EARTH VOICE FOOD CHOICE™

Getting Real About Our Food Choices

A Multimedia Project for Parents, Teachers,
Young People and Food Personnel

TODD WINANT

Earth Voice Food Choice DVD

PRESENTATION ANNOUNCEMENT

Health, Environment, Global Survival and You! What's the Connection?

This multimedia digitally enhanced slide presentation takes us on a ride through outer space in search of a planet that has the three main things humans need for survival: air, water and soil. We find Earth and witness our planet's splendor. We learn the harmful effects of humans short-sighted food choices on our environment, the species we share this Earth with, our personal health, world hunger and even the economy. We clearly see the negative impacts of eating too much chemically processed animal and junk foods and comprehend the importance of eating more organically grown fruits, vegetables, nuts and seeds. We'll meet the super heroes for health and be introduced to their powerful immune system enhancers like phytochemicals and antioxidants,

The presentation will shockingly show how young people in schools are the unsuspecting recipients of unhealthy foods that are known causes of obesity and even more serious diseases like heart attacks, strokes and more. This multi-media presentation will visibly demonstrate how to protect our most valued resources of air water, soil, our children's future and our personal health by making mindful food choices.

Then the ***Earth Voice Food Choice*** Manual and the **Earth Voice Food Choice** project will be introduced.

If you care about your health and the Earth this presentation is a must see.

Todd Winant, author of the *Earth Voice Food Choice* Manual, delivers the presentation. Todd has been a health and environmental educator since 1988 and has inspired schools to teach about and offer more plant foods and less animal foods in schools across the United States.

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Earth Voice Food Choice Manual

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Parents, Teachers,Young People
and Food Personnel

Todd Winant

First Edition

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Dedicated To:

My daughter Lela Rose,
the children,
the animals,
the future generations
and planet Earth.

Earth Voice Food Choice Manual

Getting Real About Our Food Choices

A Multimedia Project for Parents, Teachers, Young People And Food Personnel

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Thank You:

To all the people who contributed to this message,
worked with me, touched these pages and
gave their hearts, ideas, research and time
to this collaborative work.

To my wife, Sherry, my Mom and Dad,
and my friends for believing in me.

To the Sun, Earth, Air, Water,
Soil and Plant Kingdom.

Introduction

The effects of our individual food choices are far-reaching. In order to understand this, we must first comprehend how we are connected to our world. Everything we do has a reaction.

We are part of a living community called Planet Earth. All life forms and elemental systems are interrelated. On a physical level, humans and the natural world are one inseparable reality. What we do to the Earth's life support systems of air, water and soil has a direct effect on our lives and on all future generations. The chemicals that are administered to our foods and natural resources eventually become a part of us on a cellular level.

The production of animal food products is responsible for causing many of the planet's most catastrophic environmental problems and depleting natural resources at an unprecedented rate. The animal and chemical agriculture industries are the primary polluters of our planet's water and soil. They accelerate desertification, forest loss, global warming and the depletion of water, soil and ozone. Furthermore, the livestock industry is consuming most of America's grain supply, which could be used to help solve world hunger problems.

Animal products such as meat, poultry, fish and dairy are also heavy contributors to most of the diseases afflicting Americans. Heart attacks, strokes, diabetes, osteoporosis, some forms of cancer, obesity, and other less life-threatening diseases are influenced by excess consumption of animal foods. Treating these diseases is costing Americans hundreds of billions of dollars per year in health care and health insurance. Notwithstanding advice from experts, the United States government continues to spend billions of our tax dollars to subsidize these industries.

In contrast, a diet of organically grown plant foods such as fruits, vegetables, whole grains, nuts and seeds produced without synthetic fertilizers and pesticides enhances personal and environmental health. Plant foods contain vitamins, nutrients, protein, fiber, antioxidants, phytochemicals, essential fatty acids and many other beneficial compounds designed by nature to promote health and prevent disease.

Compared to animal foods, plant foods are less polluting to the environment and conserve natural resources. If plant foods were consumed more and animal foods less, hundreds of billions of dollars could be saved on health care costs. If the agriculture industry stopped feeding most of this country's grain supply to animals and started feeding more to people, enough grains would be freed up to help feed the world's hungry. Farmers could sell the extra grains to other countries and make an even greater profit. However, the more the U.S. government allows industry to alter foods with chemicals and biotechnology, the less other countries are willing to import them.

The animal and chemical agriculture industries, through the United States Department of Agriculture (USDA), supply enormous volumes of chemical/animal-based foods to children in schools. The National School Lunch Program (NSLP) is the United States' largest governmental feeding program. The manner in which our children view food, how their eating habits develop, their health and the condition of the land they will inherit are directly linked to the NSLP. For the most part, health and environmental information being taught in schools is not current.

We are not serving our children healthy foods in most of our schools. What type of society have we become? Let's stop complaining about school lunches and do something about them.

The Earth Voice Food Choice Project addresses these fundamental issues directly and offers solutions.

This Manual presents documented facts on how individual food choices affect the world and our health. It explains the USDA's inability to deal with this problem and shows how you could be part of the solution. There are chapters on how to implement a healthy food and education project and how to present the material to students, teachers, parents and food service personnel. There is a food service section on preparation complete with guidelines for setting up a kitchen, family-size recipes and bulk plant-based recipes that fit within the USDA's guidelines and draw from existing food commodities. The manual also contains letter writing actions, handouts, letters, announcements and articles that can be photocopied and distributed. The *Earth Voice Food Choice* DVD is an actual presentation delivered by the author (See Chapter 17) and provides an even more dramatic vehicle for getting the message across.

Providing teachers with this information is an effective and efficient method of disseminating this information to students. You can enable the education system to teach solutions, assist schools to teach by example and help young people realize their power as consumers.

For the most part, our government is run by industry. Industry is run by consumerism. We run consumerism. The most powerful way we can voice our opinions is to vote with our money.

Teaching students, educators, parents and food service personnel to ask for, offer and consume more plant foods in schools will help to initiate a positive shift in our government's largest feeding program. This awareness could rally people to make healthier choices in the market place. Imagine re-directing the way the United States produces food. The possibilities for beneficial change are monumental.

About the Author

I was born in Brooklyn, NY, in 1960 and grew up on Long Island. In school, I felt like an outcast. Kids picked on other kids. Competition was bred into us and individuality was suppressed. I was forced to learn academics before understanding emotions. Much of the history I was taught misrepresented the facts, and rarely covered the human suffering component of the world's conquests. Most of the environmental information came from the chemical and power industries. Nutritional information was supplied by the dairy industry. I would have been HDAD if that label had existed when I was growing up. It wasn't that I couldn't learn; I just wanted to learn something that wasn't being taught in school. I searched for clarity. I looked out at the stars and wondered.

Luckily, I found a trade that gave me confidence. I became an auto mechanic. I went to college for automotive technology and then became a heavy machinery repairman. My goal in life was to make as much money as I could and have as much fun as possible, acquire possessions and follow what I thought was "the American dream."

By my late twenties, I was well on the "path." I owned my own business, a home in Long Beach, Long Island, and had a good income. But I felt empty inside and disconnected from something that I couldn't name. I remember thinking, "Something's missing. If this is all there is to life, I must have landed on the wrong planet." I started to get dizzy and sick. I went to doctors and was probed with tests, but they couldn't find anything, so I took responsibility for my own health. I started surfing to regain my balance, literally.

One evening, after a good day of surfing in the Atlantic Ocean, I awakened to a new reality. Walking home along the beach, I felt a sticky, itchy film on my skin. Big green flies were biting me, leaving welt marks. I realized that the water was polluted with floating garbage and sewage and the beach was littered with hospital waste.

In the months that followed, I researched why this garbage and waste was in the water and where it was coming from. I became aware of the routine practice of ocean dumping. I realized that while I was taking care of my material needs, government and business were taking care of theirs also. Very few people were taking care of global needs. Like clean water. If I wanted change, I would have to take action and become part of the solution instead of part of the problem. I had to leave the group mind and think for myself. I had to get my choices and lifestyle in line with my beliefs. I had to figure out what my beliefs were.

I realized that the natural world was missing from my life. I started camping and backpacking and became more connected to the environment. I liquidated my business and joined Greenpeace Action in the mid-1980s to help in their effort to stop ocean dumping. I studied anatomy and physiology to learn more about the human body and searched for the causes of human disease. My relatives were dying and I found out that their food choices played a major role. I researched many environmental problems and their causes. I was upset to learn how negatively the animal and chemical agriculture industries were affecting our lives and our world. I was happy that there were actually workable solutions. I thought, "This is too simple. Why hasn't this information been disseminated to the people? Why isn't it a major topic in schools? Why isn't our government doing something affirmative about this?"

I went to South Dakota to talk to the Lakota People on the reservations about food choices. I knew that many of the diseases that were afflicting them were caused by their

diets. Much to my dismay, I learned that the USDA was supplying unhealthy foods to these people, in the form of commodities that it had to dispose of because government subsidy programs had caused overproduction.

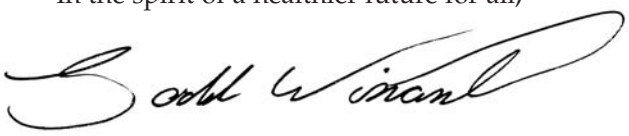
More research led me to the fact that the USDA was supplying these same unhealthy commodity foods to over 65 million young people in America's schools. The Lakota People had taught me that all life on Earth is sacred. They showed me how all life is related. They call it, "Mitakuye Oyasin," "All my Relations." I prayed for the children to receive this information.

In 1992, I joined the staff of EarthSave International in Santa Cruz, California, to help create and direct a program that would educate young people, their teachers and the school food service personnel about the problems that poor diets cause. This effort gave birth to the Healthy School Lunch Program and *Healthy School Lunch Action Guide*. The EarthSave team and I worked together for five years, fine-tuning that program. We reached hundreds of thousands of young people in schools. Our message was delivered, understood by many and gratefully acknowledged by a few people. Many of the schools began offering plant-based alternatives and the young people were eating and enjoying those meals.

In 1997, I moved to Sedona, Arizona, and continued to evolve this work. It's been seventeen years since I began dreaming about getting this message to the people. Now I can offer the culmination of this work to you: *The Earth Voice Food Choice* Manual and the *Earth Voice Food Choice* DVD.

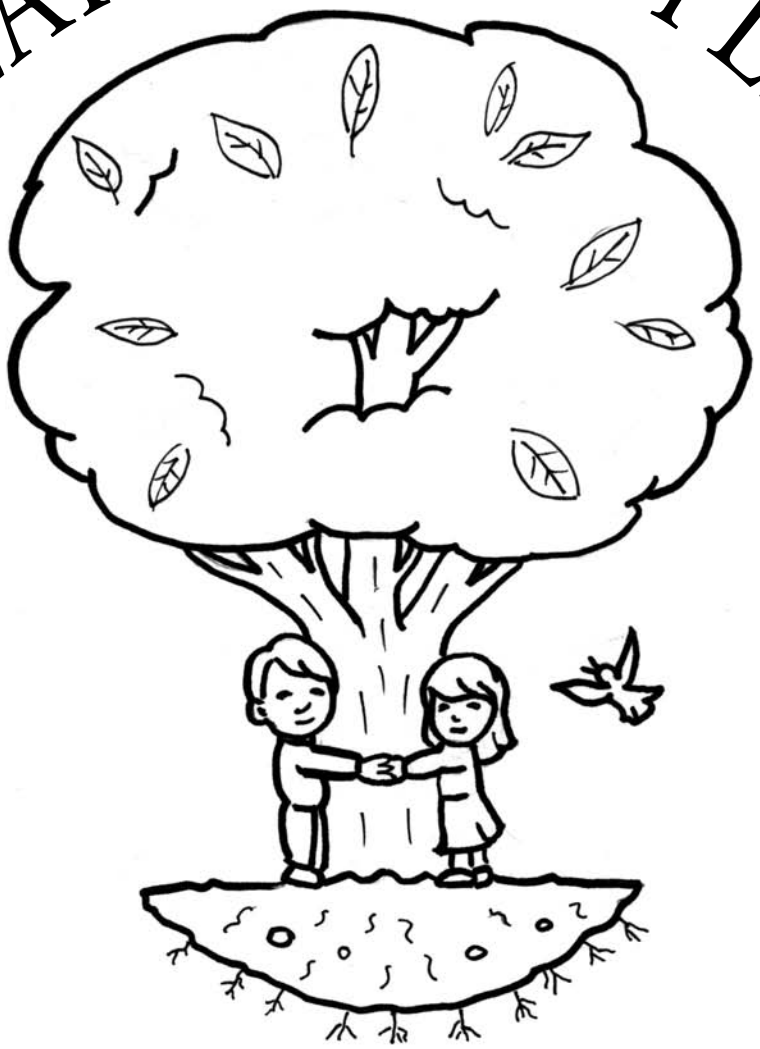
I hope you will feel as exhilarated as I do about this solution-oriented project. Now you can implement the Earth Voice Food Choice project, also. Good luck!

In the spirit of a healthier future for all,



Todd Winant

EARTH PEOPLE



Earth Voice Food Choice Project

Earth Voice Food Choice is a multimedia project with two main tools for outreach, *Earth Voice Food Choice* Manual and *Earth Voice Food Choice* DVD. These tools are designed to be used together or individually to learn about healthier food choices and then inspire other people to eat more whole, organic plant foods and less chemically processed animal and junk foods. We call this a plant-based diet a diet based mostly on eating plants (vegetables, fruits, whole grains, nuts and seeds).

Our Vision

- To demonstrate to Americans how a plant-based diet is a simple and workable solution to many of the health, environmental and economic problems in the United States.

- To encourage parents and school food services to serve more whole, organic plant foods in their homes and cafeterias.

- To inspire young people to eat more organically grown, whole, organic plant foods, and to realize their power as consumers.

Our Mission

- To distribute Earth Voice Food Choice project materials to teachers, parents, students and food service personnel.

- To reach as many of the 50 million students in America's primary and secondary schools as possible, and a significant number of the 15 million college students with the Earth Voice Food Choice project's vision.

> Sometimes it falls upon a generation to be great. You can be that great generation.
>
> *Nelson Mandela, 2005*

The Beginning of a New Era

To describe the history of Earth, scientists have labeled major geologic periods and called them eons. The present *eon* is called the Phanerozoic, which is divided into three eras: the Paleozoic era, from 570 to 245 million years ago; the Mesozoic era, from 245 to 67 million years ago; and the Cenozoic era, from 67 million years ago to present.

Unique biological and geological creativity characterized each of these eras. During each era, life forms unfolded through the process of genetic mutation, natural selection and global climatic changes.

Global climatic weather changes brought mass extinction to the predominant species, and caused each of these eras to end abruptly. The now extinct placoderms (the first jawed fish) were the dominant species during the Paleozoic era. The dinosaurs were the dominant species during the Mesozoic era.

The Cenozoic era was a time of extreme creativity and growth on Earth, during which continents drifted into each other, forming mountain ranges. Flowers, plants, and mammals began to take on their current forms. Many new species came into existence, such as the whales, primates, horses, cattle, dolphins, elephants and rodents. During the Cenozoic era all life on the planet followed Earth's natural process.

A species relatively new to planet Earth, human beings, is having an unprecedented impact on evolution. Human beings are altering the very conditions – genetic mutation, natural selection, and global climate patterns – that, in the past, have been responsible for massive species extinction.

Humans are experimenting with genetic mutation through the science of biotechnology. Humans are interfering with Earth's process of natural selection by dooming many species of plants and animals to extinction yearly by destroying their habitats. Our industrial/technological society is even disrupting global climatic weather patterns.

In the last hundred years the human species has dramatically altered what has taken Earth millions of years of evolution to create. We have evolved into a species with extreme power to affect the natural world.

As a species, we have two distinct paths to choose from. One choice is to continue on our present destructive path in which we use the natural world for our own short-term benefit. We could call this the Technozoic Era. This might be a dead end road for many life forms on planet Earth, including humans.

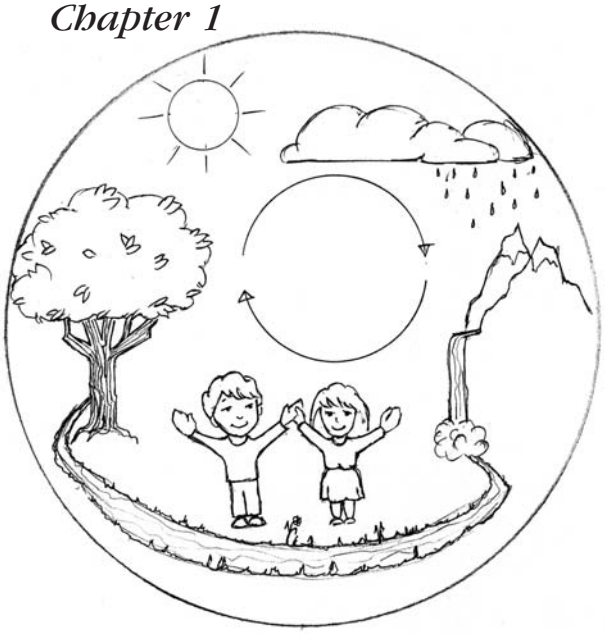
The other choice is to function with an ecological awareness of the entire Earth communities' best interests. We could call this an Ecozoic era. In this era, human priorities would be congruent with the priorities of the rest of the natural world. An Ecozoic person would live with the value that all life forms are interdependent with every other.

In an Ecozoic era, people would hold the planet's best interests in their hearts and act on them. An example of such an action would be to eat more Earth-friendly, organic, plant-based foods.

Humans have a distinctive role in the evolutionary process of this planet. Maybe it's time for the humans to grow up, take less and contribute more to the Earth community.

"The Universe Story", written by Brian Swimme and Thomas Berry, inspired the concept of this synopsis.

Chapter 1



Earth's Life Support Systems

Our incredible, exquisite, incomparable planet is alive. Air, water, soil, microbes, weeds, plants, insects, worms, birds, animals, and humans are all a part of Earth's living body. All these life forms engage in interwoven functions necessary to sustain life. We are connected to all these life forms and elemental systems. What we do to them inevitably comes back to us.

Water

As Earth cooled, a crust began to form. Gases from the center of Earth were pushed out through the crust and up into the atmosphere. These gases combined and formed new creations in Earth's primal atmosphere. One such creation was the bonding of two hydrogen atoms with one oxygen atom. They formed a new molecule called H_2O, water.

These water molecules dropped down to the surface of the planet as rain, collected and formed the oceans, streams and rivers. Some of this water froze and formed glaciers. Eventually, some of this water collected inside the Earth to form aquifers.

Only in the human mind is water separated under different names, such as glaciers, oceans, lakes, rivers, streams, aquifers, blood and human-made chemicals. In reality, water is one fluid system that runs through all life on the planet.

As we drink water it becomes part of our cells. We pass water back and forth between our bodies and all other life forms. A water molecule in any one of us

might have come from the other side of the world, already having passed through countless plants, animals and waterways. By polluting the water, we pollute ourselves and all our fellow Earth species.

When we understand water as a basic living entity and comprehend the extraordinary journey water makes as it constantly cycles through **all life**, we can begin to realize how connected we are to **all life** on Earth.

In addition to polluting the water, we are extracting water with our modern technology from the ground at an unprecedented rate. Seventy percent of the water consumed worldwide, including that which is diverted from rivers and that which is pumped from underground aquifers, is used for irrigation.[1] The result is that the aquifers, wells and underground waterways are becoming depleted.

Soil

Soils maintain a complex, intimate, and symbiotic relationship between the mineral, inorganic, and the living, organic, worlds. Organic matter gives soil its fertility, erosion resistance, and water-holding capacity.[2] Soil contains only about 4% organic matter.[3]

There are millions of microbes in a handful of fertile soil. Their activity creates healthy fertility in soil by converting dead plant and animal matter into usable minerals and nutrients. These nutrients and minerals make it possible for seeds to grow into healthy plants. This natural process acts as a cleanser and replenishes the land. In essence, the health and vitality of the land and its inhabitants depends on the richness and fertility of its soils. The more fertile the soil a nation has available to farm, the more food it can produce. This largely determines a nation's human-carrying capacity.[4] One of the reasons the United States has been able to sell more surplus food to other countries than any other nation is because it has had an abundance of rich, fertile soil.

> One element, perhaps the most vital of all, in this brief summarization of nature's economy is productive soil. This is the medium or resource upon which all life on this Earth depends. When that goes we go with it.
>
> *Fairfield Osborn, "Our Plundered Planet"*

Because of our modern monocropping and chemically dependent methods of growing food, the organic nutrients are being depleted from the soil. This depletion reduces fertility, increases erosion and decreases the soil's capacity to absorb water. Irrigation increases salinity, causing topsoil to erode even further. The valuable microbes in the soil are also being destroyed by the application of petroleum-based fertilizers and pesticides.

About 96% of topsoil is made from the breakdown of rock.[5] It takes Earth a long time to break down rock into particles small enough to make useable topsoil, to then grow plants which are the base of the food chain. The food of our future generations is in the life of the soil today.

Many of the advancements in food productivity have come at the expense of the stability of one of Earth's main food production systems, the soil. Present methods of chemical agriculture, monocropping, animal agriculture and other forms of mechanized farming are depleting the topsoil faster than nature can replenish it.

Plants, Trees & Forests

It is the plant that learned how to take the sun, water, air and earth and make food and oxygen for almost every other living organism on Earth. Plants give us our medicines, contribute to topsoil production, provide much of the color in the world and help to prevent erosion. Plants also provide habitat for many species. Plants are one of the major essential ingredients for life on Earth. Trees and plants

make an important contribution to global climate patterns. The plants, trees and forests of the world are atmospheric pumps and filters for one of the planet's main life support system, the air.

Plants and trees take carbon dioxide out of the air and replace it with the oxygen that all animals need to live. Humans and other animals take oxygen out of the air and replace it with the carbon dioxide that the trees need to live. Humans and plants are participating in an ongoing relationship, sharing the breath of the Earth. We need each other. The humans, animals, trees and plants are part of the respiratory system of the Earth.

Rainforests are home to countless different species of plants and trees. It took over 60 million years for tropical rainforests to become what they are today.[6] Over half of these ancient forests have been destroyed by humans in the last 100 years.

At a time when we need even more trees to filter the excess carbon dioxide and air pollution, humans are destroying forests beyond their ability to renew themselves.

Atmosphere

The atmosphere is a gaseous envelope approximately 25 thousand miles high, surrounding and protecting Earth and its inhabitants.[7] The gases in the atmosphere play a vital role in maintaining favorable conditions for life on Earth's surface. Human activity continues to alter these gases with hardly any regard for future consequences.[8]

Let's preserve what we cannot replace.
David Brower

During the past 100 years the gases the humans have added to Earth's atmosphere have upset the balance. Today more heat is being trapped in certain parts of the atmosphere because of the excess carbon dioxide and other gases. Like the windows of a greenhouse, these gases trap heat in the atmosphere. The resulting disruption has accelerated global warming.

Global Warming

The greenhouse gas that contributes most to global warming is carbon dioxide. Two-thirds of these emissions come from the burning of fuel such as wood, coal, oil, and gas. These are the fuels that heat our homes, run our factories, and make automobiles move.

By burning these fuels, carbon dioxide that was taken out of the atmosphere years ago is being released again. Releasing massive amounts of it into our present-day atmosphere is changing the balance of atmospheric gases. In the last 100 years, carbon dioxide levels have increased by more than 23%.[9]

The highest function of ecology is the understanding of consequences
Pardot Kynes, "Dune House Atreides"

In a *WorldWatch Issue Alert*, titled "Climate Change Has World Skating on Thin Ice", (August 29, 2000), Lester R. Brown sums up just how real and serious global warming is:

> Swedish scientist Svante Arrhenius warned at the beginning of the last century that burning fossil fuels could raise atmospheric levels of carbon dioxide (CO_2), creating a greenhouse effect. Atmospheric CO_2 levels, estimated at 280 parts per million (ppm) before the Industrial Revolution, have climbed from 317 ppm in 1960 to 368 ppm in 1999, a gain of 16% in only four decades.

As CO_2 concentrations have risen, so too has Earth's temperature. Between 1975 and 1999, the average temperature increased from 13.94 degrees Celsius to 14.35 degrees, a gain of 0.41 degrees or 0.74 degrees Fahrenheit in 24 years. The warmest 23 years, since record keeping began in 1866, have all occurred since 1975. Researchers are discovering that a modest rise in temperature of only 1 or 2 degrees Celsius in mountainous regions can dramatically increase the share of precipitation falling as rain while decreasing the share coming down as snow. . . .

The result is more flooding during the rainy season, a shrinking snow/ice mass, and less snowmelt to feed rivers during the dry season.

Greenland's 2.2 million square kilometers (three times the size of Texas) is losing its ice along the southern and eastern coasts with a net loss of some 51 billion cubic meters of water each year, an amount equal to the annual flow of the Nile River.

A team of U.S. and British scientists reported in 1999 that the ice shelves on either side of the Antarctic Peninsula, in the South Pole, are in full retreat. From roughly mid-century through 1997, these areas lost 7,000 square kilometers as the ice sheet disintegrated. But then, within scarcely a year, they lost another 3,000 square kilometers. Delaware-sized icebergs that have broken off are threatening ships in the area . . . .The thickness of the Arctic ice sheet has been reduced by 42% over the last four decades.

Oil is used in the livestock industries for fuel for transport and tractors, chemical fertilizers, and pesticides; so much, in fact, that the animal products could be considered a petroleum by-product.
Worldwatch Institute

A study by two Norwegian scientists projects that within 50 years, the Arctic Ocean could be ice-free during the summer.

The reservoirs in the sky are melting also The Rocky Mountains, the Andes, the Alps, and the Himalayas. These ancient glaciers could largely disappear over the next half-century. In Glacier National Park in Montana, the number of glaciers has dwindled from 150 in 1850 to fewer than 50 today.

As the ice on land melts and flows to the sea, sea levels rise. Over the last century, they rose by 20-30 centimeters (8-12 inches). During this century, the existing climate models indicate it could rise by as much as 1 meter. (more than 3 feet) Even more disturbing, ice melting itself can accelerate temperature rise. As snow/ice masses shrink, less sunlight is reflected back into space. With more sunlight absorbed by less reflective surfaces, temperatures rise even faster and melting accelerates.[10]

Ozone Shield

The ozone layer is vital in maintaining Earth's life support systems. It is a protective shield that protects life on Earth from excessive ultraviolet radiation from the sun. The molecules of the ozone shield are very sparsely spaced and are located about 12 to 25 miles above Earth's surface. Today, man-made compounds are destroying ozone molecules at an alarming rate. This weakens the shield and endangers all of Earth's life forms by exposing them to an excess amount of harmful UV-B radiation.[11]

For decades, scientists have known that some man-made compounds, especially chlorofluorocarbons (CFCs), are directly responsible for ozone depletion worldwide.[12] CFCs are gases used in systems like refrigerators and air conditioners. CFCs contain chlorine and, when exposed to intense solar radiation in the upper atmosphere, they break apart, releasing this chlorine. Unattached

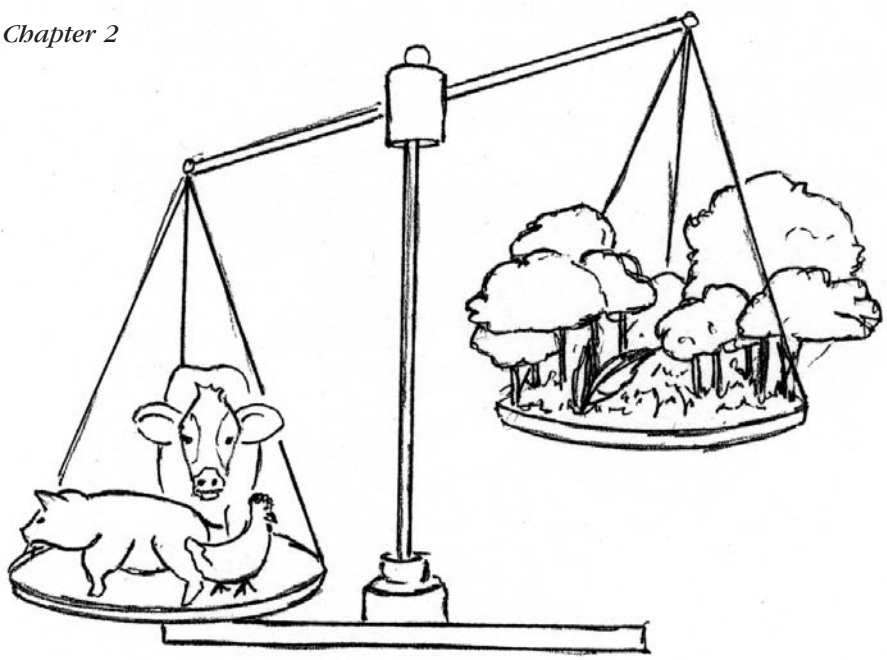
chlorine molecules then combine with ozone molecules, subsequently breaking them apart and destroying them. One chlorine molecule can destroy up to 100,000 ozone molecules during its life in the stratosphere.[13]

CFCs take years to reach the ozone molecules in the stratosphere and can linger there for over 100 years. This means ozone loss will continue for as much as a century after all ground-level CFC emissions have ceased.[14]

My dad always says, "You are what you do, not what you say." Well, what you do makes me cry at night. You grown-ups say you love us. I challenge you, please, make your actions reflect your words. If you don't know how to fix it, please stop breaking it!

Severn Suzuki, a 12 year-old girl, speaking at the Earth Summit in Rio Centro, Brazil

Chapter 2



Livestock vs the Environment

The United States raises over 10 billion animals for food consumption every year.[1] To provide Americans with a diet based on meat, poultry and dairy products, requires enormous amounts of land and resources. This has aggravated and accelerated a number of environmental crises, such as: soil erosion, desertification, the destruction of forests and rainforests, global warming, water pollution, water depletion and fertilizer and pesticide pollution.

Soil Erosion

Across the globe, the very basis of food production, the soil, is rapidly eroding away. In North America, the erosion of usable farmland mainly results from the excessive production of feed crops for livestock. Competitive pressures to create more cropland often force farmers to choose lower-cost production methods that leave soil exposed and put fragile lands that are easily depleted into intensive production.

Soil erosion is usually thought of as a slow, unrelenting process. In reality, it occurs mainly in spurts. Eighty-five to 95% of sediment discharge happens during 10% of the time. The main causes of topsoil erosion are wind and water. Primary factors that expose topsoil to wind and water are from monocropping, overgrazing, salinization, irrigation and urbanization.[2]

Total topsoil erosion in the U.S. per year is conservatively: **1.89 billion tons**. [3]

Amount of original U.S. cropland permanently removed from production due to excessive soil erosion: **one-third**. [4]

In most of the First World, contempt for soil could hardly be greater. Economists assure us that, in most cases, soil conservation is not economically justifiable.

Bruce Sundquist

Pounds of topsoil lost in the production of 1 pound of feedlot steak: **35**. [5]

Time required for nature to form 1 inch of topsoil: **200 to 1,000 years**. [6]

Historic cause of demise of some great civilizations: **topsoil depletion**. [7]

Nearly one-third of the world's arable land has been lost by erosion in the past four decades. David Pimental, at the annual meeting of the American Association for the Advancement of Science, reported that the U.S. loses 3,088 square miles of agricultural land to erosion and salinization every year. [8]

Tropical Rainforests

When you perceive nature only through the mind, through thinking, you cannot sense its aliveness, its being-ness, you see the form only and are unaware of the life within the form — the sacred mystery. Thought reduces nature to a commodity to be used in the pursuit of profit or knowledge or some other utilitarian purpose. The ancient forest becomes timber, the bird a research project, the mountain something to be mined or conquered.

When you perceive nature, let there be spaces of no thought, no mind. When you approach nature in this way, it will respond to you and participate in the evolution of human and planetary consciousness.

Eckhart Tolle, "Author of Power of Now" and "Stillness Speaks"

Tropical rainforests hold 80% of the world's vegetation [9] and contain 20% of the world's terrestrial carbon pool.[10] Fires in tropical rainforests increase the forests' susceptibility to more subsequent fires by opening the canopy and allowing sun and air to increase the drying of the forest.[11] Destroyed rainforests lead to soil erosion. These sediments run off into the waterways and eventually starve fish and plankton of oxygen and sunlight. [12] Forests razed to the ground increase crop failure from drought [13] and cause desertification. [14]

Rainforests are often cut down or burned so that cattle can be brought in to graze. Cattle grazing accounts for 10% of the global deforestation.[15] This is not including the massive amounts of forests that have been chopped down or burned to create cropland to grow animal feed. About 40% of tropical rainforests has been removed, chiefly to make soil and nutrients available for agriculture.[16]

Once a rainforest is converted to grazing land, the life span of an average cattle ranch is 2 to 7 years.[17] In Central America, cattle ranching has destroyed more rainforests than any other activity and such ranching is not even a stable and continuous source of food production.[18] In fact, 90% of the new cattle ranches in the Amazon go out of business within less than 8 years because their soil base has been depleted from overgrazing.[19] After 7 to 10 years of grazing beef cattle, the former rainforest is eroded into a wasteland.[20]

Current rate of species extinction due to destruction of tropical rainforests and related habitats: **1,000 per year**. [21]

Amount of medicines available today that have been derived from plants: **25%**. [22]

Amount of Brazilian rainforests destroyed to create pastureland for cattle: **38%**. [23]

Amount of Central American rainforests converted to cattle pastureland: **40%**. [24]

Amount of ranching, primarily for export beef that has indirectly leveled Central America's Rainforests since 1960: **50%**. [25]

Amount of Panamanian and Costa Rican rainforests converted to cattle pastureland: **70%**. [26]

Amount of rainforest converted to cattle pastureland from Panama through Mexico: **60%**. [27]

Amount of Earth's land surface once covered by tropical rainforest: **14%**. [28]

Remaining land covered by tropical rainforest: **6%, and shrinking rapidly**. [29]

After only a few years of cattle grazing, the fragile rainforest soil becomes eroded and incapable of sustaining healthy plant life.[30] Indigenous people and their ancient cultures and wisdom, that once inhabited these forests, vanish.

One of the last remote, old-growth forestlands, the Tongas, which has 2 million roadless acres and 400,000 old-growth acres, is slated for logging.[31] North America was once densely forested. These fallen forests that took millions of years to evolve, are no longer available to provide the many resources and functions that they once did, such as: adding fresh oxygen to the atmosphere; assisting in the process of precipitation; providing rare plant material for new medicines; and providing countless species of plants and animals with habitat.

Desertification

The overuse of land encouraged by the drive to produce animal foods competitively has led to widespread desertification in many countries. Desertification is the impoverishment of arid, semi-arid and sub-arid ecosystems by the impact of human activities.[32] Regions most affected by desertification are: all cattle-producing areas, including the western half of the United States, Central and South America, Australia and Sub-Saharan Africa.[33]

Amount of Earth's land rendered unproductive by desertification annually: **52 million acres**. [34]

Percentage of Earth's landmass suffering from desertification: **29%**. [35]

The main causes of desertification are:
Declining groundwater tables
Unnaturally high soil erosion
Overgrazing of livestock
Over-cultivation of land
Improper irrigation techniques
Salinization of topsoil and water
Deforestation
Loss of native vegetation
Reduction of surface water
Prevention of reforestation [36]

Primary contributing factor in all cases: **cattle production**. [37]

The Sahara Desert had a plenitude of trees as recently as 8000 BC. [38] Ancient villages have been found buried in the Sahara Desert.[39] The overgrazing of the Rajasthan Desert of India reduced rainfall.[40] The center of India's Thar Desert was a jungle 2,000 years ago.[41] The Sonoran Desert of Arizona and much of the Chihuahuan Desert of New Mexico have been exacerbated by overgrazing during the past few centuries.[42]

> Every one of us is an environmentalist, because every choice we make has an impact on the environment.
>
> *Dennis Weaver*

Pesticides & Fertilizer Use

"We make hundreds of thousands of chemicals every year whose effects on our immune systems, reproductive systems, limbic systems, etc., are basically unstudied and unknown, and companies can make them, put them in the environment and say, "good luck."

Paul Hawken

After World War II, farmers thought they had found relief from the constant menace of crop damage from insects and weeds by utilizing pesticides. Chemical manufacturers also convinced farmers to buy their fertilizers to produce larger crop yields. This new technology allowed farmers to begin the practice of monocropping: planting vast tracts of a single crop, year after year. This supposed "breakthrough," together with increased mechanization, synthetic fertilizers, subsidized irrigation water and cheap, abundant energy, resulted in the "increased efficiency" that allowed farmers to grow enough livestock feed to produce large quantities of meat, poultry and dairy products.

Today, a common sight on large American farms is airplanes dumping pesticides and fertilizers on the sterile fields below. The workers are clothed in silver protective suits with hoods, face shields, gloves and gas masks while handling and spraying toxic chemicals labeled with skull and crossbones on the crops. These chemicals are hidden in the food just as the many facts regarding their danger, destructiveness and ineffectiveness are hidden from the public.

Because of the remarkable ability of insects to rapidly adapt and become genetically resistant to toxic chemicals in their environment, more and more pesticides have been needed to produce the same degree of crop protection. Insect "pests" are consuming more crops since the introduction of pesticides. This momentous increase has come about even with the massive chemical offensive and claims of pesticide manufacturers.[43] Species resistant to common pesticides now number more than 900, up from 182 in 1965.[44] Crop losses to insects have increased since the introduction of pesticides and now insects are developing increased genetic resistance to these toxic human-made chemicals. Modern agriculture has become chemically addicted to using larger and larger quantities of pesticides that poison the water, increase topsoil depletion and contaminate the entire food chain.

The vanishing Bee, this vital pollinator is in grave danger. So is our food supply. This ancient partnership of pollinator and plant is essential to life as we know it. One-third of all food we eat comes from crops that require animal pollinators, a role often filled by bees.

Sharon Levy, ONEARTH, National Resources Defense Council, 2006

Even more alarming, most of the modern pesticides are more than 10 to 100 times as toxic to living organisms than those marketed in the 1970s. [45]

A press release from the UN Food and Agriculture Organization (FAO) and the World Health Organization (WHO), warned that 30% of the pesticides marketed in developing countries do not meet internationally accepted quality standards and thereby pose serious health threats. To add insult to injury, it is estimated that some 100,000 tons of banned or obsolete pesticides are improperly stored in the developing world. Eventually these pesticides leak into the environment.[46]

Amount of total herbicides used that are applied to corn and soybeans: **61%**. [47]

Increase in overall crop losses due to insects since 1945: **20%**. [48]

Increase in corn crop losses since 1945: **400%**. [49]

What is most responsible for wiping out honey-bees across the United States? One of the biggest problems is irresponsible use of pesticides and the failure of regulators to enforce the rules meant to protect bees from poisoning.

Jeff Anderson, bee keeper of 30 years

Amount of pesticides applied to American farmlands annually: **750,000 tons**. [50]

Amount of global pesticide use annually: **2.5 million tons**. [51]

Amount of chemical fertilizers applied to American farmlands annually: **19 million tons**. [52]

Amount of chemical fertilizers used globally in the year 2000: **134 million tons**. [53]

Total global market value for pesticides in the year 2000: **32 billion dollars**. [54]

U.S. government subsidies for fertilizer consumption have been decreasing. This has resulted in global fertilizer consumption dropping slightly. This decrease

seems to be an economic indicator revealing that fertilizer technology may not help farmers produce greater yields of food from croplands after all. [55]

Water Pollution

The excessive consumption of animal products plays a tremendous role in water pollution. The main contaminants of water pollution to rivers, streams and, wells are: pesticides, herbicides, ammonia from animal urine, coliform bacteria from manure and nitrate-bearing artificial fertilizers. [56]

Only one percent of the billions of pounds of pesticides and herbicides we use every year actually kills the weeds or insects in question.

Paul Hawken

Livestock & excrement - The explosion in livestock populations has resulted in a parallel explosion in animal wastes. Two trillion seven hundred billion pounds of manure is produced in the United States each year.[57] Animal waste is now over 130 times the waste generated by humans in this country.[58] Pathogens in hog waste are 10 to 100 times more concentrated than they would be in human sewage, which is diluted with water in sewage treatment plants. Human sewage is treated to reduce the nutrients, organic matter and pathogens and is then usually disinfected. In contrast, hog waste is typically stored in anaerobic lagoons that scarcely reduce the microbial indicators of fecal contamination.[59]

Wastes from factory farms, feedlots and dairies quickly flood local markets for manure fertilizer, resulting in the buildup of stockpiles of animal waste. The nitrogen from these wastes is converted into ammonia and nitrates that leach into groundwater and surface water where it pollutes wells, contaminates rivers and streams and kills aquatic life. According to the U.S. Environmental Protection Agency, nearly half the wells and all of the surface streams in the country are contaminated by agricultural pollutants.[60]

Cattle represent the U.S. West's largest source of non-point water pollution. Nearly all surface waters of the West are fouled with livestock-related contaminants.[61] Nitrates in well water can cause irreversible nervous system impairments, cancer, and blue baby syndrome.[62]

Production of excrement by U.S. livestock: **230,000 pounds per second**. [63]

Amount of waste created by a 10,000-head cattle feedlot: **equal to that of a city of 110,000 people**. [64]

Thirty-five percent of imported fruit and 51% of domestic fruit contains detectable amounts of pesticides, according to an FDA study which, based on these findings, proclaimed all produce to be completely safe for consumption.

Safe Food News

A 50,000-acre hog farm in Utah will produce more waste than the city of: **Los Angeles**. [65]

Quantity of manure produced by hogs in North Carolina in 1993: **roughly the equivalent of all the sewage produced by the state of New York**. [66]

Chemical agriculture - Animal agriculture is responsible for most of the pesticides and fertilizers that are added to the air, water and soil in the United States because the majority of the cropland in the U.S. is devoted to growing feed grains for livestock. Soy and corn are the largest feed grain crops in America and receive massive amounts of fertilizers and pesticides. This intensive animal feed program greatly increases the amount of soil laden with fertilizers and pesticides. Which erodes and runs off into surface and groundwater. This pollution eventually reaches the oceans, contaminating marine life, and seeps into the ground, polluting wells.

Fertilizers, pesticides and other runoff from Mid-western farms flow down the Mississippi River and then collect in the Gulf of Mexico, leading to explosions of algae. When these algae concentrations die, they absorb the free oxygen in the water, leading to the death of all marine life in that area. This "dead zone" has created a vast, virtually lifeless expanse devoid of oxygen, over 40,000 square miles large—roughly equal in size to the state of New Jersey.[67]

Billions of tons of pesticide-soaked topsoil are being deposited behind dams in rivers, and the municipal drinking water reservoirs have become toxic from pesticide and fertilizer poisoning.[68] The Environmental Protection Agency has found over 700 pollutants in U.S. drinking water, [69] and pesticides are showing up in the drinking water of at least 23 states by conservative estimates.[70] From the 67 million birds that fall prey to farm chemicals, to the decline of forests, to the die-off of the amphibians, to the skyrocketing cancer rates in the human population, pesticides are negatively affecting all life on Earth.[71] These toxic chemicals have entered most life forms on Earth through the fluid system of the planet, the water.

We went organic 19 years ago, when we finally just started thinking for ourselves…what we're doing is so simple that most farmers don't understand it.

Glen Spray, organic farmer

Water pollution attributable to U.S. agriculture, including runoff of soil, pesticides and manure, is greater than all municipal and industrial sources combined.[72]

Global Warming

World livestock production is a significant factor contributing to global warming. Livestock emits 3 of the 4 major global warming gases: carbon dioxide, nitrous oxide and methane.

Carbon dioxide - The burning of fossil fuels accounts for about two-thirds of world carbon dioxide emissions. The other third comes from the burning of Earth's biomass. Livestock production adds to both these figures.

Carbon dioxide is emitted by fuels used in the highly mechanized production of feed crops for cattle and other livestock. The burning of tropical forests for cattle production also generates carbon dioxide. Add to this, the carbon dioxide that is not absorbed because of the absence of those forests.

Diets based on meat, poultry and dairy products require more energy than those using vegetables, fruits and grains. It takes extra resources to: manufacture pesticides and fertilizers, grow livestock feed, transport and process livestock, and distribute and refrigerate the meat, poultry and dairy products.

Climate Data Hint at Irreversible Rise in Seas.

NY Times

To grow the beef the average U.S. family eats every year, 200 gallons of fossil fuels must be burned.[73] Two tons of carbon dioxide is released into the atmosphere by burning those 200 gallons of fossil fuels.[74] As a comparison, the average American car puts out 2.5 tons of carbon dioxide every year.[75]

Oil is used so much in the livestock industries to fuel transportation and harvesting, produce chemical fertilizers and pesticides, that, in fact, animal products could be considered a petroleum byproduct.

Energy expended to produce 1 pound of grain-fed beef: **equivalent to 1 gallon of gasoline**. [76]

Amount of carbon dioxide released from 1970 to 1990 from rainforests cleared and burned for cattle pasture: **1.4 billion tons**. [77]

Nitrous oxide - Petroleum-based fertilizers used to produce feed crops for grain-fed cattle release nitrous oxide—another greenhouse gas.

Worldwide, the use of fertilizers increased from 14 million tons in 1950 to 143 million tons in 1989. These millions of tons of fertilizers sprayed on the land every year have produced a massive amount of nitrous oxide, accounting for 6% of the global warming effect.[78]

Be Worried. Be Very Worried. Climate change isn't some vague future problem—it's already damaging the planet at an alarming pace.
Time, Special Report Global Warming, April 3, 2006

Methane - One methane molecule traps 25 times as much solar heat as a molecule of carbon dioxide.[79] The metabolic processes of cattle produce large quantities of methane through belching and flatulence. Each cow produces one pound of methane for every two pounds of meat it yields.[80]

A commonly used manure treatment technology is anaerobic lagoons, which minimally reduce the nutrient content of the waste but produce methane gas as a byproduct. The EPA estimates that emissions from manure management were about 10% of the U.S. total in 1995, and about 31% of the agricultural sector's emissions. Of these emissions, liquid-based manure management systems, such as those found in factory farms, accounted for over 80% of the total methane emissions from animal wastes.[81]

Amount of methane emitted by the world's cattle annually: **100 million tons**. [82]

Amount of the world's total methane emissions directly attributable to cattle: **25%**. [83]

In 2005 Greenland drained more than 53 cu. miles into the sea. A cubic mile is about 5 times the amount of water LA uses in a year. The entire Greenland ice sheet is enough to raise global sea levels 23 feet. The Antarctic holds enough ice to raise sea levels more than 215 feet.
Time, Special Report Global Warming, April 3, 2006

Global warming is changing the Earth's weather patterns. This change could lead to droughts in some places and torrential rain in others.[84] These shifts in weather patterns could make it more difficult to grow food on the planet.[85]

An article in the *New York Times*, August 19th, 2000 issue, states that for the first time in millions of years, there is an expanse of water at the North Pole. Ice, six to nine feet thick, was the norm in the past.

An article in the *Asheville Citizens-Times*, in January 2001, stated that, "The United Nations panel sounded its direst warning yet about the potential for damage from global warming… Scientists who have studied the phenomenon regard it as a leading long-term threat to human survival. They cite scientific evidence that a buildup of carbon dioxide and other man-made air pollutants is trapping excess heat in the atmosphere, causing potentially disastrous shifts in air temperature, precipitation patterns and ocean currents."

Ozone Depletion

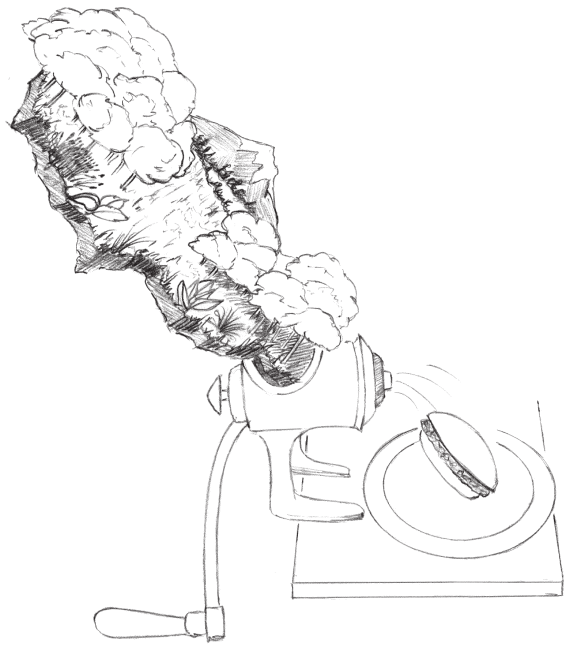
As the ozone shield deteriorates, ultraviolet rays from the sun are reaching Earth's surface, increasing the incidence of skin cancer and cataracts. Other problems resulting from increased ultraviolet radiation documented by United Nations Environment Program scientists include immunosuppression, phytoplankton loss and crop damage.[86]

Ask yourself these three questions:
If not me, Who?
If not here, Where?
If not now, When?
John Denver

In 1993 seasonal ozone loss was measured at record levels: 18% loss and more over the U.S. and Europe, 65% loss and more over some parts of the Southern Hemisphere.[87] The ozone shield over our heads every spring is at least 40% thinner than it was 10 years ago.[88] Because of damage to the ozone shield, ultraviolet rays from the sun are now burning up the phytoplankton in the oceans. Phytoplankton is the base of the marine food chain and has declined by up to 12% in parts of the Antarctic Ocean.[89] Phytoplankton produces 60-70% of Earth's oxygen.[90]

The gases contributing the most to ozone depletion are chlorofluorocarbons (CFCs). Among other things, CFCs are used in coolant and refrigeration systems. The production of meat, poultry and dairy products requires refrigeration throughout the process in factory farms, transportation vehicles, supermarket refrigerators and freezers in people's homes. Hence, consumption of meat, poultry and dairy products contributes to ozone depletion.

