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## FINDINGS



## Grain Exports From the Black Sea: How Large?

From 1996 to 2000, annual net grain exports from the former Soviet Union (mainly Russia, Ukraine, and Kazakhstan) and other transition countries in the Black Sea region (Romania, Bulgaria, and Serbia) averaged only about 7 million metric tons. The exports were far short of forecasts made by Western analysts when these countries began their major economic reforms in the late 1980s and early 1990s. In 2001 and 2002, grain export levels from the Black Sea area shot to 25 million and 33 million tons, accounting for 12 and 15 percent of total world grain trade. Many thought the large exports signaled the arrival of the region as a formidable grain-export area. Optimism was dimmed, however, by a severe drop in grain production in 2003.

Early expectations of high exports from the region grew out of an assumption that the countries' transition from centrally planned to market-based economies would trigger huge gains in productivity. During the Communist period, these countries had much lower agricultural productivity than Western countries, such as the United States, Canada, and Australia. Analysts expected that market-based reforms would reduce waste and raise productivity, substantially boosting grain output and exports. The countries bordering the Black Sea, however, have made less reform progress than Central European countries, such as Hungary, Poland, and the

Czech Republic. In Russia, Ukraine, and Kazakhstan, the virtually unreformed former state and collective farms inherited from the planned economy remain the main agricultural producers, along with small household plots tended by the farm workers. Agriculture in Romania, Bulgaria, and Serbia is largely in the hands of private farmers, but continues to be dominated by small, fragmented farms with low productivity.

Nature may have had more of a hand in the large 2001-02 grain exports by the Black Sea region than market forces. Very good weather for grains in those 2 years helped push average annual grain output in the region to 180 million tons, compared with 143 million

tons during 1996-2000. Disappointing (though not terrible) weather then dropped grain production back to 127 million tons in 2003, below the average for 1996-2000.

Even if the large growth in exports in 2000-02 was mainly the result of favorable weather conditions, the potential for market-induced growth in the coming decade is still strong. ERS model-generated forecasts show that if the Black Sea countries continue their current slow pace of reform, the region could become a medium-sized grain exporter of about 10 million tons a year by 2012-13. With more rapid reform and accelerated productivity growth, annual grain exports could be as high as 30-40 million tons, comprising 12-15 percent of world grain trade. Such export volumes would fulfill predictions that the region would become a major grain exporter. W

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**This finding is drawn from ...**

*Black Sea Grain Exports: Will They Be Moderate or Large?* by William Liefert, Olga Liefert, Ralph Seeley, and Ed Allen, WRS-04-05-02, USDA/ERS, October 2004, available at: [www.ers.usda.gov/publications/wrs04/oct04/wrs040502/](http://www.ers.usda.gov/publications/wrs04/oct04/wrs040502/)

## China's Demand for Commodities Outpacing Supply

China has long sought to maintain self-sufficiency in the production of basic foods, but with its large population and rising living standards, China's demand for grains and oilseeds is outpacing its ability to produce them. China has already become the world's largest soybean importer and is expected to become a significant grain importer as well, with profound impacts on global commodity prices.

In recent years, China's grain production has lagged behind domestic demand, the result of unfavorable weather, loss of grain area to more profitable crops and urbaniza-

tion, removal of price supports for low-quality grain, and retirement of environmentally fragile land. Huge grain stockpiles accumulated during the late 1990s allowed China to avoid imports and to even export grains, but those reserves now appear to have been drawn down to critical levels. Sharply rising prices in late 2003 signaled tighter supplies in China at the same time that markets in the United States and other countries were also tightening. Chinese officials responded by restricting corn exports in 2004, purchasing wheat to replenish government reserves, and introducing direct subsidies for grain producers.

China has quietly become the world's largest importer of soybeans. Although soy-

based foods, such as tofu, have long been mainstays in the Chinese diet, it was only during the 1990s that demand for soybeans took off. Livestock producers began including more high-protein soy meal in animal feed rations, and Chinese consumers developed a taste for soy-based cooking oil. Demand outstripped China's production capacity, and China now relies on imports for more than half of its soybean use. China's demand has become a key factor in the world soybean market.

Chinese officials would prefer the country to rely less on imported grain and soybeans, but China cannot be self-sufficient in all food products. Boosting soybean production would entail a reduction of corn output since

The desire for specific attributes in agricultural products is making contracts the method of choice for moving products through the production and marketing system. These attributes cover everything from oil content in corn, which affects feed digestion, to the weight of market hogs, because uniform weights can reduce processing costs. Other examples include milk produced according to organic standards, or attributes tied to a product's delivery, such as a certain volume of peas provided during a specified time window, that can reduce processing costs and better meet consumer demands.

Buyers—processors, elevators, and retailers—use production contracts to control input choices and production methods. They also use marketing contracts that offer farmers price premiums for desired attributes. Farmers can benefit from contracting as well, in that contracts can reduce income risks, ease credit requirements, and provide higher prices for providing specific product attributes.

