

May Newsletter 2022

Welcome to our monthly newsletter! This month's features are:

- The Market Corner article “**The Ukrainian Crisis Sheds New Light on the Importance of Biotechnology in Agriculture**“ by David Zilberman, C-FARE Board Member.
- A new feature to our newsletter titled C-FARE's Monthly Facts. This month features “**Ukraine, Russia, and Trade in Grains**” by **Gal Hochman**, C-FARE Board Chair.
- In case you missed it, the recording of C-FARE's webinar entitled “**Building the Capacity to Invest in Rural Prosperity**“ is now available on our [website](#) and [YouTube](#).
- New Direction features articles and papers titled:
 - [A Rural Capacity Map](#)
 - [Local Governments across the Rural–Urban Continuum: Findings from a Recent National County Government Study](#)
 - [Thrive Rural Framework](#)

Keep reading to learn more,

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Market Corner

The Ukrainian Crisis Sheds New Light on the Importance of Biotechnology in Agriculture

Modern biotechnologies such as GMO (genetically modified organism) and CRISPR (gene editing) allow much faster and more precise crop breeding, and early experience suggests that some traits enable increased crop yields, and reduced use of inputs like water and chemicals. While modern biotechnologies have been used extensively in medicine, regulations in the US and around the world have prevented biotechnology from reaching its potential in agriculture. Despite the wide use of GMOs, there has been no incidence of significant negative environmental side effects, but they improve environmental conditions. By increasing yield, they can reduce the Greenhouse Gas emissions associated with crop production and reduce the environmental footprint of agriculture.

Currently, GMO crops are grown mostly to produce feed and fiber, but hardly for food production. They are practically banned in most of Europe and Africa. Studies* suggest that they increase corn supply by 5-10% and soybeans supply by 15-25%, thus reducing food prices and improving food security. However, if GMO wheat or rice had been introduced and the EU adopted biotechnology, the corn, and the food-fuel dilemma of the 2010s would have been avoided. The crisis in Ukraine emphasizes the vulnerability of the food and fuel system and the value of technologies that can expand both food and fuel production. Have modern biotechnology crop breeding technologies been adopted more extensively- they could have reduced the food security challenges we face. Wide-scale adoption of transgenic wheat varieties in the US and Europe might have increased yields by 5-10% and reduced the impacts of the loss of grain from Russia and Ukraine. Increased productivity of grains like corn and rice where they are not adopted would have freed lands to produce biofuels reducing dependence on soviet fuels.

In sum, the larger adoption of biotechnology in agriculture is likely to lead to expanding agricultural productivity, reducing pollution, and enhancing resilience to biophysical and socioeconomic shocks.

**See survey by “Zilberman, David, Tim G. Holland, and Itai Trilnick. "Agricultural GMOs—what we know and where scientists disagree." Sustainability 10, no. 5 (2018): 1514.*

David Zilberman, C-FARE Board Member, University of California, Berkley

C-FARE’s Monthly Fact

Ukraine, Russia, and Trade in Grains

This month’s CFARE Fact of the Month focuses on Ukraine while highlighting Ukraine’s importance to global corn and wheat markets. We start by depicting Ukraine's main exporting destinations in 2018, using data from [FAOSTATA](#) for both maize and wheat.

Figure 1 depicts Ukraine's largest exporting partners for corn (maize) and wheat. The figure focuses on countries exporting from Ukraine more than one million metric tons (one million tonnes) of wheat and corn.

By 2020, corn exported from Ukraine to China more than doubled, from less than 30 million metric tons to about 75 million metric tons. We also want to note that amounts exported to other trading partners remained stable across the two years. On the other hand, the wheat amount exported to Egypt more than doubled, although we also see a significant change in Ukraine's exporting destination for wheat.

Russia, on the other hand, is poised to become the most prominent wheat exporter this year ([Grain: World Markets and Trade, June 2022](#)). Global wheat production is down for June, primarily because of crop production in India and the European Union. However, this drop in production is partially offset by an increase in Russia’s production. To this end, for the 2022/23 season, imports are unchanged, and the U.S. season-average farm price remained stable at \$10.75 per bushel.

Gal Hochman, C-FARE Board Chair, Rutgers University

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- In case you missed it, the recording of C-FARE’s webinar entitled “Building the Capacity to Invest in Rural Prosperity“ is now available on our [website](#) and [YouTube](#).
- Check out our fourth episode of C-FARE’s podcast [Get a Grip with FARE](#) featuring Peyton Ferrier and Steve Neff from the USDA Economists Group.

For more information on our webinar series visit our [webpage](#) or [youtube](#)!

New Directions

- [A Rural Capacity Map](#). The Infrastructure Investment and Jobs Act is the largest investment in climate resilience in U.S. history. The \$1.2 trillion in funding will create transformative opportunities for local governments that own and maintain most of the nation's infrastructure, but first state and federal agencies must ensure the resources get to the places that need it the most. To help identify communities that need support but may lack staff and expertise to compete for federal funding, we have created a first-of-its-kind Rural Capacity Map.
- [Local Governments across the Rural–Urban Continuum: Findings from a Recent National County Government Study](#). In recent decades, local governments have faced profound changes in their economic, social, and political environment. Long-term economic restructuring, the fallout from the Great Recession, and political changes such as ongoing devolution and pressure from state governments have affected the performance of local governments.
- [Thrive Rural Framework](#). Rural communities and Native nations are integral to our entire nation's economy, our culture — and our future. One in five people in this country live in rural places, and one in four of those rural residents are people of color. The Thrive Rural Framework is a new tool to help you take stock, target action, and gauge progress on equitable rural prosperity.