Chapter 3



Food Choices & Natural Resources

Earth's resources cannot effectively support the extreme demands of animal agriculture. Animal foods are far less efficient to produce than plant foods. Furthermore, when we consider the tremendous growth expected in world population, it is easy to see that a diet **based** on meat, poultry and dairy products will further exhaust our resources. If we continue down this path, we simply will not have sufficient resources to produce enough food for future generations.

Present agricultural methods are exhausting natural resources, and are also destroying the mechanisms needed by the natural world to continue to reproduce those resources. This constitutes a downward spiral that is catastrophic for humans as well as for most other life forms.

Human & Livestock Populations

The growing consumption of meat, poultry and dairy products has created an explosion in livestock populations, both in the United States and worldwide. World meat consumption has climbed from 44 million tons in 1950 to 217 million tons in 1999.[1]

Human world population in 2006 ..... 6.5 billion [2]
Human population in the United States in 2006 ..... 299 million [3]
Number of human deaths in the United States in 2006..... 2.4 million [4]

Approximate number of animals killed for food in the United States in 2005:

Chickens (Broilers, Layers)	9.4 billion [5]
Ducks	27 million [5]
Turkeys	309 million [6]
Cattle/Calves	41.6 million [7]
Pigs	118 million [8]
Sheep	4.2 million [9]
Farm animals that died before the slaughter	945.3 million[10]
Total number of farm animal deaths in the U.S.	**10.4 billion**

Total number of animals killed for food worldwide..... **48 billion**[11]

Energy Consumption & the Inefficiency of Livestock Production

Much of what we feed livestock is turned into inedible byproducts, such as manure, or simply wasted on metabolic processes. Because of this basic inefficiency, growing the feed to produce animal products for large numbers of people requires the allocation of vast amounts of land, water, grain and energy. Additionally, one-third of the world's fish catch is fed to livestock.[12]

Truth: The quality of being in accordance with experience, facts, or reality.
Webster's New World Dictionary

Growing feed crops is an extremely energy-intensive process. In addition to the corporate manufacturing of all the necessary equipment, the farmers must pump water, plow, cultivate and fertilize the fields, then harvest and transport the crops. Managing the factory farms and feedlots that turn huge quantities of these energy-intensive crops into meat, poultry, dairy products and eggs requires even more energy. Almost half of the total energy expended in American agriculture is devoted to livestock production.[13]

Water Depletion

Ninety-nine percent of the water on Earth is in the oceans and glaciers, and only 1% is available for human use.[14] Out of the 1% of fresh water that is available for human use, 97% is in underground aquifers.[15] Since the 1950s, with the advent of powerful diesel and electric pumps, farmers have been tapping underground water on a massive scale.[16] New irrigation technologies have enabled farmers to grow crops on lands that normally would not support crops under natural conditions.

Irrigated cropland comprises 15 to 17% of the world's croplands and produces 35 to 40% of the world's crops.[17] Nearly 50% of the world's grain is produced on irrigated land.[18]

The U.S. is the third-largest irrigated area in the world and uses groundwater for 43% of its irrigated farmland.[19] Eighty percent of the United States' irrigated cropland is in the West, and uses 92% of all irrigation water.[20]

Beneath the high plains states of Colorado, Kansas, Nebraska, Oklahoma, and New Mexico lies the Ogalala Aquifer. It took nature millions of years to create this vast pool of fresh water. Tragically, it has taken humans only a few decades to bring this non-renewable resource of water to dangerously low levels, mainly from practicing the most inefficient type of agriculture: growing feed grains for livestock. The Ogalala Aquifer is being depleted at 20 times the rate of its natural replenishment.[21]

Another example of water depletion is that of the underground aquifer supplying the Juarez, Mexico/El Paso, Texas - region which will be exhausted in 15 to 25 years.[22] The average recycling time for groundwater is 1,400 years.[23]

Approximately 70% of the water humans annually withdraw from freshwater systems is used for irrigation.[24] More than half of all the surface and groundwater consumed in the United States is used in the production of livestock.[25] For example, 90% of the water taken from streams in the Colorado River basin is used for irrigation to grow hay and other crops for livestock.[26] Currently, because of human water usage, many of the largest rivers on Earth no longer reach the sea during some parts of the year.[27]

In California, the number of gallons of water needed to produce 1 edible pound of:
Tomatoes 23
Lettuce 23
Potatoes 24
Wheat..... 25
Carrots 33
Apples..... 49
Oranges 65
Grapes..... 70
Milk 130
Eggs..... 544
Chicken 815
Pork..... 1,630
Beef ..... 5,214 [28]

We need to parent our governmental officials. Like they are the parents we've come here to teach.
Mary Catheren Bateson

Irrigation increases farmers' ability to perform the new phenomenon of monocropping (growing the same crop year after year on the same plot of land). Monocropping increases salinization (salt buildup). Twenty-five to thirty-five percent of the irrigated western U.S. croplands have excessive salinity.[29] Salt buildup from excessive irrigation lowers crop yields by 25 to 30%.[30] Irrigation also increases topsoil depletion that can eventually lead to desertification.[31]

The wars of the future might very well be fought over water rights and usage. As a matter of fact, U.S. intelligence services have already conducted research identifying ten potential flash points where war could break out over water.[32]

Land Utilization

Raising livestock requires the intensive use of vast amounts of land whether the animals are fed crops or allowed to graze on pastures, ranges and forests. Either way, land is often stripped of its productive capacity, in some cases permanently.

The Earth's surface land area is about 57 million square miles. The total worldwide land area being used to grow crops is approximately 7 million square miles.[33] The United States' total cropland area is over 500,000 square miles. The amount of land used to grow foods for human consumption in the United States is a little over 100,000 square miles. There are 640 acres in one square mile.

Total area of crops planted in the U.S.: **329.3 million acres**. [34]

Area planted in fruits and nuts for human consumption in the U.S.:
3.95 million acres. [35]

Area planted in vegetables for human consumption in the U.S.:
3.3 million acres. [36]

Area planted in food grains (includes wheat, rye and rice) for human consumption in the U.S.: **62.7 million acres**. [37]

Percent of total crops planted in the U.S. for direct human consumption: **21%**. [38]

Pounds of edible product that can be produced on an acre of prime land:

Cherries 5,000
Green beans 10,000
Apples..... 20,000
Carrots 30,000
Potatoes 40,000
Tomatoes..... 50,000
Celery..... 60,000
Beef ..... 250 [39]

Grazing the Earth

Government must step in to teach industry like parents who teach shortsighted self-destructive children towards greater responsibility.
Jean Mitchell Cousteau

Grass appeared on the surface of the planet approximately 60 million years ago. Prairie grass developed about 15 million years ago.[40] Grasslands are the largest single component of the Earth's vegetated lands.

Livestock were brought into the U.S. Southwest in the 1700s and into the Northwest in the mid 1800s. By the early 1800s in the Southwest and the late 1800s in the Northwest, virtually all plant communities that supported grass and sedge production were heavily stocked with cattle and sheep.[41]

Much of the rainfall in these areas comes from the moisture that evaporates from soil and plants.[42] Overgrazing diminishes vegetation and compacts the soil. Hence, overgrazing diminishes precipitation, causing less grass growth and less moisture-holding capacity of the soil. This process diminishes evaporation, which decreases rainfall, compounding a negative downward spiral.[43] Livestock grazing is associated with decreased water storage, increased runoff, excess topsoil erosion and hotter soil temperatures.[44] Hot, dry soil retards accumulation of organic matter in the soil which in turn decreases plant growth.[45]

Additionally, the decrease in water increases tree mortality and fire frequency.[46]

Pounds of vegetation needed to graze 1 pound of beef: **over 20 lbs.**.[47]

Pounds of vegetation an average grazing cow consumes per month:
700 to 800 lbs..[48]

Amount of beef that humans consume from an average cow weighing 800 lbs..:
less than half. [49]

Amount of land area in western United States grazed by livestock: **70%**. [50]

Amount of Earth's (ice-free) land grazed by livestock: **40%**. [51]

Amount of the world's meat that comes from the Earth's range lands: **nearly 25%**. [52]

Livestock grazing is the fourth major cause of species endangerment in the U.S. and the second major cause of endangerment of plant species.[53] Experts suggest that range soil is eroding 20 times faster than it is being replaced.[54]

Since the 1940s through the year 2000, the U.S. Grazing Service, the Interior Department, a former secretary of the Interior, and a former U.S. President, have all tried to raise grazing fees on public lands. All these attempts, for the most part, have failed or have been filibustered to death.[55] To add to this atrocity, more than 50% of federal grazing fees are returned to the ranching interests.[56] This is another example of a hidden subsidy that costs taxpayers their dollars.

The actual market rate for the right to graze each steer on public land is about $6.40 to $9.50 per month. This does not include the costs of environmental degradation. However, thanks to Congress, many cattle ranchers pay less than $2 per month per cow. Taxpayers even pay for the government to kill predators such as coyotes for ranchers.[57] In addition to paying absurdly low prices for cattle to graze on public lands, the livestock industry also receives governmental aid in the form of: reduced rates for energy, taxes and water; promotional assistance; and the guarantee of markets, as in government feeding programs, including the National School Lunch Program.

Grain Consumption

During this century, the fundamental shift in diet among Western nations from plant foods to animal foods has resulted in a parallel shift in world agriculture from human food grains to animal feed grains. Grain consumption by livestock is increasing twice as fast as grain consumption by people. The total global grain production in 2000 was about 1.86 billion tons.[58]

Family farmers are victims of public policy that gives preference to feeding animals over feeding people. This has encouraged the cheap grain policy of this nation and has made the Beef Cartel the biggest hog at the trough.

Howard Lyman, "Mad Cowboy"

Amount of grain grown in the U.S. consumed by livestock
Soy ..... **90.5%** [59]
Corn ..... **74.7%** [60]
Total (not including soy) ..... **74%** [61]
Total (including soy) ..... **80%** [62]

Amount of grain consumed by livestock around the world:
U.S...... **80%** [63]
Eastern Europe..... **64%** [64]
Soviet Union..... **56%** [65]
Brazil ..... **55%** [66]
Japan..... **48%** [67]
Amount of the world's grain production fed to livestock: **roughly half** [68]

Amount of nutrients wasted by cycling grain and soy through livestock:
Protein **90%**
Carbohydrate..... **99%**
Fiber ..... **100%** [69]

Pounds of grain and soy used to produce 1 pound of food from:
Beef..... **12 to 14 pounds**
Pork..... **6 pounds**
Turkey..... **4 pounds**
Chicken/Egg ..... **3 pounds** [70]

The amount of grain needed to produce an edible pound of animal flesh is a very controversial subject. The equations are as varied as they are intricate. For example, the National Cattlemen's Association suggests that only 4.5 pounds of grain is needed to produce a pound of beef. The laws of physiology and thermodynamics make such a claim dubious, and knowledgeable observers of feedlot operations report that this figure is simply not true.[71] Other estimates conclude that the weight of grain needed to produce a pound of beef is 7.5 pounds.[72]

In order to figure the actual amount of grain needed to produce a pound of edible beef, other factors need to be taken into account. For example, many conversions of grain to beef do not include the fact that over half the animal is not eaten, nor do they take into account the amount of grain needed to feed the female cow during pregnancy and suckling. Other factors that should be added into the equation are how much the meat packager, local supermarket, restaurant and home user trim before cooking. The cooking process further decreases the edible weight, and then even plate waste could be factored in.

Further research and equations are still needed in this area. However, whether it is 7.5 lbs.. or 16 lbs.. of grain needed to produce a single edible pound of meat (or any other animal food for that matter), compared to plant foods, animal foods remain the most inefficient and wasteful method of feeding the global population.

Distribution of Food & World Hunger

World hunger is a painful, persistent and needless reality. Currently, sufficient land, water and energy exist to feed well over twice the world's human population. Yet, roughly half of the world's grain harvest is fed to livestock[73] while millions of humans go hungry. In 1984, when thousands of Ethiopians were dying daily from hunger, Ethiopia continued growing and shipping millions of dollars worth of livestock feed to the United Kingdom and other European nations.[74]

> We got hooked on grain-fed meat just as we got hooked on gas-guzzling automobiles. Big cars "made sense" only when oil was cheap; grain-fed meat "makes sense" only because the true costs of producing it are not counted.
>
> *Frances Moore Lappé, "Diet for a Small Planet"*

Number of people around the world who lack sufficient food: **900 million**. [75]

Number of children around the world under 5 years of age who suffer from protein and energy deficiencies: **200 million**. [76]

Number of children under 12 years of age in the U.S. who go hungry each year: **5 million**. [77]

Average number of people around the world who die as a result of malnutrition and starvation every year: **20 million**. [78]

Number of children who die as a result of malnutrition and starvation every day: **38,000**. [79]

How frequently a child on Earth dies as a result of malnutrition and starvation: **every 2.3 seconds**. [80]

Number of people who could be nourished with the grain and soy used to produce the meat, poultry and dairy products eaten by the average American each year: **7**. [81]

If Americans reduced their intake of meat by just 10%, there would be enough water, land and energy freed up to feed 100 million people.[82] That is 5 times the number of people who starve to death each year.

In a world where 17% of people go hungry, the politics of meat consumption are becoming increasingly heated. Meat production is an obviously inefficient use of grain. The grain is used more efficiently when consumed directly by humans. The competition for grain continues between affluent meat-eaters and the world's poor.[83]

Global meat consumption is highly concentrated, dominated by only a few nations. Americans consume 5 times as much beef as the average human on the planet.[84] The U.S. and China, which contain 25% of the world's population, together to consume 35% of the world's beef, over half of the world's poultry, and 65% of the world's pork. If Brazil and the European Union are included, this group consumes over 60% of the world's beef, over 70% of the world's poultry, and over 80% of the world's pork.[85]

China is currently increasing its overall meat demand by 4 million tons per year. Of that amount, China's consumption of poultry meat is rising by 700,000 tons per year.[86] China is losing the capacity to feed itself.[87] When China turns to world markets on a continual basis, its food scarcity will become the world's scarcity.

Reducing global meat consumption to a fat intake of 30% among the affluent nations can save enough grain to feed the world's hungry, [88] ease the health care burden, improve public health, and take some pressure off rangelands and grainlands. It could allow the agricultural resource base to rejuvenate, allow more efficient use of declining per-capita land and water resources, and make grain more affordable to the world's hungry.[89]

Taxes, Subsidies, Pesticides & Water Pollution

Congress has taken special care of the livestock industry since the mid-1930s. Industry experts say that no consumer in the world pays as little for meat and milk as Americans do, and the principal reason is government subsidies.[90] Subsidies are provided to the livestock industries in the form of cash allotments, free or reduced land and water usage, low-cost energy and tax deductions.

Crops such as corn are heavily subsidized and highly regulated by the federal government. Government subsidies — American tax dollars — pay farmers to grow certain crops, especially feed grains like corn and soy. Therefore, farmers have a monetary incentive to produce more grain than is actually needed.

The following compelling evidence is excerpted from an article appearing in *Business Daily* entitled "Paying U.S. Farmers to Pollute."[91]

> A 1994 study looked at the effect of farm programs on North Carolina coastal plains. It found that ending these programs could cut nitrogen leaching fertilizer use to almost half. That same year another study looked at corn growers in the USDA's feed grain program. It found they use chemicals at a much greater rate than those who aren't in the program.
>
> In 1995, the free-market think tank Competitive Enterprise Institute (CEI) looked at the effect of farm programs. This group focused on the bread basket states of Ohio, Indiana, Illinois, Iowa, Nebraska and Kansas. CEI chose these states because they produce a large amount of subsidized crops.
>
> "We found a significant correlation between subsidies and chemical

It seems disingenuous for the intellectual elite of the first world to dwell on the subject of too many babies being born in second- and third-world nations while virtually ignoring the overpopulation of cattle and the realities of a food chain that robs the poor of sustenance to feed the rich a steady diet of grain-fed meat.

Jeremy Rifkin, "Beyond Beef"

and fertilizer use," said Jonathan Tolman, CEI's environmental policy analyst. There is a direct relationship between the subsidies a farmer gets and the amount of chemicals a farmer uses. The higher the subsidy the more chemicals used.

"The inescapable conclusion is that intensive use of chemicals and fertilizers is driven, in large part, by federal farm programs," Tolman said. Tolman states that ending farm subsidies would cut chemical use per acre by more than a third. And fertilizer use per acre would drop by nearly that much.

This approach would have a significantly positive effect on water pollution, because farms are the only businesses in the country that use chemicals and that are free from rules controlling water pollution. Farm runoff of soil and chemicals is the largest source of water pollution in the United States.[92]

Organic Farming & Sustainable Agriculture

Farms growing crops organically are teeming with life, collectively forming a sustainable biosystem and performing interwoven functions essential for continuous healthy soil. These crops taste better, being nourished by nature, not artificial fertilizers.

Well, I just think that it doesn't make sense that people eat meat and they know it is destroying their bodies and the planet. Because it's littering and wasting the planet up and they just do it anyway, because they're being careless. I mean, it just doesn't make sense to me.

6th grade student, Bayview Elementary School, Santa Cruz, CA

Organic farming, the old fashioned way of skillfully cultivating crops, is becoming one of the fastest growing segments of agriculture. Worldwide, sales of organic crops have risen to $30 billion annually93 and have reached $15 billion in the U. S.. [94] Ten thousand organic farmers are supplying food to ten million healthier customers. However, organic farming only comprises 2.5% of American agriculture. [95]

Today, with more people farming organically, there are more available materials, plant stocks, seeds, compost and other similar products to support this growing industry. Organic farming technology has improved to the point that organic yields are often as good as yields obtained by conventional methods but without contaminating the soil. [96] Farmers in the Midwest who produce grain and soybeans organically are finding that their net profits equal or surpass those from conventional production, even when they do not charge the premiums that organic crops generally command. Profits increase when expenditures for fertilizers and pesticides decrease. [97]

Organic farming decreases soil erosion and compaction, salinization and many other forms of degradation. Organic farming reduces water pollution, conserves water and soil, improves soil structure, preserves natural nutrients, enhances biodiversity, and even improves the health of farm families and workers. Land that is managed to produce crops centuries into the future represents sustainable agriculture.

USDA's National Organic Program

As of October 2002, after twelve years of lobbying, the United States Department of Agriculture now regulates the organic certification process. Some of the products referred to as organic under the USDA's national standards are not

truly "organic" as the term is defined in the dictionary (Webster's II, New Riverside Dictionary). The USDA's definition of "organic production" is, "A production system that is managed in accordance with the Act and regulations in this part to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity."

Among the regulations is a subsection of the USDA's Final Rule for the National Organic Program called "The National List of Allowed and Prohibited Substances". Within that list there are sections titled "Synthetic Substances Allowed for Use in Organic Crop Production," "Synthetic Substances Allowed for Use in Organic Livestock Production," and "Synthetic Substances Allowed for Use in Organic Processed Products." The lists go on for 12 pages and include such items as: hydrogen peroxide, soap-based herbicides, newspaper or other recycled paper, copper sulfate, liquid fish products, streptomycin, tetracycline, biologics, vaccines, procaine, waxes, and so on.[98] All of the substances on the National List were reviewed and approved by the 15-member National Organic Standards Board, and were subjected to several rounds of public comments. Most of the substances were previously allowed in organic production prior to the USDA regulation. Many substances previously allowed, including antibiotics for livestock and fungicide seed treatments, are no longer allowed.

As we move on into this so-called biotech revolution and we start producing more and more transgenic manipulations, we'll start seeing pieces of DNA interacting with each other in ways that are totally unpredictable... I think this is probably the largest biological experiment humanity has ever entered into.

Ignacio Chapela

The USDA's National Organic Program includes: Crop Standards, Livestock Standards, Labeling, Penalties, and a list of Allowed Synthetic and Prohibited Non-Synthetic Substances. These subcategories are defined in the following manner:

Crop Standards – Land will have no prohibited substances applied to it for at least 3 years before harvest of a certified organic crop. Crop rotations and cover crops can be supplemented with animal and crop waste materials and allowed synthetic materials. Preference will be given to the use of organic seeds and other planting stock. However, a farmer may use non-organic seeds and planting stock under specified conditions. Fungicide treated seeds and genetically engineered seeds and planting stock are not allowed. Crop pests, weeds, and diseases will be controlled primarily through management practices including physical, mechanical, biological, botanical, or synthetic substances approved for use on the National List.[99]

A National Academy of Sciences report concluded that American farms, if carefully managed and planted with diverse crops, could, with little or no application of chemicals, be as productive as – and more profitable than–farms dependent on pesticides and inorganic fertilizers.

Kenneth Brower, "One Earth"

Livestock Standards – Animals for slaughter must be raised by organic management from the last third of their gestation, or no later than the second day of life for poultry. Producers are required to feed livestock agricultural products that are 100% organic, but may also provide allowed vitamins and mineral supplements. Organically raised animals may not be given hormones to promote growth, or antibiotics for any reason. Vaccines may be used and animals must have access to the outdoors.[100]

Labeling – Products labeled "100% organic" must contain organically produced ingredients (excluding water and salt). Products labeled "organic" must consist of at least 95% organically produced ingredients (excluding water and salt).[101] Products that contain between 70 to 95% organic ingredients can be labeled "made with organic ingredients" on the front panel. Processed products that contain less than 70% organic ingredients cannot use the term organic anywhere on the principal display panel, but may identify the organic ingredients on the ingredient list.[102]

Penalties – A civil penalty of up to $10,000 per violation can be levied on any person who knowingly sells or labels an organic product that is not produced and handled in accordance with the National Organic Program's regulations.[103]

In Summary

There is a variance of opinions pertaining to the USDA control of organic standards on a federal level.

Many organic farmers are concerned that the new expenses and labor involved with the certification process will make their jobs more difficult, and additionally fear that large-scale mechanized agriculture will once again take over their businesses and livelihoods. Ray Green, of the California Department of Food and Agriculture, declared that, "This is the first national standard that regulates food from the field to the fork for consumers."[104] William Osborne, an organic farmer from Asheville, NC stated, "The new USDA National Organic Program is not in the spirit of what organic agriculture is to many organic growers, but at least it prohibits the use of pesticides".

The USDA's National Organic Program certainly does suggest a far better choice than the standard commercial food products now being offered to the public.

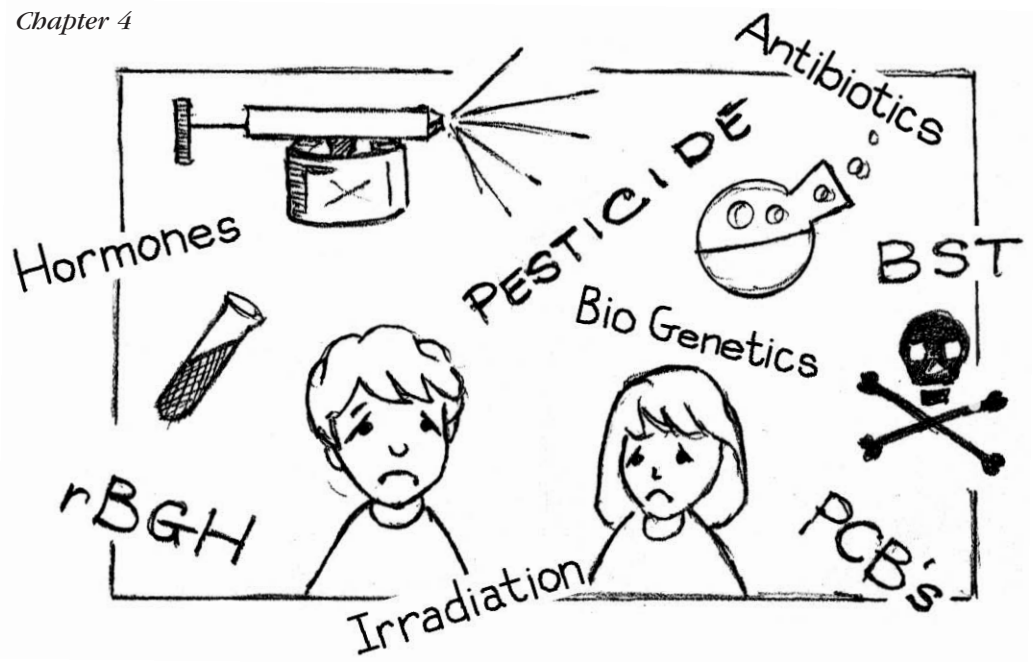
For the latest information on what is happening in the organic world, contact: www.organicconsumers.org; www.ccof.org; www.newfarm.org; www.organicecology.umn.edu; or www.ota.com/legislat.htm

For a full copy of the regulation and to track new regulatory developments, visit www.ams.usda.gov/nop

Jim Riddle, Organic Outreach Coordinator, University of Minnesota www.organicecology.umn.edu and Ronnie Cummins, National Coordinator for Organic Consumer Association reviewed and helped to write this section on the USDA's National Organic Program.

Some politicians ignore massive compilations of data and hope that an endless series of technological fixes will keep us out of trouble–ignoring the trouble the human race is already in, and the limits of past fixes.

Bruce Sundquist



Food Contamination

Chemicals in our food, drugged food, irradiated food, bioengineered food and processed food: what are the consequences?

Pesticides Increase Cancer Risks

As early as 1983, a United Nations Report estimated that there are approximately 2 million pesticide poisonings annually, nearly 4 per minute worldwide. Dozens of pesticides sprayed on our food are known to cause cancer.[1] In the early 1900s, 1 out of every 33 Americans died of cancer. Today, 1 out of every 3 Americans dies of cancer.[2] Exposure to modern pesticides, which didn't exist in the early 1900s, is thought by many to be one of the primary reasons.[3] Of the 80,000 pesticides and other chemicals in use today, 10% are recognized as carcinogenic. Cancer-related deaths in the U.S. increased from 331,000 in 1970 to 521,000 in 1992, with 30,000 deaths attributed to chemical agriculture.[4] The known carcinogen DDT remains one of the most commonly detected pesticides in human breast milk samples.[5] Many other pesticides and fertilizers have not even been fully tested to know their effects on humans.

Children born today are exposed to these chemicals even before birth. Richard Wiles, who directed the Environmental Working Group study using the Environmental Protection Agency methodology, stated that children accumulate between 25 and 35% of their lifetime cancer risk from carcinogenic pesticides by the age of 5.[6] In 2000, the National Academy of Sciences linked childhood developmental behavior problems in the U.S. to pesticides.[7]

In 1991, the United States exported over 4 million pounds of pesticides that have been banned, canceled, or voluntarily suspended for use in the United States, including 96 tons of DDT. These exports included 40 million pounds of compounds known to be endocrine disrupters.

Theo Coldburn, Dianne Dumanoski and John Peterson Myers, "Our Stolen Future"

In 1960, U.S. farms used 46 pounds of chemical fertilizer per acre. In 1995, the average amount used was 129 pounds per acre. Grain farmers increased herbicide use ten times between 1964 and 1982. Pesticide use has almost doubled since 1964, and feed crops such as corn and soybeans account for most of this jump. Corn receives more total herbicides, insecticides and chemical fertilizers than any other crop grown in America.[8] Eighty percent of this corn is routinely fed to livestock.[9]

Some people think that most of our pesticide exposure comes from fruits and vegetables. However, the major source of pesticide residue in an American's diet is from meat, poultry, and dairy products.[10] The reason is that animals eat grains with pesticides and these pesticides are bio-accumulating chemicals that are stored in body tissues. When we eat animals, we receive a concentrated dose of what they have ingested during their lives. Our bodies then become storehouses for these chemicals.

Antibiotics, Hormones & Biogenetics

Fifteen million pounds of antibiotics are used in livestock production each year,[11] over half of all antibiotics used in the U.S.[12] Because of the routine feeding of antibiotics to U.S. livestock, European countries have banned nearly all imports of American beef. Many forms of livestock feed are often laced with antibiotics and hormones just to keep the animals alive long enough to reach marketable weights.[13]

In 1997, the World Health Organization called for a ban on using antibiotics to promote livestock growth. Other public health agencies, including the U.S. Center for Disease Control and Prevention, have raised concerns about administering medically vital antibiotics to fatten livestock. Using antibiotics to make livestock grow faster makes it more likely that bacteria will become more resistant and that the antibiotics we need to protect health will become ineffective. A 1997 study by the Center for Disease Control and Prevention stated that, "more than one-third of the reported cases of a particular type of Salmonella that causes food poisoning were caused by Salmonella bacteria resistant to five important antibiotics used to treat the disease. Drug resistance to Campylobacter, the most common cause of food-borne illness increased from zero in 1991 to 20% in 1999."[14]

At the feedlot, cattle are administered hormones and steroids through small time-released pellets implanted in their ears. These hormones and steroids are slowly released into the bloodstream, stimulating the growth of muscle and fat tissue.[15] Over 95% of all feedlot-raised cattle in the U.S. are currently administered growth-promoting hormones.[16] Commercial estrogens will increase daily weight gain of animals by 8 to 15% and improve feed efficiency by 5 to 10% in beef cattle or lambs.[17] The U.S. is the only industrialized country to allow the implantation of hormones into cows.

The immune system of every unborn child in the world will soon be adversely and irrevocably affected by the persistent toxins in our food, air, and water.

Paul Hawken, "The Ecology of Commerce"

Milk is sometimes contaminated with antibiotics, excess Vitamin D, pesticides, herbicides, growth and sex hormones and bovine leukemia virus. In addition to these contaminants, the U.S. Food and Drug Administration (FDA) has approved bioengineered bovine growth hormone (BGH) to be administered to dairy cows in order to increase milk production.

Many people of the United States have consistently shown that they want to know which foods are biogenetically engineered so that they can choose whether or not to consume them at the point of purchase. But the FDA continues to ignore the public's demands. Manufacturers of genetically engineered foods are still not

required to label their foods and the majority of the American public is still unaware that they are the unsuspecting recipients of these questionable genetically engineered foods in the supermarkets.

After 20 years of research, biotechnologists have not produced a single high-yield variety of wheat, rice or corn.[18] Corn and soy are commonly subjected to genetic engineering,[19] and remember: most of the corn and soy grown in America is fed to livestock. (For more information, visit: thefutureoffood.com/*THE FUTURE OF FOOD* is a documentary film offering an in-depth investigation into the disturbing truth behind the unlabeled, patented, genetically-engineered foods that have quietly filled U.S. grocery store shelves for the past decade. Also visit Pure-food.com.)

Thirty-five percent of the food consumed in the United States has detectable pesticide residues.

Theo Coldburn, Dianne Dumanoski and John Peterson Myers, "Our Stolen Future"

BGH – Bovine Growth Hormone

Since February 3, 1994, Americans have found themselves the unsuspecting consumers of milk, cheese, butter, yogurt, ice cream, beef and infant formula produced using artificial, genetically engineered hormones. Bovine Growth Hormone (BGH) is harmful to cows and a disaster for human health, the environment and small farmers.

BGH makes cows produce 10 to 20% more milk, but it also increases their risk for an infection called mastitis. BGH injections cause cows' udders or teats to become infected, releasing increased levels of pus into the milk. Besides more pus, residual levels of antibiotics in the milk can rise because the only cure for mastitis is to inject the cows with powerful antibiotics. This new BGH milk will also be higher in fat.

Presently, the FDA does not require that BGH-tainted products be labeled as such, although farmers and dairies will be permitted to voluntarily label and certify their products as being free of synthetic BGH.

BGH promotes energy-intensive, industrial-scale dairy production which, among other things, increases groundwater pollution in areas with dairies. The use of BGH puts small dairy farmers and fragile rural economies in jeopardy. While high-tech corporate factory farmers will benefit financially from putting many family farmers out of business, our society as a whole will suffer.[20]

The February 1995, issue of *Food R & D*, an important industry publication, quotes a survey that found that 92% of the public want mandatory labeling for BGH.

Norway, Sweden, Denmark and the Netherlands are among the European countries that have banned BGH. The European Parliament called for a worldwide ban in 1989. Alberta, British Columbia and Ontario have outlawed BGH.

Z Magazine

Food Inspection

According to officials at the National Center for Disease Control and the FDA, an estimated one-third of all food poisoning comes from poultry or red meat, yet government inspectors have just seconds to inspect a cow or steer carcass. The speed and pressure of the assembly line makes disease inspection highly inefficient. Only 3% of all meat is tested for residues, hormones and pesticides.[21] Chickens hung on conveyor belts move past inspectors so fast that disease detection is virtually impossible. Ninety-one birds a minute whiz past USDA inspectors who have continually voiced concern over these sped-up production lines. The inspectors complain that this practice allows unsafe poultry contaminated with salmonella to receive the USDA's stamp of approval.[22] What makes the entire inspection system an exercise in futility is that the microbiological threat they are looking for is invisible to the naked eye. The bacteria are detectable only by tests that

The oath I took to be an inspector said if I ever saw anything wrong I was supposed to report it. But today I can't report anything. Today, if you blow the whistle, you're in trouble with the inspection service. I feel the oath I took is violated every day I work.

William Freeman, a 25-year USDA inspector, Ellijay, GA

require 48 hours to yield results. By the time results for a particular carcass were available, the meat would already have been shipped and eaten.

Food Poisoning

One bite of a fast-food hamburger can contain beef from four countries, and only 2% of imports are inspected.

Newsweek

Salmonella, E. coli and other infectious bacteria found in fecal contamination have caused tragic deaths and illnesses. The Center for Disease Control considers E. coli infection to be a leading public health threat.[23] Salmonellosis makes from 800,000 to 4 million people sick each year. It can cause stomach-aches, diarrhea, chills, nausea and sometimes death.[24] Other causes of food contamination are chicken feathers, viscera and wastewater which are routinely recycled back and added to feed. Industry experts believe that along with unclean slaughtering and processing techniques, this forced cannibalism is leading to the rampant Salmonella epidemic in poultry plants.[25]

Nearly half the fish tested in a six-month investigation by the Consumers Union were found to be contaminated by bacteria from human or animal feces. This problem is suspected to be the result of poor sanitation practices in one or more points along the fish handling process.[26] In addition, seafood processors can go 4 years without an FDA inspection.[27]

PUBs

According to *Consumer Reports*, a notable incidence of unacceptably high levels of polychlorinated biphenols, or PUBs, carcinogenic hydrocarbons released by industries into rivers and oceans, were often found in certain species of fish that were tested. Eating food tainted with PUBs is considered a chief reason for the sperm count among American men to be lower than 30 years ago. Today, one-third of the world's fish catch is fed to cattle that absorb the PUBs and pass them on to humans who eat this beef.[28]

Food Irradiation

Levels of irradiation approved by the government for meats are too low to kill all bacteria.

University of California at Berkeley, Wellness Letter

This proposed solution to food contamination and the goal of prolonging the shelf life of our nation's food is a tactic to benefit the packager, storehouse and marketer. A product change such as this should undergo years of intensive testing before it is foisted upon the public. This potentially dangerous method fails to kill 100% of the bacteria. Additionally, when food is irradiated the radiation breaks up the molecular structure of the food and creates a whole new set of chemicals known as "unique radiolytic products" (URPs). These URPs include benzene, formaldehyde and a host of known mutagens and carcinogens. Irradiation kills vitamins, friendly bacteria and enzymes, effectively rendering the food "dead" and therefore useless to your body. In addition, some of the friendly bacteria that are killed produce odors indicating spoilage and other friendly bacteria naturally control the growth of harmful bacteria. (For more information please visit Pure-food.com and Irradiation.com)

Mad Cow Disease, BSE & CJD

"The UN Food and Agriculture Organization (FAO) has urged countries around the world, not just those in Western Europe, to be concerned about the risks of Bovine Spongiform Encephalopathy (BSE) and its human form, the new variant Creutzfeldt-Jacob disease (nvCJD). FAO called for action to protect the human population, as well as the livestock, feed and meat industries. . . . There is currently no method of diagnosis at early stages of infection and no cure for the disease, neither in animals nor humans. . . . All countries which have imported cattle or meat and bone meal (MBM) from Western Europe, especially the UK, during and since the 1980s, can be considered at risk from the disease," according to the UN agency. [29]

The guts of slaughtered chickens are often added to animal feed for herbivores to provide extra protein, spreading salmonella and other bacteria.
Newsweek

Mad Cow Disease or Bovine Spongiform Encephalopathy (BSE) was first diagnosed in England in 1986. BSE is an incurable, brain-destroying dementia. The disease has a long incubation time, so the results will be felt over time. The epidemic required the slaughter of 3.7 million British cattle and collapsed Great Britain's cattle industry. Afflicted cows display aggressive, confused behavior, appearing to go mad. Until 1990, most afflicted cows were used for human consumption. This disease has already infected cattle in 11 European nations.

When humans eat BSE-contaminated beef they risk becoming sick and may die of the human form of BSE. This disease, nvCJD, is believed to be responsible for 90 deaths in Europe as of February 2001. Scientists think that the disease was spread in cattle which were fed rendered parts of sick cows, and then jumped the species barrier to humans.[30]

Dr. Maura Ricketts, of the World Health Organization (WHO), said, "Our concern is that there was sufficient international trade in meat, bone meal and live cattle that there has already been world wide exposure. We think we have to review how feed moves around the world because of the importance of cattle feed in the transmission of BSE."

In the U.S., government and livestock industry representatives have insisted that our domestic herds are free of Mad Cow Disease. Few reports mention, however, that the very practice that caused and fostered BSE in England has been commonplace on American farms for half a century. In 1989, approximately 800 million pounds of slaughterhouse remains were fed to U.S. beef and dairy cows as an inexpensive protein supplement designed to boost milk and meat production. American dairy farmers have been feeding cows to cows as a supplement containing fat, bone meal, blood and meat protein for 50 years.

Researchers hypothesize that the disease is located in the animal's central nervous system. The practice of feeding cows to cows, and separating cow brains and central nervous systems was supposed to be banned in the United States; however, FDA officials admitted that hundreds of U.S. animal feed producers have not properly labeled their products as containing items from the central nervous system.

While the UN health agency sees a global mad cow risk, the U.S. has failed to close dangerous loopholes in U.S. regulations regarding byproduct feeding which has caused this disease to spread in other countries.[31]

Another similar fatal disease called Chronic Wasting Disease (CWD) is affecting wild game. According to a January 2001 press release by the Nebraska Game and Parks Commission, "A progressive, fatal disease of the nervous system of cervids such as mule deer, white-tailed deer and elk, CWD was first identified in the late 1960s in captive deer and elk research herds in Colorado and Wyoming. It has since been found in wild deer and elk in northeastern Colorado and southeastern Wyoming and in captive deer and elk herds in 5 western states and Saskatchewan.

. . . There is no test for live animals and it may take up to 18 months for infected animals to exhibit clinical signs of the disease. . . . Animals infected with CWD display changes in behavior and progressive loss of body conditions. Symptoms include weight loss, incessant drinking and urination. An infected animal often stands listlessly, head down and ears drooping, with saliva dripping from its mouth. The disease is always fatal."

On May 12, 1997, *ABC World News Tonight* reported that, "people may not be contracting Alzheimer's as often as we think. The bad news is that they may be getting something worse instead. . . . This is about Creutzfeldt-Jacob Disease (CJD). It is fatal. It destroys the brain, and what is worse, it is infectious."[32]

Mad Cow Disease, BSE, CJD, CWD and Alzheimer's disease and their connection to each other is a very controversial subject among experts. Time will tell who are the "alarmists" and who are in "denial." It surely presents another excellent reason why eating more plant foods is a wise choice.

For the latest news on this most disturbing subject, contact www.madcow.org and www.organicconsumers.org and read *Mad Cow USA: Could the Nightmare Happen Here?* by John Stauber and Sheldon Rampton.

Chemicals Endangering Reproduction

Many pesticides pose invisible health hazards as well, whose consequences we have yet to recognize. Pesticides can cause behavioral changes in animals in extremely low concentrations. A pesticide called Sevin even in an infinitesimal concentration of one billionth can change the behavior of large schools of fish: their movement becomes uncoordinated. Yet we are pouring billions of pounds of pesticides into the environment each year.

Kenny Ausubel, "Seeds of Change: The Living Treasure"

For the past 30 years, fears about toxic chemicals have focused primarily on cancer. Now there is compelling research documenting how man-made chemicals are severely undermining the reproductive health of wildlife and humans worldwide. Dr. Theo Coldburn, a leading expert on chemical hormone disrupters, author of *Our Stolen Future*, and senior scientist with the World Wildlife Fund, states that some human-made chemicals are so toxic that quantities of just a few parts per trillion can alter the development of human cells. Scientists have uncovered evidence demonstrating how some man-made chemicals, from pesticides to plastics, interfere with hormones and the development of animal and human reproductive systems.

The World Wildlife Fund states that at least 250 hormone-disrupting chemicals are now found in the body fat of every living human being, even in people living in the remote Arctic, over a thousand miles from pollution sources. To date, scientists have identified 51 human-made chemicals that scramble hormonal communication, while tens of thousands more chemicals have never even been tested for this capacity.

Chemicals like DDT, dioxin, PUBs, furans and countless others can cause hormonal chaos by affecting adrenal glands. This inhibits the body's ability to produce steroids, and interferes with testosterone and thyroid metabolism. As an indicator that we are being affected, human sperm counts have dropped by 50% worldwide over the past two generations.

DDT, dioxin, PUBs, and other hormone-disrupting chemicals can persist in the environment for decades. Dozens of species, from Florida alligators to Lake Michigan mink to Baltic Sea fish, have suffered documented cases of shriveled genitalia, female sterility and other reproductive disorders. Deformities, unhatched eggs, and abnormal nesting patterns have also been observed among wildlife, especially otters, snapping turtles and other top predators of Great Lakes fish. Often adults in a species appear healthy, while their offspring do not, suggesting that toxic chemicals in the parents' bodies act as hand-me-down poisons that affect the unborn and very young.

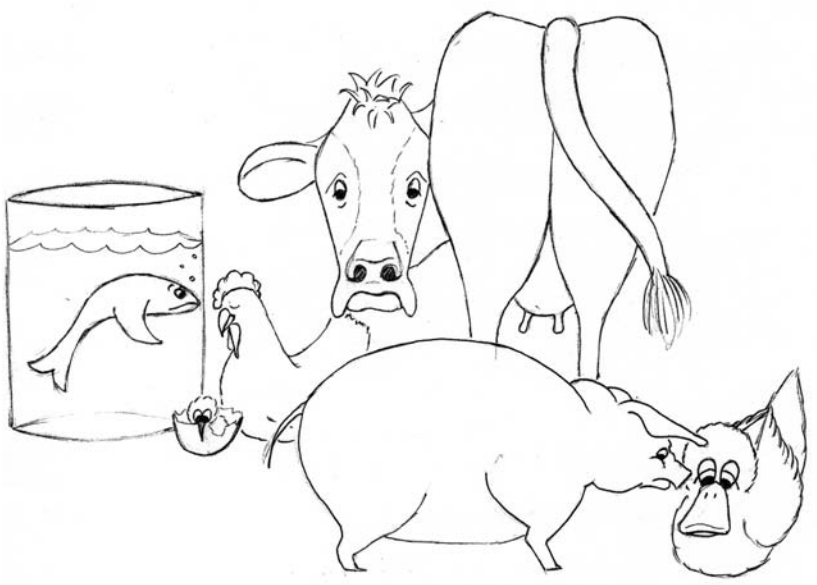
Hormone disruption from synthetic chemicals may be already jeopardizing the survival of some animal populations such as the Florida panther. Dozens of other species have shown signs of derailed development such as birth defects, abnormal sexual development, aberrant behavior, and a wasting syndrome that causes seemingly healthy offspring to wither and die. Leading biologists have linked these symptoms to hormone-disrupting chemicals. Some scientists believe that these chemicals are implicated in the worldwide decline of frog populations and the dramatic die-off of dolphins and seals.

Because animal and human endocrine systems and hormones operate in basically the same way, these disorders of other species could be an indicator of what is in store for human beings.

Coldburn's research further demonstrates how breast cancer could be linked to estrogenic pesticides and other human-made chemicals because of their ability to proliferate breast cancer cells. There is a clear risk that we may be inadvertently destroying the health, intelligence, and fertility of future generations.

Human-made chemical hormone disrupters are most commonly found in: pesticides that not only leave residues on foods but also runoff into groundwater and often make their way into drinking water; plastics used to process, package, store, and cook food; animal fats, such as those found in meat, butter and cheese, where contaminants tend to accumulate; and fish from contaminated waters, especially species containing high amounts of fat.[33]

Chapter 5



Animal Welfare

Many people believe that cows live in fields and chickens live in barnyards among other animals. However, this is far from the case today.

Cows

Generally, when a dairy cow gives birth to a male calf, he is immediately shipped to a veal factory and put in a stall so tiny that he cannot move except to collapse his legs into a sitting position. For his entire short life, he is tied by the neck to prevent him from almost all bodily movement, including licking himself. He is fed a diet deliberately lacking iron and roughage. Antibiotic injections keep him free from the symptoms of diseases caused by this deficient diet and lack of exercise. Growth hormones may be administered to speed weight gain and he is kept in darkness except during feeding time. Four months later he is killed to create a "delicacy" called veal.[1] As John Robbins, author of *Diet for a New America* so succinctly puts it:

> The average dairy cow living on today's modern milk farm is bred, fed, medicated, inseminated and manipulated to a single purpose, maximum milk production at minimum cost. She lives with an unnaturally swollen and sensitive udder and is milked up to three times a day. She is kept almost constantly pregnant and her calves are taken from her almost immediately after birth. "Contented" is the characteristic most often attributed to the cow. However, cows in some factories are fed tranquilizers to calm their frazzled nerves.[2]

In the U.S., today's factory dairy cow is injected with hormones to produce 2 to 3 times more milk than yesterday's pasture cow. After about 4 years, milk production declines and the spent cow becomes hamburgers and steaks. A cow's natural life

span is 20 years.[3]

The cow's transportation to the feedlot is a long truck ride that can last for days without food or water, with exposure to extreme weather conditions. Many of them die on the road. Cows get trampled, often suffering broken backs, necks and legs. Transported animals frequently receive brutal handling, getting shocked with electric prods, beaten, kicked, and dragged by the leg or neck.[4]

In the U.S. beef industry, some 900,000 farms produce calves, which are typically shipped to one of 46,000 feedlots for finishing, and later to one of 81 large plants for slaughter.
Newsweek

Cows stand in mud and dirt for 4 months, and are fed a mixture of grains containing antibiotics and residues of herbicides, pesticides and insecticides.

From the feedlot the cows go for another truck ride to the slaughterhouse. As they enter the slaughterhouse a stun gun is applied to their heads. They sink to their knees, and a chain is hooked onto a rear hoof, mechanically hoisting each animal upside down. As they kick and scream, their bones break from the weight of their bodies. Workers with long knives then slit each animal's throat, leaving the animal to bleed to death hanging upside down.[5] Then they are slid down to the next station, where their bodies are skinned, chopped into quarters, and tumors cut out; then they are packaged and shipped all around the country. Every 24 hours, approximately 114,000 cows are slaughtered in the United States.[6]

Chickens

The majority of today's chickens are crowded together in factory farms. A typical egg factory farm holds 80,000 hens per warehouse. Baby chicks, only days old, are de-beaked by a hot knife machine. This procedure keeps them from pecking and scratching at each other in their close confinement and guarantees those "scratch-free" chicken parts manufacturers brag about. Four to five chickens are squeezed into each 12"x 18" metal cage where they are imprisoned for their entire six-to-eight-week life.[7] These cages are stacked one on top of the other, and the excrement from above continually drops down on the chickens in the cages below. A chicken under normal conditions could live as long as 15 to 20 years.

An alien ecologist observing Earth might conclude that cattle is the dominant animal species in our biosphere.
David Hamilton Wright, Ph.D., Emory University biologist

In egg factories all over the country, male chicks are weeded out and disposed of by "chick pullers." Five hundred thousand male chicks a day are literally thrown together into plastic bags where they are crushed and suffocated. They are then either thrown away or put through a grinder, often being ground up while still alive. These ground-up chicks are often added to feed, and fed to their sister chicks.[8]

When ready for slaughter, the chickens are moved into other cages, then loaded onto trucks and shipped to the slaughterhouse. They are deprived of food for 30 hours before their slaughter.[9] This is to save money, because any food given to them during this time would not be converted into flesh.

The chicken's throats are slit with a razor blade knife and they are then thrown into a holding bin where their blood slowly drains. The chickens are then thrown into a tumbler that both washes and de-feathers them. Every 24 hours, approximately 25 million chickens are slaughtered in the United States.[10]

Pigs

Pigs in today's indoor factories are likely to be stacked 2 and 3 decks high, each imprisoned alone in a bin. For their entire lives they live in a space barely big enough for their bodies. They stand on metal slats or concrete that cripples the legs of half of them before slaughter.[11]

With every one of their natural instincts restricted and unfulfilled, pigs in

today's factories take to "tail biting." Bored and frustrated, they may be driven to gnawing on other pigs' tails and hindquarters. If not prevented, a mauled pig may die from an attack and then be eaten by his attackers. Maimed pigs cannot legally be sold so they become a problem to the producer. The answer? Pig tails are routinely amputated shortly after birth, and pigs are kept in total darkness except for feeding time.[12] Every 24 hours, approximately 323,000 pigs are slaughtered in the United States.[13]

I care not much for a man's religion whose dog or cat are not the better for it.

