

SOLAR AGE OR ICE AGE?

BY TODD FRANZ

The ecological condition of the planet in the early twenty-first century seems to be beyond any hope of restoration to its pristine, natural state. Daily we are bombarded with media reports on massive deforestation, desertification, pollution, extremes of weather, global climate change, increasing risk of cancer, world hunger . . . how in the world can we ever begin to solve such complicated and seemingly unrelated catastrophes which affect our very survival?

The solution to most of these problems, believe it or not, is actually quite simple. First though, I would like to explain the geological "stage" our earth is in at the present time. Mankind is not fouling the planet on his/her own, nature has a hand in it also. We are merely accelerating a natural process.

We now know that the major ice ages recur on a vast 100,000 year cycle - approximately 90,000 years cold and 10,000 years warm. Evidence of the past 25 of these cycles, spanning 2.5 million years, has recently been discovered in ice and sea floor cores.

We are now about 10,800 years into one of the warm inter-glacial periods. Everything we know of as civilization has occurred during this period since the last ice age; pottery, writing, agriculture, etc. Statistically, we're due for another 90,000 years of glaciation very soon.

What could possibly cause this cycle of ice ages? Science has long known that a great deal of erosion by wind and water takes place during these 10,000 year warm interglacial periods. One of the major consequences is that the minerals in the soil get substantially eroded away, or leached deep into the subsoil where they are no longer available to trees and other plants, including our crops. When the first settlers came to the midwest the topsoil was many feet deep, it is now measured in inches.

Close to a HUNDRED minerals - iron, calcium, magnesium, selenium, zinc and many others are essential nutrients for all plant, animal and human life. As the vital minerals in the soil get eroded away, the earth's forests get progressively weaker and eventually begin to die back. This is now happening on a massive scale worldwide. In California alone the U. S. Forest Service estimates 1 in 3 trees are dead or dying. The forests succumb more readily to insects, disease and forest fires, all of which increase. As the forests die back and then burn, they not only consume less carbon dioxide from the atmosphere, but the huge amount of carbon stored in them is released back into the atmosphere where it recombines with oxygen to form large quantities of carbon dioxide. Since carbon dioxide traps more heat from the sun, this increase creates a naturally occurring greenhouse effect, with severe climatic consequences. This time around, man is accelerating the process by burning fossil fuel and by using slash and burn farming techniques.

Most observers assume the greenhouse effect will warm the earth's climate dramatically in the coming decades. As a matter of fact, the media has deemed the greenhouse effect synonymous with "global warming" and made it a household word over the past few years. True, the four hottest years on record were during the 1980's, the summer of 1988 was unbearable, but surprisingly, the winters have also been getting colder and longer over the past 100 years. Over and over again in the last 15 years, northern hemisphere winters have been the coldest in recorded history. Record snow has fallen shockingly late in the season in many areas, sometimes as late as June and July. What is going on?

The greenhouse effect is indeed occurring, but primarily in the tropics and lower latitudes where there is much more of the sun's heat for the greenhouse gasses to magnify. Since the polar regions get few of the sun's rays and are actually dark six months of the year, the greenhouse effect is minimal there. So, the greenhouse effect is primarily heating up the tropics while the poles stay about the same, a "differential greenhouse effect".

Any meteorologist can tell you the consequences; the hotter tropical air rises faster causing cold, heavy polar air to rush in and fill the vacuum. The earth's air masses circulate faster, resulting in higher winds. In fact, there have been greatly increasing numbers of hurricanes and tornadoes (a 1000% increase) for half a century now. 1988's hurricane Gilbert and then 1992's hurricane Andrew were the strongest ever recorded in the western hemisphere.

These greenhouse winds often carry a lot of moisture with them, evaporated from the now overheated tropical oceans and then carried in the clouds to the higher latitudes. This moisture falls as increasing rain during the spring and fall, and as snow and ice during the winter. Thus, winters get longer and colder. Longer winters have reduced the growing season by almost a month in the American midwest in the last 40 years. All these phenomena are well documented in scientific literature.

