IRRI
INTERNATIONAL RICE RESEARCH INSTITUTE

IRRI RESEARCH BRIEF 2

The Financial Crisis: Short- and Long-Term Impact on Rice Food Security

December 2008

In the October-December 2008 issue of *Rice Today*, I wrote a short brief on the aftermath of the rice crisis to highlight the 2008-09 supply and demand situation and the long-term challenges ahead in terms of meeting future demand growth. It seems ages since I wrote that brief because things have changed so drastically in the past few weeks. The world has graduated from a smaller food crisis to a much bigger economic crisis, dubbed by many as the "worst financial crisis in human history." Global equity markets have been shredded and commodity prices are in a free fall.

The price of crude oil (WTI-Crushing, Oklahoma), which rose to an all-time high of US$145 per barrel on 14 July 2008, was driven down to $44 per barrel on 15 December 2008, a drop of 70% in less than six months, due to the slowdown in economic growth in the U.S. and other parts of the world. Things are no different on the crop side. Since reaching their peak earlier this year, wheat and rice prices have been dropping like a rock (Figure 1) in response to record production worldwide. The price for 100% Grade B Thai rice fell to $574 per metric ton on 11 December 2008 compared with a whopping $1,080 per metric ton reached in April 2008. Apart from record production and the economic slowdown, the downward push of commodity prices has been worsened by the action of speculators to sell their futures positions to free up cash in the face of the credit crunch. A strong U.S. dollar has also played a part in weakening commodity prices in recent months.

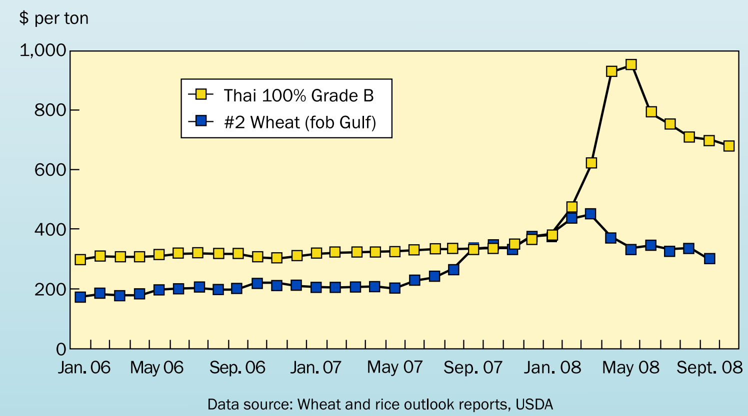

Fig. 1. Monthly average grain prices.

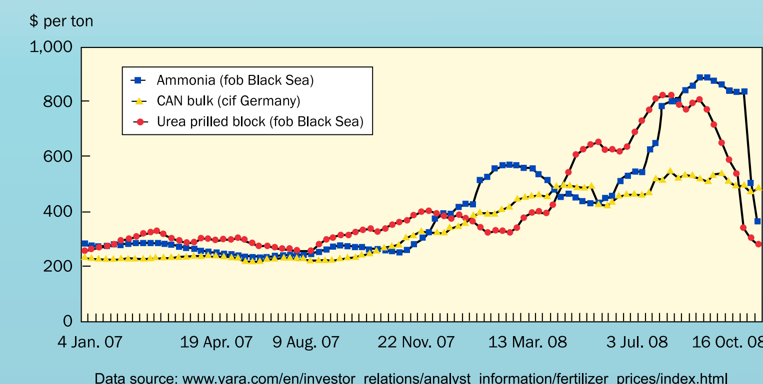

Fig. 2. Daily fertilizer prices at weekly intervals.

Following crude oil and agricultural commodities, fertilizer prices, particularly for urea and ammonia, have also plummeted in the past few weeks after reaching record highs in the second and third week of September (Figure 2). The price for ammonia declined by around 70% from around $880 per metric ton in early September to $243 per metric ton in the last week of November 2008, with the biggest one-week drop of $330 in the third week of October. Similarly, the price for urea also declined by approximately 71% during the same period.

