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From: O. V. Wells, Administrator O. V. Wells

In going through some of our old files, I discover the original copy of a report entitled "The Restoration Land Phase of the Agricultural Conservation Program, 1938, in the Northern Great Plains States with Suggestions for future programs." Inasmuch as there is a continuing interest in the problem of land utilization in the Great Plains with especial reference to keeping in grass land which is really not suitable for wheat over extended periods, it occurred to me that this is a report which might well be filed in our USDA Library.

The restoration land program which was made a part of the Soil Conservation and Domestic Allotment activities in 1938 was designed to move back into permanent grass quite a bit of land which had been plowed up earlier for wheat. With the coming of World War II this program was soon forgotten or in fact abandoned. Nevertheless we are again interested in a similar experiment in connection with the current Administration's Great Plains Program.

Attachment

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The Restoration Land Phase

of the

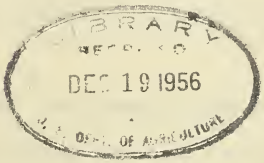
Agricultural Conservation Program, 1938,

in the

Northern Great Plains States

with

Suggestions for future programs.



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The Restoration Land Program in the
Northern Great Plains States.

Conclusions.

The restoration land phase of the Agricultural Conservation program was carried out in the five Northern Great Plains states under the direction of the western and north central divisions of the Agricultural Adjustment Administration. The objectives of the program to remove land not suited to cultivation from crop production was uniformly held in all states. Variations in natural and economic conditions in different areas and variations in procedure in different states and in counties within the same state did, however, affect the acreage set aside for restoration. One problem common to all areas is that of maintaining in permanent vegetation land on which restoration payments are made.

In those areas where crop acreages have declined the program was accepted as a means of retiring unproductive tracts from cultivation. Counties in these areas frequently exceeded their assigned quotas of restoration land. In those areas where crop acreage has been maintained the reaction was less favorable and in these better farming areas little land was designated for restoration.

The primary reasons for designating restoration land were:

(1) wind erosion

(2) low productivity because of thin soil or unfavorable climate

(3) soil depletion

(4) location with regard to other land in the farm unit

(5) the need for added pasture

Much of the designated acreage came into the program because, for the foregoing or other reasons, the tract had been idle and had no operator in 1938.

The results from different methods of handling the program indicate (1) that in distressed areas and in areas with a receding margin of cultivation, land would be designated for restoration under either a compulsory or under a voluntary program, and (2) that in the better farming areas only an insignificant acreage can be designated even when goals are compulsory.

The designation of land most desirable from the soils and productivity standpoints was consistently made in counties with a closely supervised program. A less desirable designation of land as regards soils was made in counties with a loosely supervised or a purely voluntary program.

In areas suffering acute economic distress and in which abandonment of farms is common, economic considerations may determine the land for restoration. In such areas characteristics of designated land are:

(1) all crop land on a tract is designated for restoration.

(2) The tract may have no operator for 1938 or may be held on a temporary lease.

(3) The tract may have been added to an operating ranch.

(4) The owner's title may be insecure and future operation of the tract uncertain.

Designation by temporary or involuntary owners made important contributions to the total acreage in the Dakotas and in Montana. The future use of land held for sale either by counties on tax deed, or by lending agencies depends more on the desires of the purchaser than on the intention of the present title holder. A series of favorable crop years might return

this land to crop production.

A high proportion of the land designated for restoration came out of land not previously listed as crop land under the conservation program. When this land had been included in ranch pasture, no change in land use was effected by the program.

In those areas subject to wind erosion and where additional work is needed to aid revegetation the payment for restoration was not always sufficient to cover costs of needed work.

In some counties the effectiveness of the program was reduced because of confusion regarding the objectives of the program, failure to define restoration land, lack of interest on the part of local officials and because of the limited time for outlining and directing the program.

As the program became known and the possibilities under the program understood, non-operating owners showed a preference to designate land so that they could collect the full payment. The possibility of such owners withdrawing land from existing operating units so that it can be designated for payment is a matter for concern in some localities.

Recommendations

(1) Goals

In view of the experience with the 1938 programs the establishment of compulsory goals seems inadvisable. The knowledge of local conditions is usually an inadequate basis on which to determine the acreage that can be designated from a county in a single year. The goals should serve as a guide for a long time program and be objectives for single years rather than to set an acreage to be designated in one year.

(2) Procedure

Procedure in counties will necessarily be adapted to conditions in counties. However, in general the best results were obtained when the program proceeded through the following steps:

1. Instruction of county and community committeemen.
2. Designation of land eligible for restoration.
3. Request to owners and operators to present applications for restoration land.
4. Inspection of tracts designated to insure their desirability and to increase the likelihood that the land will remain out of cultivation.

(3) Education

An educational campaign to inform owners and operators of the use of the restoration program and to insure their understanding its objectives, should be a part of the program.

(4) Control of land.

As much of the land now designated for restoration is not under the control of a local operator, and as it is or may be on the market for sale, or may at the expiration of the payment period change operators and come into crop production, some effort should be made to place land under some responsible local control or to restrict designation of land not likely to remain out of crop production.

This could be accomplished by requiring long term leases from tenants on land submitted by them, or by requiring tenant participation and the combination with an operating unit of land submitted by a non-operating owner.

(5) Practices.

Some provision should be made for practices on restoration land. Land on which no soil depleting base remains has no soil building allotment through which additional work can be financed. On farms with a soil building allotment it may not be adequate to cover protective operations or grass seeding. The allowance for protective work might exceed the value of a given tract if wind erosion control on that tract is essential to protection of adjacent land.

(6) Payments.

The rate of payment and division of payment for restoration land can be considered only in relation to the handling of bases and allotments in the Agricultural Conservation program. They also are affected by requirements

of practices and payments made for practices on the restoration land.

Where depleting allotments are lost on restoration land, it will be difficult to obtain land for restoration on farms which are being actually cropped. It is much easier and more profitable to leave the poor or grassy land for non-depleting acres and crop the rest of the crop land. In such cases some persuasion on the part of the committee plus fairly liberal payments will be necessary in order to obtain restoration land.

If possible payments should be adjusted to encourage the development of local operator's control and the return and retention of land in grass. The following methods are suggested:

(a) Division of payment between landlord and tenant; the payment of 50¢ an acre be divided as follows: 40 per cent to the owner for designation, 10 per cent to the tenant for participation, and 50 per cent to cover practices actually performed by the operator according to recommendations of the county committee.

(b) Division of payment for designation, practices and maintenance. The original payment of 50¢ be for designation, a smaller (10¢ annual) payment be made to the owner for a period longer than 3 years to insure non-cropping, and additional payments for needed practices.

(c) Payment in 1939 of 50¢ divided as at present on all "farms," (AAA definition) which show crop land. On remaining farms the restoration land payment could be divided.

(1) Actual leasing rate to operator, remainder of 50¢ to landlord.

(2) Actual leasing rate to operator, plus a 10¢ fund which could be earned by practices; remainder to landlord.

A 1940 payment either the same as 1939, with a 10 to 20 cent payment continued until each plot is restored, or a payment on the same basis as 1939, but with a fraction paid in 1940 and the remaining fraction paid when the land is restored to grass.

(d) Additional payments for practices.

The payment for designation could remain as in 1938 and additional payments be made for needed practices recommended by the county committee.

(e) Correlation of programs.

Inasmuch as the adjustment of land use presents a different problem in different areas and as a lack of control of land is a serious weakness in the restoration land phase of the agricultural conservation program, a closer working relation between county AAA and county planning committees in outlining local programs would be advantageous.

Control might be obtained through action in cooperation with local farmers' associations such as grazing districts; conservation districts, or new associations formed to control absentee held restoration land. In some areas concerted action with the purchase program of the Bureau of Agricultural Economics offers an opportunity for more effective action.

The 1938 Restoration Land Program in the Northern Great Plains.

The restoration land phase of the 1938 Agricultural Conservation Program offered to land holders an opportunity to retire from cultivation and return to permanent vegetation land not suited for crop production. In general, the program was accepted as offering a means whereby a desirable adjustment could be made. Certain limitations of the program developed and in some localities the designation of land met local resistance.

State and county reports were incomplete and a broad picture of the program could not be obtained. However, data from state and county offices provide a basis for an early appraisal of the program in certain localities.

Studies were made in the following states and counties:

State	County
South Dakota	Hyde
	Ziebach
Nebraska	Box Butte
	Dundy
	Lincoln
North Dakota	McHenry
	Morton
	Sargent
Montana	Judith Basin
	McCone

The counties presented a wide variation in natural and economic conditions, and covered many variations in procedure. The study indicates a number of problems with which a program involving adjustments in land use is concerned, the need for control in making adjustments permanent, and the desirability of concerted action on the part of local, and federal agencies.

Restoration Land Program in South Dakota.

The state quota of 550,000 acres for restoration given to South Dakota was assigned to 49 counties in the central and western parts of the state. Twenty counties in the eastern and southeastern portions received no quotas. The distribution on the basis of idle land in 1937 threw the heavy quotas in South Dakota to the western and especially the northwestern counties of the state.

Instructions as to procedure in determining and locating restoration land were given to county officials at committeemen training schools; however, county officials were granted sufficient freedom to work out their own methods and considerable variation between counties could be expected. Although the acreage for restoration land had not been reported, a total of 1,000,000 acres of restoration land in the state was expected. General recommendations from the state committee for handling restoration land and which may have affected designation were:

1. "On land subject to wind erosion, tillage operations or go-down crops are required to prevent wind erosion."
2. "Noxious weeds must be prevented from seeding by mowing."
3. "Seeding of perennial grass or legume seed is required on land adapted to such seedings in 1938 when grass will not come back naturally."
4. "Excessive grazing of vegetative cover or mowing for hay will not be permitted."

These requirements without corresponding payments for work may have kept some land in crop designation. Later instructions may have prevented some acreage already reverted to grass from being designated for payment.

"Land which has returned to grass and has a permanent cover and was classified as noncropland last year definitely cannot be designated as restoration land . . . . County committeemen should refuse to establish restoration land goals on such land. Also they should continue to classify such land on the listing sheets as noncropland."

Data were obtained from two counties which show the effectiveness of the program in two parts of the state.

Hyde county, South Dakota.

