
Chapter VII

Issues and Options for Congress

Contents

| | <i>Page</i> |
|---|-------------|
| Issue 1: Integrating Conservation Policy and Economic Policy | 181 |
| Issue 2: Improving the Effectiveness of Federal Conservation Programs | 183 |
| Issue 3: Enhancing Federal Research Capabilities | 186 |
| Issue 4: Reducing Pressures on Fragile Lands | 188 |
| Issue 5: Encouraging State Initiatives | <i>1810</i> |

Issues and Options for Congress*

The U.S. Government affects agricultural technology decisions through an extensive body of law, policy, and precedent. This in turn affects long-term inherent land productivity.

Congress has two main channels to affect the development and use of agricultural technology: through legislation, including budget appropriations; and through committee oversight of how existing laws and programs are administered. Generally, this assessment finds that existing agricultural legislation provides a sound basis for Government activities needed to accelerate the development and use of productivity-sustaining technologies. Consequently, many of the congressional options listed are related to oversight functions. There are also

opportunities to change legislation to make existing conservation programs more effective and to cause other agriculture programs to support the objective of sustaining inherent land productivity,

Opportunities for congressional action relate to five policy issues:

- 1, integrating conservation policy with economic policy,
- 2, improving the effectiveness of Federal conservation programs,
- 3, enhancing Federal research on technologies that help sustain land productivity,
- 4, reducing pressure on fragile lands, and
5. encouraging State initiatives,

ISSUE Issue 1 INTEGRATING CONSERVATION POLICY AND ECONOMIC POLICY

Various factors influence farmers' and ranchers' choices of technologies and their land management decisions, but economics is the overriding influence. Recognizing this decades ago, Congress established several cost-sharing and other programs to make conservation practices more economically attractive for land managers. Payments to farmers from these programs undoubtedly have had a significant impact on agricultural economics and thus on technology decisions. From 1969 to 1979, total Federal payments to farmers and ranchers were about \$25.6 billion. Only \$3.6

billion of this was cost sharing for conservation practices. The other \$22 billion supported programs intended to affect agricultural economics for other purposes. Still other Federal programs do not make direct payments to farmers but change the economics of farming in other ways—e. g., by increasing foreign demand for U.S. crops.

Thus, the Federal Government has tremendous influence on agricultural practices. But only a relatively small part of this influence is used to achieve the goal of sustaining land productivity. This is not to say that the programs designed to affect production levels, stabilize prices, improve farm incomes, or accomplish other short-term economic goals all cause long-term deterioration of inherent land productivity. On the contrary, some of the programs to limit production have been credited with conserving soil and water resources and with enhancing wildlife habitat. However, others, such as the disaster relief programs, have been accused of encouraging cultivation of fragile

*While the draft of this report was being reviewed by U.S. Department of Agriculture (USDA) agencies and by many other experts during September, October, and early November of 1981, USDA released the 1981 Program Report and Environmental Impact Statement (revised draft). That report, which is part of the process required by the Resources Conservation Act (RCA), contains a chapter titled "Preferred Program" that offered some recommendations quite similar to certain options identified in this OTA assessment. The "Preferred Program" chapter of the RCA report is included as app. E to this report and the options in this chapter that are similar to the RCA options are identified with an asterisk.

land. The key words here are “credited with” and “accused of.” In fact, little is known about how long-term productivity is affected by the important short-term economic influence wielded by Congress through the U.S. Department of Agriculture’s (USDA’s) programs.

Existing agricultural economic programs, proposed new programs, and program modifications are not regularly or systematically analyzed to forecast their long-term effects on land quality. Neither the administrative mechanism nor the analytical methods exist for such evaluation. Conservation cost-sharing programs only now are beginning to be evaluated to determine their effectiveness in achieving intended conservation goals, and these evaluations are leading to more enlightened public and congressional debate over how to modify the programs. The other, much larger, agricultural economics programs do not have conservation as a goal and so their evaluations seldom include an assessment of their long-term effects on the land resource.

