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## *Appraisal of Programs and Impacts on Land Use Adjustments*

**C**OST-BENEFIT ANALYSIS in land and water development in the U.S. is a wonderland which uninitiated but cautious economists view from a distance. It is applicable not only to land development but also to price supports and land retirement under public auspices. The public is vaguely aware that additional crops produced with reclamation water are counted among the benefits of resource development projects and that the costs of the contemporary price support program are results of excessive crop output. To cap the contradiction, crops not produced are the primary benefits from the Soil Bank. These programs operate side by side in most regions of the U.S.

The public has selected or at least acquiesced in our farm price goals or price-support levels. In doing so, it has committed itself under present open-ended price-support programs to indefinite investments in farm commodities. Unless price goals are revised downward sharply or unless price goals are to be achieved mainly by marketing limitations in the 1960's, the public's investment in farm commodities seems sure to rise each year. Even with farm price supports as much as one-third below 1959-60, U.S. farmers in 1965 would produce and market far more than could be consumed at those prices. When we are faced with such production prospects, nearly every addition to land area in cultivation must be counted a contradiction. Unless new land is uniquely suited to the production of some scarce product, it must add to public expenditures either in acquiring stocks for storage or in buying out the production rights in land so further acquisition and storage may be avoided.

The world, however, is full of contradictions which are not *ipso facto* intolerable. If we are to make good use of the limited time we can spare to purge ourselves of economic paradoxes, we must deal with those which are most pressing.

## LAND DEVELOPMENT

We have many public programs which increase farm land area or affect land use. Reclamation is one of the most visible and, to many, the most virtuous. New irrigation projects are modern frontiersmanship. Like cowboys and covered wagons, they hold a special place in the public mind. It would not be easy to convince many of us that the lush fields often seen in the colored pages of the farm magazines are producing large public liabilities.

How much have reclamation projects added to farm land and production? And under what circumstances was the land developed? In 1957, 6.6 million acres, 2 percent of all cropland harvested, were watered from reclamation facilities. Only one-sixth of this was added since 1950 — the modern surplus era. Reclamation land produced \$928 million in crops in 1957 — 5 percent of the value of all crops, and the following percentages of certain crops:

Corn	.8 percent	Dry beans	27.6 percent	Tomatoes	10.6 percent
Wheat	2.2 percent	Sugar beets	40.6 percent	Apples	8.1 percent
Barley	7.9 percent	Carrots	23.2 percent	Peaches	7.9 percent
Upland cotton	7.4 percent	Lettuce	20.9 percent	Grapes	26.2 percent

Many of these are produced almost exclusively under irrigation. Further, some are crops whose demand expands as incomes rise. Under private auspices or public, it will be desirable to add to lands capable of producing fruits and vegetables.

The Bureau of Reclamation is rather self-conscious about its role in adding to crop surpluses, and has constructed a defense. Not all the dried beans, wheat, corn and cotton produced on reclamation land adds to surpluses, according to the defenders. Instead, it is argued that if 10 percent of all wheat (for example) is surplus, the same share of reclamation-produced wheat should be called surplus.

At first glance, it seems curious that reclamation officials should be concerned about their contribution to farm surpluses. After all, we were very fortunate to have 5 million extra acres and nearly \$1 billion in extra crop production from 1940 to 1952. Reclamation can rightly claim great contributions in the past, and at a small cost. The entire program since 1903 has cost only \$4 billion in public funds. We have spent as much in buying, storing and disposing of farm surpluses in a single year. The largest annual expenditure — \$300 million in 1950 — would not even store present wheat stocks for a year. History may thoroughly vindicate past reclamation projects.

The future may be another story. Sympathy for the family farms which could prosper in now-arid valleys should not obscure the fact that much, perhaps most, of the reclamation projects of the 1960's and 1970's are self-contradictory. For the primary and ultimate purpose of reclamation is irrigation; from a national and a public standpoint, there are few activities with a lower priority for the 1960's than the expansion of crop acreage or encouragement of irrigation.

It ought to be possible to determine which irrigation projects proposed by regional groups or public agencies will produce crops with genuine consumer value (benefits), and which will produce chiefly cotton, grains and dry beans (costs) in the 1960's. It is clearly possible to place the Malthusian argument "out of bounds" to reclamation enthusiasts if economists and public officials will speak up forcefully.

Projects will not stand or fall, however, chiefly on "solid" economic grounds, but will probably continue on the basis of regional power structures and romance. What then, can be done to put them into a defensible national perspective?

Local and personal financial interests in the reclamation program often are made to appear subordinate to the national interest. Congressional hearings bulge with efforts to remove the onus of special pleading from the reclamation program. It is claimed that (1) reclamation pays its own way, (2) that a food shortage is imminent and (3) that the West was robbed of its resources in the past and reclamation projects are a partial restitution. The first item appeals to non-West members of Congress to support reclamation projects as self-liquidating federal investments that place no financial burden on their constituents. The second appeals to the national interest in an adequate food supply. The third lays a foundation for equitable treatment of the West.