Abraham Lincoln

Ducks

Ducks and geese are force-fed huge quantities of grain 3 times a day with a feeder tube. This painful process goes on for 28 days before slaughter, sometimes causing their stomachs to burst. Livers, diseased and swollen to several times their normal size by overfeeding, are processed into a delicacy that sells for about $12 an ounce. This is called *paté de foie gras*. About 8,000 tons are produced worldwide per year.[14] Every 24 hours, approximately 74,000 ducks are slaughtered in the United States.[15]

Fish

The waters of the Earth are being strip-mined by overfishing. One of the main contributing factors to this crisis are huge factory fishing vessels called trawlers. These $40 million fishing boats, with their nets as wide as 12 Boeing 747 airliners, indiscriminately ensnare virtually every living thing in their path, catching up to 500,000 pounds of fish in just one tow of the net. Once they make their pass they leave local fishers facing the consequences of a wasted ecosystem.[16]

Factory trawlers roam the world's oceans for months, fishing, processing and storing fish 168 hours a week.[17] In 1998, 1% of the world's 3.5 million fishing boats accounted for at least half of the global catch.[18]

We need to change the United Nations into the United Species, and allow animals and trees and the entire natural world the same rights as humans. Only when this happens will we have world peace.

Thomas Berry, "The Dream of the Earth"

Now, fifteen out of the Earth's seventeen major marine fishing zones are at their limits or in decline, and the majority of the world's near-shore fisheries are overexploited.[19] Atlantic fishing grounds that sustained 10 generations of fishers are said to be largely barren.[20] Demand for these ocean fish contributes to over 200,000 needless deaths of mammals and birds caught in fishing nets each year.[21]

In the last decade, marine fish caught globally have totaled around 85 million tons per year. Both freshwater and aquaculture factory-farmed fish "catch" have each been around 14 million tons per year.[22]

The United Nations Food and Agriculture Organization (FAO) estimates that 27 million tons per year of non-target fish species are thrown back into the ocean, usually dead or dying. The worst offending industry is shrimp trawling, which accounts for 11.2 million tons of by-catch per year.[23]

Globally, $124 billion a year is spent catching $70 billion a year worth of fish. Government subsidies make up the $54 billion-a-year difference.[24] Now, because of this negligent overfishing, global marine fish and shellfish production are down by 80%.[25]

Today 58% of our coral reefs are imperiled by humans.[26] These coral reefs are a vital part of Earth's life support systems. They are among the largest and oldest living communities of plants and animals on earth, having evolved between 200 and 450 million years ago.[27] Most coral reefs are 5,000 to 10,000 years old[28] and are home to 25% of all marine fish species.[29]

As for freshwater fish, it is estimated that 37% of the world's freshwater fish are

I have never yet happened upon a trace of evidence to show that any one animal was ever made for another as much as it was made for itself.

John Muir

either threatened or already extinct. In Europe the estimate is as high as 42%.[30] "A mass extinction is occurring in our lakes and rivers," said Anthony Ricciardi of Dalhousie University in Halifax, Nova Scotia. Common freshwater species from snails to fish to amphibians are dying out 5 times faster than terrestrial animals.[31]

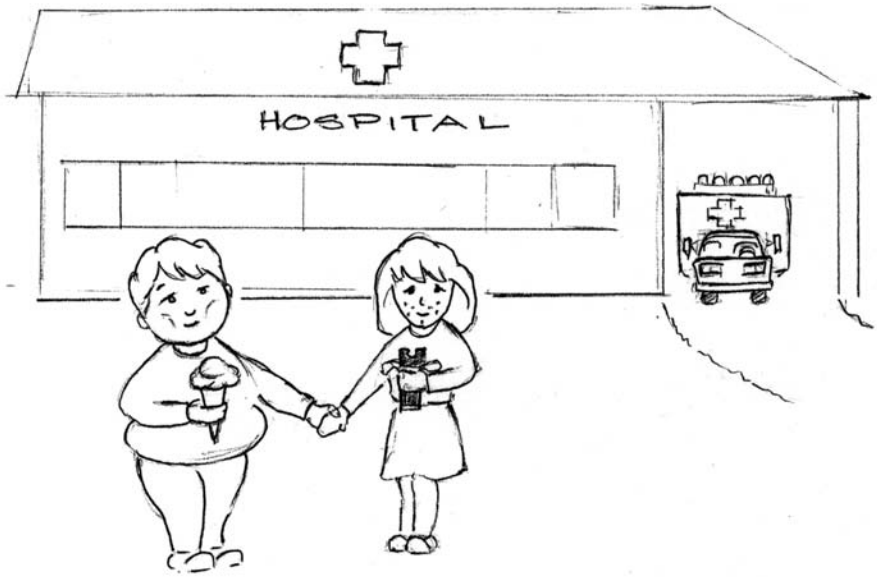
Thirty million tons of marine life (36% of the world's "catch") is fed to the world's livestock every year.[32]

Fish are high in animal protein, which contribute to osteoporosis and kidney disease.[33] Fish are high in saturated fat and cholesterol, the main culprits in causing heart attacks and strokes. The fat in fish also increases the risk of cancer and gall bladder disease.[34]

In fact, if one person is unkind to an animal it is considered to be cruelty, but where a lot of people are cruel to animals, especially in the name of commerce, the cruelty is condoned and, once large sums of money are at stake, will be defended to the last by otherwise intelligent people.

Ruth Harrison, "Animal Machines"

Chapter 6



Foods & Disease

Americans spend over $1.4 trillion a year for health care.[1] In 1988, the U.S. Surgeon General reported that 68% of all deaths in this country were caused by diet-related diseases.[2] Diets high in saturated fat, protein and cholesterol, substances found in rich supply in meat, poultry, fish and dairy products are major suspects in diseases such as heart attacks, strokes, adult-onset diabetes, osteoporosis, kidney disease and cancers of the breast, prostate and colon. These diet-related diseases eventually kill the majority of our population.[3]

Less life-threatening disorders such as high blood pressure, impotency, food allergies, psoriasis,[4] rheumatoid arthritis,[5] obesity,[6] constipation,[7] kidney stones,[8] hemorrhoids,[9] hiatus hernia,[10] diverticulitis[11] and irritable bowel syndrome[12] are also linked to a high-fat, low-fiber diet based on meat, poultry, fish and dairy products. These diseases create widespread suffering and add to already high national health care costs.

Health care costs and insurance premiums are taking a huge financial chunk out of the income of the average American family. When all the effects of eating a meat-based diet are totaled, it's easy to understand that the costs are much more than the price paid for the products at the store.[13]

Treatment vs. Prevention

Most doctors today learn how to fight and treat disease with drugs and/or surgery. Their primary purpose is to treat diseases once they have been established.

The Dietary Guidelines are based on extensive medical research that has shown that Americans' typical dietary habits can result in obesity, heart disease, stroke, adult-onset diabetes, certain cancers, and other chronic, degenerative diseases.

"The diet of the American people has become increasingly rich—rich in meat, other sources of saturated fat and cholesterol, and in sugar... It should be emphasized that this diet which affluent people generally consume is everywhere associated with a similar disease pattern—high rates of ischemic heart disease, certain forms of cancer, diabetes, and obesity—epidemic in our population... This diet is the major cause of death and disability in the United States... We have an obligation to inform the public of the current state of knowledge and to assist the public in making the correct food choices. To do less is to avoid our responsibility."

From Dietary Goals for the United States, Second Edition, 1977. Statement by D.M. Hegsted, M.D., Professor of Nutrition, Harvard School of Public Health

Today's average physician receives minimal nutritional training during his or her entire four years in medical school. In fact, the majority of U.S. medical schools require no formal nutritional education.[14] The unfortunate reality is that the role diet plays in preventing and even healing disease is a mystery to most physicians.

This is why most physicians are simply not qualified to properly advise people regarding diet, and why they rarely prescribe dietary measures for conditions that are simply, safely and inexpensively prevented and/or treated by whole food, low-fat, plant-based diets.

Hippocrates, considered by many to be the father of modern medicine, said, "Let food be your medicine." Let us look at some of the most widespread and costly diseases of our time, and learn how our food choices play a major role in the cause of these diseases.[15]

Diet is clearly one of the factors that influence the onset of cardiovascular disease. Compared to other countries, U.S. children and teenagers have higher blood cholesterol and consume more high-cholesterol and high-fat food.

James A. Moeller, M.D., president of the American Heart Association

Cardiovascular Diseases

Cholesterol – All human cells contain cholesterol, which is used by our bodies to create cell membranes, hormones, skin, etc. However, our bodies make all the cholesterol they need. We never need it in our diet. Animals also make their own cholesterol. When we eat meat, poultry, fish and dairy products, we eat excess cholesterol, found in all types of body cells. Even lean meat contains cholesterol. Fortunately, excessive dietary cholesterol can be eliminated by eating a low-fat, plant-based diet.

Saturated fat – Foods that have cholesterol also tend to be loaded with saturated fat, which contributes to cardiovascular diseases. In fact, saturated fat raises blood cholesterol levels more than any other dietary factor. Saturated fats can often be identified because they become solid at room temperature.

When we eat fewer animal products, we also eat less saturated fat. Most plant foods are naturally free from saturated fat. Some vegetable oils, such as margarine, have been artificially saturated or "hydrogenated." These fats are often used in "junk" foods and should be avoided.

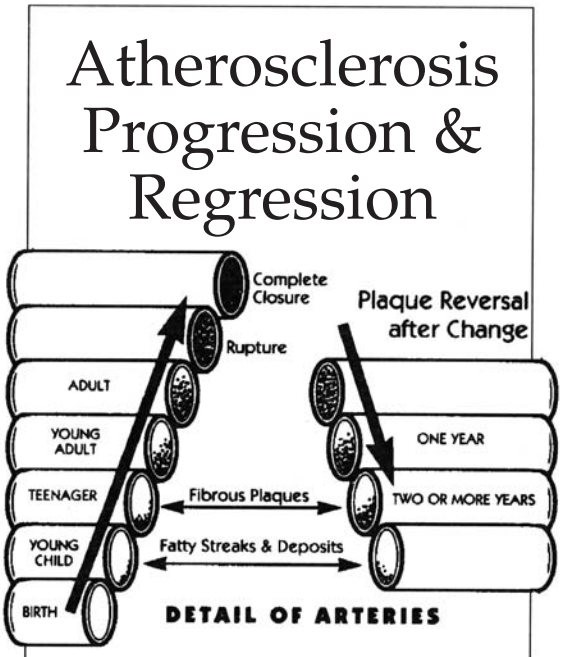
Atherosclerosis – After years of eating a high-fat, low fiber diet, arteries can become so clogged with plaque that blood flow decreases. This condition is called atherosclerosis. Plaque is a buildup of a greasy, waxy cholesterol-containing material that attaches to the wall of the artery.[16] Plaque can form in any artery leading to any organ. If an artery leading to the heart gets clogged with plaque, a heart attack can occur. If an artery leading to the brain gets clogged, it can cause a stroke. By age 61, 1 out of 4 men are impotent. Many of these cases are due to atherosclerotic clogging of the arteries leading to the genitals.[17]

Children as young as 3 years old have been found to have fatty streaks in their arteries, a precursor to atherosclerosis and heart disease.[18] In fact, by the age of 35, 25% of white men in the U.S. have atherosclerotic plaques firmly established in their arteries.[19]

High blood pressure (hypertension) – Plaque deposited on the inside of the artery walls also increases blood pressure by narrowing the space through which the blood flows.[20] Over months or years, high blood pressure makes the arteries thicker, less flexible and more likely to clog and rupture, increasing the risk of heart attack and stroke.

Too much sodium or salt in the diet can also cause high blood pressure in some people. Salt causes water retention. This increases blood volume, so it also increases

the pressure. Emotional stress and smoking can also affect high blood pressure by constricting the artery walls.



Atherosclerosis can be reversed. Plaques develop on the artery walls of people consuming high levels of saturated fats and cholesterol. However, with a sufficient reduction in the dietary intake of saturated fats and cholesterol, these plaque formations can begin to dissolve, thus opening up the arteries. Source: John McDougall, M.D., *McDougall's Medicine*, Page 100.

Cancer

As with other diseases, studies show that an effective strategy for dealing with many forms of cancer is prevention. The food we eat today can determine, to a great extent, the condition of our health tomorrow.

Colon cancer – Fiber is found only in plant foods. Low-fiber diets have been linked to a higher risk of colon cancer.[21] Recent studies have shown that people with high intakes of meat, poultry and dairy products combined with low intakes of fruits, vegetables and fiber were more likely to develop colon cancer.[22]

Breast and prostate cancer – Meat, poultry and dairy products are also linked to breast and prostate cancer.[23] Diets high in animal fat increase blood levels of estrogen in women and testosterone in men. Estrogen and testosterone stimulate growth in the hormone-sensitive tissues of the breast and prostate. This can encourage abnormal cell division and lead to tumor growth.

Breast cancer has reached epidemic proportions in this country. Authorities now say that 1 out of 8 American women will develop breast cancer in her lifetime.[24]

Medical and scientific evidence clearly demonstrates a direct link between the explosion of breast cancer and a diet rich in animal protein and fat, and lacking in

September 11th was a national tragedy. Over 3000 people lost their lives. People were furious. Americans wanted to know who were responsible. Hundreds of billions of dollars was spent. The entire country focused on this massive problem.

"A tragedy of this proportion happened the day before yesterday. It happened yesterday, too. It will happen again today, and tomorrow. Every single day in the United States, 4,000 lives are taken by heart attacks and almost nothing is being done about it."

Neal D. Barnard, M.D., President, Physicians Committee for Responsible Medicine, Washington, D.C.

dietary fiber and fresh fruits and vegetables. According to Robert Kradjian, M.D., a breast surgeon for nearly 30 years, "The data is clear, consistent, and compelling. Breast cancer is essentially a dietary disease, just as lung cancer is essentially a smoking-related disease."

Results of the massive China Health Project indicate that Chinese women who eat diets rich in plant foods and few or no animal foods have only a fraction of the risk of developing breast cancer. These results are attributed to both the detrimental effects of the animal products and the protective effects of the plant foods. "The most important message," says T. Colin Campbell, director of the China Health Project, "is not that low-fat intake alone reduces cancer risk, but that a large number of factors in plant-based diets combine to reduce the risk of the disease. For this reason," says Campbell, "removing only small amounts of fat from an animal based diet will not significantly reduce this serious disease." [25]

Adult-Onset (Type II) Diabetes

About 7 million Americans suffer from adult-onset diabetes, a disease that can result in amputations, blindness, kidney disease, and death. Diabetes occurs when the cells of the body are starving for their normal food, glucose. The cells need this simple sugar to function. Normally glucose is escorted into the cells by a hormone called insulin. The insulin is like a key that unlocks the cell membrane receptor site. High-fat diets can block these receptor sites as the excessive fat in the bloodstream coats the cell membrane. This coating prevents insulin from unlocking the receptor site and prevents glucose from entering the cell. Researchers are now finding that low-fat, plant-based diets enable insulin to bind to the cells more effectively.[26]

Coronary-artery disease is not the only risk for children consuming excessive dietary fat. The National Cancer Institute estimates that at least 35 percent of all cancers are linked to food...but estimates among researchers range up to 70 percent.

Dr. Attwood's Low-Fat Prescription for Kids

The Protein Myth

Most Americans eat more protein than their bodies need. Because organizations like the Meat Board and Dairy Council have been allowed to supply educational materials to schools, most people have come to believe that animal protein is of higher quality than plant protein and that good health is dependent upon getting massive amounts of animal protein in one's diet. Our biological needs for protein are easily met by eating a predominantly plant-based diet. The once popular belief that one must combine plant proteins in order for them to be as useful to the body as animal proteins has since been found untrue.[27]

A healthy, plant-based diet that provides enough calories will meet our protein needs for most people. Protein is found in all grains and legumes, which also provide carbohydrates. Some people choose to eat no animal protein whatsoever and enjoy excellent health. However, some people need to eat animal protein and this need varies.

A recent study from the Harvard School of Public Health presented the strongest evidence yet that advanced prostate cancer may be linked to a high-fat diet, especially fat from red meat.

Worldwatch Institute

Problems with Animal Protein

Cornell University's T. Colin Campbell, Ph.D., chief investigator in the China Study, the largest diet study ever conducted, observes:

> In China the overall average fat intake is 14.5 percent. Only about 10 percent of the total protein intake of the people studied in China is derived from animal sources, whereas in the U.S. it is about 70 percent. Animal

protein is a hypercholesterolemic (increases cholesterol) agent. Some plant proteins, particularly soy, have an impressive ability to reduce cholesterol. I really think that plant protein, both the kind and the amount, is more significant as far as cholesterol levels are concerned than is saturated fat, and certainly more significant than dietary cholesterol itself.

The consumption of animal protein has a profound effect on the enzymes that are involved in the metabolism of cholesterol and related chemicals and this occurs very quickly, within hours after the consumption of the meat. Animal protein is about as well correlated with overall cancer rates across different countries, as is total fat. I suggest that animal protein is more problematic in this whole diet/disease relationship than is total fat.

The hypothesis of the China Study is that a diet enriched in a variety of good quality plant foods prevents a variety of chronic degenerative diseases, and the richer the diet is in these foods, the lower the disease risk. The study suggests that the closer one approaches a total plant food diet, the greater the health benefits.[28]

Plant-based – a diet based on eating mostly plants.
Todd Winant

Osteoporosis

Osteoporosis is a slow process that results in bone loss, leaving victims with porous, weakened bones. This disease affects many elderly people in North America, especially women. Like many diseases affecting Americans today, osteoporosis is largely preventable.

While many factors including genetics, body weight, exercise, and calcium intake throughout childhood and into young adulthood influence our chances of getting osteoporosis, some studies show that reducing one's consumption of animal protein may be an important factor in preventing osteoporosis.[29] A high-protein diet, particularly one high in animal protein, causes the body to lose calcium. High-sodium diets have also been shown to increase bone loss.

The best strategy for avoiding osteoporosis is to slow the loss of calcium from the bones by eating less high-protein, animal-based foods, and eating more calcium-rich plant foods, and getting plenty of exercise.[30] Additionally, avoid other risk factors such as smoking, caffeine, dark colas and alcohol.[31]

Animal-based – a diet based on eating mostly animals.
Todd Winant

Kidney Disease

As mentioned above, too much animal protein in the diet can cause excessive calcium to be excreted in the urine.[32] Since urine is filtered by the kidneys, calcium deposits can form in the kidneys, thus contributing to kidney stones. Animal protein in the diet increases the risk of developing urinary tract stones much more than vegetable protein.[33] Studies of people observing low-fat, plant-based diets indicate that they have low rates of kidney stones.[34]

Obesity

Obesity is a rapidly growing disease in our country, particularly among young people. About two-thirds of adults in the United States are overweight or obese and close to 30 percent of children in this country are considered overweight. The number of children diagnosed with diabetes in the United States has increased 10 times

over the past 25 years. Gilman Grave, chief of the endocrinology, nutrition and growth branch of the National Institute of Child Health and Human Development stated, "What worries public health officials is the possibility that today's over-obese children are destined to be tomorrow's obese adults. If so, they will face increased risk for a host of health problems from premature heart attacks and high blood pressure to stroke and diabetes. It is very worrisome, these children are clearly facing a doubling of the risk for adult diseases later in life."[35]

Percent of Calories from Fat in Animal Foods

ANIMAL FOODS	PERCENT OF CALORIES FROM FAT
Butter, lard	100%
Bacon	90%
Cream cheese	87%
Hot dog	85%
Half and half	80%
Hard cheese (cheddar, muenster, jack)	70-75%
Red meat	50-80%
Ice cream	65%
Whole eggs	64%
Salmon	60%
Whole milk	50%
Turkey, dark meat (with skin)	47%
Chicken with skin	45%
Tuna in oil	40%
Turkey, white meat (with skin)	38%
Low-fat milk (2% milk)	35%
Turkey, dark meat (without skin)	35%
Chicken (without skin)	32%

Fats and Sugars – One or more of the following can cause obesity: genetics, eating too much, and exercising too little. One of the worst food culprits is fat, since it has more than twice the calories than either protein or carbohydrates. Some people also think that eating a lot of refined sugar, the kind found in candies, pastries, soft drinks, packaged desserts, donuts, and so on, also contribute to obesity. This may work in several ways. The sugar forces the body to release insulin into the blood and the insulin, in turn, makes the body store more food as fat. Also, foods that are high in sugar, like the ones mentioned above, are generally high in fat. Therefore, they are much higher in calories. Finally, filling up on these high-fat, sugary foods leaves little room for the healthier, lower-fat foods our bodies need.

The typical high school student sees about 14 chocolate and candy ads, 3 fast-food ads and 4 sugary snack and soft drink ads before dinnertime.[36] Snack industries spend exorbitant amounts of money on advertising and promotional programs because they know that the youth represent over an $80 billion/year market.[37]

Calcium & the Milk Myth

Most children throughout the world grow up healthy without drinking cow's milk.[38] Milk and dairy products are high-fat, high-protein, high-sodium, fiber-free foods that are perfect for rapidly growing baby calves. However, they are not perfect for humans. Many people mistakenly think that if they don't drink milk, they will suffer from calcium deficiency. It is really quite understandable, considering that for decades the Dairy Council has been in schools, on television and on billboards everywhere, telling us all how important milk is as a source of calcium. They have not mentioned that many of the body's needs are considerably less than previously thought and that humans can get all the calcium they need from plant foods. Just bear in mind: cows get all of their protein, calcium, minerals and vitamins from plant foods.

More Problems with Milk

Fat – Dairy products, with the exception of those made from skim milk, are high in fat, particularly saturated fat, the kind associated with heart disease.[39] Regular milk has a fat content of about 3% if the fat is measured as a percentage of the milk weight. But a more accurate way to measure the fat in milk is by calories. Done this way, regular milk is actually closer to 50% fat.[40]

Fifty million Americans are lactose intolerant according to the National Digestive Disease Information Clearinghouse, an arm of the National Institutes of Health.

Wall Street Journal

Iron – Cow's milk can also cause blood loss from the intestinal tract. In infants, this can lead to iron deficiency.[41] In addition, the casein protein in cow's milk inhibits the absorption of iron, making milk one of the most iron-deficient food sources.[42] Ample iron is obtained when we eat a well-balanced diet containing plenty of grains and vegetables. When our diet contains sufficient vitamin C, the body more easily absorbs the iron we eat.

Childhood-onset (Type I) diabetes – Insulin is produced in a special area of the pancreas. Damage to this area causes insulin-dependent diabetes in children and young adults. Recent studies have begun examining the link between the use of dairy products during infancy and incidence of type I diabetes.[43] According to these studies, cow's milk proteins enter the infant's bloodstream and can stimulate the formation of antibodies.[44] These antibodies can attack and destroy the insulin-producing cells in the pancreas and that can cause insulin-dependent diabetes.[45] Out of 142 diabetic children tested, 100% had high levels of an antibody to a cow's milk protein.[46] Approximately 1 million Americans have insulin-dependent diabetes.

Lactose intolerance – Many people, particularly people of color, are unable to digest the sugar in cow's milk (lactose) because they lack the required enzyme in the lining of their digestive tract. In many humans, these enzymes disappear after early childhood. As a result, these people commonly suffer diarrhea, cramps, and gas when they consume cow's milk and its products.

Allergies – Milk is one of the most common causes of food allergies and may contribute to asthma[47] and rheumatoid arthritis.[48] Often the symptoms are subtle and may not be immediately attributed to milk.

Hydrogenated Products

Hydrogenation converts liquid fats into solids by adding hydrogen atoms. This

is an inexpensive way to produce thicker texture in foods and prevent them from going bad as quickly. Some of the more popular hydrogenated food products are shortening, margarine, lard and non-dairy cream. Similarly, large amounts of hydrogenated and partially hydrogenated oils are found in processed "junk food" like cakes, candy bars, cookies, muffins, crackers, cereals, donuts, precooked French fries, potato chips, and corn chips. The hydrogenation process also produces oil that can be used for frying for long periods of time. Many fast-food restaurants use these oils over and over again for days.

However, hydrogenated fats can be harmful, resulting in a loss of cellular health. For example, one class of these manipulated fatty acids is trans fatty acids.[49] Trans fatty acids have no known desirable function and many researchers believe that they may increase the risk of coronary heart disease. The best approach to avoid this risk is to avoid foods with hydrogenated oils.[50]

Sugar

Processed sweeteners like white table sugar, brown sugar, cane syrup, corn syrup, high fructose corn syrup, dextrose and turbinado sugar are concentrated, refined sugars composed of mostly sucrose. Sucrose causes a larger insulin response than does fructose, the naturally occurring sugar found in fresh fruit. A continually elevated blood insulin level can lead to insulin resistance, thus increasing the likelihood of diabetes. There is currently considerable concern about insulin resistance and its link to obesity, diabetes and heart disease.

The mood mechanisms of your brain are so finely tuned that even a small chemical change can make noticeable differences in the way you feel, think, and perform.

Judith Wurtman, Ph.D., author of Managing Your Mind and Mood through Food

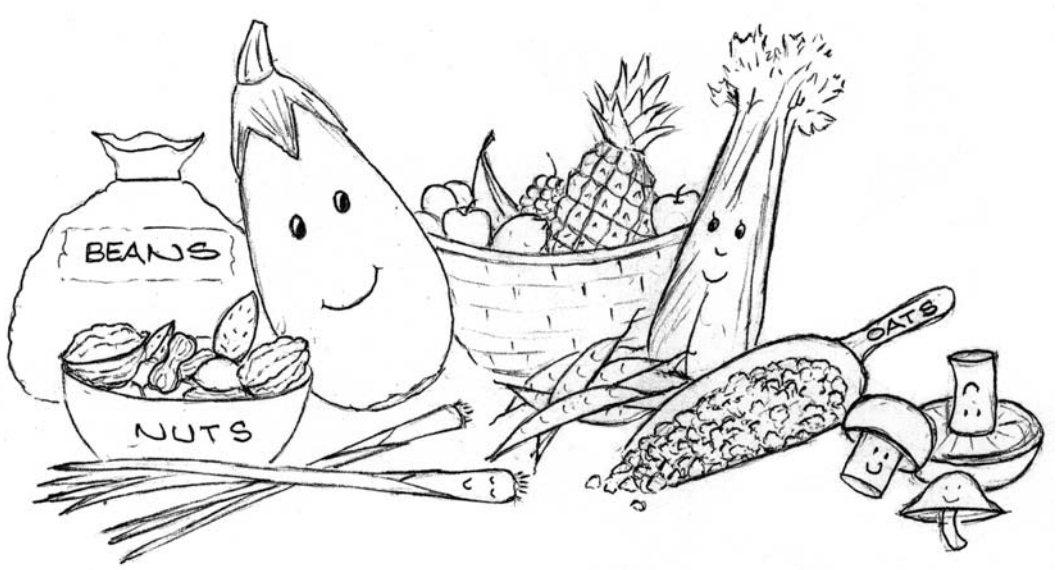
Another concern is how sugars affect mood, attention and hyperactivity in youth. Although more research is needed, many parents and medical professionals feel there is a definite connection. Foods like candy bars, cakes, and sodas affect our children's ability to concentrate both in and out of school.[51]

Yale University's School of Medicine found hormonal evidence that supports the popular belief that sugar can provoke abnormal behavior in some children. In the study, children given refined sugar experienced levels of adrenaline in their blood 10 times higher than before they ate the sweet. This led to anxiety, difficulty in concentrating, and crankiness. Some children have been found to exhibit anti-social behavior when given appreciable amounts of sugar. A series of scientific studies of institutionalized delinquent youths conducted by California State University researchers showed that antisocial behavior can be reduced by nearly half if sugar is restricted to very minimal levels.[52]

Another study, The Impact of a Low Food Additive and Sucrose Diet on Academic Performance in 803 New York City Public Schools, clearly demonstrated that as refined sugars are removed from the diet, academic aptitude and test scores increase.[53]

Researchers also believe that sugar may accelerate the aging process. When sugar is consumed in large amounts, as in candies, cakes, soft drinks and so on, sugar molecules cling to protein fibers throughout the body, including protein in artery walls, skin, etc. This makes the protein fibers stiff and more prone to damage. Large amounts of sugar can also contribute to oxidation of blood cholesterol, thus accelerating the atherosclerotic process. A study conducted in 1993 revealed that the average American consumed 64.2 pounds of refined sugar and 147.1 pounds of total sweeteners per year.[54]

Small amounts of refined sugars are okay occasionally as sweeteners. However, natural fructose is preferable. Sweetening foods with real fruit is optimal. The real problem arises when people eat sugars in large amounts in foods or as foods.



The Plant Kingdom

Plants are the master alchemists of Earth. They are the only living things that have the ability to take sun, air, water and soil and make food and oxygen for most of the life on this planet. Out of the countless varieties of plants; grains, legumes, fruits, vegetables, nuts and seeds are consumed most by humans. Briefly described:

Grains

Grains like wheat, oats, rice, buckwheat, and corn are the basis for the diets of most human beings around the world. They provide protein, carbohydrates, fiber, vitamins, minerals, and small amounts of fat. Like other plant foods, grains contain no cholesterol.

The term "whole grain" means that the bran and germ layers have not been removed from the grain. Whole grains are higher in most vitamins, minerals and fiber than refined grains. Additionally, the germ layer contains the important antioxidant vitamin E, as well as essential fatty acids. The fiber in whole grains helps keep the digestive tract healthy by preventing constipation, hemorrhoids, and diverticulitis. Fiber also helps regulate blood cholesterol and blood sugar levels and plays an important role in preventing unwanted weight gain.

> Leadership is about empowering others to take action.
>
> *Millisa Poe, 15 years old*

Legumes: Beans, Peas & Lentils

Next to whole grains, legumes are among the most widely consumed foods in the world. Legumes are a rich source of protein and fiber at an affordable price. Unlike animal sources of protein, legumes are very low in fat and contain no

cholesterol. They are rich sources of complex carbohydrates, fiber, vitamins, and minerals.

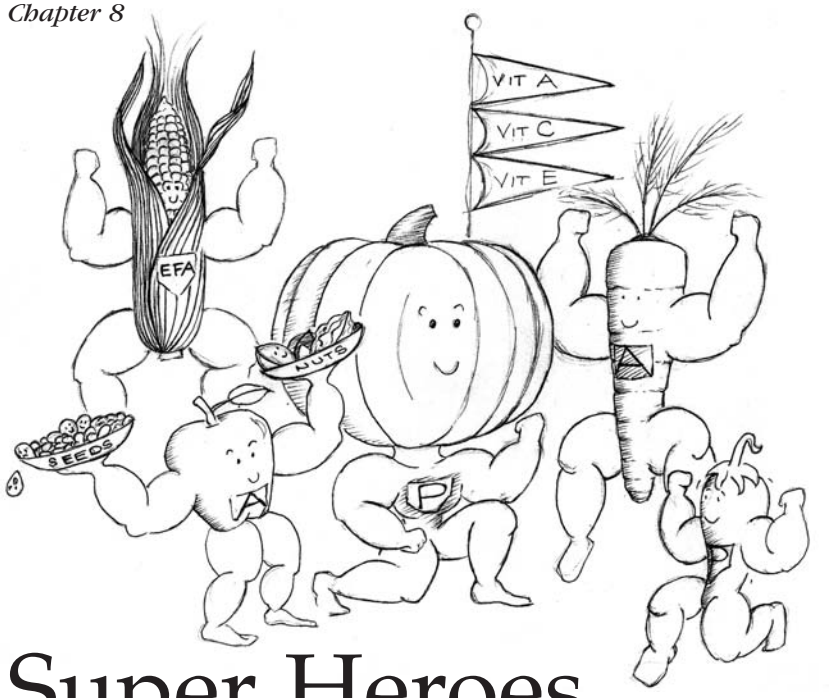
Vegetables & Fruits

Vegetables and fruits are rich sources of antioxidants and other phytochemicals, which reduce the risk of heart disease, cancer, and a score of other diseases. They are also rich sources of fiber, vitamins, and minerals, and tend to be very low in fat. The most nutritious vegetables and fruits are those which are the least processed.

Nuts & Seeds

These are the only plant foods high in fat. It should be noted that nuts and seeds, like other foods from plants, contain no cholesterol. Furthermore, the fat they contain is mostly the healthier, unsaturated variety. Nuts and seeds are also rich sources of protein and essential fatty acids, as well as many vitamins and minerals. Nuts should be served raw, rather than cooked, for optimal health.

Chapter 8



Super Heroes for Health

Organically grown fruits, vegetables and whole grains, produced without synthetic fertilizers and pesticides should rightly be named Heroes for Health. In addition to all of the widely known vitamins and nutrients, plant foods contain a wide variety of beneficial compounds such as fiber, antioxidants, phytochemicals and essential fatty acids. For the past three decades, scientists have consistently found that people who eat greater amounts of vegetables and fruits have lower rates of cancers and other diseases.

When young people understand why fruits, vegetables and whole grains are healthy, rather than just hearing, "eat your vegetables, they're good for you," they become more motivated to taste and include more of these plant foods in their diet.

Antioxidants

There is strong evidence that antioxidants improve health and immunity. They help prevent heart disease, cancer and a multitude of other ailments.[1] Antioxidants come in many different forms. They include vitamins A, C and E, minerals like selenium, enzymes and phytochemicals such as beta-carotene and sulphoraphane.

Antioxidants also serve as immune stimulants, anti-inflammatories and anti-carcinogens.[2] They are health-promoting because of the way in which they react with free radicals (free radicals are extremely reactive atoms or molecules).[3] Research indicates that over 60 diseases, from allergies and arthritis to cancer, are initiated by free radicals.[4] These cause cellular and chromosomal damage if there

are no antioxidants to trap and quench them. An antioxidant-rich diet is one that contains many whole, organic plant foods. A diet high in meat, fat, and sugar is antioxidant poor. Such a diet actually increases the need for antioxidants. Most free radicals come from processed foods, especially fats that are already going rancid or oxidizing. To give you a clearer idea of what an oxidant is, picture rusted iron. The rust is oxidized iron. Such iron has been damaged by an over-exposure to oxygen. Foods that contain shortening, that are hydrogenated, partially hydrogenated or fried, all go rancid quickly. These foods create the largest density of free radicals in our diet.

In addition to having a preventive role, multiple antioxidant nutrients taken during cancer treatment protocols improve success rates. There is worldwide scientific evidence that natural beta-carotene and vitamins C and E are safe even at reasonably elevated levels[5] and that combinations work better than isolated nutrients.[6] Research indicates that different antioxidants work together in a network by regenerating each other and individual antioxidants quench different free radicals more efficiently. [7]

Phytochemicals

Phytochemicals offer us a wide range of protection against infection, pollution and even cancer.[8] They have varied disease-prevention properties, including anti-viral, anti-bacterial, anti-inflammatory, anti-allergic, and anti-carcinogenic.[9] Phytochemicals include plant pigments such as beta-carotene, and plant hormones such as diosgenin. The 2 best-known groups are carotenoids and flavonoids.[10] Flavonoids provide the color for fruits and flowers; however, they also help protect the plant against environmental stresses. When we eat plants, these substances offer us similar protection.[11]

The health of Americans is not the responsibility of their doctors and not the responsibility of the government. It is their personal responsibility.

Dr. Cooper

Like flavonoids, carotenoids also provide natural pigments. There are 19 known carotenoids present in human blood, each with unique properties. There is evidence that the higher the carotenoid content in body tissues, the longer the life-span potential of the mammal will be.[12] This suggests that a diet high in mixed carotenoids may help humans live longer.

By eating certain foods you can modify your body's immune response. Quercitin, a bioflavonoid, is potentially anti-allergic. It can reduce an allergic response.[13] Quercitin inhibits histamine release in tissues and is also a powerful antioxidant. It can reduce all phases of an allergic cascade reaction.[14] It is not surprising that several prescription drugs designed for allergic conditions like asthma and hives were modeled after flavonoid molecules.

There are hundreds of human studies, virtually all showing positive correlation between phytochemicals and a lowered risk of certain types of cancer. Preliminary results show stronger anticancer effects in the tissue lining of organs like the mouth, throat, colon, cervix and bladder in people who consume an ample supply of daily phytochemicals. Phytochemicals target specific organs and offer specific disease protection.[15] Specific examples of reduced cancer risks on various parts of the body are: mouth—fruits; stomach—lettuce and onions; lungs-—carrots and green leafy vegetables; colon—cruciferous vegetables (such as broccoli, cabbage, and cauliflower).

Importantly, evidence suggests that natural forms of phytochemicals are better absorbed, stored and utilized than are isolated, synthetic sources.[16] This means that your daily menu is your best insurance plan. Additionally, phytochemical content in the same food type varies in amount depending on season, soil health, climate, water, storage, preparation and other factors.[17] Animal products are phytochemically

inferior. Plants contain a much higher density of phytochemicals. It becomes obvious that eating a variety of plant foods will give one the broadest possible overall protection.[18]

How Phytochemicals Help You

Phytochemical	Food Source	What It Can Do
Sulforaphane	Broccoli, cauliflower, turnips, kale	Promote detoxification; lower risk of breast and colon cancer.
Beta-carotene	Carrots, apricots, peaches, squash, cantaloupe	Increase resistance to infection; reduce risk of heart disease, lung and breast cancer.
Allylic sulfide	Onion, garlic, leeks, chives	Neutralize carcinogens; reduce high cholesterol.
Genistein	Soybeans, tofu, soy beverage drinks, cabbage	Prevent and inhibit tumor growth in many ways.
Flavonoids	Virtually all fruits and vegetables	Enhance T-cell activity; help control allergies; potent antioxidants.
Indole-3-carbinol	Cabbage, cauliflower, brussel sprouts	Protect against some estrogen-sensitive cancers; help detoxify.
Capsaicin	Chili peppers, cayenne pepper, jalapenos	Prevent cancer cell formation; decrease pain.
Lutein	Spinach, collards, kale, red peppers	Helps slow down and prevent age-related blindness.
Lycopene	Tomatoes, red grapefruit, watermelon	Protect your genes from free radical damage; 100 times more potent antioxidant than vitamin E.
Alpha-carotene	Pumpkins, carrots, yellow corn, cantaloupe	Ten times more anticarcinogenic than beta-carotene (skin, lungs); help damaged cells become healthy again.
Catechins	Green tea, black tea, berries	Reduce risk of skin and stomach cancer; reduce atherosclerosis; antiviral and antioxidants.[19]

Lots of fiber in your diet can have the effect of reducing dietary cholesterol absorption, so a simple bowl of oatmeal for breakfast and rice for lunch can be heart protective.

Alternative Medicine Digest, Issue 5, page 3, 1995

Essential Fatty Acids (EFAs)

People concerned about the undesirable health consequences of excessive consumption of fats may lose sight of the fact that fats and oils perform vital functions in our bodies.[20]

Essential fatty acids – Most of the fatty acids that we need can be produced in the body. However, there are 2 that we cannot make and must obtain from food.[21] These essential fatty acids are called linolenic acid (omega-3) and linoleic acid (omega-6). These help in the formation and function of strong, flexible, healthy cell membranes and in proper development of eye and brain tissue.[22] They are also involved in energy production and in the metabolism of cholesterol and triglycerides. These EFAs produce potent chemical messengers (hormones), vital to cell membrane maintenance. They help regulate numerous vital body functions such as blood clotting, blood pressure,[23] nerve firing, immune response, reaction to shock and injury, retaining skin moisture and improving brain function.[24]

Most people can make every other fatty acid their bodies need if they eat enough linolenic and linoleic EFAs. Plants are an excellent source of EFAs, because EFAs are commonly found in the cell membranes of plants: nuts, seeds, and vegetables. Additionally, many green vegetables such as broccoli, collard greens and peas contain EFAs, as do legumes and corn.

Plant oils are another good source for varying amounts of EFAs. Linolenic acid (omega-3) is found abundantly in flax, soybean and walnut oil. Linoleic acid (omega-6) is found abundantly in flax, sesame, soybean, corn, sunflower and safflower oil.

A Healthy Diet

To insure a healthy diet, follow these simple guidelines:

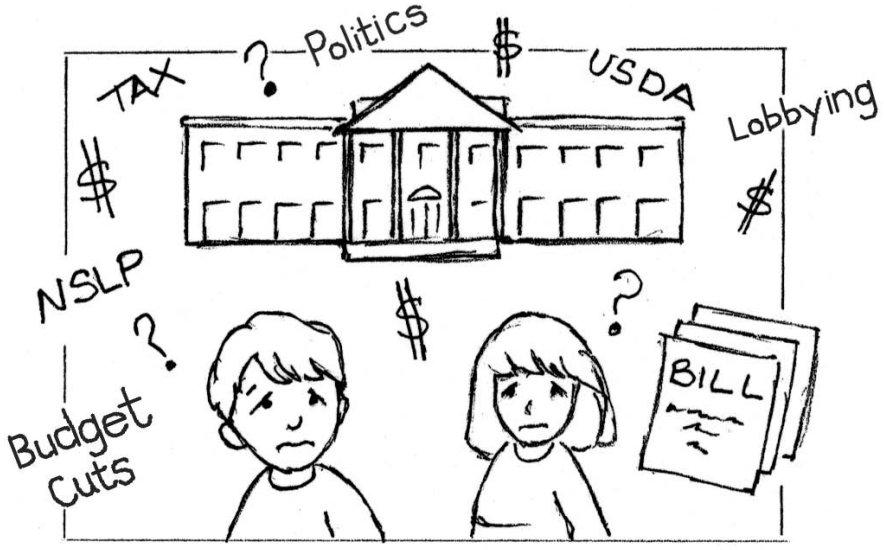
- Base all meals on a variety of fresh, organically grown fruits, vegetables, legumes, nuts, seeds and whole unprocessed grains.[25]
- Increase your consumption of foods from the plant kingdom.[26]
- Reduce your consumption of meat, poultry, fish and dairy products.[27]
- Reduce your consumption of processed foods, sugars and chemically fertilized food products.[28]
- Read all food labels carefully and reduce or completely eliminate packaged foods with preservatives, additives, hydrogenated oils and food colorings.
- Drink plenty of fresh, clean water ever day.

You must apply the knowledge you now possess to prevent diseases that your child cannot cure in later years.

Dr. Attwood's Low-Fat Prescription for Kids

Following the above guidelines insures ample protein, calcium, iron and vitamin D intake. For those who eat no meat, poultry and dairy products, be sure to include a good reliable source of vitamin B-12 such as fortified cereals or vitamin supplements. If you choose to eat animal foods, buy organic, with no antibiotics, steroids or hormones, and eat these foods sparingly.

Get plenty of exercise, a good night's sleep, think positive thoughts and include some type of meditation and yoga for a healthy body and balanced emotions.



The USDA & the National School Lunch Program (NSLP)

USDA Statistics

The National School Lunch Program (NSLP) is the federal government's largest feeding effort, and cost over $5 billion a year. In addition, the school breakfast program costs $1.2 billion annually.[1] Almost 4 billion lunches are served to students every year. Just over half of these lunches were provided at no charge, while another 8% were provided at a reduced price. The remaining 41% were full priced meals.[2]

There are approximately 96,000 public, private and residential schools in America that participate in the NSLP. Out of the 46 million students enrolled in America's public schools,[3] 42 million of them are enrolled in the NSLP.[4] Twenty-two percent of all private schools participate in the National School Lunch Program by offering a free or reduced-price lunch. That amounts to roughly 1 million students in 7,000 private schools participating in the NSLP.[5]

The dollar value of food acquisitions by all the public unified schools in the NSLP is $4.6 billion.[6] Of this amount, $2 billion is spent on animal products, and over $1 billion is spent on milk and other dairy products.[7]

In 1984 fresh fruits and vegetables only amounted to 5.6% of the total amount of foods served on the NSLP. In 1997 that figure only increased to 7.2%. There was only a 1.6% increase in fresh fruits and vegetables served from 1984 to 1997.[8]

USDA History

The United States Department of Agriculture, the USDA, was established in 1862, to serve the people and take care of America's food supply. From its inception, the USDA promoted farmers and ranchers, making sure that their products were produced, sold and distributed. In the 1930s, there were 12 basic food groups. One-third of these foods were derived from animal products. Our nation's citizens seemed strong and healthy.

By the 1940s, the basic food groups were reduced to 7 categories and almost half were derived from animal products. During World War II, many young recruits failed physicals because of nutrition-related problems. As a result, in 1946 Congress enacted the National School Lunch Program and the Food Commodity Program.

In collaboration with the food producers, the USDA began a nutrition education program for the youth. The USDA and the Dairy Council created food groups that were to teach youth proper balance in their diets. In 1956, lobbying from industry reduced the basic food groups to only 4 categories, half of them being derived from animal products. The false concept that meat and dairy products were necessities for good health became established.

Years passed. Population increased. Agriculture expanded. In the 1950s and 1960s the food industry created new foods and added new chemicals so that they could be manufactured more easily and cheaply. Businesses were created in order to manufacture, market and advertise these processed foods. They were tasty, cheap, fast to prepare and highly addictive. A new style of eating evolved: fast food/ junk food.

Why must we be reticent about recommending a diet which we know is safe and healthy? We, as scientists, can no longer take the attitude that the public cannot benefit from information they are not ready for. I personally have great faith in the public. We must tell them that a diet of roots, stems, seeds, flowers, fruit and leaves is the healthiest diet and the only diet we can promote, endorse, and recommend.

Colin Campbell Ph.D., director of the Oxford-Cornell-Beijing study, "Diet, Life-style and Mortality in China"

Thereafter, Congress passed a law requiring that whole milk be served to every student. In 1969 the Free and Reduced Price School Lunch Program for low-income students was enacted and in 1975 Congress permanently authorized the School Breakfast Program. The meat and dairy industries must have been thrilled with their growing, guaranteed market of young Americans.

In the 1980s, Congress withdrew much of its financial support and the school lunch budget was cut by 42%. To counter the budget cut and provide enough food for students, the USDA gave schools an increased supply of butter, meat and cheese commodities. These foods were becoming more readily available because our tax dollars were subsidizing these industries. Americans were eating less of these foods and the warehouses were filled to the bursting point. Therefore, just to get rid of these foods, the USDA gave them to students to eat in schools. Meanwhile, our population was becoming sicker, with increased heart disease, strokes, cancer, obesity, diabetes and other food-related diseases.

By the early 1990s, it became common knowledge that cholesterol, saturated fat and animal protein contributed to causing disease and that people must greatly reduce their consumption of meat, poultry and dairy products in order to maintain optimum health. Pressure was also building from medical institutions and non-profit public interest organizations to cut down the cholesterol, saturated fat and sodium in school lunches.

However, the meat and dairy industries fought to maintain their financial interests through heavy lobbying in Congress and enhanced school educational and marketing programs. Advertising with catchy slogans, jingles and trinket toys influenced youth to crave these fast foods even more. Of course, it didn't help when most families had both mom and dad working and no one at home to give their kids a healthy lunch. This made the function of the school cafeteria doubly important because in many cases this was a child's only opportunity to get a decent meal.

Fifty years later there are still only four basic food groups – the "Meal Pattern". With all of today's nutritional knowledge suggesting otherwise, the USDA's "Meal

Pattern" still prescribes half of the 4 food groups to be derived from animal products.

Our children's health is in jeopardy. Diseases thought at one time to afflict adults exclusively are striking our children to an increasing degree. Obesity is up 54% in young people. Some USDA officials might recognize the need to move the schools away from meat, dairy products, processed foods and sugary junk food, but they cannot possibly accomplish this task because of expensive advertising, lobbying and lack of support from the general population and Congress. That lack of support is certainly linked to a lack of information and education with regard to the problem. The Earth Voice Food Choice Project is endeavoring to change that.

The root of the problem becomes more obvious when we consider that the USDA does not have the funding or support from Congress to revise this old model of nutrition, or to supply healthier alternative meals and snacks for our young people in schools. The meat and dairy industries are still being subsidized with billions of our tax dollars a year, while manufacturers of healthier foods, such as the organic fruit and vegetable growers, receive no financial help from Congress.

Furthermore, schools under stress from economic pressures and seeking easy solutions have opened their cafeterias to opportunistic businesses such as fast-food/junk-food concessions. The only motive these businesses have is profit and they avoid the already minimized restraints of adhering to a governmental program and provide the same junk food that is served in their fast-food franchises. This food does not fit within the Recommended Daily Allowances (RDAs). As a result, children on the National School Lunch Program who qualify for free or reduced lunch no longer receive a free meal at school and the meal they may be forced to buy is substandard. Furthermore, young people are becoming sick from eating contaminated beef and chicken at home and in restaurants across the country. Some even die because of these food-related illnesses.

Now, Americans are questioning the safety of the food supply. However, the food industry continues to fight back with misinformation, twisted facts, expensive lobbying and advertising—the very same strategies the tobacco industry used. The USDA's dual mission—to promote the sale of U.S. agricultural products and guard the health of consumers—is in direct conflict with itself. The only reason government does not step in and does something about it is because public outcry has not been loud or strong enough. (See the Evolution of Food Groups Chart at the end of this chapter.)

Dietary Guidelines

The current version of the U.S. Dietary Guidelines, set by the USDA in conjunction with the Department of Health and Human Services and the National Academy of Science, recommends that Americans: eat a variety of foods; limit total fat intake to 30% of calories; limit saturated fat intake to less than 10% of calories; choose a diet low in cholesterol; choose a diet with plenty of grain products, vegetables, and fruits; choose a diet moderate in salt, sodium and sugars. The simplest way to achieve adherence to the dietary guidelines is to serve more plant foods and less animal products.

The dietary guidelines of the prestigious National Academy of Sciences do not include the consumption of meat or dairy products as a necessary part of a healthy diet.

National Academy of Sciences, "Diet and Health"

Meal Pattern

One of the biggest challenges that schools face in the preparation of plant-based alternative meals is the Traditional Food-Based (TFB) menu planning approach, the existing "Meal Pattern" for school lunches. To qualify for federal reimbursement,

all lunches served in the National School Lunch Program must contain portions of food from each of the following 4 food groups at each meal: milk (as a beverage), meat or meat alternate, vegetable or fruit, and grain/breads.