OPTION 1

Congress could direct USDA to routinely and rigorously evaluate the long-term impacts of not only conservation programs but also all other programs that have a major effect on agricultural economics.

The information generated from such evaluations would foster more enlightened policy debates. It could greatly improve policy decisionmaking, even without regulations requiring that programs not cause long-term harm to agricultural productivity. There is a danger that mandating a routine evaluation would lead to a slow, expensive, and complex process, in which case the information might be too costly or might not be available soon enough to be useful for policy decisionmaking. Developing improved mathematical policy models, however, could enable USDA analysts to avoid that problem.

OPTION 2

Congress could direct USDA to develop analytical models suitable for evaluating how proposed program policy decisions

would affect the inherent productivity of agriculture’s natural resource base.

To some extent, this is being done as a part of the 1977 Resources Conservation Act (RCA) process, which mandated continuing evaluation of each of USDA’s 34 soil and water conservation programs. Evaluations already completed have revealed opportunities to improve program effectiveness and presumably more conservation programs will be evaluated for the 1985 RCA report. Several major mathematical modeling efforts are being undertaken under the auspices of the RCA program. However, only one of these is a modeling program designed specifically to analyze policy impacts and Congress has not directed the RCA to evaluate the larger and more powerful USDA economic programs that are not considered conservation programs.

A new effort to develop simulation models to evaluate existing programs, program modifications, and alternatives could be undertaken without necessitating a major new allocation of funds to USDA. However, such an effort would have costs—personnel would have to be taken from other program efforts. The actual model development might be done by contractors, but USDA analysts would need to be assigned to run such a project. If new funding were not available, the idea would be resisted by offices whose funds might be diverted to it. One appropriate source of funds and personnel could be the commodity, loan, and insurance programs that comprise most of the Federal effort to influence agricultural economics.

A disadvantage to developing and using mathematical models is that too much credence may be given to the accuracy or precision of the analytical results. In fact, predictions made with complex policy models are not necessarily more precise than predictions from the “mental” models of experienced policy experts. The advantage of the mathematical models is that when experts disagree, they can use models to diagnose the causes of their disagreement and to communicate these objectively to Members of Congress and other policy makers.

OPTION 3

Congress could initiate a policy to require all new agricultural programs to include: 1) explicitly stated, attainable objectives, one of which would be to sustain the inherent productivity of agriculture's natural resources; 2) management plans for achieving the objectives; 3) monitoring mechanisms to measure how well the program activities are achieving the objectives; and 4) a mechanism through which the monitoring of results could be used to make changes.

Explicitly stating that conserving the productivity of renewable resources is a major policy objective would force recognition that conservation and production are not conflicting goals. Designing programs to include monitoring mechanisms would keep agricultural programs flexible so that cost effectiveness could be improved continually and full use could be made of technology or management innovations.

This approach to integrating conservation and agriculture programs is more demanding than the program evaluations suggested by the first option. There may be some programs that Congress deems necessary but that come into conflict with conservation of inherent produc-

tivity. The debates regarding whether the social or economic objectives of such programs are worth the cost in long-term productivity could be enlightening, but might be expensive. This option, too, could lead to an expensive analysis process, but that could be avoided if appropriate mathematical policy models were developed.

Any action requiring explicit program goals and monitoring is likely to cause some agency objections and political repercussions. Disadvantages include: 1) political advantages that may be gained from using programs for implicit goals, such as distribution of funds to a large or special constituency, could be lost; 2) data from monitoring programs could be used to end programs before they have had a realistic opportunity to achieve their goals (this is especially likely with conservation programs, which are usually long-term solutions to long-term problems); 3) politicians and upper management could lose some control over program operations (with technicians gaining some control) if programs were made flexible enough to allow constant improvements in cost effectiveness.

