



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Former Soviet Union Region To Play Larger Role in Meeting World Wheat Needs

William Liefert

wliefert@ers.usda.gov

Olga Liefert

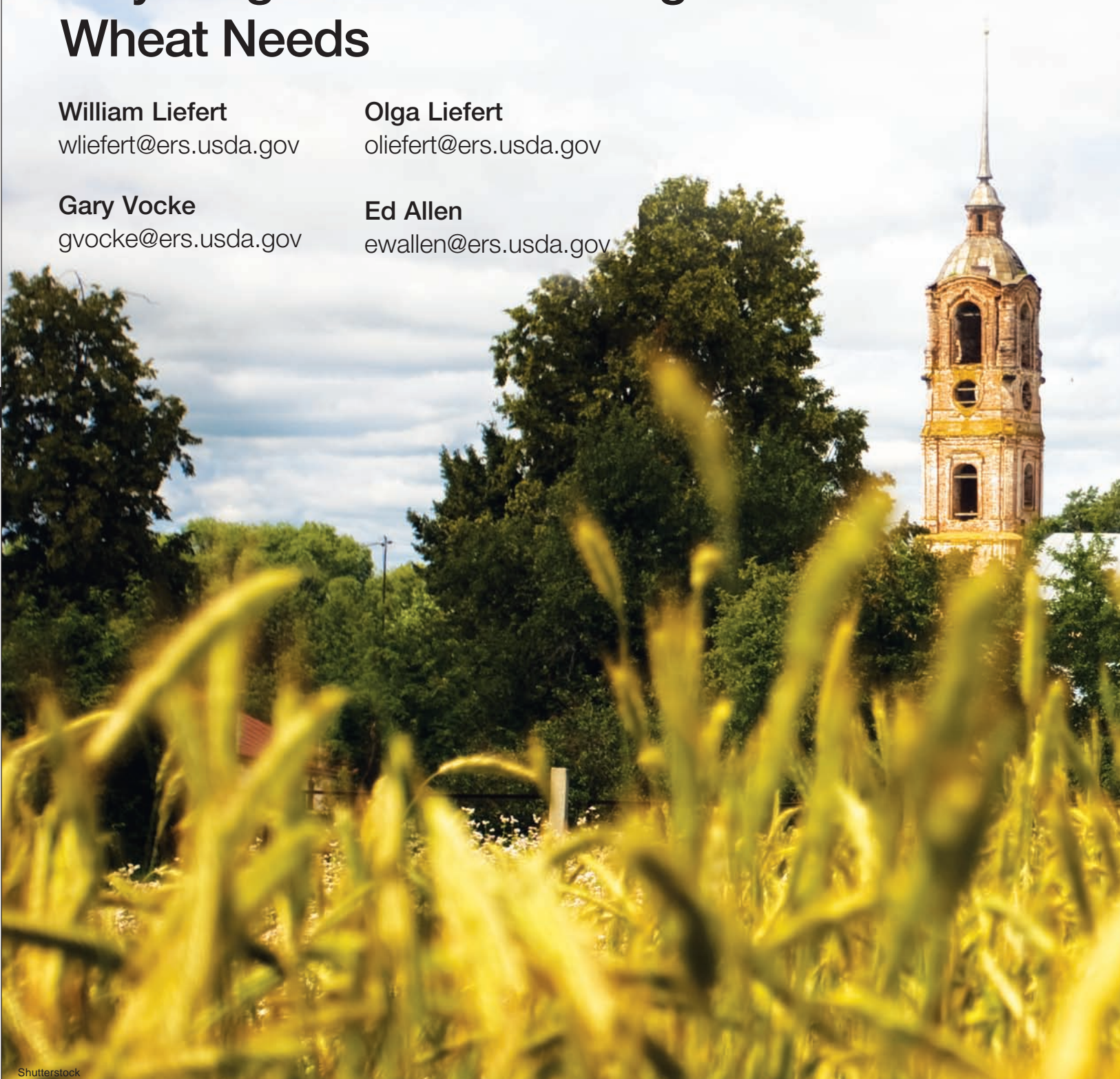
oliefert@ers.usda.gov

Gary Vocke

gvocke@ers.usda.gov

Ed Allen

ewallen@ers.usda.gov



- By 2019, Russia could become the world's top wheat exporter, and Russian, Ukrainian, and Kazakhstan wheat exports collectively could more than double those of the United States.
- Growth in the former Soviet Union's grain production and exports may increase world food availability and, in the near term, help mitigate global food security concerns.
- U.S. wheat production is leveling off, as U.S. producers shift acreage to benefit from competitive advantages in corn and soybeans.