The food items listed in the meat or meat alternate component are: lean meat, poultry, or fish; alternate protein products; cheese; large egg; cooked dry beans or peas; peanut butter or other nut or seed butters; yogurt, plain or flavored, unsweetened or sweetened. The following may be used to meet no more than 50% of the requirement and must be used in combination with any of the above: peanuts, soynuts, tree nuts, or seeds, as listed in program guidance, or an equivalent quantity of any combination of the above meat/meat alternate (1 ounce of nuts/seeds = 1 ounce of cooked lean meat, poultry, or fish).

The meat alternate must meet all the criteria for alternate protein products used in the National School Lunch Program. One of the 6 criteria states, "The biological quality of the protein in the alternate protein product must be at least 80% that of casein, determined by performing a Protein Digestibility Corrected Amino Acid Score (PDCAAS). Casein is commonly found in dairy products. This USDA rule is subjecting all possible alternative protein sources to resemble, by 80%, an amino acid equivalent to casein which is found in cow's milk.

In the case of milk, unless a student has a doctor's request stating that a life-threatening medical condition exists, no other beverage can be substituted in the milk component of the Meal Pattern. The Meal Pattern is another chief cause of the high fat content in today's lunches and its very structure limits nutritional options.

If a school cafeteria wants to serve other alternative sources of protein such as vegetables, grains, and soy foods (tofu, tempeh and a variety of plant-based burgers,

The USDA's Traditional Food-Based Menu Planning Approach

Under the Traditional Food-Based Menu Planning Approach, schools must comply with specific component and quantity requirements by offering five food items from four food components. These components are: meat/meat alternate, vegetables and/or fruits, grains/breads, and milk. Minimum portion sizes are established by ages and grade groups.
For the purpose of this table, a week equals five days.

TRADITIONAL FOOD-BASED MENU PLANNING APPROACH–MEAL PATTERN FOR LUNCHES					
	MINIMUM QUANTITIES				RECOMMENDED QUANTITIES
FOOD COMPONENTS AND FOOD ITEMS	GROUP I AGES 1-2 PRESCHOOL	GROUP II AGES 3-4 PRESCHOOL	GROUP III, AGES 5-8 GRADES K-3	GROUP IV AGES 9 AND OLDER GRADES 4-12	GROUP V AGES 12 AND OLDER GRADES 7-12
Milk (as a beverage)	6 fluid ounces	6 fluid ounces	8 fluid ounces	8 fluid ounces	8 fluid ounces
Meat or Meat Alternate (quantity of the edible portion as served):					
Lean meat, poultry, or fish	1 ounce	1½ ounces	1½ ounces	2 ounces	3 ounces
Alternate Protein Products[1]	1 ounce	1½ ounces	1½ ounces	2 ounces	3 ounces
Cheese	1 ounce	1½ ounces	1½ ounces	2 ounces	3 ounces
Large egg	½	¾	¾	1	1½
Cooked dry beans or peas	¼ cup	3/8 cup	3/8 cup	½ cup	¾ cup
Peanut butter or other nut or seed butters	2 tablespoons	3 tablespoons	3 tablespoons	4 tablespoons	6 tablespoons
Yogurt, plain or flavored, unsweetened or sweetened	4 ounces or ½ cup	6 ounces or ¾ cup	6 ounces or ¾ cup	8 ounces or 1 cup	12 ounces or 1½ cups
The following may be used to meet no more than 50% of the requirement and must be used in combination with any of the above: Peanuts, soynuts, tree nuts, or seeds, as listed in program guidance, or an equivalent quantity of any combination of the above meat/meat alternate (1 ounce of nuts/seeds=1 ounce of cooked lean meat, poultry, or fish)	½ ounce =50%	¾ ounce =50%	¾ ounce =50%	1 ounce =50%	1½ ounces =50%
Vegetable or Fruit: 2 or more servings of vegetables, fruits or both	½ cup	½ cup	½ cup	¾ cup	¾ cup
Grains/Breads: (servings per week): Must be enriched or whole grain. A serving is a slice of bread or an equivalent serving of biscuits, rolls, etc., or ½ cup of cooked rice, macaroni, noodles, other pasta products or cereal grains	5 servings per week[2] -- minimum of ½ serving per day	8 servings per week[2] -- minimum of 1 serving per day	8 servings per week[2] -- minimum of 1 serving per day	8 servings per week[2] -- minimum of 1 serving per day	10 servings per week[2] -- minimum of 1 serving per day

Source: US Department of Agriculture

hot dogs, and other entrées) they may do so. However, those lunches will not meet the requirements that qualify them for federal reimbursement and children will not be able to receive such a meal free or at a reduced price. This deprives children on the NSLP, who are receiving a free or reduced-price meal, from having a cholesterol-free lunch if they so choose.

However, there is now another option available to schools called Nutrient Standard Menu Planning System.

Nutrient Standard Menu Planning System

The Nutrient Standard Menu Planning System (NSMP) and the Assisted Nutrient Standard Menu Planning (ANSMP), (food-based menu systems), are the USDA's answer to obtaining the Dietary Guidelines for school lunch and breakfast programs. The new system incorporates the dietary guidelines for Americans into program regulations. The program establishes a method of meal planning and preparation based on a computerized nutrient analysis.

The following appears in the USDA's *Federal Register*, "Child Nutrition Programs: School Meal Initiatives for Healthy Children; Final Rule": "To provide local food service directors with flexibility to meet the dietary guidelines' nutrition goals, the USDA proposed to replace the rigid meal patterns with a method of menu planning and preparation called Nutrient Standard Menu Planning (NSMP or NuMenus). Under NuMenus, a nutrient analysis is conducted on all foods offered as part of reimbursable meals over a school week. Appropriate adjustments are made to insure that the meals meet the nutrition standards. In recognition that some schools might not have the computer capability or the access to technical support necessary to conduct NuMenus independently, the proposal allowed school food authorities to use a modified form of NuMenus, called Assisted NuMenus, under which schools could arrange for menu development and nutrition analysis by other entities, such as State agencies, consortiums of school food authorities or consultants."[9]

It is estimated by the USDA that 25% of the nation's schools participating in the National School Lunch Program are presently using some form of Nutrient Standard Menu Planning (NuMenus).[10]

The goal of the USDA was to increase the consumption of fruits and vegetables and decrease consumption of fats, saturated fats and cholesterol. Nutrient analysis seemed to focus on the nutrient content of individual foods rather than emphasizing the food groups (as in the Meal Pattern). However, fluid milk is still a requirement.

The Food Guide Pyramid, jointly issued by the Department of Health and Human Services and the USDA, is intended to reflect visually the Dietary Guidelines. As stated in the Final Rule: "The department fully intends to continue using the pyramid to promote nutritionally sound diets for American people, and the department expects the Pyramid to continue making a major contribution to nutritional education in the school meal programs and among the general public."[11]

Food Pyramid

The evolution of the food group chart is an obvious example of the USDA's conflict of interest and the politics involved in how our children are fed in schools. In 1956 the department revised the seven food groups and introduced its "basic four" food group chart, which divided food into four major categories: dairy products; meat, poultry and fish products; vegetables and fruits; and bread and cereals (see Evolution of Food Groups at the end of this Chapter). Over time, the "basic four" food groups were branded into the brain of most American school children as being equally important. However, as research into heart disease, cancer, adult-onset diabetes, osteoporosis, kidney disease, obesity and the relationship that nutrition has with these diseases continued, the "basic four" food group chart became increasingly out of date by overemphasizing meat and dairy. Because of increased nutritional knowledge and public outcry, the USDA began redrawing the chart and in 1992 introduced the Food Guide Pyramid. Unfortunately, this approach retained the premise of the "basic four" food groups.

Reducing the fat content of lunches is a start, but to prevent chronic disease we need to go beyond that and focus on incorporating more plant foods into the American diet. Grains, vegetables, legumes and fruit do more to promote good health than low-fat hot dogs ever could.

Pete Anderson, Registered Dietitian, Madison, WI

Obviously, the Food Guide Pyramid is still protective of industry, as it continues to encourage consumption of unhealthy, yet familiar, foods. The pyramid does attempt to encourage consumption of lower-fat, higher-fiber foods. However, its attempt falls short because it equates foods such as beans, which are low in fat and rich in fiber, with meat, a food high in saturated fat and cholesterol and completely lacking in fiber. The pyramid incorrectly suggests that these foods are equal in nutritional value because both are rich in protein and iron.

Likewise, ice cream and skim milk, which differ dramatically in fat content, are presented as equally appropriate sources of calcium. Because the 4 food groups and the Meal Pattern do not educate consumers about better food choices, meals planned with that guide are likely to be high in fat and protein and low in fiber.

The 1992 Food Guide Pyramid, along with the Dietary Guidelines, is used to set

Source: U.S. Department of Agriculture/U.S. Department of Health and Human Services

My research indicates the USDA Food Pyramid recommendations are incorrect because they do not inform people about their need for "essential fats", moreover, the food labels by the FDA are misleading because they do not require the "essential fat" content in foods. The most significant nutritional factor in health and disease is having the proper balance of essential fats to your body.

Edward Siguel, M.D.,Ph.D., Boston Medical University

standards for the actual portions served in school lunches. Thus, the new guidelines were compromised to complement the Meal Pattern serving requirements for school meals, which have been firmly in place since 1956. This compromise, a result of successful lobbying by the meat, poultry and dairy industries, guarantees a market for their products and reinforces, through mis-education, the incorrect perception that their products are necessary for good health.

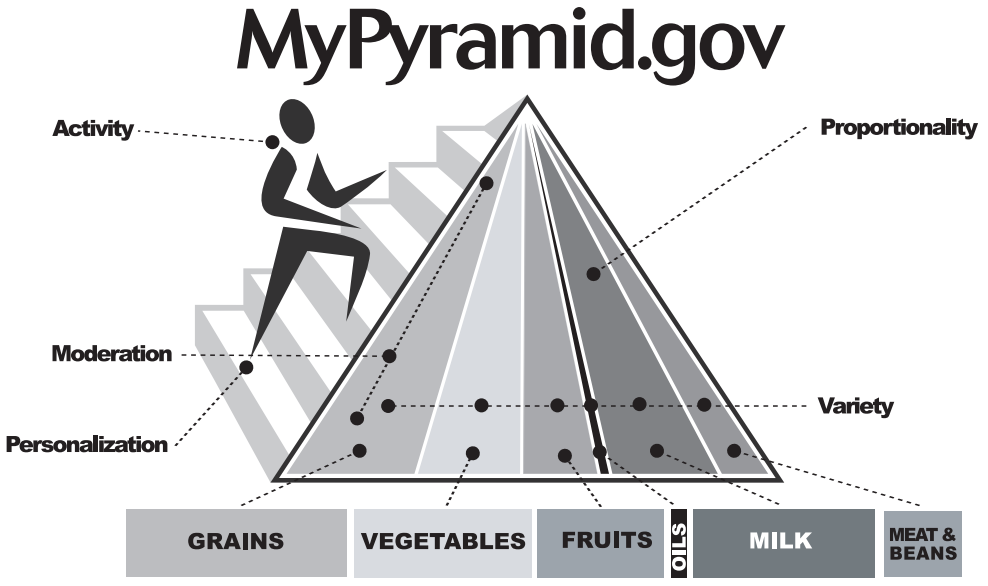
USDA's My Pyramid

In 2005, the USDA introduced a new version of the Food Pyramid called, "My Pyramid". Once again we can clearly see the dairy and meat industries' hand in the construction of this new guide to Americans on how to eat healthy. Dairy products, milk specifically, are the second largest component, second only to grains. Because of its proportional size to the other food groups, milk is being portrayed as being more important than eating vegetables and fruits and almost equally as important as grains.

In the "new" My Pyramid, meat, beans and legumes are still lumped into one category suggesting that these forms of protein are equal. Beans and legumes have no cholesterol or saturated fat and contain fiber, while meat has no fiber and is loaded with saturated fat and cholesterol.

It is notable that the USDA has included oil in My Pyramid. However, this section makes no mention of the differences between oils that are health promoting or oils that are too processed to offer any benefit for health promotion. For example, cold pressed unrefined oils like flax seed oil have easily assimilable omega-3 and omega-6 essential fatty acids while overrefined, heat processed oils in clear bottles that sit on store shelves for long periods of time offer very little, if any nutritional value.

My Pyramid does not represent current scientific and medical knowledge showing that many people can live healthy lives without drinking any milk or eating any meat. Actually most people in America are overconsuming dairy and



animal products, which are clearly linked to diseases ranging from obesity to heart disease.

When will the USDA and their guidelines speak clearly and truthfully that plant foods – fruits, vegetables, whole grains, nuts and seeds – are optimal foods? When will they show us that organic foods are the best choices for our health and the environment, and that meat and dairy products should be eaten sparingly? Sparingly meaning, a few times a week, instead of at every meal as My Pyramid suggests.

Politics, Money & School Nutrition

Most of the federal support provided by the USDA for the National School Lunch Program comes in the form of cash reimbursement for meals served, which is highest for students who qualify to receive their meals free and lowest for students who pay full price.

In addition to cash reimbursements, our tax dollars support schools through the commodity programs. Schools are entitled by law to receive commodity foods, called "entitlement" foods, at a per-meal rate for each meal they serve. States select these "entitlement" foods from a list of more than 60 different kinds of foods purchased by the USDA through a bidding structure. The list includes meats, canned and frozen fruits and vegetables, fruit juices, vegetable shortening, peanut products, vegetable oil, flour and other grain products. The schools rely heavily on these commodities to provide meals that fall within their budget guidelines, and are therefore restricted in their choices for variety and quality.

In addition to "entitlement" foods, schools can get certain additional commodities as needed, if they can be used without waste. These foods are known as "bonus" commodities and are available from surplus stocks purchased by the USDA under its agricultural price support programs. These programs stem from actual legislation to control price support and surplus removal of agriculture products. This is what has produced the infamous mounds of surplus butter and high-fat cheese that the government then turns around and gives away to schools as "bonus" commodities.

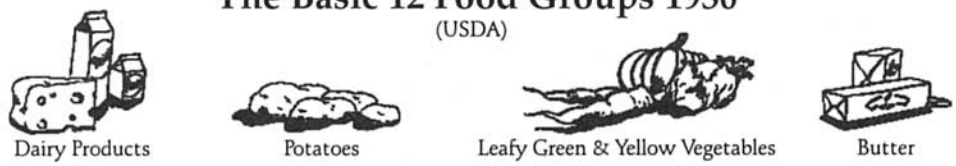
According to a USDA spokesperson, butter and cheese are in surplus in the first place because people have realized that these foods are harmful to their health and are no longer buying as much of them. Why then does the dairy industry continue to overproduce? Only because they have a buyer mandated by law: the schools.

Milk is a good example of how people can change the rules. Through the repeated attempts by parents and public interest groups to release schools from the requirement to offer whole milk, the law has recently been modified to require schools to offer non-fat, low-fat or whole milk consistent with children's preferences in the prior year. Why does the dairy industry continue to lobby for whole milk even though it is guaranteed a market for a lower-fat milk? Because dairies make more money on whole milk and need a market for the high-fat whole milk. The logic defies reason. Our tax dollars subsidize the meat, poultry and dairy industries. These industries overproduce because they have a guaranteed market. Our tax dollars buy their surplus. We feed that surplus to our children in school. Those children get used to eating that type of food which is not good for them. A false belief pattern is reinforced because these foods are provided for them at school, a place of education. These dietary habits will burden their adult years with diet-related diseases. Medical, medicine and health care costs will continue to increase. Health insurance will continue to gouge the public, which will cause more people to be denied proper medical care.

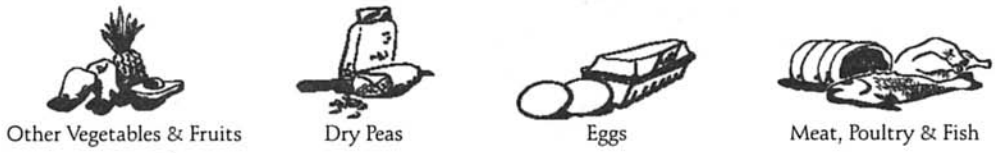
Evolution of Food Groups

The Basic 12 Food Groups 1930

(USDA)



Dairy Products | Potatoes | Leafy Green & Yellow Vegetables | Butter



Other Vegetables & Fruits | Dry Peas | Eggs | Meat, Poultry & Fish

Flour & Cereals | Sugars | Tomatoes & Citrus Fruits | Other Fats

The Basic 7 Food Groups 1940

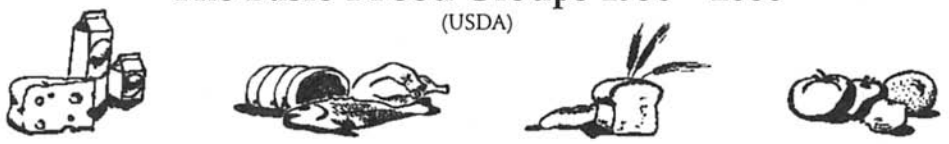
(USDA)

Fruits | Eggs | Potatoes | Dairy Products

Bread & Cereals | Meats, Poultry & Fish | Vegetables

The Basic 4 Food Groups 1956 – 2006

(USDA)



Dairy Products | Meat, Poultry & Fish | Grains | Fruits & Vegetables

Food Groups for the 21st Century

(Physicians Committee for Responsible Medicine)

Whole Grains | Vegetables | Legumes | Fruit

Dietary Guidelines, Food Group Charts, School Nutritional Education and School Meal Patterns set by the USDA are all interlaced with monetary and political motivations.

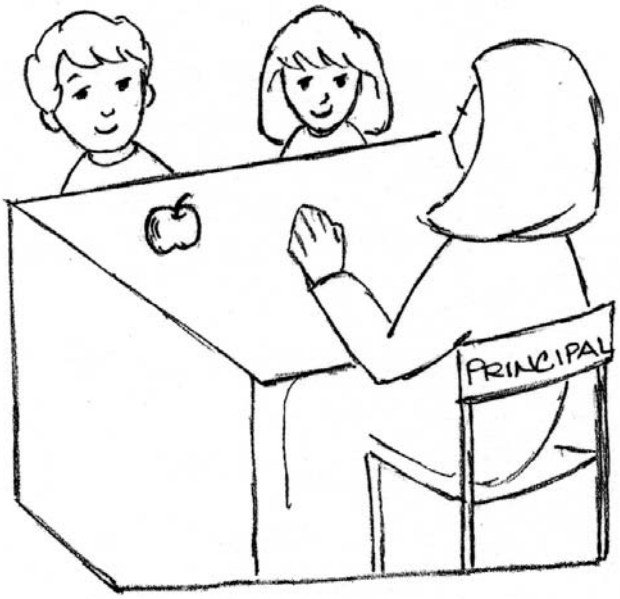
Furthermore, funding in schools is becoming more scarce, forcing school food services to accept the cheaper, unhealthy surplus commodity items like butter, low-grade, high-fat meats and cheeses. Some schools give up altogether and contract out their cafeterias to fast-food chains. Additionally, because of the insufficiency of money being given to teachers and toward education, they accept curricula that industry groups such as the Meat Board and Dairy Council provide.

The most impressionable segment of our society, our children, are not being educated about the powerful impact that personal food choices have on health and environment. Our children are being fed foods, drinks and snacks that are unhealthy, unproductive for learning, damaging Earth's life support systems, and depleting our world's natural resources.

Teaching cutting-edge health promotion and disease prevention to students and educators is a great opportunity for our elected governmental officials to show their true dedication to the people. Children deserve access to optimal health-promoting foods and to information to help them learn how to make wise food choices for both their own health and the health of the planet.

It is time we address the misinformation that schools, government, TV and advertising sells our society. The USDA's challenges are complex and they seem to be moving in the right direction. The USDA needs the people's support. If the people's resolve becomes unyielding, together we could correct the damage ignorance and greed has caused. The best way to produce a lasting change in society is to educate the people, especially the youth.

Chapter 10



Implementing the Healthy Food Healthy Planet Project

Much of the information being presented in this manual is common knowledge to many people and has great support in the medical and scientific communities. However, some people might feel threatened by it. It is important to acknowledge and respect the positions and mindsets of the people you'll be working with. Establish a rapport, build alignment, cultivate trust and be sensitive to their fears and objections. Learn how to redirect a culture toward restoration and sustainability in a loving, gentle manner.

Remember, all people are unique and it is an art form to bring out the best in each of them. This Chapter discusses a plan of action for reaching the various people you might be working with. In this chapter, the focus is on schools and the people to contact within them, in order to achieve a successful food and education project. However, the information can easily be used for any institution or audience, large or small. It need not be only a school.

Set clear goals, have fun, be personable and be in the moment. When you are relaxed you'll be more yourself, you'll have more resources, and people will feel your sincerity.

Earth Voice Food Choice Project

Earth Voice Food Choice is a multimedia project with two main tools for outreach, *Earth Voice Food Choice* Manual and *Earth Voice Food Choice* DVD. These tools are designed to be used together or individually to learn about healthier food choices and then inspire other people to eat more whole, organic plant foods and less chemically processed animal and junk foods. We call this a plant-based diet a diet based mostly on eating plants (vegetables, fruits, whole grains, nuts and seeds).

Our Vision

- To demonstrate to Americans how a plant-based diet is a simple and workable solution to many of the health, environmental and economic problems in the United States.

- To encourage parents and school food services to serve more whole, organic plant foods in their homes and cafeterias.

- To inspire young people to eat more organically grown, whole, organic plant foods, and to realize their power as consumers.

The stars burn clear,
All night,
Til dawn,
Do that yourself.
Rumi

Our Mission

- To distribute Earth Voice Food Choice project materials to teachers, parents, students and food service personnel.

- To reach as many of the 50 million students in America's primary and secondary schools as possible, and a significant number of the 15 million college students with the Earth Voice Food Choice project's vision.

Introducing the Earth Voice Food Choice Project

One way to implement the Earth Voice Food Choice Project is to simply give this Manual and the ***Earth Voice Food Choice*** DVD to the appropriate people. Another strategy would be to initiate a the project personally. The following pages will offer ideas, strategies and materials for either, or any combination of these scenarios.

Become Knowledgeable & Research the Players

If you think education is expensive, try ignorance.
Gary Griggs

Learn and understand the information as fully as possible and be ready and able to share it with others. Practice sharing your knowledge with people. This will build your confidence and prepare you to handle legitimate, sincere questions, as well as adversarial ones.

Obtain the names, addresses and telephone numbers of the food service director, principals, teachers and members of parent associations through the particular school with which you are interested in working. Lists with phone numbers are usually available from district offices.

Put Together a Portfolio of Materials

The following are suggested materials to bring along with you to your meetings with the various key people with whom you will be interfacing. They are contained in this Manual in the Chapters 16 and 17.

Handouts

Nutritional Fact Sheet
Heroes for Health

Letters, Announcements and Articles

Letter of Introduction
Parent Newsletter Announcement (Version 1 & 2)
Student Newspaper Article

By modeling appropriate action that is aligned with our higher-selves we feel responsible to ourselves. Responsibility is the ability to respond.
Todd Winant

Be a Strategist

When attending meetings, remember to be sensitive as to how much material you give someone at one time. Handing out a small amount of information in the beginning will make it easier for most people to absorb it. As a person's interest develops you can introduce more information. Ask people who else they think would be in agreement with this message. Use terms like "cholesterol-free," that everyone can agree is beneficial. Request that schools offer these meals alongside the regular meals served on the National School Lunch Program so students can have an option.

Establish Rapport (Provided by David Jubb, Whole Brain Function, NY, NY.)

Establish rapport, create mutual trust, help people you meet with to feel comfortable. Use common sense and common courtesy.

- Be a good listener.
- Speak about things positively. Focus on what your listeners understand easily.
- Speak inclusively. Use "we, us, our" instead of "I, you, them."
- Speak about your ideas in a manner that focuses toward your desired outcome.
- Find ways that seem to agree with your listeners, even with their objections. Focus on points of similarity and agreement, rather than conflict. Keep things moving in the direction of resolution.
- Create action in your listeners; i.e., frame comments with phrases like "what if?"
- Use humor to free things up when you get stuck.
- Point out how the world has already begun to change.
- When speaking, vary your tone to create different moods. Quieting down can draw your listeners in, creating a more personal and intimate mood.
- Make eye contact with people.
- Communication is measured by the response you get back rather than what you said.
- Use language of possibility. Present from the perspective of choice rather than limitation. Frame statements with, "I wonder…?" "Possibly we could…" "Would you like to…" "It is possible. . . ."
- Use metaphors. Metaphors lead the listener to "go within" to retrieve the meaning of what is being communicated.
- Be neat, clean, well-rested and relaxed, and have fun.

Homo Sapiens has a greater flexibility of behavior, a broader range of choice of action—and therefore a responsibility—more than any other species.

Richard Leekey

Set Up Appointments

When calling to make appointments, tell people you are participating in a national effort to assist schools in offering healthier food to their students, and that you would like to meet and discuss what you have to offer. Focus on the need for low-fat, high-fiber, fresh fruits, vegetables and whole grains, leaving the project specifics for personal meetings. Mention that you have educational material that motivates students to make healthier food choices. Speak about what you want rather than what you want to leave behind. Create a positive image in people's minds. Speak about one person's positive response to others. For instance, when talking to the principal, share the enthusiasm of the parents. This builds a feeling of acceptance.

Go to Meetings

Outline the specific areas most relevant to the group you will be meeting with and focus on them. Know in advance what you want to say and what you want from each group.

Begin meetings with statements with which your group will agree, such as the necessity of improving young people's dietary habits and how they need to eat more fruits and vegetables, less sugary snacks and sodas, and so on.

Present the facts that follow the latest medical and scientific recommendations for health. Mention the U.S. Surgeon General's statement that 68% of all deaths result from diet-related diseases. Point out the fact that all modern medical journals acknowledge the overwhelming evidence that fruits and vegetables are health promoting foods.

Take students who support the project along with you. Young people inspire

others to speak candidly and act sincerely. The excitement that young people present when they take up an issue is usually infectious and the media loves this type of activity.

Discuss the Goals

- To provide health and environmental education to teachers, students, parents and food service personnel.
- To provide health education, cooking tips, plant-based recipes and assistance to food service personnel so they may serve more whole plant foods in schools.
- Have teachers show the ***Earth Voice Food Choice*** DVD to students.
- Have teachers use the ***Earth Voice Food Choice*** Manual in their classrooms.
- Have teachers use the handouts contained in this book.

Follow Through

One of the most important aspects of this project is to follow through. When people seem enthusiastic we'll tend to assume they will do everything they say and then some. However, most people need a lot of urging to continue. The old way of doing things usually creeps back in over time, out of convenience and habit.

Stay in contact with the food service director, the principal, the parent associations and the teachers and student groups to insure a successful, lasting project. Drop in on them, bring them treats, become a welcome addition to their day, ask them how you can help them to make this project successful.

There are two big reasons why we have the conditions we have today in our schools, on the streets, in our homes and so forth. The first reason is that our bodies are unbalanced physically and mentally because of lack of nourishment. The second reason is that all young people should understand the principle that all life is related to each other.

Ann Wigmore, D.D., N.D., "Be Your Own Healer"

Spread the Word

There are several sources of media you may wish to pursue. To reach parents, use the parent newsletter put out by most schools. Another excellent source is the student newsletter put out by most high schools and colleges. See Letters, Announcements and Articles, Chapter 17: for materials and articles that have already been used successfully.

Feel Good

Undoubtedly you will encounter obstacles. Understand that the road to change is often uneven, especially with something as personal as people's food choices. Feel good about the quality of information you are sharing with people. Feel proud of yourself for doing this purposeful work, and fulfilling a desperate need in our society.

If you need a boost by someone who is making a significant contribution to the health of our children and the restoration of the planet—go look in the mirror.

As a mother of a six-year-old, I personally appreciate your efforts to promote healthy balanced options. These issues are a growing concern to our students, as well as the community at large.

Diane K. Siri, Superintendent of Schools, Santa Cruz, CA

Working Within the School System

Parents

Parent Teacher Student Associations (PTSAs) are very accessible and are a great place to win support. Parents and PTSAs can also offer a lot of clout and power. The PTSAs are in direct communication with the principal and school administration. Parental influence can help make changes through phone calls,

writing letters and influencing others to support the project.

Parents who are not involved in the PTSA can be reached through the school newsletters that go out to all parents, usually monthly.

To contact the parents, ask the principal's secretary for the PTSA president's phone number. Arrange a meeting or schedule a presentation at the next PTSA gathering, then write an announcement or article for their publication (see sample Parent Newsletter Announcements Version 1 & 2 in, Letters, Announcements and Articles, Chapter 17.)

We want to ensure that the information students receive in the classroom is modeled in the policies and activities of their school. For nutrition, this means that available foods reflect healthy food choices. All members of the school team can work to create a healthy food environment whether the foods are available through school nutrition programs, fundraising activities, school events, holiday parties, or student stores.

Bill Honig, Superintendent of Public Instruction for the state of California

Deliver a 10 to 15 minute presentation to the parents at a PTSA meeting, covering:

- Health risks for their children observing the standard American diet.
- The links between diet and students' academic performance.
- How necessary parent support is for success.
- Relevant environmental effects of dietary choices—at your discretion.

Goals for Parents:

- Ask parents to support the project by voicing their endorsement to the principal.
- Ask parents to motivate food service to serve healthier meals in the cafeteria.
- Help parents form a committee to carry on the work of the project.
- Ask parents to encourage teachers to provide students with health and environmental education.
- Ask parents to inspire their children to have an open mind to the material and taste the new meals.
- Suggest that parents try some of these meals at home.

Principals

Eating plant-based foods will impact health, it will impact the economy for the better, and our health will definitely affect how we relate to each other.

Allen Voeglen, Spanish teacher, Santa Cruz High, Santa Cruz, CA

Principals have much to oversee and are not always easy to track down. They may not return your phone calls right away. Be patient, yet persistent. The principal needs to trust that you have something to offer the students and that the teachers will have an interest in sharing this information with their students.

Many principals and especially teachers are aware of how wild students get after their morning break, their usual time to indulge in sugary sodas, pastries and candy. Focus on the nutritional aspects of the project for improving student health, concentration and academics.

Expound on the concept of the environmental impact of students' food choices. Suggest having the cafeteria meals congruent with the latest in health and environmental knowledge. Show the principal that by emphasizing the relationship between food, health and the environment they are creating a powerful motivating tool to inspire students to eat healthier foods.

We send our students to school, we send them to health class, we teach them what's healthy and not healthy, we teach them the importance of a good diet, then we send them to the cafeteria for a cheeseburger and Coke. Let's get real.

Security officer, Santa Cruz High School, Santa Cruz, CA

Deliver a 10 to 15 minute presentation to the principal, covering:

- The links diet has with disease, learning, emotions and behavior. Stress the behavioral component. Principals are usually very interested in this aspect of a student's life.
- The link between obesity and eating too much animal products and junk food.
- Demonstrate how the project motivates students to make wise and healthy food choices.
- Highlight the mutual alignment of other national organizations like the American Cancer Society and the American Heart Association.
- Have the principal approve your giving a short 10 to 15 minute presentation to the teachers at a faculty meeting.

Goals for Principals:

- To welcome the concept of healthier food, health and environmental education into their school.
- To approve the educational materials, the ***Earth Voice Food Choice*** Manual, and the ***Earth Voice Food Choice*** DVD.
- To bring up the concept of the project at PTSA meetings.
- To give you the name of the teachers in charge of: student leadership groups, environmental clubs, health, and other departments.

The presentation was a real "eye opener"...our students were shocked at the statistics, and we appreciated the Project's classroom presentations.

Jo-Ann Karge, teacher, Mission Hill Jr. High, Santa Cruz, CA

Teachers

Most teachers will readily accept and welcome the idea of healthier food in the cafeteria for themselves and the students. Contact and make appointments with those teachers who are directors of nutrition, science, social studies, student leadership groups, environmental clubs, coaches and all other interested teachers for a short meeting. You will need their help to reach the largest number of students. Once you contact these people, make appointments for personal meetings and presentations. Give a presentation at a faculty meeting, or put an announcement into the teachers' mailboxes.

Present facts, not opinions. It is important for teachers to understand that you are offering current nutritional and scientific information, and that you will present the material in an unbiased form that will stimulate the students. Teachers like to demonstrate to students the responsibility and power of their own choices.

Deliver a 10 to 15 minute presentation to teachers, covering:

- Health risks for children observing the standard current diet.
- The links between diet and students' academic performance.
- What other organizations are saying, such as the American Heart Association, the American Cancer Society and the American Dietetic Association.
- How better-fed students will be easier to teach, will learn more and behave better.
- The impact of a healthier diet on the environment.

Goal for teachers:

- To approve the ***Earth Voice Food Choice*** Manual
- To show the ***Earth Voice Food Choice*** DVD to students
- To use the ***Earth Voice Food Choice*** Manual as a reference and for Q & As after the DVD
- To use the handouts provided in this Manual for the students
- To encourage students to eat more whole, plant-based foods
- To have the students write letters to congress and the USDA voicing their concerns about food issues.

I am extremely happy because for once I actually have a choice. I'm on AFDC, which is welfare, and I have to eat in the cafeteria.

Khalisa Herman, Santa Cruz High, Santa Cruz, CA

Food Service Directors & Operators

Food Service Directors are responsible for all the food budgeting, ordering, preparation and service in the schools in their jurisdictions. In most districts, there is a Food Service Coordinator for each school site. The directors may be persons carrying out all the tasks alone, or they may have a large staff.

Be aware and respectful of the food service person's unique situation. Most are working with limited facilities and budgets. They may not yet be fully aware of the nutritional information you are presenting. Let them know that you understand their situation.

The focus is nutrition and healthy food. Find out as much as you can about what is already being served before you talk to food service directors. Present recipes, suggestions and a la carte menus that fit within the guidelines of the school you are working with.

The Plant-Based Food Preparation for Schools, Camps, Institutions & Homes and the Plant-Based Food Recipes for Schools, Camps, Institutions & Homes chapters in this Manual contain all the necessary recipes and suggestions for preparing a kitchen for plant-based cooking.

Your ultimate goal is a start date for the new meals.

Some food service people may want to start with only one meal a week. Strive for the goal of a plant-based meal daily, even if on some days just a salad bar is offered.

We do our children a wonderful service when we support them in maintaining healthy eating habits. We are fulfilling the genuine call of parenthood when we help them never to feel ashamed or afraid of being different, but rather to take pride in doing what they know is wholesome and good.

John Robbins, "Diet for a New America"

Deliver a 10 to 15 minute presentation to food service personnel, covering:

- Acknowledgement of food personnel's efforts.
- Establishing mutual goals of serving nutritious food, lowering the fat content, and serving more fruits, vegetables, healthy snacks and beverages.
- Current health statistics outlining the need to lower saturated fat and cholesterol in children's diets (specifically, school lunches).

Goals for Food Services:

- To use the Plant-Based Food Preparation section of this Manual (Chapter 14).
- To use the Plant-Based Food Recipes in this Manual (Chapter 15).
- To offer a low-fat, plant-based meal option, daily.
- To give their endorsement to the project and have you work with their on-site director at the particular school that you will be targeting.

Students

The students with whom you speak are most important. They can be effective agents of change. They can motivate their parents, teachers and food services to get involved with new ideas. Their actions can eventually lead to legislative changes, boycotts, and shifts in USDA rules. They are the key to future generations. They need to understand how important and powerful their choices can be. They need to know this!

Treat students like your peers and honor them with respect. One of the best ways to do this is to show them that you understand some of the demands in their lives. They get up early for school, their brains have to absorb new information all day and they must keep focused on their lessons. They usually have an unreasonably short time to relax and eat. They really want to do well. Show these young people that healthier diets will increase their attention span, help them do better at sports and protect their natural resources.

National polls find that 75% of the young people in the U.S. now consider the environment to be the biggest problem confronting their generation. Show them how their food choices and monetary purchases can be tools to voice their opinions.

Meet with student leadership groups, student clubs and environmental groups for separate presentations. When introducing yourself to the student leadership groups and environmental clubs for the first time, be clear and concise about the latest nutritional and environmental information. Find out how these students feel. Scout for enthusiastic students with whom you can meet separately, and guide them to organize a club.

When you have a group together, suggest hanging posters reflecting the importance of the new meals and the start date. Have them circulate petitions to rally

other students and teachers to ask the food service director to serve more whole, plant-based foods. Have students help write and/or coordinate articles for the school newspaper.

Deliver a 10 to 15 minute presentations to students, covering:

- The link between food choices, obesity and other diseases.
- The link between food choices and the environment.
- The power of the students' food choices and monetary purchases for personal health and planetary well-being.

Goals for Students:

For a complete description of how to present to students, see the following Chapter – Presenting to Young People.

- To give a 10 to 15 minute presentation to the Student Leadership groups and Environmental Clubs.
- To view the ***Earth Voice Food Choice*** DVD in classroom and/or auditorium settings.
- To encourage teachers and food service to participate in the project.
- To encourage students to ask for more whole, plant-based foods.
- To write letters to the USDA and their congressional representatives.

I think that our administration should look at this project that we have. It's a plant-based lunch and it's a wonderful thing. And to bring it into more schools and more work places too, would be a really great idea. We're all going to benefit from it, there's nothing that could go wrong.

11th grade student, Santa Cruz High, Santa Cruz, CA

Additional Strategies

Parent Workshop Ideas

Have a series of workshops one night a week. Invite students and other interested community members to attend. Seek out local sponsors to cover the cost of the event. Below is a suggested agenda for each workshop:

Night one: Introduction—show the ***Earth Voice Food Choice*** DVD and give a general presentation on food choices, health, and the environment.

Night two: Have a representative from a local health food store come to the school and give a lecture about their products (which you have chosen in advance). Coordinate with the local health food store to offer parents and students a tour through their store to introduce new, healthier food options.

Night three: Coordinate with a local chef and perhaps a restaurant, to host a live cooking demonstration and food sampling using only plant-based foods.

Food Service Personnel Workshop Ideas

- A good way to introduce a healthy food project to food service personnel (once you have gained approval from the food service director) is to have them prepare one of the healthy meals for themselves.

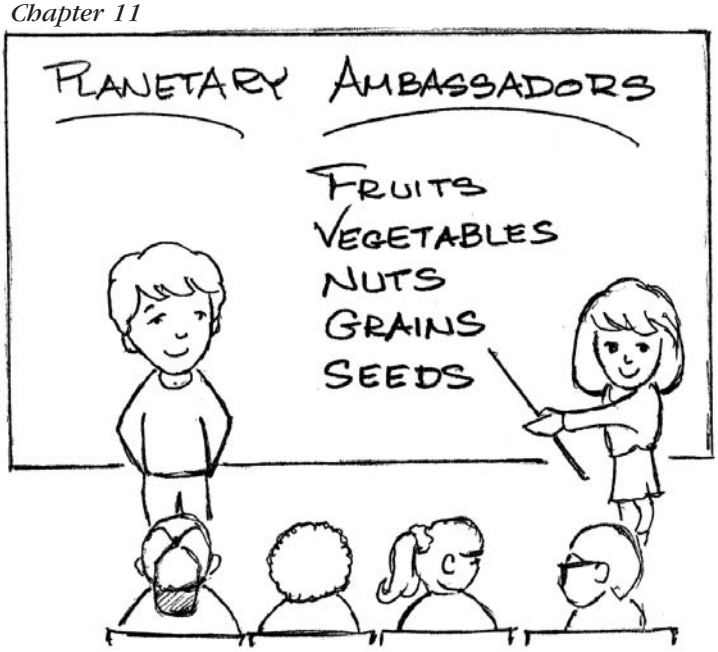
- Show the ***Earth Voice Food Choice*** DVD and give a presentation. If possible, invite a local registered dietitian to assist in the presentation.

- Invite a chef to give a live cooking demonstration using some of the recipes from the Plant-Based Food Recipes section.

Student & Teacher Food Sampling

Coordinate a food sampling day for teachers and students and invite parents and school administrators. This event can be a fun way to introduce the project. Many companies will happily donate food for this event, helping to defray expenses.

Chapter 11



Presenting to Young People

Presentations delivered with emotion are felt more deeply. Adding humor in appropriate places makes the presentations more fun for the students. Sharing information with people in a sincere, compassionate way seems to be a key to successful presentations.

This chapter is for those who desire to deliver their own personalized presentations.

Presentation Helpful Hints

Be Clear on Your Goal

The purpose of the presentation is to offer an overview of how our food choices affect our personal and planetary health. Present the facts. Your desired outcome is to inspire the students to be open to the new material and continue further research on their own.

Know Your Audience

It is important to know to whom you will be presenting. Be a good observer before, during and after the presentation. Notice how the students are interacting with each other. Which students are more attentive? Who are the class leaders? Do the students naturally raise their hands or call out? Be ready to alter your presentation style to achieve the most effective results. Use your personal charisma to transform adversarial situations into positive scenarios. Reading a class and

I asked the trees, and the trees said, "Tell them the story." I asked the wind, and the wind said, "Tell them the story." And I asked the birds, and the birds said, "Tell them the story." And I asked the clover, "little sister, what should I say," and the clover said, "tell them the story, my story, your story, the tree story, the river story, the mountain story, the great story." What we say here is not so important, what the trees say out there is what's important. What the river says is important, because what they say is where the ultimate truth comes to us from. We in our intellectual life get confused, we have guidance deep within us, but it gets obscured, our thinking gets obscured. If we want to know the way, we have to ask the trees and the stars, and the birds and the butterflies and the worms of the earth.

Thomas Berry,
"The Dream of the Earth"

moving through tough situations gets easier with experience.

Look around the room for artwork, projects and other things that indicate what the class might be currently covering. Tie the class interest to the information that you'll be covering by drawing parallels. For example, if you see pictures of people who have done admirable things in their lifetime, tie this to what you are presenting by saying, "The people pictured on the walls of your class stand out in history because they addressed a need in society. They spoke out. They were the leaders of their time. Their deeds made our world a better place. Now, the people who speak up for human and planetary health are becoming leaders in our time. It takes only a few dedicated people to lead a whole society out of a negative situation toward a more positive direction."

We feel the material you presented has given our students new and valuable information. The classroom presentations have caused many of them to rethink their beliefs and practices. Many students expressed hope that this project will bring some positive changes in the food service here at Harbor. We were impressed with the DVD [Diet for a New America] and written information presented during the program.

The Department of Social Science, Harbor High School, Santa Cruz, CA

Build an Alliance

Building an alliance with the students enables them to feel safe and comfortable with you and the new information. Let them know you understand the demands in their lives.

Example – Tell them, "I know it's tough out there to get good healthy food. I know you have a lot going on in your lives and fast-food restaurants are easy and cheap, and that's where your friends go. We live in a conflictive world. On the front page of many magazines and newspapers are articles on the harmful effects of high-cholesterol foods. Then you go to school and you find that you are being served high-fat, high-cholesterol meals every day in your cafeteria. Cigarettes are legal, subsidized by our tax dollars, advertised and sold everywhere, even though we know they can cause cancer and heart disease. To continue this chaos we then have to spend more money to cure these very diseases." Explain that you understand the confusion they must feel and let them know they can redirect the forces that cause it.

Inflection & Changing Topics

Using different tones and inflections is a great way to shift gears, alter the mood and have the information received. When I first started giving presentations, my tone was often hard and factual. As I became more experienced, I learned to vary my tone and be lighter.

Example – If a class is a bit noisy and talkative, speak softly so everyone has to quiet down to hear what you're saying. Other times it is appropriate to amplify and speed up your voice, using a question to change a topic or quiet a talkative group. Some questions that help are: "How many of you think you are powerful? How many of you would like to make a difference three times a day? How would you like to be in greater control of your own life?"

My father died this past year due to a heart disease attributed to a diet that you were telling students to avoid. Your presentation had special meaning to me as a result.

Tim Willis, history teacher, Soquel High School, Soquel, CA

Be a Good Observer

Reading a class can sometimes be a real mystery. You are presenting students with some facts that are quite new to them. Some students are really shy about showing themselves openly, and others are quick to challenge or concur with you. They may not always show their true feelings.

Example – I saw one high school student weeks after a presentation and she said, "It might not have seemed like everyone was interested in your presentation,

but they are all still talking about it. Some people have already changed their diets and it sure made everyone wake up to reality." The gratitude you receive may not always come from your audience, especially at the time of the presentation. You are planting seeds someone else may water, and yet another may harvest the fruits of your labor.

Remain Calm in Challenging Situations

There might come a time when you're faced with a rebellious student or group of students. The beauty of most rebels is that they are usually sharp students wanting to be convinced. They are outspoken and challenge you to the limit. These are good students to empower. Recognize their questions as legitimate and intelligent. Give them positive feedback, like, "good question," or, "yes, many people share your concern." There are also rebels, or groups of them, who are not always so polite and may try to take over the class with their sarcasm. This requires attention.

If any of the students get too wild, ask them nicely if they would like to leave the room. They will usually quiet down. Staying calm and kind helps diffuse their polarizing energy, allowing them to feel your intentions. I've found the ones who challenge the most are sometimes the closest to change and are just looking for the last piece of convincing evidence. I have also found that this type of person can become the most vocal in spreading the new knowledge.

I just don't like eating meat as much because it's not very good for you and when you know what's in that you won't want to eat it either.

6th grade student, Bayview Elementary School, Santa Cruz, CA

Ideas to Enhance Your Presentation

- Record yourself with a tape recorder or video camera. These tapes serve as an excellent tool for self-critiquing.
- Use note cards for technical data and have them and the presentation outline ready. You don't have to use them; however, it helps to have them for off-days or when you feel you need to get back on track.
- Use the blackboard as a teaching aid.
- If a question is asked and you do not know the answer, just tell them you don't know the answer, and acknowledge that their question was a good one. If you are so inclined, you can find out the answer later and tell the teacher.
- Bring along visual aids or things the students can actually touch: pictures, posters, packaged food items like soy milk, cereal boxes, animal fat in a plastic bag, canned goods and juice containers.
- This work expands all your emotions. Be easy on yourself, as you refine your presentation. Honor yourself as you go through the process, be light and have a good time.

I learned a lot of stuff about it and I said, "Whoa—it's not good for me, it's bad for the planet," and I became a vegetarian.

11th grade student, Santa Cruz High, Santa Cruz, CA

Helpful Hints for Auditorium or Classroom Presentations

- Invite the students, the food service staff, the teachers and the parents.
- Show the ***Earth Voice Food Choice*** DVD.
- Following the DVD, give a presentation that explains your goals. Follow with time for questions and answers. Inspire communication with the students and the food service personnel.
- Most schools have an auditorium and DVD facilities you can use to arrange a lunchtime DVD showing.

Sample Presentation & Dialogue Ideas

After showing the ***Earth Voice Food Choice*** DVD, you might want to use a class period to review the DVD, hear what the students retained, offer other perspectives and discuss their feelings and ideas on this subject.

Following is a suggested sequence for a classroom presentation offering dialogue and interaction examples. Examples of many topics are provided. It is not necessary to cover them all in one class. Being familiar with each topic will prepare you for questions and enable you to act with spontaneity. When designing your class presentation, take into consideration the age group and where the students are in their studies. Language adjustments can be made for younger students and adult presentations.

Use the beginning of this book as a reference for factual content. It is designed to make questions and answers fast and easy.

People always ask me, like, what do you eat? Well, just about everything else. There are a lot of things that aren't meat.
12th grade student, Santa Cruz, Santa Cruz, CA

Introduce the Earth Voice Food Choice Project and how to be a Planetary Ambassador

Introduce your purpose and goals.

Example – "The Earth Voice Food Choice Project demonstrates how our everyday food choices affect our bodies, the environment, world hunger and even the economy. We all have concerns for ourselves, our family and the planet. Today we'll discuss solutions to many of these concerns. We'll learn how many human diseases are preventable and how environmental problems are reversible. The Earth Voice Food Choice Project can even assist us in getting healthier food into our school cafeteria. It will demonstrate how we can all create a more sustainable world by producing and consuming more organic, whole, plant foods.

"We'll talk about how money and the economy are involved and how powerful our daily purchases are as part of the solution to the many problems we all face in our world today. We will discuss the power we all possess in directing the future."

It's good to ask the students how they feel about the information throughout the presentation and encourage them to share this information with their family and friends.

"Let's all be Planetary Ambassadors. All we have to do is begin to realize how our everyday actions affect Earth. Even by eating a few plant-based meals a day, and eating some foods that are organic during the week, we will be acting as Planetary Ambassadors.

Thanks to you I don't eat hot dogs anymore. Before I didn't eat green plants, but now I do. Thank you.
Elizabeth Castillo, 4th grader, Miami, FL

"When we buy and consume organically grown, plant-based foods instead of chemically produced, high-fat meats and dairy products we are making our bodies healthier. We are sending a message of support to organic growers and one of discontent to the meat and dairy producers."

Introduce Yourself

When you introduce yourself, share some personal background of how and why you became involved in this issue. Be personal and keep this part short. By candidly sharing your desire to contribute to the students' health and the planet's well-being, your audience begins to acquaint themselves with the meaning of service.

Review Earth Voice Food Choice *DVD*

If the class viewed the DVD, ask what they thought about it and what they learned from it. This is a good way to get a feel for what they care about and a good beginning for your interaction with them.

Intuition

This is a topic which can be slipped in any time you feel it is appropriate or needed.

Example – What is intuition? Our intuition is like an inner knowing. It's how we interpret and communicate our internal feelings into our everyday awareness. We have many voices communicating various messages. Some of these messages come from our mind and seem very logical, and some seem to come from our body, like our heart or gut and are more of a feeling than logical thoughts. Often these voices or thoughts conflict with one another. Using our intuition is trusting our feelings more than our intellect.

How do you intuitively feel about all the trees being chopped down, the rainforests being cut and burned, global warming, water and air pollution, ozone depletion and billions of animals being killed? Much of what we see going on in the world might intuitively feel uncomfortable and upsetting, yet most people in our society rarely acknowledge these feelings. In the past, many of us just went along.