ISSUE 2: IMPROVING THE EFFECTIVENESS OF FEDERAL CONSERVATION PROGRAMS

USDA conservation programs are administered to provide technical and financial assistance to agriculturalists. But the programs have not been effectively concentrated on the most severe land productivity problems, and USDA technology development and promotion efforts are not effectively focused on the most cost-effective erosion control techniques. The Soil Conservation Service did use national inventories of conservation needs in 1957 and 1967 to allocate some funding and personnel. However, the political need to provide assistance to the maximum number of farmers has remained an important factor in distributing program efforts,

The National Resource Inventories of 1977 provided, for the first time, statistically reliable data which indicate that very rapid soil erosion is concentrated on a relatively small proportion of America's agricultural land. The data now make it possible to determine, with considerable precision, the geographic location of highly erosive land. In 1979 and 1980 USDA recognized that there was still a paucity of precise information on how erosion relates to agricultural productivity for each major soil type. Thus, two new research efforts have been started to translate erosion rates into productivity loss rates. one will provide quick preliminary estimates of the relationship between ero-

sion and losses in yield; the other, longer study will more precisely describe these relationships with simulation models that reflect the complexity of modern farming. As these analyses develop, it should be possible to rank regions and specific sites by the severity of their erosion-caused productivity losses. Meanwhile, the available data on erosion rates can substitute for more exact information on productivity loss.

The information now becoming available has set the stage to redirect Federal conservation efforts (technical and financial assistance) to achieve improved erosion reduction—the so-called “targeting” approach, which formed the cornerstone of the conservation program proposed by the Secretary of Agriculture in October 1981. The emergence of water pollution control as a major national policy objective also shows a need to reorient Federal erosion control programs to achieve the greatest possible reductions in erosion rates rather than the widest geographic diffusion of program efforts. The political motivation to distribute programs widely still remains, however.

OPTION 1

Congress could direct the Agricultural Stabilization and Conservation Service (ASCS) and the Soil Conservation Service (SCS) to concentrate increased financial and technical assistance on agricultural land with severe erosion problems.

Such a concentration of effort could enhance the effectiveness of these programs. For example, ASCS has estimated that the Agricultural Conservation Program (ACP) could triple the amount of soil kept in place through its expenditures (mainly cost sharing) by directing erosion control funds to highly efficient techniques and to land with high potential for erosion reduction. SCS estimates that if 25 percent of USDA's technical and financial aid were redirected to “national priority areas,” it would reduce gross national erosion by 300 million tons (6 percent) annually. Many soil conservation policy experts anticipate a continued decline in the buying power of the Federal conservation budget. If this occurs, improving the

cost effectiveness of these funds by directing the program efforts to the worst sites would seem imperative. However, if appropriations remain level (implying a decline in real funds), as they have over the past decade, any concentration of technical and financial assistance on critical areas will reduce or eliminate assistance elsewhere. The “targeting” option has another problem: all conservation programs are voluntary and there is no guarantee that farmers of highly erosive lands will use the financial or technical assistance made available. Some data suggest that much of the erosive and otherwise fragile lands are concentrated in the hands of farmers with less capacity to manage the complex productivity-sustaining farming technologies and/or less available capital to finance their share of the conservation practices.

If cost sharing were directed to land simply according to erosion rates, it might miss lands with other significant productivity problems. There are areas that have shallow soils, poor subsoils, and other problems, and that thus incur high rates of productivity degradation in spite of relatively low erosion rates. Nor are the areas with high erosion rates the only threat to water quality. Sedimentation and nutrient and pesticide runoff, for example, can be severe in areas where erosion rates are low to moderate. The relationship between erosion and these environmental problems varies greatly among watersheds. The new research programs to determine relationships between erosion and yield reduction will resolve some of these uncertainties in redirecting the program efforts, but will leave the water quality issues largely unanswered.