**An interview with one of the authors is featured
online at: www.ers.usda.gov/amberwaves/**

The next decade is likely to see a major shift in global wheat production and trade. The largest gains in wheat production and exports will likely come from the former Soviet Union (USSR), specifically Russia, Ukraine, and Kazakhstan, where changes in production efficiency and market forces combine to favor wheat. USDA projects that wheat exports by Russia, Ukraine, and Kazakhstan will increase by about 50 percent to over 50 million metric tons (mmt) by 2019. In the coming decade, the region may account for over half the growth in world wheat exports, perhaps even supplanting the U.S. as the “wheat breadbasket of the world.”

The United States, the world’s largest wheat exporter since World War II, could slip to second place. U.S. wheat production is projected to rise only slightly over the next decade, and exports are forecast to remain below the average for 2001-09. By 2019, according to USDA projections, Russia’s wheat exports will exceed those of the United States. And, total wheat exports

By 2019, according to USDA projections, Russia’s wheat exports will exceed those of the United States.

from Russia, Ukraine, and Kazakhstan likely will be more than double those of the United States.

These developments could improve global food security. The 2006-08 surge in world food prices raised concerns about the potential for world wheat production to increase sufficiently to feed a growing population. Commercial imports account for a rising share of food supplies in many developing countries. The availability of more wheat from Russia, Ukraine, and Kazakhstan could help meet these countries’ growing import needs.

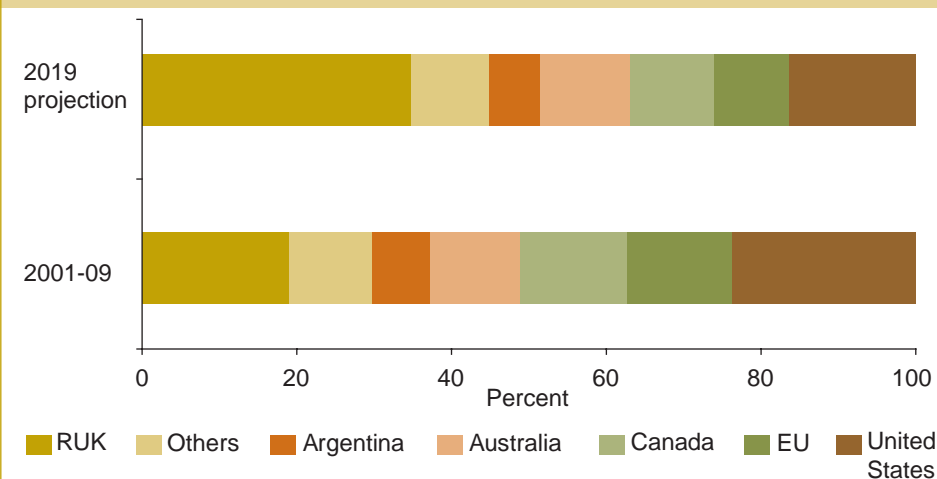
U.S. To Relinquish Top Spot as Wheat Exporter to Former Soviet Union

The United States has been the largest wheat exporter during the post-World War

II period. However, the U.S. share of world wheat exports could drop from an average of 24 percent in 2001-09 to an estimated 16 percent by 2019, with the annual volume of U.S. wheat exports declining from 27.5 mmt during the 2000s to 24.5 mmt in 2019. The European Union, Canada, and Argentina also will lose shares of world wheat exports, while Australia will likely maintain its share. USDA projects that over the next 10 years, Russia, Ukraine, and Kazakhstan’s share of wheat exports could increase from less than 20 percent in the 2000s to over 33 percent in 2019. Russia and Ukraine are returning to their historical role, as during the Russian tsarist empire which ended in the late 1910s, of being major wheat exporters.

By severing the link between Federal farm program payments and the production of specific commodities, the 1996 Farm Act gave U.S. farmers the flexibility to switch acreage among crops, often at the expense of wheat acreage. Progress in

Russia, Ukraine, and Kazakhstan's share of world wheat exports will rise, while U.S. share could fall



Note: RUK = Russia, Ukraine, and Kazakhstan.

