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Annual Report: 1939

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COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS

ANNUAL REPORT 1939

CHERRY COUNTY

STATE OF NEBRASKA

From Nov. 21, 1938 to Nov. 18, 1939

County Agricultural Agent.
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SUMMARY

The educational program of agricultural extension has been sponsored by the Cherry County Extension Service. 359 families subscribed $1650.40 for the support of the work in 1939. The commissioners provided office space valued at $180.00. Other income provided $288.58 making a total operating fund of $2,103.38.

Expenditures for operating costs during the year were $180.00 for office space and $1671.29 for carrying on the program.

Mr. Jake Stasch of Nenzel, Mr. A. J. Galloway of Kilgore, and Mr. O. J. Dau of Cody were appointed members of the finance committee. They directed the canvass for subscriptions with the help of precinct solicitors.

The program of work directed special emphasis to the Nebraska Pasture-Forage-Livestock program, to pasture improvement, to hard-quality improvement and to livestock marketing. The 4-H agricultural clubs specialized in herd quality. The home economics program for both 4-H clubs and adult women gave attention to foods, clothing and home management.

Demonstrational variety and type plats of wheat, oats and sorghums were planted in the county. Komar wheat yielded 17.5 bushels per acre as compared to 16.3 bushels of Thatcher, 15.3 bushels of Ceres, and 14.3 bushels of Reward. Dry weather, grasshoppers and wind destroyed the oats tests. Most of the sorghum plats were destroyed by hail and heavy rain in June. Leoti Red sorgo produced two and three-fourths ton of cured fodder per acre compared to 2.4 tons of atlas, 2 tons of Cheyenne, and an estimated 3/4 ton of corn fodder. The acreage of grain sorghums was more than doubled this year and totalled 4,274 acres. The forage sorghums increased from 11,960 acres in 1938 to 13,625 acres in 1939.

In the early 1930's, the sandhills were carrying maximum numbers of livestock. The drouth has accumulated since 1930 to a total deficiency of 36 inches of rainfall. Cattlemen here had to cut down their herds and get more range in their ranching units. The range program, pasture improvement program of the county extension service and the pasture-forage-livestock program have made the ranchers conscious of the need for conserving grasslands. 429,348 acres of Cherry County pastures were rested in 1939 in addition to those regularly left for winter pasture. 195 additional wells were installed in 1938 and 242 more during 1939. The average acreage served by one well has been reduced from 1111 acres to 1026.

Landscaping, yard beautification and garden information was given at the time of farm and home visits, by office interviews, by news items, and by a beautiful flower and vegetable exhibit at the county fair.

41 ranchers and farmers planted 19,700 Clarke-McNary seedlings.

Blueprints and bills of material service was given for the con-
struction of a horse barn, a 2-car garage, a grain elevator, 2 livestock feeders and a sale barn.

Turkey growers were given monthly service bulletins. Feeding, management, and breed improvement information was extended to all growers whose name was available. Turkey production in the county was greatly increased.

Quality improvement program for beef cattle was conducted by means of 4-H clubs, cooperation with the breeders association and calf shows held in connection with association sales, at a special event in Mullen and at the county fair.

Protein supplements and mineral supplements as a balance to the needs of range cattlemen was discussed at two series of community meetings and as a part of the pasture-forage-livestock program. Cottonseed cake and soybean cake have been proved to be more economical than other sources of proteins. Steamed bone meal, by furnishing a good source of phosphorus is an important mineral source.

Control of calf scours, calf diphtheria and the latest information concerning Bang's disease were the subjects of discussion at community meetings and during the progress of pasture-forage-livestock visits.

Bot control and sleeping sickness control in horses was continued. The latter malady has been almost entirely eradicated during the 1939 year.

With an A.C.P. depleting goal of 102,976 acres for the county the summary of performance showed that 73,464 acres were planted to depleting crops. 3,096 acres of wheat were planted as compared to a wheat allotment of 3,565. 429,948 acres of range were deferred or rested between May 15 and October 1. 242 wells were installed.

76 ranchers and farmers cooperated with the Nebraska Pasture-Forage-Livestock program. 98 visits were made to 61 different ranches and farms. District finish-up clinics and recognition meetings were conducted at Valentine and at Mullen. 8 Cherry County ranchers were awarded recognition by the sponsoring business firm organizations at these district meetings. Two were awarded honorable mention at the Omaha state meet.

The Land-Use committee assisted to coordinate the credit facilities of FSA, FCA, and the land bank. Their policies were outlined and discussed with representatives of the production credit association and the local banking agencies. Collections are reported much greater than new amounts loaned for the current year. FCA reports collection of total amount on their books for the county as being more than 60 percent.

A livestock brand directory with 1800 brands of herds maintained in the county was published as a 6-page supplement to the 1938 Cherry County atlas.
Cooperated with and assisted the various livestock agencies with promotion of livestock sales services. Sales from Cherry County members of the new feeder cattle association are estimated to exceed 59,000 head. Added to the purebred sales, the valuation of livestock sold by members of organizations assisted is estimated to exceed $2,000,000.00.

28 clubs enrolled 405 ladies for the home demonstration program. Six lessons were demonstrated.

A total of 148 regular members and 10 associate members enrolled for 172 4-H club projects. 99 regular members, and 7 associate members completed their projects. 18 clubs were organized as follows:

5 beef cattle clubs completed 41 of 47 enrolled
1 colt club completed 7 of 7 enrolled
2 cooking clubs completed 15 of 24 enrolled
1 canning club completed 8 of 8 enrolled
5 clothing clubs completed 27 of 38 enrolled
2 home management clubs completed 5 of 11 enrolled
1 girls room club completed 7 of 11 enrolled
1 fix-it club completed 1 of 11 enrolled

88 persons used 26 tons of grasshopper bait for protecting crops to make an estimated saving of $16,525.00.

FOREWORD

The fourth year's Extension program was sponsored by the Cherry County Extension Service. This organization is the successor to the Cherry County Farm Bureau which was organized in 1936. The new organization sponsors the educational program of agricultural extension only. Some phase of this program has influenced every family on farm or ranch within the county. It has also lent itself to a larger part of the town families.

The reorganized board of directors placed the responsibility of conducting the routine business in the hands of an executive committee of three. The three lived close enough to the county office to give their regular attention to its needs. The responsibility of financing the local budget was given to a finance committee.

The program of work has not yet been narrowed to major issues enough. Neither has this program been created as thoroughly by local leaders as is desirable. This fact causes more of the load of conducting the details of the program to rest on the agent and office assistant than is desirable to insure greatest growth.

A very heavy rain and hail in June traversed a narrow strip running from the Northeast corner of the county to the west end, bearing slightly south. This storm damaged much of the corn and newly planted feed crops. It also destroyed much small grain. This situation was an opportunity to further encourage the seeding of sorghum forages.

Pastures grew a rank cover of grass. Deferred pastures were es-
tially well improved. Heavier than usual feed supplies permitted the
ranchers to rest more of their grazing land.

Heavy corn crops in the eastern corn-belt states and the adver-
tizing campaign of the local cattle producers association brought a larg-
er than usual number of feeder buyers into the county. This fact gave
background for the program of livestock marketing and quality improvement
in herds.

The pasture-forage-livestock program which now embraces the range
cattlemen in its scope, offered a splendid means of creating interest and
attention to the extension work both from the rural and town groups.

The second year of county fair held in the county since 1931 made
it possible to present the 4-H program for the inspection of the public.
Enrollment has remained the same as last year. Completions have been high-
er. For the most part percentage of completions is just a matter of whether
or not the members can be given help to make out their written reports.

A larger budget was supported this year than at any previous time.
Double the number of farm and home visits were made. This type of contact
is most important to a newly organized county.

The quarters occupied since 1935 by the county Agricultural Con-
servation Association and the county Extension Service jointly were aban-
donned. Both offices located in new and more spacious quarters. This move
separated the offices. It has made for much more efficient use of time for
the administrative personnel of both organizations. The move will no doubt
have an influence on financial support by subscriptions.
FORM OF ORGANIZATION

The Extension program has been sponsored by the organization known as the "Cherry County Extension Service". This organization was formerly known as the Cherry County Farm Bureau. The members, at their annual meeting, amended their by-laws. They adopted the new name and are no longer affiliated with the Nebraska Farm Bureau Federation, nor with the American Farm Bureau Federation. They decided to confine the scope of activities to sponsoring the educational program of Agricultural Extension only. They also reduced the number of directors to 7 elected at the county meeting.