The attitude of farmers contacted in Hyde county was that much of the crop land should be restored to grass. This favorable regard for the program is reflected by the designation of 22,454 acres in a county with a goal of 7,530 acres. All of the land was voluntarily designated for restoration. Township committeemen made a farm to farm canvass and asked each operator if he desired to designate land for restoration. Letters were sent to land owners explaining the restoration provisions; giving the acreage of cropland listed in previous years and providing blanks on which to request restoration land designation. On receipt of requests for restoration, tracts not previously classed as cropland were inspected for eligibility. Two points were given chief consideration; whether the land had been farmed in recent years and whether or not it had already returned to grass. Apparently little question was raised regarding type and condition of soil or regarding operation and ultimate land use.

Although the United States Census reported only 123,600 acres of crop land in 1934, the total crop land shown by the Agricultural Conservation Program work sheets was 140,700 acres in 1937. The county had in 1937 a soil depleting crop base of 124,260 acres and in 1938 a soil depleting allotment of 96,425 acres.

The county overshot their restoration land goal of 7350 acres with 22,454 acres recommended for restoration. This acreage was designated on 285 accepted applications, of which 78 or 27 percent of the total were on land not included in the 1937 listing sheets. In addition, 30 applications were not accepted by the county committee. About two-thirds of the approved acreage came from previously listed crop land and about one-third from land not previously listed under the conservation program.

Of the land designated for restoration only about 15 per cent was under the control of an owner operator. Approximately 42 per cent was designated on the application of a tenant and about 43 per cent on the application of an owner for land on which there was no operator in 1938. The distribution of ownership shows that 17 per cent was held by the Hyde county commissioners representing land taken on tax deed; 11 per cent was held by the State Rural Credit Board representing land taken on mortgage foreclosures, 15 by various corporations, primarily lending agencies; 36 per cent by non-resident private owners, 6 per cent by resident landlords, and only 15 per cent by owner operators.

Data on leases were not available but probably a high proportion of the applications filed by tenants were on land leased for one year only. Applications filed by Hyde county, the Rural Credit Board, lending agencies, and a part of those submitted by non-resident owners usually committed all

land on a given tract to restoration and were on land subject to purchase by any prospective farmer and therefore might be cropped in the future. These tracts once restored to grass might become a part of a locally operated unit, but there is little assurance that such tracts will remain out of cultivation, particularly when the tract consists of a farm unit with buildings.

Most of the land designated for restoration was in tracts of 80 or more acres (Table 1.)

Table 1. Number and percent of applications for restoration tracts of different size and total acres and percent of restoration acres for different sized tracts. Hyde County, South Dakota, 1938.

Size of restoration tracts: Acres	Applications : No.	% of total	Acres recommended : Acres	Percent of total
20 and less	31	11	427	2
21 to 40	65	23	2024	9
41 to 80	89	31	5385	24
81 to 120	47	16	4597	21
121 to 160	41	14	5889	26
161 to 320	7	3	2076	9
321 and more	5	2	2056	9
Totals	285	100	22454	100

Thirty-five per cent of the applications and 65 per cent of the acreage were on tracts of more than 80 acres. Although 34 per cent of the applications were for tracts of less than 40 acres, these represented only 11 per cent of the restoration acreage in the county.

There was apparently little tendency to select the poorer lands in the county for restoration. The tracts designated may have represented the poorer land within a soil type and the poorer land on a particular farm, but where entire tracts were designated there was little change for selection between grades of soil on a particular tract. Nearly all, or 80 per cent of the restoration land, was located on either Williams loam or Williams silt loam, the best farming land as well as the prevalent farming land in the county. More

land was broken on these two soils than on others in the county but apparently designation of land was made with little regard for productivity.

Table 2. Acreage and per cent of restoration land on different soils and proportion of different soils in the county. Hyde county, South Dakota, 1938.

Soils	Restoration land : Acres	Per cent	Proportion of county in each soil percent
Williams silt loam	6338	28.3	20.8
Williams loam	11534	51.4	40.3
Bearden silt loam	108	0.5	0.5
Williams silty clay loam	187	0.8	6.3
Bearden fine sandy loam	19	0.1	0.1
Williams loam, shallow phase	1929	8.6	15.1
Fargo silt loam	1252	5.6	5.1
Fargo silty clay	687	3.1	3.4
Pierre clay	146	0.7	2.5
Orman clay	20	0.1	1.5
Orman clay, bottom phase	20	0.1	0.5
Pierre loam	165	0.7	1.9
Sioux loam	15	-	-
Pierre clay, rough phase	0	-	1.9
	22420	100.0	100.0

In the opinion of the committee much of the land for restoration was made available when the date of the last crop was moved back from 1933 to 1930. Information on all crop land was available on only 80 percent of the farms, but on these only 15 per cent of the land was cropped in 1937 and only 19 percent in 1936. Most of the acreage had been farmed last in 1935 or an earlier year. It was difficult in some cases to determine the year when the land had last been farmed.

The program in Hyde county had no difficulty in exceeding the restoration quota but in this area with many idle farms a purely voluntary and unrestricted approach resulted in designation of land not on the basis of productivity or ultimate land use, but to secure immediate payments. Consequently a large proportion of the land is not under an operator's control and when the payment period expires may again be put to crops. One of the chief problems is the

determination of what restoration land should be, another is that of assimilation of restoration tracts by some existing operating unit. Land designated by an involuntary or speculator owner may actually be withheld from combination with an operating unit. Greater selectivity in designation of land and a division of payment that would encourage combination with existing units would help to solve problems in this area.

Ziebach county, South Dakota

The attitude of the farmers in regard to the restoration land was that much of the crop land in the county should be returned to grass, and that the program offered one means of facilitating this adjustment in land use. The response from local owners and operators was so favorable that the 20,000 acre quota originally allotted to the county and on which the plans for the county program were based was later raised to 31,000 acres. Additional unrequested designations of land for restoration brought the total restoration land in the county to about 46,500 acres, or 35 per cent of the crop land, reported on previous records of the Agricultural Conservation Program committee.

The United States Census reported 120,144 acres of crop land in 1934. The records of the Conservation Program indicated 129,983 acres in 1937. The county was given a soil depleting base of 101,294 acres in 1937 and a soil depleting allotment of 78,919 acres in 1938.

The procedure in indicating land in the county, based on the original allotment of 20,000 acres, was that the county district chairman would designate tracts for restoration in his community. This land was designated primarily on four criteria.

1. Poor soil

2. Erosion.

3. Abandonment.

4. Location of tract in regard to other crop land and pasture land on that particular operating unit.

The local operators were then interviewed by the county district committeeman, and absentee owners of unleased land were informed that their land was eligible for restoration through correspondence. The degree of persuasion was kept at a minimum and no farm goals were given. Land was designated for restoration only on the approval of the operator and in some instances the operators were permitted to substitute other fields for those selected by the county district committeeman.

No attempt was made to contact all owners of unleased tracts in the county. However, some of the larger land owners such as the Ziebach county commissioners, and the Rural Credit Board, took the initiative in requesting designation of land for restoration. A large acreage not originally designated by the committeeman came into the program from two sources: (1) that designated by the Ziebach county commissioners and the Rural Credit Board, and by individual owners primarily for the payment, and (2) land from operators of large ranches who held small areas of crop land under lease in connection with grass land, and which, although they had been plowed since 1930, were incorporated with pastures and handled as grass land. All of the land so requested was inspected for eligibility and the county committeeman refused to accept some tracts where proof that it had not been cropped since 1930 was lacking or on which there was a good stand of grass.

Because of unfavorable conditions, no seeding requirements on restoration land were made in 1938.

The application for 46,529 acres of restoration land was submitted on 575 tracts. Of these applications, less than half were for land definitely classed as crop land in previous years, and more than one half had not been previously reported to the Agricultural Conservation Program committee. Of the acreage submitted, only one-third definitely came from previously listed crop land, and at least two-thirds came from land not previously listed under the program.

A very high proportion of the land submitted for restoration came from non-operating owners. Nineteen per cent of the total applications were made by the Ziebach county commissioners. Another 19 per cent was made by the Rural Credit Board. Twenty-eight per cent was held by non-resident owners. Only 14 per cent was turned in by owner operators, and another 14 per cent by tenants with resident land owners.

Because of the uniformity of soils through the county and because large acreages on the prevailing type of soil have been abandoned, little selection on the basis of soil type was possible. Statements of county officials indicate that nearly all of the poorest crop land has been designated for restoration, but that there was little difference between much of the land designated, and that remaining for crops in the county.

For the most part, applications turned in embraced entire tracts of land, and approximately 40 per cent of the applications designated more than 80 acres each. Two-thirds of the acreage designated was for tracts of 80 acres or more.

Table 3. Number and percent of applications of restoration tracts of different size, total acres, and per cent of restoration acreage on different size tracts, Ziebach county, South Dakota, 1938.

Size of restoration tracts: Acres	Applications: No.	Per cent of total	Acres recommended: Acres	Per cent of total
20 and less	51	9	671	2
21 to 40	111	19	3404	7
41 to 80	184	32	10814	23
81 to 120	114	20	11458	25
121 to 160	76	13	10866	23
161 to 320	37	6	8026	17
321 and more	2	1	1290	3
Total	575	100	46529	100

That this land had been abandoned for some time is evident from the dates when it had last been farmed. Only 6 per cent of the land had been prepared for crops in 1937, and only 11 per cent reported crops in 1936. Because of the difficulty of determining the date when the land was cropped last, 50 per cent of the land designated, carried no definite date but had been abandoned some time between 1930 and 1936.

The predominating reasons given for designating land for restoration were, in the order of their importance, abandonment of the fields, unproductive crop land, wind erosion, and location with regard to other fields. A rather high proportion of the acreage was designated by the owners with no specific reason given for its classification as restoration land.

Agricultural distress in Ziebach county in the past several years and the heavy abandonment of crop land account for the fact that this county far exceeded its quota. In addition to the poorest land in the county, a much larger acreage of the better grades of land was designated for economic reasons. The major share of the land for restoration was not under the control of the local operator, and had been designated primarily for restoration payments.

Much of the land under the control of local operators had been taken out of crop production and although abandoned for crop production, the grass cover was poor. The farmers contacted in connection with this study indicated their interest in restoration was to obtain the payment, and that their interest in reducing their acreage of cash crop was of secondary importance. Inasmuch as locally controlled land constituted a minor part of the total acreage, this reaction could hardly be representative of the total. There is little question, however, that the primary interest of absentee owners and non-operating corporations was to secure the payment for restoration.