This program redistribution option may not achieve greater cost effectiveness if the limit on the amount of assistance allowed per farmer per year (currently \$3,500 for ACP cost sharing) is not raised. This is because many erosion control practices (such as terraces) necessary for highly erosive sites are expensive to implement. Another problem is that the cost of relocating field personnel presumably would come from the agencies' existing budgets, thereby reducing the funds available for other

functions. Finally, any major redistribution of Federal funds among States to reduce erosion might weaken other State and Federal efforts to conserve agricultural productivity.

OPTION 2

Congress could appropriate additional funds, or redirect existing funds, to expand in-service training programs for SCS and Extension Service field personnel to improve their expertise with innovative productivity-sustaining technologies.

New agricultural production technologies and new conservation practices are being developed that can conserve inherent land productivity effectively and simultaneously maintain or enhance farm or ranch profits. Often these technologies are not reaching farmers as quickly as they might because Extension agents and SCS field personnel lack experience in the new methods. Some of the Federal personnel, while having considerable engineering expertise, are not adequately prepared to advise farmers in new management approaches that might solve the same problems at lower cost. For example, in the last 5 to 10 years private industry and State-level research scientists have made substantial advances in designing no-till farming equipment, yet many Federal personnel still resist the technology because of early development problems that have since been solved.

Improved promotion and consequent wider adoption of technologies that are already "on the shelf" could greatly enhance the cost effectiveness of the overall Federal conservation effort. And if training efforts were coordinated to include both SCS and Extension personnel, farmers would be less likely to receive conflicting advice about solving their production problems while sustaining land productivity.

The disadvantage to this option is that in the absence of new funds for conservation technology training, money would have to come from existing programs. Also, if such training results in greater emphasis on conservation tillage, improved water distribution or timing, and similar management techniques, certain economic

dislocations could result. (For example, local land improvement contractors who have done past work recommended by SCS and cost shared by ASCS or other agencies probably would have less business.)

OPTION 3

Congress could direct the Farmers' Home Administration (FmHA) to provide increased loan support for conservation practices, and to give preference among conservation loans to applicants who need capital for the initial costs of implementing new, more cost-effective management technologies for resource conservation. Congress also could direct FmHA to make conservation plans a criterion for ownership and operating loans.

Historically, FmHA agricultural loan programs primarily have assisted farmers and ranchers who have had difficulty obtaining credit from commercial lenders. Maintaining the farms' renewable resources has been one of several explicit goals for six of the agency's loan programs: the Operating Loan, Farm Ownership Loan, Soil and Water Loan, Resource Conservation and Development Loan, Emergency Loan, and Economic Emergency Loan programs. No rigorous evaluation of how well these programs are achieving conservation goals is available, but data on program expenditures suggest that only a small part of these programs' funds actually are used for conservation.

Increased emphasis on supplying startup costs for innovative crop or range management techniques (as contrasted with building engineering structures) could increase the cost effectiveness of the conservation loan programs and might substantially increase the pool of conservation loan applicants.

If conservation plans are required, they need not interfere with the agricultural production and income stability objectives of the loan programs because technologies are available that can conserve resources while maintaining farm profits in most situations. However, a loan program that requires conservation plans probably would have increased administrative

costs since the plans would have to be prepared and reviewed. Also, if implementing the plan was made a requirement either for the initial

loan or for follow-up loans, Federal personnel would be needed to certify the implementation effort.

Issue at ENHANCING FEDERAL RESEARCH CAPABILITIES

This assessment, and other recent studies such as USDA's report on organic farming, have found a surprising lack of data on what would seem to be fundamental issues for developing agricultural production technologies that can sustain the quality of the natural resource base while simultaneously producing commodities for the Nation and profits for farmers and ranchers. For example, little is known about soil formation rates under modern farming systems. Little is known about what impacts agricultural chemicals have on soil microbe ecology or on species-specific microbe functions. Little is known about the dynamics of erosion or hydrology on rangelands under various management systems.

