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## A SUMMARY OF AGRICULTURAL CONSERVATION PROGRAM PRACTICES IN KENTUCKY AS THEY AFFECT LAND USE RELATING TO WILDLIFE <sup>1</sup>

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### INTRODUCTION

"The Agricultural Conservation Program (herein referred to as the ACP) shares with individual farmers and ranchers the cost of carrying out soil and water conservation measures intended to (1) protect farm and ranch land from wind and water erosion, (2) improve the productivity of the Nation's agricultural resources, and (3) protect and improve the source, flow and use of water for agricultural purposes." (USDA, Dec., 1960). According to United States Department of Agriculture figures (March, 1960), during the years 1950-1959, the ACP in Kentucky has had gross annual expenditures ranging from \$5,000,000 to \$7,794,500. The total number of farms in the state declined by 18,558 during this same period. (USDA, March, 1960). This same reference indicates that farm participation in the program also declined from 66% of the total farms to a 1959 low of 19%. Yet, the total allocation of ACP funds has not proportionately decreased, but averages around \$7,200,000 annually.

The decreased farm participation with little or no decrease in ACP expenditures is accountable by the jump in average payments to parti-

<sup>1</sup> A contribution of Kentucky Federal Aid Project W-37-D.

cipating farms. This payment increased from \$54 in 1950 to \$191 during 1959. (USDA, March, 1960). The 1959 average national assistance per farm was \$209. (USDA, Dec., 1960).

Kentucky farms average 98 acres in size, while that of 1959 ACP participants was 160 acres. (USDA, March, 1960). These participating farms averaged 98 acres of cropland compared with a state-wide average of 56 acres. It appears from these figures that a majority of farms with above average acreage are taking advantage of the program. Also, the largest acreage on participants' farms is in cropland. Thus, farms with above average crop acreage are receiving the major share of ACP cost-share assistance.

## AGRICULTURAL CONSERVATION PROGRAM PRACTICES AS THEY RELATE TO WILDLIFE

The ACP practices are primarily aimed at assisting in solving the varied soil and water conservation problems of the state. Cost-sharing is largely confined to those practices which would not otherwise be carried out without assistance. A direct result of this program is increased farm income through monetary encouragement of conservation practices. Standards are dictated by federal agencies and state committees, but the county committee determines local program needs and directs the expenditure of available funds. Wildlife benefits accrue only incidentally if they happen to coincide with specific ACP practices and objectives. For example, in practices to prevent erosion (A-8) ACP recommends consideration be given to wildlife habitat enhancement, but there are practically no benefits in this practice specifically for wildlife. (USDA, 1961). Erosion control is the primary objective and wildlife receives little or no consideration.

The 1961 Kentucky ACP Handbook (USDA, 1961) contains the guiding regulations and practices which the state committee has deemed acceptable for Kentucky. These practices are extracted from the national handbook. The individual county committees choose practices from the state handbook which they believe meet their local problems and needs.

There are four practices in the Kentucky ACP Handbook which state that due consideration shall be given to wildlife habitat maintenance and enhancement. However, there are eight other practices that result directly or indirectly in wildlife habitat destruction. These subsidized practices are explained in detail under the headings that follow.

### 1. Alteration of Habitat:

The A-2 practice, which is the initial establishment of permanent grass-legume seedings for soil protection or land use adjustment, resulted in the establishment of 204,000 acres of hay and pasture fields during 1959 alone. (USDA, March, 1960). The payments amounted to \$3,551,000 or 52% of the total ACP allotment for 1959. How many acres of wildlife habitat composed of broomsedge and weed fields were destroyed can only be estimated. Figures on this are not tabulated by any of the federal agricultural agencies. Some counties refuse to cost-share for land clearing under this practice. However, the choice is optional and land clearing can, according to the state handbook, be eligible for cost-sharing.

The practice of improving established vegetative cover (B-1), though highly commendable from the standpoint of rejuvenating old pastures, is destructive of some fine rabbit habitat. This practice is usually confined to neglected pastures that are being invaded by broomsedge, briers and weeds, affording excellent rabbit habitat. This is especially true in Kentucky's bluegrass region. By encouraging light disking and reseeding, the overstory of briers, broomsedge and weeds is destroyed. During 1959, there were 43,700 acres treated under this program (USDA, March, 1960).