Source: USDA, Economic Research Service using USDA's Production, Supply, and Demand database and the 2010 *USDA Agricultural Projections to 2019*.



biotechnology has given the United States an increasing competitive advantage in corn and soybean production over wheat. The rapid introduction of new varieties of corn and soybeans has expanded U.S. production to areas farther west and north with drier conditions and shorter growing seasons than traditional growing areas. Biotech advances have produced new types of corn and soybeans resistant to herbicides, resulting in improved weed control. Advances in corn genetics have also increased resistance to major pests, boosting yields. In contrast, genetic and other improvements for wheat have been slower.

Increased use of reduced-till and no-till planting practices that retain more water in the soil makes it possible to grow more row crops, such as corn and soybeans, which require more soil moisture than wheat. The move away from wheat also is attributable to growth in corn-based ethanol production, which boosted returns to growing corn. About 23 percent

of the U.S. corn crop was used to produce ethanol during the 2007/08 marketing year (September-August), and the share is projected to rise to 35 percent over the next decade.

Expanding Production in the Former Soviet Union Is Driving Export Growth

There are two main reasons why Russia, Ukraine, and Kazakhstan have become large wheat exporters. First, the region's transition from planned to market-oriented economies that began with the collapse of the USSR in the early 1990s generally restructured its agricultural production and trade. During the late Soviet period of 1987-91, the USSR imported about 35 mmt (net) of grain per year, while in 2009, the former USSR countries exported nearly 55 mmt. This change involved a shift of about 90 mmt

of additional grain available to the world market, a huge increase given that in 2009 total world exports of wheat, barley, and corn equaled about 245 mmt.

The exportable grain surpluses were made possible because of the dramatic contraction of the livestock sectors of Russia, Ukraine, and Kazakhstan during the 1990s. While the former Soviet Union produced high-cost livestock products using imported feed grain and oilseeds, the market-oriented successor countries have become large importers of meat and other livestock products. The big drop in domestic feed demand not only ended imports of grain and oilseeds, but also freed internal grain production for export.

Second, the region's wheat yields rose steadily during the 2000s, which increased output and surpluses for export. During the 1990s, grain and wheat yields fell in

The new operators bring investment, superior technology, and better management practices into the entire agro-food system.



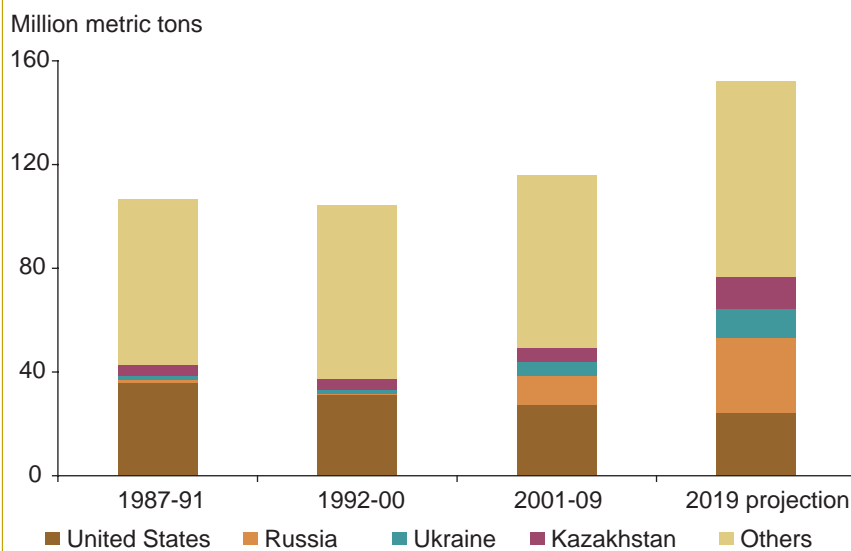
Shutterstock

Russia, Ukraine, and Kazakhstan because of the general disruption to the agricultural economy following the collapse of the USSR and its planned economic system, a drop in input use, especially of fertilizer, and several bad weather years in the second half of the decade. However, during the 2000s, wheat yields rose by 32 percent in Russia and 25 percent in Kazakhstan, compared with yields during 1992-2000, while Ukrainian yields rose slightly.