Officers Of

THE CHERRY COUNTY EXTENSION SERVICE

Valentine, Nebraska

President C. B. Faubion Cody
Vice President A. J. Galloway Kilgore
Secretary-Treasurer Kenneth Hall Valentine
County Agent C. M. Mead Valentine
Office Assistant Miss Eola Fischer Valentine

BOARD OF DIRECTORS

C. B. Faubion Cody
A. J. Galloway Kilgore
Kenneth Hall Valentine
Ed Belsky Merriam
Mrs. Essie Davis Hyannis
C. R. Wolfenden Kennedy
Wm. Ganser, Jr. Wood Lake

359 families subscribed $1630.40 to the general fund for support of the 1939 extension program. Rental of office space in the amount of $180.00 was absorbed by the county commissioners from their general fund. The cooperative non-stock association donated $39.08 in lieu of clerical service performed for them. $4.40 income was received for mierographing. Platbook sales amounted to $249.50 during the year. Thus a total of $2,193.36 was provided. At the close of the year $199.40 has been collected from subscribers for 1940.
SUMMARY OF EXPENDITURES
For the period DECEMBER 1, 1938 to NOVEMBER 30, 1939.

Subscriptions to Ranch and Farm Journals.............................. $ 62.50
Variety Tests............................................................................. 17.01
Soliciting.................................................................................. 178.58
Bank charges............................................................................. .20
Advertising................................................................................ 40
Janitor and cleaning............................................................... 6.72
Printing..................................................................................... 5.30
Express, freight, drayage......................................................... 7.39
Typewriter Rent........................................................................ 8.00
Post Office Box Rent.............................................................. 1.00
Telephone................................................................................ 55.33
Postage..................................................................................... 36.48
Office Equipment..................................................................... 90.77
Office supplies (stationery, etc.)............................................. 79.14
Heat (fuel)............................................................................... 15.94
Electric service........................................................................ 18.37
Clerical salaries....................................................................... 613.25
Travel/..................................................................................... 344.30
Women's Project Clubs............................................................... 18.12
4-H Club supplies.................................................................... 24.65
Platbook, atlas......................................................................... 87.84

TOTAL OPERATING COSTS......................................................... $1671.29
MAINTENANCE OF ORGANIZATION

Members of the County Farm Bureau held their annual meeting at Valentine January 17, 1939. They amended their by-laws to adopt the name of Cherry County Extension Service and to confine the scope of activities to the educational program of Extension Service.

They elected a board of 7 members. This board met at the county office January 20 and elected an executive committee of 3 to handle the routine business during the year. These three men have met at the county office at the first of each month through the year. This committee consisted of Mr. C. B. Faubion, the President, Mr. A. J. Galloway, the Vice-President, and Mr. Kenneth Hall, the Secretary-Treasurer.

A Finance Committee of 3 members was given the responsibility of directing the canvass. Jake Stasch of Nenzel, A. J. Galloway of Kilgore, and O. J. Dau of Cody were the members of this committee. They enrolled the assistance of community or precinct solicitors. In some precincts a thorough canvass was not made by the precinct solicitors. The Finance Committee gave their personal efforts to supplement the drive in these communities. The county seat business firms were contacted and subscribed a generous percentage toward the budget. The Finance Committee contacted the county board of commissioners and secured their agreement to provide office quarters. This was done and two very suitable rooms were made available. The office is quartered in the business district of Valentine.
SITUATION.

The agricultural income for Cherry County comes primarily from the sale of feeder cattle. Other interests are quite secondary in importance. Only about 3% of the acreage in farms is under cultivation. The average size of farm for the county is 2100 acres. This considers the small garden and truck farms which are not characteristic of the county. A truer measure is that the average size of ranching unit cooperating with the AAA program is 5470 acres.

Extension work is being financed here by this type of operator. Consequently our program has been developed mainly to serve them. The rancher who operates on this scale is a skilled and well trained individual as concerns the routine of his activities. His problems are few. They are chiefly concerned with feed supplements to our native forages, degree of quality desirable for herd standards, livestock disease prevention and control, and marketing problems.

MAIN OBJECTIVES.

We have centered attention on the pasture-forage-livestock program as developed by our state Extension organization. In this we have striven for a general management approach. Other main objectives in our program have been livestock disease control and the development of a marketing organization representative of our feeder producer interests.

The program has attempted to focus attention to management details including size of unit, size of pastures, position and amount of fencing, well and other watering facility placements, periods and rotation of grazing practices, winter supplements to range and hay, besides the herd management, marketing and disease control features.

These latter 3 phases have been given individual attention as major issues.

The main objectives of this year's program so far as management is concerned have been to study the methods as practiced by a selected group of cooperators. The data gathered from this study then has been a basis and is to continue to be the basis for information made available to others. This procedure has prevailed even into the field of disease control which is highly technical. A few operators have been found to be very successful in control of diseases over a period of years.

Managing the breeding periods for the herds so that the calving dates conform to most economical consumption of total forage produced in order to market the maximum poundage, so that the labor requirement is held to a minimum and so that weather influences can be coped with, leads to one of the major issues of disease prevention.
Assistance in developing the cooperative market organization known as the "Sandhill Feeder Producers", the breed associations and the statewide livestock growers' organization has been a definite aim of our county program as well as that of the state program. Emphasis to its importance can be stated by saying that well organized and orderly marketing needs careful planning by nature of its being the weakest link in the operators' management.

Less than one-fourth of the farm operators may be considered as grain crop farmers. These do not practice selling grain on the market unless forced to do so because of need for immediate cash. All but a very few of these smaller cropland operators produce a large part of their income from cattle. Consequently the details of crop production and soil management are left to become incidentals in our program of work.

OUTLINE OF PROJECTS

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<td>1. CEREALS</td>
<td></td>
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<tr>
<td>1.13 Corn Variety Tests 1 plat.</td>
<td>Test completed. No meeting held. Data to be published during winter.</td>
</tr>
<tr>
<td>1.22 Wheat Variety Test 3 plats.</td>
<td>1 plat completed. Meeting held at harvest time.</td>
</tr>
<tr>
<td>1.32 Oats Variety Tests 1 plat.</td>
<td>1 plat destroyed by grasshoppers.</td>
</tr>
<tr>
<td>1.61 Sorghum Seed Certification. Certify Lecot, Early Kalo, Early Sumac.</td>
<td>Most acreage destroyed by June flood and hail. Some survival of Lecot only. No certifications.</td>
</tr>
<tr>
<td>1.62 Sorghum Variety Test 5 plats.</td>
<td>5 plats planted. 3 destroyed by flood in June. 2 completed forage tests. Blackbirds destroyed grain test.</td>
</tr>
<tr>
<td>1.64 4-H Sorghum Club - s clubs.</td>
<td>No clubs organized.</td>
</tr>
<tr>
<td>2. LEGUMES &amp; FORAGE CROPS.</td>
<td></td>
</tr>
<tr>
<td>2.5 Pasture Improvement, 1 contour furrow demonstration. 20 cooperators in pasture management.</td>
<td>Contour furrows surveyed and staked. Project abandoned as impracticable in this area. 75 cooperators in pasture management.</td>
</tr>
<tr>
<td>5. VEGETABLES, FRUITS, BEAUTIFICATION.</td>
<td></td>
</tr>
<tr>
<td>5.4 Landscaping. Assist 2 adult clubs to landscape 1 or more places each.</td>
<td>Assisted with project at six homes.</td>
</tr>
</tbody>
</table>
6. **FORESTRY.**
   6.1 Farm Plantings—60 plantings of shelters.

7. **WILDLIFE CONSERVATION.**
   1 4-H Bird Club. Information to all 4-H. Cooperate with Federation and local refuge admin.

8. **AGR. & HOME ENGINEERING.**
   Distribute information re: Midwest Plan Service and other Eng. services. Promote farmstead improvement contest sponsored by county organization.

9. **POULTRY.**
   3 demonstrations of hogging-off grain sorghums with turkeys. 1 4-H turkey club. Feeding-sanitation-marketing-service information.

11. **LIVESTOCK.**
   11.2 Beef Cattle. Breed Improvement, Cooperate with NW. A., 6 stocker-feeder clubs, 1 baby beef club, calf show, sanitation meetings, general information.
   11.4 HOGS. Sanitation, feeding problems, two 4-H clubs.
   11.5 HORSES. Bot Control, sleeping sickness, meetings and circular letters.

