

World Food Crisis: Spring 2011

FELLOW BELIEVERS - WAKE UP AND WARN OTHERS - WE ARE NEARING THE END!

“The restraining Spirit of God is even now being withdrawn from the world. Hurricanes, storms, tempests, fire and flood, disasters by sea and land, follow each other in quick succession. Science seeks to explain all these. The signs thickening around us, telling of the near approach of the Son of God, are attributed to any other than the true cause. Men cannot discern the sentinel angels restraining the four winds that they shall not blow until the servants of God are sealed; but when God shall bid His angels loose the winds, there will be such a scene of strife as no pen can picture.”—6 Testimonies, 408.

“The great conflagrations and the disasters by sea and land that have visited our country were the special providences of God, a warning of what is about to come upon the world. God would show man that He can kindle upon his idols a fire that water cannot quench. The great general conflagration is but just ahead, when all this wasted labor of life will be swept away in a night and day. The treasure laid up in heaven will be safe. No thief can approach nor moth corrupt it.”—4 Testimonies, 49.

“The earth itself is convulsed, the ground heaves and swells like the waves of the sea, great fissures appear, and sometimes cities, villages, and burning mountains are swallowed up. These wonderful manifestations will be more and more frequent and terrible just before the second coming of Christ and the end of the world,

as signs of its speedy destruction. . .

“More terrible manifestations than the world has ever yet beheld will be witnessed at the second advent of Christ. ‘The mountains quake at Him, and the hills melt, and the earth is burned at His presence, yea, the world and all that dwell therein. Who can stand before His indignation? and who can abide in the fierceness of His anger?’ Nahum 1:5, 6. ‘Bow Thy heavens, O Lord, and come down: touch the mountains, and they shall smoke. Cast forth lightning, and scatter them: shoot out Thine arrows, and destroy them.’ Psalm 144:5, 6.”—Patriarchs and Prophets, 109.

“Now is our golden opportunity to co-operate with heavenly intelligences in enlightening the understanding of those who are studying the meaning of the rapid increase of crime and disaster. As we do our part faithfully, the Lord will bless our efforts to the saving of many precious souls.”—Temperance, 251.

“The terrible disasters that are befalling great cities ought to arouse us to intense activity in giving the warning message to the people in these congested centers of population while we still have an opportunity. The most favorable time for the presentation of our message in the cities has passed by. Sin and wickedness are rapidly increasing; and now we shall have to redeem the time by laboring all the more earnestly.”—Medical Ministry, 310.

Obama Orders Military to Prepare for Spring Food Riots, EU Times, January 13, 2011—

A grim report, prepared by France’s General Directorate for External Security (DGSE) and obtained by Russia’s Foreign Intelligence Service (SVR), states that presidents Obama and Sarkozy have “agreed in principal” to create a joint US-European military force to deal exclusively with a global uprising expected this spring as our world runs out of food.

According to this report, Sarkozy, as head of the G-20 Group of Developed Nations, called for and received an emergency meeting with Obama this past Monday at the White House; wherein he warned his American counterpart that **the shocking rise in food prices occurring, due to an unprecedented series of disasters, is threatening the stability of the entire world and could lead to the outbreak of Total Global War.**

Just last week French Prime Minister Francois Fillon stressed that **one of France’s top G-20 priorities was to find a collective response to “excessive volatility” in food prices now occurring.** Philippe

Chalmin, a top economic adviser to the French government, also warned that the world may face social unrest, including food riots in April, as grain prices increase to unprecedented highs.

The fears of the French government over growing global instability was realized this past week after food riots erupted in Algeria and Tunisia and left over 50 dead. So dire has the situation become in Tunisia that their government this morning rushed in massive amounts of troops and tanks to their capital city and instituted a nationwide curfew in an order to quell the growing violence.

The United Nations also warned, this past Friday, that millions of people are now at risk after food prices hit their highest level ever and global wheat stocks fell to 175.2 million tons from 196.7 million tons a year ago. Global corn stocks may be 127.3 million tons at the end of this season, compared with last month’s USDA outlook for 130 million tons; and global soybean inventories will drop to 58.78 million tons at the end of this season, from 60.4 million tons a year earlier.

Robert Zoellick, president of the World Bank, further warned this past week that **rising food prices are “a threat to global growth and social stability.”**

It is said that our world, for the first time in living memory, is just “one poor harvest away from chaos.”

In order to comprehend just how dire the global food situation has become, **it is necessary to understand the disasters that have befallen our world’s top wheat growing nations, this past year**, and who, in descending order, these nations are: China, India, United States, Russia, France, Canada, Germany, Ukraine, Australia and Pakistan.

