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Roar of the dragon: The Asian upside for U.S. agriculture commentary on the rural economy*

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Handbook Updates

For those of you subscribing to the handbook, the following update is included.

Livestock Planning Prices – B1-10 (1 page)

Suggested Closing Inventory Prices C1-40 (2 pages)

Financial Terms – C3-05 (10 pages)

Twelve Steps to Cash Flow Budgeting – C3-15 (7 pages)

Analyzing a Cash Flow Statement – C3-16 (2 pages)

Your Net Worth Statement – C3-20 (5 pages)

Analyzing a Net Worth Statement – C3-21 (2 Pages)

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Despite a recent pull back, U.S. agricultural commodity markets have been on a strong run in 2004. A key factor in setting a bullish tone in the markets has been China. Not only does the nation have more than a billion mouths to feed, but strong economic gains have left millions of Chinese consumers clamoring to improve their diets. In most cases, that means eating more protein and less rice.

That shift is good news for U.S. agriculture, since two of its fortes are growing feedstuffs and meat. The China effect was evident not only in the price run-up, but also in the recent pullback. Agricultural prices slid after China announced in late April that it would rein in its economy out of fears of mounting inflation.

The roar of the China market has clearly been felt in 2004, and current projections suggest the market could become a big source of demand over the next ten years. Many market observers wonder if the same is true of India—a nation projected to overtake China’s population within the next two decades. But current projections suggest the answer is no. Despite India’s huge population and steady growth in incomes, its consumers are much more reluctant to shift away from diets that are even

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more heavily based on cereal grains than in China.

China's roar: A classic growth market for U.S. agriculture

China is well on its way to becoming a classic growth market for food. This growth model has been the dominant push behind U.S. agriculture's export success over the past 50 years. In most developing economies, improving diets is the number one priority of consumers. As incomes rise, a big share of every new dollar of income is spent on better food, which typically means buying more processed foods and substituting meat products for cereal-based subsistence foods. In China, for instance, roughly a third of every new dollar of income is spent on food, and meat is a major target for much of the new spending. In developed nations like the United States, on the other hand, less than 10 cents of every new dollar of income goes to food.

China is now receiving a lot of attention in U.S. agriculture because some market analysts argue that, for the first time, its roar is helping to drive commodity prices. The soybean market is a case in point. China is now the number one market for U.S. soybeans—\$2.9 billion in 2003, and more than a third of all U.S. soybean exports. While some of the new soybeans are exported in processed foods, most of the soybeans end up as a protein supplement in livestock feed. This demand for soy feedstuffs is a clear indication that the shift in Chinese diets toward more meat is having a very real impact on the nation's agricultural imports.

U.S. soybean prices clearly reflect the Chinese market. Prices topped \$10 a bushel in May, due in part to a booming Chinese market. China's soybean imports have essentially quadrupled over the past five years, and China now represents the single biggest soy importer in the world. A revealing feature of the strength of Chinese soybean demand is that purchases continued a pace in the first half of this year in spite of record prices.

Soybean prices have softened markedly in recent weeks. Chinese officials announced a plan to reduce demand through new limits on credit and other measures. Though other factors probably also contributed to a dip in prices, most commodity analysts continue to believe that the course of the Chinese economy will remain a key influence on soybean and other crop prices.

The outlook for the Chinese market

What is the long-term outlook for the Chinese food market, and what opportunities does it pose for U.S. agriculture? Most experts agree that China's economy will continue to grow at a healthy pace in coming years, though perhaps not as fast as the torrid 8 percent pace of the past half-decade. Moreover, a huge portion of China's population is expected to migrate from rural to urban areas in the years ahead in pursuit of better economic opportunities. Estimates vary, but many experts believe that more than 500 million people may move from rural areas to China's cities in the coming decade. This represents a huge shift from subsistence farming to active buyers of food. Together, the rising incomes and urban migration point to potent growth in food demand. Analysts generally agree that China's agricultural sector, though growing more productive, will be unable to meet all the new demand for food. In short, China will be an active buyer in world food markets.

Over the next decade, Chinese consumers will be buying a different market basket of food. Rice consumption, long the staple of the Chinese diet, will drop about 10 percent as meat consumption rises. Chinese consumers already eat a lot of pork, but consumption is expected to rise about a sixth. Poultry consumption is projected to jump about a quarter, while beef demand could surge nearly 40 percent. Beef is the most expensive meat to produce, and rising demand for beef is a beacon of richer consumers.

Together, these shifts in consumption will open new doors for producers elsewhere in the world.

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Again, soybeans provide a good illustration of the potential. In the current marketing year, China will import about 20 million tons of soybeans, with more than a third coming from the U.S. The Food and Agricultural Policy Research Institute projects that China's soybean imports will roughly double in the next ten years. U.S. soybean producers may not capture all the growth, of course. South American soybeans are now cheaper than U.S. soybeans, and Chinese buyers now favor them as a result. In short, Brazil and Argentina may retain their edge in the Chinese market.