12. **AGRICULTURAL ECONOMICS.**
   12.11 A.C.P. Conduct educational program in all communities.
   12.12 F.S.A. Cooperate with local supervisor in his educational program.
   12.31 P.F.L. 41 range demonstrations, 25 sorghum or farm demonstrations. Information to all.
   12.4 Farm Financing. Cooperate with various credit agencies. Give individual planning service as needed.

   **Livestock Marketing.** Assist Sandhills Feeder Cattle Producers Association

41 cooperators planted 19,700 Clarke-McNary seedlings.

1 club-10 members organized. Project abandoned during summer.

Plans, blueprints, and bills of materials provided for 8 buildings. Assisted with construction of sale barn at the county fair grounds.

A general management, feeding, grading, and marketing information provided. 1 hogging-off sorghum demonstration completed.

6 stocker-feeder and 1 baby beef project carried by 6 4-H clubs. Calf show at county fair completed. 3 sanitation meetings held. General information distributed throughout year.

No clubs organized. Sanitation, feeding problems information distributed.

3 discussion meetings, sleeping sickness, Bot control publicity nets good repeat for capsuling treatment.

Discussed phases of program to series of community meetings.
Office interviews with patrons. Conferences with administrative personnel.

Very complete program discussed in full elsewhere.

3 Land Use meetings. General coordination policy developed.

Animal husbandry state specialist and agent cooperated in all meetings of the association.
13. FOODS & NUTRITION.
Project club lessons for 500 members, 30 clubs. 4 4-H clubs: 2 learning, 2 meal planning & prep.

14. CLOTHING.
Project lessons for 500 members, 30 clubs. 4 4-H clubs: learning project.

15. HOME MANAGEMENg.
Project work complete. 6 4-H clubs.

16. HOME MANAGEMENT.
Project work complete. 2 4-H clubs.

17. HOME BEAUTIFICATION.
Project work complete. 1 4-H club.

19. PROGRAM MAKING.
Develop Home Demo. Council. 4-H Committee; Program Committee and special committees.

19.21 Farm Bureau. Reorganize Board - reduce number to 7 members with Executive Committee of 3, create Finance Committee of 3. Give all leaders special duties.

19.23 Publicity. Work out program of publicity for full farm and ranch coverage with Mid-West Ranch & Farm and local weekly newspapers.

20. COMMUNITY ACTIVITIES. Assist County fair holds second program in local County Fair in 2nd year's pro-G years. Leader training, judging, program. Conduct range management and demonstration days, and club camp feed crops tours. Conduct 4-H club were arranged for. tour of county. Leaders' training and judging and demonstration days for all clubs.

21. OTHER ACTIVITIES.
Conduct full program of grasshopper, gopher and prairie dog control.

21.5 4-H Fix-It Club. 2 clubs. 1 club organized. 1 completion.
CEREALS

One spring wheat variety test was completed with the cooperation of Walter Shelbourn of Valentine. The test plat was located just east of the Kewanee school house. 5 varieties were tested including Ceres, Komar, Thatcher, Reward and Mindum.

The Mindum variety was not ripe enough to be harvested at the time the other four varieties were cut. Mr. Shelbourn found it impractical to leave the strip in his field so yield test was not taken. It is estimated to have outyielded the other varieties. Grasshopper damage was more severe for this variety. It is not desirable milling wheat and not readily saleable here. However, for this year, the yield was no doubt very favorable for a feed crop in comparison with adjacent corn and barley yields. From this standpoint it could be recommended in this area.

The following table is a report of results:

<table>
<thead>
<tr>
<th>VARIETY</th>
<th>CERES</th>
<th>KOMAR</th>
<th>THATCHER</th>
<th>REWARD</th>
<th>MINDUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>YIELD</td>
<td>15.3</td>
<td>17.5</td>
<td>16.3</td>
<td>14.3</td>
<td>------</td>
</tr>
<tr>
<td>TEST WEIGHT</td>
<td>56.0</td>
<td>53.8</td>
<td>52.8</td>
<td>57.2</td>
<td>------</td>
</tr>
</tbody>
</table>

The plat was planted April 3 on 1938 corn ground. The plat was disked April 1. A light rain fell during the evening of April 2. The seed bed was in excellent well packed condition.

Grasshopper damage was estimated to be about 15% in the Reward variety, slightly less in the Thatcher and approximately 5% in the Ceres and Komar plats at the time of harvest.

One oats variety test was attempted with Wm. Forath of Crookston (German Precinct) cooperating. 6 varieties including Fulghum (Coker #8), Fulghum 718-12, Fulton, Brunker, Burt #518 and Iogold.

Spring wind erosion and very severe grasshopper damage prevented any accurate measurement data and results to be taken.

The campaign to increase sorghum production was continued this year. Variety tests were again conducted. The grain sorghums are new to this area. Variety plats were planted with the cooperation of Leslie Crabb in Military precinct, Jake Stasch in Nenzel, C. H. Feezer in Georgia, Fred Hinton in Cody, Howard Burress in Irwin and E. M. Brouse in Valentine precinct. All plats were damaged by rain and hail June 16. The Burress, Hinton and Brouse plats were not completely destroyed. Forage yields were taken for the varieties including Cheyenne, Early Sumec, Lecta, Atlas and Greeley from the Burress plat near Gordon. The following table indicates the readings taken after the fodder was air cured.
Blackbirds destroyed the readings of grain yields on the Burress plat.

2 and 4 pound samples of certified seed were distributed to cooperators living in the farming precincts adjacent to the Northwestern railroad. The varieties of Early Kalo, Soonar Milo, Cheyenne, Early Sumac and Leoti were those from which best results were expected. Unfortunately, no accurate data can be given. The heavy rain and hail during June destroyed all early plantings.

Cheyenne seed was found to be available in small quantity. Some 30 farmers were induced to plant this variety during the week of June 19 to 24. It produced a very satisfactory tonnage of forage. The fields of Leoti are estimated to have produced a higher tonnage than other varieties in localities where the rains did not disturb the relationship to date of planting, etc.

A survey of the Agricultural Conservation Program midsummer farm reports shows a total acreage for the county of 4,274 acres of grain sorghum and 13,625 acres of forage sorghums. The following table shows the relationship of these acreages to those of former years.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>1939</th>
<th>1938</th>
<th>1937</th>
<th>1936</th>
<th>1935</th>
<th>1934</th>
<th>1933</th>
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</thead>
<tbody>
<tr>
<td>FORAGE SORGHUM ACREAGE</td>
<td>13,625</td>
<td>11,961</td>
<td>8,900</td>
<td>1,630</td>
<td>4,630</td>
<td>4,630</td>
<td>960</td>
</tr>
<tr>
<td>GRAIN SORGHUM ACREAGE</td>
<td>4,274</td>
<td>1,945</td>
<td>1,550</td>
<td>550</td>
<td>2,580</td>
<td>980</td>
<td>150</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>YEAR</th>
<th>1932</th>
<th>1931</th>
<th>1930</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORAGE SORGHUM ACREAGE</td>
<td>790</td>
<td>340</td>
<td>310</td>
</tr>
<tr>
<td>GRAIN SORGHUM ACREAGE</td>
<td>60</td>
<td>65</td>
<td>25</td>
</tr>
</tbody>
</table>

The data reported is taken from the crop reporting bureau of agricultural economics for the years prior to 1937.

A sorghum variety display was exhibited in the county office during the winter and spring. It drew much comment and interest from office callers. Seed samples were also on display. Some very fine exhibits were brought to the county fair by cooperators. Special emphasis was given to sorghum production during the spring by means of publicity given to the Pasture-Forage-Livestock Program. Methods and rates of planting, feed value, yields, etc., were brought to attention of farmers visited during the year.
Pasture Improvement

Again an active campaign for improved pasture management was conducted in all precincts of the county. This program was carried in cooperation with the agricultural conservation association, and promoted chiefly through the Pasture-forage-livestock cooperators.

Range cattlemen have considered the question of maintaining and improving the carrying capacity of their native grasses as a most important problem. In the past the average cattlemen has been so busy managing his livestock that he could give little consideration to management of the grass itself. During the settlement period the cattlemen acquired more acreage if he found himself short of grass. Drouth years discouraged those who were less fortunate and forced some to sell cattle at too low figures.