Our intuitive voice is often louder in times of emergency. Intuitively, many people feel the urgency of the environmental problems and are speaking out and becoming involved in protecting and nurturing the Earth. They are trusting their intuitive voice and acting on it.

Intuitive feelings guide us to make choices that are in alignment with our true purpose in life. Learning how to listen to these internal feelings eventually helps us feel calmer and more confident in handling life's situations. Have fun exploring your inner world of intuition.

The Government should subsidize farmers that grow fruits and vegetables with more money than people who raise livestock.

Pernell Begay,
5th grader,
Leupp, AZ

Explain How Our Collective Food Choices Affect the Earth

Ask the students which environmental concerns are most important to them. Where you are able, take the related environmental problems and correlate how plant-based, organic food is part of the solution. Make it clear to the students that by continuing to eat large quantities of meat, poultry, dairy, and chemically-laden foods, they are eating away their own and their children's future. Draw the parallel that, like our bodies, the Earth can begin to heal itself as we reduce our consumption of chemicals and animal foods. It is important during the presentation to show that the solutions to these problems are real and incredibly simple and fast.

Examples – "Who has seen a picture of what the Earth looks like from outer space? It's beautiful, isn't it? We are living on a blue oasis in the vastness of space. The only one we know of in the entire universe. Today many industries are destroying our beautiful home, the Earth, at an alarming rate.

"Who has concerns and fears about the environment and our future? What are some of your concerns? What is topsoil depletion? How does it affect you? What is desertification? How does that affect you? What is the greenhouse effect? How will that impact you? What is the ozone shield? How will its absence affect you and your children?"

My father has high blood pressure. When I told him what I had learned he was happy because he had eaten the right foods that day.

Nancy Martinez,
3rd Grader,
Leisure City, FL

By gaining a deeper understanding of each environmentally caused disease and how a change in our diets can cure and prevent many of them, these students have become Planetary Ambassadors.

Explain to them how we are all interconnected with our environment, that the air we breathe, the water we drink, the soil we stand upon, trees, rainforests, and the ozone layer, are an intricate part of staying alive and being healthy enough to enjoy living. Explain the detrimental effect that the livestock and chemical agriculture industries are having on each environmental problem, such as water pollution, topsoil depletion, resource utilization, etc. Always point out that by consuming fewer animal products, buying organic food, growing their own food in a garden and voicing their concerns, they become part of the solution.

Explain How Our Food Choices Affect Our Bodies

Start out with a few minutes of discussion of the knowledge the class already has about nutrition. The next step will be to cover the diet-related diseases and their prevention by following a healthy, whole foods, plant-based diet. Following are several ideas for openers and interaction.

I want to offer my personal thanks for your efforts in helping to bring a Healthy Food and Education Project to Cincinnati schools. This project is a pioneering effort on your part and I acknowledge you for being on the leading edge of nutritional options for our children's menus.

By providing students a simpler, more Earth-friendly plant-based diet and by helping your personnel to provide that alternative, you contribute to the health and mental clarity of students while supporting them in solutions to many of the health, environmental, and economic concerns which face them today.

Roxanne Qualls, Mayor, Cincinnati, OH

Examples – "I'm going to mention some diseases that are affecting many people in our society today. Raise your hands and keep them up if you know anyone who has had one of these diseases. Heart attack! Stroke! Osteoporosis! Kidney disease! Cancer! Diabetes!" Now, look around the room. Almost everyone's hand will be up.

"How many of you think these diseases are just a part of life? Well, guess what? By eating less meat, poultry, dairy products, highly processed foods and sugar and by eating more of a variety of whole, organic, unprocessed vegetables, fruits, whole grains, nuts and seeds, you can possibly avoid these diseases. Besides, your immune system will grow stronger and more vital too.

"How many of you have ever heard of the saying, 'You are what you eat'? How many of you believe that's true? Then why do we continue to put high-fat, high-sugar, processed junk food into our precious bodies? Everyone is so aware that these foods are bad for us that the term 'junk food' has become a part of our vocabulary.

"Who can tell us what cholesterol is? How much cholesterol is in plant food? Zero, right!

"How many of you read labels? What do you think about all those chemicals in your food?

"Sometimes it's fun to teach our parents and give them advice. Listen carefully, because you might learn some things today that you can teach to your parents to help them live longer and healthier lives.

"How many of you go to fast-food restaurants and eat pizza, burgers, fries, shakes and sodas?" Almost everyone's hand will go up. "How many of you think that kind of food is good for you?" Almost all hands will go down. While the students look around the room at each other, ask them, "If you know it's not good for you, wouldn't it be smarter to order healthier foods or go to restaurants that serve healthier options? You don't even have to do it all the time, just more often will make a difference."

Ask how many of them believe milk is good for them. Explain that whole milk is just like any other dairy product. It is laced with cholesterol and fat.

You could go into detail in other areas, explaining the effects meats, poultry, fish, dairy products, processed foods and sugars have on their bodies. The students like knowing the intricacies of "why." Going into detail gives you credibility, and

gives them the impetus for change. The story showing the progression of plaque buildup works well. (See Additional Presentation Ideas later in this chapter.)

You could also explain how uncooked foods are high in mineral and nutrient content and are an excellent addition to their diet.

Relate How Factory-Farmed Animals Are Really Treated

If it is appropriate, share a story of an animal's life from birth to the plate. Be gentle when delivering this delicate subject. During the stories some students will clearly be in pain, hiding behind their books and squirming in disbelief at the reality. I was a little afraid to tell these graphic stories in the beginning until a teacher said, "It's the truth and people have to hear it sooner or later." If it feels right, talk about it from the animals' point of view.

Examples – "How many of you have pets? Do you love your pets? Do you think they feel pain? Have you ever walked into a room when everyone was angry and you could actually feel the energy even though no one told you what was going on? Have you ever eaten a meal while someone was yelling at you and later had a stomachache because of the tension that was generated? Do you think that emotions affect us on a physical level? When you yell at your dog or cat do they become sad or afraid? Do you think your pets have feelings? Do you think all animals have these same feelings? Do you think the fear and the anger from the animals that we slaughter as food may be transferred to the people who eat them?" One good suggestion would be, "If you are going to eat animal products, at least eat organic animal products that have been allowed to mature on the range and have been slaughtered more humanely. If you must eat animal flesh, eat it less frequently."

Advertising–The Power of Manipulation

Tell the students how some industries are misusing advertising. Explain that the main concern of most industries is money, not the health of the people. Industry is rarely concerned with how their products effect the environment. Ask the students if they appreciate being lied to, defrauded and not told all of the facts just because some businesses want people to buy their products. Explain to them that just because something is on TV, and one of their favorite rock stars, movie stars, or athletes is promoting it, does not mean it is necessarily a good thing to buy, or eat. These stars are not performing as a public service. They are doing it because they get paid a lot of money for it. This is the same manner in which tobacco companies got folks to use their products. They had actors and actresses in motion pictures with a cigarette in their mouth.

Examples – "How many of you believe what the TV commercials tell you is always truthful? How many of you buy the products anyway? Why are we supporting some of these industries that are taking our money, harming the Earth and our bodies? Did you know these industries spend millions of dollars a year to convince you to buy their food? Many manufacturers actually advertise foods that promote disease. With all the money the unhealthy food industry spends on advertising, we still know their food is bad for us.

"The fruit and vegetable farmers hardly spend any money on advertising and we know these foods are good for us. However, once some manufacturer puts those fruits and vegetables into their product line, they "enhance" them by adding preser-

vatives, salts, sugars, dyes and other harmful substances and then spend loads of dollars to entice you to eat them. We must be in some kind of a trance to buy food and put it into our bodies when we know it's unhealthy. Well, guess what? We are in a trance. That is just what advertisements are calculated to do. They play on our emotions in a very subtle way and keep us from thinking for ourselves.

"The commercials we are forced to watch are hypnotizing us and our children so that we will go out and buy harmful products. We've been brainwashed by expensive advertising, TV commercials and TV programs. An important part of our education process should be learning to be aware of who is telling us truths and who is telling us lies and half-truths."

After listening to your presentation, I am convinced that a Healthy Lunch Program is imperative if we expect our children to make good choices about their food intake, and ultimately their health.

Claudia Brown, Assistant Principal, Leisure City, FL

Economics and the Power of the Dollar

"We have all just learned how our food choices affect our bodies and the environment. Now it's up to us to create a change for the better by becoming aware of how we spend our money. Money is one of our most formidable tools to exercise our power immediately and effectively.

"As we stop buying environmentally destructive food and begin to buy food that is life-sustaining, our dollars will actually cast a vote. Showing these unhealthy food industries that we will no longer support them or their products is the fastest way to get them to change or go out of business. By using our money as our voice we are sending a strong message to industries which, for the most part, are more interested in monetary gain than our health and the health of our world.

"Buy organic whole fruits, vegetables and grains. Foods grown organically keep our soil alive so it can continue to grow food and keep our water clean so we can drink it without getting sick. This is called sustainable agriculture, which means it is a form of agriculture that will sustain our natural resources."

Subsidies

Explain what subsidies are to the students. Discuss how meat, poultry, and dairy products are subsidized. Explain how a shift in subsidies toward organic fruits, vegetables and grains supports a more sustainable form of agriculture. Ask the students how they feel about supporting the livestock and chemical agricultural industries with their tax dollars. Subsidies are also used to keep food from the marketplace. Therefore, not only are we spending money on the subsidy, but this causes the price of the subsidized food to rise in the marketplace.

The Earth Voice Food Choice Project

If you are working with, or planning to work with the food service people of your school, introduce the specifics of the plant-based meals. Find out how many of the students eat in the cafeteria. Quickly go around the room and ask the students what they think about eating more plant foods.

Example – "The school food service in our school has agreed to offer a plant-based meal every day along with the regular meal offered now, so you have a healthy option in the cafeteria.

"This is a good way to begin integrating healthy food into your diet. The more of it you purchase and consume, the more the school will back it up with other choices. There are lots of recipes that students in schools across America are enjoying,

like veggie burgers, pizza, tacos, burritos, falafel, sandwiches, soups, pasta, casseroles, and potato and salad bars. It's important to talk with the food service personnel and tell them what you like and don't like. These people are working for you. They care about you and want to make food you like.

"If your cafeteria served a meal each day that tasted really good, was good for you and the environment, and cost the same, how many of you would purchase it?" When you get a show of hands, then inspire them to participate and follow through with the project. Use the Student Sign-Up Sheet (in the Handouts chapter) to get their commitment. It takes collaboration and participation from the students in order to insure success in obtaining and continuing the plant-based meals.

Ask the students, "What are some of the things you would like to see offered in your cafeteria?"

Policy Change Through Letter Writing

Explain to the students how letter writing is effective in bringing about needed government policy change. (See Healthy Food Student Letter in the next chapter, The Need for Involvement.) "The purpose of the Student Letter Writing Action is to focus our demands and organize our voices into a resounding chorus that is too loud and persistent to be ignored. Write to your senators and representatives asking them to mandate the USDA to provide enough organic, plant-based foods to your school food service personnel so that they can offer you healthy meals and snacks everyday in your cafeteria."

Suggest that students write to their senators and representatives because they are the ones who dictate what is served in the National School Lunch Program.

If you have a class that wants to be more active, suggest that they write to the president of the United States and ask that he join them in preserving the Earth's natural resources. Explain to them that our elected officials need to understand that it is every American's constitutional right to have clean air, water and soil. Teach them that by joining together and demanding that policy be created to protect their natural resources, they become part of their government by inspiring new policy. This will show elected officials the students' priorities.

> The response of the students has been very positive, and a number of students have decided to switch to a plant-based diet altogether. It is without reservation that I highly recommend this project.
>
> *Mimi Fortunato,*
> *Teacher,*
> *New York, NY*

Visualizing and Manifesting

Visualizing, manifesting, positive thinking and generally being aware of the fact that we as humans are in control of some of our destiny is becoming increasingly accepted by mainstream thinking.

Thinking – The way we think about things is very relevant to the way things turn out in our world. Thoughts generate energy, and the more we think about something the more we tend to speak about it and then act.

Speaking – Speaking tells others what we want and what we believe. Speaking about a problem is the first step in bringing people together who agree on a particular issue. This builds coalitions and strength. The more we speak about what we want, the more often we will get it.

Action – In order to make something happen we must act and convince others to act. We can think about clean water, and tell others that we want clean water, but if we continue to buy chemically laden foods, how will we get clean water? We must make our actions and our words work together to accomplish our purpose.

Example – Ask the students to close their eyes and one by one call out the way they would like the world to be in the future. Have them begin their one-sentence comments with, "I see a world . . . ." For example, "I see a world in which all the water is clean, and all life is respected and cared for."

Review

Take the time to review the information. Ask questions and ask specific students to give the answer. If the answer is unresponsive or incorrect, point to another student and ask their opinion.

Example – "What are some things we could do to prevent a heart attack? How can we produce less greenhouse gases? How can we reduce topsoil depletion? How can we reduce water pollution? What do heart attacks and wasteful agriculture have in common? What is one very powerful action we can take to help our health and the environment? Cut down on meat, poultry, dairy products and chemically laden foods and eat mostly plant-based, organic foods." Go around the room quickly and pull the answers out of the students. It's good to make this part fun and upbeat. You want to leave the students excited, feeling good about their future and knowing that they hold the power to bring their dreams to fruition.

As Principal of the Yeshivah of Flatbush, I plan to integrate your nutritional philosophies into the main science curriculum because I feel the students desperately have to be taught good eating habits when they are young.

Leonard Zeplin, Brooklyn, NY

Actions to Announce

- Announce meal starting dates or have students fill out the Student Sign-Up Sheet (see Handouts, Chapter 16) if no date has been set.
- Hand out the Student Response Sheet (see Handouts). These will also act as a guide to the district and food service people as to the intended participation of the students.
- Announce the Student Letter Writing Action. This is an optional project (see Student Letter Writing Action in the next chapter).
- Thank your audience for hearing what you have to say.

13 years

25 years

35 years

45 years

Additional Presentation Ideas

Cardiovascular Disease

The following diagram and story works effectively to demonstrate to a class the progression of heart disease. Draw 4 circles on the blackboard depicting the inside of an artery and write the following ages underneath the circles: 13, 25, 35, 45. The circles will represent the cross section of an artery. Tell the class these circles represent one of the coronary arteries whose function is to deliver blood to the heart.

Imagine someone growing up consuming large amounts of meat, poultry and dairy products in foods like hot dogs, pizza, cottage cheese, ice cream, and hamburgers. All these foods contain large quantities of saturated fat and cholesterol. Eventually this diet can lead to the formation of plaque in the arteries. First, streaks of fat appear in the arteries. (Shade in the inside border of the first circle.)

During their teens they continue to eat foods like hamburgers, tacos, milk shakes, and bakery items with lots of butter. This adds to the plaque buildup and by the time they reach age 25 they might have considerable plaque buildup in their

arteries (shade in the area of the second circle).

As they continue to eat the typical American diet, adding lots of barbecues, steaks, ribs, baked potatoes with toppings like butter, sour cream and cheese, plaque buildup becomes thicker and thicker. By age 35, that person could have significant plaque buildup called atherosclerosis. The heart muscle fibers begin to weaken and die from decreased blood flow, lack of nutrients and lack of oxygen. (Shade area of third circle even more than the first two.)

Along comes age 45 and this person has really been enjoying the "good life." or so they think (shade in the area of the fourth circle as you talk and leave one tiny hole open). This plaque buildup cannot be felt. Someone could be out jogging or dancing and feel just fine. Many people continue to eat meat, poultry and dairy products, and these products are continually being converted into more plaque, narrowing the inside diameter of the artery even more.

By this time, the coronary artery supplying blood to the heart is almost completely closed. The blood cells begin to stick together, a clot forms inside the artery. Then the clot breaks off the artery wall and floats away in the blood. When the clot reaches that tiny hole in the person's artery and blocks it (fill in the tiny hole on the board) the person has a heart attack. This is what people call a "sudden" heart attack. However, the disease can manifest itself in other serious ways. The blood clot can move to the brain and cause a stroke. We can all see how this disease actually develops over a period of years from consuming foods that are high in saturated fat and cholesterol.

The good news is that plaque formation is reversible by avoiding saturated fats and cholesterol. The best way to do this is to cut down on eating meat, poultry, fish and dairy products.

Our health is largely determined by what we put into our mouths. There is no question that a plant-based diet reduces the risk of heart disease and stroke. Our bodies have an innate ability to repair themselves. Arteries can become clear of plaque formation by eliminating meat, poultry and dairy products, and replacing these foods with low-fat, plant-based foods. Speak about the benefits of a plant-based diet and refer back to the circles on the board. Erase the plaque buildup in the circles as you speak about healthy plant-based foods the students could eat. It is important for us to learn how we can clean our arteries. The best time to start is while we're young and our arteries are relatively clean.

> Your visit to my class and others at Arvida Middle School made an enormous impact. I have heard so many students talk about changing their eating and buying habits.
>
> *Linda Zack, Teacher, Miami, FL*

Writing the Names of Common Foods on the Blackboard

Start by asking the students to name all the animal foods they usually eat during the week. As they are calling out the different foods, it is helpful to list them on the blackboard. If you are presenting with another person, one presenter can write on the board while the other facilitates the responses. If you are presenting alone ask the teacher to help write the responses on the board. Then ask the students to call out all of their favorite vegetables and list them on the board. Fruits are often the most fun to list because the students get so happy and excited when they are calling them out. Do the same thing for all the grains, nuts and seeds. Then tell the students, "It's amazing how many plant foods there are."

Tips on Public Speaking

Take a Deep Breath, and Calm Yourself

The anxiety and "butterflies" that come with presenting in front of a group are a normal, healthy and human response to wanting to do your best. You are not alone. Just bear in mind that everyone feels this way when they begin to speak publicly. The Book of Lists ranked fear of public speaking as the #1 most common fear. How do you manage it? You just go ahead and do it. If it will help you to feel better you can even tell your audience how you feel. They will understand it and appreciate that you are being honest with them. After 2 or 3 presentations those butterflies will disappear and you will enjoy yourself and your audience. Another key to handling those butterflies is to notice how much time you spend paying attention to yourself versus paying attention to your audience. A lot of nervousness comes from staying focused on how you're doing instead of noticing how the audience is doing. Once you're comfortable with the content of your speech, practice shifting your attention from yourself to the audience and back again. This takes the "heat" off you and helps you adjust your material to the changing needs and wants of your audience. You can get those butterflies to fly in formation by paying careful attention to the following.

This is a subject, which all students (and most adults, for that matter) clearly need to be made more aware of. I found that the majority of my students were surprised and enlightened by what they had learned.

Mark Testa, Science Teacher, NY, NY

Set a Clear Goal

Having a clear goal for each speech is the best way of saying and doing what will help you be most effective, calm, clear, and to the point. Decide on your overall purpose in presenting ideas as well as a goal for each specific audience. As part of your preparation, ask yourself: "What do I want from giving this talk?" and "What do I want people to go away with at the end of the presentation?"

Go for it!

The best way to get ready is to just jump in and do it!

The Need for Involvement

The USDA has major obstacles to overcome in its efforts to raise nutritional awareness in the schools and facilitate healthier meals in their cafeterias. The greatest areas of immediate need are:

1) Health education for students powerful enough to motivate them to make healthier choices.
2) Training and supplies for food service personnel in the preparation of appetizing low-fat meals.
3) The ability to stand up to Congress and demand that school food nutrition be brought up to nutrition standards of the 21st Century.

Consumers Can Create Policy Change

As soon as students, food service personnel and educators begin to demand foods such as organic fruits, vegetables, whole grains and legumes, the USDA will have to supply them. A shift of food distribution in a government feeding program the size of the NSLP would be felt throughout the entire agricultural system. To loosen the grip of the meat, poultry and dairy industries on the current unsustainable agricultural practices, we must begin to ask for, buy and eat more healthy organic plant foods.

Another effective way to help create needed subsidy shifts is through communicating your support for sustainable agricultural practices to your congressional representatives. As your awareness of social, environmental, agricultural, and

economic issues increase, you can voice your opinion by writing, faxing, and e-mailing letters. Communicating with your representatives is very powerful and does make a huge difference.

Of course, one must not forget that the best way to bring about change is to boycott the poor choices and put your dollars on the better choices. These money-driven industries will either change to support the people's choices, or go out of business.

Taking Action Through Letter Writing

Many of us know changes are desperately needed with regard to food and environmental issues. One might think that with current medical and scientific knowledge, policies would be enacted immediately to produce safe and nutritious food and preserve our natural resources. However, our food, our land and our water are still being contaminated. It is important for us all to recognize that because of the political and economic influence from large chemical and agricultural industries, unsustainable agricultural practices threaten to remain the norm. We must become involved if we want to have a say in our future. One of the most powerful ways we can be effective is through our consumer choices. Another equally powerful way is by voicing our opinion to our representatives. A great way to do this is to take action through letter writing.

The most important thing about letter writing is to do it. Fancy letters are unnecessary. True, polite thoughts and feelings are the most effective approach. Simply stated handwritten notes and letters are responded to more than typewritten form letters. As a rule of thumb, politicians, public opinion polls, and the media consider that 1 letter from a concerned citizen represents 10,000 others who feel similarly. Letters with petition signatories are also very effective.

As we become informed ourselves, we can begin to teach our representatives to form food policies that promote wellness. Congressmen are well aware that their jobs depend on your vote.

Student Letter Writing Action

The best way to get what you want is to ask for it. Inspire the youth of America to join in a national effort to ask our senators and representatives to offer organic, whole, plant-based meals in school cafeterias.

Suggest having the students address the letters to their senators and representatives. Imagine the impact of receiving thousands of letters from students across America asking for plant-based meals. The youth of this country have a powerful voice and can be very influential in changing policies.

How to Coordinate the Student Letter Writing Action

- Part of your presentation to a class or a larger audience should be used to explain the power of letters written to representatives. (Use a whole class period to explain the power of writing letters and then have the students write their own letter on this food issue. Or, reserve enough time at the end of the classroom presentation to explain the letter writing action to the students.)

- Explain to the students that writing these letters will enable them to voice their opinions for their health and the health of the planet. The more student letters, the faster the plant-based meals will become a reality.
- Recommend that students write requesting that organic, whole, plant-based meals be served in schools, and to add any other comments in their own words. If it is easier, they can use the student letter. (See Student Letter at the end of this chapter.)
- If there is a lot of support, you can organize a successful letter writing action in the whole school, or the entire district.

Additional Letter Writing Ideas

In addition to their local representatives, students can also write to the Secretary of the USDA regarding school food programs.

Here are some other recommendations to put in letters:

- Offer students a low-fat, plant-based meal option each day on the National School Lunch and Breakfast Programs.
- Recognize all foods for their protein, vitamin and nutrient value.
- Approve tofu, tempeh, and seitan as acceptable sources of protein.
- Offer beverage alternatives to milk, such as soy, rice, or almond milk, and fruit juices.
- Ask that organic food be served in schools.
- Increase portions of fresh fruits, vegetables and whole grains.

People to Write:

Congress
U.S. House of Representatives
Washington, DC 20510
(202) 224-2131

U.S. Senate
Washington, DC 20510
(202) 224-3121

Secretary of Agriculture
U.S. Dept. of Agriculture (USDA)
14th & Independence Ave.
Washington, DC 20250
(202) 720-3631
agsec@usda.gov

President
The White House
Washington, DC 20500
(202) 456-1414
president@whitehouse.gov

Healthy Food Student Letter

Date _____

To _____

From _____

Address _____

Address _____

City _____ State _____ Zip _____

Dear _____,

My name is _____, and I am in the _____ grade.

I am a student at _____ school.

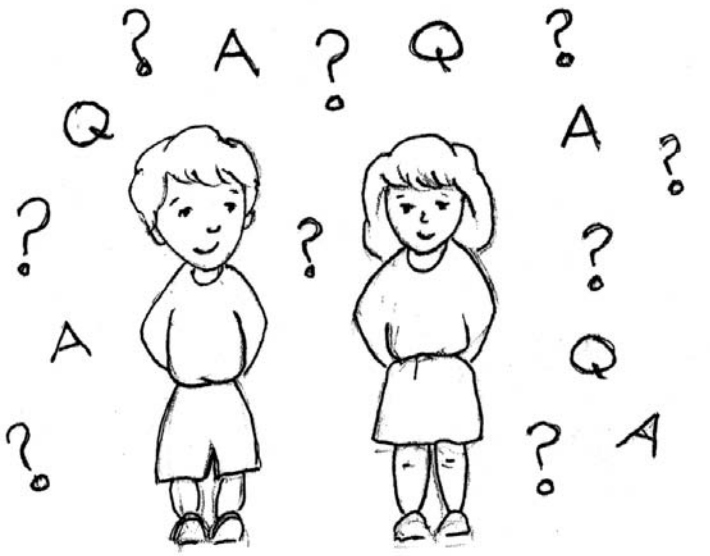
I have been learning in school about the effects meat, poultry, dairy products, pesticides and fertilizers have on my body and the planet. Because of these effects, I would like to have organic, whole, plant-based meals and snacks served in my cafeteria every day so I can stay healthy and help the Earth at the same time.

I am also requesting that my school serve healthier beverages like soy milk, rice milk and pure fruit juices.

Can you help? Will you help? When will my school be able to serve this healthy food? I would like a response as soon as possible.

Thank you for caring about me and our environment.

Sincerely, _____



Answers to Frequently asked Questions

Are your goals to convert people into vegetarians or vegans? Do I have to be a vegetarian or a vegan?

People do not have to become vegetarian or vegan in order to choose a healthier plant-based meal some of the time. Many people who eat animal products also like to eat a totally plant-based meal some of the time. The goal is for schools to offer students a whole food, plant-based meal as a daily option, and inform them of the benefits of eating such meals. The project is striving to offer the students balance in a society that is consuming too much high-fat, highly processed, animal-based foods.

Can I get healthier meals in schools with a minimal amount of time and effort, and no help from anyone else?

- Yes! Simply offer information in the *Earth Voice Food Choice* Manual to: the food service director, Principal, PTSA president, teachers and district officials, or anyone else you feel can be effective.
- Make an appointment with the PTSA, principal and food service director and give a short presentation to familiarize them with the material and advantages of eating more plant foods.

How can I be instrumental in having more plant foods served in schools without costing the food service more money?

- The USDA has a large assortment of legumes, canned fruits, frozen vegetables, dried grains and some fresh fruit and vegetables already available through the commodity program.
- Schools receive a cash allowance for making outside purchases.
- Be instrumental in getting an organic garden started and suggest that it be made part of the school's curriculum. The free food from the garden can be used in salad bars and in the plant-based meals.

What should I do if the food service director or principal turns me down?

- Find out specifically why you were turned down and look for solutions to address their concerns.
- Gather letters of support from parents, local elected and appointed officials, teachers, and students. Send the letters to the person who turned you down.
- Start a sign-up sheet or petition and circulate it among the students (see Student Sign-Up Sheet in Handouts, in Chapter 16). Then deliver the sign-up sheet to the person who turned you down.

How can I assist on a national level?

Inspire students, parents and educators to call and write their congress people and USDA officials, to voice their opinions in a constructive way. Ask that whole, organic plant-based foods be served in our nation's public schools.

What is the "Greenhouse Effect?"

Think about a car parked outdoors on a hot sunny day. Before the current buildup of greenhouse gases in the atmosphere, the Earth was like the car with the windows wide open. The hot air inside the car could escape through the open windows. The greenhouse gases (human made gases and gases from fossil fuels) act like rolling up the car windows. They prevent the hot air from escaping, thus causing the temperature to increase. Like the car, the heat from the sun stays caught in between the Earth and this 'closed window' of gases in the atmosphere. This is heating up our world, causing "Global Warming," or the "Greenhouse Effect." These higher temperatures can change climate patterns, cause the ice caps to melt prematurely, increase precipitation and actually destroy life on earth as we know it.

I'm only one person, how can I make a difference?

When we see our actions supporting a system that is damaging to our lives, we must make a conscious effort to change. It doesn't make sense to allow that damage to continue. We must act while we still have the opportunity to make choices that can save our lives and help our world. We can send a message to all

industries by how we purchase their products. Our money is one of our best tools to motivate industries to produce what we want to buy. If we don't buy a product, they won't make it anymore! This is one of the best ways you, as an individual, can make a difference.

If I don't eat animal products, why do I have to eat beans?

The USDA controls what food is served in school cafeterias through the Meal Patterns. For a school lunch to qualify for federal funding, the school must serve meat, dairy or legumes as a source of protein at each meal, even though we know there is protein in other plant foods. So, for this alternative plant-based meal to qualify, it must consist of some type of bean, legume or peanut butter. Having to include beans or nuts in every meal may sound pretty limiting; however it is actually very possible. Salad, soup and potato bars are good alternatives and they qualify for the federal school lunch program because they offer cheese as an optional alternative.

Why do you want to change my school lunch?

The typical school lunch has an average of 38% fat, and twice the sodium content recommended in the government's Recommended Daily Allowances (RDAs). These substances are known causes of disease. It is good to avoid foods that are bad for you and at the very same time, you can eat foods that will help your body and your mind grow and guard your future health. Eating the foods that will do you the least harm and the most good will also keep our planet clean, healthy and productive.

How many vegetarians are there in the United States?

Over 12 million Americans are now vegetarian and even NASA recognizes that the only diet in the future for astronauts living in space colonies will be a plant-based diet.

Aren't people living longer today?

This is certainly true. In the 1870s, the average life span was 46 years. In 1976, the average life span was 74 years for men and 76 years for women. The reason for this jump in the average mortality rate is mostly attributed to the increase of children surviving diseases that, in the past, were fatal. Many more children died 100 years ago than do today. The higher mortality rate of children in the past brought the average life span down. Today, due to improved sanitation, sewage systems, cleaner housing conditions, developments in medicine and so on, fewer children die.

More people reach adulthood and even old age. However, the quality of life for the elderly has diminished. Arthritis, coronary disease, osteoporosis, and many other diseases prevent some of our elderly from enjoying an active, healthy old age.

Do animal foods contain as much pesticide residue as fruits and vegetables?

Actually, they contain a lot more because toxins are stored in the fat cells of animals and tend to build up. This is called bio-accumulating. For example, a cow or a chicken that is fed pesticide-treated corn for 4 months at the feed lot is accumulating residues of these toxins in the fat tissues of its body. When someone eats the flesh of the cow or chicken they end up eating toxins that the cow stored in its cells over its entire lifetime. The same thing happens with other animals like pigs, turkeys and so on. Plant foods only live for one season, are sprayed a few times during their lifetime, and tend to store much less toxins in their tissues. This is why, if you're going to eat animal foods, you're better off eating ones that are raised organically.

Chapter 14

Plant-Based Food Preparation for Schools, Camps, Institutions & Homes

School meals must meet the Dietary Guidelines for Americans by reducing fat, saturated fat, cholesterol, and sodium. At the same time, adequate levels of protein, calcium, iron and fiber must be provided. If you feel perplexed about how you are going to accomplish these changes in a cost-effective manner, you will find this chapter to be extremely useful. Increasing the number of plant-based options on your menu is exactly what is needed to comply with the regulations.

Low-Fat, Plant-Based Meal Preparation

- It is often possible to make low-fat, plant-based options available with only minor changes to an existing menu. For example, offer a vegetarian burger as a meat-free alternative on the day you serve hamburgers.
- It is likely that many of your currently used recipes can be easily modified to make them meat free. For example, lasagna lends itself easily and deliciously to meat-free versions, and many soups can be made vegetarian with the simple substitution of vegetable stock for meat stock.
- Plant-based menu items often cost significantly less to prepare than meat-based

items, even when labor costs are included. Savings may be less when meat, cheese and eggs are supplied through the U.S. Department of Agriculture commodity program. However, increased reliance on plant food commodities such as brown rice, bulgur wheat, whole wheat flour, rolled oats and fresh vegetables will help keep costs down.

- New recipes and ingredients may be unfamiliar and more time consuming at first. However, soon these will become as familiar and routine as present menu offerings.

Definitions of Some Key Terms

Vegetarian meals exclude all meat, poultry, fish and other sea animals, and animal by-products including gelatin and lard. Vegetarian meals can include cheese and other dairy products and eggs.

Vegan ("vee-gun") meals are made exclusively with plant foods, including grains, legumes (beans, lentils, and peas), vegetables, fruits, nuts, and seeds. Vegan meals exclude all foods of animal origin, including dairy products and eggs. Some people who eat a strictly vegan diet use honey, others do not.

It's important to note that these terms define what vegetarian and vegan meals do not contain. A healthy vegetarian or vegan meal does contain a wide variety of foods from primarily the plant kingdom: fruits, vegetables, whole grains, legumes, nuts, seeds, spices, etc. One does not have to be a vegetarian or vegan to enjoy these meals. This balance is a personal choice.

What we eat may affect our risk for several of the leading causes of death for Americans, notably, coronary heart disease, stroke, atherosclerosis, diabetes, and some types of cancer. These disorders together now account for more than two-thirds of all deaths in the United States."

From The Surgeon General's Report on Nutrition and Health, 1988

Changes that can be easily incorporated into an existing menu might include:

- A plant-based soup can be a daily menu item. The addition of salad and bread makes a nutritious and satisfying meal.
- Offer a meat-free salad, such as a hearty bean or grain salad, every day. These are nutritious, easy to prepare, and will hold for several days. Many schools offer a meat-free Chef's Salad as a daily vegetarian option.
- Consider adding a salad bar that includes leaf lettuce, spinach, a variety of fresh vegetables, cooked beans, sprouts, and seeds.
- Offer cooked pasta or a baked potato with one or more meat-free toppings every day. Chili makes a great topping for baked potatoes.
- A burrito bar or a taco bar is easy, inexpensive to offer, and always popular.
- If a selection of hot entrées is offered each day, make one of them plant-based.
- Non-dairy milks made from soy and also from rice, are available in individual portions. Aseptic packaging allows convenient storage without refrigeration. Powdered non-dairy milks are also available.
- Offer fresh fruit as a healthful dessert alternative.

Simple Modifications to an Existing Menu

The addition of vegetarian items need not involve a complete overhaul of the menu. Existing recipes often lend themselves to simple modifications that make them acceptable to vegetarians as well as non-vegetarians.

- Replace the meat or chicken stock in soups and stews with vegetable stock, vegetable juice, or water and additional herbs. Bean-cooking liquid may also be

used as a stock in soups and stews. A variety of vegetable stocks are available in liquid and powdered form, and their price is equivalent to meat stocks.
- Use vegetable stock in place of meat stock in pilaf, other grain dishes, and sauces. This will eliminate the cholesterol and make these dishes healthier for everyone.
- Use vegetable oil instead of animal fat for frying and sautéing. This simple change will greatly reduce the levels of saturated fat and cholesterol.
- Lasagna can be prepared with a meat-free sauce. Vegetables such as spinach, eggplant or zucchini can be substituted for the meat filling.
- When preparing spaghetti or pasta sauce, prepare a portion without meat. Likewise, on pizza day, make meat-free versions topped with chopped fresh vegetables.
- Offer vegetarian baked beans in place of pork and beans, chili beans instead of chili con carne, and refried beans made with vegetable oil or no fat at all. Everyone will benefit from the reduced fat and cholesterol.
- Textured vegetable protein (tvp) is inexpensive, easy to prepare, and fat free. Use it as a substitute for ground meat in sauces, chili and tacos.
- Meat-free burgers and hot dogs provide a quick and delicious vegetarian option.
- Meat-free burger patties may also be crumbled and used in spaghetti sauce, chili and tacos.
- Offer sandwiches made with meat-free cold cuts.
- Add bulgar wheat to bean dishes for added texture. Bulgar wheat is often available through the U.S. Department of Agriculture commodity program.
- Prepare or purchase pastries, crackers, rolls, and cookies made with vegetable oil instead of animal fat or butter. (Consider offering non-fat versions as well.)
- Prepare or purchase yeast breads without eggs or dairy products. Breads should be made from whole grain flours whenever possible and should contain little or no fat. If fat is an ingredient, make sure that it is vegetable rather than animal fat.
- Cow's milk can be replaced with soy milk, rice milk, or with water in most recipes, without altering the taste or appearance of the food.
- Buttermilk can be replaced with soured soy milk or rice milk. For each cup of buttermilk, use 1 cup soy milk plus 1 tablespoon of vinegar. Replace 1 cup of yogurt with 3/4 cup soy milk plus 1 tablespoon of vinegar.
- Crumbled tofu can be substituted for cottage cheese or ricotta cheese in lasagna and similar dishes. It can also be scrambled in place of eggs with a bit of soy sauce and turmeric for color.

Research has shown that many of these diseases could be prevented simply by changing our diets, especially by reducing our consumption of fat and cholesterol. A considerable body of scientific data suggests positive relationships between vegetarian diets and risk reduction for several chronic degenerative diseases and conditions, including obesity, coronary artery disease, hypertension, diabetes mellitus, and some types of cancer.

From The Position of the American Dietetic Association: Vegetarian Diets

Additional Suggestions for Recipe Modification

With just a bit of experimentation, additional recipes may be made low-fat and plant-based by using the following suggestions:
- A variety of meat substitutes are now available in institutional quantities. These include burgers, hot dogs, sausage, beef-like products, and cold cuts.
- Replace ham or bacon in bean or pea soups with chopped vegetarian hot dogs or sausage added at the end of the cooking time or simply increase the other seasonings, like marjoram, cumin, black pepper and salt.
- Replace meat stuffing in bell peppers or cabbage rolls with rice, nuts and raisins.
- Diced or mashed tofu can be substituted in some salads and sandwiches in place of chopped egg.
- A bit of tofu and/or tahini (sesame seed butter) blended with a vinaigrette dressing makes a delicious, creamy salad dressing. Add fresh herbs such as chives, basil, oregano, marjoram, and tarragon if desired.
- Eggs in baked goods can often be eliminated without affecting the taste or

texture. If the family-size version of the recipe calls for one egg, just leave it out, and add a couple of extra tablespoons of water to maintain the intended moisture content. If 2 or more eggs are called for, substitute one of the following for each egg:

1/4 cup (2 ounces) soft tofu blended with the liquid ingredients of the recipe
1/2 small banana, mashed
1/4 cup applesauce, prune purée, or canned pumpkin
1 tablespoon flax seeds puréed in a blender with 1/4 cup water
1 heaping tablespoon soy flour mixed with 2 tablespoons water
2 tablespoons cornstarch

- To replace eggs which are used for binding in burgers or loaves try:
  Mashed potatoes
  Quick-cooking rolled oats
  Cooked oatmeal or cooked rice
  Fine bread crumbs
  Tomato paste
- Gelatin, which is made from the bones and hooves of animals, may be replaced with a plant-derived substitute. This is available from natural foods or kosher distributors.
- Instead of clam chowder, serve a potato corn chowder.
- Fruit juice concentrate, dates, raisins, sweet blended fruits and Succanat may be substituted for all or part of the white sugar in recipes.
- Grind seeds such as sesame, pumpkin and sunflower to a fluffy powder consistency in a coffee grinder. Shake the coffee grinder around in your hands to prevent the seeds from turning into a paste. This seed powder is great for topping salads, vegetables, grains and many other dishes. It tastes cheesy, and is loaded with essential fatty acids.

The loss of a lifetime of whole foods may be incalculable…and may have a good deal to do with the rise of chronic illness. The consumer's best defense is a working knowledge of foods and nutrition and a diet built around fresh whole foods, avoiding highly refined, processed products to the extent possible.

Joseph Beasley, M.D., Kellogg Report: The Impact of Nutrition, Environment & Lifestyle on the Health of Americans

Typical Entrées	Low-Fat, Plant-Based Alternatives
Teriyaki Chicken	Teriyaki Tofu
Chicken Fajitas	Tofu Fajitas
Beef or Chicken Tacos	Bean or Bean and Nut-Seed Tacos
Spaghetti with Meat Sauce	Spaghetti with Marinara Sauce
Lean Beef or Chicken Patty	Veggie burger made from original recipes or from dry mix
Chicken Gyros	Falafel or hummus from dry mix filling, wrapped in pita bread
Lasagna	Lasagna with meat-free sauce, broccoli, tofu, etc.
Beef and Cheese Egg Rolls	vegetable spring rolls

Simple Tips for Cutting Fat

The U.S. Department of Agriculture has mandated that school meals must

comply with the Dietary Guidelines for Americans. This means that the fat in school meals must be reduced to at least 30% of calories and that saturated fat must be no more than 10% of calories.

Many people are surprised to learn that the major sources of fat and saturated fat in the typical U.S. diet are meat, full-fat dairy products, and eggs. The first step in reducing fat is to decrease reliance on these foods and replace them with grains, vegetables, and legumes. Other sources of fat include fried foods, especially deep-fried foods, pastries, many sauces, salad dressings, nuts and seeds. The tips below will help you cut the fat without losing the flavor.

- Grilling, baking, and oven roasting are great alternatives to frying.
- Braise vegetables such as onions instead of sautéing them in oil. Heat a small amount of liquid such as water or vegetable stock in a large skillet or pot. Add the onions and cook over high heat. Stir occasionally until tender, then proceed with the balance of the recipe.
- The braise-deglaze technique allows you to actually caramelize onions, bringing out all their natural flavor and sweetness with no added fat. This is especially useful in the preparation of soups and sauces. Heat a small amount of water in a skillet and add the onions. Cook over high heat until the water has evaporated and browned bits begin sticking to the pan. Add another cup of water, stirring to loosen any stuck particles. Continue cooking, stirring occasionally, until the water has again evaporated. Repeat this process until the onions are nicely browned.
- Serve oven fries sprayed with a little olive oil instead of deep-fried French fries.
- Serve cooked vegetables plain or with a bit of seasoned rice vinegar, lemon juice or fat-free salad dressing. Dijon mustard is also nice for dipping.
- Replace all or part of the oil in salad dressing with seasoned rice vinegar, vegetable stock, bean cooking liquid, or with water.
- Use guar gum, Thick-It, or cornstarch to thicken fat-free salad dressings. When using cornstarch, first heat the cornstarch-and-water mixture (1/4 cup cornstarch per 1 quart water) until clear and thick. Cool and substitute for oil in any salad dressing recipe.
- Make soup thick and creamy by adding mashed potatoes or quick-cooking rolled oats. For soups that will be puréed, simply cook and purée diced potatoes along with the other ingredients. For other soups, add instant mashed potato flakes or quick-cooking rolled oats that have been puréed with a small amount of liquid.
- The amount of fat in baked goods can often be reduced with no noticeable change in taste or texture. Experiment with your recipes, adding a bit less fat each time and evaluating the results. You may have to replace the fat with a bit of extra liquid to achieve the desired consistency.
- Applesauce, mashed banana, prune purée, or canned pumpkin may be substituted for part or all of the fat in many baked goods.
- Prepare pies with a single crust to reduce the fat and calories (about 100 fewer calories per serving).
- Crumb crusts usually contain less fat than pastry crusts. Crusts can also be made from chopped nuts and dates mixed by hand.
- Most plant foods are very low in fat. Nuts and seeds, avocados, and olives are the exceptions and should be reserved for use as garnishes and condiments.

Many people think if you feed kids vegetarian meals they won't eat them. My experience as a parent and a summer camp cook is that the kids will eat vegetarian meals. When I asked my son what he thought, he gave me the thumbs up sign and said the lunches need more vegetables.

Renee Miller, parent, Lowell School, Madison, WI

Saving Time and Labor

A frequently expressed concern by food service managers is that the addition of low-fat, plant-based items to the menu will add to time and labor costs. This may be true initially if new recipes, ingredients, and preparation techniques are involved. However, as recipes and ingredients become familiar, preparation time will decrease. You may even discover that preparation and cleanup times are actually reduced. When one school began making a taco filling with textured vegetable protein instead of with commodity ground beef, they found that the preparation took only a third as much time and that clean-up was also significantly easier and faster because of the elimination of grease.

The following suggestions will be useful in streamlining food preparation:

- Canned beans offer a quick alternative to cooking dry beans from scratch.
- Soaking and washing dry beans significantly reduces their cooking time and increases digestibility.
- In some recipes, frozen or canned vegetables may be used in place of fresh and will cut down on preparation time.
- Vegetables used frequently, such as chopped onions, may be prepared in quantity for use in several recipes. This is also true for salad bar ingredients.
- Prepare a basic sauce to be used for several different dishes. For example, a basic marinara can be used to prepare lasagna, manicotti, spaghetti, or pizza. Use the same basic marinara sauce on a "Lasagna Monday " or "Pizza Friday." A peanut sauce can be used with a hot vegetable dish or a cold pasta salad. As you make each of these sauces, double the quantity for later use.
- Plan menus so that leftovers can be incorporated into subsequent meals. For example, leftover bean or pasta salad can be added to tomorrow's green salad.
- Label items, especially new products with which the staff may not be familiar.
- Herbs and spices are essential for flavorful low-fat food. To save time and avoid confusion, label these seasonings clearly and arrange them alphabetically or by group, such as sweet, spicy, Italian, etc. Clearly mark your new organization plan on the shelf so the staff knows where to return items.
- Store grains, flours, and dried beans in labeled bins.

Neal Barnard, M.D., president of Physicians Committee for Responsible Medicine states, "The beef industry has contributed to more American deaths than all the wars of this country, all the natural disasters, and all the automobile accidents combined. The beef industry spent $29 million on the "Real Food for Real People" campaign. If beef is your idea of 'real food for real people,' you'd better live real close to a real good hospital."

Karen Wiebe, "Vegetarian Voice"

Adapting Recipes for Quantity Use

Quantity low-fat, plant-based recipes are available in the following section. You may also want to expand standard size recipes from vegetarian cookbooks. Most of these recipes can be quantified to meet your needs with little difficulty, keeping the following in mind:

- The amount of oil used for sautéing or frying does not need to be increased at the same rate as other ingredients. Often, the amount in the original recipe will be sufficient.
- The amount of herbs and spices often do not increase at the same rate as other ingredients in the recipe. It is recommended that seasonings be added as late as possible in the cooking process. Begin with about half the amount you would add if you were increasing proportionately. Adjust for the seasonings by tasting. Keep track of the total amount of each seasoning used and record that measurement for future use as soon as your taste buds are pleased.
- As with herbs and spices, the amount of salt does not increase at the same rate as other ingredients. When possible, add salt to taste to the finished product. Sea salt is a great alternative to regular table salt. In items such as baked goods,

where salt must be added during preparation, add only one-quarter to one-half the amount suggested. When the product is baked, you can determine if the salt should be increased or decreased next time and adjust your measurements accordingly. If you are using a prepared soup base containing salt, additional salt will probably not be necessary.

An Important Note on Fats

In a world of change, it seems that the healthiest way to select and prepare food is changing as well. In fact, much of what was taught as healthy in the past is now being discovered to be unhealthy.

Food service directors bring up an excellent point when they ask, "If kids cut down on meat, poultry, dairy products and eggs, where will they obtain their essential fats and oils?"

Scientists are making quick progress in their understanding of children, their growth and development and the importance of fats and oils in their diets. The key is a balance of the right fats and the quality of unprocessed fats. When a recipe calls for margarine, shortening or vegetable oil, the healthier choices are unrefined oils such as flax, olive, safflower, sunflower or sesame. When choosing olive oil, Extra Virgin is the best. However, it does have a strong taste and that should be considered when incorporating it in a recipe.

Chapter 15

Plant-Based Food Recipes for Schools, Camps, Institutions & Homes

All of the recipes outlined in this chapter have been prepared, eaten and enjoyed by people of all ages, young and old alike. They have been made at home, school cafeterias, restaurants, camps, businesses and other institutions. They have great nutritional value and are delicious.

Great thanks and appreciation to Jennifer Raymond, Physician's Committee for Responsible Medicine (PCRM), Vegetarian Resource Group, the Staff of Life Health Food Store, True Nature Health Food Store, Ruth Frase, Ed Crammer, Saturn Café, Keffi's, Sprouts, Patricia Becker, Kerri Creations and David and Annie Jubb for their contributions of recipes that make up this chapter.

Many of the recipes contributed by Jennifer Raymond, an expert in school food preparation, have been analyzed using SNAP, a USDA-approved nutrient analysis software program. Recipes analyzed with this method are indicated with a (USDA/SNAP) symbol next to the nutrition information appearing in an index format at the end of the recipe.

The recipes in this chapter are divided into three sections. The first section, School & Institutional Size Recipes, yields large quantities. Jennifer Raymond designed this first section of recipes specifically for public schools and they also can be used for other institutions. The School & Institutional Size Recipes already meet

the constraints schools have with regard to government regulations, food availability and limited budgets.

The second section, Additional Institutional Size Recipes, are for all institutions and some of them may work great for schools as well, depending upon availability of ingredients. This second section of recipes was contributed by some of Santa Cruz, California's most popular chefs and healthy food establishments, Physicians Committee for Responsible Medicine (PCRM), and Vegetarian Resource Group.

The third section also designed mostly by Jennifer Raymond, are for home-size recipes. These homestyle recipes are identical to many of the School & Institutional Size Recipes so parents can serve the same meals at home that are being offered in school cafeterias. David and Annie Jubb contributed the salad dressings, which are called "living foods" and are designed for optimal health.

For information about these and other recipes please contact the creators:

Jennifer Raymond (vegicook@aol.com) teaches cooking and nutrition in schools and spas throughout the United States. She has worked with the wellness programs of Dr. Dean Ornish, Dr. John McDougall, and Dr. Neal Barnard. She is the author of numerous cookbooks, including ***The Peaceful Palate*** and ***Fat-Free & Easy*** which may be ordered by calling 1(800) 695-2241 in Humboldt County, California.