The outlook may be brighter for other U.S. crops. China's corn imports are projected to grow fourfold over the next ten years, while wheat imports could jump twelvefold. Beef imports could rise tenfold, with pork up eightfold. In every case, the U.S. is well-positioned to capture a significant share of the growth. Overall, that is good news for the Heartland, since these commodities are big parts of Heartland agriculture.

The outlook for the Indian market

India's impact on global markets is often compared to that of China. Its billion plus population continues to grow; poverty rates, while still high, are falling; and a more affluent middle class is the fastest growing population group. Over the next decade, India's economy is expected to grow at a rate comparable to the healthy rate of the last two decades. Together these trends will shape the country's demand for agricultural products going forward, just as they have in China. However, while the economic trends are similar to those in China, India is a much different food market, and the implications for U.S. agriculture are quite different as well.

India's consumers are very sensitive to both economic and cultural factors when it comes to food consumption. India has a large vegetarian population, which will limit gains in meat consumption, especially when compared to China. In addition, beef and pork are not widely

accepted by Indian consumers, partially due to religious preferences. But beef and pork are also expensive protein alternatives, and because India's consumers still spend a large share of their income on food, price remains an important factor. Consumption of animal products accounted for only 8 percent of calories in Indian diets in 2001. And per capita consumption of beef is projected to grow only slightly to a mere 1.6 kilograms in 2013.

Rising incomes have led to more protein consumption in the form of poultry, eggs, milk, and vegetable oils, which are a better fit for the dietary preferences of the country's population. Poultry was not a part of Indian diets 15 years ago, but it has gained popularity and consumption has grown an average of 18 percent in each of the last five years. Although per capita consumption remains rather low, poultry consumption in India is projected to grow nearly 50 percent in the next ten years. Milk consumption has risen steadily as Indian consumers improved their diets, and the trend is expected to continue. Edible oils are also a growing market as consumers demand more convenience foods and foods cooked with oils. Consumption of edible oils in India has grown by more than 80 percent in the last decade.

For a variety of reasons, therefore, India's growth will have much different impacts on world markets than China's. Agricultural policies in India have a history of protecting domestic production and creating barriers to imports. Recent projections suggest that India will satisfy much of the growth in meat, poultry, and milk demand in the next decade with domestic production. However, India has been unable to meet its rapidly growing demand for edible oils with domestic production, and the country increasingly relies on imports. India is now the largest market in the world for edible oils—more than 70 percent of its edible oil imports are palm oil, while a fourth are imports of soybean oil. Trade restrictions in India have eased considerably in recent years, but high tariffs still remain on many products. Still, the

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growing imports of consumer-oriented food products in India illustrate the strengthening purchasing power of consumers.

India's growing population and more affluent consumers certainly create opportunities for producers in other countries to meet the changing food demand. Producers in the United States, however, will continue to have limited opportunities to export to India because of the relative prices of U.S. products. Many U.S. products are simply not competitive in the price-sensitive Indian market. U.S. exports of cotton and nuts to India have been on the rise, but few other products have enjoyed consistently higher demand there.

Capturing a piece of the Asian market

The growing affluence of consumers in China and India is creating new markets for higher value food products. Demand in China is already spurring sharp increases in food imports. India's food imports have been more modest and trade tends to be limited to selected commodities. U.S. producers will certainly find opportunities to export to these growing markets, especially in China, but navigating the new trade winds could be tricky.

U.S. commodities face mounting competition from countries with lower production costs. Although China is a huge market for soybean exports, the U.S. share of growth in this market will be limited as China will likely purchase lower cost soybeans from South America and elsewhere. India appears to be even more price sensitive than China, and therefore imports of U.S. food products may be limited, at least in the near term.

Infrastructure improvements in both countries will be important for facilitating trade. Inadequate transportation and storage can add significant costs and increase retail prices for

consumers. China has made large investments in its infrastructure, allowing its producers in remote areas more access to external markets, while at the same time making it easier for China to receive and distribute imports.

India, on the other hand, lags behind in infrastructure and marketing system investments. Although consumers are demanding more diversified products, improvements in India's food system from the farm to the retail level are crucial if these changing demands are to be satisfied with either domestic production or imports. Production practices are lagging, processing facilities are scarce, and small food shops are still the primary retail food outlets. Adequate investments have yet to be made to improve the production, distribution, and marketing of food in India.

Trade relationships and agreements will play a large role in trade with China and India. China is clearly a large consumer of food products and can quickly influence world prices, as they did recently in the U.S. soybean market. Longer term, though, new trade agreements that give U.S. food products unfettered access to these huge markets will have a big impact on U.S. agriculture's exports.

Perhaps the brightest prospects for the U.S. in the growing Chinese and Indian markets are in higher value and consumer-oriented foods. High land and labor costs increasingly hinder U.S. competitiveness in commodity markets. However, the U.S. is a leader in responding to consumer preferences. China and India are two new, exciting markets whose consumers will have more sophisticated tastes as they move up the income ladder. Fulfilling these preferences with products that satisfy cultural preferences at the same time could be the key to tapping new markets.