The sandhills area is deficient of rainfall since 1930. A study of this deficiency has been made by the Extension engineering department. The table below illustrates the accumulating deficiency for the Valentine station as compared to the 41 year average 1889 to 1930. This shows the total deficiency of 36.1 inches in the period 1931 through 1938. This deficiency represents a huge amount of water. It makes itself manifest in the cattlemen's program to a great extent, in the shortage of forage, both range and meadows.

<table>
<thead>
<tr>
<th>Station</th>
<th>Period</th>
<th>Yr.</th>
<th>PRECIPITATION BY YEARS 1931-1939 INCL.</th>
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<tbody>
<tr>
<td></td>
<td>of A v.</td>
<td>1931</td>
<td>1932</td>
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<tr>
<td>Valentine</td>
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<td>41</td>
<td>19.57</td>
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<tr>
<th>Valentine</th>
<th>1935</th>
<th>1936</th>
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The 1939 year was especially favorable to the production of grass in the dune hills. That is to say, the forage on range as compared with the forage in the meadows was exceptionally good. Hay production was perhaps below normal varying from 60% to nearly 100%. The west border and precincts in the southwest corner of the county may be said to be below normal in forage production on the range as well as in the meadows. Even summer pastures produced enough grass over most of the county so that some could have been mowed for hay at the end of the pasture season. This abundance of grass was produced with slightly less than normal rainfall. To a large degree, the improvement of pastures in the sandhills proper has been influenced by the deferred grazing practice.
Considerable study of the effects of resting pastures according to the deferred grazing program of the agricultural conservation program was made during the progress of the ranch visits in connection with the Pasture-Forage-Livestock program. A complete history was taken of the individual pastures obtaining the date of number of head and class of livestock pastured; the period of grazing for each year; and the residue of forage remaining at the end of the grazing season for the years 1937, 1938, and 1939. This study conclusively showed that pastures that were very much overgrazed in 1934, 1935, and 1936 have been very definitely improved while carrying the same number of livestock except during the resting period. It also showed that the grasses reached considerable maturity during July. Continued growth later than July was minor in importance to that prior to July. The rancher loses the replacement production of the grass during the growing season. Nevertheless, this rest seems evidently to restore the vigor of the pasture by increasing the root development. The years following the resting period have in each instance under observation been rated with higher carrying capacity than before their resting period.

A few of the ranchers interviewed follow the practice of rotating the pastures more than twice during a season. They shifted their herds from pasture to pasture during the summer season. They have more than the average number of pastures in proportion to the size of their herds. These pastures are smaller and also are the herds classed into smaller groups. This practice permits more thorough grazing of pastures and also eliminates some of the competition occurring with larger herds in one pasture. Comparing the uniformity of grazing over the small pastures to that found over the larger pastures show the latter to be grazed closely in spots, while other spots show little grazing.

429,948 acres were deferred in accordance with the stipulations of the Agricultural Conservation Program this year. That is, livestock was kept out of this area between the dates of May 15 and October 1. This practice is approved by our local ranchers as being the major issue so far as conservation of the range is concerned.

The installation of additional watering plants has been another factor in improving the range. As fences have been added the effects of proper placement of sufficient wells and watering plants becomes more noticeable. A typical example of needed correction by this factor may be cited as an illustration. 3 sections in a row were enclosed in one pasture. The north section has a well in the center of it. There is a second well near the center of the middle section. No well has been installed in the south section. The area furthest to the south was not grazed at all during the summer for at least one half mile from the south fence. The two north sections were overgrazed. This habit of cattle is now more nearly understood than formerly. The addition of a well in the south section would correct this and virtually be the means of adding one-half section of summer pasture to the ranch.

A survey of the Agricultural Conservation Program records was taken. 399 ranches in 1938 controlled 2,180,279 acres of range land. 1,962 wells were located on these ranches. Each well served 111 acres on
an average. 195 wells were installed during 1938. This reduced the average acreage served by each well to 1010. In 1939 the survey showed 2,163,435 acres controlled by 414 ranches. 2,062 wells serving an average acreage of 1049 each were reported. 242 wells have been installed during the year, bringing the total to 2104. The average acreage served by each well is now reduced to 1028.

Considerable attention to reseeding and other methods of restoring grass cover is being directed to abandoned cropland. Native sand dropseed is usually the first permanent grass to establish itself on such areas. Mr. W. M. Epke in Kewanee precinct and Mr. Clarence Kellogg in Sparks precinct have outstanding examples of this dropseed cover. Artificial seedings with dropseed were made by L. W. Harso of Wood Lake, C. J. Bau of Cody and Emil Puckser of Irwin. No results have as yet been determined. The seed supply is normally heavy enough to permit practicability of harvest. If a method of successful seeding can be found, this grass will prove of great importance for such work.

Mr. R. C. Dille of Ashby, Mr. C. R. Wolfenden of Kennedy, Mr. O. M. Walcott of Valentine and Mr. Emil Puckser of Irwin have made experimental plantings of Crested Wheat. In former years the Valentine Substation and the local agent have each made successful experimental plantings of crested wheat grass. It has germinated and produced a fair to good stand in each trial. The "fairway" strain promises to be adaptable for such plantings. It seems to obtain a stand best when the fields are not disturbed by cultivation. The seed is drilled in and covered not to exceed 1/4 inch. The weeds serve as a buffer for the wind. Later the grass crowds out the weeds. Too little is yet known concerning this grass. It probably needs to be planted cooperatively as a test by a larger number of operators.

Western wheat and Bromus grass are both being tested by a number of operators. The western wheat grass has not yielded to artificial seedings to any great extent. The best results have been obtained by feeding wheat grass hay on an area. The stems and refuse of other vegetation are needed to protect the tiny seedlings. Once a small area is established, it spreads by rootstalks as far as 10 feet in a year. No results are available to date on the bromus grass.

Two articles published by the ranch journal at Rushville, one discussing the pasture problem in general, the other discussing crested wheat grass were major items of publicity for this part of the program. 62 different ranges were closely and thoroughly inspected. The two district meetings for Pasture-Forage-Livestock cooperators and other ranchers, namely at Valentine November 1, and at Mullen November 3, developed this problem more fully.

GARDENS AND YARD BEAUTIFICATION

The objectives for the year include encouraging the planting of more vegetable gardens; to properly landscape a few yards as demonstration yards. In addition, a definite attempt has been made to direct more thought toward yard and home beautification rather than so much to economic interests.
News stories prepared for local papers covered the subjects of growing more vegetable gardens, fertilizing thin lawns, growing flowers in the vegetable garden, juniper pests, handling cut flowers, pruning Chinese Elms, insects on vines, fall care of lawns, and winter bouquets. In addition, the publicity given concerning grasshopper control supplemented our direct attention to the yards themselves.

The interviews, office calls and farm and home visits recorded directly in connection with this project were few. So also was the time recorded as spent by the agent on this project, very limited. However, actually a considerable attention was directed to the project as incidental to other calls and other homes visited.

Some of the problems given attention were fertility, use of commercial and barnyard fertilizers, yard trellis, landscaping details, or plan of landscape, winter care of bulbs, grasshopper poisoning, irrigation, general insect control, insects on flowers, tree and shrubbery pests and cultivation of annual flowers.

A demonstration of controlling fairy-ring fungus was made. The use of fungicides is to be given more attention in future programs.

Incidental to the general program, assistance was given to the organized garden clubs known as the Sand Hills Garden Club and the Sand Cherry Garden Club. Much interest was evident in the beautiful exhibits at the county fair by these club ladies. Assistance was also given these clubs at the time of their annual meeting and their annual flower sale.

FUTURE OBJECTIVES:

Undoubtedly more time and attention must be given toward the garden program and a vegetable garden for every farm and ranch home is difficult to attain as a goal. The routine of methods and handling should be given more publicity. Discussion groups perhaps should be encouraged to treat this project.

There now a gratifyingly large number of well-landscaped yards in the county. This is in the face of very sandy soil and less than normal rainfall. This landscaping work will be incorporated as part of the well-kept farmstead lesson for project clubs. Our number of news items bearing on this subject can well be increased during the coming year. More demonstrations of methods are needed. We hope to use a film strip of local yard scenes as a part of our educational material.

FARM WINDBREAK PLANTINGS.