From China’s disaster: 2010 China drought and dust storms were **a series of severe droughts** during the spring of 2010 that affected Yunnan, Guizhou, Guangxi, Sichuan, Shanxi, Henan, Shaanxi, Chongqing, Hebei, and Gansu in the People’s Republic of China. The drought has been referred to as the worst in a century in southwestern China.

From Southeast Asia: **Severe droughts** in parts of southeast Asia, including Vietnam and Thailand, and **dust storms** in March and April that affected much of East Asia.

From India’s disaster: A record **heat wave** and growing **water crisis** in India are forcing politicians to consider implementing user fees and other measures to conserve water.

From Sri Lanka: Its President Mahinda Rajapaksa yesterday instructed ministers and officials to prepare a strategic plan to face **an impending food crisis**, as there were signs that the world is to confront a food shortage by next April.

From Russia’s disaster: Ten percent of the total world’s output, 20% for export, were hit by the **highest recorded temperatures** Russia has seen in 130 years of record keeping; the **most widespread drought** in more than three decades; and **massive wildfires** that have stretched across seven regions, including Moscow.

From France’s disaster: The French government lowered their wheat crop forecast by 2.7% over last year, due to **drought and cold weather**.

From Canada’s disaster: Record setting **drought** has affected their main grain producing provinces in the western part of their nation.

From Ukraine’s disaster: The world’s top producer of barley, and sixth biggest of wheat, was hit as hard as Russia was by **fire and drought**, to the point that they have halted all their exports of grains in 2011.

From Australia’s disaster: Fears of a global wheat shortage have risen after the Queensland area of Australia was hit by **calamitous flooding**. Andrew Fraser, Queensland’s State Treasurer, described the floods as a “disaster of biblical proportions.” Water is covering land the size of France and Germany. It is expected to reach over 30 feet deep in some areas in coming days. [Since then, the worst **cyclone** in memory has struck Queensland.]

From Pakistan’s disaster: **Floods** have submerged 17 million acres of Pakistan’s most fertile cropland, have killed 200,000 herds of livestock, have washed away massive amounts of grain, and left farmers unable to

meet the fall deadline for planting new seeds. This implies a massive loss of food production in 2011 and potential long-term food shortages.

From South America: Not only have the vast majority of our world’s top wheat producers been affected, but also one of the main grain producing regions on the planet, South America. A **drought** has crippled Argentina and Bolivia. And Brazil, South America’s largest nation, has been hit with **catastrophic floods** that have killed nearly 400 people in the past few days alone.

From United States: Even the United States has been hit. A **catastrophic winter** has seen 49 of their 50 States covered by **snow**; this has caused unprecedented damage to their crops in Florida, due to freezing weather. And **record setting rains** destroyed massive numbers of crops in their most important growing region, California.

From Korea: And, if you think that things couldn’t get any worse, you couldn’t be more mistaken. South Korea (one of the most important meat exporters in Asia) has just this past week had to destroy millions of farm animals after an outbreak of the dreaded **foot-and-mouth disease** was discovered.

From United States: Just how horrific the global food situation will become this year was made even more grim this past month, when the United States reported that nearly all of their **honeybee and bumblebee populations** have died out; when coupled with the “mysterious” die-off of the entire **bat population** in America, this means that the two main pollinators of fruit and vegetable plants will no longer be able to do their jobs, which lead to crop losses. This report warns that this disaster will be “biblical and catastrophic.”

It is chillingly to note that, after the meeting with Sarkozy, **Obama began implementing his nation’s strategy for keeping the truth of these dire events from reaching the American people; he ordered all U.S. citizens to have an Internet ID, so that they can be tracked and jailed if they begin telling the truth.**

Still more coming: And so today, agricultural traders and analysts warn that the latest revision to U.S. and global stocks means there is no further room for weather problems. A new **cyclone** is preparing to hit Australia, brutal **winter weather** in India has killed nearly 130, and more **snow** is warned to hit America; we’re not even two full weeks into 2011.

The Great Food Crisis of 2011, Foreign Policy, January 10, 2011—As the new year begins, **the price of wheat is setting an all-time high in the United Kingdom. Food riots are spreading across Algeria. Russia is importing grain, to sustain its cattle herds until spring grazing begins. India is wrestling with an 18 percent annual food inflation rate, sparking protests. China is looking abroad for potentially massive quantities of wheat and corn.** The Mexican government is buying corn, to avoid unmanageable tortilla price rises. And on January 5, the UN Food and Agricultural organization announced that **its food price index for December hit an all-time high.**

But, in years past, it’s been bad weather that has

caused a spike in commodities' prices; now the trends on both sides of the food supply/demand equation are driving up prices. On the demand side, the culprits are **population growth, rising affluence, and the use of grain to fuel cars**. On the supply side: **soil erosion, aquifer depletion, the loss of cropland to nonfarm uses, the diversion of irrigation water to cities, the plateauing of crop yields in agriculturally advanced countries, and—due to climate change—crop-withering heat waves and excessive melting mountain glaciers and ice sheets**. These climate-related trends seem destined to take a far greater toll in the future.