In the summer, the winds circulate more rapidly toward the opposite pole, which is now in winter cold. So, most of the moisture-laden tropical clouds are blown away, leaving behind intense summer heat and drought to make our lives miserable and destroy our food crops. All of these terrible consequences of the greenhouse effect - record heat, drought, high winds, longer winters and increased spring flooding from the excess snowfall - destroy our ability to grow food. As a matter of fact, the United States for the first time in its history, has had to recently import more food than export because of the frequency of natural disasters. Our "strange, unseasonable weather" is almost a weekly occurrence on the news. Records are constantly being broken as the weather fluctuates from one extreme to the next, a result of ever increasing temperature differentials between the poles and the tropics. The consequences of these extremes of weather; i.e. the Oakland/Berkeley fire, the California drought and citrus freeze, the 1993 Mississippi flood, our dying forests, are costing us billions of dollars. A severe drought in the southeastern United States in 1986 destroyed 90% of the crops in that region.

We now know by analyzing the stratified pollen in ancient lake beds that the transition into ice age weather conditions occurs in about 20 years. Some scientists believe this transitional period may have already begun. We can expect the climate to become increasingly extreme and inhospitable in many ways as the greenhouse gasses accumulate at an accelerating rate. Nighttime summer freezes will become more and more frequent, destroying our food supply throughout the temperate regions of the earth. This greenhouse effect continues for tens of thousands of years, transferring more and more moisture to the growing polar glaciers and creates an ice age.

How do ice ages ever come to an end? As the glaciers slowly advance over tens of thousands of years, they grind up the rocks in their path into a dust as fine as talcum powder. This dust is then carried by streams and blown by wind over many parts of the earth.

Rocks are made up of minerals. So this rock dust (glacial loess) remineralizes much of the earth's soil. It nourishes the forests again, and they become rejuvenated. As they thrive and spread, they consume the excess carbon dioxide in the atmosphere. The greenhouse engine eventually subsides, and another mild inter-glacial period, like the one we've been living in, is ushered in. Every element of this complex theory is validated by current scientific knowledge in a number of different fields. You might be wondering why this thesis, introduced by John Hamaker in the 70's, hasn't received the attention it deserves, especially in light of overwhelming evidence to support it. There are many reasons, most of which are political/economic.

First of all, our legislators are being given extremely contradictory information concerning CO2 build-up and the climatic consequences. There are "warming" scientists who are in effect saying the increased CO2 in our atmosphere will offset glaciation by increasing world temperatures and will actually melt the polar ice caps, which would raise sea levels and flood coastal population centers worldwide. This is the popular "official" view adopted by the media. Then, of course, there are the "cooling" scientists who assert just the opposite will occur. Our legislators have, quite justifiably, thrown up their hands and said they can't make any decisions concerning preventive measures until science can agree on the global climatic outcome. The only common point of agreement is the necessity to increase global bio-mass; i.e. stop clearcutting the world's forests, especially the fast growing tropical rain forests which contain so much carbon, and plant vast quantities of new, fast growing species of trees to quickly begin consuming the excess CO2. An abundance of healthy trees on the planet would solve whichever happens, the heating of the earth or an impending ice age. By removing CO2 from the atmosphere, either scenario would have its solution. It really is useless to debate cooling or warming. We need to plant trees! Steps are being taken in these directions. A national tree planting campaign is being promoted here in the United States which will buy us some time before the momentum of climate change becomes irreversible, but even these efforts fall short of what needs to be done.

One extremely important key factor is missing from these attempts to rejuvenate the earth's bio-mass. Existing forests and trees newly planted on the demineralized, generally infertile soils of the world during this late interglacial phase will not attain the rigorous health and growth rate needed to accomplish the task of reversing the CO2 curve. We must remineralize the soils by spreading powdered rock dust over existing forests along with each and every newly planted tree, and billions of acres must be planted soon.

Another solution for reducing the carbon dioxide in our atmosphere to acceptable levels has been proposed by Harvard educated, research scientist Daryl Kollman. He suggests the massive growth of the world's fastest growing, carbon dioxide consuming plant - algae. After all, blue-green algae transformed the atmosphere of earth 3 1/2 billion years ago from one that was void of oxygen and rich in the "greenhouse gases", to the atmosphere of today by being the first organism to perform the miracle of photosynthesis. The miracle continues. At the very foundation of the food chain and directly responsible for about 80% of the world's oxygen, algae are found in every drop of water and every inch of fertile soil, transforming the minerals, gases and sunlight of our environment into viable foods for all other species of life.