But there are downsides to contracting. Specific features of contracts, like requiring use of a specific feed ration, can limit farmers' decisionmaking freedom. Contracts can reduce volumes traded on spot markets (where individual buyers and sellers agree to a price at the time the product changes hands), thereby increasing price volatility and risks of trading in spot markets. They can also be structured to limit competition among buyers.

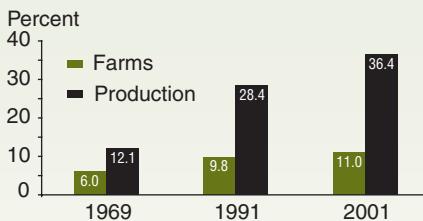
An observed expansion in contract use is closely tied to consolidation in agriculture. Among farms with at least \$500,000 in annual

## Contract Use Continues To Expand



Larry Lefever/Grant Heilman Photography

### Contracting covers a growing share of production



Sources: U.S. Department of Commerce, Bureau of the Census, 1969 Census of Agriculture; USDA, 1991 Farm Costs and Returns Survey; USDA, 2001 Agricultural Resource Management Survey.

sales, 61 percent used contracts for at least some of their production in 2001, compared with only 8 percent of farms with sales under \$250,000. Because most farms are small, only 11 percent of all farms used contracts in 2001, up from 6 per-

cent in 1969. But because large farms account for most agricultural production, contracts cover a large and growing share of production—36 percent in 2001, up from 12 percent in 1969 and 28 percent in 1991.

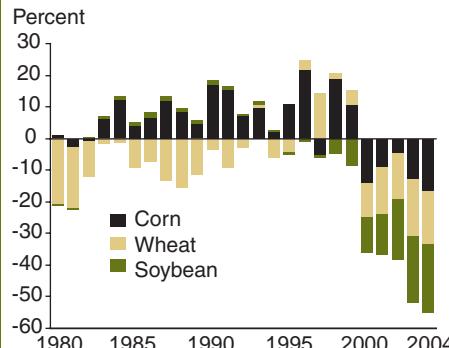
The use of contracts can spread rapidly through an industry. Virtually nonexistent in tobacco marketing in 1999, contracts covered half of 2001 production and almost 100 percent of 2002 production. In just 5 years, from 1996 to 2001, contract coverage grew from one-third to two-thirds of hog production, as spot markets commensurately diminished. By 2001, contracts covered 54 percent of cotton and 39 percent of rice production, compared with 30 percent and 20 percent, respectively, in 1991.

Growing demand for specific product attributes should lead to continuing expansion of contracting. In turn, spot markets will come under continuing pressure to adapt to the challenge posed by the contracting alternative, by providing better means of defining, measuring, and communicating product attributes. **W**

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**This finding is drawn from . . .**  
*Contracts, Markets, and Prices: Organizing the Production and Use of Agricultural Commodities*, by James M. MacDonald, Janet Perry, Mary Ahearn, David Bunker, William Chambers, Carolyn Dimitri, Nigel Key, Kenneth Nelson, and Leland Southard, AER-837, USDA/ERS, November 2004, available at:  
[www.ers.usda.gov/publications/aer837/](http://www.ers.usda.gov/publications/aer837/)

### China's demand for corn, wheat, and soybeans outpaced supply since 2000



Note: Chart shows difference between production and estimated domestic use for each year.

Source: U.S. Department of Agriculture, World Agricultural Outlook Board, "World Agricultural Supply and Demand Estimates."

the two crops compete for the same land area. In 2004, officials sought to boost production of grains. Production did rise in response to higher prices, subsidies, and good weather, but low profitability, dwindling water supplies, and loss of farmland to urbanization will prevent China from attaining grain self-sufficiency. Chinese farmers could produce enough grain and soybeans to meet all of China's needs, but they would have to divert land from production of horticultural crops, orchards, livestock, and aquaculture, which earn much higher returns per hectare. **W**

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### This finding is drawn from . . .

*Is China's Corn Market at a Turning Point?* by Fred Gale, FDS-04C-01, USDA/ERS, May 2004, available at: [www.ers.usda.gov/publications/fds/may04/fds04c01/](http://www.ers.usda.gov/publications/fds/may04/fds04c01/)

*China's Wheat Economy: Current Trends and Prospects for Imports*, by Bryan Lohmar, USDA/ERS, WHS-04-D01, May 2004, available at: [www.ers.usda.gov/publications/whs/may04/whs04d01/](http://www.ers.usda.gov/publications/whs/may04/whs04d01/)

*China's Soybean Imports Expected To Grow Despite Short-Term Disruptions*, by Francis Tuan, Cheng Fang, and Zhi Cao, OCS-04J-01, USDA/ERS, October 2004, available at: [www.ers.usda.gov/publications/ocs/oct04/ocs04j01/](http://www.ers.usda.gov/publications/ocs/oct04/ocs04j01/)