Clarke-McNary seedlings were distributed to 41 farmers and ranchers. Chinese Elm, Red Cedar, Jack Pine, Yellow Pine and Cottonwoods were the varieties most popular.

Only 19,700 seedlings in all were taken this year. This total is lower than any of the last 7 years with the exception of 1934 when only 17,400 were requested. Other sources have furnished the seedlings for the larger plantations during 1938 and 1939.
The drought years have prevented much survival except the few plantings that could be irrigated. Cultivation in many of the plantations is not practical. The looser sandy soils blow too readily. The Red cedars do quite well in the sandy hillside and eventually become excellent windbreaks. However, cultivation in these sites would be out of the question. The sharp sand would soon ruin the trees themselves.

In years of more normal rainfall the seedlings become well established before they meet any serious competition from weeds and grasses. Undoubtedly interest will be revived with the return of more favorable rainfall averages.

AGRICULTURAL ENGINEERING.

The service known as the Midwest Building Plan Service as initiated this year. Sketches, blueprints and complete "bills of material" were provided to cooperators on request. By studying the sketches and brief plans of a very selected group of recommended building plans, the patrons could choose the ones which fitted their needs. Blueprints were ordered which cost 15¢ per sheet. The office at Valentine then provided complete bill of materials list for this particular blueprint. This enabled the patrons to save the time of studying out what their costs would be in advance of construction. It gave them the advantage of knowing all items had been included. Characteristic to the building trade, so often one or more extra trips are caused. This of course is due to the partial inexperience of carpenters or contractors who erect the building. The plan service has been provided through the cooperative efforts of 15 agricultural colleges and universities.

A large horse barn, a 2-car garage, a 5000 bushel elevator, two livestock feeders and a sale barn were constructed with the aid of these blueprints and bills of material. The service was apparently much appreciated.

POULTRY

Attention was directed to turkey production and management as a source of supplemental income. The open range, the sandy texture of the soil, and the consequent freedom from disease are factors especially favorable to turkey production in this area. Undoubtedly there are more large flocks in the county this year than for any previous year. Instead of the usual flock of 40 to 60 poults, many of the growers this year produced 250 to 500. While the price toward the close of the year is somewhat disappointing, yet most growers will have produced at a profit.

A meeting was conducted at Valentine in cooperation with the hatchery December 23, 1938. The publicity by means of circular letter drew attention to source of hatching eggs of desirable quality. The discussions at the meeting were from growers who had been especially successful in developing quality in their flocks. Feeding, management, and particularly marketing information has been stressed through the year mostly by means of the monthly turkey bulletins mailed to the grower list.
Assisted one family to develop plans and methods of handling 1200 poults on a share basis with their landlord. Helped them arrange for supplementing range feeds with balancing rations. Three other growers were encouraged to use Early Kalo fields for hogging-off turkeys.

Toward the end of the season, Nebraska Extension Circular No. 9922 was distributed in order to promote local consumption. This bulletin has met with considerable favor. By discussing turkey as a favorite meat and offering suggestions for preparing and serving, it has performed a useful marketing service.

LIVESTOCK

BEF CATTLE:

The objectives were directed into three main divisions. First: Breed or quality improvement. Second: Feed Balance. Third: Sanitation or Disease Prevention.

The methods adopted to accomplish the first objective included the general 4-H club program for beef cattle. Cooperation with the Northwest Hereford Breeders Association was another phase. The promotion of general interest in quality improvement by means of an organized calf show held in connection with the county fair. The second objective was carried out by means of two series of community meetings in connection with the Agricultural Conservation Program. It also was a large factor incorporated in the Pasture-Forage-Livestock program. The third objective was given attention for the second year as a definite part of the program. News items, circular letters and community meetings were employed to bring the sanitation program to the attention of cooperators.

I. QUALITY. The county fair and a spring and fall show in connection with the Northwest Hereford Breeders Association bull sales at Valentine offered opportunities to hold cattle shows. A new calf show was initiated at Mullen serving Hooker County, Thomas County, and the South part of Cherry County. 4-H club calves were exhibited locally at Merriman and Cody in addition to being shown at the county fair in Valentine. Prizes and ribbons were given at each event, both local and county. Probably no other line of effort has so developed the interest in quality improvement of herds within the county. Supplementing the final efforts at the shows, the club members and their parents were given individual assistance in selecting their project animals.

4-H clubs were organized in the Merriman, Cody, Kilgore, Nenzel, Valentine, Wood Lake and Mullen trade areas. Club members were given assistance from the club committee, from the Hereford Breeders Association, and from the Extension office so that they could make financial arrangements in order to purchase better quality project animals. Held club leaders conferences and arranged classes of animals to train these leaders for judging competition. Encouraged all club members and invited their friends to participate in the judging day program held in July at Valentine. This Judging Day schooled those present in characteristics of quality. The class-
as included not only cattle, but sheep, hogs and horses. Prepared
a discussion for the Valentine Sub-Station annual spring feeder's day.
This talk was concerned with the distribution of Sandhills feeder cat-
tle over the corn belt. It featured the relation to a quality improve-
ment program within the county. Two Angus 4-H club calves were shown
at Denver placing near the top. The quality of these calves drew much
attention. The agent cooperated with the members of the breed associa-
tion at their annual meeting and during the year. They in turn have giv-
en a great amount of assistance in conducting the educational program of
Extension.

II. FEED BALANCE. The Extension Service cooperated with the
current work in progress at the Valentine Experimental Sub-Station. The
main consideration was given to supplementing range and wild prairie hay
with proteins and minerals. Based on experimental work done, cotton-
seed cake was advised in preference to any other source of protein unless
the cottonseed cake price was higher. The main reason for this seems to
lie in the fact that cottonseed cake contains 6% of phosphorus which is
one of our deficient elements. During the year the price differential
made it advisable to recommend soybean oil meal feed cake. The soybean
cake was quoted as much as $7.00 per ton cheaper than the cottonseed
cake. The recommendation given to patrons has been that protein supple-
ments must be bought below the price of cottonseed cake to produce as
economical gains.

This information was given at a series of 16 meetings over the
county. Office interviews and bulletin mailings supplemented the local
meetings to obtain full distribution of this information.

A study of the practices of 76 cooperators with the Pasture-
Forage-Livestock program has through the years been the cheapest. The informa-
tion summarized from the reports of these cooperators has been made
available to the public. The agent has contacted the various feed
dealers during August through October. The dealers have been encouraged
to stick to fundamentals for the winter supplements. They have coop-
erated quite well and have been especially desirous to obtain complete
formula information for their various proprietary feeds. Considerable
pressure is being exerted by salesmen of these commercial mixed pro-
teins. They have repeatedly been shown to be more costly to the
sandhill rancher. This program of feed supplement information has been
conducted in cooperation with the station at North Platte as well as
the local station at Valentine. The Extension Service has assisted to
publicize the annual meetings of each of the latter stations.

Minerals as a supplement is also part of the experimental work
conducted at the Valentine Sub-Station. Likewise, the need for mineral
supplements has been a part of the Pasture-Forage-Livestock program.
Ranchers were interviewed concerning their use of minerals. The conclu-
sions drawn indicate that steam bone meal will supply the mineral de-
iciency. The ordinary practice of feeding minerals is to mix 40% ground
limestone, 40% steam bone meal, and 20% salt. When fed separately, there
has been little proof that cattle would eat the ground limestone. The steam-bone meal when fed alone has produced apparently as good results as have been obtained from the mixed minerals. Two news items, one in April, one in June, were submitted to the local papers suggesting rations for fattening beef cattle. Publicity was given to receipt of a new silage circular.

III. SANITATION and DISEASE CONTROL. Following up the 1938 program of livestock sanitation, community meetings and general publicity were given. Emphasis was placed on control of calf scours, calf diphtheria, abortion, and the so-called hemorrhagic. The 1938 program was again outlined as follows:

1. Focus the attention and interest of the cattle producers on the disease problems.

2. Place at their disposal technical and scientific information.

3. Acquaint the operators with the several agencies endeavouring to control livestock disease.

4. Gain the practical and successful methods used by the operators themselves.

5. Follow progress of experimentation in practices as yet lacking authoritative sanction.

Dr. S. W. Alford and W. W. Derrick assisted the local agent with three community meetings at which the sanitation program was discussed. The state specialists were taken to four ranches to diagnose calf diphtheria and calf scours maladies. They outlined a program of education to prevent undue recurrence of the conditions found.