Some of the gaps in the data base are the result of agricultural research priorities developed during the era of relatively inexpensive energy and fertilizers. Options for improving the overall planning and coordination of agricultural research are presented in some detail in the OTA report *An Assessment of the U.S. Food and Agricultural Research System*. The options given here relate more narrowly to the issues of research for inherent land productivity.

OPTION 1

In exercising its oversight responsibilities for agricultural research, Congress could encourage and closely monitor the modeling program proposed by the USDA National Soil Erosion-Soil Productivity Research Planning Committee in 1980, assuring that the program receives adequate funds and sufficient expert personnel. Further, once the research models can adequately describe the relationship between erosion and yield, Con-

gress could encourage USDA to: 1) broaden the models to include processes of productivity change other than erosion, and utilities of agricultural land other than crop yield (such as forage and water quality); and 2) simplify them for integration with policy models directly useful to Congress.

The soil erosion-soil productivity modeling program now under way should greatly advance scientific understanding of the relationships between erosion and inherent land productivity. USDA has initiated the program with enthusiasm and, apparently, an adequate commitment of funds and personnel. However, like any agricultural research program, the results will not be immediate and the agency commitment could wane as other priority needs for scarce funds and personnel are identified. By exercising vigilant oversight and by avoiding imposition of new responsibilities on the same agencies without concomitant additions to funds and personnel, Congress can ensure that the scientists will not be distracted from this important program.

The modeling program is analyzing the most important process of productivity degradation—soil erosion—first. It is defining the bounds of its study by considering crop yield the main dependent variable. This should produce a useful model within a reasonable budget and time frame. If the model is ready to be used for the 1985 Resources Conservation Act report, that report's usefulness to Congress will be greatly enhanced. Yet important gaps in the understanding of inherent land productivity will remain.

Precision in understanding erosion is important, even essential, for adequate policy decisions regarding how Federal conservation program resources are distributed both geographically and among particular technologies. However, other processes such as aquifer depletion,

¹ Office of Technology Assessment, *An Assessment of the U.S. Food and Agricultural Research System, OTA-F-155* (Washington, D. C.: U.S. Government Printing Office, December 1981).

salinization, compaction, and changing rangeland ecology also are influencing the inherent productivity of U.S. croplands and rangelands. For all these processes, little is known about technological causes, national extent, or relationships to long-term agricultural production. Policies on how to distribute funds among programs that work with these productivity-change processes are based mainly on intuition and on political pressures, rather than on science. The intuition of scientists and experienced analysts is a good basis for interim policy decisions, but it should not be accepted as a long-term substitute for scientific knowledge.

Many aspects of productivity-change processes, such as the hydrological effects of range deterioration, have yet to be measured adequately. However, the most immediate need is to use the data that already exist for comprehensive analyses to indicate which data gaps are most significant for policy decisions and for technology development. Subsequent research could then be concentrated on those questions. Simulation modeling, the approach being used in the soil erosion-soil productivity study, is ideally suited for this kind of analysis. That program should expand its scope beyond erosion and yield to other processes affecting inherent land productivity as soon as it has described erosion-yield relationships with sufficient precision.

OPTION 2

Congress could direct the Agricultural Research Service to expedite research and development for potentially profitable cropping systems that reduce the need for tillage on highly erosive soils or that reduce the need for high irrigation rates in areas where ground water resources are being severely depleted.

The most promising innovative technology for reducing tillage, and thus reducing erosion, on highly erosive land is “no-till,” which substitutes herbicides and other agricultural chemicals for weed, insect, and disease control. This technology has been developed by private sector and State-level scientists and tested by risk-taking farmers, with little Federal involvement.

