

The Survival Foods And Gardening Section

ON THE HORIZON: FAMINE

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Perhaps you have been too busy to notice, but the concern about our global food supply is real! Major news magazines are reporting that after a quiet few decades, talk of a world food crisis is again in the air. Government leaders, economists and scientists are seriously pondering such sobering questions as: Does the world face a global shortage? and Will the world starve? There *is* a growing sense of urgency.

In November 1996 the United Nations Food and Agricultural Organization will convene a World Food Security Summit in Rome. The conference was called due to growing concerns that shrinking world food reserves, rising prices and the declining production of food grains could be the precursors of an imminent food security crisis. Dr. Jacques Diouf, the FAO Director-General, has stated, "**The very survival of humanity depends on world food security**".

Just what does the future hold for humanity? Will there be enough food to go around? What does a look at *all* the evidence indicate? And how will this issue affect *your* life in the months and years ahead?

HOW LONG BEFORE THE CUPBOARD IS BARE?

Numerous sources document that global supplies of rice, wheat, corn and other key commodities have dwindled to their *lowest levels in years*. The U.N. recently warned that food stocks stand *far below* the minimum needed to provide for world food security. The world's grain harvest has not increased in any of the last five years, and since 1992 world grain consumption has exceeded production... this year--for the first time since World War II--**there are basically no surplus stocks in government-owned reserves**. The tight supplies have led to steep price increases for wheat, rice, and corn. Grain stockpiles have fallen particularly fast in the U.S. and the European Union as a result of agricultural reforms that have focused on reducing overproduction and selling off surpluses--primarily to China--to gain revenue from exports. Bad weather and a string of poor harvests in grain producing areas of the world have also contributed to the dwindling reserves.

A CRISIS AHEAD?

Opinions are sharply divided over what the future may hold. The world's food economy may be shifting from a long-accustomed period of overall abundance to one of scarcity and that **food scarcity will be the defining issue in the future**. The lack of growth of the world grain harvest since 1990 coupled with the continuing growth in world population and the increased likelihood of crop-damaging heat waves in the years ahead at least carries the potential of *severe food shortages*. U.N. sources suggest that with grain stocks dangerously low serious food shortages could result if there are major crop failures in 1996.

These pessimistic predictions for the future are countered by voices claiming to be more rational and optimistic. They argue that present shortages in food reserves are merely a temporary blip on the food charts and that relief will probably come with this year's harvest. The optimists believe returning idled land to production will assure enough food for growing populations. They also have faith that biotechnology will develop new varieties of plants, boosting production. Julian Simon, a business professor at the University of Maryland, downplays doomsayers and the fears of famine. In Simon's opinion, "For some 25 years they have been wrong, and they have not changed their minds. Why should they be believed?" From Simon's perspective the record of history is progress, and life has never been better.

Who should you believe? Is there really an impending global food crisis? Has anything changed in 25 years since the doomsayers began sounding the alarm? Are there reasons for concern?

POPULATION PRESSURES INCREASE

A prime concern is that, in spite of falling grain reserves and the leveling off of production, worldwide grain consumption continues to grow. This increase is driven by two factors: growing populations and improving lifestyles. Both are placing increasing strains on world food supplies.

Since 1950 world population has more than doubled--surging from about 2.5 billion to more than 5.8 billion people. Globally, it continues to grow (by any historical benchmark) with *extraordinary speed*. As populations grow, demand is certainly rising fast. Every year there are 90 million more mouths to feed in developing countries. As consumers become richer, they develop a taste for meat, and it takes a lot of grain to fatten livestock. The basic question is: Will we be able to feed 90 million more people each year **when grain production seems to be leveling off**? Keep in mind this is in addition to the *biblical scale of hunger* that exists already. About 800 million people in poorer countries are chronically undernourished *right now*!

SHIFTS TO DEPENDENCY

Another worrisome trend is described by Stanford University biologists Paul and Anne Ehrlich. Fifty years ago "most regions of the world were *self-sufficient* in food production, and many exported grain. Since then, for various reasons, the pattern has dramatically changed; more than 100 nations now import grain from the United States, Canada, Western Europe, Australia and a few other surplus producers.... Nearly all developing nations have become *dependent* on grain imports to keep their populations adequately fed.... **This growing worldwide dependency on a mere handful of suppliers for basic foodstuffs could itself spell trouble for global food security** ".

This shift to dependency has ominous implications for the future. As nations industrialize, people move from rural farms and villages to the cities, leaving fewer laborers to produce food. Agricultural skills are lost and more people become dependent on distant food supplies. Prime agricultural land is permanently lost to urban development, reducing the acreage available to grow food. In just two years, China turned from exporting grain to Japan (8 million tons) into the world's second largest grain importer (16 million tons). Some are concerned that, if this ominous trend is not reversed, China would need to import virtually **all the grain available for export** in the world.

TECHNOLOGY--A PLAYED-OUT SAVIOR?

Optimists are quick to point out that a major reason why pessimists were wrong in their predictions for widespread famine in the 1960s was their failure to anticipate the arrival of the "green revolution" with its new strains of high-yield seeds, chemical pesticides, increased use of fertilizers and improved irrigation. These four factors kept grain production ahead of the doubling population. The predicted worldwide famine did not materialize. But were the doomsayers wrong--or only premature?

