

Carbon Policy

Specialists Study Impact Of Global Warming Policy On Farming

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Changes in agriculture can be expected, regardless of whether or not farmers accept the global warming theory, according to Dr. Lanier Nalley and Mike Popp, who spoke recently about their studies on the issue. Nalley, Assistant Professor, and Popp, Professor, both of the University of Arkansas Agricultural Economics department, said the changes could be significant.

"With the new administration, it doesn't matter if you believe in global warming or not, some sort of carbon policy will be adopted," Nalley said. "It may not be this year, maybe not next, but it's coming down the line."

Popp continued: "What that means is changes to agriculture and farmers are going to have to react," he said. "What we're hoping to do is provide some policy advice so we can say 'if you put this policy in place, the likely impact will be.' Hopefully, we would be able to say 'this policy would be better than the other one.'"

Nalley began the discussion by describing what a carbon footprint is and the process to measure it. He discussed sequestration and various tillage

things."

For example, a change in price for rice to five-year average levels also has the potential to reduce net state farm income compared to the study's base scenario - 2007 crop prices and 2007 input production costs. So a lot of these numbers suggest that a carbon policy can have impacts and can have potentially large impacts, so they're not very easy to analyze.

"Emissions, as opposed to soil carbon sequestration, are fairly easy to analyze," Nalley said. "We don't know how the federal government is going to use tillage and soil type and above and below ground biomass, or there's talk of them just using a tillage factor. If that's the case, then our results are going to be vastly different than what the federal government estimates. So the sequestration is where the variation in results is going to be."

There are many variables, and Nalley said that



Changes in agriculture can be expected, according to Dr. Lanier Nalley (left) and Mike Popp, who spoke about their studies on the issue of global warming.

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John LaRose, Jr.

practices and soil types, then combined the two to get a net emissions number. From that number, he gave various analyses of hypothetical carbon prices and what that would mean in terms of potential offset programs for farmers. A price range of 40 cents per ton to \$90 per ton has been analyzed.

"We considered, that if we were to get such a revenue, what the incremental income effect for producers would be if they were to sell those carbon offsets," Popp said. "It's generally positive but not very large, as payments to producers only flow if changes in net carbon emissions are positive for the environment. What has not been included in the analysis is that potentially both commodity and fertilizer and fuel prices would rise with an uncertain outcome.

"If you model only fertilizer price increases you're looking at decreases in net returns for crop production in the state of Arkansas," Popp continued. "However, a lot of those numbers are subject to our interpretation of how a policy scenario might unfold. Even a small change in some numbers on the carbon sequestration side over various other measures could really impact

with the Waxman Markey bill agriculture stands to benefit because it's not under the cap and trade scenario.

"But you also have to consider that if the Waxman Markey bill goes through, petroleum processing facilities and electric coops will see increased costs and they probably will be passed down to the farmer," Nalley said. "Although they do have offset potentials, they also have the potential to seek higher input prices."

Still other variables enter the scenario. All the processing industries would also be affected.

"If you have large shifts in crop production across different crops, if there's ground water restrictions or the ground water availability in the Delta is lowered, you could potentially see fairly large acreage shifts, and as a result, attendant effects in the processing industry. So change in agriculture is the name of the game in the foreseeable future - possibly significant changes," Nalley summed. Δ

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