The difficulties connected with the restoration program in Ziebach county did not lay with the problem of designating restoration land, but rather in the choice of land for restoration. Differences in soil type and productivity offer one basis for selection, but the chief problems center around the control of operating units and the improvement of land designated as restoration.

Local opinion indicated that a period of one to ten years, depending upon weather conditions and the condition of the land would be required for regrassing. Land owners have learned apparently to withhold customary leases from tenants, in order to designate their land for restoration and to receive the entire payment. And those who did not withhold their land from lease this year are apt to do so in 1939, if the program is continued in its present form. This practice prevents the designated land from becoming a part of the operating unit. The land under the best operating control is that held by ranchers under a grazing lease. Crop land on such holdings has been turned in for restoration payment. As the land had already been included in grazing units, the operators are receiving pay without making any adjustment in land

use. This matter of operating control is so important that a division of payment for restoration between the tenant and the landlord is suggested. It would be desirable also to maintain some type of control on land subject to change of ownership and if the payment to owners could be distributed over a longer period than three years.

In this county grasshoppers and worms had destroyed cover on some land that had reverted to grass by 1937. It would seem desirable to allow a practice payment in order to establish cover on this and crop land which had been slow in reverting to grass.

The Restoration Land Program in Nebraska.

In Nebraska 250,000 acres of the 425,000 acre allotment for restoration was divided between 58 counties in the western two-thirds of the state. In this area, wind erosion had been a damaging factor to cultivated land since 1934. In 29 of these counties, where wind erosion had been severe, or in which wheat is the most important crop, county committees were required to meet the set goals. In the other 29 counties in which corn is the most important crop the goals were not compulsory. The accomplishment by counties was learned definitely only for counties in which studies were made, but goals were met in virtually all counties which had a compulsory program.

County goals were determined by the state committee on the basis of soils, cropping history, and the extent of idle acres in the county. The goals once set were not adjusted and while voluntary designation exceeded the restoration goals in some counties, committees in other counties had difficulty in reaching their quotas.

Instructions concerning the restoration land program were given to the counties by district field men, in the conference of committeemen, and in the written outline of listing procedure, NRC 210-Preliminary.

Briefly, the procedure described was that each county committee should tabulate the acres of crop land which was shown by the Soil Management Field Report (NCR 203) to be of low productivity score. The specific criteria to be used: slope, erosion, etc., was left to the discretion of the county committee. Successive grades of land were to be taken for

restoration until a county total equal to the county restoration land goal could be reached. Two other classes of land were to be included in the county total.

1. Land not included under the Soil Management Field Report designation, but which "because of abandonment, isolation, or other circumstances relative to proper land utilization"---has not been planted to crops since January 1, 1936.

2. Land, the owner of which "indicates in writing that he desires to designate as restoration land even though such acreage has been planted to crops since January 1, 1936."

Finally, the county committee was expected to review the acreage so determined and make its final recommendation of restoration land goal for each farm.

Box Butte County

The restoration land goal in Box Butte county was set at 15,194 acres and although the goal was exceeded, some arbitrary designation of acreage was made.

The county committee, to reach the required goal, reviewed with the precinct committee chairman, the kinds of land that should be eligible for restoration. The kind of soil, as determined by the soils map, the soil rating, the general knowledge of the localities, and land which had been idle the previous two years, were taken into account. On this basis precinct goals were established and tracts for restoration were located by precinct committeemen. Each precinct chairman then contacted every farmer in his territory to get applications for the "designated" fields and for as

much additional land as was possible. Apparently the precinct committeemen had to use considerable persuasion to get the restoration land designated. In addition, the county committee corresponded with absentee landlords, both owners of unleased farms and owners of farms on which the tenant was willing to submit land for restoration.

In their canvass, the precinct committeemen obtained the cropping history on the restoration tracts, and also noted the extent of cover on the fields.

At first the committee would not permit any planting of crops, such as rye, or sorghum, on the restoration land. Later, they relaxed in this requirement, but never encouraged planting "go down" crops. Neither did they require any conservation practices on restoration land.

Under the restoration land program in Box Butte county 18,989 acres were designated on 244 applications, for restoration. Approximately 82 per cent of this land had originally been listed as crop land under the AAA program. About 6 per cent of the crop land reported by the U. S. Census of 1934 was designated for restoration.

Box Butte county reported 342,694 acres of crop land under the AAA program in 1937. This land carried a soil depleting base of 296,093 acres, and a soil depleting allotment of 248,842 acres in 1938.

Although the major portion of the restoration land had previously been listed as crop land, only a small percentage was cropped in 1936 and 1937. Of the entire acreage designated for restoration 15 per cent had been in soil depleting crops in 1937, 25 per cent in 1936, 32 per cent in 1935,

and 36 per cent in 1934. Most of the land had been dropped from crop production by 1934 or earlier. The methods followed in Box Butte county should give a close association between soil productivity and restoration land. A classification of the fields designated according to productivity groups indicates that one-half of the land designated for restoration was as good as or was better than the average for the county.

The soils were ranged in five groups according to productivity. Grades 4 and 5 were considered to be restoration land. Forty two per cent of the total acreage in the county, designated as restoration land, came from these poorer grades, and 57 per cent of the land designated came from land graded as 2 and 3. Inasmuch as some sandy land was classified with soils of grade 2 and 3, some of the land in these grades may have been designated because of erosion. Of the 11,000 acres designated in grades 1 to 3, 26 per cent was designated because of topography, 36 per cent because of soil depletion, 24 per cent because of wind erosion, and only 14 per cent because of location of the fields and need of pasture.

The size of the units designated for restoration indicates, moreover, that much land was designated in complete tracts. Although 62 per cent of the applications came in for restoration tracts smaller than 80 acres, only 30 per cent of the land was included in these tracts. Twenty nine per cent of the total acreage was included in units of 160 acres or larger.

Of the land designated for restoration, 28 per cent was designated by owner-operators. Fifteen per cent was on land of tenants for resident landlords, and 27 per cent on tenant operated land for absentee landlords. Although 28 per cent of the land was designated by owner operators, only 42 per cent was definitely designated by tenants.

Table 4. The number of applications and per cent of applications for different sized restoration tracts, and the acreage and per cent of acreage designated for different sized tracts, Box Butte county, 1938.

Size of Tract	Applications		Acreage of restoration land	
	Number	Per cent of Total	Number	Per cent of Total
Less than 21	36	16	560	3
21 to 40	43	19	1358	7
41 to 80	62	28	3826	20
81 to 120	32	14	3156	17
121 to 160	31	14	4502	24
161 to 320	16	7	3393	18
321 and more	4	2	2195	11
Total	204	100	18990	100

On 30 per cent of the land either there was no operator in 1938, or the operator was not indicated on the application.

There is quite a variation in the description of the land obtained for restoration. Some is in large idle tracts, some is in the center of ranchers' range land, some in scattered fields on small farms. A part is on poor and sandy soils but much is also on what is listed on the soils map as good soil.

The chief problem in Box Butte county was to reach the compulsory goal. Rather vigorous administration was necessary to accomplish this, although the county estimated that all except approximately 3,000 acres was obtained voluntarily. By "voluntary" a different idea was meant than was the case in some of the other counties. On the involuntary acreage the complete assent of owner and operator was not obtained, but a restoration goal was set anyway. This involuntary class consisted of two chief types: (1) idle or very poor land which the absentee landlords were hesitant about leaving for permanent grassland; (2) idle land which a farmer wanted to keep, perhaps year after year, for his non-depleting acres.

A second problem is associated with the selection or designation of restoration land consistently as between farms. Land classed as restoration is deducted from crop land acreage, and a reduction in wheat and total depleting allotment thereby also occurs. It is unfair to require restoration on one class of crop land, and to permit a neighbor to hold similar land for idle non-depleting acres.

A point in connection with equitable apportioning of restoration is that of future adjustment of crop land. If the Soil Management Field reports

are revised, with idle and pasture land omitted, how can farmers be prevented from scratching idle land that should be restoration, to keep it in crop land?

The third problem is keeping restored land. There is always the possibility that land will be plowed outside of the Agricultural Conservation Program, perhaps to be farmed a year or two and then be idle again indefinitely.

The desirability of long term lease contracts; differential lengths of payment; and perhaps varying rates of payment, to take care of differences in time needed for restoration; county zoning, or other form of land use control; and of outright Federal purchase, arises in connection with these problems.

Fourth, the question of correct county goal may be considered. The 1938 goal for Box Butte was more difficult to secure than were the goals in some other counties. The county chairman was the only one who believed an additional goal could be fulfilled in 1939, and he said that if the county were given an additional 10,000 acres next year, they would have to cut into the small farms drastically.

Dundy County

Dundy County was given a restoration land goal of approximately 3800 acres. Originally the county committee believed this to be a compulsory goal and made their plans accordingly. Restoration provisions were announced in the precinct meetings, and on March 14th a letter was sent out to all "cooperators," telling them of the restoration land program. The letter mentioned that in the "case of a tenant it would require also the agreement of the owner."

Later, when the county committee discovered that the restoration goal was not compulsory, all pressure to obtain restoration land was removed. Only land offered voluntarily was designated for restoration. The precinct chairmen had little to do with restoration land. Farmers calling at the county office would ask for restoration payment and submit forms. In some cases the application was withdrawn when the farmers learned that corn and depleting allotments on restoration land would be lost.

Dundy county was classified as one of the corn counties and the goal set was not compulsory. The U. S. Census reported 211,837 acres in crops in 1937. The Conservation Program reported 202,575 acres in 1937. The crop base for 1937 was 189,000, and the soil depleting allotment was set at 146,809 acres. The restoration land goal of 3798 acres was based primarily on the reported idle land in the county. With a purely voluntary program, 2942 acres were designated for restoration on 55 applications. Ninety eight per cent of this land had previously been listed as crop land. Although no cropping history was available, it appeared that nearly all of the restoration land had been idle for several years, although it had been included on the work sheets as crop land.

In Dundy county nearly all of the restoration land was on the poorer grades of soils. Eighty two per cent of the acreage designated was located on grades 4 and 5, which were considered poorly adapted to crop production, and 17 per cent was located on grade 3 soil, with a negligible amount on soils of grades 1 and 2. Justification on the first three grades of soil was primarily that the land was needed for pasture.

