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Issues for the 1990's: ENVIRONMENT

Improving Water Quality through Policy Reform

Marc O. Ribaudo (202) 219-0444
Steve Crutchfield (202) 219-0444

Issue. Agriculture is a major source of sediment, nutrients, salts, animal wastes, and pesticide residuals entering U.S. water supplies. These materials impair water quality in some areas of the country (see charts). Most other major sources of pollution are already controlled through regulation, so improvements in many areas will likely have to come by reducing agricultural discharges. Ideal policies would reduce agricultural pollution in a way that farmers and consumers alike view as equitable and efficient.

Context. The 1972 Federal Water Pollution Control Act outlined the goals for surface water quality. So far, the emphasis in this legislation and subsequent amendments has been on controlling pollution coming from clearly identified points (point sources). Agriculture and other nonpoint sources have been dealt with only as a secondary problem, largely through voluntary State management programs. However, programs must address agricultural pollution sources if national water quality goals are to be achieved. The 1990 Coastal Zone Act Reauthorization Amendments required technology-based management measures for farms in coastal zones. Agriculture's effect on ground water quality is addressed in Environmental Protection Agency's (EPA) Chemicals in Groundwater Strategy and in U.S. Department of Agriculture's (USDA) Water Quality Program. Some States also have programs for protecting water resources from agricultural pollution. Most Federal and State programs emphasize voluntary approaches. The 1985 and 1990 farm acts introduced USDA programs aimed at protecting or improving water quality. Such programs are likely to remain an important part of USDA's conservation activities. The issue becomes one of identifying which policy actions to pursue for achieving water quality goals.

At Stake. Who will bear the cost of cleaner water? Voluntary measures and stronger controls are the two most commonly considered approaches to reduce agricultural nonpoint source pollution. Most farm groups favor the voluntary approach, supported by research, education, technical assistance, and cost-sharing. This approach is appealing because the characteristics of agricultural pollution make it difficult, if not impossible, to identify individual or point sources of pollutants. In addition, it is difficult to predict the water quality benefits from adopting alternative management practices. Supporters of this approach believe that producers should not be forced to change practices and incur possible income losses unless conclusive evidence exists that their farm is a problem and that the actions taken will produce cleaner water. The voluntary approach would have minimal economic effects on producers, but would force water users to bear the costs of polluted water. This approach also implies that more progress towards meeting water quality goals would require increased controls on point sources, despite greater costs.

Environmental groups favor stronger controls on agriculture. Point-source pollution control policies have traditionally followed the "polluter pays" principle. Doing so would require that farmers bear some of the costs for their actions. Marginal costs for reducing most agricultural pollutants are lower than for a like reduction in pollution from point sources, economic analysis shows. Stronger actions might also be warranted since farmers already benefit from a number of commodity programs that can create incentives to increase chemical use and to produce crops by farming marginal land. Requiring farmers to alter their management practices will generally increase costs, especially for those growing input-intensive crops or those farming on marginal land. Some land may even be forced out of production. Consumer prices could rise and trade could suffer, particularly if other countries ignore the environmental costs of their agricultural systems.

Alternatives.

Continue current programs (status quo). Avoid further regulations under the Clean Water Act and continue to rely on volunteerism supported by publicly funded research, education, technical assistance, and cost-sharing. Adverse effects on producers are minimized under voluntary programs. However, there are no guarantees that voluntary changes in management necessary to improve water quality will occur, especially if those changes indicate lower incomes.

Shift more heavily towards compliance measures. USDA's commodity and other income-support programs offer payments contingent on farmers adopting environmentally sound management practices. Conservation compliance has already been adopted for the control of soil erosion. However, such an approach misses nonprogram crops. And, such incentives have declined recently and could decline further because of proposed trade agreements which limit support payments and possible budget-saving cuts in commodity program expenditures.

Introduce environmental taxes under the Clean Water Act. Input fees or taxes have been suggested as a way to reduce chemical use. Several States have taxes on nitrogen fertilizer. Taxes could reduce the amount applied, with the revenue to be used for research or refunded to those who adopt nutrient management strategies. Taxes based on potential environmental effects could also be applied to certain management practices.

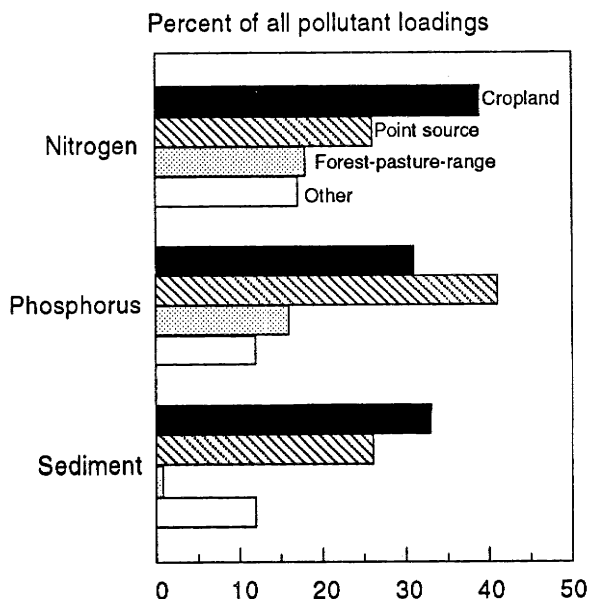
Adopt the Coastal Zone Management Act (CZMA) strategy. The CZMA calls for a technology-based approach in which States identify a list of approved best management practices (BMP's). States can use voluntary or regulatory means to see that appropriate practices are adopted. USDA and EPA cooperated in identifying the approved BMP's. This strategy has not yet been implemented, so it is unclear how successful it might be. Enforcement may be particularly difficult.

Agenda. Two pieces of prospective legislation can have a significant effect on agriculture's role in meeting national water quality goals. The Clean Water Act is up for reauthorization in 1993; preliminary work on major issues has been in progress for the past year. The 1995 farm bill debate will offer another forum for debate and, ultimately, legislative provisions.

Information Sources. Bulletins from the Environmental Protection Agency: *Water Quality Inventory, Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, Pesticides in Well Water Survey, and Chemicals in Ground Water Strategy.*

Sources of surface water pollution

Runoff from agricultural land is the single largest source of the Nation's surface water pollution.



Nitrates in U.S. drinking water wells

The nitrate levels in most wells are below 10 milligrams per liter, which does not pose a human health risk.