Paul and Anne Ehrlich, among others, suggest that yield increases from green-revolution technology *may now be playing out*. Worldwide fertilizer use, which increased over 1,000 percent during the green revolution years, has been declining for several years in a row. Insects are developing resistance to pesticides. Underground aquifers used for irrigation are being depleted.

While plant scientists talk of continuing to boost grain production through biotechnology, the Ehrlichs--both biologists--suggest, no promising new technology appears on the horizon that could carry the process (green-revolution technology) further on a global scale. From their perspective, a big jump in agricultural productivity resulting from advances in biotechnology is *not foreseen* .

With the green revolution apparently running out of gas, numerous observers are warning that the globe is on the brink of a new era of food scarcity. In fact, the growing dependency on bioengineered crop varieties may contain the seeds of our own destruction.

FRAGILE FOOD CHAIN

Today our food supply depends upon a few hybridized varieties of a very limited selection of plant species--primarily wheat, corn, rice and potatoes. These plants are genetically bred for uniform qualities of color, size and texture while other traits are eliminated. What many do not realize is that reducing the genetic base in this way may boost efficiency, **but it also increases the risk that one type of pest will infest a whole harvest.** When entire fields or regions are planted with just one hybrid variety of a single crop--such as Russet Burbank potatoes that McDonald's prefers to make French fries with--you have a potential disaster waiting to happen. It has happened before!

The Great Irish Potato Famine in the late 1840s developed during a series of wet growing seasons when a fungus from Europe spread through many fields planted with a *single variety* of potato. The collapse of this crop was catastrophic. Over a million Irish died and millions more emigrated to escape the horrible conditions spawned by a "sinister trend toward monoculture," oppressive political decisions and unusual weather. Now a new strain of this same fungus has *reappeared* in the 1990s and is sweeping through potato fields in much of Europe and North America and parts of South America, Africa, Asia and the Middle East. The aggressive new strain is resistant to commonly used pesticides and has been called one of the worst crises to ever strike the U.S. potato industry. It has the potential of causing serious problems to our food supply if wet weather develops.

However, the potato blight is only one part of a very disturbing picture. Karnal bunt fungus has turned the 1996 durum wheat harvest in the southwestern U.S. into a nightmare. A soybean fungus, for which there is no known treatment, has appeared in Hawaii. Reports are also surfacing that genetically engineered plants designed to withstand herbicides can pass those new genes to nearby weeds. The European Union recently refused to approve the sale of a genetically engineered variety of corn, fearing the genes for antibiotic resistance might be passed on to cattle and humans.

The impressive methods of modern grain production rest on a **very narrow and fragile genetic base.** Our future harvest could be likened to delicately balanced houses of cards--highly susceptible to sudden changes. However, there is one more unpredictable factor that is capable of dramatically affecting the size and quality of global food supplies.

WEATHER--A WILD CARD!

What is seldom stated is that optimistic forecasts for increasing grain production are based on critical long-term assumptions that include normal (average) weather. Yet in recent years this has *definitely not* been the case. Severe and unusual weather conditions have suddenly appeared around the globe. Some of the worst droughts, heat waves, heavy rains and flooding on record have reduced harvests in China, Spain, Australia, South Africa, the United States and Canada--major grain growing regions of the world--by 40 to 50 percent. As a result grain prices are the highest on record. Worldwatch Institute's president, Lester Brown, writes, "No other economic indicator is more politically sensitive than rising food prices.... Food prices spiraling out of control could trigger not only economic instability but widespread political upheavals"-- even wars.

The chaotic weather conditions we have been experiencing appear to be related to global warming caused by the release of pollutants into the earth's atmosphere. A recent article entitled "Heading for Apocalypse?" suggests the effects of global warming--and its side effects of increasingly severe droughts, floods and storms--could be catastrophic, especially for agriculture. The unpredictable shifts in temperature and rainfall will pose an **increased risk of hunger and famine** for many of the world's poor.

With world food stores dwindling, grain production leveling off and a string of bad harvests around the world, the next couple of years will be critical. Agricultural experts suggest it will take *two bumper crops in a row* to bring supplies back up to normal. However, poor harvests in 1996 and 1997 could create severe food shortages and push millions over the edge.

Is it possible we are only one or two harvests away from a global disaster? Is there any *significance* to what is happening today? Where is it all leading? What does the future hold?

The clear implication is that things will get worse before they get better. Wars, famine and disease will affect the lives of billions of people! Although famines have occurred at various times in the past, the new famines will happen during a time of unprecedented global stress--**times that have no parallel in recorded history--at a time when the total destruction of humanity would be possible!**

Is it merely a coincidence that we are seeing a growing menace of famine on a global scale at a time when the world is facing the threat of a resurgence of new and old epidemic diseases, and the demands of an exploding population? These are pushing the world's resources to its limits! The world has *never before* faced such an ominous series of potential global crises at the same time!

However, droughts and shrinking grain stores are not the only threats to world food supplies. According to the U.N.'s studies, all 17 major fishing areas in the

world have either reached or exceeded their natural limits. In fact, nine of these areas are in serious decline.

The realization that we may be facing a shortage of food from both oceanic and land-based sources is *a troubling one* . It's troubling because seafood--the world's leading source of animal protein--could be depleted quite rapidly. In the early 1970s, the Peruvian anchovy catch--the largest in the world--collapsed from 12 million tons to 2 million *in just three years* from overfishing. If this happens on a global scale, we will be in deep trouble. This precarious situation is also without historical precedent!

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