Table 5. Number of applications and Proportion of Applications for Restoration Tracts of Different Size and the Acreage and Per Cent of Acreage Designated for Different Tracts, Dundy County, Nebraska, 1938.

Size of Tract	Applications		Restoration Land	
	Number	Per cent of Total	Number	Per cent of Total
Less than 21 acres	16	30	167	6
21 to 40	15	27	457	15
41 to 80	11	20	574	20
81 to 120	4	7	361	12
121 to 160	5	9	666	23
161 and over	4	7	718	24
Total	55	100	2943	100

In this county, on nearly all of the applications, a high percentage of the acreage designated was on units smaller than 80 acres. Three-fourths of the applications were made for tracts of 80 acres or less. Although 41 per cent of the acreage was included on these tracts, only 7 per cent of the applications and 24 per cent of the acreage was designated on tracts of more than 160 acres. The restoration land in Dundy county is a part of the operated land, as indicated by the fact that 55 per cent of the designated acreage came from owner-operated farms, 32 per cent was operated by tenants for resident owners, and only 13 per cent on farms with non-resident owners. No land was designated that was not operated in 1938.

In such a situation few specific problems would arise. The big question probably is that concerning the effects of a compulsory program and a higher goal in 1939. Without a doubt Dundy county could carry a higher goal much more easily than could Box Butte county.

Lincoln County

The procedure followed in designating land in Lincoln county, which was one with a compulsory goal, was similar to that followed in Box Butte county. That is, the land was designated by the county committeemen and the chairman of the precinct committee. Individuals were later contacted and designation of restoration land requested. The response in Lincoln county, however, was much more satisfactory than the response in Box Butte.

The goal of 15,193 acres was exceeded, and as an increase in acreage of restoration land could not be obtained, individual applications were scaled down so that the county total would equal the county goal. Lincoln county contains large areas of sandy and wind eroded soil. Although the U. S. Census reported 498,635 acres of crop land in 1934, only 384,891 crop acres were reported by the Agricultural Conservation Program for this county. The soil depleting base was 346,538 acres in 1937, and the soil depleting allotment for 1938 was set at 302,236. Apparently there are extensive areas of idle or abandoned land in this county.

Data from the applications for restoration land were taken for 24 townships in the county. Within these townships 10,197 acres of restoration land were designated on 97 applications. Of this acreage 92 per cent came from land previously listed as crop land. No data are available on the acres of crops on restoration land in recent years.

Practically all of the land designated for restoration is on grade 5, the lowest grade, soils. Ninety six per cent of the land was on grade 5 soil, and $2\frac{1}{2}$ per cent on grade 4 soil.

Forty eight per cent of the land designated was from owner operated farms, 37 per cent from tenant operated farms, and 15 per cent of the land was either not operated in 1938, or the operator was not reported. On the land designated by someone other than the owner-operator, one-half was on land held by a resident landlord and one-half by a non-resident landlord.

Table 6. Number of applications and proportion of applications for restoration tracts of different size and the acreage and per cent of acreage designated for different tracts, 24 townships in Lincoln county, Nebraska.

Size of Tract Acres	Applications		Restoration Land	
	Number	Per cent of Total	Number	Per cent of Total
Less than 21	17	18	234	2
21 to 40	12	12	363	4
41 to 80	21	22	1290	13
81 to 120	15	16	1485	14
121 to 160	14	14	1987	20
161 to 240	10	10	1965	19
241 and more	8	8	2873	28
Totals	97	100	10197	100

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Fifty two per cent of the applications for restoration land and 19 per cent of the total acreage was designated on tracts of 80 acres or less; 18 per cent of the applications and 47 per cent of the acreage was on tracts of 160 acres or more.

The very nearly perfect correlation between restoration land and soil grades, the high percentage of land designated in large blocks, together with the great disparity between crop land reported by the U. S. Census and that reported by the Conservation Program for the county, indicates that additional idle land could be designated for restoration if the program were reopened. A larger acreage could have been obtained this year on a voluntary basis if the upper limit on restoration land had been removed.

The program in Nebraska, carried out as it was between compulsory and voluntary designations in different counties, indicates the usefulness of the two methods of approach. Designation of restoration land could have been obtained much more easily in the western wind eroded counties than in the eastern counties. Nevertheless, designation of land in Box Butte county was made reluctantly. Apparently a much larger acreage could have been designated in Lincoln county, had the goal been raised.

A much closer coincidence of restoration and soil grades was obtained in Lincoln and Dundy county, than in Box Butte county. This is probably due more to the fact that soil types in the two former counties are more easily distinguished than to procedure followed or to other aspects of the restoration program.

With a few exceptions the restoration land in the counties studied in Nebraska was under the control of local operators. It was designated as restoration land either because of low productivity or because of the need for additional pasture land.

The program in Nebraska should be clarified through a more descriptive definition of restoration land, and separation of the concept of idle and restoration land, together with a diminishing importance placed on the county goals. These acted in some instances toward forcing land under the program, and in other instances toward preventing land from coming into the program voluntarily.

The Restoration Land Program in North Dakota

The restoration land goal for North Dakota was set at 1,025,000 acres. Of this 500,000 acres were in turn allocated to counties. The county goals were assigned by the State Committee and included nearly all counties in the state. The goals were set with the intention that they be met by counties, but apparently full designation was not necessary, as many of the better counties in the state fell far short of equaling the acreage allotted to that county. Adjustments in the crop base was left primarily to the discretion of the county committeemen and in the counties observed the method of adjusting the crop base was apparently that of determining soil depletion bases in the light of good farm practice, with some relation to crop history. The fact that some counties over-subscribed their restoration land goal, while in others the designation was far below the goal set indicates either that the program was not well understood or that the basic knowledge for the determination of goals was inadequate.

McHenry County

Beginning with an allotted goal of approximately 40,000 acres, the McHenry county committee designated 52,551 acres for restoration land in the county. Most of this land was designated on the basis of poor soil, or wind erosion. As the soils in McHenry county are characteristically light and sandy, they have suffered considerably from wind erosion, and designation of restoration land was not particularly difficult.

The 1934 Census reports 708,943 crop acres in McHenry county. Only 654,982 acres were reported on the Agricultural Conservation Program work sheets in 1937. The soil depleting base for the county in 1936 was 537,590

acres and the allotment for 1938 was 524,854 acres. The wide spread between the acreage reported by the 1934 census and the 1937 report of the Conservation Committee, and the allotment for 1938, indicates that on the basis of idle and unused crop land a large acreage in the county was eligible for restoration.

Of the acreage designated for restoration, only about 4,000 acres were designated by the county or community committee, although very little land was voluntarily listed by farmers until the county committee instructed them that the land would be designated for restoration. About 50,000 acres were eventually voluntarily listed. It seems likely that an educational program would have increased the acreage voluntarily assigned in this county.

Practically all of the acreage designated for restoration fell on land graded as poor soil. Only about 8,000 acres of the total assigned was on soil classed as good, and the designation of this acreage was justified on the basis of wind erosion.

The land designated for amounted to 7.4 per cent of the total crop land in the county. A total of 645 tracts were included on applications with an average of 81 acres per application. Although a number of small tracts were designated, 36 per cent of the applications covered 65 per cent of the total acreage. This 65 per cent fell in tracts of 80 acres or larger, and a number of tracts representing 22 per cent of the total acreage was reported in tracts of 160 acres or larger. The usual practice apparently

Table 7.

Number of applications and proportions of applications for restoration tracts of different size and the acreage and proportion of acreage designated on tracts of different size, McHenry County, North Dakota, 1938.

Size of Tract Acres	Applications		Restoration Acres
	Number	Percent of total	Percent of total
20 and less	66	10	2
21 to 40	162	25	10
41 to 80	191	29	23
81 to 120	102	16	20
121 to 160	80	13	23
161 to 320	38	6	17
321 and over	6	1	5
Total	645	100	100

was to designate all crop land on a given tract for restoration. The acreage designated by owner-operators was approximately the same per cent of the total acres designated, as is the proportion of owner operated land in the county. Twenty-nine per cent of the land designated for restoration was on land operated by owners, 40 per cent was on tenant operated land. On 31 per cent of the land no operator was reported in 1938. Of all the land designated for restoration, 24 per cent was covered by applications from non-resident owners. The information in Table 8 indicates that a large proportion of the restoration land was being designated from entire tracts held by non operating owners. The land designated by tenant operators was for the most part controlled under a one year crop share lease. Few of the rented tracts were controlled by a lease extending as long as the expected payment period for restoration.

On the tracts designated for restoration land, 53,551 acres of the 112,852 acres of crop land were designated for restoration. Assuming that applications were made on the basis of entire farms, this would reduce the crop land by nearly 50 per cent. The soil depleting crops reported on the entire farm acreage in 1937 were, however, greater than it was in 1936. The crop land on these farms had a soil depleting base of 68 per cent in 1937. The land designated for restoration, however, had a base of approximately 50 per cent, and as a result of the designation of restoration land, the remaining crop acreage had a base of apparently 85 per cent. Consequently, the designation of restoration land even on farms with a high proportion of such land, did not proportionally reduce the acreage of soil depleting crops permitted on the farms.

Table 8.

Ownership and Tenure on Restoration Land in McHenry County, North Dakota, 1938.

Item	Tracts: Number	Tracts in each Group: Percent	Land Designated: Acres	Land in each Group: Percent	Average Size of Tracts: Acres
1. Owner operated	196	30	15,372	29	78
2. Tenant operated	305	47	20,828	40	68
a. Resident owned	137	21	9,511	18	69
b. Non-resident	168	26	11,317	22	67
3. No operator, 1938	144	23	16,351	31	114
a. Resident	35	6	3,774	7	108
b. Non-resident	109	17	12,577	24	115
Total	645	100	52,551	100	81

All things considered, it would seem that the restoration land program would add to the stability of agriculture in McHenry county, North Dakota. Almost all of the Restoration Land had been classed as such because of wind erosion. Although the restoration acres were for the most part covered with sweet clover or annual weeds and grasses, some land was without adequate cover. The large acreage of sandy soils still in crops make wind erosion a serious problem for a large portion of the county. The introduction of suitable grasses for seeding on restoration land would be welcomed by nearly all resident farmers. The control of wind erosion requires special consideration in this county.

