

C-FARE Newsletter August 2021

Market Corner

Current U.S. federal farm policy focuses on risk management. Projected spending for the Federal Crop Insurance Program exceeds that of all other farm-related programs authorized in the 2018 farm bill. In 2020, the Federal Crop Insurance Program provided almost \$114 billion in insurance coverage to U.S. agricultural producers.

The total premium cost for this coverage was \$10.1 billion with federal subsidies paying more than \$6.3 of the total premium. Even the primary title I farm bill programs, Price Loss Coverage (PLC) and Agriculture Risk Coverage (ARC), are focused on helping farmers manage their exposure to price or revenue (the product of price and yield) risk.



Congress will likely start holding hearings on the next farm bill in 2022. While agriculture has always been subject to the vagaries of weather, climate change is likely to increase weather risk exposure for many farmers. The challenge for policymakers will be ensuring that future federal programs assist farmers with their exigent risk management needs while also facilitating adaptation to a changing climate.

Necessary adaptations are likely to include changes in crop or variety selections and/or changes in production practices. Programs that do not encourage adaptation will leave farmers even more exposed to the expected increase in extreme weather events due to climate change.

To further understanding of these issues, the Council on Food, Agriculture, and Resource Economics (C-FARE) is hosting a free virtual panel of experts who will be discussing various issues related to climate change impacts on Federal Crop Insurance and other federal farm programs.

Barry J. Barnett, C-FARE Board Member, University of Kentucky

Agricultural Risk Management and Climate Change Adaptation

Join us for [Risk Management and Climate Change Adaptation](#) on **August 27th at 12 pm** (EDT). For those interested in the future of federal agricultural policy, it promises to be an interesting discussion. [More info here:](#)

Opinion Editorial

Western Canada is facing record-high temperatures and a lack of rainfall. The extreme weather stresses the crops, leading to crop losses, affecting crop quality, and reducing forage and water supplies for livestock.

Since the beginning of the growing season in April, the Prairies in Western Canada received somewhere between 40% to 85% of their average precipitation.

Conditions are even worse in the interior of British Columbia, where rainfall is less than 40% of the average.

The severe drought did not skip the U.S., another key crop producer. U.S. Department of Agriculture (USDA) analysis suggests only 10% of the country's spring wheat crop categorized good to excellent—the lowest estimates since the 1988 drought. As a result, USDA expects the U.S. spring wheat harvest to drop by 41%, compared to the previous year—its lowest production level during the last 33 years [FarmDoc].



When looking at prices, it's the perfect storm. The pandemic already severely impacted the global crop supply. In addition, the severe drought only amplified the effect on prices. On a year-on-year basis, prices were up 31.0% in July. Besides, supply chains are also responding globally to this shock, with crop buyers across Africa and Asia pulling back from purchases, highlighting how the price rally across grain markets curbs demand [Bloomberg].

How can we alleviate the effects of these extreme events in the future? First, physical inventories can serve as cushions that absorb and reduce the negative shock. Second, investment in climate-smart crops and digitalization shows much potential. Climate-smart crops' ability to withstand disasters is essential, especially given the projections that the frequency and ferocity of extreme events will only intensify with time. Tackling this issue led scientists to explore ways to make crops require less water to grow. From developing a crop that is more resilient to drought to obtaining invaluable satellite data on water loss, agriculture can be less vulnerable to the changing climate. Third, and related to the second point, supply chains should become more resilient to adverse events, preventing farmers and industries from crumbling in the aftermath.

There is a role for government and investments in the research and development of smart-climate and digitalization. Another place the government's presence is essential is in mitigating farmers' exposure to price fluctuation. In Market Corner of this newsletter, Barry J. Barnett discusses the magnitude of these programs and their role. In addition, Barry is part of a panel that the Council

on Food, Agriculture, and Resource Economics (C-FARE) invited for noon on August 27th to discuss crop insurance programs. In that free webinar, the panelists will discuss U.S. federal crop insurance and other federal farm programs and their implications to farmers and markets.

Gal Hochman, C-FARE Board Chair, Rutgers University

New Directions

Global Wheat Supplies Contract, Impacting Exports, and Food Prices.

Bloomberg writers Megan Durisin, Kim Chipman, and Khadija Kothia reported that “Crop losses in two of the world’s biggest wheat exporters and quality concerns in a third have pushed prices to multiyear highs, adding to worries about food price inflation for millions of the world’s most vulnerable. Drought and heat continued to fry Canada’s wheat in July, months after a brutal winter hit the Russian crop. Those losses will only be partially offset by gains elsewhere. [The Full Analysis is Available Here:](#)

Economic Dimensions of Soil Health: Given soil health’s key role in sustaining Agricultural productivity and enhancing C storage, there is significant interest in promoting agricultural management decisions, practices, and production systems that can help maintain or improve soil health. These include practices such as cover cropping, no-till residue and tillage management, conservation crop rotations, mulching, and nutrient management. [The Full Study is Available Here:](#)

Accounting for Weather Probabilities in Crop Insurance Rating. This article develops a procedure for weighting historical loss cost experience based on longer time-series weather information. Using a fractional logit model and out-of-sample competitions, weather variables are selected to construct an index that allows proper assessment of the relative probability of weather events that drive production losses and to construct proper “weather weights” that are used in averaging historical loss cost data. [The Full Article is Available Here:](#)