Physician's Committee for Responsible Medicine (PCRM). These recipes are from **PCRM's Gold Plan**, a complete institutional guide for healthy low-fat cuisine. Gold Plan includes recipes and educational material suitable for hospitals, schools and large institutions. PO Box 6322, Washington, DC 20015; (202) 686-2210.

Vegetarian Resource Group (VRG). These recipes are from **VRG's quantity Recipe Pak** that contains vegan recipes and a list of suppliers of bulk vegetarian foods. PO Box 1463, Baltimore, MD 21203; (410) 366-VEGE.

The following from **Santa Cruz, CA** were kind enough to contribute some of their best recipes to this project: **Staff of Life** (Health Food Store), **True Nature** (Health Food Store), **Saturn Café** (Restaurant), **Restaurant Keffi**, **Sprouts**, **Kerri Creations** and **Patricia Becker**, Nutritional Counselor, Los Altos, CA.

David and Annie Jubb contributed the salad dressings and are authors of many living food recipe books as well as creators and practitioners of **Whole Brain Function**. 514 E. 5th St. #10, NY, NY 10009, (212) 420-8270.

School & Institutional Size Recipes

Pita Pizzas

(contributed by Jennifer Raymond)
Yields 75 to 100 pizzas

1 #10 can tomato sauce or crushed tomatoes
3 15-ounce cans tomato paste
2 tablespoons garlic powder
1 tablespoon each: basil, oregano, thyme
75 to 100 (pieces) pita breads
20 to 30 cups chopped vegetables including green onion, bell pepper, and mushrooms

Procedure: Turn pita bread upside down so it looks like a saucer. Spread with pizza sauce. Top liberally with chopped vegetables. Place on a cookie sheet and bake about 10 minutes at 375°F until the edges are lightly browned.

Nutrition information per pizza:

Calories:	85 calories (9% from fat)
Protein:	7 g
Carbohydrate:	35 g
Fat:	2 g
Sodium:	337 mg
Calcium:	76 mg

Chili Con Veggie

(contributed by Jennifer Raymond)
Yields about 4 gallons

12 cups chopped onions
1/3 cup minced garlic
1 quart diced bell peppers, fresh or frozen
2 #10 cans crushed tomatoes
3 #10 cans pinto beans, including liquid
1 #10 can corn, including liquid
1 30-ounce package Archer Daniels Midland (ADM) Harvest Burger Dry Mix (or 8 cups other textured vegetable protein)
1-1/2 quarts water
1 cup chili powder (more for a spicier chili)
1/4 cup ground cumin
1 teaspoon salt

Procedure: Heat about 1 cup of water in a large pot or steam-jacketed kettle and cook the onions and garlic about 5 minutes until the onions are soft. Add the remaining ingredients and simmer about 30 minutes, stirring occasionally. Add water if the chili becomes too thick.

Nutrition information per 1/2 cup: (USDA/SNAP)

Calories:	152
Protein:	9 g
Carbohydrate:	27 g
Fat:	0 g
Cholesterol:	0 mg
Fiber:	7 g
Sodium:	319 mg
Vitamin A:	96 RE
Vitamin C:	13 mg
Iron:	3 mg
Calcium:	65 mg

Terrific Tacos

(contributed by Jennifer Raymond)
Yields 100 tacos
(1/4 cup of filling per taco)

1 cup water
3 quarts chopped onion
1 quart finely chopped green bell peppers (optional)
1 30-ounce package ADM Harvest Burger Dry Mix (or 8 cups other textured veggie protein-tvp)
1 #10 can crushed tomatoes or tomato sauce
1/3 to 1/2 cup chili powder
1/4 cup granulated garlic
1-1/2 tablespoons cumin
100 corn tortillas or preformed taco shells

Garnish options:
1 gallon shredded romaine lettuce
7 medium tomatoes, diced
1-1/2 lbs.. cheddar cheese, shredded (optional)
salsa or taco sauce

Procedure: Heat the water in a large pot or steam-jacketed kettle. Add the onions and bell peppers and cook until soft. Add the tvp, crushed tomatoes or tomato sauce, water, chili powder, granulated garlic, and cumin. Cook over low heat until the tvp is softened and the mixture is fairly dry, about 30 minutes.

Note: Filling may need salt if plain unseasoned tvp is used.

For soft shell tacos: Heat corn tortillas in a warmer or oven. Place 1/4 cup of filling in the center, fold the tortilla in half, and place on sheet pan. Continue until all tortillas are filled. Cover with plastic film and hold in warmer until ready to serve. Garnish options: lettuce, tomatoes, cheese, salsa. For crisp shell tacos: Place 1/4 cup of filling into preformed taco shell just before serving. Garnish with lettuce, onions, tomatoes, and salsa.

Nutrition information per taco:

Calories:	126 (10% from fat)
Protein:	7 g
Carbohydrate:	21 g
Fat:	1 g
Sodium:	75 mg
Calcium:	92 mg

Hearty Chili Mac

(contributed by Jennifer Raymond)
Yields 100 cups

5 pounds uncooked pasta spirals
1 gallon chopped onions
1/3 cup minced garlic
1 quart diced bell peppers, fresh or frozen
2 #10 cans crushed or diced tomatoes
2 #10 cans kidney or pinto beans, including liquid
1 #10 can corn, including liquid
1 30-ounce package ADM Harvest Burger Dry Mix (or 8 cups other textured vegetable protein-tvp)
1-1/2 quarts water
1-1/2 cups chili powder
1/4 cup ground cumin
2 teaspoons salt

Cook the pasta in boiling water until it is just tender. Drain and rinse.

Procedure: Heat about 1 cup of water in a large pot or steam-jacketed kettle and cook the onions and garlic about 5 minutes until the onions are soft. Add the remaining ingredients and simmer 30 minutes. Combine with the cooked pasta.

Nutrition information per 1/2 cup:

Calories:	109 (2% from fat)
Protein:	6 g
Carbohydrate:	20 g
Fat:	0.4 g
Sodium:	138 mg

Pueblo Pie

(contributed by Jennifer Raymond)
Yields 3 half-pans (12 x 10 x 20)
48 servings (2-1/2 x 3 inches)

Pueblo Pie is a bit like a Mexican lasagna, with layers of tortillas, garbanzo cheese, chili beans, corn, and a spicy tomato sauce. Serve it with a green salad for a very satisfying meal.

1 cup water
1-1/2 quarts chopped onions
2 tablespoons minced garlic
1 #10 can crushed tomatoes
1-1/3 cups textured vegetable protein (tvp)
3 cups water
1/2 cup chili powder
2 tablespoons ground cumin
1-1/2 teaspoons salt
6 cups garbanzo beans, drained
1-1/2 cups roasted red peppers, chopped (about 3 peppers)
1/2 cup tahini (sesame seed butter)
1/2 cup lemon juice
48 corn tortillas, torn in half
1 #10 can vegetarian chili beans
4 cups chopped green onions
6 cups corn, fresh or frozen
2 cups sliced or chopped olives (optional)

Procedure: Heat 1/2 cup of water in a large pot or skillet and cook the onions and garlic about 5 minutes, until soft. Add the tomatoes, tvp, balance of water, chili powder, cumin, and salt. Simmer over medium heat 10 to 15 minutes.
Process the garbanzo beans, roasted peppers, tahini, and lemon juice in a food processor or blender until very smooth.
Preheat the oven to 350° F.
Spread a thin layer of the tomato sauce in the bottom of a #200 half pan. Cover with a layer of tortillas, then spread with a thin layer of the garbanzo bean mixture. Sprinkle with some of the chili beans, green onions, corn, and olives. Spread a layer of tomato sauce over the top. Repeat the layers twice, ending with the tomato sauce. Make sure all the tortillas are covered. Cover with foil and bake for 30 minutes.

Nutrition information per serving:

Calories:	282
Protein:	13 g
Carbohydrate:	47 g
Fat:	4 g
Sodium:	347 mg

Very Primo Pasta

(contributed by Jennifer Raymond)
Yields 50 cups

Mix some pasta with veggies and beans for a deliciously satisfying meal.

5 pounds uncooked spirals, shells or similar type pasta.
1 cup water
1 gallon chopped onions
1/3 cup minced garlic
8 stalks celery, sliced
1 quart diced bell peppers, fresh or frozen
2 #10 cans crushed tomatoes
2 #10 cans kidney beans, including liquid
1/2 cup soy sauce
2 tablespoons mixed Italian herbs
2 tablespoons basil
1 teaspoon black pepper
1 teaspoon salt

Procedure: Cook the pasta until it is just tender, then drain and rinse. Heat 1 cup of water in a large pot or steam-jacketed kettle. Cook the onions, garlic, peppers, and celery for 10 minutes, stirring occasionally. Add the tomatoes, kidney beans with their liquid, soy sauce, Italian herbs, basil, and pepper. Cover and simmer, 15 to 20 minutes, stirring occasionally. Stir in the cooked pasta. Add salt if needed.

Nutrition information per serving:

Calories:	147 (2% from fat)
Protein:	6.5 g
Carbohydrate:	29 g
Fat:	0.4
Sodium:	137 mg

Simple Refried Beans

(contributed by Jennifer Raymond)
Yields about 25 cups
(50 1/2 cup servings)

5 pounds dried pinto beans
2 gallons water
1/2 cup onion powder
2 tablespoons granulated garlic
3 tablespoons cumin
1 teaspoon cayenne
2 to 2-1/2 tablespoons salt

Procedure: Pick through the beans to remove any debris. Place in a large pot or bowl and add 2 gallons of water. Soak at least 6 hours or overnight.

Pour off soak water and rinse beans. Place in a large pot or steam-jacketed kettle with 2 gallons of fresh water. Add seasonings (except salt) and simmer, 1 to 3 hours, stirring occasionally until desired consistency is obtained. Stir in salt.

Nutrition information per 1/2 cup:
(USDA/SNAP)

Calories:	122
Protein:	6 g
Carbohydrate:	23 g
Fat:	0 g
Cholesterol:	0 mg
Fiber:	4 g
Sodium:	322 mg
Vitamin A:	2 RE
Vitamin C:	2 mg
Iron:	3 mg
Calcium:	51 mg

Quick Bean Burritos

(contributed by Jennifer Raymond)
Yields 45 to 50 burritos
(1/2 cup beans per burrito)

2 #10 cans vegetarian refried beans, heated
4-5 dozen flour tortillas

Optional garnishes:
10-15 tomatoes, diced (about 3 quarts)
3 bunches green onions, thinly sliced (about 3 cups)
1-1/2 to 3 pounds reduced-fat cheddar cheese, shredded
1 to 2 quarts salsa

Procedure: Heat the tortillas in the package in a microwave oven until they are warm and soft. Fill with 1/2 cup of beans and any desired garnishes. Fold the edges in, then roll the tortilla around the filling and place on a sheet pan. Repeat with remaining tortillas until sheet pan is filled. Cover with plastic wrap and hold in the warmer.

Nutrition information per burrito:

Calories:	300 (10% from fat)
Protein:	2 g
Carbohydrate:	55 g
Fat:	3 g
Sodium:	196 mg
Calcium:	82 mg

Variation: For Black Bean Burritos, use 2 #10 cans of refried black beans in place of the pinto beans. Proceed as directed.

Bean Burritos

(contributed by Jennifer Raymond)
Yields (using dried beans) about 100 burritos (1/2 cup beans per burrito)

10 pounds dried pinto beans
4 gallons water
1 cup onion powder
1/4 cup granulated garlic
1/3 cup cumin
1 to 2 teaspoons cayenne
4 to 5 tablespoons salt
8 to 9 dozen flour tortillas

Optional garnishes:
10 to 15 tomatoes, diced (about 3 quarts)
3 bunches green onions, thinly sliced (about 3 cups)
3 quarts salsa

Procedure: Pick through the beans to remove any debris. Place in a large pot or bowl and add 4 gallons of water. Soak at least 6 hours or overnight.

Pour off soak water and rinse beans. Place in a large pot or steam-jacketed kettle with 4 gallons of fresh water. Add seasonings (except salt) and simmer 1 to 3 hours, stirring occasionally, until desired consistency is obtained. Stir in salt to taste.

Heat the tortillas in the package in a microwave oven until they are warm and soft. Fill with 1/2 cup of beans and any desired garnishes. Fold the edges in, then roll the tortilla around the filling and place on a sheet pan. Repeat with remaining tortillas until sheet pan is filled. Cover with plastic wrap and hold in the warmer.

Nutrition information per burrito:

Calories:	300 (10% from fat)
Protein:	12 g
Carbohydrate:	55 g
Fat::	3 g
Sodium:	196 mg
Calcium:	82 mg

Variation: For Bean and Cheese Burritos, add 1-1/2 to 3 pounds of shredded reduced-fat cheddar cheese to the cooked beans and stir well to mix. Proceed as above.

Super Burritos

(contributed by Jennifer Raymond)
Yields 48 to 60 burritos

2 #10 cans fat-free refried beans, or 1 batch Simple Refried Beans
3 quarts cooked brown rice
4 to 5 dozen flour tortillas (preferably whole wheat)
1-1/2 pounds cheddar cheese, shredded (optional)
1 to 2 quarts salsa

Nutrition information per burrito:

Calories:	300 (10% from fat)
Protein:	12 g
Carbohydrate:	55 g
Fat:	3 g
Sodium:	196 mg
Calcium:	82 mg

Procedure: Heat beans and rice. Heat tortillas in their package in microwave or in foil in the oven until they are warm and soft. Spread 1/2 cup beans and 1/2 cup rice down the center of the tortilla. Sprinkle with cheese (if using) and salsa. Fold top and bottom of tortilla toward the center, then start at the side and roll tortilla tightly around filling. Place on a baking sheet. Repeat with remaining tortillas. Cover with plastic or foil and place into warmer until ready to serve.

Shepherd's Pie

(contributed by Jennifer Raymond)
Yields 50 to 60 servings

This is a hearty and satisfying vegetable stew with a top "crust" of fluffy mashed potatoes.

30 pounds potatoes
1 to 2 cups milk (soy, rice, or dairy)
2 teaspoons salt

12 onions, chopped
6 large bell peppers, diced
12 carrots, sliced
12 stalks of celery, sliced
2-1/2 lbs. mushrooms, sliced (about 3 quarts)
1 #10 can crushed tomatoes
1 #10 can kidney beans
1 tablespoon paprika
2 teaspoons black pepper
3/4 cup soy sauce

Procedure: Scrub potatoes and cut into large chunks. Place in a pot, cover with water and cook until tender. Mash, adding enough milk to achieve a spreadable consistency. Stir in salt. Set aside.

Heat 1 to 2 cups of water in a large pot or steam kettle. Add the onions, peppers, carrots, and celery and cook over medium heat, about 20 minutes, until the vegetables are soft.

Add mushrooms, then cover and cook 20 minutes. Stir in tomatoes, kidney beans (including liquid), paprika, pepper and soy sauce. Cover and simmer 10 to 15 minutes.

Preheat oven to 350°F. Spread the vegetable mixture into a full pan, then spread the mashed potatoes evenly over the top. Sprinkle with paprika. Bake until hot and bubbly, about 25 minutes.

Chili Corn Pie

(contributed by Jennifer Raymond)
Yields 48 servings

2 #10 cans vegetarian chili beans, with their juice
3 cups textured vegetable protein (optional)
3 cups water
6 cups frozen corn

6 cups corn meal
2 tablespoons baking soda
1-1/2 teaspoons salt
9 cups low-fat milk (soy, rice, or dairy)
1/2 cup vinegar
1/2 cup oil

Procedure: Combine chili beans, textured vegetable protein, water, and corn in a steam tray. Place in a 400°F oven until hot, about 30 minutes.

Combine corn meal, baking soda, and salt in a bowl. Stir in milk, vinegar and oil. Pour over the hot bean mixture. Bake about 30 minutes until the bread is set and golden brown.

Nutrition information per serving:

Calories:	234 (14% from fat)
Protein:	9 g
Carbohydrate:	41 g
Fat:	4 g
Sodium:	329 mg
Calcium:	28 mg

Sweet & Sour Stir-fry Vegetables

(contributed by Jennifer Raymond)
Yields about 50 cups

2 cups ketchup
2 cups vinegar
2 cups brown sugar or honey
1/3 cup soy sauce
2/3 cup cornstarch
1 teaspoon dried red pepper flakes OR
1/2 teaspoon cayenne
3 cups water
1/4 cup toasted sesame oil
3 quarts thinly sliced onions
2 tablespoons minced garlic
10 carrots, thinly sliced
10 stalks celery, thinly sliced
3 pounds mushrooms, sliced (about 1 gallon)
10 red bell peppers, thinly sliced
10 medium zucchini, thinly sliced
10 cups snow peas

Cooked rice for serving

Procedure: Combine ketchup, vinegar, sugar or honey, soy sauce, cornstarch, pepper flakes or cayenne and water in a small bowl. Stir to mix, then set aside.

In a large skillet or wok, heat sesame oil and add onion, garlic, carrots, and celery. Cook about 10 minutes, stirring often, until vegetables just begin to soften. Add mushrooms and cook 5 minutes. Add bell pepper and zucchini. Continue cooking another 5 to 10 minutes over medium-high heat, stirring continuously, until the vegetables are just tender. Add the snow peas and sauce mixture and cook 2 to 5 minutes, stirring constantly, until sauce is clear and thickened. Serve with rice.

Nutrition information per 1/2 cup: (USDA/SNAP)

Calories:	99
Protein:	2 g
Carbohydrate:	18 g
Fat:	2 g
Cholesterol:	0 mg
Fiber:	4 g
Sodium:	116 mg
Vitamin A:	365 RE
Vitamin C:	37 mg
Iron:	2 mg
Calcium:	44 mg

Thai Vegetables with Rice

(contributed by Jennifer Raymond)
Yields 50 cups

These versatile, spicy vegetables are delicious with rice or try them with pasta or couscous for a variation.

1/3 cup soy sauce
6 onions, thinly sliced
1/4 cup minced garlic
6 pounds yams, peeled and diced
1 #10 can crushed tomatoes
3 to 6 tablespoons curry powder
1 #10 can garbanzo beans
3 quarts sliced zucchini (about 6 pounds)
6 red bell peppers, cut into thin strips
1/4 cup grated lemon peel
1/3 cup lemon juice

Procedure: Heat 2 cups water and the soy sauce in a large pot or steam kettle. Add onions and garlic and cook about 10 minutes until soft. Add yams, tomatoes, curry powder and 3 cups of water. Cover and simmer about 20 minutes until yams are just tender. Add garbanzo beans with their liquid, the zucchini, bell pepper, and grated lemon peel. Cover and simmer about 5 minutes until zucchini is just tender, then stir in the lemon juice.

Nutrition information per serving:

Calories:	286
Protein:	7 g
Carbohydrate:	62 g
Fat:	1 g
Sodium:	166 mg

Sweet & Sour Sauce

(contributed by Jennifer Raymond)
Yields about 2 quarts

2 cups ketchup
2 cups vinegar
2 cups brown sugar
1/3 cup soy sauce
2/3 cup cornstarch
1 teaspoon dried red pepper flakes
3 cups water

Procedure: Combine all ingredients in a pan and whisk to remove any lumps. Cook, stirring often, over medium heat until sauce is thickened.

Simple Peanut Sauce

(contributed by Jennifer Raymond)
Yields about 1 quart

2 cups peanut butter
2 cups hot water
1/4 cup soy sauce
1/4 cup seasoned rice vinegar
3 tablespoons sugar or honey
2 tablespoons crushed garlic
2 teaspoons ginger powder
1 teaspoon cayenne

Procedure: Mix all ingredients together with a whisk until smooth. Add more water if sauce is too thick.

Simple Marinara Sauce

(contributed by Jennifer Raymond)
Yields about 1 gallon

8 onions, chopped (about 12 cups)
4 tablespoons crushed garlic
1 #10 can crushed tomatoes
4 tablespoons mixed Italian herbs
1/4 cup honey or sugar
1 teaspoon black pepper

Procedure: Heat 1 to 2 cups water in a large pot or steam kettle, then add onions and garlic. Cook about 30 minutes, stirring frequently, until onions soften and begin to brown. Add remaining ingredients and simmer for 20 to 30 minutes. Use for lasagna and other pasta dishes.

Simple Pizza Sauce

(contributed by Jennifer Raymond)
Yields just under 1 gallon

1 #10 can tomato sauce
3 15-ounce cans tomato paste
2 tablespoons garlic powder
1 tablespoon mixed Italian herbs

Stir all ingredients together.

Brown Rice
(Steamer Method)

(contributed by Jennifer Raymond)

Yields 25 to 30 cups

2 quarts brown rice
2 quarts water
4 teaspoons salt

Procedure: Place rice in a #400 half pan. Combine water and salt and pour over rice. Cook uncovered in steamer for 30 to 35 minutes.

Brown Rice
(Oven Method)

(contributed by Jennifer Raymond)

Yields 25 to 30 cups

2 quarts brown rice
4 quarts water
4 teaspoons salt

Procedure: Preheat oven to 350º F. Place rice in a #400 half pan. Combine water and salt and pour over rice. Cover tightly with foil and bake, about 1 to 1-1/2 hours, in preheated oven until rice is tender.

Brown Rice
(Stovetop Method)

(contributed by Jennifer Raymond)
Yields 25 to 30 cups

The secret to making fluffy rice on the stovetop is to cook it in extra water. The excess is drained off when the rice is tender and makes excellent stock for soups and stews.

6 quarts water
4 teaspoons salt
2 quarts brown rice

Procedure: Combine water and salt in a large pot or steam-jacketed kettle and bring to a boil. Add rice. Cover and cook about 45 minutes, until rice is tender. Drain off excess liquid.

Simply Spanish Rice
(Oven Method)

(contributed by Jennifer Raymond)
Yields 25 cups

2 quarts brown rice
1 gallon water or vegetable stock
1/3 cup chili powder
1/3 cup soy sauce
3 tablespoons granulated garlic
4 teaspoons ground cumin
2 teaspoons salt

Procedure: Preheat oven to 350˚ F. Spread rice in a #400 half pan. Combine the water or stock with the remaining ingredients and stir to mix. Pour over rice. Cover tightly with foil. Bake approximately 1 to 1 1/2 hours, until rice is tender and all the liquid is absorbed.

Simply Spanish Rice
(Oven Method)

(contributed by Jennifer Raymond)
Yields 100 cups

16 pounds brown rice
4 gallons water or vegetable stock
1-1/3 cup chili powder
1-1/3 cup soy sauce
2/3 cup granulated garlic
1/4 cup ground cumin
2 tablespoons salt

Procedure: Preheat oven to 350˚ F. Divide rice evenly among four #400 half pans. Combine the water or stock with the remaining ingredients and stir to mix. Pour 1 gallon over each pan. Cover tightly with foil. Bake for approximately 1 1/2 hours, until rice is tender and all the liquid is absorbed.

Nutrition information per 1/2 cup:
(USDA/SNAP)

Calories:	97
Protein:	2 g
Carbohydrate:	20 g
Fat:	0 g
Cholesterol:	0 mg
Fiber:	2 g
Sodium:	175 mg
Vitamin A:	34 RE
Vitamin C:	1 mg
Iron:	1 mg
Calcium:	15 mg

Simply Spanish Rice
(Steamer Method)

(contributed by Jennifer Raymond)
Yields 25 cups

2 quarts brown rice
2 quarts water or vegetable stock
1/3 cup chili powder
1/3 cup soy sauce
3 tablespoons granulated garlic
4 teaspoons ground cumin
2 teaspoons salt

Procedure: Spread rice in a #400 half pan. Combine the water or stock with the remaining ingredients and stir to mix. Pour over rice. Steam, uncovered, for approximately 1/2 hour, until the rice is tender and all the liquid is absorbed.

Nutrition information per 1/2 cup:
(USDA/SNAP)

Calories:	97
Protein:	2 g
Carbohydrate:	20 g
Fat:	0 g
Cholesterol:	0 mg
Fiber:	2 g
Sodium:	175 mg
Vitamin A:	34 RE
Vitamin C:	1 mg
Iron:	1 mg
Calcium:	15 mg

Simply Spanish Rice

(White Rice, Oven Method)

(contributed by Jennifer Raymond)

Yields 25 cups

2 quarts white rice
1 gallon water or vegetable stock
1/3 cup chili powder
1/3 cup soy sauce
3 tablespoons granulated garlic
4 teaspoons ground cumin
2 teaspoons salt

Procedure: Preheat oven to 350˚ F. Spread rice in a #400 half pan. Combine the water or stock with the remaining ingredients and stir to mix. Pour over rice. Cover tightly with foil. Bake for approximately 1 hour, until rice is tender and all the liquid is absorbed.

Simply Spanish Rice

(White Rice, Steamer Method)

(contributed by Jennifer Raymond)

Yields 25 cups

2 quarts white rice
2 quarts water or vegetable stock
1/3 cup chili powder
1/3 cup soy sauce
3 tablespoons granulated garlic
4 teaspoons ground cumin
2 teaspoons salt

Procedure: Spread rice in a #400 half pan. Combine the water or stock with the remaining ingredients and stir to mix. Pour over rice. Steam, uncovered for approximately 15 minutes, until the rice is tender and all the liquid is absorbed.

Nutrition information per 1/2 cup:
(USDA/SNAP)

Calories:	89
Protein:	2 g
Carbohydrate:	19 g
Fat:	0 g
Cholesterol:	0 mg
Fiber:	0 g
Sodium:	175 mg
Vitamin A:	34 RE
Vitamin C:	1 mg
Iron:	1 mg
Calcium:	13 mg

Chinese Fried Rice

(contributed by Jennifer Raymond)
Yields 30 cups

This quick side dish is perfect with any vegetable stir-fry.

1-1/2 gallons cooked rice (white or brown)
1/4 cup toasted sesame oil
4 bunches green onions, finely sliced (about 6 cups)
2 tablespoons minced garlic
1/4 cup soy sauce
2 teaspoons ginger powder
Prepare rice according to one of the preceding methods. Set aside to cool.

Procedure: Heat the toasted sesame oil in a large wok or skillet, then add the green onions and garlic. Cook 1 minute. Add the cooked rice, soy sauce, and ginger powder. Cook for approximately 3 minutes, turning gently with a spatula until very hot.

Nutrition information per 1/2 cup:

Calories:	145
Protein:	5 g
Carbohydrate:	27 g
Fat:	2 g
Sodium:	331 mg
Cholesterol:	0 mg

Variation: For Chinese Fried Bulgur, substitute 1-1/2 gallons cooked bulgur for the rice.

Quick Confetti Rice

(contributed by Jennifer Raymond)
Yields 25 cups

This colorful rice pilaf is made with no added fat.

1 gallon cooked brown rice
1 quart frozen corn
1 quart frozen peas
1 quart diced red bell pepper
4 teaspoons curry powder
2 cups raisins (optional)

Procedure: Preheat oven to 350°F. Mix all ingredients together thoroughly, then spread in a full pan or other large baking pan. Cover with foil and bake for approximately 30 minutes until very hot.

Nutrition information per 1/2 cup:

Calories:	109 (0% from fat)
Protein:	2.5 g
Carbohydrate:	24 g
Fat:	2 g
Sodium:	112 mg
Cholesterol:	0 mg

Three Bean Salad

(contributed by Jennifer Raymond)
Yields 32 cups

This three bean salad is flavorful with no added fat. Serve it plain, or as an addition to green salads.

1 #10 can kidney beans, drained
1 #10 can garbanzo beans, drained
1 #10 can green beans, drained
1 large red onion, finely chopped (about 2 cups) (optional)
1 bunch parsley, finely chopped (about 1 cup)
3 cups cider vinegar
2 tablespoons crushed garlic
2 tablespoons sugar
1-1/2 tablespoons dried basil
1 tablespoon Italian herbs
1 teaspoon black pepper

Procedure: Toss the drained beans with the chopped onion and parsley in a salad bowl. Mix the vinegar, garlic, and seasonings. Add to the beans and toss to mix. If possible, refrigerate and marinate 2 hours before serving.

Nutrition information per 1/2 cup: (USDA/SNAP)

Calories:	107
Protein:	6 g
Carbohydrate:	14 g
Fat:	1 g
Cholesterol:	0 mg
Fiber:	5 g
Sodium:	167 mg
Vitamin A:	16 RE
Vitamin C:	5 mg
Iron:	2 mg
Calcium:	43 mg

Chinese Noodle Salad

(contributed by Jennifer Raymond)
Yields 25 cups

This delicious salad is easy to prepare and keeps well. Ramen soup is available in a variety of flavors at most food stores. It contains dry noodles and a packet of seasoning. Be sure to select a variety in which the noodles are baked instead of fried, and be sure the seasonings do not contain meat or other animal products.

24 cups finely shredded green cabbage
1 cup slivered almonds
1/2 cup sesame seeds
3 bunches green onions, thinly sliced (about 5 cups)
2 packages vegetarian ramen soup (any flavor)
3 tablespoons toasted sesame oil
1 cup seasoned rice vinegar
1/3 cup sugar or other sweetener
1-1/2 teaspoons black pepper
fresh cilantro leaves for garnish (optional)

Procedure: Place the shredded cabbage in a large salad bowl. Toast the almonds in a 375º F oven for 8 to 10 minutes or in a skillet, stirring constantly, until lightly browned and fragrant. Add to the cabbage, along with the onions. Coarsely crush the uncooked ramen noodles and add them to the salad. Empty the packet of seasoning mix into a small bowl or jar, then stir in the sesame oil, seasoned rice vinegar, sugar, and pepper. Mix thoroughly and pour over the salad. Toss to mix, then allow to stand 30 minutes in order for the noodles to soften. Garnish with fresh cilantro just before serving, if desired.

Nutrition information per 1/2 cup: (USDA/SNAP)

Calories:	58
Protein:	1 g
Carbohydrate:	8 g
Fat:	2 g
Cholesterol:	0 mg
Fiber:	1 g
Sodium:	126 mg
Vitamin A:	23 RE
Vitamin C:	19 mg
Iron:	0 mg
Calcium:	24 mg

Hoppin' John Salad

(contributed by Jennifer Raymond)
Yields 25 cups

Combine the following in a large bowl:

1 #10 can black-eyed peas, drained
2 quarts cooked brown rice (2-1/2 cups uncooked)
1-1/2 bunches green onions, finely sliced
4 stalks celery, sliced (1-1/2 cups)
8 small tomatoes, diced
1/2 cup finely chopped fresh parsley

Procedure: Mix the following vinaigrette ingredients and pour over the salad. Toss gently.
3/4 cup olive oil
3/4 cup lemon juice
2 teaspoons salt
3 tablespoons crushed garlic

Chill 1 to 2 hours if time permits.

Simple Pasta Salad (Version I)

(contributed by Jennifer Raymond)
Yields 100 cups

This salad is quick to prepare and delicious hot or cold.

6 pounds uncooked pasta spirals
1 #10 can garbanzo beans, drained
1 #10 can kidney beans, drained (reserve liquid)
1 bunch celery, thinly sliced
4 bunches green onions, finely sliced
1 bunch fresh basil, finely chopped (or 4 tablespoons dried basil)
3 cups cider vinegar
3 cups liquid from kidney beans
1/4 cup sugar
1/3 cup olive oil
2 tablespoons mixed Italian herbs
2 tablespoons minced garlic
2 teaspoons salt

Procedure: Cook the pasta in a large pot according to package directions until it is just tender. Rinse it with cold water, then drain and place it into a large bowl. Add the beans, celery, green onions, and basil. Combine the vinegar, liquid from beans, sugar, olive oil, Italian herbs, garlic, and salt, and stir to mix. Pour over the salad and toss gently to mix.

Simple Pasta Salad (Version II)

(contributed by Jennifer Raymond)
Yields 100 cups

This salad is quick to prepare and delicious hot or cold.

6 pounds uncooked pasta spirals
1 #10 can garbanzo beans, drained
1 #10 can kidney beans, drained 6 red bell peppers, diced
1 5-1/2 pound can water-packed artichoke hearts, drained (optional)
3 bunches green onions, finely sliced
1 bunch fresh basil, finely chopped (or 4 tablespoons dried basil)
3-1/2 cups cider vinegar
2 cups apple juice concentrate
1/2 cup lemon juice
1/3 cup olive oil
2 tablespoons mixed Italian herbs
2 tablespoons minced garlic
2 teaspoons salt

Procedure: Cook the pasta in a large pot according to package directions until it is just tender. Rinse it with cold water, then drain and place it into a large bowl. Add the beans, peppers, artichoke hearts, green onions, and basil. Combine the vinegar, apple juice concentrate, lemon juice, olive oil, Italian herbs, garlic, and salt, and stir to mix. Pour over the salad and toss gently to mix.

Aztec Salad

(contributed by Jennifer Raymond)
Yields 25 cups

This salad is a true celebration of color and flavor. It may be made in advance, and keeps well for several days. If you are a cilantro lover, you may want to increase that amount.

1 #10 can black beans, drained and rinsed or
4 cups dry black beans, cooked and drained
2 red onions, finely chopped
3 green bell peppers, diced
3 red or yellow bell peppers, diced
6 tomatoes, diced
6 cups corn kernels, frozen, canned, or fresh
1-1/2 cups chopped fresh cilantro (optional)
1/3 cup seasoned rice vinegar
1/3 cup apple cider or distilled vinegar
1/3 cup lime or lemon juice
1 tablespoon minced garlic
2 tablespoons cumin
1 tablespoon coriander
1/4 teaspoon cayenne

Procedure: Drain and rinse the beans and place them in a large bowl with the onions, peppers, tomatoes, corn and cilantro. Using a small bowl, combine the vinegar, lemon or lime juice, garlic, cumin, coriander, and cayenne. Pour over the salad and toss gently to mix.

Nutrition information per serving:

Calories:	43
Protein:	7 g
Carbohydrate:	28 g
Fat:	0 g
Sodium:	117 mg
Cholesterol:	0 mg

Crispy Green Salad

(contributed by Jennifer Raymond)
Yields 100 cups

8 pounds romaine lettuce, chopped
8 pounds cabbage, shredded
3 pounds iceberg lettuce, chopped
3 pounds celery, thinly sliced
1 #10 can garbanzo beans, drained (save liquid for dressing)

2-1/2 cups reserved bean liquid
1-1/2 cups cider vinegar
1/4 cup sugar
1 tablespoon dried basil
1 tablespoon mixed Italian herbs
1/2 tablespoon granulated garlic
3/4 teaspoon salt

Procedure: Combine the lettuce, cabbage, celery and drained garbanzo beans. In a separate bowl, mix the remaining ingredients. Pour over the salad and toss to mix.

Curried Rice Salad

(contributed by Jennifer Raymond)
Yields 25 cups

3 quarts cooked rice (brown, white, or a mix)
2 bunches green onions, thinly sliced including green tops (about 4 cups)
3 large carrots, grated
3 celery stalks, thinly sliced
2 red bell peppers, diced
2 cups finely shredded green cabbage
1 cup finely shredded red cabbage
1 cup finely chopped parsley
2/3 cup balsamic or cider vinegar
1/2 cup seasoned rice vinegar
1/3 cup apple juice concentrate or 3 tablespoons sugar
1/4 cup olive oil
1 tablespoon toasted sesame oil
1 tablespoon stoneground or dijon mustard
2 teaspoons curry powder
2-1/2 teaspoons salt
1 teaspoon black pepper

Procedure: Combine the cooked rice in a large bowl. Add the onions, carrots, celery, cabbages, bell peppers and parsley. Stir to mix.

Mix the vinegar, apple juice concentrate (or sugar), olive oil, toasted sesame oil, mustard, curry powder, salt and pepper. Pour over the salad and toss to mix.

Nutrition information per serving:

Calories:	136
Protein:	2 g
Carbohydrate:	24 g
Fat:	3 g
Sodium:	160 mg
Cholesterol:	0 mg

Fat-free Italian Dressing

(contributed by Jennifer Raymond)
Yields 2 quarts

4-1/2 cups bean cooking liquid (or liquid from canned beans)
3 cups cider vinegar
1/2 cup sugar
2 tablespoons dried basil
2 tablespoons mixed Italian herbs
1 tablespoon granulated garlic
2 teaspoons salt

Procedure: Whisk all the ingredients together. Store in a closed jar or airtight plastic container.

Nutrition information per tablespoon:

Calories:	14
Protein:	0 g
Carbohydrate:	3 g
Fat:	0 g
Sodium:	310 mg
Cholesterol:	0 mg

Lentil Barley Soup

(contributed by Jennifer Raymond)
Yields 50 cups

This hearty soup is easy to assemble and cooks in a single pot. It is thick enough to be considered a stew, though you can add more water or stock if you want a thinner soup.

1 quart lentils
1/2 quart hulled or pearled barley
2 gallons water or vegetable stock
1-1/2 quarts chopped onions
3 tablespoons minced fresh garlic
1-1/2 quarts sliced carrots
1 quart sliced celery
8 potatoes, scrubbed and diced
1 tablespoon oregano
1 tablespoon ground cumin
1-1/2 teaspoons black pepper
1/2 teaspoon red pepper flakes
1-1/2 to 2 tablespoons salt

Procedure: Place all the ingredients except salt into a large pot and bring to a simmer. Cover and cook approximately 1 hour, stirring occasionally until the lentils are tender.

Nutrition information per serving:

Calories:	78
Protein:	4 g
Carbohydrate:	16 g
Fat:	0 g
Sodium:	150 mg
Cholesterol:	0 mg

Cornbread

(contributed by Jennifer Raymond)
Yields 50 servings

This delicious cornbread is made without eggs. Serve it with chili or any other spicy bean dish.

3 quarts milk (soy, rice, or dairy)
3/4 cup vinegar
8 cups cornmeal
8 cups unbleached flour
2 tablespoons baking powder
2 tablespoons baking soda
1 tablespoon salt
1 cup oil
1 cup honey (optional)

Preheat oven to 375˚ F. Combine the milk and vinegar and set aside.

Procedure: Mix the cornmeal, flour, baking powder, baking soda, and salt in a large bowl. Add the milk mixture and the oil. Stir until just blended. Spread the batter evenly in an oil-sprayed sheet pan. Bake 25 to 30 minutes until the top is golden brown. Serve hot.

Nutrition information serving:

Calories:	150
Protein:	3 g
Carbohydrate:	26 g
Fat:	3 g
Sodium:	180 mg
Cholesterol:	0 mg

Bulk Dessert

Banana Cake

(contributed by Jennifer Raymond)
Yields one full sheet pan
(100 servings)

16 cups flour (unbleached or whole wheat pastry)
1/4 cup baking soda
4 teaspoons salt
1 quart sugar or 1 quart honey
1/2 quart vegetable oil
16 ripe bananas, mashed
1/2 quart water
3 tablespoons vanilla
1 quart chopped dates

Preheat the oven to 350˚ F. Mix the flour, baking soda, and salt together.

Procedure: Beat the sugar and oil together in a large bowl. Add the bananas and mash them. Stir in the water and vanilla and mix thoroughly. Add the flour mixture along with the chopped walnuts and stir to mix. Spread into an oil-sprayed full sheet pan and bake at 350º F for 45 to 50 minutes.

Nutrition information per slice:
(USDA/SNAP)

Calories:	221
Protein:	2 g
Carbohydrate:	44 g
Fat:	5 g
Cholesterol:	0 mg
Fiber:	2 g
Sodium:	245 mg
Vitamin A:	2 RE
Vitamin C:	2 mg
Iron:	1 mg
Calcium:	7 mg

Applesauce Cake

(contributed by Jennifer Raymond)
Yields one full sheet pan (100 pieces)

3 quarts unbleached flour
1 quart whole wheat pastry flour
4 teaspoons baking soda
4 teaspoons salt
2 tablespoons cinnamon
1 teaspoon cloves
1 teaspoon nutmeg

1-1/2 quarts brown sugar
1/2 quart vegetable oil
3 quarts applesauce
1 quart raisins (about 1 pound)

Preheat the oven to 350° F. Mix the flour, baking soda, salt and spices together.

Procedure: Beat the sugar and oil together. Add the applesauce and mix well. Stir in the flour along with the raisins. Beat until smooth. Spread into an oil-sprayed full sheet pan and bake at 350° F for 45 to 50 minutes.

Additional Institutional Size Recipes

Vegetable Chili

(contributed by Saturn Cafe, Santa Cruz, CA)
Yields six gallons

16 cups red beans
2-1/2 gallons water
5 pounds bell pepper, chopped
12 pounds onion, chopped
1/2 cup vegetable oil
4 10-pound cans chopped tomatoes
8 tablespoons salt
6 tablespoons chili powder
5 tablespoons garlic powder
5 tablespoons cumin
2 tablespoons cayenne
1/4 cup honey or sugar

Procedure: Boil beans in water. Sauté bell pepper and onion in oil. When beans and vegetables are well cooked, combine both with the remaining ingredients. Cook for 30 minutes.

Black Bean Enchiladas

(contributed by Physicians Committee for Responsible Medicine)
Yields 48 servings of 2 enchiladas each

96 small corn tortillas.
24 cups cooked black beans
12 cups (3/4 gallon) medium taco sauce
2 bunches thinly sliced scallions
3 cups black olives, drained and chopped
12 medium onions, finely chopped
1-1/2 cups water

Procedure: Sauté the onions in the water until tender. Place the onions and the black beans in a blender or food processor and purée. Heat the taco sauce in a frying pan. Simmer each tortilla in the sauce until just soft. (Don't overcook, as the tortillas may begin to disintegrate.) Lay the tortilla flat on a cutting board or other flat surface. Place 1/4 cup of the bean mixture in the center of the tortilla and roll it up. Place them seam side down in a baking pan. Arrange the enchiladas in a single layer in the baking pan and put any remaining taco sauce across the top. Sprinkle tops with scallions and black olives. Bake covered at 350° F until heated through.

Black Bean with Rice

(contributed by Physicians Committee for Responsible Medicine)
Yields: 48 servings each

24 cups cooked black beans (12 cups dry beans)
1-1/2 cups chopped onions
3 cups green or red sweet pepper, diced
3 cups mild chili peppers, diced
3 cloves crushed garlic
36 cups cooked brown rice

Procedure: Simmer onions, peppers, chilies, tomatoes, and garlic in 3 cups water for 10 minutes. Add the cooked beans and simmer for at least 15 minutes, adding enough water to keep the beans from sticking. Serve with 3/4 cup steamed brown rice. Top with mild salsa. Garnish with parsley and chopped tomatoes.

Mushroom Nutbake

(contributed by Staff of Life, Santa Cruz, CA)

Yields: 8 pans / 2-1/2 gallon size

Gravy

12 cups cashews
18 cups water
1-1/2 cups tamari
3/4 cup onion powder
3/4 cup arrowroot powder
1-1/2 tablespoons white pepper

Procedure: To make the gravy, mix all ingredients and blend in blender. Place mixture in double boiler and cook until desired consistency for gravy—will turn brown in color.

40 cups cooked rice
15 cups uncooked bulgur
22-1/2 cups water
10 diced onions
8 celery stalks
30 zucchini
10 pounds sliced fresh mushrooms
5 heads green cabbage, chopped
5 cups raw tahini
5 cups tamari
10 cups chopped almonds
10 cups sunflower seeds
2 heaping tablespoons black pepper
7 heaping tablespoons basil
7 heaping tablespoons thyme
7 heaping tablespoons marjoram
3 loaves whole wheat bread

Procedure: Bring water to boil and add bulgur. Remove from heat, cover, and allow to sit 30 minutes before adding to mixing bowl. In mixing bowl combine rice, grilled onions with juice, grilled and drained zucchini, cabbage, and celery. Drain mushrooms and reduce 50% by simmering in rice pot for 1 to 2 hours. Purée together raw tahini, tamari, and reduced mushroom stock. Add to mixing bowl. Add almonds, sunflower seeds, pepper, basil, thyme, and marjoram. Mix ingredients well and turn into oiled trays. Using a blender, blend the bread into crumbs (cube and blend one slice of bread at a time) and use it as a topping for the entrées.

Mexican Pizza

(contributed by Ed Cramer, True Nature, Boulder Creek, CA)

Yields: 3 40" double sheet pans/ 16 slices per sheet

8 cups warm water
3/4 cup molasses or honey
1/4 cup yeast
8 cups cornmeal
2 cups white flour
6 cups whole wheat flour
1 level tablespoon salt
3/4 cup safflower oil
2 tablespoons crushed red chilies

Procedure: To make the crust, add molasses to warm water and sprinkle yeast over top of mixture. Let it sit until yeast "crinkles" or starts to get a texture. Add cornmeal and let sit for 15 minutes. Add flour, salt, oil, and chilies. Knead until elastic. Let rise 1 hour. Punch down and let rise another 30 minutes. Roll out thinly in pan that has been oiled. If necessary, sprinkle with flour to keep from sticking. Pinch sides to hold sauce. Bake at 350˚ F for 10 minutes.

2 large zucchini, julienne strips
3 large tomatoes, 12 slices per tomato
1 6-ounce can drained and chopped olives
2 cloves minced garlic
1 yellow onion, thinly sliced
4 cups tomato sauce (any red sauce)
2 12-ounce cans cooked red beans
2 15-ounce cans salsa—thin with tomato sauce and add a pinch of chili powder and cayenne

Assembly: Thinly spread sauce over baked crusts. Layer with vegetables—zucchini, sliced tomatoes, onions, garlic, olives, beans, and spoonfuls of salsa. Bake at 350˚ F for 11 to 15 minutes.

Shepherd's Pie

(contributed by Staff of Life, Santa Cruz, CA)
Yields: 8 pans / 2-1/2 gallon pans

Gravy
1 gallon chopped onions
20 pounds washed and whole button mushrooms
10 cups whole wheat flour
6 cups olive oil
1 cup onion powder
1 cup nutritional yeast
1 cup powdered garlic
Tamari to taste
Salt to taste
Pepper to taste
45 to 50 cups water

Procedure: Make gravy the night before. Sauté onions and olive oil in a 10 gallon pot. Add flour and salt. Cook on low heat, stirring frequently to avoid burning. Add hot water and whisk steadily until mixture is simmering. Add mushrooms and other ingredients in batches. Season highly to offset blanched vegetables.

Vegetables
3 gallons carrots, blanched
1-1/2 gallons celery, blanched
3 gallons zucchini, blanched
3 2-1/2 pound bags peas, frozen
10 cups parsley, chopped
Procedure for filling: Mix vegetables into gravy mixture.

Topping
50 pounds potatoes (russet, washed, large hunks)
4 pounds soy margarine
Procedure topping: First whip margarine until emulsified and smooth. Add potatoes, parsley, and seasonings. (Important: Mix potatoes briefly on low speed because whipping causes potatoes to become starchy and stretchy. It is OK if potatoes are somewhat chunky, to avoid getting starchy.)
Assembly: Layering is 2/3 stew and 1/3 potato topping. Bake covered with foil at 375˚ F for 20 to 25 minutes. Uncover and bake another 5 to 10 minutes. Serve hot.

Tamale Pie

(contributed by Staff of Life, Santa Cruz, CA)
Yields: 8 pans / 2-1/2 gallons

39 cups black beans
15 tablespoons salt
15 tablespoons garlic
40 green peppers, diced
40 red peppers, diced
7 2-1/2-pound bags frozen corn
2 cans black olives, well-drained, sliced

Procedure for vegetables: Presort and soak black beans. Be sure to fill pot with water as water level will actually decrease. Cook gently and save liquid. Add garlic and salt to beans at end of cooking time.

5 cans tomatoes, drained, diced in water
30 medium onions, chopped
2 lbs., halved and seeded jalapenos, very finely diced
5 tablespoons cumin
2 tablespoons chili paste, or cayenne
3 tablespoons garlic, fresh, finely chopped
3 tablespoons salt
3 tablespoons pepper

Procedure for salsa: Sauté salsa for 20 minutes. Add to vegetables in big bowl.
*(To make chili paste: Take 2 gallons of dried Mexican chilies and de-seed. Put in a rice pot and cover with water. Simmer 30 minutes or until tender. Purée in big blender with just enough of the water to make a thick paste. Consider wearing gloves while handling the chilies.)

39 cups cornmeal
7 gallons vegetable stock
2 quarts soy milk, plain
Salt to taste
Pepper to taste
Garlic to taste
12 lbs. soy cheese, sharp cheddar, grated (optional)

Procedure for cornmeal topping: Bring vegetable stock to a boil. Pour boiling stock into cornmeal in a slow steady stream while whisking. Add soy milk, stirring almost constantly. Season with salt, pepper, and garlic.

Assembly: Fill pans 3/4 full with beans and salsa mix. Flatten with spatula. Sprinkle with grated cheese. Top with cornmeal which should go to the top of the pan. It should be very thick in consistency—like spackle—and can be spread with a pie server. Bake covered at 375˚ F for 35 to 40 minutes. Uncover and continue baking for another 5-10 minutes, until top is browned and dry.

Hummus with Pita Bread

(contributed by Physicians Committee for Responsible Medicine)
Yields: 48 servings / 2 filled pita pockets per portion

24 cups cooked garbanzo beans (chickpeas)
8 cloves garlic, minced
1 tablespoon tamari
1 cup lemon juice
2 cups parsley, minced
2 cups scallions, minced
1/4 cup salt
1 tablespoon black pepper
2 cups water
2 cups tahini
48 large pitas, whole wheat
For garnish: tomatoes, cucumbers, lettuce (chopped)

Procedure: Mash garbanzos to a paste, adding enough water for a smooth consistency. Blend with other ingredients. Adjust seasonings to taste. Cut each pita bread in half. Fill each half with 1/3 cup hummus. Top with chopped tomatoes, cucumber and lettuce.

Comment: Hummus can also be served as a dip. Serve 2/3 cup hummus with a pita bread that has been cut into 6 wedges. Raw vegetables such as mushrooms, carrot sticks, sliced zucchini and broccoli florets can also be used as dippers.