The calf diphtheria technically known as Bang's necrophorus bacillus has been bothering a few ranchers. It is born in litter accumulating in sheds and corrals. It causes nasty lesions or cankers in the mouths of calves. It affects the tongue, lips and palate. Occasionally a canker will be found in the larynx. Local treatment with silver nitrate and potassium permanganate has been reported to as a cure. Preventive measures involve a management problem which most ranchers are adopting, namely, that of avoiding the frequent use of barns for sheltering new born calves. Sunlight, or more particularly oxygen, is necessary to destroy the causative organisms. In practice, this means it is advisable to use uncovered windbreaks for shelter when at all possible. A few outstanding good examples of windbreak and shelter arrangements were discovered during the Pasture-Forage-Livestock program. Many of our sandhill ranchers could have the fences reorganized so that the springers and fresh cows could be kept separated from the main herds for 3 or 4 days. The use of especially rough sandhills affords very good shelter except in extreme weather. Emil Fuchser of Irwin and Victor Hoffman of Nenzel have the arrangements which could be used as demonstrations. Both were cooper-
ators in the 1939 Pasture-Forage-Livestock program.

White scours in calves occurs under similar conditions with those described in the above paragraph. The preventive measures outlined above would be corrective for white scours also.

Experimental vaccination of heifer calves to control Bang's disease was initiated on the P. H. Yound ranch during 1938. The heifers were marked with a nose brand. Vaccination for control of this malady was brought to discussion in the community meetings. The practice is widespread throughout the county. Dr. S. W. Alford nicely summarizes our recommendations to date: "

"First, the method is still in the experimental stage and nobody is able to say what the final decree will be. Second, the vaccine should be used on calves under eight months of age only. Third, that the results secured from its use on already infected mature cows are probably more or less imaginary. Fourth, that it should not be used under any circumstances in herds entirely free of Bang's disease."

Hemorrhagic is considered quite important in range country. It is too little understood. Experimental evidence varies even to the point of disagreeing. Common practice in the sandhills has not given uniform results. Some ranchers vaccinate, others do not. Perhaps diagnosis is the trouble. Most high fevers are called hemorrhagic. Suffice it to say that the sales agencies perhaps too greatly agitate the use of vaccines. The money improperly spent on these treatments is sufficient to pay a large part of the total Extension program costs.

HORSES.

The county horse population is approximately 18,000. Some attention was given to bot control program. It has not been possible to learn the numbers treated with capsules each year. 120 horses were treated with capsules purchased through the non-stock organization. This latter organization has been discontinued and patrons are urged to make their purchases through private agencies.

Sleeping sickness has been well controlled and is almost eliminated. The statewide campaign to inform operators about the use of vaccines has been very effective. Very few cases were reported this year. Our community meetings, office interviews, local leaders and news service are estimated to have reached nearly every operator in the county. News story was submitted in June repeating emphasis on precautions of handling vaccines and their use as a preventive for sleeping sickness. These precautions including the care of the vaccine to see that it was kept at low temperatures during shipment, while in the hands of the local dealer and during transportation to the farm where used. Mention was made of the procedure of administration of the vaccine. This latter was emphasized for the reason that many ranchers and other laymen did the work.

Our first horse and colt club was organized at Merriman with a membership of 7. These boys exhibited their colts at the county fair. This project should become popular in the county.
FARM FINANCING

152 office calls were given attention. A large number of these involved simply the direction to the proper agencies for information. Net worth statements, inventory, and property statements were prepared for clients who were attempting to secure loans from the Farm Security Administration and Production Credit. The new water development and re-organization loan plans of the Farm Security Administration were discussed with the local supervisor and the district supervisor. The local situation was explained for their information. The Land Use Committee recommendations in brief were to the effect that the loan level of the Farm Security Administration was too low to meet the needs of a group not yet eligible for Production Credit loans. The Land Use Committee secured the cooperation of Production Credit officials, the various livestock agencies, and the credit institutions including Federal Land Bank, Farm Credit Administration, as well as the Farm Security Administration. Collectively these representatives worked out the credit recommendations to fit the county. Contacts with the several credit agencies have been made at the close of the year. Collectively they report that less than 40% as much borrowed money is being used by operators in the county in 1939 as during 1935. This probably indicates recovery from the 1934 drought and increased income due to livestock price levels.

PASTURE-FORAGE-LIVESTOCK-PROGRAM

76 farmers and ranchers cooperated in this phase of the Extension program. Each contributed an outline of his methods. These methods were summarized as a study of management.

61 of these ranches and farms were visited. Feeding practices, pasture management, water facilities, supplemental feeding, equipment, herd management, quality of herd sires, sanitation control and other pertinent factors of management were compared.

6 of the other ranches and farms were interviewed. 9 were contacted by mail.

Edson A. Gale, Cody
C. J. Dau, Cody
D. E. Sullivan, Mullen
C. S. Reese, Simeon
G. A. Daniels, Simeon
Perry Miller, Valentine
P. H. Young, Simeon
Art Nelson, Cody
Frank Carver, Crookston
E. M. Kellar, Crookston
R. P. Bouwman, Merriman
Arnold Pink, Elsmere
Charles Giles, Elsmere
James Adamson, Wood Lake
Clarence Ethinger, Wood Lake
Ted Ormesher, Wood Lake

C. R. Wolfenden, Kennedy
E. H. Howarth, Mullen
J. L. Coates, Kennedy
D. J. Sanford, Kilgore
S. G. Nine, Kilgore
C. H. Feezer, Kilgore
Lloyd Olsen, Kilgore
Walter Chlmann, Crookston
Albert Witt, Crookston
A. G. Kime, Cody
Geo. P. Hanna, Wood Lake
F. W. Canzer & Son, Wood Lake
Emil Fuchs, Irwin
Crossfire Cattle Co., Gordon
Jess J. McGinley, Irwin
L. C. Beal, Simeon
Finish-Up Meeting

SANDHILLS

Pasture-Forage-Livestock Program

Friday, Nov. 3, 1939

Mullen, Nebraska

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1. Emil Fuchs
2. Victor Hoffman
3. Joy Fairhead
4. Leonard Beel
5. H. E. Derrick
6. J. Hall Dillon
7. Albert Skinner
8. Ed. Gale
9. C. C. Nelson
10. A. F. Bates
11. F. G. and Wm. Beckhoff
12. Cyrus Wolfenden
13. J. F. Buchsineck
14. Fred Marshall
15. Edward Rodewald
16. Albert Shaffer
17. Leonard Sturr
18. A. G. and Edward Waits
19. Leonard Sturr
20. Albert Skinner
21. Emil Fuchs
ACKNOWLEDGEMENT

This regional finish-up of the Pasture-Forage-Livestock Program is made possible through the efforts of the business men of Mullen and the local Extension offices of this territory, located at Stapleton, Thedford and Valentine. In cooperation with these were over 100 farmers and ranchers who willingly gave their time to make this program a success.

The men selected for recognition are typical of the various types of farming and ranching found in their territory. Their location is shown on the map on the back of this pamphlet.

A short summary is given of their operations.

A. F. BATES—Halsey

Operates 9000 A. ranch 1 mile northeast of Halsey in Thomas County. Runs 500 cows, 40 horses. Has purebred herd. Windrows 1500 A. for winter feed. Summers mostly on Forest Reserve. Regular rotation of pastures between summer and winter range.

F. G. and Wm. BECKHOFF—Thedford

Located in Thomas County over 46 years ago. Now operates 7400 A. range land. 7 miles northeast of Thedford. 300 A. farm land back to grass. 40 acres trees, planted 8000 trees in 1939. Runs 175 cows, 25 horses, 500 tons hay on hand.

CYRUS WOLFENDEN—Kennedy

Rancher operating 35000 acres 40 miles north of Mullen. Runs 1300 cattle and 175 horses. 60-70 hogs. 3000 acres meadow. Has irrigation system to water one meadow. Does all work with horses.

J. F. BUCHFINCK—Whitman

13900 acres southwest of Hyannis. 4100 acres of winter range, 300 acres farm land returned to native range. Some sowed to alsike and sweet clover. 700 acres wet meadow. 500 cows, 60 horses. 950 tons hay. Has always rotated pasture.