With few exceptions, wildlife habitat and general grazing practices are not compatible. We realize that the farmer is in business to make a living and wildlife benefits are only of secondary concern. If the present and future subsidized conversion of millions of acres of farmland to pasture is necessary for our national well-being, then it is time wildlife interests re-evaluated attempts at habitat restoration and management practices aimed at private landholdings. Possibly, more research

is needed to find replacement habitat more favorable to farm-game species. Under these circumstances, habitat preservation should be of more concern than habitat restoration.

## 2. Drainage:

There were 20,600 acres drained in one year (1959) under ACP practices C-9, 10. (USDA, March, 1960). These two practices pay up to 50% of the costs of installing tile drainage systems and constructing or enlarging permanent open drainage systems. Open ditches (C-9) were responsible for 11,200 acres of the total. Wildlife habitat values are destroyed in four ways by these practices: (a) Clearing of rights of way for open ditches destroys considerable wildlife habitat; (b) Spoil banks are required to be kept free of trees and brush and must be mowed, thus excluding wildlife habitat from these strips. Most of the spoil banks are seeded to grasses such as fescue which are not attractive from a wildlife standpoint; (c) Ditching which cuts through lowland woods jeopardizes timber and wildlife values. By drying-out these sites, hydrosere type plants die or are excluded; (d) Drainage also promotes land clearing practices that brings land previously unavailable into agricultural production.

Since ditching is associated with wetlands, a great deal of it is confined to west Kentucky where waterfowl are an important recreational resource. Lowland woodland habitat comes the nearest to a multiple use concept of any wildlife environment. Its utilization by important furbearers, waterfowl, and for its timber resources, make it doubly valuable from the monetary and recreational standpoints. Open ditching usually leads to further drainage by tiling and diversions which lead into the main channel. The last Congress made some progress in deleting federal subsidies for drainage of wetlands of principal value to waterfowl. This provision applies mostly to upper midwest waterfowl nesting areas and does not necessarily stop drainage of bottomland woods and sloughs and other feeding and resting areas along the Mississippi Flyway. These woodland sloughs, situated along the major northward migration routes, serve as conditioning areas and play an important part in getting waterfowl back to their nesting grounds in good shape.

Some of the practices recommended by the ACP as enhancing wildlife habitat and maintenance are actually in conflict with their purpose. Practice C-9, concerned with the construction or enlargement of open drainage ditches states, "In the installation of drainage systems, due consideration shall be given to the maintenance of wildlife habitat". (USDA, 1961). The Kentucky ACP Handbook further states that the annual spraying or mowing of ditchbanks and berms to control weeds and brush is a requirement for maintenance. How can wildlife habitat be enhanced when weeds and brush must be kept down? Also, there is no provision made under this practice to cost-share for the maintenance of wildlife habitat.

## 3. Reshaping gullies, creation of terraces, waterways, etc.:

In many instances when gullies or depressions are reshaped or filled for waterways or terraces (practices C-1, 4), natural wildlife habitat is destroyed. These areas are then seeded to grasses (usually fescue). When it is necessary to relocate fencerows to make way for waterways, they usually end up in sod also. Sod, especially fescue, does not constitute good wildlife food and cover as found in Kentucky. A past study of the values of sod versus brushy fencerows for harbouring injurious insects showed that sod came out second best. (Dambach, 1948). Sod fencerows harbor many more agriculturally injurious insects than brushy fencerows. Part of the control of injurious insects in brushy fences is vested in the birdlife attracted by the presence of food and cover. Meadow mice are also more common in sod than brushy areas. During drought years they can have an important detrimental effect upon pastures and hay.

