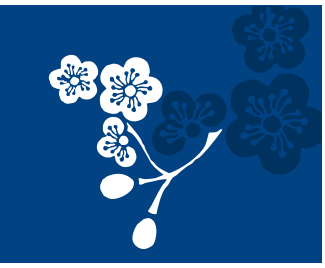


Anatomy of a Rice Crisis

By John Berthelsen

Asia Sentinel editor John Berthelsen provides a case study of how geography, a burgeoning population and a corrupt and inattentive government in the Philippines have defined the country's vulnerability to rice shortages.

But the latest crisis over rice supplies, he argues, was more the product of panic than reality.

ON NOVEMBER 9, 2007, far to the southwest of the Andaman Islands in the Bay of Bengal, weather observers began to notice an area of disturbance near the Nicobar Islands. The India Meteorological Department designated it Depression BOB 09 on November 11; shortly later they upgraded it to Tropical Cyclone 06B.

Ominously, 06B intensified into a deep depression as it moved. It would be upgraded again to Cyclonic Storm Sidr, a name contributed by Oman to the annual rota of storm names and taken from the Arabic name for a tree, Ziziphus spina-christi, or Christ's thorn.

Driving almost directly north, Sidr was classified as a super typhoon on November 13. With winds peaking at 260 kilometers an hour, it slammed into Bangladesh with sustained winds of 215 km/h. Despite early warnings and effective large-scale evacuations, Sidr killed at least 3,447 people, according to the Bangladesh government, although Save the Children and the Red Crescent Society estimate that the death toll may actually be as high as 10,000.

The storm also reduced Bangladesh's annual rice harvest by 1.4 million to 2 million metric tons, requiring the government to import up to 3.5 million tons over its normal shortfall of 2 to 2.4 million. This proved to be the catalyst that would result in a global crisis for rice, a staple for half the world's population. As far away as the United States, the consumer giant Wal-Mart would eventually limit sales of rice on its shelves. In Taiwan, shoppers fought over bags of rice. In Hong Kong, shelves magically emptied of rice. Food riots would begin in countries as

diverse as Bangladesh and Cote d'Ivoire and, on April 13, bring down the Haitian government.

Declines in the rate of growth in rice production, diminishing amounts of rice land, increasing fuel costs, flagging attention to irrigation systems in several countries, drought in Australia and in the central and northern rice bowl of Luzon in the Philippines, pest problems in Vietnam—all of these factors, complicated by panicking governments, came together at once to drive up prices and create the impression that a global shortfall was imminent.

From November 2007 to April 2008, the price of rice skyrocketed from about US$300 a ton to as much as US$1,100 although some governments couldn't buy it at any price. The Philippines had to withdraw a rice tender in April because of high prices and lack of supply.

The situation is a textbook example of how interlocked the world's food markets are. Despite the fact that only 10 percent of the world's rice is traded internationally and that most of it is grown by barefoot men and women on tiny plots and seeded by hand, governments began to shut down rice supplies across the world.

On January 8, 2008, India, the third-largest rice exporter after Thailand and Vietnam, banned exports of non-basmati rice. Egypt followed on January 17, cutting exports from 1.1 million metric tons to 800,000. On February 20, Venezuela's Rice Milling Association announced that imports would be needed to meet market demand. China banned exports the next day, followed by Cambodia on March 26. On April 8, an increasingly nervous Egypt reinforced its previous, porous ban, suspending exports for six months. On April 15, Indonesia announced plans to ban foreign sales of its rice because smugglers were seeking to exploit higher prices outside the country. Three days later, Kenya announced that 20 percent of its rice area had been lost to a plant fungus.

And so it went. Then, on April 27, weather observers began to observe yet another storm in the Bay of Bengal, one that would dwarf Sidr. Cyclone Nargis—an Urdu word for daffodil—hit the Irrawaddy River Delta on May 3 and turned into the most destructive natural disaster in Burma's history. A wall of water 12 to 15 feet high, undeterred because mangrove swamps along the coast had been torn out for seafood farms, raced 25 miles inland, sowing unimaginable destruction. The Burmese government estimated a toll of about 90,000 dead and 56,000 missing. That figure has since been updated to about 130,000 dead.