There is a serious question about the validity of these arguments, but they are likely to continue to attract Congressional support for a substantial reclamation program. Proposals for reorientation of the reclamation program need to take into account, therefore, not only the real economic interests of the West and the U.S. which will provide the prime mover for a genuine development program for the West, but also the institutionalized rationalizations (not too strong a phrase) which help to broaden reclamation's political support and to divert attention from potential unfavorable economic effects.

Aside from whether or not the Federal Government should continue to make large or small developmental expenditures in the West, the need to minimize the contribution of any program

to the agricultural surplus problem appears evident. Three lines of strategy might be followed to this end.

The simplest approach would not challenge the basic philosophy of the reclamation program. We would slow the rate of development of new irrigated land on projects already authorized, and select new projects with only moderate effects on farm production, particularly of those staples seriously in surplus.

A second line of strategy would be to recommend new projects selected to place primary emphasis on electric power and water for non-irrigation purposes. This would be a substantial break with historic "reclamation," in which power and non-irrigation water were by-products. But it would not be a sharp break with the total program for western development.

A third approach would begin to build the foundation for a broader action which might eventually replace the reclamation program as the major public investment effort in the West. This would provide legislative basis for a broad regional development program for the West in which reclamation projects would be appropriately timed among other resource development projects. The West is not interested in reclamation projects *per se*, but rather in federal investment to promote economic development. If public funds and enthusiasm were available to develop the resources of the West on a broad front, the pressure for the restricted and somewhat backward type of resource development represented by land reclamation would be reduced. Enough other benefits would accrue so that supposed irrigation benefits need not be counted in order to get an appropriate benefit-cost ratio. Perhaps the present political support for reclamation could be diverted to support for a broader program of resource development.

### Price Supports

The role of price supports in land use changes has often been exaggerated, in my opinion. Neither the planting of 15 to 20 million acres of new lands to wheat in the semi-arid plains between 1940 and 1952 nor failure to return those lands to grass since 1952 can be laid mainly to the price supports.

The chronology of higher price support levels for wheat in the 1940's follows that of expansion of new lands — a damaging coincidence. Often overlooked is the fact that the mid to late 1940's were years of exceptionally good weather, that wheat prices were often well above supports and that the discovery and adoption of new cultivation technology was at its peak.

Seldom from 1943 to 1953 were wheat prices raised by the price-support program. The guarantee of 90 percent of parity prices even after war demands were met helped to reduce uncertainty and was thus expansionary. But in retrospect, the practical alternatives to 90 percent of parity were support prices only modestly lower and scarcely less expansionary, as the 1950's have shown.

The argument that price-support levels prevented widespread retirement of such land to less intensive uses since 1953 is scarcely less transparent. First, the level of price support proposed by the critics of the price-support levels we have had, were only slightly lower. If we had gone to wheat price supports at 60 or 70 percent of parity in 1954 (no one seriously proposed this), I doubt that land abandonment or reseeded to grass would have moved noticeably faster than it has. The difficulties of returning semi-arid land to grass are such that only extreme measures will bring it about. Sustained low grain prices would make land retirement less costly and given rental rates more attractive. But taken alone, low wheat prices are more likely to result in capital losses and land abandonment than in a return to grass.

Clearly, the acreage allotment programs associated with price supports have influenced the use made of land, but not the aggregate amount of farm land in use. Acreage controls have been a system of passing the buck, improving one commodity situation at the expense of another.

### Soil Management

There are two other public programs with important land development implications — the Soil Conservation Service (SCS) program and the Agricultural Conservation Program Service (ACPS). Public expenditures in the two are \$250 million and \$80 million per year, respectively. Both programs are justified partly from a genuine conservation standpoint, but are equally dependent on rationalizations of soil and water conservation. Drainage, irrigation, tillage and other pseudo-conservation practices make up a large part of each program.<sup>1</sup> Since ACPS and SCS practices merge with other farming operations, the addition to farm output is incalculable. SCS considers one-third of all farm land as adequately treated (from a conservation standpoint);<sup>2</sup>

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<sup>1</sup>Earl O. Heady, "Redirecting conservation programs," National Farm Institute, Des Moines, Iowa, 1960.

<sup>2</sup>Hearings, House of Representatives, subcommittee on appropriations for the Department of Agriculture, 86th Cong., 1st Sess., p. 568.

one-third of all farm land is involved in ACPS practices.<sup>3</sup> The annual contribution to total output of these two programs after nearly 25 years is probably far greater than the 5 percent of annual farm output contributed by the reclamation program, which operates on only 2 percent of all cropland area.