The private sector paid to develop the no-till techniques largely because of the potential for profits from sales of patented inputs (e.g., herbicides). However, neither no-till nor any other single technological approach is suitable for every fragile agricultural environment. Private funding cannot be relied on to develop the wide array of innovative cropping systems needed to sustain the inherent productivity of dry, erosive, or otherwise fragile agricultural lands. Some of the technologies needed will take too long to develop; others will not include any potential profits from exclusive sales of inputs to repay the development costs.

Developing new crops—or improving old crops—produced from perennial plants (trees, shrubs, and herbaceous perennials) is an example of technology development that might reduce the need for tillage or irrigation. Developing new, more profitable uses for crops that provide perennial cover is another example. (As one scientist advising this assessment suggested: “we need a research program to do for alfalfa what George Washington Carver did for peanuts.”)

Congressional instructions to USDA’s Cooperative Research Service (CRS) for implementing the Competitive Research Grants Program in 1977 included “research to develop and demonstrate new, promising crops” as one of four priority areas. Congress could provide additional recommendations to CRS to support research on crops that help sustain inherent land productivity.

Congressional oversight authority could also be used to promote such a research network. OTA’s recent assessment on the U.S. food and agricultural research system found that the Federal research network for agriculture lacks explicit goals. Congress might choose to make sustaining the renewable resource base an element of such goals.

OPTION 3

Congress could direct USDA to develop a program for screening innovative technologies that might sustain land productivity, conducting preliminary tests of those that

have a sound scientific basis, and getting those that seem promising into the mainstream of technology development.

Agricultural scientists necessarily concentrate their efforts on rather specialized subjects for long periods in order to contribute significantly to agricultural technology development. The institutions that employ such scientists suffer from chronic funding shortages and can hardly afford to risk funds or personnel on fundamentally new approaches to agricultural production. This partly explains the seemingly conservative, methodical pace of agricultural technology development. "Breakthroughs," fundamentally new shifts of vision or technique, do occur, however. No-till farming is one of many examples. But given the projected demand for U.S. agricultural products and the degree of erosion, ground water depletion, and other negative effects that seem inevitable consequences of available production technologies, there is a great need to accelerate technological development. A program to provide objective, deliberate screening of innovative agricultural technologies and ideas developed both by scientists and nonscientists might serve this purpose. Various peer-review processes for research proposals and journal articles now screen ideas, but without an explicit commitment to locate and test fundamentally different approaches.

This option is not dissimilar to the charge given USDA's Competitive Research Grants program, except that sustaining inherent productivity was not an explicit criterion for that program. The program met a great deal of resistance because it was not funded with new appropriations, but rather used funds diverted from established programs. Any new program or program change designed to include screening and preliminary testing of innovative technologies for sustaining inherent productivity probably would meet similar resistance and might ultimately fail without new appropriations.

A related problem with this option is that if Congress gives the function to USDA's Agricultural Research Service, it could distract the agency from other important tasks such as improving data analysis. The Agricultural Research Service and the network of associated federally sponsored research agencies cannot perform an expanding agenda of responsibilities without expanding funds and expert personnel. However, if Congress should expand the Federal agricultural research establishment, it should not be assumed that the new funding and resources would automatically be used to promote productivity-sustaining technologies. The need for congressional vigilance and oversight in this regard will remain.

ISSUE 4: REDUCING PRESSURES ON FRAGILE LANDS

A relatively small part of the Nation's range and cropland accounts for a large portion of the Nation's soil erosion. In the 1950's and 1960's, Federal land diversion and set-aside policies, intended primarily to control production, provided substantial incentives for farmers to remove highly erosive and otherwise fragile land from production. However, over the past decade, growing demands for agricultural commodities have virtually eliminated the incentives to keep land out of production. Continued growth in demand will cause additional land with high erosion hazards to come into production during the coming decades, and

land diversion programs on the scale of former programs are not foreseen. As long as highly erosive lands are tilled for row crop or small-grain production with conventional agricultural technologies, they will continue to be a major cause of the Nation's soil losses and a major cause of the Nation's water quality problems.