Nargis also wrecked as much as 65 percent of Burma's rice crop—at least 200,000 hectares of the Irrawaddy Delta are ruined for planting in 2008. Hitting just a few days after the harvest was completed, Nargis also wiped out much of the crop in warehouses.

Burma had contracted to sell 600,000 tons of rice to Sri Lanka and Bangladesh. Now it was either going to starve its own people or require the import of as much as 1.5 million tons. And, almost simultaneously, it became known that North Korea was facing another acute famine that would require aid agencies to deliver as much as a million tons of grains—rice or otherwise.

Sitting and watching all this was the Philippines, a country of 90 million people, a large percentage of whom are poor and subsist on government-subsidized rice. A shaky government, prone to panic by its own weak hold on power, went hat in hand to countries around the globe, seeking to buy as much as 500,000 tons at a sharply increased price. This created a fast-buck opportunity for traders in Indonesia, where prices are controlled, to smuggle the commodity out through Singapore for eventual sale in the Philippines.

Rice in government-controlled storage in Indonesia was selling for US$436.80 per ton at a time when the Philippine government and rice traders were offering up to US$1,100 in Vietnam and Thailand. The skyrocketing price and the attendant smuggling opportunities generated political concern in both countries, with Indonesian President Susilo Bambang Yudhoyono ordering government officials to stop the smuggling before rice shortages in Indonesia caused political unrest. Politicians in the Philippines also warned of unrest.

PHILIPPINE RICE DISAPPOINTS

The story of Philippine rice is a dispiriting one. This was where, in the 1960s, the International Rice Research Institute, a three-hour drive south of Manila, funded largely by the Carnegie and Ford Foundations, developed so-called Miracle Rice. The first and most famous variety was known as IR8, a high-yielding, short-statured rice plant about 120 cm tall that didn't fall over in storms. IR8 was so productive that Philippine yields on test plots averaged 9.4 tons per hectare against average yields of about 1 ton per hectare, according to a history of IRRI by Tom Hargrove and W. Ronnie Coleman. As IRRI rice spread across Asia, an Indian farmer named K.N. Ganesan was so impressed that he named his second son IR8 in honor of the new variety.

The research institute's reputation grew to the point were Philippine strongman Ferdinand Marcos ordered the production of as much IR8 as possible, vowing to make the country self-sufficient in rice. During the last half of 1966 alone, according to the history by Hargrove and Coleman, 2,359 Filipino farmers came to IRRI "by bus, on bicycle, and on foot, from 48 of the country's 56 provinces, to get seeds."

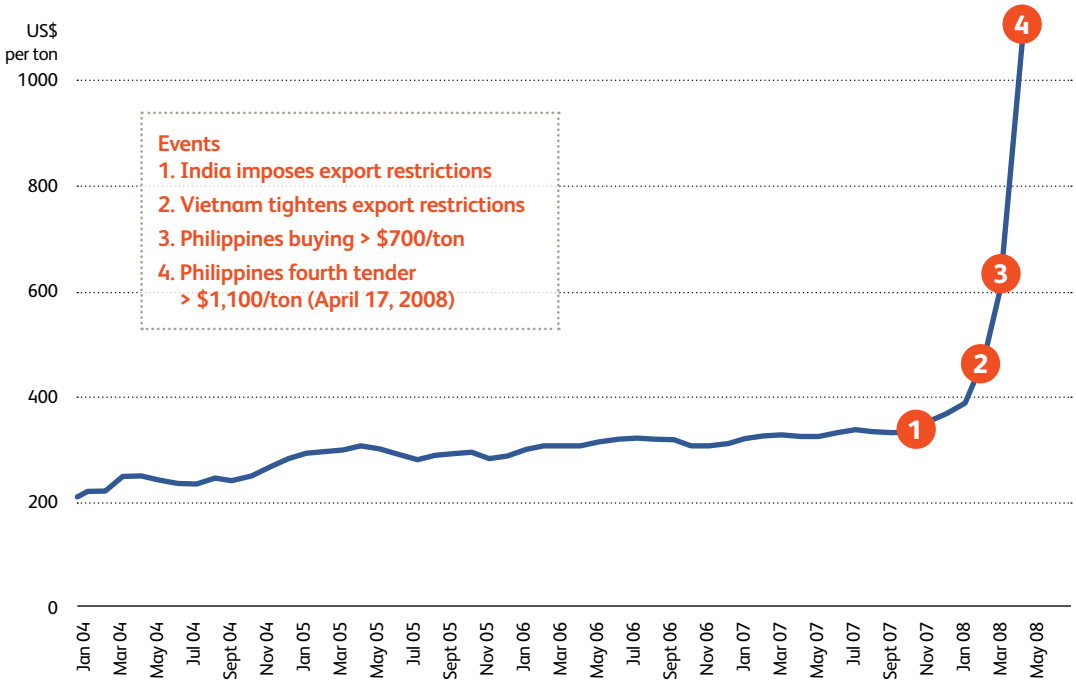
Because IR8 had disadvantages, including a chalky grain and high breakage, the institute continued to develop new strains that ultimately revolutionized rice production worldwide. It eventually did make the Philippines self-sufficient in rice until 1993, when it turned into the net importer it remains to this day.