Iowa and Mexico: The corn connection

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Iowa and Mexico have some obvious differences: climate, land resources, and language, for example. But what do Mexico and Iowa have in common? The answer is a long and important relationship to corn.

Central Mexico was probably the birthplace of the corn plant, as it evolved from pre-historic plants such as *teocinte* and others. When the Spaniards arrived they found that the Mayan and Aztec nations depended on corn as a staple in their diet, even though the crop was unknown in Europe at that time. Corn was deeply ingrained in the religious life of the Aztecs, and was represented by an important deity named *Centeotl*. Corn is still an important part of the Mexican diet. It is found in traditional foods such as tamales, tortillas, and enchiladas as well as in snack foods such as corn chips and corn flakes.

Corn production in Mexico

Why does all this matter? As we observe the 10th anniversary of the North American Free Trade Agreement (NAFTA), which includes the United States, Mexico and Canada, trading of corn and other agricultural products has become an important and sometimes controversial topic. Canada and Mexico are now the first and second leading buyers of U. S. farm products.

This spring a group of Iowa State University students traveled to Mexico to learn first hand about our southern neighbor. Instructors for the class were William Edwards and Sergio Lence, professors of agricultural economics at ISU. The group was hosted by the Autonomous University of Chapingo, Mexico's largest public agricultural university. Over 7,000 students study all aspects of agriculture there. Tuition depends on family income. Many of the students come from poor villages and pay nothing at all to study. However, the entrance exams are rigorous.

Years ago much of the land around Mexico City was planted to corn. Some of it was grown on small islands and irrigated from canals originally built by the Aztecs. Today much of this land has been taken over by houses, streets and businesses. Land that is still cultivated has been shifted to other crops. Where water is available, intensive horticultural production helps supply some of Mexico City's 20 million people with fresh vegetables. Farther from the city, the dry hills are planted to *nopal*, a type of cactus that is a staple in the diets of many Mexicans. The leaves can be boiled or steamed, and the fruit can be made into preserves, salsa and other products. The class visited the office of *Espina de Oro*, a small cooperative of *nopal* producers who are looking for markets for innovative products such as marmalade and salsa.

Overall, the area planted to corn in Mexico peaked in 1994, and has decreased by 10 percent since then. Interestingly, yields have increased enough to offset the smaller area, and total production has stayed nearly constant. Price controls on corn and corn products have been lifted. The farm level price of corn has dropped, while the cost of corn products such as tortillas has risen. This has caused considerable dissatisfaction for both producers and consumers.

In eastern and southern Mexico, researchers and extension specialists are searching for alternative crops to corn. Possibilities include avocados, kiwi fruit, macadamia nuts, and other perennials. However, many of these crops take several years to become established. Moreover, they are less labor intensive than corn. In one village that the students visited, a high percentage of the young men had left and gone to the U.S. to work, because they could not find profitable employment in the region.

Most of these changes are occurring in the less productive southern states, where corn has

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traditionally been raised for family consumption first and for the market second. Yields in the states of Chiapas and Guerrero, for example, averaged about 27 bushels per acre in 2003, compared to 143 bushels per acre in the northern state of Sinaloa, where irrigation is available.

Exports have increased

Exports of corn from the United States to Mexico have doubled since the implementation of NAFTA. The U.S. sold 5.6 million metric tons of corn to Mexico in 2003, 13 percent of total U.S. corn exports. Most of that was yellow corn, which was used for livestock feed. As a result of higher personal incomes, consumption of meat in Mexico have increased substantially over the last decade, and Mexican livestock producers have expanded their herds.

Iowa manufacturing businesses are also hoping to cash in on the lower trade barriers. The ISU students visited with Jose Antonio Jimenez of Trade Management Services, a consulting company that works with the Iowa Department

of Economic Development to find markets for Iowa products in Mexico.

A highlight of the trip was a visit to CIMMYT, the International Maize and Wheat Improvement Center. Since 1966 scientists at CIMMYT have successfully bred more productive and resistant corn and wheat varieties that have been adopted around the world. Their germ plasm preservation facility has samples of over 30,000 strains of corn. And, to top it off, Iowa native and Nobel Prize laureate Dr. Norman Borlaug gave the students a warm welcome and a brief history of CIMMYT's role in alleviating world hunger.

Besides touring Mexico for a week, the students prepared research reports on such diverse products as sugar, coffee, corn and strawberries, and on various aspects of U.S. and Mexico trade relations. For copies of their papers and other information, visit the class Web page at: http://www.econ.iastate.edu/classes/econ496/lence/spring2004/index.html .

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Your Farm Income Statement – C3-25 (4 Pages)

Financial Performance Measures – C3-55 (4 Pages)

Interpreting Financial Performance Measures – C3-56 (5 Pages)

Please add these files to your handbook and remove the out-of-date material.

Internet Updates

In addition to those listed above, the following updates have been added to www.extension.iastate.edu/agdm.

- Decision Aids
Net Worth Statement
Net Worth Statement Analysis
Income Statement
Income Statement Analysis
Financial Performance Measures
Interpreting Financial Performance Measures
Comprehensive Financial Analysis

... and justice for all

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