Short-Term Impact

The meltdown in commodity prices may have caught many farmers off guard, who just harvested a low-price crop produced with high-priced inputs (Ray 2008). Burned once, these farmers are likely to play it safe and may reduce input use for their 2009 crops in order to avoid expensive credit. Although the fertilizer prices have dropped significantly in recent weeks, the credit crunch will also make it difficult for farmers around the world to secure credit for purchasing inputs such as seeds and fertilizer. This has been echoed by farmers globally in reports published during the past few weeks. In a Bloomberg report published on 27 October 2008, Brian Willot, a former colleague of mine at the Food and Agricultural Policy Research Institute, now a 2,000-acre soybean farmer in Brazil, summed up the current situation in one sentence: "Credit has completely dried up for the financially weak farmers and it comes with a high cost for the financially strong farmers." Based on this report, Cargill and Archer Daniel Midland (ADM) have stopped financing for growers in Brazil. The vice-president of the national maize producers association of Brazil projected that maize production may drop 20% because farmers can't get loans to buy fertilizer. The report also mentioned an earlier statement from the president of the Russian Grain Union that interest rates on farm loans have increased by more than 50% in the past few months. Although the credit crisis is yet to hit U.S. agriculture seriously, the extent of its impact will be apparent when the Prospective Planting Report by the USDA comes out at the end of March 2009.

In a recent interview with the "Manila Standard Today," the executive director of the Philippine Rice Research Institute, Dr. Ronilo Beronio, lowered next year's production estimate by around 3.8% because of lower input use. I expect to hear similar news from other rice-producing countries in the coming weeks. Production uncertainty due to tight credit and declining rice prices combined with strong demand growth points to rising rice prices in the coming year, with high volatility.

How Does This Affect Long-Term Rice Food Security?

The recent crisis in the rice market has done a world of good in terms of exposing fundamental imbalances in supply and demand since 2000. In the last five of the seven years, rice consumption has exceeded production, resulting in a frequent dipping into the buffer to finance the shortfall. The recent rise and fall in rice prices does nothing but reaffirm the high degree of price volatility arising out of the historic low level of global rice stocks.

The world has produced a record rice crop in each of the past four years, with most of the increase coming from area expansion rather than yield growth (Figure 3). This slowdown in rice yield growth is not a recent phenomenon but has been in place since the early 1990s. Years of negligence for rice research and infrastructure development that go as far back as the early 1980s have started to show their true color. The glimmer of hope created by the recent food crisis in turning the world's attention to rice appears to be fading away with the looming financial crisis, which is likely to tighten the capital flow into agricultural infrastructure improvements and other research and development activities even further.

Making matters worse, the economic slowdown might in fact increase the demand for staples such as rice and wheat in developing countries as poor people switch back to less expensive food items in the face of falling income. Depending on the extent of the economic slowdown, consumption projections may rise higher than our earlier estimate of 90 million tons of additional rough rice by 2020.

High Time to Bring Our Act Together

Our director general, Dr. Robert Zeigler, during an interview with Bloomberg, pointed out that rice prices have been rising since 2000 because we have failed to invest in agriculture and further negligence can prove to be very negative in the long run. It's not difficult to understand that the supply and demand situation does not add up for rice. In the past few years, demand growth has been met by adding more area into rice production. It is very unlikely that the recent trend will continue in the future, with rice area already at a historic high.

With no interventions, one can expect rice prices to continue to rise in the future at an even faster pace than what we have witnessed since the beginning of this century. The solution lies in revitalizing rice yield growth through higher investment in research and infrastructure development. The nine-point program of short- and long-term interventions developed by IRRI is a good example of urgent actions that need to be taken by donors, international organizations, and national governments to improve yield now and in the future (detailed information regarding the nine-point program can be found at http://solutions.irri.org/images/the_rice_crisis.pdf).

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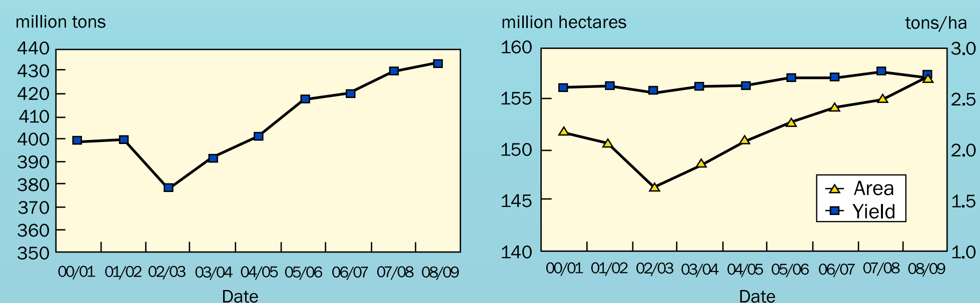

Data source: Production, supply, and distribution database, USDA

Fig. 3. Source of rice production growth in the 21st century.

The International Rice Research Institute (IRRI) was established in 1960 by the Ford and Rockefeller Foundations with the help and approval of the Government of the Philippines. Today, IRRI is one of the 15 nonprofit international research centers supported, in part, by members of the Consultative Group on International Agricultural Research (CGIAR – www.cgiar.org) and a range of other funding agencies.

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