Crop Insurance Could Help Remove 'Dagger From Steering Wheel'

LEXINGTON, KY.

What a year 2012 was for agriculture: crop yields were down, water supplies were depleted, feed costs were up. And yet, in the midst of one of the worst droughts in the country's history, the U.S. Department of Agriculture is forecasting U.S. net farm income will remain near record levels. University of Kentucky College of Agriculture economists recently released their outlook for the remainder of 2012 and 2013, saying data indicates 2012's Kentucky's net farm income will remain near the top end of the state's typical $1 billion to $1.5 billion range.

High prices and significant crop insurance indemnities – producer payments – have had a hand in saving what could have been a year of hard losses for farmers.

"Crop insurance constitutes one of the primary risk management programs administered and subsidized by the U.S. government, and over the past 16 years, it's one of the biggest things to hit production agriculture," said Cory Walters, assistant professor in UK agricultural economics. "In Kentucky, from 1996 through 2011, the total premium base associated with crop insurance increased from $16 million to $139 million. Insured cropland increased from 1.5 million acres to 2.8 million acres over the same time period."

So far in Kentucky in 2012, insurance has paid $208 million in indemnities for corn. For soybeans, insurance has paid out $9.5 million in indemnities and nearly $10 million for wheat.

"The indemnity number will go up, especially for corn; more claims are coming in all the time," Walters said.

He believes, though, that crop insurance isn't just about finances; it can influence a multitude of decisions farmers make.

"If we all had a dagger sticking out of our steering wheels, we'd be more careful (when driving)," he said. "But what if crop insurance removes that dagger? How would we drive then?"

Producers purchase crop insurance to manage production risk, but risk reduction can vary based on crops and regions and also in agronomic and environmental characteristics. Changes in risk will inevitably affect production decisions, including acreage decisions. As a result, small, regional environmental effects occur based on those decisions. That is the conclusion Walters drew, based on data collected between 1995 and 2002.

In his study, recently published in the Journal of Agriculture and Resource Economics, using producer-level crop insurance data for four U.S. geographical regions, Iowa, North Dakota, eastern Washington State and eastern Colorado, Walters delved into the real effects of using crop insurance or "driving without that metaphorical dagger." In his peer-reviewed paper, he pointed out that there are inevitable environmental consequences when the relationship between risk, farm production decisions and environment changes.

"Farming, is, after all, a kind of environmental activity – inescapably bound to soil, water and air quality and, of course, changing ecosystems," he reported.

According to Walters, crop insurance has the potential to affect two types of farm decisions: how much acreage is devoted to a single crop and the amount of inputs used depending upon the crop choice.

"Is crop insurance impacting acreage decisions, and if it is, are environmental impacts positive or negative?" he said.

Of the four regions analyzed, Walters found that the purchase of crop insurance in North Dakota did have a "meaningful environmental impact," in all four environmental indicators he examined: total nitrogen loss, change in total organic carbon, wind erosion-caused sediment loss and soil erosion due to other causes. But only for total nitrogen loss was the effect negative. In eastern Washington, the effect was adverse on wind erosion. However, in this area, the decision to purchase crop insurance did not greatly affect the crop allocation in that region. In Iowa, there was no meaningful environmental impact from the decision to buy crop insurance. In eastern Colorado, the decision adversely impacted wind erosion and soil organic carbon.

In his results, Walters noted that he found "a small, but not universal, tendency of increased crop insurance participation to create 'noticeable' environmental effects. Our evidence shows both positive and negative environmental effects as cropping patterns change, but more importantly, results are specific to local conditions and particular environmental indicators."

Walters' study also backed up earlier research by Jun Ji Wu and Richard M. Adams of Oregon State University showing that the type of crop insurance and the coverage level influenced the decision to change crop allocations. Revenue insurance altered cropping patterns more than the yield protection.

In Kentucky, revenue protection is the dominant type of coverage chosen, mostly because it receives the most subsidy dollars per acre. Revenue protection coverage for wheat, soybeans and corn ranged from 54 percent to 69 percent of total insurable acreage per crop in 2011. Δ