Although no practices on restoration land were required by the county committee, it was felt that land requiring particular work such as either crop planting or distribution of straw on shifting soils should receive a higher rate of pay than lands where no such practices were required. Their interpretation of practice A-7 in regard to earning soil building units on restoration land was given as an obstacle to designating land and prevented requirement of practices. Even if payments necessary to control land were greater than the value of the land itself, the county committee felt that payments to control small areas could be justified. In general the committee felt that once restoration was in effect the land would not be rebroken, although considerable acreages of the designated land was not under local control.

It seems likely, however, that designation of land for restoration by owners may be more important in the future. When landlords realize that the restoration payment is greater than the return from the lease, they may prefer to take the land out of the operating unit for designation as restoration land, than to leave the land in the hands of a tenant who receives full payment for restoring the land. Some adjustments on the basis of making payments is needed more in this section than in some of the other counties in the Great Plains.

Morton County

Most of the restoration land in Morton county, North Dakota, is located in the rougher, more broken, portions of the county. Much of the land designated was either on sandy soil, soil with low fertility, or a shallow top soil. Economic reasons such as small irregular fields or small tracts inaccessible to other parts of the farm determined restoration on some farms. Wind erosion was, however, the major reason for designating the land for restoration.

The 12,786 acres of land designated for restoration in 1938 represented 2.4 per cent of the crop land in the county, and fell short of the county goal set at 18,000 acres. The U. S. Census reported 441,378 acres of crop land in 1934. Under the Conservation Program 470,491 acres were listed as crop land in 1937. This land carried a soil depleting base in 1937 of 391,300 acres. As the soil conserving acreage in this county is small, a wide spread must exist between crop land and permitted acreage of soil depleting crops.

Because of the rough terrain, and the fact that crop land was located in small units scattered throughout the area, the size of the tracts designated were smaller than in the other Great Plains counties. The 12,786 acres of land for restoration, was designated on 282 applications. The average size of the tracts was 45 acres, and 86 per cent of the applications and 60 per cent of the total acreage was on tracts of less than 80 acres in size. Tracts of larger than 80 acres embraced 40 per cent of the total acreage, but only 14 per cent of the applications. In this county 30 per cent of the land designated was on owner operated farms, 41 per cent was on tenant operated farms, and 29 per cent was on land that had no operator in 1938.

Table 9.

Number and Proportion of Application for Restoration Tracts of Different Size and the Proportion of the Acreage on Tracts of Different Size, Morton County, North Dakota.

Size of Tracts Acres	Applications		Acreage percent of total
	Number	Percent	
20 or less	91	32	8
21 to 40	80	28	19
41 to 80	73	26	33
81 to 120	24	9	20
121 to 160	8	3	9
161 to 320	6	2	11
Total	282	100	100

Considering all land on the applications presented by tenants and by non-operating owners, 64 per cent of the acreage was designated on land held by absentee owners. Although much of this absentee owned land may later be incorporated with operating units, there is a grave question at present considering the future use and eventual control of this land. The fact that restoration tracts on land designated by absentee owners is larger than on tracts designated by operators, indicates that entire tracts were placed under the restoration program. Under the existing demand for land in the area, it is probably more profitable for owners to designate their land for restoration than to lease the land to resident operators. Leases held by tenants are typically for a short period. Seventy-five per cent of the leases were for one year only, and only 1 per cent were for more than a three year period. Future control, even on land now leased, is very questionable. Practically all of the land designated for restoration was on poor soil -- only 16 per cent was on land considered to be good farm land. Of the applications on land with soil classified as good, low productivity and wind erosion were the usual reasons given to justify its designation.

Nearly all of the land designated had been abandoned for crop production. On the entire acreage more than one-fourth had been in crops in 1937 and only about one-half of the acreage had been cropped in 1934. Most of the land, however, had been given a soil depleting base before its designation as restoration land.

Table 10.

Ownership and Tenure on Restoration Land in Morton County, North Dakota

Item	Designated Tracts		Designated Land		Average size of tracts, Acres
	Number	Percent	Acres	Percent	
1. Owner operated	103	37	3,828	30	37
2. Tenant operated	128	45	5,303	41	41
a. Resident owned	11	4	467	3	42
b. Non-resident	117	41	4,836	38	41
3. No operator, 1938	51	18	3,655	29	72
a. Resident owned	1	-	100	1	100
b. Non-resident owned	50	18	3,555	28	71
Total	282	100	12,786	100	45

The program in Morton county was in most cases a voluntary one. Land was designated with the approval of both owner and tenant, and only two tracts of very poor land was designated by the county committee.

One factor that retarded the listing of land for restoration in Morton county arises from the large number of small units in the county. Farmers on small acreages felt that they had too little crop land to justify retiring even the poor land to grass. There is in the county, however, a considerable acreage of abandoned land, so that the restoration program may encourage the development of larger farms in the area.

The recent shifting from horse power to tractor power in farm operations induced the designation of some small or irregular fields that would otherwise have remained in crops.

No local regulations were set down for restoring cover or for controlling erosion on restoration land. The general feeling was that the payment was inadequate to justify a seeding or cultural requirement on land so designated. The county committee indicated that approximately 8,000 acres of restoration land could be obtained in the county for the 1939 program, but their estimate of the total acreage for restoration was far short of the objective set by the long time goal of the Bureau of Agricultural Economics.

Table 11.

Cash and Share Leases on Restoration Land by Years for Morton County, North Dakota.

Length of Lease	CASES	
	Number	Percent
1	95	75
2	8	6
3	23	18
4	0	0
5	1	1
Total	127	100

Sargent County

Sargent county is located in the southeastern part of North Dakota, and almost all of the restoration land in the county is in a locality with very light sandy soil. This particular area had been designated as a problem area by the county commissioners several years before. The program in the county is not typical of programs in this part of the state. 7,672 acres were designated for restoration in the county. This was only 1.8 per cent of the total crop land and practically all of the restoration land was located on poor, wind-eroded soils. A number of abandoned farms in the county have been designated for restoration land, some apparently because no tenant could be obtained.

In 1937 the county supervisors had listed erosive land, and located blow outs on land in the county. Information in the office also listed contracts with an excessive amount of idle land, farms having an extremely low productivity index and fields that had been idle for two or more years. Blown out spots were located by aerial photographs. On the basis of this information, and the knowledge which the committeemen had of local conditions, restoration land was designated.

After this tentative designation, owners and operators were notified that their land was considered for restoration, and they were asked to offer any objections to listing the land for restoration. The most common objection offered was that the land had been seeded to rye in 1937 and had a crop on it this year. In cases where serious objection was offered to designating restoration land, the county committee reduced the soil depleting goal on the farm accordingly. Consequently most of the designated tracts were eventually offered for restoration. The 7,672 acres of restoration land was included

Table 12.

Number of Tracts and Proportion of Tracts of Different Size Designated for Restoration and the Proportion of Restoration Acres on Farms of Different Size Sargent County, North Dakota, 1938.

Size of Tracts	Applications		Acreage
Acres	Number	Percent of Total	Percent of Total
20 and less	10	9	2
21 to 40	31	29	13
41 to 80	33	32	26
81 to 120	18	15	25
121 to 160	10	10	19
161 to 320	5	5	15
Total	107	100	100

in a total of 107 applications, and the average size of the tracts was 72 acres. A few of the tracts were less than 40 acres, thirty per cent of the applications and 59 per cent of the land was included on tracts with more than 80 acres.

The size of tracts in an area that is for the most part well adapted to crop production indicates that restoration land was selected in that portion of the county not well suited to cultivation, and that in a number of cases most or all of the crop land on tracts was designated for restoration.

As in the western counties, a large proportion of the acreage designated was controlled by non-resident owners, and 42 per cent of the land designated had no operator in 1938. Only 25 per cent was held by owner operators. The average size of tracts designated by absentee owners was much larger than those designated by owner operators or by tenants. This designation by owners of land in an area where there is rather keen competition for farming land would suggest that some land is being held out of operating units, in order to secure the conservation payment. If this is the case, additional land may be taken in the future from tenants for restoration. Ninety eight per cent of all leases on land designated by tenants were for only one year.

The future use of restoration land on farms with no operator or on farms leased for one year only, must be very indefinite. The poorest land in the county was selected for restoration, as indicated by the small proportion of crops on this land in 1937. Only 1200 acres of crops were

Table 13.

Ownership and Tenure on Restoration Land in Sargent County, North Dakota, 1938.

Item	Designated Tracts		Designated Land		Average size of tracts
	Number	Percent	Acres	Percent	Acres
1. Owner operated	33	31	1,908	25	58
2. Tenant operated	39	36	2,516	33	65
a. Resident owned	10	9	666	9	67
b. Non-resident owned	29	27	1,850	24	64
3. No operator, 1938	35	33	3,248	42	93
a. Resident owned	6	6	516	7	86
b. Non-resident owned	29	27	2,732	35	94
Total	107	--	7,672	--	72

reported on 7672 acres in 1937 and nearly all of the land had been idle since 1935. As the total soil depleting base on the restoration acres, reported as 2,900 in 1936, had increased to 4,500 in 1937, it is apparent that much of the land designated came from land not included in the program in 1937. The designation of restoration land did, however, serve to increase the percentage of soil depleting base on remaining acres on farms designating land for restoration. According to listing sheet information the per cent of soil depleting base on crop land increased from 72 to 82 per cent as a result of the restoration program. As most of the land designated had not been in crop production, it is quite evident that the designation of such land for restoration does not materially decrease the permitted acreage of soil depleting crops.

Local opinion is that approximately 5,000 more acres could be brought under the present program in Sargent county, and a much larger acreage of poor land could be taken out if a higher payment per acre were made for restoration.

The farmers contacted in North Dakota indicated that few of the operators really understood the restoration program. They are, for the most part, in favor of retiring the land from crops. Twenty six out of 29 farms in McHenry and Morton counties indicated that wind erosion was the primary cause for designating land. A few listed land because of soil depletion, and a few to obtain more pasture or to reduce their crop acreage.

Practically all of them felt that no work would be necessary to bring about natural revegetation, and although their opinions varied greatly, most of them felt that partial cover could be attained in five to ten years. Few of the plots designated had made much progress toward revegetation. Sixteen out of 28 farmers indicated that they had additional land for restoration. Some of these intended to restore the land under the present program. Most of those who had no more land to restore, felt that the land was worth more for crops than pasture and that restoration was not needed. Quite a number had land that had reverted to grass some time in the past. Few of these indicated that permanent vegetation had been set, although some of the land had been out of cultivation for ten years.

