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Changes to the Noninsured Crop Disaster Assistance Program Under the Agricultural Act of 2014: Their Potential Risk Reduction Impacts

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What Is the Issue?

Federal crop insurance (FCI) underwritten by USDA's Risk Management Agency is not available for all crops, and an FCI-covered product may not be available in all counties. Since 1994, if crop insurance is unavailable, a producer may enroll in the Noninsured Crop Disaster Assistance Program (NAP). Before 2014, producers could only purchase catastrophic coverage under NAP, which covered yield losses greater than 50 percent of the expected yield at 55 percent of the average market price (NAP Basic). Now producers can pay a premium to purchase coverage for up to 65 percent of the approved yield at 100 percent of average market price (NAP Buy-Up). This report examines the effects this change in policy has on producers' income and revenue risk, as well as the makeup of NAP enrollment. The information can help policymakers and producers better understand the cost and benefits of enrolling in NAP.

What Did the Study Find?

Since the Agricultural Act of 2014, both the revenue stabilization from NAP and the participation in NAP have changed:

- The new NAP Buy-Up policy can mitigate yield risk more than NAP Basic and slightly increase a producer's average revenue.
- NAP applications with Buy-Up coverage were first offered in 2015 and constituted 16 percent of NAP applications. In 2015, NAP applications increased to 138,000, up from 66,000 in 2014. (An application is defined here as a request from a producer to cover an individual crop.)
- The participation of limited resource, socially disadvantaged, and beginning farmers and ranchers more than doubled in 2015.

While over 150 crops have been enrolled in NAP, this report contrasts three cases: cherries, pecans, and squash, with differing climate requirements and farming practices. Analysis of the effects of NAP on producers of these three products can help stakeholders and policymakers understand the effects that NAP has on producers of different crops across the United States.

The authors found that:

- For some cherry-producing States, Buy-Up comprises up to 80 percent of NAP applications.
- On average for these three crops, 30 percent of NAP applications have Buy-Up coverage.

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Although NAP is typically purchased for forage, vegetables, and fruits, there are not enough available data on these crops to perform risk analysis. Using corn as a proxy, the authors instead modeled the effects of NAP Basic and NAP Buy-Up on the revenue of a corn producer in a county with high revenue risk in crop production. The simulation showed that while expected total revenue is only slightly higher when either NAP Basic or NAP Buy-Up is purchased, the lower bound for realized revenue is approximately 50 percent higher when NAP Basic is purchased and over twice as high when NAP Buy-Up is purchased than when no NAP policy is purchased. That is, the risk of low revenue falls substantially with either NAP policy, but drops twice as much under Buy-Up.

How Was the Study Conducted?

NAP enrollment is measured by the total number of active applications in the Farm Service Agency's National Summary Report, "Applications for Coverage." Coverage is reported by crop, not by operation, so an application is reported for each crop enrolled in NAP. The Farm Service Agency supplied NAP outlays for crop losses from 2013 to 2015 that were distributed after April 15, 2014.

Prices and yields were simulated using conditions present in 2015 to estimate expected revenue and revenue risk. County-level yields documented by USDA's National Agricultural Statistics Service (NASS) for each year between 1975 and 2014 were collected to generate a county-level yield distribution for feed corn. The distribution of corn prices was also calculated for planting prices and harvest prices from 1975 to 2014, using the futures contract prices from the Chicago Board of Trade. While maintaining the historical relationship among yields and prices, the model drew 10,000 yields from the county and 10,000 prices. To model the yields of a representative farmer for the county, additional variation was added to the county yields, derived from the crop insurance premium rates for the county. From these simulated yields and prices, we calculated revenue, payments from NAP, and the revenue risk reduction from NAP.