THE MAGAZINE OF FOOD, FARM, AND RESOURCE ISSUES

CHOICES

Fourth Quarter 1994

Findings

What agricultural and resource economists are finding about food, farm and resource issues.*

- Integrated pest management, or IPM, increased cotton yields without increasing varience in yields in California's San Joaquin Valley—says Hurd.
- Dynamic economic models offer producers more flexible thresholds, easier implementation, and higher profits than did previous fixed rules for pest management—say Harper and coauthors.
- In South Central Texas, a 25 percent tax on pesticides would cut the demand for some highly soluble and persistent pesticides by up to 50 percent—say Shumway and Chesser.
- Even though economic development eventually leads to reduced levels of air pollution, without concerted actions the world will not return to current emission levels until the end of the next century—say Selden and Song.
- Dairy price support programs elevated the price of milk above market clearing levels by 14 to 22 percent between 1980 and 1983, an outcome which draws into question the wisdom of such programs—say Helmberger and Chen.
- Mandatory cleaning of U.S. winter wheat exports to meet proposed standards increases the break-even price of wheat by 0.4 to 2 cents per bushel—say Adam, Kenkel and Anderson.
- Agricultural price interventions in eighteen less-developed countries taxed the agricultural sectors at rates of 30 to 50 percent, and wasted 7 to 16 percent of the agricultural resource base—say Fulginiti and Perrin.
- Nutrition information does affect dietary fat intake—say Gould and Lin.

*Findings are taken from recently or soon-to-be published research in the *American Journal of Agricultural Economics*, *Journal of Agricultural and Resource Economics*, *Review of Agricultural Economics*, *Journal of Agricultural Economics Research*, *Journal of Agricultural and Applied Economics*, *Agricultural and Resource Economics Review*, *Land Economics*, *Journal of Environmental Economics and Management*, *Agribusiness*—an International Journal, and other journals which publish the research findings of agricultural and resource economists. Abbreviated citations are found on page 43.

ON OUR COVER—The industrialization of agriculture affects the way farmers farm and the way agribusiness serves agriculture. Feature articles discuss the pace and shape of these changes.

by Peter Kuch ■ **Guest Editorial**

The Environment and Farm Legislation

Peter Kuch is chief of the Agricultural Policy Branch of the Environmental Protection Agency's Office of Policy Analysis. He is a veteran of the 1990 Farm Bill reauthorization process, and has been dealing with agro-environmental policy issues since 1980.

Even after various attempts to correct the problems, serious environmental deterioration and health concerns related to agriculture continue. Agricultural sediments and nutrients are leading causes of stream, lake, and estuary impairments. Nitrate is the second most frequent contaminant found in drinking-well water after pathogens; both often have agricultural origins. Drainage of wetlands and sodbusting have, over the decades, destroyed an enormous amount of wildlife habitat, which together with irrigation water diversions have brought many wildlife species to the verge of extinction. Wind erosion is a major contributor to the airborne particulate matter that is small enough to cause respiratory ailments. Rightly or wrongly, the public exhibits paranoia about pesticide residues in food.

Although future reauthorizations of FIFRA, the Clean Water Act, the Safe Drinking Water Act, and a growing body of state environmental legislation will increasingly impact agricultural production, the 1995 Farm Bill has the potential to have a much greater affect on how farmers manage the nearly one billion acres under their control.

Farm programs attempt to support farm income by subsidizing certain sorts of agricultural activities. The commodity programs encourage the production of crops that are often more erosive, and often require more irrigation water, pesticides, and nutrients than alternative nonprogram crops. The need to maintain base acreage discourages conserving rotations. The federal government makes sure that credit is readily available for production inputs, but not for on-farm environmental capital. Quotas for Class I milk, and the price differential that increases with the distance from Eu Claire, Wisconsin, are added incentives for large daity operations where there is inadequate pasture and cropland to recycle manure.

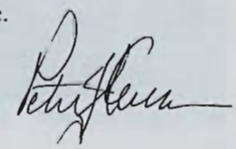
Tighter future federal budgets are not likely to support both farmers' income through the current types of commodity programs and programs to offset all of their perverse environmental effects.

Farmers have a wide range of land use choices. They can manage the land to boost crop acreage and yields, frequently with accompanying environmental problems. Or, they can manage the land to maximize the production of environmental services. Or they can shoot for some combination of the two. Market returns reenforced by farm program incentives encourage the first mix of activities. With the exception of the Conservation and Wetland Reserve Programs, few economic incentives are provided to farmers to produce environmental services.

In the next farm bill we should let the public signal its demand for crops and livestock through the commodity markets, and let the government signal the public's demand for farm-produced environmental goods and services through "stewardship" payments. These payments could be an annual fee, paid by the government to farmers for the production of environmental benefits not reflected in market prices, or the payments could be for multiyear contracts that retire cropland. We should leave it to the profit-maximizing farmers to supply what the public demands, rather than attempt to regulate how they farm. Agriculture, because of its widespread control over vast acreage, has a comparative advantage over other sectors in producing environmental services. I should think we could get a lot of farm-produced environmental benefits for the $12 billion dollars projected to go into commodity programs.

In the legislative process, rather than worrying about how much acreage should be in short-term versus long-term reserve programs and how much ought to be devoted to what purpose, let us turn the problem over to a government portfolio manager charged with maximizing the total output of environmental services from a given budget. The manager should be given guidance on desired outputs (water quality, soil conservation, particular wildlife habitat, etc.), but these and the availability of funds could change over time. The portfolio manager should be given complete flexibility to leverage public funds with money from nonprofits, renegotiate existing contracts and sign new ones to take advantage of new opportunities and changing public priorities.

Reorienting the basis upon which we supplement farm income to a system of payments for environmental services is likely to expand the political support for farm programs and enable them to grow in the future.



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