Yields improved mainly because of the rise of a new type of agricultural producer in these countries. These “new operators” are large, vertically integrated enterprises that combine primary agriculture, processing, distribution, and sometimes retail sale. The most common types of farms in these countries are big corporate farms, most of which are the former State and collective farms of the Soviet period that remained largely unreformed even into the 2000s. The more dynamic new operators usually acquire a number of these corporate farms and improve them, as well as bring investment; superior technology, including the use of imported high-quality seed; and better management practices into the entire agro-food system. The new operators are especially interested in grain production because of the opportunities for profitable export.

Increased fertilizer use, higher rainfall and generally more favorable weather conditions, and a switch from spring wheat to higher yielding winter wheat also contributed to the growth in yields during the 2000s. The 2010 report *USDA Agricultural Projections to 2019* assumes continued growth in the use of fertilizer and other inputs in the region and further

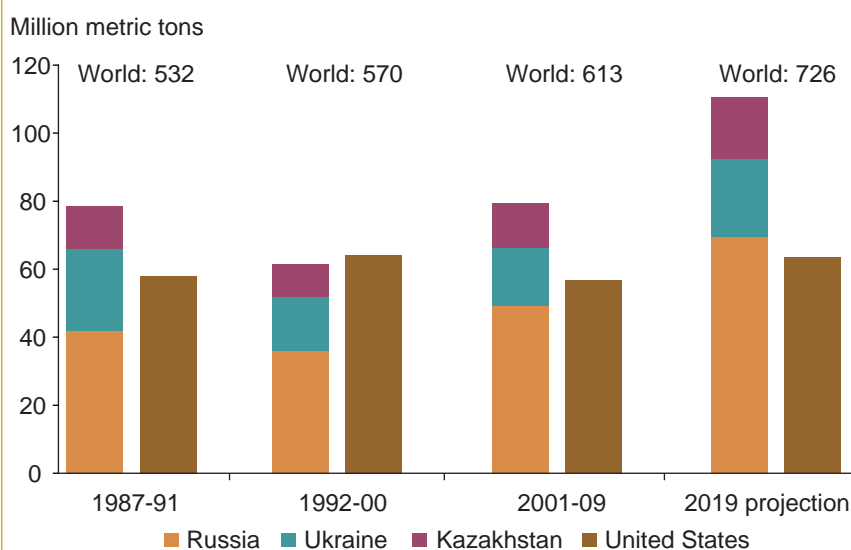
Russian, Ukrainian, and Kazakhstan wheat exports are expanding . . .



Note: Figures give average annual exports over the periods identified, except for 2019, which are from the 2010 *USDA Agricultural Projections to 2019*.

Source: USDA, Economic Research Service using USDA's Production, Supply, and Demand database and the 2010 *USDA Agricultural Projections to 2019*.

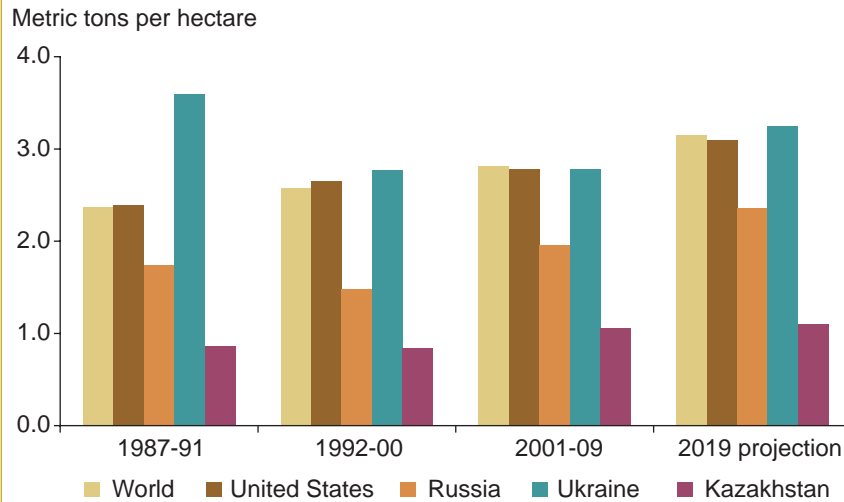
. . . because wheat production in the three countries is expanding



Note: Figures give average annual production over the periods identified, except for 2019, which are from the 2010 *USDA Agricultural Projections to 2019*.