There is at least a glimmer of good news on the demand side: The world's population growth, which peaked at 2 percent per year around 1970, dropped below 1.2 percent per year in 2010. But, **because the world's population has nearly doubled since 1970, we are still adding 80 million people each year. Tonight, there will be 219,000 additional mouths to feed at the dinner table, and many of them will be greeted with empty plates. Another 219,000 will join us tomorrow night. At some point, this relentless growth begins to tax both the skills of farmers and the limits of the earth's land and water resources.**

Beyond population growth, **there are now some 3 billion people moving up the food chain, eating greater quantities of grain-intensive livestock and poultry products**. The rise in meat, milk, and egg consumption in fast-growing developing countries has no precedent. Total meat consumption in China today is already nearly double that in the United States.

The third major source of demand growth is **the use of crops to produce fuel for cars**. In the United States, which harvested 416 million tons of grain in 2009, 119 million tons went to ethanol distilleries to produce fuel for cars. **That's enough to feed 350 million people for a year**. The massive U.S. investment in ethanol distilleries sets the stage for direct competition between cars and people for the world's grain harvest. In Europe, where much of the auto fleet runs on diesel fuel, there is growing demand for plant-based diesel oil, principally from rapeseed and palm oil. **This demand for oil-bearing crops is not only reducing the land available to produce food crops in Europe, it is also driving the clearing of rain forests in Indonesia and Malaysia that is used for palm oil plantations.**

The combined effect of these three growing demands is stunning: **a doubling in the annual growth in world's grain consumption** from an average of 21 million tons per year in 1990-2005 to 41 million tons per year in 2005-2010. Most of this huge jump is attributable to the orgy of investment in ethanol distilleries in the United States in 2006-2008.

While the annual demand growth for grain was doubling, new constraints were emerging on the supply side, even as long-standing ones such as soil erosion intensified. An estimated **one third of the world's cropland is losing topsoil faster than new soil is forming** through natural processes—and thus is losing its inherent productivity. **Two huge dust bowls are forming**—one across northwest China, western Mongolia, and central Asia; the other in central Africa. Each of these dwarfs the U.S. dust bowl of the

1930s.

Satellite images show **a steady flow of dust storms in these regions, each one typically carrying millions of tons of precious topsoil**. In North China, some 24,000 rural villages have been abandoned or partly depopulated as grasslands have been destroyed by overgrazing and croplands have been inundated by migrating sand dunes.

In countries with severe soil erosion, such as Mongolia and Lesotho, grain harvests are shrinking as **erosion lowers yields and eventually leads to cropland abandonment**. The result is spreading hunger and growing dependence on imports. Haiti and North Korea, two countries with severely eroded soils, are chronically dependent on food aid from abroad.

Meanwhile **aquifer depletion is fast shrinking the amount of irrigated areas in many parts of the world**; this relatively recent phenomenon is driven by the large-scale use of mechanical pumps to exploit underground water. Today, **half the world's people live in countries where water tables are falling as overpumping depletes aquifers**. Once an aquifer is depleted, pumping is necessarily reduced to the rate of recharge; but if it is a fossil (nonreplenishable) aquifer, pumping ends altogether. And sooner or later, **falling water tables translate into rising food prices**.

Irrigated area is shrinking in the Middle East, notably in Saudi Arabia, Syria, Iraq, and possibly Yemen. Saudi Arabia, which was totally dependent on a now-depleted fossil aquifer for its self-sufficiency in wheat production, is in a free fall. From 2007 to 2010, Saudi wheat production fell by more than two thirds. By 2012, wheat production will likely end entirely, leaving the country totally dependent on imported grain.

The Arab Middle East is the first geographic region where **spreading water shortages are shrinking the grain harvest**. But the really big water deficits are in India, where the World Bank numbers indicate that 175 million people are being fed with grain that is produced by overpumping. In China, overpumping provides food for some 130 million people. In the United States, the world's other leading grain producer, **irrigated area is shrinking** in key agricultural states, such as California and Texas.

The last decade has witnessed the emergence of yet another constraint on growth in global agricultural productivity: **the shrinking backlog of untapped technologies**. In some agriculturally advanced countries, farmers are using all available technologies to raise yields. In Japan, the first country to see a sustained rise in grain yield per acre, rice yields have been flat now for 14 years. Rice yields in South Korea and China are now approaching those in Japan. Assuming that farmers in these two countries will face the same constraints as those in Japan, **more than a third of the world's rice harvest will soon be produced in countries with little potential for further raising rice yields**.