This is unlikely to change. The Philippines is the victim of three forces: geography, a burgeoning population and a corrupt and inattentive government.

It is an archipelagic country of 7, 107 islands, very few with the topography crucial to growing rice. The country has only 4.07 million hectares of rice land compared with 10.2 million in Thailand, which has a largely stable population of 65.5 million people. Vietnam has 7.32 million hectares in Vietnam to feed its population of 86

FIGURE 1 RICE EXPORT PRICE, 2004-08, THAI 100B

Source: USDA, FAO



million. They are the world's No. 1 and No. 2 rice exporters, respectively.

The 90 million people of the Philippines are more than 80 percent Roman Catholic and population growth is essentially unchecked by the government, which fears offending powerful church leaders. Consequently, numbers are growing inexorably—more than 1.72 percent annually, from 85.2 million people in 2005 to 86.2 million in 2006 to 88.7 million in 2007. Three babies are born every minute according to PhilRice Executive Director Leocadio S. Sebastian, who wrote that despite increases in rice production, supply cannot keep pace with population growth. Some 34.1 percent of the population is under the age of 14. The population was expected to exceed 92 million in July 2008.

In fact, Filipino rice farmers are relatively productive when measured against the rest of Asia, producing about 3.84 tons of rice per hectare against Thailand's 2.69 tons, according to Duncan Macintosh, a former spokesman for IRRI, although Thai farmers tend to go for high quality instead of high yield. Indonesia is higher, Burma, India and Bangladesh somewhat lower. The world average is 4.02 tons per hectare, according to the US Department of Agriculture.

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MACHINERY VERSUS TRADITION

What mechanized farming could achieve is dramatic. The United States, the world leader in rice production per hectare, averages 8.2 tons, largely due to planting and fertilizing precisely by using the global positioning system (GPS). Massive laser-guided machines level paddies to a millimeter of elevation to preserve water and ensure even growth. Farmers also plant high-yielding—and high-priced—species of rice, while the US government, particularly in California, subsidizes irrigation water so that farmers in the upper Sacramento Valley can plant rice on what was once essentially a desert. Vast milling machines and gas-powered rice dryers ensure a uniform crop.

By contrast, across much of Asia, including the Philippines, farmers still plant seedlings by hand, depending on tropical heat and plentiful rainfall to boost production. They dry their rice on roadbeds and town squares. They bag it in substandard containers, resulting in insect and moisture damage.

The endemic corruption that nearly wrecked the country during the Marcos years and beyond is partly responsible for the poor agricultural standards. The Philippines is tied with four other countries for No. 131 out of 180 in Transparency International's world perception index of corruption. According to a study by Jennifer Guste, a senior researcher with the IBON Foundation, a research group in Manila, "Production tools are outdated, almost all farms are not mechanized, more than half are not yet irrigated, and most of all, seven out of 10 peasants are still landless. Despite three agrarian reform programs, land is still in the hands of a few families who control not only land but also trade and marketing."