Source: USDA, Economic Research Service using USDA's Production, Supply, and Demand database and the 2010 *USDA Agricultural Projections to 2019*.

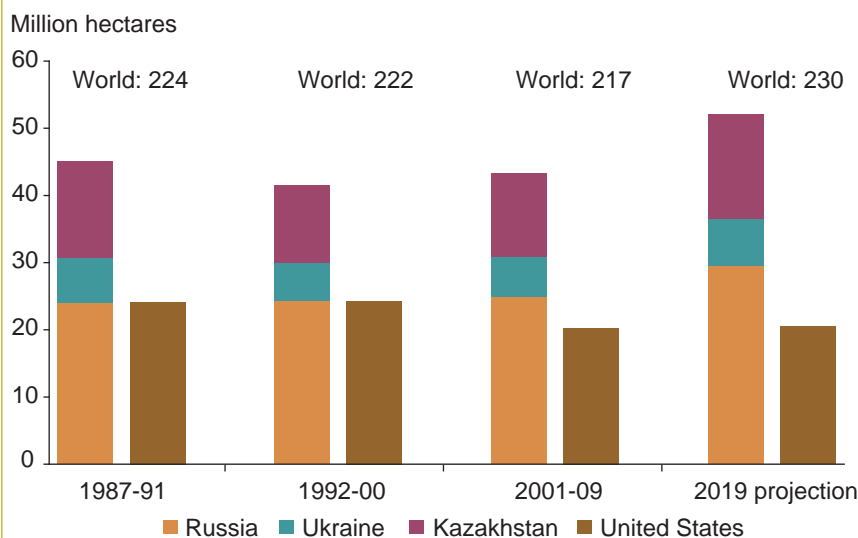
Russian, Ukrainian, and Kazakhstan wheat yields are projected to continue increasing . . .



Note: Figures give average annual yields over the periods identified, except for 2019, which are from the 2010 *USDA Agricultural Projections to 2019*.

Source: USDA, Economic Research Service using USDA's Production, Supply, and Demand database and the 2010 *USDA Agricultural Projections to 2019*.

. . . and wheat areas also will rise



Note: Figures give average annual area over the periods identified, except for 2019, which are from the 2010 *USDA Agricultural Projections to 2019*.

Source: USDA, Economic Research Service using USDA's Production, Supply, and Demand database and the 2010 *USDA Agricultural Projections to 2019*.

expansion in the number and influence of new operators. USDA projects that by 2019, wheat yields will rise 20 percent in Russia and 17 percent in Ukraine from their yearly averages over 2001-09. ERS estimates that Kazakhstan wheat yields will increase 5 percent by 2019 compared with 2001-09.

Wheat Area Could Expand, but Possibly at Higher Cost

Russia, Ukraine, and Kazakhstan's wheat and grain production in the 2010s will depend not only on yield growth but also on changes in planted acreage. During the 1990s, wheat and total grain area fell in Ukraine and Kazakhstan, with wheat area dropping 15 and 20 percent, respectively, compared with the 1987-91 period. In Russia, total grain area declined 30 percent, though wheat acreage remained unchanged. To a large extent, the reduced area corrected the Soviet-era policy of pushing wheat and other grains onto marginal land, which resulted in inefficient high-cost production. During the 2000s, wheat and grain area rose slightly in Russia, Ukraine, and Kazakhstan, though total wheat area in the three countries was still below the former Soviet level.

The surge in world agricultural and food prices in 2006-08 rekindled interest in not only returning the remaining idled land to grain production, but also expanding area beyond the Soviet-era levels. Some observers of global food markets argue that an expansion of grain acreage in Russia, Ukraine, and Kazakhstan, especially if combined with higher yields, might substantially increase world grain supplies, putting strong downward pressure on prices and benefiting lower income consumers around the world. USDA projects

that by 2019, total wheat area in Russia, Ukraine, and Kazakhstan will grow by 20 percent, compared with the yearly average in the 2000s. By 2019, wheat area in all three countries is projected to exceed that of the former Soviet period.

However, these projections depend on world wheat prices remaining high enough to motivate growers in Russia, Ukraine, and Kazakhstan to increase grain area. The acreage expansion likely will occur mainly in the more isolated and underdeveloped regions of these countries. For the increased area to translate into more output for domestic consumers or export markets, improvements will be needed in the region's physical and commercial infrastructure for storing and transporting grain. Some improvements were made during the 2000s, but the governments of Russia, Ukraine, and Kazakhstan recognize that more are necessary.