### Research and Education

Research and extension are the public programs with the greatest effect on land use adjustments. Properly oriented toward more efficient farm production and more intensive land use during most of their history, they have surely been more influential in determining land use than all the other public programs combined. Crops with drouth tolerance, systems of cultivations which substitute for precipitation, fertilizers which substitute for precipitation, fertilizers which substitute for rotations and high-yielding strains which offset price declines are at the very core of intensive land use. These practices and discoveries are being applied not only on selected acreages, but to some extent on most of the land in the U.S.

To decrease intensity of land use while new discoveries for intensification are available is not an easy task. To do it concurrent with a system of open-ended price supports which encourage intensification on limited land areas (cotton, wheat, rice and tobacco) is virtually hopeless.

### LAND RETIREMENT

There has seldom been any doubt that we have had our hearts behind resource development, nor any indication that we had our hearts in land retirement or in production control. The moral neutrality which attaches to idle plant capacity, and in some quarters even to idle workers, has not yet become attached to farm resources. As a public, we are still stirred by speakers who implore us to plant and produce more — not less. And a cloud follows those who argue the contrary.

It will take time to forget the acreage reserve, which gave land retirement a bad name. And it would take ingenuity to devise an expanded land retirement program which achieved the production adjustment it pays for. But these obstacles can be overcome if we can decide whether or not we are serious about it.

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<sup>3</sup> *Ibid.*, p. 663.

The purpose of land retirement is to implement a price policy. Unknown but discoverable acreages of U.S. cropland idled under appropriate rules would result in selected long-run price levels for crops and livestock without chronic surplus production. The farm price level is terribly important to farm people and to the public. There is much disagreement among farm groups on the desirable level for farm prices for the 1960's. But there is virtually unanimous consent to the idea that farm prices, in the absence of price-raising devices, will be chronically low in the 1960's even in a prosperous general economy. All major farm groups reject this prospect and are searching for means to avoid it. Despite continuing free market incantation, the question of government intervention in the farm economy of the 1960's has thus been answered affirmatively by everyone who counts. Two related questions — the specific price level to be sought and the means by which to seek it — remain undecided.

It is almost axiomatic that if we decide as a public policy to reduce farm resource use, we should not simultaneously choose other public policy goals which are obstructive. Sharply higher prices for farm crops would make public land rental more costly, and would make substitution of other inputs for land on remaining farms or part-farms more attractive. If land retirement for compensation is to be a major tool of farm policy, it can best be used first to end excess output at prices near present levels, not far above. Otherwise, the public will pay three times — in higher food prices, in higher compensation required to attract land to be idled and in a greater acreage required to achieve a given price goal.

Clearly, land retirement even under present law is superior to indiscriminate stock accumulation from the viewpoint of public cost. Claims made by Soil Bank administrators are probably optimistic. Yet the value of major crops not produced in 1959 and 1960 because of the Soil Bank surely exceeded the \$375 million cost appreciably in 1959.

Given farm price goals, the choice between adding about \$1 billion in farm commodities to stocks each year as at present, or spending \$1 billion on land retirement, ought to be resolved in favor of the latter. But that would not solve the "choice of farm program" problem, for there remains the choice between land retirement and direct marketing controls, alternatives not mutually exclusive.

Political reality and history are on the side of a pluralistic approach to marketing restrictions. Democratic government, for better or worse, is often crisis government. Commodity crises do not arise simultaneously; we cannot, therefore, expect to adopt

a 10 or 20 commodity marketing quota in a short time. We must start from where we are and improve upon our past mistakes.

The first farm policy crisis of the 1960's is in wheat and feed grains, with wheat the most visible. The wheat allotment program since 1954 has added 5 to 15 million tons to the feed grain supply each year since 1954. If the land taken out of wheat since 1954 had been retired permanently for a lump sum or multi-year payment, feed grain stocks in 1960 might be near normal and livestock prices since 1954 would not have been seriously affected.

Wheat marketings will be reduced further in the 1960's, to the detriment of the feed-livestock economy if the released acreage is permitted to produce any other product for use. This would hasten the day when direct marketing controls on livestock would be demanded in the interest of price maintenance. In my opinion, there is much to be lost in comprehensive direct controls, while the price gains might be achieved partly through indirect programs not yet tried. Selective land retirement coupled with selective marketing quotas on crops is one such indirect approach to reduced marketings, and should be tried first.

#### SUMMARY

Land development is a modest effort in the U.S. While contradictory, it is in many ways unassailable. Yet we are not absolved from pointing out its contradictions.

Effective land retirement, like effective production and marketing controls, has not yet been tried. Obituaries for both are premature. I believe they will not only survive the failures of the 1950's, but can be joined in a lasting marriage of convenience in the early 1960's. Properly supervised, they should get along well, for they have the same ends. Like succeeding generations, they will be modest improvements on the past, not permanent solutions for the future.