OPTION 1

Congress could authorize ASCS to institute a special land diversion program for highly erosive or otherwise fragile lands that would reimburse farmers for removing these lands from row crop and small-grain production

whenever crop supplies are deemed by the Secretary of Agriculture to be adequate for domestic and export needs.

Cost-sharing programs focused on the most erosive lands might enable some farmers to protect that land from high erosion rates, but for much of the most erosive cropland, such protection is extremely expensive, no matter who pays for it. For such sites, paying the farmer the difference between the per-acre profit from the crops that cause erosion and the profit from alternative soil-conserving land uses, such as hay or pasture, may be a less expensive and more effective way of protecting long-term land productivity. Such a diversion could also serve to buffer farm prices in periods of surplus commodity production, reducing the need for periodic set-asides. The diversion could be canceled when low supplies are expected, thus avoiding pushing row crop and small-grain prices up to levels that are either too high for U.S. consumers or too high for the diversion program to afford.

A principal disadvantage to a diversion program with conservation as its primary objective is that it creates a need for additional appropriations. The program might reduce the need for expenditures in the Federal cost-sharing and technical assistance programs for conservation, but diverting funds from those programs probably would cause a long-term and substantial reduction in the Federal capability to provide technical service. Thus, services would be reduced for conscientious farmers who are willing to pay part of the costs for implementing conservation practices. Also, reducing the Federal capacity to provide technical conservation services would be a significant risk, since the diversion program might not attract enough farmers or commodity prices might dictate that the diversion not be in effect during many years.

There are other problems with this option. Availability of funds for farmers who retire fragile land from row crop and small-grain production could be an incentive for farmers to plant land now in pasture or hay to such crops in order to make such land eligible for the paid

diversion program. This could increase program costs and, in years when the diversion payments were canceled, degrade land productivity where it would otherwise have been protected. That problem perhaps could be avoided by the use of some baseline year for eligibility, but that could leave fragile lands now called "potential cropland" out of the program. Finally, from the farmer's view, such a program could make it difficult to maintain equipment and flexibility enough to produce both row or small-grain crops and land-conserving crops on the same land.

OPTION 2

Congress could direct USDA to develop an incentive program to promote the intensive use of those lands able to sustain row crop and small-grain farming or livestock grazing that are not now used for those purposes.

The 1977 NRI indicated that some 36 million acres of land in the United States (excluding Alaska) had "high potential" for development as cropland. This included some land with relatively high erosion potential, but which is suitable for sustained, intensive crop production as long as conservation practices are applied. How much of this land may have been converted to cropland since 1977 is not known, but the 1982 NRI should give updated information on the potential cropland remaining. SCS has identified another 18 million acres of potential cropland in Alaska that is suitable for sustained production with appropriate conservation practices. Similarly, underused grazing land resources have been identified in Alaska and in the Nation's Eastern forests.

Production from these land resources, as they are developed, should help to meet the growing demand for agricultural commodities and, thus, help reduce pressure to grow row crops and small grains on those erosive or otherwise fragile lands where production costs are high or yields are low.

Most of the potential cropland and grazing land, including that identified as "high potential" in the 1977 NRI and the land in Alaska, will not sustain intensive use without conserva-

tion practices. Any accelerated development of this land will increase needs for SCS field personnel and technical services. It may also

require some redeployment of SCS personnel or of other USDA conservation program activities.

ISSUE 5: ENCOURAGING STATE INITIATIVES

Soil conservation became a major public policy issue in the 1930's. When it became apparent that States were not able to cope with the problems of land productivity degradation, the Federal Government began providing most of the public investment in agricultural resource conservation. But the Federal investment has been shrinking over the past decade by 6 percent per year for financial assistance and 0.1 percent per year for technical assistance—in spite of increasing pressures on the resources as additional fragile lands are brought into production.