Daryl has discovered one particular species of blue-green algae that is most capable of lowering the concentration of atmospheric CO2 to a level providing global stability. *Aphanizomenon Flos-Aquae*, found growing in the pristine, unpolluted waters of Upper Klamath Lake, Oregon is the most efficient chlorophyll-producing organism known. One cubic foot of this algae actually consumes the same amount of CO2 as 150 full grown trees! The Upper Klamath Lake is also the richest bio-mass producing environment on the planet. For the past 10,000 years, since the retreat of West Coast glaciers, the lake has served as a "nutrient trap" for a rich supply of minerals, volcanic silt, organic nitrogenous matter and other nutrients washed in from some 4,000 square miles of land surface. This exceptionally nutrient-rich environment also accounts for the fact that this algae is the most nutritious food on the planet, surpassing even spirulina and chlorella, both of which were also introduced to Americans by Daryl Kollman in the 70's. This has enormous implications considering the fact that 99% of Americans are deficient in some mineral and 70% suffer from a degenerative disease.

Calculations show that approximately 350,000 square miles of algae ponds are needed now to return the concentration of carbon dioxide in the atmosphere to an acceptable level. These algae ponds could be set up around the world by simulating the natural conditions in Oregon. This could be accomplished by dusting large bodies of water with crushed rock and introducing *Aphanizomenon Flos-Aquae*. Not only could people around

the world help stabilize the CO2 level, but they would also be cultivating a highly nutritious food source for themselves.

The concept of fertilizing the soil with rock dust is so incredibly simple that it is difficult to understand why returning the 100 or so minerals it originally had is not in widespread use. Plants require a continuous intake of minerals just as we do, and for very similar reasons - calcium to build structural support, iron to carry oxygen, and so on. Plants growing on mineral-depleted soil do not get enough nourishment and so become smaller, less abundant and less hardy, and more vulnerable to the insects, worms and fungi they are prey to. Remineralization causes a phenomenal growth of the microorganisms in the soil. It increases the nutrient intake of plants, counters the effects of soil acidity, prevents soil erosion, increases the storage capacity of the soil, contributes to the building of precious humus complexes, has anti-fungal properties, and when you spray rock dust on plants it repels insects as well. The plants and trees become highly resistant to insects, disease, frosts and drought. Remineralization also enhances and speeds up the process of composting.

The results of long term experiments in Austria, released in 1986 showed that in a forest where pine seedlings were remineralized, after 24 years the wood volume was **FOUR TIMES HIGHER** than in untreated areas. Dr. C. S. Hansen has experimented extensively with rock dust. In one experiment he spread a bag of azomite (rock dust) on the ground around an orange tree with mature fruit. The tree was full of heavy metals; zinc, lead, mercury and insecticides. Within four minutes after spreading the dust there was not an orange or leaf on the tree that wasn't free of the harmful effects of the heavy metals, DDT and other chemicals. He has repeated this experiment many times and his explanation is as simple as it is amazing; "Microwaves from the trace elements in the azomite catalyze the heavy metals into harmless compounds, which the tree can then use or automatically return to the soil."

In another experiment, Georgia cattle ranchers mixed 5% cement kiln dust into their animal's feed and found that after 112 days the dust fed animals had gained 28% more weight than those on the control diet, while at the same time consuming 21% less feed and all were in superior health. The world's healthiest people, the Hunzas, live at the base of the Ultar Glacier in East Pakistan. Cancer is unknown among them along with virtually every other disease known to modern man. (Americans, on the other hand, now have a 1 in 2 chance of getting cancer in their lifetime.) The Hunzas regularly live well past 100 years of age with some reported living up to 140 years. It has been well documented for decades in books and journals that their crops are watered by the milky gray meltwater from the glacier and that they regularly add glacial rock dust to their fields along with their compost.