A similar situation is emerging with wheat yields in Europe. In France, Germany, and the United Kingdom, **wheat yields are no longer rising at all**. These three countries, together, account for roughly one-eighth of the world's wheat harvest. Other problems slowing the growth

in the world's grain harvest is **the conversion of cropland to nonfarm uses**, suburban sprawl, industrial construction. Also the paving of land for roads, highways, and parking lots are claiming cropland in the Central Valley of California, the Nile River basin in Egypt, and in densely populated countries that are rapidly industrializing (such as China and India). In 2011, new car sales in China are projected to reach 20 million—a record for any country. The U.S. rule of thumb is that, **for every 5 million cars added to a country's fleet, roughly 1 million acres must be paved to accommodate them**. And cropland is often the loser.

Fast growing cities are also competing with farmers for irrigation water. In areas where all water is being spoken for (such as most countries in the Middle East, northern China, the southwestern United States, and most of India), diverting water to cities means less irrigation water available for food production. **California has lost perhaps a million acres of irrigated land in recent years** as farmers have sold huge amounts of water to the thirsty millions in Los Angeles and San Diego.

The rising temperature is also making it more difficult to expand the world's grain harvest fast enough to keep up with the record pace of demand. Crop ecologists have their own rule of thumb: **For each 1 degree Celsius rise in temperature above the optimum during the growing season, we can expect a 10 percent decline in grain yields.** This temperature effect on yields was all too visible in western Russia during the summer of 2010 as the harvest was decimated when temperatures soared far above the norm.

Without sufficient ice melt of mountain glaciers, the grain harvest would drop precipitously and prices would rise accordingly. However, another emerging trend that now threatens food security is **the excessive melting of mountain glaciers**. This is of particular concern in the Himalayas and on the Tibetan plateau, where sufficient ice melt from glaciers helps sustain the major rivers of Asia during the dry season (such as the Indus, Ganges, Mekong, Yangtze, and Yellow rivers), and also the irrigation systems dependent on these rivers.

And finally, over the longer term, melting ice sheets in Greenland and West Antarctica, combined with **the thermal expansion of the oceans, threaten to raise the sea level** by up to six feet during this century. Even a three-foot rise would inundate half of the riceland in Bangladesh. It would also put under water much of the Mekong Delta that produces half the rice in Vietnam, the world's number two rice exporter. Altogether there are some 19 other rice-growing river deltas in Asia, where harvests would be substantially reduced by a rising sea level.

The current surge in the world's grain and soybean prices, and in food prices more broadly, is not a temporary phenomenon. We can no longer expect that things will soon return to normal; because, in a world with a rapidly changing climate system, there is no norm to return to.

The unrest of these past few weeks is just the beginning. **It is no longer conflict between heavily armed su-**

perpowers; but, it is the spreading food shortages, rising food prices, and the political turmoil that threatens our global future. Unless governments quickly redefine security and shift expenditures from military uses to investing in climate change mitigation, water efficiency, soil conservation, and population stabilization, the world will be facing a future with more climate instability and food price volatility. If business as usual continues, food prices will only trend upward.

Food Costs at Record High as UN Warns of Volatile Era, Reuters, February 3, 2011—Record high global food prices showed no sign of relenting following a rash of catastrophic weather, highlighted by a major U.S. snowstorm and a cyclone in Australia, which could put yet more pressure on prices and spark further unrest around the world.

The closely watched **UN Food and Agriculture Organization Food Price Index on Thursday touched its highest level since records began in 1990.** "These high prices are likely to persist in the months to come," FAO economist and grains expert, Abdolreza Abbassian, said in a statement.

Surging food prices have helped fuel the discontent that toppled Tunisia's president in January and that has spilled over to Egypt and Jordan, raising expectations that other countries in the region would secure grain stocks to reassure their populations.

World Bank President, Robert Zoellick, urged global leaders to "put food first" and wake up to the need to curb price volatility.

Catastrophic storms and droughts have been battering the world's leading agriculture countries in recent months, including **flooding and a massive cyclone** in Australia and **a powerful winter storm** that swept across parts of the United States.

Dubbed "Stormageddon," **one of the biggest snowstorms in decades dumped up to 20 inches of snow in some parts of the U.S. grain belt** this week, paralyzing the grain and livestock movement. Meanwhile, more cold weather in the U.S. Plains ignited concerns that the region's winter wheat lacked adequate insulating moisture.

"Today's announcement by the Food and Agriculture Organization should ring alarm bells in capitals around the world," said Gawain Kripke, a policy and research director for Oxfam America, an international development group. "2008 should have been a wake-up call, but I'm not yet sure all the countries in the world that we need to support this have woken up to it," the World Bank's Zoellick said.

The *UN World Food Programme's* executive director, Josette Sheeran, said the world is now in an era where it has to be very serious about food supply. "If people don't have enough to eat, they only have three options: They can revolt, they can migrate, or they can die. We need a better action plan," she said.

— vf