This also has been a decade of increasing State activity in land resource conservation. No data exist that measure how well State efforts have offset declines in Federal investment or how well State programs are meeting the increased conservation needs necessitated by increased cropland in production. To date, most State initiatives have been planning efforts and not all States are involved. Since much of the State activity seems to have been stimulated by specific congressional actions, there is good potential for further congressional action to promote State activity.

Over the past decade, Federal legislative requirements have prompted some major long-range planning efforts by States. For example, the Federal Water Pollution Control Act of 1972 requires State and local governments to develop long-range water quality management plans. The Resources Conservation Act provided grants for States to plan long-range resource conservation programs. Some States have completed these planning programs and have begun to implement them—the Iowa Till Program and the Wind Erosion Control Incentive Program are among the first fruits of this process. Unfortunately, the RCA grant funds are expected to run out before the program

planning process has been completed in several States.

In addition to long-range, comprehensive planning, there have been State legislative initiatives. As of mid-1980, 20 States had enacted erosion and sediment control laws, prompted in part by a Model State Act for Soil Erosion and Sediment Control published by the Council of State Governments in 1973. A few States have recently begun programs in cost sharing, technical assistance, conservation education, tax incentives, and various regulation approaches to promote conservation technologies. In October 1981, the Secretary of Agriculture proposed shifting some Federal conservation funds to States via grants for technical and financial assistance or for other purposes related to federally approved State conservation programs.

OPTION 1

Congress could encourage State initiatives to enhance inherent land productivity by:

1) directing USDA to establish a special program to assist States in formulating long-term conservation plans and legislation; 2) providing small incentive grants to States that request assistance for formulating such plans and legislation; and 3) appropriating additional funds, or redirecting existing funds, to provide substantial matching grants to States either for designated or unrestricted use in agricultural resource conservation programs.

A coordinating program in USDA to gather and disseminate information from States where long-term plans and special conservation legislation have been successfully developed could save officials in other States from having to "reinvent the wheel," and allow them to focus on the unique needs of their particular

State. This should be a relatively inexpensive and cost-effective option. Extending the RCA grant program for States' conservation program planning would necessitate additional appropriations, but could accelerate the transfer of agricultural resource conservation responsibility to the States. This program has been effective for initiating promising resource conservation programs in those States that have taken full advantage of it.

Matching grants to the States to implement conservation programs would be an expensive option for the Federal Government. Such grants could encourage State legislatures to provide technical and financial assistance for farmers and for strengthening the institutions necessary to support large-scale conservation assistance programs. States could also benefit from unrestricted grants to initiate innovative planning, pilot projects, and other activities that neither the States nor the Federal Government currently support.

Each of these approaches to stimulate State conservation activity has disadvantages. If any detailed criteria or strict Federal review process is part of Federal grants for conservation planning or programs, it may be viewed as a subtle step toward Federal land-use planning. Another problem is that financially strapped or urban-dominated States may not be able to appropriate their share of funds for matching grant programs year after year. This could re-

sult in the Federal funds going disproportionately to the States that need them least.

Transferring increased responsibility to State governments could be used as a rationale for continued reduction in Federal funding for programs, especially if funding is transferred directly from the Federal programs to matching grant or other types of Federal grants to the States. Any severe cuts in the Federal programs are likely to undermine efforts to improve Federal effectiveness by concentrating efforts in the areas with the greatest conservation needs. The processes stimulated by the Resources Conservation Act and other recent legislation are helping develop systems to monitor the effectiveness of Federal conservation programs. States may not develop such monitoring systems, and State programs may be even more susceptible than national programs have been to political pressures for distributing services to the maximum constituency or to special farmer groups other than those who have land with the greatest potential for conservation program effectiveness. Finally, many of the State programs that are being implemented are designed to complement pre-existing Federal programs. If sufficient money cannot be appropriated by Congress to maintain the Federal programs while supplying grants to the States, the grants may simply be used to replace diminished Federal services. This would imply no new conservation benefits but adds another layer of administrative costs.