In 1976 John Hamaker spread gravel crusher screenings on part of his ten acres in Michigan. The following year, in an area of sparse rainfall and dry summers, and with **NO IRRIGATION**, his corn produced 65 bushels per acre, compared with yields of under 25 from other local farms. When independent analyses were done, Hamaker's corn was found to contain 28% more protein, 47% more calcium, 57% more phosphorous, 60% more magnesium and 90% more potassium than the same type of corn grown with chemical fertilizers nearby. Hamaker estimates that on fully remineralized soil, American agriculture could grow **FOUR TIMES** as much food as it is capable of now - or the same amount of food at about 1/4 the cost - and with no pesticides or chemical fertilizers.

Rock dust (or *gesteinsmehl* as they call it - stone meal) is being applied to forests and farmland in Europe with amazing success. Germany and Austria are putting an end to "Waldsterben", the massive die off of trees in the Black Forest and elsewhere, previously thought to be lost forever to the effects of acid rain and pollution (and demineralization). Their forests are becoming completely rejuvenated by dusting them with local rock powders. The Swedish government has recently passed legislation to spray stone meal over their entire country. Russia also used it to help clean up the Chernobyl disaster.

We could easily remineralize our farmlands here in the U.S. and increase yields dramatically in both quantity and quality before drought and other climatic threats wipe out all our meager food reserves and much of our ability to grow food. Of course that would render chemical nitrogen fertilizers obsolete along with most of the 2.6 billion lbs. of pesticides we use per year, but here lies the crux of the problem. The chemical companies have a virtual economic stranglehold on our government, the media, our agricultural colleges, the USDA and our farmers. The media has made "global warming" a household word and won't allow interviews with scientists who promote "global cooling". To acknowledge Hamaker's thesis and the incredible benefits of rock dust would be an enormous conflict of interest because most media outlets are owned by the large chemical companies. Our agricultural colleges will not conduct experiments with rock dust for the same reason, they are funded by the petrochemical fertilizer and pesticide companies. The USDA won't even update it's Handbook of the Nutritional Content of Food from the 1963 figures because the vitamin and mineral values have become so low. For instance, the protein content of wheat grown today is only 20% that of wheat grown before WWII and the use of chemical fertilizers. Commercially grown carrots have as little as 70 IU's (international units) of beta-carotene compared to 18,500 IU's of beta-carotene in remineralized, organically grown carrots. Spinach has virtually no iron anymore. In 1948, spinach had as much as 158 mg. iron/100 g. In 1965, that figure dropped to 27mg./100 g. In 1968, the average was down to 3.1 mg., and in 1973 an average of 2.2 mg./100 g. Today you'd have to eat around 75 bowls of commercially grown spinach to get the iron found in one bowl back in 1948; and, when a plant is weak in iron, it is usually weak in other trace elements and minerals as well. (It's no wonder the cancer/degenerative disease rate is so high in this country, not only are we bombarded with toxins and carcinogens but at the same time we are being robbed of the micro-nutrients essential for a strong immune system.) And so it goes, right on down to the farmers (farmers incidently, have the highest rates of cancer) who are being sold more and more chemicals and told to keep escalating their never ending war with nature.

Wouldn't it be great if we put our farmers to work growing crops (which, when remineralized, could have 4 times the growth rate and approximately 3 times the yield) to be used for bio-mass fuels and start exporting inexpensive, clean burning fuel technologies worldwide. This would end our foreign dependence on oil and dramatically clean up the atmosphere. Just think of the benefits if our forests were healthy and growing at 4 times the rate they are now; if our air, water and food were free of toxins and carcinogens; if our food was optimally nutritious; if world hunger was eliminated by stabilizing the climate and teaching much more efficient and cost effective farming techniques.

Of course, it won't be easy to get such massive changes accomplished. We live in a very competitive society with enormous vested interests making billions of dollars in profits from the current way of doing things. We need to educate as many people as possible to the underlying causes of the many problems facing our entire planet as we begin the 21st century. Only then can America lead the world into a solar age instead of an ice age.

Todd Franz is an active environmentalist who believes in solutions rather than regulations, works construction overseas and is currently promoting pyramid shaped greenhouses, Flour of Life glacial stone meal, Super Blue-Green algae and other highly nutritious, remineralized super-foods and supplements worldwide.