Destruction of woody vegetation disrupts nature's carbon dioxide balance in the atmosphere. If there is an excess of this gas in the atmosphere, it forms an insulating blanket, warming the air by preventing the earth's heat from radiating into space. Man is constantly burning coal and oil which gives off carbon dioxide. He is also turning forests and brushland, which absorb carbon dioxide, into farmland which

absorbs little. Thus, he is adding a half a percent every year to the atmosphere's carbon dioxide. The oceans, which absorb carbon dioxide, will take up a third of this excess. But, unless man switches to atomic fuels, the amount remaining might by the twenty-fifth century raise the globe's temperature twelve degrees Fahrenheit. (Life, Nov. 14, 1960).

### INTRA ACP CONFLICTS

The stated purpose of the ACP is "To help achieve additional conservation on land now in agricultural production rather than to bring more lands into agricultural production. The program is not applicable to the development of new or additional farmland measures such as drainage, irrigation and land clearing." (USDA, 1961). With these stated objectives in mind, let us examine the A-2 practice. This practice provides for the initial establishment of permanent grass-legume seedings. The landowner is responsible for the upkeep and maintenance of the vegetative cover for a period of four years after initial establishment. After the four year period expires, he can use the land for crops if he so desires. This often happens where the pasture is part of a four or five year crop rotation plan. After cropping the field for several years, he can reapply the A-2 practice and put it back into pasture. While he is cropping the former A-2 area, other fields might be eligible for the A2 practice. This practice tends to encourage a four year crop-pasture-hay rotation. A survey and interviews of ACP and SCS personnel by Kentucky Biologists in thirteen counties revealed that the use of practice A-2 in rotations was common in nine of them.

The A-2 practice is also applicable to "land on which complete re-establishment measures are needed." (USDA, 1961). This broad wording means that land clearing is permissible on certain areas. The Kentucky ACP Handbook further states that this practice is not eligible "to land which, if cleared, would be suitable for the continued production of cultivated crops." Thus, in Kentucky, most of the land clearing under this practice is confined to hillsides and ridges which contain some excellent wildlife habitat. Data on the acreage cleared are not available, but from personal observation it is sizeable. Many of these cleared hillsides are planted to grasses. A-2 is the largest practice from the standpoint of money expended (\$3½ million) and acreage participation.

The ACP plays an important part in Kentucky's expanding watershed program conducted under the Watershed Protection and Flood Prevention Act, commonly known as Public Law 566. This law allows the federal government to furnish technical and financial assistance to local sponsoring organizations for the purpose of flood prevention and the conservation, development, utilization and disposal of water in watershed and subwatershed areas not to exceed 250,000 acres. At present, Kentucky has twelve watersheds under construction and three in the planning stage.

Work plans for the 97,310 acre Caney Creek Watershed lying in portions of three Kentucky counties have been approved by the 1961 Congress and land treatment measures are now in progress. This work plan (USDA, Feb., 1960) contains typical conservation measures that will be cost-shared by the local ACP. Some of the practices planned on this watershed that are eligible for ACP payments are: Twenty-one miles of diversion ditches (practice C-5), twenty-five miles of terracing (C-4), 284 acres of land smoothing and tiling (C-10), 663,000 lineal feet of open and tile drains (C-9, 10), 19,000 acres of pasture planting and treatment (A-2, B-1) and 550 acres of grassed waterways (C-1). The estimated cost of these and other land treatment practices was \$1,380,000. This is listed as other than Public Law 566 funds. The word "other" implies cost-sharing under ACP plus the cost to the landowner. All of these land treatment measures are eligible for 50-80% payment under the ACP.

Under the stated objectives of the ACP, no cost-sharing funds are to be utilized for bringing new land into agricultural production. Inspection of the Caney Creek Watershed Work Plan revealed that the calculated land use changes, due to structural measures and land treatment, would result in an increase of 963 acres of corn land. This is one percent of the total watershed area. After land treatment measures have been implemented, the Soil Conservation Service estimated corn production

would increase from the present 53 bushels per acre to 80 bushels. These two measures would result in an increase of 107,118 bushels of corn annually. While the government is subsidizing the increase of corn production and agricultural land on this and other watersheds, the new federal feed-grain program is attempting to reduce our already bulging corn surplus. This watershed plan also calls for the change of 487 acres of brushy woods to cropland use. These measures not only destroy wildlife habitat, but bring new land into crop production which is contrary to the watershed program's objectives.