The concensus in this group of farmers was that they needed more information concerning the possibilities of reseeding grass and additional payments for needed restoration practices.

THE 1938 RESTORATION LAND PROGRAM IN MONTANA

The restoration land program was designed to restore to grass, cropland which experience had demonstrated was unfit to be continued in cultivation. The state restoration land goal was to have been distributed among counties east of the Rocky Mountains, "designated as counties subject to serious wind erosion and counties containing large acreages unsuited to continued production of cultivated crops, on the basis of the amount of land in such counties which was cropped at least once since January 1, 1930, but on which, because of its physical condition and texture, and because of climatic conditions, a permanent vegetative cover should be restored." Because of the paucity of data on which to base accurate county goals, the state committee did not set any goals in 1938.

Description of Restoration Land

Furthermore, "it is proposed that under the 1938 program shall be accomplished the reclassification of the worst types of such land and of those tracts in the worst degree of erosion, a reasonable proportion of the ultimate total which may now, and in the future, appear to be for the best interest of special areas in particular, agriculture in general, and the nation as a whole." The state committee also impressed upon the counties the importance of not unduly restricting the operations of the operator in any one year. Also, that the land

the land be considered from the standpoint of its probable future usage as well as its present condition. County committees were instructed to first include all tracts of cropland which had been cropped at least once since January 1, 1933 and on which agricultural conservation payments for natural reseeding were approved under the 1937 program. In designating other land the committee was to give first consideration to sandy lands that had been subject to blowing and had not responded to wind erosion control practices. Also lands adjacent to, or surrounded by land in permanent native cover, and lands whose owners and/or operators had not instituted erosion control measures.

The county committees were asked to use all available data in classifying land and were to give consideration to the following factors in analyzing each piece of land.

1. Soil type and adaptability to crop production.
2. Condition of the land at the present time.
3. Relationship of the tract to the entire farm or farming unit.
4. Character or type of land in surrounding farms.
5. Crop production history since it was first brought under cultivation, and the type of farming followed with special reference to erosion control.
6. Economic studies of farming possibilities in the community.
7. Other factors governing the future use of the land and the conservation of its resources.

The state committee was to review the land recommended for restoration land by the county committee and to pass on the advisability of designating it as such land. When the state committee passed on the land, the county committee was instructed to notify the owner and operator that:

1. The land was to be restored to permanent vegetative cover.

2. No tillage operation, save for the purpose of promoting a permanent vegetative cover and approved by the county committee, be conducted on the land.

3. The land should be handled so that, in the opinion of the county committee, the maximum control of wind and water erosion would be brought about.

4. Failure to cooperate in the proper care of such land would be the basis for deduction from any payments that the unit might otherwise be entitled to under any Agricultural Conservation Program.

To bring about the successful and permanent change of this land to grass, it was suggested that the county committee advise assessors and any other concerned public officers as to the identity and acreage of this land. This was intended to encourage reclassification of such land on county records. Also, the state committee was to transmit to the offices of the Soil Conservation Service, Farm Credit Administration, Farm Security Administration, and the Bureau of Agricultural Economics, lists containing the acreage of each tract and the identification of the legal subdivisions in which it is located. "The purpose of such notification is to inform those agencies of the progress which is being made by the AAA in promoting proper changes in land use, in order that they may cooperate in their consideration of such of the restoration land tracts as may come within the scope of their local operations."

In some cases the county did not follow these instructions, but merely explained the program and asked operators to voluntarily designate restoration land on their units. In other counties the committees followed the instructions quite closely. Little information on the amount of restoration land in each county in Montana was available in the state office, but the field men stated that very little restoration land was designated in the "triangle" area. In nine out of the forty two counties having restoration land the operation of the government land purchase program makes a study of restoration land difficult.

Judith Basin County

Judith Basin has considerable acreages of the better grades, as well as the lower grades of farm land. Judith Basin county lies in the central part of Montana, southeast of Great Falls. It is bounded on the west by the Little Belt Mountains and on the north by the Highwood mountains. It occupies the western two-thirds of the high tableland area called the Judith Basin. This study is principally confined to the cropland on the gravel-capped benchlands and the stream bottoms between them.

On August 22, 1938, 9,094 acres of restoration land had been turned in by operators in Judith Basin county. This land was designated voluntarily by the farmers after the restoration land program had been explained in meetings conducted by the county agricultural conservation association. The county planning committee estimated 83,867 acres as the long time restoration goal. The 9,094 acres of restoration land constitutes 3 percent of the total crop acres reported by the Agricultural Conservation Program in 1937.

Table 14 shows the total acres of the various grades of farm and grazing land in Judith Basin county and the acres of restoration land on each grade.

The large acreage of unclassified land can be accounted for by the mountainous sections and badland portions of the county. From the soils standpoint, grade one and grade two farm land can be considered acceptable plowland, grade three is questionable for crops, and all land under grade four should be regrassed. Under very favorable climatic conditions all of the grades of cropland can be cropped economically, but under the conditions of the past decade it is highly improbable that the third grade farm land can be profitably farmed. Twenty six percent of the restoration land is on the third grade farm land, and 58 percent on plowland unfit for cultivation, or on land definitely suited only for grazing.

Justification for the restoration land on first grade farm land was secured by personally interviewing about half of the operators on such land. These men stated that all of the land they operated was good and that such land was restored to permanent grasses for hay. Incidentally, the observations made in this study tend to indicate that farmers cannot differentiate between the grades of land, but only between good and bad land. In some cases the operators restoring first grade land were leaving the second and third grade farm land, on gravelly benches, for cash grain. One explanation for this might be that they wanted to be assured of a hay crop. Some of this first grade farm land was cold, moist land, and not well adapted to wheat production. All of the restoration tracts on first

Table 14. Acres of the various grades of farm and grazing land and 1938 restoration acres in each grade, and percentage of the total in Judith Basin County, Montana.

Grades of Land	Total Land	In County	Restoration Land		Percent Restoration Acres are of Total Acres
	Acres	Percent	Acres	Percent	
1st grade farm land	36,242	3.04	127	1.47	0.35
2nd " " "	82,840	6.96	1,245	14.39	1.50
3rd " " "	220,044	18.48	2,249	26.01	1.02
4th " " "	134,616	11.31	2,420	27.98	1.80
1st " grazing land	256,287	21.53	746	8.63	0.29
2nd " " "	10,355	0.87	617	7.13	5.96
3rd " " "	24,887	2.09	579	6.69	2.33
4th " " "	24,887	2.09	320	3.70	1.29
Lakes, stream bottoms, unclassified	400,242	33.62	344	3.97	0.86
Total	1,190,400	100.	8,647**	99.97	0.76

** Total acres of restoration land is 9,094 but 447 acres were not located and so could not be classified as to grades of land.

grade land were around 10 acres, and too small to farm with power equipment. Restoring first grade farm land to field crops such as brome grass may not be justified by the same economic reasons that justify restoration of unsuitable or low grade land, but probably is a desirable shift in organization for these operating units.

The second grade farm land that was designated as restoration land could be justified by a number of reasons. In all of the cases where the restoration land, on second and third grade farm land, was observed by the soils man, it was found to be either on gravelly ridges, or the steeper slopes, or to be the more unproductive and shallow, gravelly land. Much of this land shows severe wind erosion and some water erosion. Further justification for the restoration of these lands can be found in other than soils data. Some of the tracts are too small to farm with power equipment. There is a pronounced trend towards more livestock and a need for more pasture in Judith Basin county. Wheat farming has been unprofitable in the past decade. Many farmers have very little capital and lack credit to finance large acreages of wheat. Hence, a decrease of wheat acreage combined with the shift to more livestock and need for pasture, justifies a shift of land use. In general, it may be said that unproductive and low grade soils justify most of the restoration land in this county.

The ownership, class of operation, number and size of restoration tracts, are shown in Table 15. Thirty three percent of the

Table 15. Ownership, size of tract, and type of operator for restoration land tracts in Judith Basin county, Montana, 1938.

Ownership and Type of Operator	Restoration Land	Restoration Land	Tracts Designated	Tracts Designated	Average Size of Tracts
	Acres	Percent of Total	Number	Percent of Total	Acres
Resident owned and operated	2379	26	33	26	70
Resident owned and tenant operated	584	6	14	11	42
Non-resident owned and tenant operated	5876	65	78	59	75
Non-resident owned and not operated	65	1	3	2	22
County owned and tenant operated	190	2	3	2	63
Totals	9094	100	131	100	69

restoration land is under a desirable type of control. It is either resident owned and operated or it is resident owned and tenant operated. Such control gives some assurance that the land will be used for grazing and not be broken up for crops under favorable climatic and price conditions. Sixty five percent is non-resident owned, and two percent is county owned. A number of tenants who turned in restoration land which was owned by non-residents found that the owners would not permit restoration.

Table 16 shows the duration of leases on restoration land. The large percent of annual leases would seem to indicate that the control of the absentee owned land is very unstable. Although the length of the lease does not necessarily mean that the operator will lose control of the land at the end of the lease period, there is always that possibility. The uncertainty of tenure influences the amount of permanent improvements and the kind of handling the land receives. That 76 percent were share leases may indicate the most prevalent kind of lease on cropland in the Northern Great Plains.

The majority of tracts are quite small in Table 17. Fifty percent are 40 acres or less. The designation of individual tracts of this size will have no appreciable effect on the farm organization. On the other hand, almost half of the restoration land in the county is in tracts of 121 acres or more. The arithmetic mean is 70 acres, but the modal size group contains tracts of from 21 to 40 acres. The significance of large numbers of small tracts is

Table 16. Length of leases and percentage for each on restoration land, Judith Basin county, Montana, 1938

Length of Lease	Number of Leases	Percent of All Leases
Annual	31	52.55
Two years	10	16.95
Three years	14	23.72
Five years	3	5.08
Ten years	1	1.69
Total Leases	59	99.99

Table 17. Size and number of tracts of restoration land in Judith Basin county, Montana, with percentages of each, 1938

Size of Tract Acres	Total Restoration Land in Group		Tracts Designated	
	Acres	Percent	Number	Percent
0 - 20	410	5	29	22
21 to 40	1102	12	37	28
41 to 80	1730	19	28	21
81 to 120	1402	15	14	11
121 to 160	2357	26	17	13
161 to 320	1016	11	4	3
321 and Over	1077	12	2	2
Total	9094	100	131	100

simply that they are pieces of land that the operator cannot farm easily. They may be on rocky ridges, or be parts of fields plowed too far into the lower grades of land.