FRED MARSHALL, Whitman

11,600 acres north of Whitman in Cherry County. 3800 acres winter range. 450 acres old farm land returned to range. Intends to seed to rye and brome grass. 1400 acres meadow land, 1100 ton hay. Will hold 390 cows over winter. Regular rotation of pastures. Feeds commercial mineral and lime.

EDWARD RODEWALD—Seneca


ALBERT SHAFFER—Stapleton

Operates 640 acre farm in Logan County typical of that territory. 487 acres crop land, 4 horses, 18 milk cows, 149 pigs raised 1939. Produced 6000 bu. grain in 1939. Uses temporary pasture of rye, oats and sudan. Rusted native pasture last 2 years. 3500 lbs. butter fat. Feeds few calves. Cane and sudan for winter feed. Good balance between pasture, winter feed and livestock.

LEONARD STARR—Mullen

Rancher living 25 miles northwest of Mullen. Operates total of 12000 acres partly in Thomas County. 800 cattle, 60 horses. Has regular rotation of all pastures between summer and winter grazing. Has limited amount of hay and depends on cake and winter range.

A. G. and EDWARD WAITS—Tryon

Operated by A. G. Waits and son, Edward.

Combination farm and ranch of 2560 acres with 600 acres cropland. 2700 acres Winter range 175 ton hay and 200 ton sorghums. 1500 bu. corn. Rotates pasture every 30-60 days during summer grazing. 115 cattle and 12 horses. Feeds tankage and cotton cake.
THE SPEAKERS

W. H. Brokaw is director of the Extension Service of the University of Nebraska, college of agriculture and a widely-known farm leader.

J. S. Campbell has been with the Bureau of Agricultural Economics of the U. S. Department of Agriculture for many years as a market observer at Chicago.

Elton Lux is the state extension agent in Agricultural Conservation and has worked closely with the ACP program and the Pasture-Forage-Livestock Program.

Dr. A. L. Frolik is a member of the agronomy department at the college of agriculture and a widely-known grass authority. He will discuss grass research work done recently in the sandhills.

Parr Young is a consistent cattle feeder in Cass county and knows what feeders like when buying cattle.

W. W. Derrick or better known as "Bill" is the extension livestockman at the college and is widely known in the ranch country.

E. F. Frolik is assistant extension agronomist and chairman of the Pasture-Forage-Livestock committee at the college.

Prof. Wm. J. Loeffel is acting chairman of the animal husbandry department at the college and one of the foremost meats authorities in the country today.

Dean George E. Condra heads up the Conservation and Survey Division at the University of Nebraska and probably knows more about the state and its geology than any other person.

NORTH CENTRAL

FASTURE-FORAGE-LIVESTOCK MEETING

Valentine, Nebraska

Wednesday, November 1, 1939

An Eight-Point Program

1. Produce High-Quality Roughages
2. Restore Pastures
3. Return Eroded Land to Grass
4. Increase Acreage of Soil-Building Crops
5. Maintain Proper Livestock-Forage Balance
6. Utilize Forage Crops Profitably
7. Build Up Feed Reserves
8. Encourage Livestock on Tenant Farms

Regional Finish-Up
Sponsored By

Valentine Chamber of Commerce and

Nebraska Agricultural College Extension Service
THE DAY'S ACTIVITIES

1. Exhibits - Grasses, sorghums, hay, others - on display from 11:00 A.M.

2. Afternoon clinic program - beginning at 2:00 P.M.

3. Evening banquet - 6:30 P.M.

Committee in charge - George Gross, Chairman; Joe Wilson, and G. W. Andersen. Arrangement of educational features handled by C. M. Mead, Cherry County Agricultural Agent.

Who is eligible to attend? - Anyone interested in ranching and farming problems.

AFTERNOON "CLINIC" PROGRAM

Beginning at 2:00 P.M.

Director W. H. Brokaw, Presiding

1. War and cattle prices
   J. S. Campbell, Agricultural Marketing Service, Bureau of Agricultural Economics, Chicago

2. Objectives of the P-F-L and AAA range programs
   Elton Lux, Nebraska Agricultural Extension Service, Lincoln

3. Abundance and grazing value of range grasses
   Dr. A. L. Frolik, Nebraska College of Agriculture, Lincoln

4. What a Corn-Belt buyer looks for in feeder cattle
   Parr. Young, Prominent feeder, Cass county, W. W. Derrick, Nebraska Agricultural Extension Service, Lincoln

5. Feed crops and livestock balance on Sandhills farms
   E. F. Frolik, Nebraska Agricultural Extension Service, Lincoln
   Dr. W. J. Loeffel, Nebraska College of Agriculture, Lincoln

6. Why has the water table in the Sandhills gone down?
   Dean G. E. Condra, University of Nebraska, Lincoln

7. Question Box
Finish-Up Meeting

SANDHILLS

Pasture-Forage-Livestock Program

Wednesday, Nov. 1st

Valentine, Nebraska
ACKNOWLEDGEMENT

This regional finish-up of the Pasture-Forage-Livestock Program is made possible through the efforts of the business men of Valentine and the local Extension offices at Ainsworth, Butte and Valentine. In cooperation with these were over 100 farmers and ranchers who willingly gave of their time to make this program a success.

The men selected for recognition are typical of the various types of farming and ranching found in their territory. Their location is shown on the map on the back of this pamphlet.

A short summary is given of their operations.

EMIL FUCHSER—Irwin

Operates 14000 acre ranch in northwest corner of Cherry County near Irwin. Will winter 500 cattle, 25 horses. Raised 244 calves from 250 cows. Has small springer pastures for calving. Regular rotation of pastures. 140 acres farm land back to grass. 850 tons hay. Winters cows on range and cake until bad weather.

VICTOR HOFFMAN—Nenzel

Rancher operating 10000 acres 4 miles north of Nenzel. 310 calves from 315 cows in 1939. Yearling steers averaged 809 lbs. in 1938. 400 ton old hay and 700 ton new hay. 3000 acres winter range. Usually rotates pastures every 30-60 days. Feeds no mineral. Cake from Dec. 1 to May 1. Winters calves on meadow.

JOY FAIRHEAD—Merriman

Rancher 3 miles north Merriman. Operates 8000 acres with 800 acres wet meadow, 1000 ton hay on hand. 2600 acres winter range. Winter 275 cows and 250 calves. 25 horses. Regular rotation of pastures so each rests one year out of three. Rotates about every 30-60 days on summer range.

LEONARD BEEL—Simeon

Ranch located 34 miles southwest of Valentine. Operates 33,480 acres. 1670 cattle and 100 horses. Has number of 2 section pastures to carry cow herd. Pastures lightly grazed and rotated as necessary.

H. E. DERRICK—Bassett

Rancher, 25 miles southeast of Bassett in Rock County. Operates 10,080 A. with 560 A. meadow, 100 A. crop land and 80 A. old farm land returned to native grass. Runs 1100 cows and yearlings. Ranch divided into 11 pastures. Rotates as needed, 1200 ton hay and 3100 A. winter range. 344 calves from 350 cows 1939.

J. HALL DILLON—Long Pine

Operates 11,440 A. 30 miles south of Long Pine in Brown County. 1500 A. hay land, 350 A. crop land and 150 A. old farm land returned to grass. 3040 A. winter range, 1250 tons hay. Cow herd of 250. Ranch divided into 12 pastures. Rotates as needed, usually every 2 or 3 years.

ALBERT SKINNER, Ainsworth


EDSON GALE—Cody


C. C. NELSON—Bristow

Approximately 300 Cherry County farmers and ranchers attended two district clinics at Valentine and Mullen. These clinics were the first at which strictly sandhills operators were concerned.

Of 18 operators receiving recognition at these two meetings, 6 were Cherry County operators. They were Emil Fuchsner, Victor Hoffmann, C. R. Wolfenden, Edson Gale, L. C. Beel, Fred T. Marshall, Joy Fairhead and Leonard Starr. Mr. Roy Ross, manager of the Crossfire Cattle Company received honorable mention at Omaha in 1938. Mrs. Essie Davis won Master-Farmer recognition this year. The practices carried out by these operators are considered worthy of close study as guides to proper management. It is planned to continue this program so that additional operators can be interviewed and their methods studied.