Although ACP does not participate directly in the resultant increase of cornland, cost-share payments for ditching, tile drains, diversions and terraces encourage stabilized production and greater crop yields. The total effect is similar to bringing new land into production. Direct drainage of bottomlands may also lead to incidental drainage of adjoining fields which may then be brought into crop production.

### CONSERVATION PRACTICES WITH BENEFITS PRIMARILY TO WILDLIFE

The old G practices of the now defunct Soil Bank Program have been modified and revived under the 1962 ACP. (USDA, July, 1961). The intent and scope of these three practices supposedly offers wildlife administrators unlimited opportunities for fish and wildlife habitat enhancement on agricultural lands. Payment has been set at 50% as compared to 80% under the Soil Bank Program. During the five year existence of the Soil Bank Program, Kentucky had only 441 acres contracted specifically for wildlife G practices. (Eversole, 1960). Why then should we expect a greater participation in the forthcoming 1962 G practices which pay a lower cost-share rate than the Soil Bank Program?

As long as the average payment to farms participating in the Kentucky ACP is \$191 this money will be largely utilized for practices that directly benefit the farmers' income. Except in special interest cases, we cannot expect a Kentucky farmer to divert part of his small ACP allotment to wildlife measures which give him no monetary return.

There are only two successful approaches to stimulating participation in G practices: (1) Earmarking a portion (1-2%) of ACP funds specifically for G measures payments. (2) Encourage farmers to obtain a monetary return from Wildlife enhancement practices by fee hunting or leasing of hunting privileges.

The preliminary 1962 national ACP handbook (USDA, July, 1961) states that wildlife conservation practices within the state ACP are recommended by the State ACP Committee and designated representatives of the Soil Conservation Service and Forest Service at the state level. Since these are specifically wildlife measures, why isn't the state wildlife agency, in place of forestry, allowed to recommend which practices are to be included in the state ACP handbook?

Only after the proposed practices are accepted at the state level are the wildlife agencies consulted concerning their development. This instance points up the need for closer liaison between the Departments of Agriculture, Interior and state wildlife agency administrators. It may well be that the effects of ACP agricultural and wildlife practices upon game species and habitat differ from state to state. If so, this is all the more reason that state wildlife agencies should be in closer touch with these programs at the state and national levels.

### 1961 FEED GRAIN PROGRAM

The nationwide feed grain program was intended to reduce the production of corn and sorghum grains and divert this acreage to conservation uses. A USDA June, 1961, news release stated that Kentucky farmers diverted 577,574 acres of corn and 20,076 acres of grain sorghum from production during the 1961 crop year. This amounted to 35% of the 1959-'60 average corn plantings and 48% of the average grain sorghum production. The acreage normally used for this corn-grain production could be diverted to several approved conservation uses. Among them were, grasses and legumes, summer cover crops of small grains, legumes, or grasses, winter cover crops, idle cropland and summer fallowed cropland. In cases where corn or small grains were planted on diverted acreage, they had to be plowed down or clipped before maturity.

Diverted acreage consisting of idle land had to be mowed to keep down weeds. The author attempted to obtain figures from the state office of the Agricultural Stabilization and Conservation Service on the use of diverted acreage. No such data were kept or available. Personal conversations with several county ASC and regional personnel revealed that a very high percentage of the diverted acreage was planted to grasses and legumes under the A-2 practice. The personnel of one county ASC office informed me that because of the feed grain program, there was a rush of sign-ups for the A-2 practice which exhausted their 1961 funds.

This evidence indicates that the feed grain program may be harmful to wildlife in two ways: (a) Waste from harvesting grain sorghum and corn constitutes an important food source for farm-game species and many migratory birds. By growing a half million fewer acres of these crops, less food is available. (b) A large portion of the diverted acreage is being utilized for grasses, some of which are not suitable for wildlife. The feed grain program has been continued for 1962 with similar programs initiated for wheat, barley and rye. The impact of these programs on wildlife needs to be studied.