Government Policies Might Constrain the Growth in Wheat Exports

In 2009, Russia, Ukraine, and Kazakhstan created State-owned grain companies to promote wheat and other grain exports. The companies' main functions are to facilitate State grain purchases in domestic markets and help improve infrastructure for export.

State policies that focus on reviving the countries' livestock sectors could mitigate the growth in grain exports, however. During the transition years of the 1990s, both livestock herds and product output in the three former Soviet countries contracted by about half. The downsizing largely corrected costly overexpansion during the Soviet period.

The governments of the three countries, especially Russia's, want to reverse

Russia, Ukraine, and Kazakhstan appear to have the most potential to substantially increase wheat production and exports.

the severe contraction of the livestock sectors. In 2003, Russia imposed a restrictive tariff rate quota system for meat imports, and in 2009, it strengthened the regimen. Among the recent changes, the tariff on Russian poultry imports in excess of the quota rose to 95 percent, significantly affecting U.S. poultry exports. The U.S. is Russia's main foreign supplier of poultry, and in 2009 Russia accounted for 20 percent of U.S. poultry exports. In 2005, Russia also began to substantially increase subsidies to agriculture, with the bulk of the new support going to the livestock sector.

In January 2010, Kazakhstan imposed tariff rate quotas for meat imports, though they are not overly restrictive. Although Kazakhstan would like to revive its livestock sector, the country recognizes that it has a strong competitive advantage in wheat and grain production, rather than livestock. Of the three countries, Kazakhstan likely will adopt the mildest policies to help the livestock sector, while Russia will take the strongest action.

The growing importance of Russia, Ukraine, and Kazakhstan as world wheat suppliers raises concerns about the reliability of their supply and policy responses



to weather-related shortfalls. The region's climate is characterized by variable temperature and rainfall, with severe drought possible in any year. These conditions can produce major fluctuations in annual grain output and exports. This effect can be exacerbated if the countries react with policies that restrict exports. For example, when world wheat prices spiked during 2006-08, Russia, Ukraine, and Kazakhstan tried to contain the growth in domestic wheat prices by restricting, or even banning, exports.

Implications for Global Food Security Uncertain

In 2009, the number of people around the world suffering from food insecurity topped 1 billion for the first time, according to the Food and Agriculture Organization of the United Nations. Moreover, the world's population is pro-

jected to grow over the next 10 years by about 10 percent. Of all the major grain-producing countries, Russia, Ukraine, and Kazakhstan appear to have the most potential to substantially increase wheat production and exports. This boost in supplies could improve world food security by putting downward pressure on wheat prices, making this staple food more affordable to the world's poor.

Yet, uncertainty exists as to the degree to which the three former Soviet Union countries will increase their wheat exports. Export growth requires costly improvements in the infrastructure needed to store, transport, and export grain. Policies that favor expansion of the domestic livestock sectors could increase internal demand for feed wheat, reducing the surplus available for trade. Variable weather and possible export restrictions in low-production years could diminish the region's export reliability. These uncertainties are likely to mitigate, though not reverse, the growing importance of Russia, Ukraine, and Kazakhstan as providers of wheat to the world. *W*

This article is drawn from . . .

USDA Agricultural Projections to 2019, ERS Contact: Paul Westcott, OCE-2010-1, USDA, Office of the Chief Economist, World Agricultural Outlook Board, February 2010, available at: www.ers.usda.gov/publications/oce101/oce101.pdf.

Wheat Outlook, ERS contact: Gary Vocke, WHS-10b, USDA, Economic Research Service, February 12, 2010, available at: <http://usda.mannlib.cornell.edu/usda/ers/whs//2010s/2010/whs-02-12-2010.pdf>.

"The Russian Federation," by William Liefert and Olga Liefert," in *Distortions to Agricultural Incentives in Europe's Transition Economies*, Kym Anderson and Johan Swinnen (eds.), The World Bank, 2008, pp. 135-174 available at: www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2008/07/10/000333038_20080710071528/Rendered/PDF/446410PUB0Dist101OFFICIAL0USE00NLY1.pdf



Shutterstock