Gingery Baked Beans

(contributed by Physicians Committee for Responsible Medicine)
Yields: 48 servings / 1 cup portions

30 cups cooked navy beans
6 medium onions, chopped
6 11 ounces (#10 size) cans chopped tomatoes
3/4 cup maple syrup
6 tablespoons vinegar
6 tablespoons soy sauce
6 tablespoons parsley flakes
3 tablespoons dry mustard
2 tablespoons ginger
1-1/2 teaspoons black pepper

Procedure: Put chopped onion in saucepan in water and simmer for 10 minutes. Add remaining ingredients (except for beans) and stir for about 5 minutes. Then add beans, and cook about 10 to 15 minutes to blend flavors.

Rice Pilaf

(contributed by Physicians Committee for Responsible Medicine)
Yields: 48 servings / 1 cup portions

8 medium onions, chopped
2 cups water
16 cups brown rice, uncooked
4 cups lentils, uncooked
4 teaspoons cinnamon
40 cups water
1 cup tomato paste
5 tablespoons salt
11 cups raisins
2 cups sunflower seeds

Procedure: Sauté onion in water until soft. Add rice and stir for 2 minutes over medium heat. Add water, cinnamon, and tomato paste. Mix thoroughly. Add lentils. Bring the mixture to a boil, then cover and simmer for 30 minutes. Stir in salt, sunflower seeds, and raisins. Pour into baking pans and bake, covered, for 25 minutes at 350˚ F.

Green Chili & Potato Soup

(contributed by Ruth Frase—True Nature Foods, Boulder Creek, CA)
Yields: 3 gallons

4 large onions, chopped
1/4 cup olive oil
1/4 cup basil
3 tablespoons granulated garlic
2 gallons water
10 to 12 large yellow finn potatoes, cut into 1" cubes
1 pint green salsa
1 cup tamari
2 cups nutritional yeast

Procedure: Sauté onions in olive oil. While sautéing, add garlic granules and basil. Add water and cubed potatoes (there should be several inches of water over the potatoes). Add the salsa and tamari. Cook until the potatoes are very tender. Stir in nutritional yeast. Simmer soup for 25 to 30 minutes before serving.

Black Bean Soup

(contributed by Saturn Cafe, Santa Cruz, CA)
Yields: 4 gallons

18 cups dry black beans
1 tablespoon salt
2 pounds onion, chopped
4 pounds carrots, chopped
2 bunches celery, chopped
1 bunch chopped green onions
1 bunch cilantro, chopped
4 pounds bell pepper, chopped
10 tablespoons cumin
4 tablespoons coriander seeds
8 tablespoons garlic powder
2 tablespoons salt
1 tablespoon cayenne
1/2 cup lemon juice
1 cup orange juice
2/3 cup soy sauce

Procedure: Bring beans and 1 tablespoon salt to a boil. Sauté onions, carrots, celery, green onion, cilantro, and bell peppers. When vegetables and beans are cooked, combine both with the remaining ingredients. Simmer 1/2 hour. It is best to blend about 1 gallon of soup and recombine with the rest of soup mixture. Can be served alone or over brown rice.

Lentil Barley Soup

(contributed by Saturn Cafe, Santa Cruz, CA)
Yields: 6 gallons

16 cups uncooked lentils
4 cups uncooked barley
2 bunches celery, chopped
24 large carrots, chopped
9 pounds onions, chopped
1/2 cup vegetable oil
7 tablespoons salt
5 tablespoons garlic powder
5 tablespoons basil
1 teaspoon cayenne

Procedure: Gently boil lentils and barley until lentils are cooked. Sauté vegetables in oil. When both the above procedures are completed, combine with the remaining ingredients. Simmer for 15 to 30 minutes. Can be served alone or over brown rice.

Pea Soup

(contributed by Saturn Cafe, Santa Cruz, CA)
Yields: 4 gallons

20 cups dry split peas
2-1/2 gallons water
8 medium carrots, chopped
4 medium onions, chopped
2 bunches celery, chopped
1/3 cup vegetable oil
1/3 cup soy sauce
2 tablespoons salt
4 tablespoons thyme
3 tablespoons basil
1/2 teaspoon cayenne
2 tablespoons paprika
5 whole bay leaves

Procedure: Rinse and boil split peas in water. Sauté vegetables in oil. When peas are cooked and vegetables are soft, combine both with the remaining ingredients. Simmer for 15 minutes. Can be served alone or over brown rice.

Mushroom Gravy

(contributed by Restaurant Keffi, Santa Cruz, CA)
Yields: 2-1/4 cups

2 tablespoons canola oil
1 medium onion, chopped
1/2 pound mushrooms, sliced
3 tablespoons soy sauce
1/4 teaspoon black pepper
1-1/2 cups water
2 tablespoons cornstarch

Procedure: Sauté onions in the oil until they start to become translucent. Add the mushrooms and sauté until they begin to soften and turn color. Dissolve the cornstarch in the water and add to the vegetable mixture, stirring thoroughly. Add the soy sauce and black pepper and continue to heat over a low heat, stirring frequently until the gravy has thickened.

Cornbread

Yields: 40 servings

1 cup safflower oil (high-oleic)
1-1/4 quarts soy milk
3/4 cup fructose
1-1/4 quarts cornmeal, coarsely ground
1-1/4 quarts flour, whole wheat
10 teaspoons baking powder
5 teaspoons egg substitute
4 teaspoons salt

Procedure: Combine oil, soy milk, and fructose. Mix dry ingredients together. Combine oil mixture with dry ingredients. Pour into pans and bake at 400˚ F for 20 to 25 minutes.

Bulk Desserts

Coconut Orange Pecan Muffins

(contributed by Ruth Frase, True Nature, Boulder Creek, CA)

Yields: 4 dozen

2 pounds soy margarine
8 cups brown sugar
1 quart orange juice
1 cup orange peel, grated
8 cups shredded coconut
3 cups pecans, chopped
4 cups soy or rice drink (Amazake or Rice Dream)
16 cups whole wheat flour
2-1/2 tablespoons baking soda
2-1/2 tablespoons baking powder (non-aluminum)

Procedure: Cream together margarine and brown sugar. Add orange juice, orange peel, coconut, nuts and soy/rice drink. Add flour, soda, and baking powder. Stir only enough to just mix in the flour. Brush muffin tins with a mixture of oil and lecithin. Bake at 350˚ F for 25 to 30 minutes.

Applesauce Muffins

(contributed by Ed Cramer, True Nature, Boulder Creek, CA)
Yields: 6 dozen

4 cups wheat bran
3 cups warm water
2 cups oat bran
6 cups whole wheat flour
2 cups safflower oil
32 ounces applesauce
12 ounces apple juice or soy milk
3 cups currants
3 cups walnuts
2 1/2 cups chopped apple
6 cups maple syrup
2 cups brown sugar
2 tablespoons baking powder (non-aluminum)
1 tablespoon baking soda
3 teaspoons almond extract
2 teaspoons vanilla
1 tablespoon cinnamon
2 teaspoons cloves
1 teaspoon nutmeg
2 pinches salt

Procedure: Soak the wheat bran in the warm water for 45 minutes. While soaking, sift together oat bran and flour. Combine wet ingredients in separate bowl. Combine mixed dry ingredients with damp wheat bran mixture. Add currants, apples, and walnuts. Then add the wet ingredients to this same mixture. Use combination of safflower oil and soy lecithin to lubricate the muffin pans. Heap to fill—add a little more than above the rim of cup. Preheat oven and bake at 350° F for 25 to 35 minutes—until it springs to touch.

Applesauce Peanut Butter Cookies

(contributed by Ed Cramer, True Nature, Boulder Creek, CA)
Yields: 18 cookies

1 cup safflower oil
1 teaspoon vanilla
3/4 cup honey
1 cup brown sugar
4 ounces applesauce
1 cup peanut butter, chunky
2-1/2 cups flour
1/2 cup oats
2 teaspoons baking soda
1 pinch salt
1 pinch nutmeg
1 scant pinch cloves

Procedure: Cream oil, vanilla, and sugars together. Add applesauce and stir in peanut butter. Add sifted dry ingredients. Form into balls about 1 rounded tablespoon. Place on a greased cookie sheet or baking paper. Bake at 375° F for 10 to 12 minutes.

Seed Cookies

(contributed by Sprouts, Santa Cruz, CA)
Yields: 36

1 cup soy milk
1 cup soy margarine
1 tablespoon vanilla
3 cups whole wheat pastry flour
1 cup turbinado sugar
1 tablespoon baking powder (non-aluminum)
1 pinch sea salt
3 cups seed and nut mixture
(Pumpkin seeds, sunflower seeds, sesame seeds, walnuts, pinenuts, and almonds as preferred.)

Procedure: Mix moist ingredients and in a separate bowl mix dry ingredients. Leave out seeds and nuts. After ingredients are well mixed add the seed and nut mixture. Place on a greased cookie sheet 1.5 inches apart. Bake at 350˚ F until golden brown (10 to 15 minutes).

Oatmeal Raisin Cookies

(contributed by Patricia Becker, Nutritional Counselor, Los Altos, CA)

2 cups whole wheat flour
1 tablespoon baking powder
1 pinch sea salt
1-1/4 cup canola oil
1/2 cup barley malt or maple syrup
1 tablespoon vanilla
3/4 cup oat flakes or oat meal
1/2 cup raisins
1/2 cup finely chopped nuts or sunflower seeds
1 teaspoon cinnamon

Procedure: Mix dry ingredients first and then add wet ingredients. Use apple juice to moisten if necessary. Bake at 350˚ F until golden brown (10 to 15 minutes).

Peanut Butter Cookies

(contributed by Kerri Creations, Santa Cruz, CA)

Yields: 350 2- ounce cookies

13 pounds whole wheat pastry flour
6 pounds fructose
1-1/2 quarts canola oil
1 quart soy margarine
4 cups water
4 tablespoons baking powder (non-aluminum)
2 tablespoons (or less) salt
3/4 cup vanilla
64 ounces peanut butter

Procedure: Mix canola and melted margarine. Add baking powder, salt and vanilla. Mix well and add fructose. Mix well. Add peanut butter, then add flour. Mix well. Roll into 2-ounces balls. Smash with a fork. Bake at 350˚ F for 10 to 13 minutes.

Recipes for Homes

Pita Pizzas

(contributed by Jennifer Raymond)

Makes 6 pizzas

Pita pizzas are quick and easy to prepare for meals or for snacks. You can make them almost instantly if you keep some pizza sauce and chopped vegetables in the refrigerator.

1 15-ounce can tomato sauce
1 6-ounce can tomato paste
1 teaspoon garlic powder
1/2 teaspoon each: basil, oregano, and thyme
1 package pita bread (6 pack)
2 cups chopped vegetables: green onion, bell pepper, mushrooms

Procedure: To make sauce, mix tomato sauce, tomato paste, garlic powder, and herbs. Turn pita bread upside down so it looks like a saucer. Spread with sauce, then top liberally with chopped vegetables. Place on a cookie sheet and bake at 375˚ F for approximately 10 minutes, until the edges are lightly browned.

Note: You will only need about half the sauce for 6 pizzas. Refrigerate or freeze the remainder for use at another time.

Nutrition information per pizza:

Calories:	185
Protein:	7 g
Carbohydrate:	35 g
Fat:	2 g
Sodium:	337 mg
Cholesterol:	0 mg

Super Burritos

(contributed by Jennifer Raymond)

Makes 4 burritos

1 cup pinto bean flakes mixed with 1 cup boiling water
or 1 15-ounce can fat-free refried beans
1 cup cooked brown rice
4 flour tortillas or chapatis
2 cups shredded lettuce
2 tomatoes, sliced
2 green onions, sliced
1/2 avocado, sliced (optional)
1/2 cup salsa

Procedure: Mix bean flakes with boiling water in a small pan or bowl. Let stand 3 to 5 minutes until softened. Or, heat canned beans on stove or in microwave. Place a tortilla in a large, ungreased skillet and heat until soft and pliable.

Spread approximately 1/4 cup black beans down the middle of the warm tortilla. Add 1/4 cup cooked rice. Top with lettuce, tomatoes, onions, avocado, and salsa. Fold the bottom up; starting on one side, roll tortilla around filling.

Nutrition information per burrito:

Calories:	182
Protein:	8 g
Carbohydrate:	34 g
Fat:	1 g
Sodium:	63 mg
Cholesterol:	0 mg

Chili Beans

(contributed by Jennifer Raymond)

Serves 6

These chili beans are delicious with cornbread, warm tortillas, or brown rice. A crisp green salad rounds out the meal beautifully.

1-1/2 cups dry pinto beans
4 cups water
3 large garlic cloves, minced
1/2 teaspoon ground cumin
1 onion, chopped
1 green bell pepper, diced
1 cup textured vegetable protein (optional)
1 15-ounce can tomato sauce
1 cup corn, fresh or frozen
2 teaspoons chili powder
1/8 teaspoon cayenne (more for spicier beans)
1/2 teaspoon salt

Procedure: Sort through beans to remove any debris, then rinse and soak for 6 to 8 hours in about 6 cups cold water. Discard soaking water and rinse beans. Place them in a pot with 4 cups of fresh water, garlic, and cumin. Simmer approximately 1 hour until tender.

Heat 1/2 cup water in a large skillet, and cook the onion and bell pepper approximately 5 minutes until the onion is soft. Add to the cooked beans, along with textured vegetable protein, tomato sauce, corn, chili powder, cayenne, and 1 cup water. Simmer at least 30 minutes. Add salt to taste.

Crockpot method: Place soaked beans in a crockpot with garlic, cumin, and 3 cups boiling water. Set the crockpot on high and cook approximately 3 hours until beans are tender. Add the onion, bell pepper, tomato sauce, corn, chili powder, and cayenne. Continue cooking on high for at least 1 hour. Add salt to taste.

Nutrition information per serving:

Calories:	210
Protein:	10 g
Carbohydrate:	41 g
Fat:	0 g
Sodium:	218 mg
Cholesterol:	0 mg

Truly Terrific Tacos

(contributed by Jennifer Raymond)
Makes 10 to 12 tacos

People often ask if I missed meat when I became a vegetarian. My answer is an emphatic "Definitely not!" But I did miss tacos. Until I discovered textured vegetable protein, a soy food that makes one of the tastiest tacos around. Look for textured vegetable protein (tvp) in natural food stores and some supermarkets.

1 cup water
1 small onion, chopped
2 garlic cloves, minced or crushed
1/2 small bell pepper, finely diced
3/4 cup textured vegetable protein
1 cup tomato sauce
2 teaspoons chili powder
1/2 teaspoon cumin
1/4 teaspoon oregano
1 tablespoon nutritional yeast (optional)
1 tablespoon soy sauce

12 corn tortillas
1 cup shredded romaine lettuce
4 green onions, sliced
1 medium tomato, diced
1 avocado, cut into strips (optional)
1/2 cup salsa or taco sauce

Procedure: Heat the water in a large pan and cook the onion, garlic, and bell pepper approximately 5 minutes until the onion is soft.

Add textured vegetable protein, tomato sauce, chili powder, cumin, oregano, nutritional yeast (if you are using it), and soy sauce. Cook over low heat until the mixture is fairly dry, about 8 minutes.

Heat a tortilla in a heavy skillet, flipping it from side to side until soft and pliable. Place a small amount of filling along the center and fold tortilla over it. Cook about 1 minute on each side. Garnish with lettuce, onions, tomato, avocado, and salsa.

Nutrition information per taco:

Calories:	105
Protein:	6 g
Carbohydrate:	18 g
Fat:	1 g
Sodium:	63 mg
Cholesterol:	0 mg

Hearty Chili Mac

(contributed by Jennifer Raymond)
Serves 4 to 6

Your kids will love this easy-to-make meal.

8 ounces pasta spirals
1 onion, chopped
2 to 3 garlic cloves, minced
1 small bell pepper, diced
3/4 cup textured vegetable protein
1 15-ounce can crushed tomatoes
1 15-ounce can kidney beans, including liquid
1 15-ounce can corn, including liquid
2 tablespoons chili powder
1 teaspoon ground cumin
1/4 teaspoon salt

Procedure: Cook pasta in boiling water until tender. Drain and rinse, then set aside.
Heat 1/2 cup water in a large pot, then add chopped onion and garlic. Cook approximately 3 minutes until onion is soft.

Add bell pepper, textured vegetable protein, crushed tomatoes, kidney beans, corn, chili powder, cumin, salt, and 3/4 cup water. Stir to mix, then simmer over medium heat for 20 minutes, stirring occasionally. Add cooked pasta and check seasonings. Add more chili powder if a spicier dish is desired.

Nutrition information per 1/2 cup:

Calories:	109
Protein:	6 g
Carbohydrate:	20 g
Fat:	0 g
Sodium:	138 mg
Cholesterol:	0 mg

Cornbread

(contributed by Jennifer Raymond)
Yields 9 servings

This delicious cornbread is made without eggs. Serve it with chili or any other spicy bean dish.

1-1/2 cups soy milk
1-1/2 tablespoons vinegar
1 cup cornmeal
1 cup unbleached flour
2 tablespoons sugar or other sweetener
1/2 teaspoon salt
1 teaspoon baking powder
1/2 teaspoon baking soda
2 tablespoons oil

Preheat oven to 425° F. Combine soy milk and vinegar and set aside.

Procedure: Mix cornmeal, unbleached flour, sugar, salt, baking powder, and baking soda in a large bowl. Add soy milk mixture and oil. Stir until just blended. Spread batter evenly in an oil-sprayed 9 x 9-inch baking dish, and bake for 25 to 30 minutes. Serve hot.

Nutrition information per serving:

Calories:	150
Protein:	3 g
Carbohydrate:	26 g
Fat:	3 g
Sodium:	180 mg
Cholesterol:	0 mg

Pueblo Pie

(contributed by Jennifer Raymond)
Yields 10 servings

Pueblo Pie is a bit like a Mexican lasagna, with layers of tortillas, garbanzo cheese, chili beans, corn, and a spicy tomato sauce. Serve it with a green salad for a very satisfying meal.

1/2 cup water
1 large onion, chopped
1 tablespoon minced garlic (about 4 large cloves)
1 28-ounce can crushed tomatoes
4 teaspoons chili powder
2 teaspoons cumin
2/3 cup textured vegetable protein (tvp)
2/3 cup water

1 15-ounce can garbanzo beans, drained
1/2 cup roasted red pepper (about 2 peppers)
3 tablespoons tahini
3 tablespoons lemon juice

12 corn tortillas, torn in half
2 15-ounce cans vegetarian chili beans
1 cup chopped green onions
1 to 2 cups corn, fresh or frozen

Procedure: Heat 1/2 cup water in a large pot or skillet and cook the onion and garlic approximately 5 minutes until soft. Add tomatoes, chili powder, cumin, textured vegetable protein, and 2/3 cup of water. Simmer over medium heat 5 minutes.

Purée the garbanzo beans, roasted peppers, tahini, and lemon juice in a food processor or blender until very smooth.

Preheat the oven to 350°F. Spread about 1/2 cup tomato sauce in the bottom of a 9 x 13-inch (or larger) baking dish. Cover with a layer of tortillas, then spread with a third of the garbanzo bean mixture, using your fingers to hold the tortillas in place. Sprinkle with a third of the chili beans, green onions, and corn. Spread about 1 cup tomato sauce over the top. Repeat the layers twice, ending with the tomato sauce. Make sure all the tortillas are covered. Bake for 20 minutes.

Nutrition information per serving:

Calories:	282
Protein:	13 g
Carbohydrate:	47 g
Fat:	4 g
Sodium:	347 mg
Cholesterol:	0 mg

Very Primo Pasta

(contributed by Jennifer Raymond)

yields 8 servings

Mix up some pasta with vegetables and beans for a deliciously satisfying meal.

8 ounces (pasta) spirals, shells or similar pasta
1/2 cup water
2 onions, chopped
1 large bell pepper, diced
2 carrots, sliced
2 stalks celery, sliced
1/2 pound (about 2 cups) mushrooms, sliced
1 15-ounce can crushed tomatoes
1 15-ounce can kidney beans, drained
1 teaspoon basil
1/2 teaspoon paprika
1/2 teaspoon black pepper
2 tablespoons soy sauce

Procedure: Begin heating a large pot of water for cooking the pasta. When it is rapidly boiling, add the pasta and cook until it is just tender. Drain and rinse quickly with cold water.

In the meantime, heat 1/2 cup water in a large skillet or pot. Add the onions and cook for 3 minutes. Add the bell pepper, carrots, and celery and cook for 5 minutes over medium heat. Add mushrooms, then cover the pan and cook an additional 7 minutes, stirring occasionally. Add tomatoes, kidney beans, basil, paprika, pepper and soy sauce, then cover and cook 10 to 15 minutes.

Spread cooked pasta on a platter and top it with the vegetable mixture.

Nutrition information per serving:

Calories:	147
Protein:	6.5 g
Carbohydrate:	29 g
Fat:	0 g
Sodium:	137 mg
Cholesterol:	0 mg

Simple "Refried" Beans

(contributed by Jennifer Raymond)

Yields 8 servings

These beans are flavorful and satisfying without actually being fried. Serve them with rice and salad, or as a filling for burritos.

2 cups dry pinto beans
6 cups water
2 tablespoons onion powder
2 teaspoons garlic powder
1-1/2 teaspoons cumin
1/4 teaspoon cayenne
1/2 to 1 teaspoon salt

Procedure: Pick through the beans to remove any debris. Place in a large pot or bowl and add 6 to 8 cups of water. Soak at least 6 hours or overnight.

Pour off soak water and rinse beans. Place in a large pot with 6 cups fresh water. Add seasonings (except salt) and simmer for 1 to 2 hours, stirring occasionally, until desired consistency is obtained. Stir in salt to taste.

Nutrition information per 1/2 cup:

Calories:	122
Protein:	6 g
Carbohydrate:	23 g
Fat:	0 g
Cholesterol:	0 mg
Fiber:	4 g
Sodium:	322 mg
Vitamin A:	2 RE
Vitamin C:	2 mg
Iron:	3 mg
Calcium:	51 mg

Quick Bean Burritos

(contributed by Jennifer Raymond)
Yields 4 burritos

Burritos make a quick, tasty, and very portable meal which can be eaten hot or cold. Fat-free refried beans are available in most markets. A growing number of markets also carry fat-free flour tortillas.

1 15-ounce can fat-free refried beans, heated
4 flour tortillas (preferably fat-free)
1 to 2 cups shredded lettuce
2 to 3 tomatoes, sliced
3 green onions, sliced
1 cup salsa

Procedure: Heat a tortilla in a large, ungreased skillet until it is warm and soft. Spread a line of the heated beans down the center of the tortilla, then top with lettuce, tomato, onions, and salsa. Fold the bottom end toward the center, then roll the tortilla around the filling. Repeat with remaining tortillas.

Nutrition information per burrito:

Calories:	300 (10% from fat)
Protein:	12 g
Carbohydrate:	55 g
Fat:	3 g
Sodium:	196 mg
Cholesterol:	0 mg

Shepherd's Pie

(contributed by Jennifer Raymond)
Yields 8 to 10 servings

This is a hearty and satisfying vegetable stew with a top "crust" of mashed potatoes.

4 large russet potatoes
1/2 to 1 cup soy or rice milk
1/2 teaspoon salt
1/2 cup water or vegetable stock
2 onions, chopped
1 large bell pepper, diced
2 carrots, sliced
2 stalks celery, sliced
2-1/2 cups sliced mushrooms (about 1/2 pound)
1 15-ounce can crushed or ground tomatoes
1 15-ounce can kidney beans, drained
1/2 teaspoon paprika
1/2 teaspoon black pepper
2 tablespoons soy sauce

Procedure: Scrub and dice potatoes, then simmer in 1 cup water approximately 15 minutes until tender. Mash, without draining, then add enough soy or rice milk to make them smooth and spreadable. Mix in salt and set aside.

Heat 1/4 cup water or stock in a large pot and add onions. Cook for 3 minutes then add bell pepper, carrots, and celery. Cook for 5 minutes over medium heat. Add mushrooms, then cover pan and cook an additional 7 minutes, stirring occasionally. Add tomatoes, kidney beans, paprika, black pepper, and soy sauce. Cover and cook 15 minutes.

Preheat oven to 350°F. Transfer vegetables to a 9 x 13-inch baking dish and spread the mashed potatoes evenly over the top. Sprinkle with paprika. Bake for 25 minutes, until hot and bubbly.

Nutrition information per serving:

Calories:	217
Protein:	6 g
Carbohydrate:	47 g
Fat:	0 g
Sodium:	257 mg
Cholesterol:	0 mg

Chili Corn Pie

(contributed by Jennifer Raymond)

Yields 10 servings

Are you wondering what to do with leftover chili beans? Give Chili Corn Pie a try! Spicy beans topped with a golden cornbread crust make a truly marvelous meal.

6 cups chili beans with their juice
2 cups soy or rice milk
2 tablespoons vinegar

2 cups corn meal
2 teaspoons baking soda
1/2 teaspoon salt
2 tablespoons oil

Procedure: Heat chili beans on stovetop or in microwave until steamy and hot, then spread them evenly in a 9 x 13-inch baking dish.

Preheat the oven to 400°F. Combine soy or rice milk with vinegar. Mix cornmeal, baking soda, and salt in a large bowl, then add oil and milk-vinegar mixture. Stir to dissolve any lumps, then pour over hot beans. Bake approximately 30 minutes until cornbread is set and golden brown.

Nutrition information per serving:

Calories:	268
Protein:	9 g
Carbohydrate:	49 g
Fat:	3.5 g
Sodium:	410 mg
Cholesterol:	0 mg

Sweet & Sour Stir-fry Vegetables

(contributed by Jennifer Raymond)

Yields 4 servings

1/4 cup ketchup
1/3 cup vinegar
1/3 cup brown sugar
2 tablespoons soy sauce
1 tablespoon cornstarch
1/4 teaspoon dried red pepper flakes
1/2 cup water

2 teaspoons toasted sesame oil
1 cup thinly sliced onion
2 cups sliced mushrooms
1 red bell pepper, thinly sliced
1 medium zucchini, thinly sliced
2 cups snow peas

Procedure: Combine ketchup, vinegar, sugar, soy sauce, cornstarch, pepper flakes, and water in a small bowl. Stir to mix, then set aside.

In a large skillet or wok, heat sesame oil and add onion. Cook approximately 3 minutes until onion just begins to soften. Add mushrooms and cook 3 minutes. Add bell pepper, zucchini, and snow peas. Continue cooking over medium-high heat approximately 3 minutes, stirring continuously, until vegetables are just becoming tender. Add the reserved sauce mixture and cook approximately 2 more minutes, stirring constantly, until clear and thickened.

Serve with rice.

Nutrition information per 1/2 cup:

Calories:	99
Protein:	2 g
Carbohydrate:	18 g
Fat:	2 g
Cholesterol:	0 mg
Fiber:	4 g
Sodium:	116 mg
Vitamin A:	365 RE
Vitamin C:	37 mg
Iron:	2 mg
Calcium:	44 mg

Thai Vegetables with Rice

(contributed by Jennifer Raymond)

Yields 8 servings

Colorful vegetables, simmered in a flavorful sauce, are served with flavorful basmati or jasmine rice. For a mild dish, use the smaller amount of dried red pepper flakes. Increase the amount for a more fiery version.

1 cup water
2 tablespoons soy sauce
1 onion, thinly sliced
4 garlic cloves, minced
1 pound yams, peeled and cut into strips
1 15-ounce can crushed tomatoes
2 teaspoons ground coriander
1 teaspoon ground cumin
1/2 to 1 teaspoon red pepper flakes
1/2 teaspoon turmeric
1/2 tsp. ginger powder (or 2 tsp. fresh, grated)
1 15-ounce can garbanzo beans, including liquid
2-1/2 cups diced zucchini (about 1 pound)
1 red bell pepper, cut into thin strips
2 teaspoons grated lemon peel (lemon zest)
1 tablespoon lemon juice

6 cups cooked basmati or jasmine rice (2 cups raw)

Procedure: Heat 1/2 cup water and 1 tablespoon soy sauce in a large pot. Add onion and garlic and cook 5 minutes. Add yam, tomatoes, coriander, cumin, pepper flakes, turmeric, ginger, and remaining 1/2 cup water. Cover and simmer approximately 15 minutes until yam is just barely tender. Add garbanzo beans with their liquid, zucchini, bell pepper, and grated lemon peel. Cover and simmer approximately 5 minutes until zucchini is just tender. Stir in lemon juice and remaining soy sauce. Serve with cooked rice.

Nutrition information per 1/2 serving:

Calories:	286
Protein:	7 g
Carbohydrate:	62 g
Fat:	1 g
Cholesterol:	0 mg
Fiber:	4 g
Sodium:	166 mg

Simple Peanut Sauce

(contributed by Jennifer Raymond)

Yields 1 cup yields 8 servings

Peanut sauce is quick to make and delicious with cooked vegetables or pasta.

1/3 cup peanut butter
1/2 cup hot water
1 tablespoon soy sauce
1 tablespoon vinegar (cider or seasoned rice)
2 teaspoons sugar
2 garlic cloves, minced
1/4 teaspoon ginger
1/8 teaspoon cayenne

Procedure: Whisk all ingredients together in a small saucepan, then heat gently until sauce is smooth and slightly thickened. Add more water if sauce becomes too thick.

Nutrition information per tablespoon:

Calories:	38
Protein:	1 g
Carbohydrate:	2 g
Fat:	3 g
Cholesterol:	0 mg
Sodium:	38 mg

Simple Marinara

(contributed by Jennifer Raymond)

Yields about 4 cups

Marinara doesn't get any easier unless you buy it ready-made! Use this simple, tasty sauce with manicotti, lasagna, or any other pasta dish.

1/2 cup red or white wine or water
1 onion, chopped
4 garlic cloves, crushed
1 28-ounce can crushed or ground tomatoes
1 tablespoon mixed Italian herbs
1 tablespoon apple juice concentrate
1/4 teaspoon black pepper

Procedure: Heat the wine or water in a large pot, then add the onion and garlic and cook about 5 minutes, until soft. Add the tomatoes, herbs, apple juice concentrate and black pepper. Simmer 20 minutes.

Nutrition information per 1/2 cup:

Calories:	50
Protein:	2 g
Carbohydrate:	8 g
Fat:	0 g
Cholesterol:	0 mg
Sodium:	33 mg

Brown Rice

(contributed by Jennifer Raymond)

Yields 3 cups of cooked rice

For perfect, fluffy brown rice every time, try cooking it with extra water. This technique can be used with short or long grain brown rice and actually reduces the cooking time. I find that the rice is tender in 35 to 40 minutes. The extra liquid that is poured off makes a marvelous broth for soups or stews.

4 to 5 cups water
1 cup brown rice (short grain or long grain)
1/2 teaspoon salt

Procedure: Bring water to a boil in a saucepan. Rinse and drain rice, then add to boiling water along with salt. Adjust heat so the rice boils gently, then cover loosely and cook approximately 35 to 40 minutes until rice is soft but still retains a hint of crunchiness. Pour off excess water. For even fluffier rice, rinse it and drain it.

Nutrition information per 1/2 cup:

Calories:	115
Protein:	2.5 g
Carbohydrate:	25 g
Fat:	0 g
Cholesterol:	0 mg
Sodium:	176 mg

Simply Spanish Rice

(Oven Method)

(contributed by Jennifer Raymond)

Yields 3 cups

1 cup uncooked brown rice
2 cups water or vegetable stock
2 teaspoons chili powder
1 teaspoon granulated garlic
1/2 teaspoon ground cumin
1/2 teaspoon salt
1 tablespoon soy sauce

Procedure: Preheat oven to 350°F. Spread rice in a 9 x 9-inch baking pan. Combine water or stock with remaining ingredients and stir to mix. Pour over rice. Cover tightly with foil. Bake approximately 1 hour until rice is tender and all the liquid is absorbed.

Nutrition information per 1/2 cup:

Calories:	104
Protein:	2 g
Carbohydrate:	23 g
Fat:	0 g
Cholesterol:	0 mg
Sodium:	200 mg

Chinese Fried Rice

(contributed by Jennifer Raymond)

Yields about 3 cups

This quick side dish is perfect with any vegetable stir-fry.

1 cup uncooked long grain brown rice
1/2 teaspoon salt

2 teaspoons toasted sesame oil
1 teaspoon fresh minced ginger
1 garlic clove, minced
1/2 cup finely sliced green onions, including tops
1/2 cup sliced water chestnuts
1-1/2 tablespoons soy sauce
1/8 teaspoon black pepper

Procedure: Bring 3 cups water to boil in a medium saucepan and add the rice and salt. Simmer approximately 35 minutes until rice is tender. Drain off excess water.

Heat the toasted sesame oil in a large, nonstick skillet. Add ginger, garlic, and green onions. Cook 1 minute. Stir in water chestnuts, cooked rice, soy sauce and black pepper. Cook approximately 3 minutes, turning gently with a spatula until hot.

Nutrition information per 1/2 cup:

Calories:	145
Protein:	5 g
Carbohydrate:	27 g
Fat:	2 g
Cholesterol:	0 mg
Sodium:	331 mg

Quick Confetti Rice

(contributed by Jennifer Raymond)

Yields about 3 cups

This colorful rice pilaf has no added fat, so be sure to use a nonstick skillet.

2 cups cooked brown rice
2 tablespoons water or stock
1/2 cup frozen corn
1/2 cup frozen peas
1/2 cup diced red bell pepper, fresh or canned
1/2 teaspoon curry powder
1/4 cup raisins (optional)
salt to taste

Procedure: Heat water in a large skillet and add the cooked rice. Using a spatula or the back of a wooden spoon, separate the rice kernels. Add the corn, peas, bell pepper, curry powder, and raisins. Heat thoroughly. Add salt to taste.

Nutrition information per 1/2 cup:

Calories:	109 (0% from fat)
Protein:	2.5 g
Carbohydrate:	24 g
Fat:	0 g
Cholesterol:	0 mg
Sodium:	112 mg

Three Bean Salad

(contributed by Jennifer Raymond)

Yields 8 servings

This salad is delicious all by itself or as an addition to a green salad. I like to mix it with torn romaine lettuce leaves for a quick, nearly-instant salad.

1 15-ounce can kidney beans, drained
1 15-ounce can garbanzo beans, drained
1 15-ounce can green beans, drained
1/2 small red onion, finely chopped
1/4 cup finely chopped fresh parsley
1/2 cup cider vinegar
2 tablespoons seasoned rice vinegar
3 garlic cloves, minced
1/2 teaspoon basil
1/4 teaspoon oregano
1/4 teaspoon marjoram
1/4 teaspoon black pepper

Procedure: Drain beans and place in large bowl with chopped onion and parsley. In separate bowl whisk the vinegar, garlic and seasoning together to make a dressing. Add to beans and toss to mix. If possible, refrigerate for 2 to 3 hours before serving.

Nutrition information per serving:

Calories:	141 (6% from fat)
Protein:	7 g
Carbohydrate:	26 g
Fat:	1 g
Cholesterol:	0 mg
Sodium:	140 mg

Chinese Noodle Salad

(contributed by Jennifer Raymond)

Yields 8 servings

This delicious salad is easy to prepare and keeps well. Ramen soup is available in a variety of flavors at natural food stores and in the health food section of many supermarkets. It contains dry noodles and a packet of seasoning. Be sure to select a variety in which the noodles are baked instead of fried and be sure the seasonings do not contain meat or other animal products.

1 medium head green cabbage, finely shredded (about 8 cups)
1/2 cup slivered almonds
1/4 cup sesame seeds
3 to 4 green onions, thinly sliced or 1/4 cup finely chopped red onion
1 package vegetarian ramen soup (any flavor)

1 tablespoon toasted sesame oil
1/3 cup seasoned rice vinegar
2 tablespoons sugar or other sweetener
1/2 teaspoon black pepper
fresh cilantro (optional)

Procedure: Place shredded cabbage in a large salad bowl.

Toast almonds and sesame seeds in an ovenproof dish in a 375° F oven (or toaster oven) for 8 to 10 minutes, until lightly browned and fragrant. Add to shredded cabbage, along with onions. Coarsely crush the uncooked ramen noodles and add them to the salad.

Empty the packet of seasoning mix into a small bowl or jar, then stir in the sesame oil, seasoned rice vinegar, sugar, and pepper. Mix thoroughly and pour over the salad. Toss to mix, then allow to stand 30 minutes for the noodles to soften. Garnish with fresh cilantro just before serving, if desired.

Nutrition information per serving:

Calories:	101
Protein:	2 g
Carbohydrate:	13 g
Fat:	4 g
Cholesterol:	0 mg
Sodium:	279 mg

Hoppin' John Salad

(contributed by Jennifer Raymond)

Yields 8 servings

Combine the following in a mixing bowl:
1 15-ounce can black-eyed peas, drained
3 cups cooked brown rice (1 cup uncooked)
4 green onions, finely sliced
2 stalks celery, sliced (1-1/2 cups)
2 tomatoes, diced
2 tablespoons finely chopped fresh parsley

Mix the following vinaigrette ingredients and pour over salad. Toss gently.
2 tablespoons olive oil
1/4 cup lemon juice
1/2 teaspoon salt
1 garlic clove, crushed

Procedure: Chill 1 to 2 hours.

Nutrition information per serving:

Calories:	190
Protein:	7 g
Carbohydrate:	35 g
Fat:	2 g
Cholesterol:	0 mg
Sodium:	372 mg

Aztec Salad

(contributed by Jennifer Raymond)
Yields 8 to 10 servings

This salad is a true celebration of color and flavor. It may be made in advance, and keeps well for several days. If you are a cilantro lover, you may want to increase the amount.

2 15-ounce cans black beans
1/2 cup finely chopped red onion
1 green bell pepper, diced
1 red or yellow bell pepper, diced
2 tomatoes, diced
2 cups frozen corn, thawed
3/4 cup chopped fresh cilantro (optional)

2 tablespoons seasoned rice vinegar
2 tablespoons apple cider vinegar or distilled vinegar
1 lime or lemon, juiced
2 garlic cloves, minced
2 teaspoons cumin
1 teaspoon coriander
1/2 teaspoon crushed red pepper flakes

Procedure: Drain and rinse beans and place them in a large salad bowl with onion, peppers, tomatoes, corn, and cilantro. In a small bowl combine the vinegar, lemon or lime juice, garlic, cumin, coriander and red pepper flakes. Pour over the salad and toss gently to mix.

Nutrition information per serving:

Calories:	143
Protein:	7 g
Carbohydrate:	28 g
Fat:	0 g
Cholesterol:	0 mg
Sodium:	117 mg

Curried Rice Salad

(contributed by Jennifer Raymond)
Yields 8 to 10 servings

This salad is as colorful as it is delicious.

1 cup uncooked brown basmati rice
3 cups water
1/2 teaspoon salt

1/2 small red onion, finely chopped
1 small green bell pepper, diced
1 small red bell pepper, diced
1 stalk celery, thinly sliced
1 carrot, grated
1 cup cabbage, finely shredded
1 cup green peas, fresh or frozen
1 cup raisins

1/4 cup balsamic vinegar
1/4 cup seasoned rice vinegar
2 teaspoons Dijon mustard
1 teaspoon toasted sesame oil (optional)
2 cloves garlic, minced or pressed
1 teaspoon soy sauce
2 teaspoons curry powder

Procedure: Bring water to a boil. Add salt and rice. Return to a simmer. Cover and cook approximately 30 minutes until rice is just tender. Drain off excess liquid for later use as a soup stock. Allow rice to cool.

Prepare all vegetables as directed, then add to cooled rice, along with peas and raisins. Combine vinegar and remaining dressing ingredients and mix well. Pour over salad and toss to mix.

Nutrition information per serving:

Calories:	175
Protein:	4 g
Carbohydrate:	38 g
Fat:	1 g
Cholesterol:	0 mg
Sodium:	405 mg

Lentil Barley Soup

(contributed by Jennifer Raymond)
Yields 8 servings

This hearty soup is easy to assemble and cooks in a single pot. It is thick enough to be considered a stew, though you can add more water or stock if you want a thinner soup.

1 cup dry lentils, rinsed
1/2 cup hulled or pearled barley
6 cups water or vegetable stock
1 onion, chopped
2 garlic cloves, pressed or crushed
2 carrots, sliced
2 stalks celery, sliced
1/2 teaspoon oregano
1/2 teaspoon ground cumin
1/4 teaspoon black pepper
1/8 to 1/4 teaspoon red pepper flakes
1/2 to 1 teaspoon salt

Procedure: Place all the ingredients except salt into a large pot and bring to a simmer. Cover and cook approximately 1 hour, stirring occasionally, until lentils are tender. Add salt to taste.

Nutrition information per serving:

Calories:	78
Protein:	4 g
Carbohydrate:	16 g
Fat:	0 g
Cholesterol:	0 mg
Sodium:	150 mg

Salad Dressings

Carrot Tahini Dressing

(contributed by Anne and David Jubb)
Yields: 5 servings

1/2 cup fresh-pressed carrot juice (save pulp)
1 tablespoons tahini, raw sesame
3 tablespoons oil, cold pressed safflower
3 teaspoon vinegar, raw apple cider
dash sesame oil, toasted
Use carrot pulp to thicken to desired consistency.

Procedure: Blend in shaking jar.

Dill Dijon Dressing

(contributed by Anne & David Jubb)
Yield: 5 servings

3 to 4 tablespoons dijon mustard, prepared
1/4 cup vinegar, raw apple cider
1/2 cup oil, cold-pressed olive
3 tablespoons dill weed
3 tablespoons tamari soysauce
1 teaspoon tahini, raw sesame
1/2 of a lemon, juiced
1/2 teaspoon honey

Procedure: Blend well in blender.

Carrot Vinaigrette

(contributed by Anne & David Jubb)
Yields: 5 servings

2 medium carrots
1/4 cup vinegar, raw apple cider
1/3 cup oil, cold-pressed
dash garlic powder
dash onion powder
2 tablespoons tahini, raw sesame

Procedure: Juice carrots and put aside 1/2 the pulp. Add juice and all other ingredients to blender and blend well. Remove and stir in the pulp to desired thickness.

Comments: Delicious over cabbage salad.

Tahini Tamari Dressing

(contributed by Anne & David Jubb)
Yields: 5 servings

1/2 cup oil (olive, sesame or safflower)
1 whole lemon, juiced
2 tablespoons tahini, raw sesame
1/3 cup tamari soysauce
1/4 cup spring water
2 teaspoons kelp (dried seasoning)
dash garlic, fresh crushed or powder
dash ginger, fresh crushed or powder

Procedure: Blend well.

Dill Vinaigrette

(contributed by Anne & David Jubb)
Yield: 5 – 6 servings

3/4 cup oil, cold-pressed olive
3 to 4 dashes tamari soysauce
1 tablespoon honey, raw clover
1 teaspoon garlic powder
1/2 cup vinegar, raw apple cider
1/2 tablespoon tahini, raw sesame
1 tablespoon miso
4 tablespoons dill

Procedure: Blend well in a blender.

Zesty Herb Dressing

(contributed by Anne & David Jubb)
Yields: 5 servings

2-1/3 cups oil, cold-pressed olive
2/3 cup vinegar, unpasteurized apple cider
1 handful basil or parsley, fresh, finely chopped
2 whole lemons, juiced
1 tablespoons miso
1 teaspoon thyme
1 teaspoon kelp, dried seasoning
2 tablespoons tamari soysauce
1/4 teaspoon cayenne, red
1 stalk celery
1 finely chopped bell pepper

Procedure: Blend in blender.

Home Size Dessert Recipes

Banana Cake

(contributed by Jennifer Raymond)
Yields 9 servings

This moist, flavorful cake really doesn't need frosting. The walnuts are optional, though they do add a lot of flavor and texture.

2 cups flour (unbleached or whole wheat pastry)
1-1/2 teaspoons baking soda
1/2 teaspoon salt
1 cup sugar or other sweetener
1/3 cup oil
4 ripe bananas, mashed (about 2-1/2 cups)
1/4 cup water
1 teaspoon vanilla
1 cup chopped dates

Procedure: Preheat the oven to 350° F. Mix the flour, baking soda, and salt together.

In a large bowl, beat sugar and oil together then add bananas and mash them. Stir in water and vanilla and mix thoroughly. Add flour mixture and chopped dates and stir to mix. Spread into an oil-sprayed 9 x 9-inch pan and bake at 350°F for 45 to 50 minutes, until a toothpick inserted into the center comes out clean.

Nutrition information per serving:

Calories:	280
Protein:	3 g
Carbohydrate:	50 g
Fat:	7 g
Cholesterol:	0 mg
Sodium:	256 mg

Applesauce Cake

(contributed by Jennifer Raymond)

Yields 9 servings

2 cups unbleached or whole wheat pastry flour
1/2 teaspoon salt
1-1/2 teaspoons baking soda
1-1/2 teaspoons cinnamon
1/4 teaspoon ginger
1/8 teaspoon cloves

1/3 cup oil
3/4 cup sugar or other sweetener
1-1/2 cups unsweetened applesauce
1/2 cup raisins
1/2 cup chopped walnuts (optional)

Procedure: Preheat oven to 350˚ F. Combine flour, salt, baking soda, cinnamon, ginger and cloves.

In a separate bowl, beat the oil and sugar together then stir in the applesauce and mix thoroughly. Gradually add the flour mixture to the applesauce mixture. Beat until smooth then stir in the raisins and walnuts. Pour into an oil-sprayed 9 x 9-inch pan and bake for 45 to 50 minutes. Serve plain or frosted.

Nutrition information per serving:

Calories:	254
Protein:	3 g
Carbohydrate:	44 g
Fat:	7 g
Cholesterol:	0 mg
Sodium:	257 mg

Gingerbread

(contributed by Jennifer Raymond)

Yields one 9 x 9-inch gingerbread

You'll find it hard to believe that this delicious gingerbread contains no added fat. Try serving it with hot applesauce for a real treat.

1/2 cup raisins
1/2 cup chopped pitted dates
1-3/4 cups water
3/4 cup sugar or other sweetener
1/2 teaspoon salt
2 teaspoons cinnamon
1 teaspoon ginger
3/4 teaspoon nutmeg
1/4 teaspoon cloves

2 cups whole wheat pastry flour
1 teaspoon baking soda
1 teaspoon baking powder

Procedure: Combine raisins, dates and water in a saucepan. Add sugar, salt, cinnamon, ginger, nutmeg, and cloves. Bring to a boil.

Boil for 2 minutes, then remove from heat and cool completely (this is very important!).

Preheat oven to 350°F. Stir flour, baking soda, and baking powder together in a large bowl. Add the cooled fruit mixture and stir just enough to mix. Spread evenly into a 9 x 9-inch pan which has been misted with a vegetable oil spray. Bake in preheated oven for 30 minutes, until a toothpick inserted into the center comes out clean.

Nutrition information per 3-inch piece:

Calories:	207
Protein:	4 g
Carbohydrate:	48 g
Fat:	0 g
Cholesterol:	0 mg
Sodium:	215 mg

Peach Cobbler

(contributed by Jennifer Raymond)
Yields 9 servings

Fresh peaches are the essence of summertime, and this is such a delicious way to eat them. If you get a yearning for this cobbler in the middle of winter, use frozen peaches instead.

1/2 cup sugar or other sweetener
2 tablespoons cornstarch or arrowroot powder
1 cup water
5 cups sliced peaches, fresh or frozen
1/2 teaspoon cinnamon

1-1/4 cups whole wheat pastry flour
2 tablespoons sugar
1-1/2 teaspoons baking powder
1/4 teaspoon salt
2 tablespoons vegetable oil
1/2 cup soy (milk) or rice milk

Procedure: Mix sugar and cornstarch in a saucepan, then stir in water and peaches. Bring to a boil and cook over medium-high heat, stirring constantly, until sauce is clear and thick. Pour into a 9 x 9-inch baking dish, and sprinkle with cinnamon.

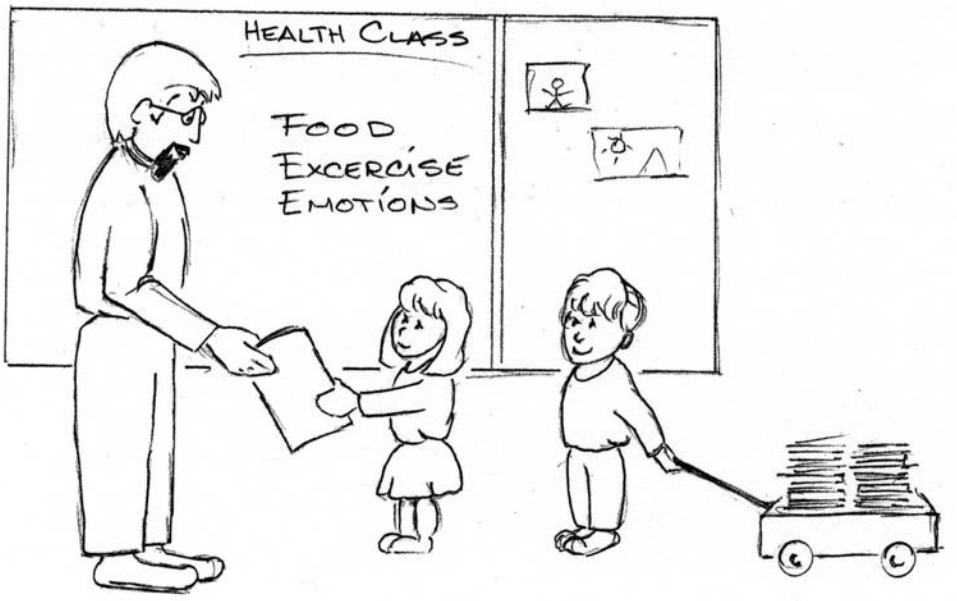
Preheat oven to 400°F. Mix flour, 2 tablespoons of sugar, baking powder, and salt in a large bowl. Add oil and work it into flour with a fork or fingers until it resembles coarse cornmeal. Stir in soy or rice milk, then drop by the spoonfuls onto the hot peach mixture. Bake approximately 25 minutes until golden.