Under the 1961 federal wheat marketing quota program in Kentucky, 1055 farms had to destroy wheat because of over-quota acreage. This destruction of already planted wheat is a senseless waste. A program of certifying over-quota grain crops for wildlife use could be worked out. Possibly, excess wheat could qualify as wildlife food plots and receive cost-share payments under the ACP. Under present regulations, this is not now possible.

## DISCUSSION AND RECOMMENDATIONS

Within present ACP definitions and program goals, wildlife is relegated to riding the caboose position. Many farmers think of wildlife from the aesthetic viewpoint rather than as a renewable crop or resource.

This attitude makes it extremely difficult to sell wildlife enhancement practices. Monetary stimulus through ACP payments might result in a limited increase in participation. This is attested to by the fact that in Kentucky there was very little participation in the Soil Bank G practices during the five years that this program was in existence. Only by apportioning a small part of ACP funds specifically for wildlife practices will this program obtain material results. Another alternative would be for state wildlife agencies to encourage fee hunting or leasing of hunting rights on agricultural lands.

It is felt that wildlife could best benefit under the present ACP by the integration of wildlife practices as components of already established ACP procedures. These wildlife methods can be formulated in such a manner that they would meet with the approval of present ACP objectives. After all, both procedures depend upon conservation practices aimed at land protection. For instance, make the seeding of legumes and/or grasses upon sites cleared for natural reseeding of trees a compulsory part of practice B-10, or as an underplanting where land is cleared for planting seedling trees (A-7). Berea College experiments with short leaf pine showed that cleared land sometimes comes into dense brush before trees seed naturally. A grass or legume cover would retard brush growth but not reseeding of pine. Where drainage ditches result in a loss of waterfowl or furbearer habitat, mitigate damages by cost-sharing for water control structures. These are just a few of the many instances where wildlife, forestry and agricultural practices can be integrated.

The role of ACP in the Watershed Protection and Flood Prevention Act should be closely scrutinized. As demonstrated on the Caney Creek Watershed, ACP monies, directly and indirectly, were responsible for drainage and land clearing practices which destroy wildlife habitat and bring new land into agricultural production. The information contained in the circular entitled "Better Hunting and Fishing on Small Watershed Projects" (US Dept. of Int., 1960) may apply to other states, but our experience in Kentucky has been contrary to the claims in this publication. This pamphlet illustrates that it is possible to channelize a stream without destroying bank cover. I have yet to find evidence of this practice upon a Kentucky watershed that did not leave the banks bare or seeded to grass.

Present and future feed grain, wheat, barley and rye programs undoubtedly will have some effect upon farm game and certain migratory bird species. Under present regulations, leaving over-quota grain crop acreages for use by wildlife is not allowed. These excess crops must be destroyed before maturing. It seems a little incongruous for ACP to pay for planting some of these same crops for wildlife when they are being destroyed under another program. The opportunity for some federal-state coordination to work out compromise solutions to these problems is obvious in this instance.

The above suggestions do not cure the main illness however, but are only a temporary remedy. Under present ACP procedures, the main conflict is in the realm of wildlife habitat destruction without specific replacement procedures aimed at mitigating this loss. It seems inconsistent to state that wildlife habitat enhancement and maintenance be given preference in some ACP measures when this program is responsible for major habitat destruction. If the importance of wildlife is to be recognized within the ACP, it must be given more status and consideration. Wildlife interests can be in harmony with present ACP goals which are to help achieve additional conservation on land now in agricultural production. Some progress has been made by the inclusion of wildlife G practices within the 1962 national ACP program.

There may be some question as to whether the ACP and the retirement of land for reducing crop production were originally intended to include wildlife benefits. Yet, with national emphasis on wildlife as a recreational resource such as that given recently by the Outdoor Recreation Resources Review Commission, the U. S. Forest Service and National Park Service, there is little question of justifying a multiple use concept that would benefit agriculture and a recreation minded public. We must set aside partisan interests and coordinate our efforts on every front where taxpayers' money is involved in national programs that affect related agricultural and recreational interests.

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