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Sources of and Solutions for Southern Agricultural Risk: The View from the Coast

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Ray et al. have examined the national agricultural sector impacts of the 1996 FAIR Act using a stochastic simulation model based on the Policy Analysis System (POLYSYS). The model outcomes are predictions of various economic measures, including the coefficient of variation of net returns for corn, wheat, soybeans, and cotton. Then Knutson et al. use the results of the Ray et al. simulations to predict the distribution of net farm income over the next 10 years for several types of representative southern farms. Any attempt to measure the changes in riskiness in southern agriculture is commendable—even heroic—and I applaud these efforts, both the national modeling effort by Ray et al. and the application to southern representative farms by Knutson et al. This task has a lot in common, I think, with trying to “tease out” the temperature changes associated with the greenhouse effect. The number of factors and mechanisms at work is mind-boggling. It’s tough enough to try to get a handle on what might happen to the first moment of net farm income over the next 10 years, let alone the second.

I don’t pretend to be an expert on this type of agriculture sector modeling, so I’m going to pose a few questions that occurred to me while reading these papers. One thing I wondered about, even from the first reading, is: How flexible have farmers been allowed to be in these model runs? Have they been allowed

to substitute away from former program crops into other crops or enterprises? Have they been allowed not to plant and simply take the contract payments or to stop farming altogether? These are both excellent ways to avoid agricultural risk, you know.

My guess is that the flexibility allowed in the models is less than complete. This is not a criticism of this effort or of the modelers, because we all know what allowing more choice will mean for the models’ complexity. It does make it less clear what the model results mean, however. It’s sort of an index number problem—if you allow less substitution, your results may be biased. I think the same principle applies here and that it might be particularly troublesome for the South, where there are longer growing seasons and, in most years, adequate moisture to produce a wide variety of agricultural outputs.

What do the POLYSYS results applied to the representative farms mean for risk exposure in the South? First of all, there is a decided (and understandable) “western South” bias here, it seems to me. I send greetings to the modelers from the “eastern South,” where the demise of the commodity programs doesn’t strike nearly as much fear in the hearts of many farmers as questions about what the future holds for the tobacco program and the peanut program, or what regulations will result from encroaching urban areas. Table 1 illustrates the potential “western South” bias at work in the modeling effort. It contains a listing of the top three agricultural enterprises in terms of cash receipts in 1995 for all of the

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Table 1. The Top Three Agricultural Products in Cash Receipts by Southern State, 1995

State	Commodity		
	No. 1	No. 2	No. 3
Alabama	Broilers	Cattle and calves	Chicken eggs
Arkansas	Broilers	<i>Cotton</i>	<i>Soybeans</i>
Florida	Oranges	Greenhouse/nursery	Cane for sugar
Georgia	Broilers	<i>Cotton</i>	Peanuts
Kentucky	Tobacco	Horses/mules	Cattle and calves
Louisiana	<i>Cotton</i>	Cane for sugar	<i>Rice</i>
Mississippi	Broilers	<i>Cotton</i>	<i>Soybeans</i>
North Carolina	Hogs	Broilers	Tobacco
Oklahoma	Cattle and calves	<i>Wheat</i>	Broilers
South Carolina	Broilers	Tobacco	Greenhouse/nursery
Tennessee	Cattle and calves	<i>Cotton</i>	Dairy products
Texas	Cattle and calves	<i>Cotton</i>	Greenhouse/nursery
Virginia	Broilers	Dairy products	Cattle and calves

Source: USDA/NASS 1997.

Note: Only the commodities appearing in bold/italics are among those considered in the simulation models and representative farms.

southern states. The agricultural enterprises considered in the models described in the Ray et al. and the Knutson et al. papers are shown in bold/italics in table 1. It appears that, especially in the "eastern South," agriculture differs more from the "western South" than the model would lead one to believe. Of course there are effects of increased variability of feed grain prices in the livestock industries, but this effect is indirect, and thus smaller. Moreover, with the degree of consolidation in these industries in the South, I suspect almost no livestock producers purchase their grain on the spot market anymore.

Knutson et al. also report the results of a focus group exercise in Texas and Kansas to elicit farmers' opinions on the relative importance of various sources of agricultural risk and risk-management tools. These, it seems to me, are in some ways more useful for the purposes at hand than the results of the simulation models (even though there is still a "western South" bias, as they freely admit in the paper). It is interesting that the simple strategy of diversification ranks consistently ahead of hedging and crop insurance as an important risk-management tool. It's my guess that its relative importance would tend to strengthen the farther east you are in the South. If the policy goal is to substitute crop insurance in place of

commodity programs and target prices and ad hoc disaster aid, these focus group results certainly point to some potential problems. It would be very useful to extend the farmer focus groups to all the southern states to see if the results reported from Texas and Kansas are consistent across the region.

Skees et al. discuss the implications of recent crop insurance pricing and new crop insurance products for the southern region. They argue that, since multi-peril crop insurance is, in many instances, priced too high in the South, any product based on the multi-peril rating will be too expensive as well. Crop revenue coverage (CRC) carries the multi-peril rate plus a premium for the price insurance part of the coverage. If multi-peril rates are, indeed, too high in the South (as Skees et al. argue), then I agree this could damage CRC's ability to provide the expected safety net. In addition, only one of several crop revenue insurance products is approved for sale in the South. While CRC appears to be a sound concept, and producer acceptance seems to be high, other products should be allowed to compete in the South, and private firms should be encouraged to develop new ones. The market is, after all, the best determinant of the value of a new product—not a government agency.

From Washington on down, everyone is talking about the potential increase in agricultural risk as an outcome of the 1996 farm bill. It appears that Congress might be putting all the federal agricultural risk-management eggs in one basket—a curious risk-management strategy, to say the least! As the papers given in this session point out, this plan may not be an optimal one for all regions. There are many policy research questions that remain unanswered. Fortunately, because there is currently so much attention focused on risk, there may be resources available to assist in addressing

these questions. Even if the changes in riskiness aren't as dramatic as we first thought, we still have an opportunity here for both research and extension to refine, reinvent, and reapply agricultural risk-management tools and take advantage of a "teachable moment."

References

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