Nutrition information per serving:

Calories:	196
Protein:	3 g
Carbohydrate:	38 g
Fat:	3 g
Cholesterol:	0 mg
Sodium:	73 mg

Breakfast Ideas

- Whole grain cereals with soy milk, rice milk, almond milk or apple juice
- Hot whole grain cereals with raisins, nuts and seeds (Arrowhead Mills makes delicious ready mixed whole grain cereals.)
- Toast or bagels served with nut butters and fruit preserves
- Fresh fruit, nuts and seeds
- Potatoes - baked or boiled the night before, then cut up and sautéed with onions and spices—stir in fresh or leftover vegetables.
- Pancakes - use dairy-free mixes or make with whole grain flours, egg replacer and soy milk and serve with maple syrup or fruit preserves.
- Fresh fruit chunks topped with vanilla yogurt, sprinkled with granola for crunch



Handouts

The following documents are formatted so they may be photocopied and used as handouts.

Nutritional Fact Sheet

Heroes for Health

Meal and Snack Alternatives

Young People Who Want to Change Their Diet

Top 10 Reasons to Eat Organic Foods

Student Sign-Up Sheet

Student Response Sheet

Nutritional Fact Sheet

The foods you eat can affect your energy, your concentration and your athletic performance.

Learn how eating excessive amounts of animal-based food can be harmful to your health.

Cholesterol

All human cells contain cholesterol. We need it to live. However, our body makes all the cholesterol it needs. We never need to actually have cholesterol in our diets. Animals make their own cholesterol too. That's why when we eat meat, fish, poultry and dairy products, we are eating the cholesterol made by those animals and adding it to the cholesterol our own bodies manufacture. This is the main cause of too much cholesterol. Even lean meat contains cholesterol.

Why is cholesterol harmful? Consider this: In the countries of North America and Europe where people consume large quantities of cholesterol, heart disease is the number one cause of death, killing more people than all other diseases. One of the main causes of heart disease is excess cholesterol.

What Foods Contain Cholesterol?

Cholesterol is found only in animal foods such as beef, chicken, pork, turkey, fish, eggs, butter, cheese, yogurt, milk and ice cream. No plant foods contain cholesterol. If these are the foods you are eating and you have been eating them for some time, medical studies show that you may have plaque buildup in your arteries right now, no matter what your age.[1]

This is how you go about reducing the cholesterol in your diet: Eat more foods made from plants, like spaghetti, breads, cereals, fruits, vegetables, grains, beans, nuts or seeds. You can enjoy these foods and be free from the worry of consuming excess cholesterol.

If that sounds easy, it is.

Saturated Fat

Foods that have cholesterol also tend to be high in thick, heavy fats called saturated fats. Saturated fats, like cholesterol, contribute to heart disease and cancer. Most plant foods are very low in saturated fat except for some tropical plant oils like palm and coconut oil that are naturally saturated. Many vegetable oils have been artificially saturated, or "hydrogenated," as the process is often called. They are commonly used in processed junk foods like candy bars, donuts, and french fries. They should be avoided. Read labels to learn how many products contain "partially hydrogenated" fats.

By reducing or eliminating your consumption of animal foods, you will automatically reduce your consumption of cholesterol and saturated fat. This will help your body stay leaner and your arteries cleaner. You will dramatically reduce your risk of developing heart disease and many other diet-related diseases[2] such as stroke, breast cancer, colon cancer, diabetes and obesity.

What About Protein?

If you eat spaghetti instead of steak, or leave the cheese off the burrito, will you get enough protein?

Protein is what your body uses to make muscle, bone, skin and almost every other kind of cell. However, your body needs less than you think. Enough protein just about equals the amount that 10 pennies weigh. However, most Americans eat 3 to 4 times that much. There is concern that all this excess protein may overwork the kidneys and weaken the bones.[3]

The Protein Myth

Over the years many people have come to believe that animal protein is of higher quality than plant protein. Our biological needs for protein are easily met by eating a wide variety of mostly plant foods. The once popular belief that one must carefully combine plant proteins in order for them to be as useful to the body as animal proteins has since been found to be untrue.[4] The good news is that most people can live healthy lives on a vegetarian diet.[5] Gorillas eat plant foods only. Do they appear to lack protein?

Where Can You Get Your Protein?

The same place strong, fast racehorses get theirs. From eating plant foods solely. Any varied diet that provides enough calories automatically meets a healthy person's protein needs. Many people, including some world-class athletes and bodybuilding champions, choose to eat no animal protein whatsoever and they enjoy excellent health as well as top performance.

Milk

Milk and dairy products are perfect for rapidly growing baby calves but not for human beings. Many people mistakenly believe that if they don't drink milk they will suffer from calcium deficiency. However, most people around the world grow up healthy without ever drinking cow's milk. They have strong bones because they get all the calcium they need from the calcium-rich plant foods in their diet such as broccoli, sweet potatoes, baked beans, figs, seeds, nuts and nut butters such as almond and cashew. Calcium-fortified orange juice is as rich in calcium as cow's milk without all the cholesterol and saturated fat. Soy, rice and almond milk are also great replacements for cow's milk. Other products made from these sources include delicious desserts resembling many flavors of ice cream.

There is also some sound scientific evidence showing that the protein and fat in milk and dairy products may also be one of the causes of many common illnesses such as asthma[6] and anemia[7] (iron deficiency). Allergies can be caused or made worse by dairy products. Symptoms from these and other common childhood ailments often disappear completely when nonessential foods such as milk, butter, cheese and ice cream are eliminated from the diet. Remember too, that even low-fat milk still contains cholesterol and animal proteins.

Are You Worried About Iron?

No hamburgers? Are we going to become anemic? As with calcium, iron is abundant in plant foods, especially dried fruits and dark leafy greens. Until recently, most people in China consumed almost no meat and their iron content was higher than most

Americans.[8] When there is sufficient vitamin C in your diet, as when you eat lots of fresh fruits and vegetables, the iron you eat is more easily absorbed by the body.

What Can You Eat?

Rather than a major overhaul of your entire diet, realize that you are probably already eating most of the right foods. You get more than adequate protein, energy, vitamins and minerals from whole grains, breads, potatoes, pastas, legumes (beans and lentils) and fresh fruits and vegetables. These foods can be enjoyed in soups, stews, salads and sandwiches and tasty ethnic dishes like spaghetti, veggie pizza, curried veggies, and Asian foods.

To Concerned Parents

In 1988, the U.S. Surgeon General reported that 68% of all deaths in this country resulted from diet-related diseases.[9] Many of these diseases have their origin in childhood.[10] Diets high in saturated fat, protein and cholesterol, substances found primarily in meat, poultry and dairy products, play a major causative role in diseases like heart attack, stroke, other cardiovascular diseases, adult-onset diabetes, osteoporosis, kidney disease and cancers of the breast, prostate and colon.[11]

Less life-threatening disorders like food allergies,[12] psoriasis,[13] rheumatoid arthritis,[14] obesity,[15] constipation,[16] kidney stones,[17] hemorrhoids,[18] hiatus hernia,[19] diverticulitis[20] and irritable bowel syndrome[21] are also linked to a high-fat, low-fiber diet based on meat, poultry and dairy products. These diseases create needless widespread suffering and drive up national health care expenditures.

The good news is that more physicians and nutritionists[22] are beginning to understand that high-fat meat, poultry and dairy products are main culprits in these diseases and fortunately not essential for healthy human nutrition. They are also discovering that there are great benefits to a diet rich of plant foods.

Consider for a moment that three-fourths of the world eat a predominately plant-based diet, and medical studies show that people who consume such a diet have lower cholesterol,[23] lower blood pressure[24] and lower rates of osteoporosis[25] and of cancers.[26] In countries like China where rice and vegetables is the norm, far fewer heart attacks occur and children live a healthy lifestyle free of many of the diseases American children suffer. So when your children say they'd rather have pasta or rice and vegetables instead of a greasy cheeseburger or fatty milk shake and fries, don't be alarmed. Commend them and acknowledge their wisdom in wanting to have clean arteries, low blood pressure and healthy adult lives.

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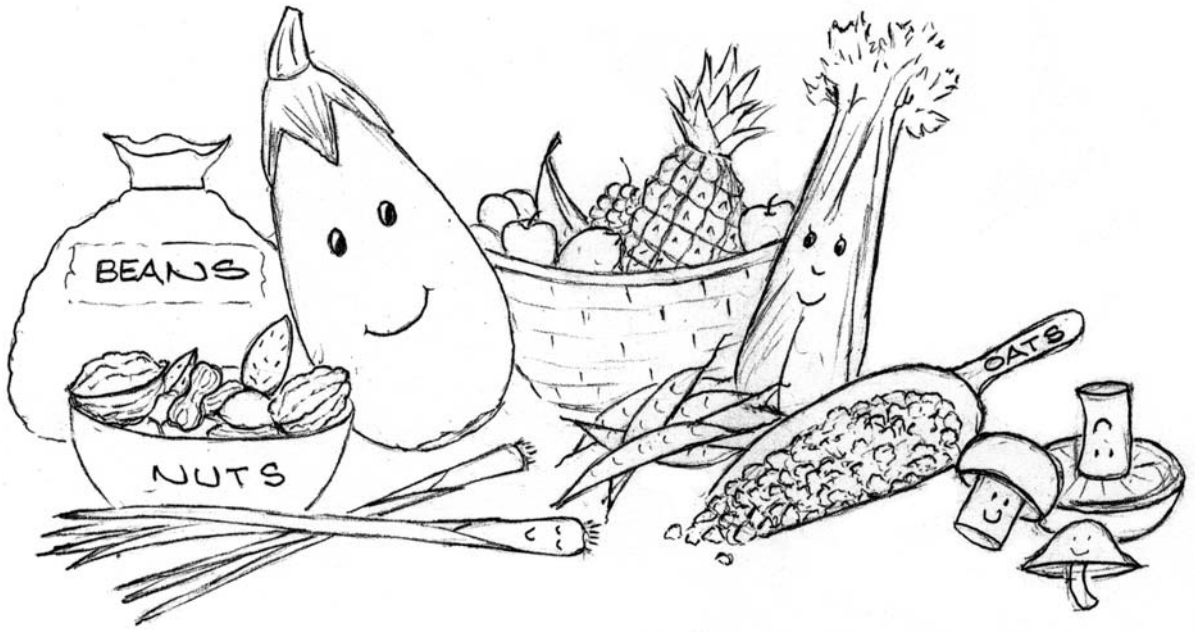

Heroes for Health

Plant foods should be named "Heroes for Health" for the fantastic beneficial compounds and nutrients they contain. When we eat plant foods, it's like eating tens of thousands of microscopic superheroes that go into our bodies and fight disease and infection, and help keep us well. In addition, the more plant foods you eat, the more you'll be helping the environment. Eating an Earth-friendly diet will help both you and the planet to be healthier.

For the past two decades, scientists have consistently found that people who eat greater amounts of vegetables and fruits have lower rates of heart attacks, cancers and other diseases. In fact, the benefits of increasing our intake of plant foods are becoming increasingly clearer. It is easy to figure this out because these foods contain a wide variety of beneficial compounds such as fiber, antioxidants, phytochemicals and essential fatty acids.

Fiber

Fiber is the material that makes up the leaves, stems, fruits, and other parts of plants; sometimes it's called 'roughage.' Although your body can't digest fiber, you can't be healthy without it! Fiber performs many beneficial functions, like cleaning your intestines. Fiber inhibits the growth of bad bacteria and increases the growth of good bacteria. Because of the fiber in whole plant foods, it is possible to eat fewer calories and yet feel fuller and more satisfied. Fiber also acts like a sponge, soaking up many harmful substances such as cholesterol (which can cause damage in the arteries) and carrying them through your digestive system, where they are removed as waste. But guess what? Only plant foods have fiber. Animal foods, like meat, fish, milk, and eggs, have absolutely no fiber.

Antioxidants

Antioxidants like vitamins A, C and E are abundantly found in plant foods such as fruits, vegetables, grains, nuts and seeds. To understand why antioxidants are important, you need to know a little about some very active and destructive particles called free radicals.

Free radicals are highly reactive molecules that are missing an electron. In order to restore their electrical balance, they will rip an electron off any passing molecule—whether it's your brain tissues, the cell membranes lining your arteries, even molecules in your DNA. This leads to damage and aging in tissues throughout the body. In fact, free radical damage to arteries is suspected to be a key factor in heart attacks and strokes, while free radical damage to your cells sets the stage for the growth of cancers. A diet heavy with too much meat, poultry, dairy products, processed and preserved foods, fried foods, sugary "junk"

foods and "fast foods," will increase the amount of free radicals in the body.[1]

Fortunately, molecules that "quench" free radicals are abundantly found in fruits and vegetables. Antioxidants such as vitamin C, beta-carotene, vitamin E, selenium, glutathione, and many others, give up one of their electrons, thus stabilizing the destructive chain reaction caused by free radicals.[2, 3] This powerful ability of fruits and vegetables to protect against free radical damage once again makes fresh, whole plant foods "Heroes for Health".

Phytochemicals

Phytochemicals (phyto = plant) help protect against many diseases.[4] They increase our immune system's capabilities and help our body fight infections, and they prevent early cancer growth.[5] They have even demonstrated the ability to slow or stop cancer from spreading. As you can tell by the name, phytochemicals are made only by plants. Therefore, the more whole plant foods you eat, the more healthy phytochemicals you'll be putting to work in your body. Beneficial phytochemicals are another reason why fruits and vegetables are "Heroes for Health".[6]

Essential Fatty Acids

Essential Fatty Acids (EFAs) help to make healthy cells and are important in proper development of eye and brain tissue.[7] EFAs are also involved in energy production and cholesterol metabolism. EFAs help regulate body functions such as blood clotting, blood pressure,[8] conduction of nerve impulses, immune responses and reaction to shock and injury.[9]

EFAs are found in nuts (especially walnuts), seeds (especially pumpkin), and green vegetables like broccoli, collard greens, peas and, legumes (beans), as well as in grains like corn, rice, wheat, and, of course, in human breast milk. EFAs are also available in refined oils like flax, soybean, walnut, safflower, sunflower, and corn oil. (Use refined oils in small amounts—no more than 2 to 3 teaspoons each day of liquid oils). EFAs are "Heroes for Health" because they help your cells stay strong and flexible.

A Healthy Diet

For an optimally healthy diet follow these simple guidelines:

- Base as many meals and snacks as possible on a variety of fresh, preferably organically grown fruits, vegetables, legumes, nuts, seeds and whole, unprocessed grains.
- Reduce your consumption of meat, poultry, fish and dairy products. These foods contain harmful saturated fats, cholesterol and excessive amounts of animal protein.
- Reduce your consumption of processed foods, fried foods, sugars, and chemically sprayed and processed foods.
- Read all food labels carefully, and avoid preservatives, food colorings and artificial sweeteners.
- Hydrogenated fats and oils can damage your cells. READ LABELS and beware of foods containing "partially hydrogenated" anything.[10]
- Eat locally grown organic food whenever possible—perhaps from your own garden.
- Drink plenty of fresh, clean water.
- Get plenty of exercise.

Young People Are Powerful

Youth are powerful. You can greatly influence what food manufacturers produce. Young people spend a lot of money on food. Manufacturers know this so they spend billions of dollars to hire advertisers to convince young people to eat their food products. What's so sad is that most of the food advertisements on TV, radio, in magazines, at theaters and sports events, are for foods that are unhealthy. When you eat food that you know is unhealthy, you're sending a message to the manufacturer to make more. If you don't buy unhealthy food, manufacturers will stop making it. Every time you eat and spend money, you're casting a vote.

When you buy and eat food that is good for you, you vote yes for your health. And remember, healthy foods are healthy for the environment too. Vote with your dollars and make food choices that will help create healthy people and a healthy planet. Your vote counts. You can begin voting, in your own school cafeteria, today.

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Meal and Snack Alternatives

O.K! Now What Do I Eat?

Base your diet on vegetables, fruits, legumes, grains, nuts and seeds.

Tastes for food are learned. As you begin changing to a more wholesome diet, you will find yourself enjoying the experience with increasing excitement. You may want to begin slowly by replacing high-fat dairy products with fat-free versions and eating meat less often.

Step 1 - Reduce red meat, poultry and fish. Replace with health-supporting grain, legume and potato-based dishes. You can begin by giving yourself larger servings of rice, potatoes and vegetables and smaller portions of meat.

Step 2 - Increase intake of calcium-rich foods, such as fortified soymilk, orange juice and calcium-rich vegetables (broccoli, carrots, kale, chard, mustard greens, etc.). Buy organic when possible.

Step 3 - Reduce the "luxury" fats. Hydrogenated oils (like margarine) are artificially thickened vegetable oils that can damage your arteries and have also been linked to some cancers. Gradually eliminate both butter and margarine from your diet. Reduce your use of cooking oils and oil-based salad dressings. Switch to nonfat and low-fat versions of prepared foods and dairy products. Read product labels. Replace eggs when baking with 2 tablespoons of water per egg.

Step 4 - Replace dairy products with non-dairy foods. Delicious milks, cheeses, and frozen desserts based on soy, rice, nuts and seeds are available in health food stores and many grocery stores.

Step 5 - Reduce refined carbohydrates (white flour, white sugar, white rice, etc.) by choosing whole grain products and natural sweeteners (fruits, juices, maple syrup, etc.).

It's Easy - There are many restaurants that serve veggie burgers, pasta dishes, etc.

> *People always ask me, like, what do you eat? Well, just about everything else. There's a lot of things that aren't meat.*
>
> – 12th grade student,
> Santa Cruz High School, Santa Cruz, CA

Breakfast

Cereal Lovers - Try hot or cold whole grain cereal or granola with soy milk and fruit. Use maple syrup or honey instead of sugar. Try apple juice on granola: it's great!

Bread Lovers - Try whole grain bread, toast, bagels, non-dairy muffins or specialty breads with raisins or dates and nuts or seeds. Be careful, even soy margarines have just as much fat as butter. Try apple butter, pure fruit jams, nut butters, hummus or tahini on your bread or bagel.

Egg Lovers - Don't knock scrambled tofu until you've tried it. There are easy mixes put out by several companies, as well as recipes in vegetarian cookbooks. Try sautéing cubed firm tofu with anything you would add to an omelet.

What else? Treat yourself to waffles or pancakes made with soy milk—try using 1/2 banana in place of each egg and smother it in fresh or hot cooked fruit. Make fruit smoothies with everything you can imagine. Use sweet fruit to make breakfast cobbler or pie and you won't need to add sugar when baking.

Lunch or Dinner

Sandwiches - Whole grain breads, avocado, grated carrots, sprouts, lettuce, tomatoes and thinly sliced cucumbers make great sandwiches. Try nut butters with pure fruit jams or hummus with crisp sliced vegetables. Vegetarian cookbooks have great recipes for spreads. Falafel is delicious.

Salads - Most vegetables can be served raw, chopped small or grated in salads. Cooked beans (garbanzos, kidney, black, lentils, etc.), sprouted seeds (alfalfa, clover, etc.), seeds, nuts and avocados are excellent. Try salad dressings with little or no oil and/or flavored vinegar. Stuff your salad into pita bread and add tahini to it.

Pasta - Try all those special pastas made with wholesome grains, vegetables and spices. Experiment with marinara, pesto and tomato basil sauces. Try sautéing garlic, onions, summer squash, red bell peppers and tomatoes in a little olive or sesame oil and tamari (soy sauce).

Burritos or Tacos - Try beans, rice or potatoes, avocado, tomatoes, lettuce or crisp shredded cabbage, salsa, soy cheese, etc. Use soft corn or whole wheat tortillas. Find your own favorite combinations. "Nachos con tofu" is a great fast meal.

Potatoes - Potatoes can be baked, steamed, mashed or home-fried. Try them with sauce, salsa and/or mustard, in soups or salads. Treat yourself to mushroom gravy. Remember yams and sweet potatoes.

Veggie or Tofu Burgers - There are many varieties in stores. They are delicious and easy to bake, fry or barbecue. Tofu hot dogs are almost indistinguishable from meat dogs. Pile on the lettuce, tomatoes, onions, pickles, ketchup, mustard, tofu mayo and barbecue sauce.

Vegetables - Try stir-fried or steamed, served with brown rice, millet, barley or potatoes. Add cubed firm tofu and tamari or mushroom gravy for a feast.

I just don't like eating meat as much because it's not very good for you and when you know what's in that you won't want to eat it either.

6th grade student,
Bayview Elementary School, Santa Cruz, CA

Pizza - Use whole wheat crust, tomato sauce, spices, soy cheese and all your favorite trimmings. Try almonds, garlic, and fresh tomatoes.

Soups - Beans, lentils, nuts, veggies, grains, potatoes, tofu—many foods are good in soup. Simmer your favorite vegetables for a few minutes and add a little miso for a quick treat. There are many brands of instant soups made with wholesome and delicious ingredients. All you have to do is add boiling water, stir and wait.

Drinks and Snacks

Milks - Soy, rice, nut or seed milks are perfect substitutes for cow and goat milk. Carob, chocolate and vanilla versions are delicious. Be careful because some of these have added oils that make them just as high in fat as cow milk.

Juices - Many bottled organic juices are available all across the country. Look for local fresh-squeezed brands. Juice your own. Many vegetable juices are just as delicious as fruit juices. Carrot juice is so delicious, it can become habit forming.

Water and Tea - Add sliced lemons, limes, oranges or tangerines to fresh clean water. Try herbal iced teas and hot teas.

Snacks - Go for crispy foods like popcorn, pretzels, chips, fresh fruit, carrots, nuts, seeds and celery with almond butter. Enjoy cobblers and pies made from sweet fresh fruit, smoothies, non-dairy cookies and muffins, dried fruit, frozen fruit bars and non-dairy frozen desserts like Rice Dream and Tofutti. Avoid preservatives and buy organic.

Young People Who Want to Change Their Diet!

Adapted from *A Teen's Guide to Going Vegetarian*, by Judy Krizmanic,
Published by Viking Children's Books (New York 1994)

What Will Your Parents Say?

When you tell your parents that you've decided to eat more low-fat, plant-based foods, they might not be as thrilled about it as you are. But you can make the transition go much more smoothly if you try to see things from their side. Here are a few things that they might be concerned about and what you can do to lessen their worries.

Parents' Concern - They might worry that you can't get enough protein, iron, calcium, or other nutrients when you start eating lower on the food chain.

What You Can Do - Read up on vegetarian nutrition and assure your parents that you know how to get what your body needs. Show them articles and brochures showing that health experts say young people can get all of the nutrients they need from a plant-based diet.

Parents' Concern - They might think you're just "going through a phase" or that your decision to eat plant foods is just some fad that you're following.

What You Can Do - Explain to your parents that you have well-thought-out reasons for improving your diet. If you feel strongly about not eating animal products, taking care of the environment or preventing disease and you understand the consequences of food on your health, share your feelings with them. Make it clear that you're doing this because you want to.

Parents' Concern - They might feel like you're rejecting what they taught you.

What You Can Do - Many parents take it personally that their child has decided to change her or his diet. They might feel like you're saying the food they've raised you on isn't good enough for you. Try to assure them that your decision to eat lower on the food chain isn't a reflection on them and that you're concerned about your health. Point out that the values they taught you have helped shape you into who you are.

One in four teenagers thinks that being vegetarian is "in," according to a poll by Teenage Research Unlimited.

—U. S. News and World Report

Parents' Concern - They won't know what to cook for you.

What You Can Do - Offer to help with the shopping and cooking, and find recipes that the whole family can enjoy.

Remember...

Above all, be patient. It may take a while for them to come around and understand exactly why you've decided to change your diet. Don't expect everyone to join you in eating a plant-based diet. Just as you decided when to improve your diet, they have to decide when they're ready to make the switch. But chances are, pretty soon you'll have your whole family eating more healthy plant foods.

Out in the Real World

Face it. The United States is set up for people who mostly consume animal products. Although it's getting easier to find animal-free and dairy-free options everywhere you go, you'll still find yourself in tough situations where it's difficult to find something to eat. Here are some tips:

In the Fast-Food World - When the rest of the gang is ordering burgers or beef burritos you might go for:

- Salad bar
- Baked potatoes
- Bean burritos
- Burgers without the burger (just toppings on the bun)
- Cheese-less all-veggie pizza

Better yet, talk to the manager of your favorite fast-food restaurant and request that more low-fat, plant-based options be made available.

Dining Out - What do you tell your waiter/waitress when it's time to order off a menu and you're not sure what contains animal products?

- Feel good about asking ques-

tions. Find out, for instance, if the vegetable soup is made with meat broth or not.

- Before you order, tell your waiter/waitress that you don't eat meat and/or dairy products. She or he may be able to suggest some foods that you hadn't thought of or that aren't listed on the menu.
- Be adventurous. Visit restaurants with more plant food cuisine on the menu. Try ethnic restaurants such as Thai, Mexican and Indian.

Traveling - The rule here is: Plan ahead.

- When making airline reservations, ask for a meal made without meat or dairy.
- Take your own food along when you're not sure what you'll find.
- Look for health food stores and vegetarian restaurants in the cities you visit. You can find listings in the Yellow Pages.

What Will Your Friends Say?

Your friends—and even people you meet for the first time—may also have something to say about your choice to change your diet. Some people will simply be curious. Some will be impressed with your commitment. On the other hand, it seems that some people will simply want to argue and debate with you. Here are some of the questions and comments you might hear:

"But what do you eat?" - People think that all vegetarians eat is salad, celery and carrot sticks. Explain to them that a wide variety of delicious, hearty, satisfying plant foods are available. Better yet, let them sample what you're eating..

> ***We do our children a wonderful service when we support them in maintaining healthy eating habits. We are fulfilling the genuine call of parenthood when we help them never to feel ashamed or afraid of being different, but rather to take pride in doing what they know is wholesome and good.***
>
> —John Robbins, author
> *Diet for a New America*

"How do you get enough protein?" - Even though protein deficiency isn't a problem in this country (and most people eat far too much protein) this is still one of the most common questions you'll hear. Read up on health and nutrition so you'll be able to set your friends straight on issues like this one.

"Don't you miss meat?" - Some people wonder how anyone could possibly give up pepperoni pizza and bologna sandwiches. It's important to respect that people have their own connections with certain foods; everyone isn't going to change overnight. You can explain, however, that with so many wonderful non-cholesterol foods available, you don't have time to miss the meat.

You'll also run into people who want to debate. They may say that human beings are supposed to eat animals because that's the way the food chain goes or some other such argument. Your best way to approach these folks is to educate yourself about various issues—like how animals are raised on factory farms or how vegetarians have lower rates of many serious illnesses or how there are simply not enough resources to feed the growing world population a meat-based diet. Speak intelligently and teach others about what's really going on.

Many people will agree with you. Actually, one of the more common responses you'll hear from your friends when they find out you've decided to eat lower on the food chain is…

"Yeah, I really don't eat much meat myself." - It turns out that more and more people today are understanding the benefits of a plant-based diet and are changing their diets for the better!

Top 10 Reasons to Choose Organic

Source: Soil Association, the UK's leading environmental charity promoting sustainable, organic farming and championing human health. www.soilassociation.org

1) Take care of your immune system…
No food has higher amounts of beneficial minerals, essential amino acids and vitamins than organic food.

2) Treat your taste buds…
In a recent poll conducted by the Soil Association, 72% said organic fruit and vegetables tasted better than non-organic produce and 71% said they'd preferred the taste of organic meat.

3) Why eat pesticides, when you don't have to?
Eating organic food is the best way of reducing your exposure to potentially harmful pesticides. For a list of the worst offenders. Please see:
http://www.soilassociation.org/pesticides

4) Show your caring side – be kind to animals…
No system of farming has higher levels of animal welfare standards than organic farms working to Soil Association standards. Non-organic meat, especially chicken and pork, is artificially cheap because it is intensively produced.
http://www.soilassociation.org/animalwelfare

5) Make a political stand - don't buy GM (Genetically Modified) food…
Buy organic food – it is the only way you can be sure of avoiding GM. Huge amounts of GM soy and corn are imported into the UK and fed to animals which produce much, if not most, of the non-organic pork, bacon, milk, cheese and other meat and dairy products in our supermarkets. As food from GM-fed animals isn't labelled, consumers can't avoid it – unless they only buy organic produce.
http://www.soilassociation.org/gm

6) Count the amount of ingredients on a pack of burgers and compare with organic ones…
Only 32 of the 290 food additives approved for use across the EU are permitted in organic food. The controversial additives such as aspartame, tartrazine and hydrogenated fats are banned in organic food. Therefore you can avoid a wide range and large quantity of potentially allergenic or harmful additives if you eat organic food.
http://www.soilassociation.org/foodquality

7) Support a living countryside, don't let your eating habits be a threat to wildife…
Organic farming is better for wildlife, causes lower pollution from sprays, produces less carbon dioxide and less dangerous wastes and increases jobs in the countryside.

8) Introduce yourself to your local farm, for an organic experience…
Visit an organic farm and find out first hand about a farming system that works in harmony with nature. We all know what food looks like in the shops but some of us are less familiar with how it got there. We have increasingly lost our link with the land and our knowledge of how food is grown.
http://www.soilassociation.org/education

9) Make a contribution to your local food economy…
Support your local farm and community and help make local organic food available to all within a thriving local food culture. Locally bought organic food reduces food miles and shopping at a farmers' market or getting a box scheme delivered is one way to help reduce food miles, and encourage sustainability.
http://www.soilassociation.org/localfood

10) Do your bit for climate change…
The UK currently emits 560 million tones of carbon dioxide. Conventional farming produces a larger amount of carbon emissions from the soil than non organic. Evidence shows that organic farming can help reduce the effects of climate change.

The Soil Association, 1946 – 2006
Sixty years pioneering organic farming, championing human health

http://www.soilassociation.org

Student Sign-Up Sheet

We Want Healthy Earth-Friendly Meals!

To the Food Service Administrators of _____ School:
We, the undersigned, request that low-fat, whole grain, plant-based meals and snack alternatives be made available daily and that the availability of fresh, uncooked and organic foods such as fruits, vegetables, green salads, nuts and seeds be increased. We thank you for your dedication and service in the past and look forward to having these nourishing foods offered in our schools.

PLEASE PRINT:

	Name (first & last)	Phone #	Grade
1			
2			
3			
4			
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6			
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8			
9			
10			
11			
12			
13			
14			
15			
16			

Please return to: _____ _____ _____

Student Response Sheet

Name _____ School _____

Teacher _____ Grade _____ Date _____

1. Describe two things that can happen to your body from eating more plant-based foods.

2. Describe two things that can happen to your body from eating more animal-based foods.

3. Describe two ways in which our food choices affect the planet.

4. What did you like most about the presentation? Do you have any suggestions for improving the presentation?

5. How do you feel about changing your diet to more plant-based meals?

6. Do you think you might eat more organic foods in the future? Why?

7. If tasty, plant-based meals were offered in your school cafeteria, would you choose them? All the time? Some of the time?

8. Are there any comments you would like to share?

Letters, Announcements & Articles

Letter of Introduction

Parent Newsletter Announcement (Version 1 & 2)

Student Newspaper Article

Earth Voice Food Choice DVD Presentation Announcement

Letter of Introduction

Date: _____

Dear _____ ,

The Earth Voice Food Choice Project is a national effort designed to assist parents, teachers, counselors, and food service directors in motivating young people to develop nutritionally sound eating habits.

By teaching students about the benefits of consuming more organic, whole plant foods and by helping food personnel provide healthier options, we improve the health and mental clarity of students while offering them solutions to many of the health, environmental, and economic concerns facing them today.

- The Project educates students, parents, teachers and food personnel about the health and environmental benefits of a low-fat, whole grain, plant-based diet.
- The project provides school food personnel with the training, recipes and resources needed to provide students with nourishing and tasty meal and snack alternatives.
- The project teaches students to understand their power as consumers and to make healthy, sustainable food choices.
- The project helps students to find their "voices" as individuals and speak out for human and environmental health.

I would like to set up an appointment to introduce myself and the Earth Voice Food Choice Project and further discuss how to bring this project to the students in your school.

Toward a healthier future,

For more information please contact:

Parent Newsletter Announcement

Dear Parent of _____ School,

The Earth Voice Food Choice Project is a national effort designed to assist parents, teachers, counselors and food service directors in motivating young people to develop nutritionally sound eating habits.

By teaching students about the benefits of a simpler, healthier, plant-based diet and by helping food service personnel provide healthier options, we will improve the health and mental clarity of students while offering them solutions to many of the health, environmental and economic concerns that face them today.

- The project educates students, parents, teachers, food service personnel and government officials about the health and environmental benefits of a low-fat, plant-based diet.
- The project supplies school food service personnel with the training, recipes and resources needed to provide students with nourishing and tasty meal and snack alternatives.
- The project teaches students to understand their power as consumers and to make healthy, sustainable food choices.
- The project helps students to find their "voices" as individuals to enable them to speak out for human and environmental health.
- The project motivates students to participate in government through letter writing actions.

Your support is necessary to insure the success of this project. Please contact your school's food service director and principal and let them know you are in support of the Earth Voice Food Choice Project.

For more information please contact:

Parent Newsletter Announcement

There is a new meal choice available on the lunch line in

_____ schools.

We are living in extreme times. Information and knowledge are abundant, and yet health and environmental problems have reached epic proportions. Many of these problems that face our world today are having a frustrating, paralyzing affect on our young people. The majority of America's youth have grown apathetic in regard to personal and planetary health. Shockingly, a majority of the most serious health and environmental problems in America are solvable. Young people deserve to be educated about these solutions to today's problems.

Youth are the key to the future and therefore must play a major role in its creation. It has been proven generation after generation that when young people understand the depth of a situation and what they can do to help, they become enthusiastic and get involved.

Let's look at some of the facts and demonstrate how we can positively affect our health and the environment by changing our diet to include more plant foods and fewer animal products. By teaching these simple solutions to our children, we can protect them from many diseases and preserve some of their dwindling natural resources.

Americans are consuming too many foods derived from animals!

The best way to illustrate this bold statement is to demonstrate how Americans' excess consumption of animal foods (meat, poultry, dairy, etc.) is affecting personal and planetary health, and even has a lot to do with much of the world hunger and economic troubles of our times.

Animal foods contain saturated fat and cholesterol and are continually being linked to much of our nation's heart attacks, strokes, diabetes, breast, prostate and colon cancer, obesity and even some forms of ear infections and allergies. The United States has a trillion-dollar-a-year health care crisis. The U.S. Surgeon General clearly stated in 1988 that 68% of the deaths in this country result from diet-related diseases. The major contributing foods in America's diet that are contributing to these diseases are animal foods.

The excess consumption of animal foods is having a deleterious effect on our environment as well. The high-volume production of animal-based diets in America uses one-third of this country's raw natural resources and is responsible for much of the topsoil depletion, 50% of the water pollution and is consuming 70% of our grain production. America's animal-centered diet is taking a heavy toll on our environment and natural resources.

Inevitably our food choices are even linked to world hunger problems because it takes approximately 7 to 14 pounds of grain to make 1 pound of feedlot beef, and with the coming billions more people to the planet we might all have to eat more plant foods and fewer animal products to sustain the human food supply. World hunger also has much to do with political situations. However, if America cut down on animal product consumption by just 10%, that would make enough grain available to feed tens of millions of additional people.

From an economic standpoint we could save hundreds of billions of dollars of medical costs needed to cure diseases that are caused by consuming too much animal food that layers our bodies with saturated fat and cholesterol. Also, American tax dollars, in the form of subsidies, are providing tens of billions of dollars to the animal industries that are simply over-marketing and over-producing foods of which Americans really need to eat less.

These are just a few of the startling facts clearly demonstrating that the Standard American Diet is out of balance. The more animal foods we consume, the greater the negative impact on our health and the environment. If we, as Americans, were able to change our diets accordingly, everyone would benefit.

Plant foods are truly "Heroes for Health"

People often ask, "If we cut way down on animal foods what will we eat?" Simply increase your consumption of foods from the plant kingdom.

When we eat plant foods, especially organic fruit, vegetables, whole grains, legumes, nuts, and seeds, it's like eating the plant's immune system. Almost daily, we hear about additional benefits from eating plant foods. Every major health organization from the American Cancer Society to the American Heart Association is telling Americans to cut way down on animal foods and increase daily consumption of plant foods.

Plant foods should be named "Heroes for Health" for the fantastic beneficial compounds and nutrients they

contain. When we eat plant foods, it's like eating tens of thousands of microscopic superheroes that go into our bodies and fight disease and infection, and help keep us well. Here are a few examples of how plant foods help keep us healthy:

The natural fiber in plant foods cleans our digestive system, soaks up extra proteins and cholesterol and keeps our digestive system flowing smoothly. Animal foods contain no fiber. Essential fatty acids in nuts and seeds and their oils (especially pumpkin, sunflower, and flax) keep our cell walls strong and flexible. Phytochemicals protect us from cancer and many degenerative diseases. Antioxidants protect us from free radical damage caused by environmental pollutants, stress, fried foods and animal foods. All these beneficial compounds are found primarily in plant foods.

Medical research has proven that the more plant foods individuals consume, the healthier they will be and the longer they may live.

Let us offer more plant foods at school as a daily option!

The Earth Voice Food Choice Project demonstrates to students, parents, educators and food service personnel the profound benefits of producing and consuming more plant foods and eating fewer animal foods and processed "junk" foods. The program educates students about the global connection between diet, health and the environment, while encouraging school food service to offer more low-fat, low-cholesterol, healthier daily options in the school cafeteria.

We need your help to insure success of this project.

In order to insure the success of these new meals we need parent and student support and involvement.

Parents, please encourage your children to try the new Heart-Healthy meals that are being offered.

Students, these new meals are for you and they will be offered for as long as you buy them. If you want this project to continue please participate by buying the new meals, and communicating with your school food service how the new meals taste.

For more information please contact:

Recipes to Look Forward to at School

Aztec Salad

(contributed by Jennifer Raymond) Serves 8 to 10

This salad is a true celebration of color and flavor. It may be made in advance, and keeps well for several days. If you are a cilantro lover, you may want to increase the amount.

2 15-ounce cans black beans
1/2 cup finely chopped red onion
1 green bell pepper, diced
1 red or yellow bell pepper, diced
2 tomatoes, diced
2 cups frozen corn, thawed
3/4 cup chopped fresh cilantro (optional)

2 tablespoons seasoned rice vinegar
2 tablespoons apple cider vinegar or distilled vinegar
1 lime or lemon, juiced
2 garlic cloves, minced
2 teaspoons cumin
1 teaspoon coriander
1/2 teaspoon crushed red pepper flakes

Drain and rinse beans and place them in a large salad bowl with onion, peppers, tomatoes, corn, and cilantro. In a small bowl combine the vinegar, lemon or lime juice, garlic, cumin, coriander, and red pepper flakes. Pour over the salad and toss gently to mix.

Nutrition information per serving: 143 calories; 7 g protein; 28 g carbohydrate; 0 g fat; 117 mg sodium; 0 mg cholesterol.

Hearty Chili Mac

(contributed by Jennifer Raymond) Serves 4 to 6

Your kids will love this easy-to-make meal.
8 ounces pasta spirals
1 onion, chopped
2 to 3 garlic cloves, minced
1 small bell pepper, diced
3/4 cup textured vegetable protein
1 15-ounce can crushed tomatoes
1 15-ounce can kidney beans, including liquid
1 15-ounce can corn, including liquid
2 tablespoons chili powder
1 teaspoon ground cumin
1/4 teaspoon salt

Cook pasta in boiling water until tender. Drain and rinse, then set aside.

Heat 1/2 cup water in a large pot, then add chopped onion and garlic. Cook until onion is soft, about 3 minutes. Add bell pepper, textured vegetable protein, crushed tomatoes, kidney beans, corn, chili powder, cumin, salt, and 3/4 cup water. Stir to mix, then simmer over medium heat, stirring occasionally, for 20 minutes. Add cooked pasta and check seasonings. Add more chili powder if a spicier dish is desired.

Nutrition information per 1/2 cup: 109 calories; 6g protein; 20g carbohydrate; 0 g fat; 138 mg of sodium; 0 mg cholesterol.

Student Newspaper Article

The Earth Voice Food Choice Project

We have always been taught that large quantities of dairy and a meat-based diet were nutritional "musts." Science has revealed that this concept is absolutely incorrect. It is now well-known that animal foods are high in fat, high in cholesterol, and low in fiber. Also, new medical studies show that whole food, low-fat, plant-based diets are healthier and more nutritionally sound. Unfortunately, the food currently available in our school cafeteria does not satisfy the new criteria. Current research shows that foods derived from animal sources are generally detrimental to our health and to our environment. Why are those types of food still being served? Why are we eating them? What are our alternatives?

The Earth Voice Food Choice Project addresses the national demand for healthier foods in our school lunchrooms. The purpose is to educate students about the ways our eating habits affect our health and the health of the environment. They plan to inspire the school food service to offer a tasty, plant-based meal option to all students.

This project teaches students to recognize the importance of a healthy, low-fat, plant-based diet. It is up to the students to make healthy eating the "in" thing.

Research has shown that illnesses associated with diet, such as obesity, cancer, diabetes and heart disease, are afflicting more children and adolescents. These people who are responsible for setting school nutrition policy have not adequately addressed the U.S. Surgeon General's statement that 68% of all U.S. deaths result from diet-related diseases. Instead of providing information about alternative foods and supporting healthy food choices, they debate about the billions of dollars needed for national health care and insurance. Without a doubt, the government would spend less on health care costs if the American public were made aware of and observed the benefits of healthier low-fat, plant-based diets.

High-fat diets are not only harmful to health, but they also contribute to the depletion of our natural resources. Statistics released by the USDA state that 64% of America's cropland is allocated for the production of livestock feed, while only 2% is used in the production of fruits and vegetables. An acre will yield 40,000 pounds of potatoes or 250 pounds of beef. That's less than one cow. Try to imagine how many people one cow would feed and compare that to how many people 40,000 pounds of potatoes would feed. The comparison is shocking. Animal agriculture is extremely inefficient. It depletes and damages Earth's valuable resources such as land, water and energy. It also pollutes what it doesn't otherwise damage. It seems that the damage we do to the Earth parallels the damage we do to our bodies.

The Earth Voice Food Choice Project is designed to educate young people about healthier eating habits and assist school food service personnel in providing more plant-based meals. This project lays the foundation for students to develop a lifelong understanding and commitment to healthy living and encourages students to take charge of their health and the future of the Earth by making conscious food choices.

For more information contact:

Earth Voice Food Choice DVD

PRESENTATION ANNOUNCEMENT

Health, Environment, Global Survival and You! What's the Connection?

This multimedia digitally enhanced slide presentation takes us on a ride through outer space in search of a planet that has the three main things humans need for survival: air, water and soil. We find Earth and witness our planet's splendor. We learn the harmful effects of humans short-sighted food choices on our environment, the species we share this Earth with, our personal health, world hunger and even the economy. We clearly see the negative impacts of eating too much chemically processed animal and junk foods and comprehend the importance of eating more organically grown fruits, vegetables, nuts and seeds. We'll meet the super heroes for health and be introduced to their powerful immune system enhancers like phytochemicals and antioxidants,

The presentation will shockingly show how young people in schools are the unsuspecting recipients of unhealthy foods that are known causes of obesity and even more serious diseases like heart attacks, strokes and more. This multi-media presentation will visibly demonstrate how to protect our most valued resources of air water, soil, our children's future and our personal health by making mindful food choices.

Then the ***Earth Voice Food Choice*** Manual and the **Earth Voice Food Choice** project will be introduced.

If you care about your health and the Earth this presentation is a must see.

Todd Winant, author of the *Earth Voice Food Choice* Manual, delivers the presentation. Mr. Winant has been a health and environmental educator since 1988 and has inspired schools to teach about and offer more plant foods and less animal foods in schools across the United States.

For more information please contact:
Earth Walk Publishing
P. O. Box 4315
Sedona, AZ 86340
www.earthvoicefoodchoice.com

ENDNOTES

Note to the reader: Some of the research and endnotes (including the style) are from earlier dates. For some of the facts contained in this document new research results are not yet available. The author feels the text and endnotes are sufficient to support the points and conclusions stated in this Manual.

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	I	II	III
Beef	73	16	1,168
Pork	59	6	354
Turkey	15	4	60
Chicken	63	3	189
Eggs	34	3	102
Dairy Products	603	1	603
Total			2,568

365 lbs.. (one pound per day) of grain, or a combination of grain and soy, will adequately feed one person for a year. Dividing the total grain and soy required to provide the average American with meat, poultry and dairy products for one year (2568 pounds), by the grain and soy needed to adequately feed one person for a year (365 pounds), we find that seven people could be fed by the equivalent of what one person consumes on the standard American meat-based diet (2,568/365 = 7.04).
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An End Story

By Thomas Berry

We are living in a moment of grace. We have, finally, learned to listen to the voices of the oak and the pine and the willow, to the crickets singing in the meadow, to the sparrows in the cities, to the robin in the park, to the daisies in the meadow; also to the seas and the rivers and the mountains, even to the wind and the rain, to the sun and the moon and the stars.

Of course many children seldom see much of the natural world. Yet everyone sees trees and an occasional bird. Everyone feels the wind and the rain. Everyone experiences the sun shining on their faces. Even in New York, children on occasion see the Hudson River or the East River or Long Island Sound or the Upper Bay. They visit some of the parks in the city or at least see the ginkgo trees or the sycamore or the black locust or the ailanthus that line the streets or grow by the wayside. Grass can be seen almost everywhere.

I remember once at a gathering where people were telling about things that had happened in their families recently, both sad things and also bright things. It was springtime. One woman mentioned how wonderful it was when her little girl came home one afternoon terribly excited saying, "Mama, I saw grass today!" She not only saw the grass. The grass spoke to her. The grass sent a thrill of joy through her being. She came alive. She shared in that great event that is the universe itself, for it took all 15 billion years of universe development to make the grass and the girl and to bring them together in that one shining moment that justified all the energy and all the wisdom and all the skill that had brought about that moment.

Such, I think, is the historical moment we are experiencing. We are no longer deaf to the natural world about us. An all-pervasive movement is sweeping over the Earth. My generation of older people, even we have awakened. We begin to realize how deaf we have been. How dumb, how mean are the things we have done to the living world about us. How stupid we have been, for what we have done to the other living beings we have eventually done to ourselves and to our children.

If we have poisoned the air and the water and the soil, we have simply poisoned ourselves. If we have paved over our world with highways and parking lots and shopping centers and commercial headquarters, we have left no place for the children to play, no fields to run through, no streams to wade in. Only concrete and steel, wires and wheels, and the noise of motors and airplanes filling the earth and the skies.

We have lost the music of the birds and the insects. We have lost the flowers that make life beautiful. We have lost the grandeur of the great forests and have left only the desolate stumps in the fields. We have lost the magic and mystery of life, the source of our music and poetry and our great stories.

But now all this is changing. We are living in a moment of grace. We are closing down the nuclear plants, we are reducing the pollution of our cities. We are restoring the Everglades in Florida. The Atlantic salmon are coming back to the Connecticut River. We have people like yourselves who are willing to use their lives as the seeds of their greatest visions and hopes and bring needed health and environmental education to our young people in schools. These and so many other things could be mentioned.

Yet most of all the education is changing. Children are now learning about their world, how all beings in the living world are dependent on each other. They are learning how to eat healthy food, how to exercise to keep their bodies healthy and their minds alert and their souls intimate with deep mystery of the universe in which they live. They are learning the poetry and music of existence. They are learning that we ourselves and the entire natural world will go into the future as a single sacred community or we will never experience the deep wonder and joy that is the deepest hunger within us. This is what the voices of the trees and the flowers and the birds and the mountains and the rivers are telling us.

Thomas Berry, Ph.D. is a historian of cultures, author of The Dream of the Earth *and coauthor of* The Universe Story *with Brian Swimme.*

This is not the end of the story.

It is just the beginning. There is a lot more to learn about food and how it affects us all. One piece leads to the next. I hope that this book is one piece that will lead *you* to the next. May this book awaken those who have been asleep. The more of us that are willing to awaken to a much larger reality than has been presented to us, the more balance we can offer to our society and to the evolution of our species.

If you would like to get involved with this effort in any way, PLEASE contact us.

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EARTH VOICE FOOD CHOICE

Getting Real About Our Food Choices

TODD WINANT

This manual is part of a multi-media project called Earth Voice Food Choice (see page vi). The two main tools for outreach of the project are this Manual and the Earth Voice Food Choice DVD.

The Manual and DVD demonstrate the preciousness and profound beauty of our world. They show how humans are depleting and destroying Earth's resources and how our present day food consumption and production methods are feeding young people foods that cause bad habits, obesity and set the stage for disease later in life. This manual also provides simple solutions to these problems and shows how to improve both personal and planetary health by providing the tools needed to inspire and enable young people to get real about their food choices.

It is common knowledge that people who eat greater amounts of foods from the plant kingdom have lower rates of heart attacks, cancers, obesity and other diseases.

By consuming and producing more organic plant foods and eating fewer chemically processed animal foods, g powerful steps to preserve our natural resources, the environment and our children's future food supply. It makes good sense to get this information and these healthier foods into our schools, institutions and homes, where people can make the choice to eat them. The Earth Voice Food Choice Manual addresses these issues directly and the DVD provides graphic illustration of the message.

This is a "How To" manual for students parents, teachers, food personnel and anyone else who wants to initiate a healthy food and education project in their schools, camps, institutions and homes. Included are all the strategies, recipes, resources, information and actions you will need to implement a successful project.

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