After decades of failed promises on land reform through successive administrations, starting in 1963 when her father was president, in June, President Gloria Macapagal Arroyo proposed 100 billion pesos in funding to extend the current land reform program for another five years to complete the handover of farms to farm workers. According to the country's agrarian reform department, 2.17 million hectares

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out of 9.12 million hectares covered by the latest law, passed in 1988, remain to be redistributed. Much of the land remains under litigation, with disputes between landowners and the government continuing. Any hope of completing reform seems distant. The Philippines has also earmarked US$964 million for irrigation. Although it might do better to repair existing irrigation systems, there are fewer votes and pork in that. Irrigation systems have fallen into disrepair because, as one analyst put it, "It's more profitable in terms of graft to build new systems than it is to maintain old ones." In addition, the kind of mechanization that produces outsize yields in the US and the European Union is problematical in Asia, where not only is the level of mechanization lower but farm sizes are often no more than half a hectare and economies of scale are simply unavailable.

"The sort of mechanization that can help on a wide scale is often simple," says Adam Barclay, a spokesman for IRRI. Indeed, IRRI continues work on pushing up yields—not just through genetically superior strains of rice, but through "mechanizations" so rudimentary that they seem heartbreaking. The institute developed a simple seeder consisting of six to eight plastic drums along a central axis and mounted on wheels. Each drum is studded with holes through which already-germinated seeds drop

in rows as a single individual pulls the device along by hand. The cost, according to IRRI, is just US$40, and it lasts for six to eight years.

Trials of the device in Bangladesh by IRRI's Social Sciences Division in 2005 pushed up yields on average by 18 percent and increased returns by 21 percent over transplanted seedlings—resulting in a boost of US$120 to US$150 per hectare per crop in profits. Importantly, the drum seeder requires only two person-days to plant a crop, compared to 50 when farmers and their wives and children plant seedlings by hand. The drum seeder also has been extremely successful in Vietnam, Barclay says.

In addition, IRRI has developed simple flatbed dryers so that farmers don't need to dry their rice on roadbeds, with the concomitant loss and spoilage of as much as 30 to 50 percent of their crops. The dryers, developed to burn rice husks instead of kerosene, have been constructed by farmers' associations in Burma, Laos, Thailand and Indonesia although they are spreading slowly.

Finally, IRRI has what it calls the IRRI Super Bag, able to store up to 50 kilograms of rice and costing less than US$1.20 per bag. Properly sealed, the bag cuts oxygen levels inside from 21 percent to 5 percent, reducing the number of insects to less than 1 per kilo of grain without using insecticides.

The problem is getting these simple implements into the hands of the millions of farmers across Asia.

CRISIS? WHAT CRISIS?

IBON and others argue that globalization and privatization have exacerbated the situation in the Philippines, driving farmers off the land. Whether that is true, rice production has continued to increase within the constraints of geography and corruption. But in May, the Philippines began to discover that maybe there wasn't that much of a crisis after all. The country, it turned out, had 54 days of rice stocks in storage, nearly double those of China and four times those of India, both of which are rice exporting nations.

India, it appears, is set for a record crop—2.5 million metric tons more than was estimated in July 2007. The Philippines itself revised its crop projections upward by nearly 400,000 tons. Global crop estimates are up by 4.5 million tons from last year. "Panic was a factor, both in terms of export restrictions, and imports, but the underlying issues were the leveling of growth and productivity which got us to this point, where we are consuming more than we are producing," IRRI's Adam Barclay says.

But in the Philippines and elsewhere politicians wanting to avert shortages and political trouble panicked and turned to the public coffers to spend money on rice. When Cambodia announced in early June that it would lift its export restrictions, prices fell dramatically and they have continued to drift downwards. While they are almost certain to never go back to the US$300 a ton level before the panic drove prices up by 174 percent this year alone, they can be expected to remain far below the US$1,100 a ton they hit on the spot market in April.

In response to these price increases it helped in part to generate, in June the Philippines ordered the release of at least 1.2 million metric tons of rice stockpiles to "flood the market," in the words of one official, with the aim of forcing down local prices. Meanwhile, ASEAN's record rice production, even with the natural disaster in Burma, is expected to give the region a 5.1 million ton surplus. The crisis, it seems, has evaporated.

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