Ninety nine differently controlled units turned in restoration land in 1938. These units had a total acreage of 53,677, with an average size of 542 acres per unit. Of this 283 acres, 52 percent, was non-crop land and 259 acres cropland. 1/ Ninety two acres out of the 259 acres of cultivated land was designated restoration land. On the basis of an operating unit of 542 acres the restoration of 92 acres, 17 percent, to grass will have an appreciable effect on the farm organization. If this acreage were regrassed, it would probably carry five or more animal units for an eight month grazing season. Thus, some of these farms which have been strictly cash grain could milk a few cows and thereby supplement their income.

As evidence of a downward trend in cash grain production on these restoration land farms there were on the farms 17,569 acres of soil depleting crops in 1935, 13,105 acres in 1936 and 10,999 in 1937. This reduction of 37 percent below 1935 can be attributed to a number of causes: 1. lack of finances or credit; 2. desire to reduce the number of acres planted to cash grain; 3. abandonment of some farm units. No data on the acres of soil depleting crops planted on restoration land is available but in all probability it would show a sharp reduction from 1935 to 1937 in the acres planted to soil depleting crops.

1/ This may not represent the full size of these operating units because they might have had range land not covered by the AAA program.

McCone County

McCone county is situated in the east central part of the state. The western part of the county is rough badlands used only for grazing. The area was settled by farmers somewhat later than were other parts of the state.

Under the 1938 program 55,467 acres were designated as restoration land. The procedure used in securing this land was quite different from that in Judith Basin county. The county committee went over the county and selected all the tracts to be designated. These were chosen on the basis of several criteria. Where a farmer had land that had been idle and where he was forced to reduce his wheat acreage, this land was designated as restoration land. In choosing this land the poorest tracts were chosen. In addition, the committee attempted to handle the program so as to give each individual the largest payment possible, but also tried to keep from reducing his base acres any more than was necessary. That they were successful in this is shown by the fact that only 13,666 acres or 25 percent of the restoration land comes out of the base acres. After the restoration tracts were selected the land was mapped on form ACP 50 and sent out to the farmers and ranchers for their consideration, and upon approval sent in to the state office.

A county program planning long-time restoration land goal, of 140,886 acres was set. The 1938 restoration land comprises 39 percent of this goal. The restoration land is distributed fairly

well over the county except that in the rough tracts in the western part and on the Vida bench in the northeastern part of the county, very little restoration was designated.

Table 18 shows the total acres of each grade of farming and grazing land in the county and the acres of restoration land with percentages. The restoration land not broken down in the lower grades because all are unproductive land. Most of the land, 93 percent, is of very low productivity and not fit for cash crop production. This classification is purely on the basis of soil and does not consider other factors. Nineteen percent of the land in the county has been cropped, though only 7 percent is second and third grade farm land.

Restoration of all the land on fourth grade farm land, or poorer, can be justified entirely on the basis of soil. The 3,136 acres of restoration land on second and third grade farm land can be justified from several standpoints. The tracts on these grades of land that were observed, were the "more rolling land which is less productive and which is more inconvenient to farm." 2/ Generally speaking, there is very little difference in the grade of land on each operators farm as far as he is concerned. Most of the men interviewed stated that the land they had restored was as good as their crop land. The principal reasons given for restoring land in this county was to reduce the acreage of land cropped or to increase the size of their payments. Slight to moderate wind erosion has occurred on much of the cropped land, and this is especially true

2/ From notes of C. L. Engelhorn, Soil Scientist, Soil Conservation Service, Great Falls, Montana.

Table 18. Acres of the various grades of farm and grazing land and 1938 restoration acres on each grade, and percentages of the total in McCone county, Montana.

Grades of Land	All Land in County		Restoration Land 1938		Percent Rest. Land is of Total Land
	Acres	Percent	Acres	Percent	
2nd grade farm land	59,381	3.51	383	0.69	0.64
3rd grade farm land	61,756	3.65	2753	4.96	4.46
4th grade farm land	456,049	26.94			
2nd grade grazing land	182,694	10.80	52,331	94.35	3.33
3rd grade grazing land	736,330	43.50			
4th grade grazing land	61,756	3.65			
Lakes, stream bottoms, unclassified	134,634	7.95			
Totals	1,692,800	100.0	55,467	100.0	

on the sandier soils. The more rolling land has had considerable water erosion. Residents of this county state that the best use of the county is for grazing purposes and that cash grain production cannot continue under the prevailing conditions. This would indicate that the majority of the cropland should be restored and only the lowlands used to produce winter feed for livestock.

Almost half of the restoration land is owned by non-residents and operated by tenants, Table 19. There is a large amount of railroad land in the area. Of the restoration land designated, 18 percent was non-resident owned, and not operated in 1938. The large amount of non-resident owned restoration land may be undesirable from the standpoint of retaining land in grass. More restoration land would have been turned in if the owners would have permitted it. Some operators refused to farm some of the tracts leased from absentee owners. It may be that sufficient pressure can be brought to bear on these owners so that they will let land go back to grass.

The size of the non-resident owned tracts is somewhat larger than the resident owned tracts. The non-resident owned and not operated tracts were relatively large. Also, the land may have been the poorest of the cropland in the area and therefore whole fields were turned in. The fact that the restoration tracts are considerably larger here than in Judith Basin County is probably due to the fact that all the land of the piece cropped was definitely low grade whereas in the former county only part of the field may have been unproductive soil.

Table 19.

Ownership, Size of Tracts, and Class of Operator for Restoration Land Tracts in McCone County, Montana, 1938.

Ownership and Type of Operator	Restoration Land		Tracts Designated		Average Size of Tracts
	Acres	Percent	Number	Percent	
Resident Owned and Operated	13,472	25	194	30	69
Resident Owned and Tenant Operated	1,548	3	35	6	44
Resident Owned, but not Operated	3,079	6	39	6	79
Non-resident Owned and Tenant Operated	23,237	43	292	46	80
Non-resident Owned and Not Operated	9,812	18	54	8	182
County Owned and Tenant Operated	2,566	5	24	4	107
Totals	53,714*	638	100		

* Does not come to total acres of restoration land, due to no data on some.

Table 20.

Length of Leases and Percentage of each on Restoration Land in McCone County, Montana, 1938.

Length of Lease	Number of Leases	Percent of Total Leases
Annual	67	66
Two years	7	7
Three years	22	22
Five years	5	5
Total Leases	101	100

Another indication of instability of restoration land is the large number of annual leases as shown in Table 20. Practically all of the five year leases are on the State of Montana land. Three-fourths of the leases in effect, 172, were share crop leases.

Table 21 shows the size and number of tracts of restoration land with percentages for each. The groups having the largest percent of the total restoration acres are from 41 to 80 acres and 161 to 320 acres, with the largest number of tracts in the former group. The majority of the tracts are found in the smaller groups. The acreage on the majority of the tracts is so small that it will not have an appreciable effect on the organization of the farm or ranch. Grassland in this area has a relatively low carrying capacity compared with Judith Basin County and much of the other parts of Montana. It will probably take 20 acres or more to carry an animal unit for an eight month grazing season.

The 538 operating units of restoration land had a total of 301,376 acres, (686 different ownership units having restoration land). The units as reported average 560 acres in size, although this may not be the complete farm unit, since all the range land controlled by these operators might not have been turned in. Some of the tracts that were operated by these same operators in 1937 were not leased in 1938. There were 149,036 total crop acres, averaging 277 acres per unit and 152,340 total acres in permanent vegetative cover, averaging 283 acres per farm. There was an acreage of 103 acres of restoration land per unit, thus reducing the cropped acres per unit to 174.

Table 21.

Size and Number of Tracts of Restoration Land in McCone County, Montana, with Percentages of each, 1938.

Size of Tracts	Total Restoration Land in Group		Designated Tracts	
Acres	Acres	Percent	Number	Percent
0 to 20	1,570	3	124	18
21 to 40	4,735	9	157	23
41 to 80	11,270	21	195	28
81 to 120	7,140	13	74	11
121 to 160	7,160	13	50	7
161 to 320	15,520	28	71	11
321 and over	7,300	13	15	2
Total	54,695*	100	686	100

* Does not total 55,467 due to fact that mid point of groups were used to get acreages for each size group.

The acres of soil depleting crops planted on restoration land are shown in Table 22. The sharp reduction in crops indicates that much of the land designated was already lying idle, especially since 1933, with another reduction in 1936. The reason for the large increases in the soil depleting base on the entire farm and on the restoration land in 1937, is probably that this land was not in the base acres in 1936, but was included in 1937. This procedure would not greatly reduce the base acres. This is indicated by comparing Table 22 with Table 23. The 13,666 acres out of the base acres is a reduction of only 25 percent.

Table 22. Acres of Soil Depleting Crops on Restoration Land the Soil Depleting Base on the Entire Farm, and on Restoration Land in McCone County, Montana, 1938.

Acres Soil Depleting Crops on Restoration Land					Soil Depleting Base on Entire Farm		Soil Depleting Base on Restoration Land	
1933	1934	1935	1936	1937	1936	1937	1936	1937
31,874	10,274	10,047	10,868	2,040	49,836	73,363	9,386	15,736

Table 23. Crop Acres, Restoration Acres, and Other Pertinent Data Concerning Restoration Land in McCone county, Montana, 1938.

1937 Crop Acres	Restoration Acres	Restoration Out of Base	1938 Crop Acres	Average Fallow	Revised Restoration Acres	Restoration Acres out of Base	1938 Adjusted Base
319,079	54,558	15,743	264,521	21,206	55,467	13,666	177,201

Suggestions for Future Program.

1. A certain percent of the restoration land should be artificially reseeded each year where less than a 10 percent grass cover of desirable forage plants exist.

The present cover on most of the restoration land is Russian thistle with some other weeds. In cases where the land has been idle for several years there may be a very small amount of grass. Interviews with operators having restoration land indicate that it takes from two to six years for any amount of grass to become established on land that has been cropped for a number of years. The farmers also estimate that it takes from three years up to twenty for crop land to get good grass cover on it, if not artificially reseeded. An average estimate would be around eight years. In most cases no work had been done on the restoration land this year and the majority did not contemplate doing any work. The few operators who had done some work had reseeded some or all of the land with crested wheat grass. A major difficulty in reseeding land is the large amount of absentee owned land. This might be overcome by entering into an agreement with the owner to have the work done by some one in the community. Another problem in artificially reseeding is the control of grazing of the tract. However, experiments show that land can be reseeded to crested wheat grass by simply drilling it in without preparation of a seed bed on abandoned crop land. Russian thistles are said to protect the seedlings by preventing blowing and reducing evaporation.

The method of seeding strips parallel to prevailing winds would seem to be desirable. By artificially reseeding the land should be brought back to grass much quicker than by letting it go back itself.

2. Operators should be made to conservatively graze areas having restoration land tracts and where possible to control livestock, keeping stock off the restoration land from April 1 to September 1.

The restoration land is to be regrassed artificially or by natural reseeding the land cannot be grazed very close. Forage plants spread only if they are allowed to go to seed. While a fair degree of stocking may increase the stand of grass by bringing the new seed in, excessive stocking will cause trampling and pulling up of new seedlings.

3. Eliminate the leasing of large tracts of land by operators who are interested only in the payments.

In a number of cases operators have gone out and leased tracts of land simply for payment of 50¢ an acre. In some instances stockmen have leased large tracts and used the grass land for range but others have not even used the range. The requirement that at least part of the land be reseeded would have a considerable effect on eliminating this kind of practice.

4. An educational program should be carried on to acquaint residents in areas having land that should be restored to the true opportunities in the area.

Data on wheat yields, rainfall, and prices should be presented to residents of the area and an analysis of the influence of these factors on income. Most of the farmers are probably influenced more by gross income than net income. The fact that livestock production may yield a profit as large or larger over a long period of years than

wheat production should be brought out. The objectives of the restoration land program should be clearly set forth because a large percent of the operators do not understand the purposes of the program.

5. More careful planning should be carried on before restoration tracts are finally designated so as to insure the designating of tracts that are fit only for grazing.

A large amount of data is available and more should be obtained on the location and extent of cropland for restoration to grass. An area planning study might well be instituted in those areas having potential restoration land. There are farms which consist entirely of low grade land. It is impossible for the operators on these farms to turn in their land as restoration land. In such cases the land should be purchased from the operators so that they can move to some other area. This would seem to indicate the need for close coordination of the various governmental agencies operating in the Great Plains. The worst land has probably been retired this past year. The next two years will bring in more questionable land and therefore more careful selection is needed if the land is to remain out of cultivation.

C O P Y

SOUTH DAKOTA STATE COLLEGE

Brookings

Department of
Agricultural Economics

September 26, 1938

Mr. R. S. Kifer
Division of Farm Management and Soils
Bureau of Agricultural Economics
Washington, D. C.

Dear Mr. Kifer:

I have just received your memorandum on the Restoration Land Program in the Northern Great Plains States and in South Dakota. Mr. Thorfinnson has indicated that you may be able to make some additions to this report in Washington.

I have two suggestions that I think should be included in this report. The first is on page 16 of the memorandum. In discussing the soils of Ziebach County and the method of selecting a restoration land, the following statement is made: "Because of the uniformity of soils through the county and because large acreages on the prevailing type of soil have been abandoned, little selection on the basis of soil type was possible." In spite of the information which you had available when writing this report, the soils in the area are not uniform. I would suggest that the following be inserted instead: "The first designation of restoration land was made on the present condition of the soil rather than soil type. Later when the goal was expanded little selection was made on the basis of either soil or soil types, first, because no detailed soils map was available for this county, and, second, economic factors are important enough to make even the best soil desirable restoration land."

The second suggestion deals with the general report. On page 6 would it not be desirable to include a statement to the effect that this division of payments should not be included in the docket, but rather instruct the counties in the states to divide the payments in such a way that grass will be restored and also to encourage inclusion in an operating unit. The state should be allowed considerable leeway in working out payments that best suit the above objectives.

These suggestions have been checked by Ralph E. Johnston, Land Use Specialist, Bureau of Agricultural Economics.

Thank you kindly for this report.

Very truly yours

(s) Raymond Penn
Assistant Professor

cc: T. S. Thorfinnson

P. S. Mr. Johnston suggests that the sentence on page 16 reading "..... but that there was little difference between much of the land designated, and that remaining for crops in the county," be changed to read: "... but that there was little difference between some of the land designated ....."

Yours truly,

(s) Raymond Penn.
E

Restoration land goals by States and counties in the Northern Great Plains

State Summary

	Restoration land estimates	
	Long-time goal	1939 Objective
	Acres	Acres
North Dakota	2,691,000	598,000
South Dakota	2,806,000	(1)
Nebraska	1,264,000	(1)
Three States	6,761,000	(1)
Montana (2)	(3,000,000	(1)
Wyoming	(	

(1) 1938 designations were not available and hence no guess as to the possible acreage in 1939 could be made.

(2) No data on the total acreage of restoration land were made available through this study. The 3,000,000 acre estimate is less than either the difference between crop land and soil depleting base in Montana or the idle crop land in Montana in 1938.

State	Restoration land estimates: Long-time goal Acres	1939 Objective Acres
NEBRASKA		
Banner	48,000	(1)
Box Butte	55,000	
Cheyenne	25,000	
Dawes	35,000	
Deuel	12,000	
Garden	32,000	
Kimball	75,000	
Morrill	50,000	
Scotts Bluff	25,000	
Sheridan	50,000	
Sioux	20,000	
Arthur	3,000	
Blaine	3,000	
* Boyd	30,000	
Brown	15,000	
Cherry	45,000	
Garfield	8,000	
Grant	2,000	
Holt	60,000	
Hooker	2,000	
Keyapaha	25,000	
Logan	7,000	
Loup	6,000	
McPherson	6,000	
Rock	10,000	
Thomas	2,000	
Wheeler	10,000	
*Antelope	25,000	
*Boone	18,000	
*Madison	15,000	
*Pierce	15,000	
*Buffalo	19,000	
*Custer	40,000	
*Dawson	17,000	
*Greeley	16,000	
*Hall	8,000	
*Howard	11,000	
*Sherman	14,000	
*Valley	14,000	
*Merrick	8,000	
*Nance	8,000	
Chase	42,000	
*Dundy	15,000	
*Frontier	16,000	
*Hayes	12,000	
*Hitchcock	11,000	
Keith	14,000	
Lincoln	96,000	
*Perkins	50,000	
*Redwillow	13,000	

Nebraska

*Adams	14,000
*Franklin	14,000
*Furnas	19,000
*Gosper	10,000
*Harlan	14,000
*Kearney	10,000
*Phelps	10,000
*Webster	15,000
Total	1,264,000

*corn counties, in which restoration receives little consideration.

(1) 1938 designations were not available and hence no guess as to the possible acreage in 1939 could be made.

State	Restoration land estimates: Long-time goal (Acres)	Restoration land estimates: 1939 objective (Acres)
NORTH DAKOTA		
Adams	70,000	15,000
Barnes	15,000	5,000
Benson	40,000	8,000
Billings	40,000	6,000
Bottineau	80,000	15,000
Bowman	100,000	25,000
Burke	43,000	8,000
Burleigh	60,000	15,000
Cass	1,000	0
Cavalier	7,000	2,000
Dickey	15,000	5,000
Divide	100,000	15,000
Dunn	103,000	18,000
Eddy	23,000	5,000
Emmons	66,000	17,000
Foster	14,000	5,000
Golden Valley	44,000	10,000
Grand Forks	2,000	2,000
Grant	104,000	20,000
Griggs	6,000	3,000
Hettinger	66,000	15,000
Kidder	72,000	25,000
La Moure	25,000	6,000
Logan	30,000	10,000
McHenry	100,000	25,000
McIntosh	33,000	8,000
McKenzie	*146,000	8,000
McLean	140,000	25,000
Mercer	45,000	10,000
Morton	94,000	20,000
Mountrail	95,000	20,000
Nelson	8,000	2,000
Oliver	32,000	8,000
Pembina	6,000	2,000
Pierce	44,000	10,000
Ramsey	12,000	4,000
Ransom	*35,000	5,000
Renville	33,000	10,000
Richland	30,000	10,000
Rolette	15,000	5,000
Sargent	15,000	7,000
Sheridan	50,000	15,000
Sioux	50,000	15,000
Slope	*100,000	15,000
Stark	93,000	20,000
Steele	5,000	2,000

Stutsman	70,000	25,000
Towner	10,000	2,000
Traill	-	-
Welsh	6,000	2,000
Ward	125,000	30,000
Wells	35,000	10,000
Williams	138,000	30,000
Total	2,691,000	598,000

*Includes the area to be retired under the Land Purchase Program on projects within the county.

State	Restoration land estimates: Long-time goal (Acres)	Restoration land estimates: 1939 objective (Acres)
SOUTH DAKOTA		
Butte	10,000	(1)
Corson	150,000	
Dewey	100,000	
Harding	55,000	
Perkins	125,000	
Ziebach	70,000	
Brown	80,000	
Campbell	50,000	
Edmonds	60,000	
Faulk	60,000	
McPherson	60,000	
Potter	75,000	
Spink	60,000	
Walworth	55,000	
Clark	10,000	
Codington	8,000	
Day	25,000	
Deuel	6,000	
Grant	10,000	
Hamilton	6,000	
Marshall	20,000	
Roberts	20,000	
Armstrong	-	
Haakon	45,000	
Jackson	10,000	
Lawrence	4,000	
Meade	175,000	
Pennington	75,000	
Stanley	20,000	
Aurora	30,000	
Beadle	90,000	
Brule	80,000	
Buffalo	10,000	
Hand	100,000	
Hughes	40,000	
Hyde	40,000	
Jerauld	25,000	
Sully	70,000	
Hanson	10,000	
Kingsbury	15,000	
Miner	10,000	
Sanborn	30,000	
Bennett	75,000	
Custer	20,000	
Fall River	50,000	

South Dakota

Shannon	30,000
Washabaugh	40,000
Washington	12,000
Brooking	-
Davison	20,000
Gregory	75,000
Jones	35,000
Lyman	100,000
Mellette	50,000
Todd	75,000
Tripp	175,000
Charles Mix	50,000
Douglas	5,000
Total	2,806,000

(1) 1938 designations were not available and hence no guess as to the possible acreage in 1939 could be made.