By formal statement the Nebraska P-F-L program has for its purpose the stressing of eight main points, namely: 1. Maintaining proper livestock balance. 2. Restoring drouth injured grasslands. 3. Returning unproductive cropland to grass. 4. Increasing the acreage of soil-building crops. 5. Production of heavy yields of high quality roughages. 6. Utilizing forage crops to a profit through feeding. 7. Building up feed reserves against possible future drouths, and 8. Encouraging livestock production on rented farms.

A few of the Cherry County ranchers cooperated with the pasture-improvement program of the 1936 and 1937 pasture contests sponsored by the agencies conducting the P-F-L program. 17 ranchers and farmers participated in the 1936 P-F-L program. The attention in 1938 particularly emphasized sorghum production. The popularity of the sorghums carried through the
the 1939 year with not a great amount of attention or publicity necessary as concerns the P-F-L work.

During 1939 emphasis was directed to the first, second, sixth, and seventh objectives of the statewide program. Minor attention was given to the remaining points. As interpreted from the Cherry County viewpoint, the objectives for 1939 were better utilization of the native grasses by the herds. Fencing, windbreaks, location of water, rotation of grazing periods of individual pastures, size of pastures, number of head per unit of acreage pastured, meadow improvement, feeding of supplements (protein and mineral), location and arrangement of corrals, sheds, barns, and other equipment incidental to the handling of the herds were given study by comparison.

With but one year of intensive study it is recognized that to make specific recommendations from the limited information would be simply conjecture. Some statements can be made which should be helpful.

1. Fencing: Three-wire fences are probably most economical over a period of years. More wires should be used and these should be carefully spaced for a short distance each way from water tanks when the latter are used to serve two enclosures. This will help at other positions of more than ordinary stress. Position of fences with respect to soft hills is important. This feature is too little understood. It is closely related to the location of water. It is virtually a study of the travel habits of the cattle. Often it is possible to locate cross-fences along the tops of ridges instead of cutting across ridges and valleys. This tends to eliminate straying out of herds when they make their daily trek toward water. They tend to graze up higher on the ridges during the night time thereby working toward the borders of the enclosures. When once started toward water they do little grazing, until after they have quenched their thirst. With the division fences at the ridge tops they find no barriers in their path so remain more scattered or spread out in their trek toward water. It is sometimes necessary to place fences along the foot of the hills. Meadows are usually separated from range by these fences. Some of the meadow can be sacrificed in order to keep the cattle from making deep paths along the fence higher up. Correction of improper fencing can only be accomplished very gradually. However, it is probably a major factor in determining the production of the most pounds of beef from a given unit of land without deteriorating the range.

2. Windbreaks: 8 of the cooperators are using trees as windbreaks and protection against storm. All cooperators considered the problem of windbreaks as important. Trees once established afford a very real shelter. One rancher uses his grove as a boundary of his springer pasture where he confines his heavy cows for a few days immediately prior to calving. One rancher uses willow whips made into bundles and tied to a fence constructed for a windbreak. This device seems to make a larger sheltered space available than an equal amount of windbreak constructed from flat lumber. One rancher has so arranged his windbreaks into a series of corrals and smaller pens that he is able to divide his herd in times of storm. The whole idea of windbreaks is to provide shelter through the seasons at a minimum cost and yet be able to protect the cattle against severe storms.
They must be so arranged that springers and baby calves can be separated from the herd for special care. The use of barns and sheds with roofs increases the danger from filth and litter harbored diseases such as calf scours and diphtheria. Death loss in calves from these diseases can become greater than loss from exposure to the cold and wet. If the corrals can be located on a slope with properly arranged windbreaks, the use of covered sheds can be held to a minimum. The cost of the shelters are reduced at the same time. Plans of these arrangements are on file in the office.

3. Location of Water: A study of the Agricultural Conservation Program records have shown that each well waters an average of more than 1,000 acres of grazing ground. Conclusions arrived at from the P.F.L. study indicate the need for one well to each section of grazing land. In larger pastures it may be generally stated that cattle should not need to travel more than three-fourths of a mile to the watering places. Location of watering plants with reference to degree of slope of the hills is important. When forced to travel directly down the side of steep ridges or hills, the cattle usually tramp out the vegetation and start blow-outs.

4. Rotation of Grazing: No attempt will be made in this discussion to enlarge on the general rotation grazing practice. The degree to which the practice could or should be carried depends upon the number of cross fences and the compactness of the grazing land under control of the operator. In most cases, however, it has been conclusively shown that periodic resting of summer pastures is to be recommended. In practice it is generally agreed that not only should a pasture be rested periodically, but it should also be close grazed or mowed periodically. A good rotation practice is to defer (rest) a pasture one year. Put a medium number of cattle in the second year. The third year permit it to be grazed closely for a short period of time. In case there are not sufficient cattle to graze it closely the third year, some of the areas of taller coarse grass should be mowed.

5. Size of Pasture: Cost of fencing is the item of expense involved with reducing the size of pastures. For the most part ranchers have in general tended to eliminate the very large pastures once used. One cooperator in the P-F-L program was given honorable mention because of his great amount of cross-fencing. He claims as merits for this practice, First, that he obtains more total forage each year by rotating the cattle during the grazing season; Second, that by “classing” his herd, there is little competition for water, salt and supplements when fed. Third, in addition, he is able to obtain sufficient service from a lesser number of herd sires. That is, one bull will sufficiently “settle” a larger number of cows during the season when placed in a pasture with a smaller herd of cows.

6. Carrying Capacity: This problem is probably more debated than any other. It is rather ably shown by some operators that they can market more pounds of beef by carrying fewer numbers in their herds. The solution to this problem is closely involved with the question of rotating the periodic resting of the pastures. When the entire ranch is considered as a unit, the number of cattle must be small enough so that about 1/3 of the grazing area can be rested while 1/3 of the grazing area is grazed medium and the other 1/3 grazed closely.
7. Supplements. Part of the ranchers still argue that proteins repay the cost only. The leading ranchers, however, almost without fail, balance the low protein winter range and hay with cottoncake. Some use soybean cake. A few only use commercial protein minerals. Most agree that cottonseed cake is the standard to insure economy. Steamed bone meal has been the most popular source of minerals. In fact, its use is credited as being the cheapest source of balancing mineral deficient feeds.

8. Equipment, Sheds, Corrals, Barns, Dipping Vats, and Minor Articles of equipment can scarcely be discussed in narrative. During the ranch visits memoranda were made as interesting items of equipment were noticed. Notes, sketches and explanations have been filed for reference. This will constitute an exchange of ideas among ranchers.

9. Sanitation: This problem has been discussed under the heading of livestock disease control elsewhere in the report. The Pasture-Forage-Livestock ranch visits afforded a very good opportunity to study the detail of management involved with sanitation measures. Again notes have been taken and will serve as an exchange of ideas among cooperators.

LIVESTOCK MARKETING

LIVESTOCK BRAND DIRECTORY:

1760 current brands used by operators of ranches in the county were assembled and published as a 6-page supplement to the Atlas and platbook published in 1938. Copies were distributed to some 320 subscribers.

Cooperation of the state brand recording office was secured. They graciously assisted with the work of obtaining the records of the Cherry County operators.

The brands were assembled on 3 x 5 inch cards so that they could be filed and kept current after the directory has become outdated. In addition, this card file serves as a mailing list for ranch operators.

The cards were then assembled mechanically on large wooden mountings. These served as photographic negatives. They in turn were shipped to a St. Louis firm for reproduction.

This directory is of assistance to the patrons who do not own a Nebraska brand directory. Locally, it has the advantage of a lesser number of entries to be scanned when in search of a specific brand. To gentlemen in the range area where close supervision and daily tally of livestock numbers is impracticable, the brands are a worthy protection at all market centers.

LIVESTOCK SALES:

The county Extension Service cooperated closely with the livestock organizations to assist them in promoting sales for operators within the county. The organizations representing the cattle interests for this county are the Nebraska Stockgrowers Association, F. M. Broome, Alliance, Secretary; Northwest Hereford Breeders' Association, Ed Belsky,
of Merriman, Secretary; and the Sandhills Feeder Cattle Producers, Ralph Baker, Valentine, Secretary. The latter organization was created last year. Its activities during the second year were again to "advertise, popularize, improve the quality, aid in the sale of sandhills feeder cattle, maintain a code of ethics between buyers and sellers, and promote a spirit of cooperation, friendship and mutual understanding among producers of beef type cattle in this region."

Since beef feeder cattle sales are the primary source of income for this county, the Extension organization has felt duty-bound to give all the assistance possible to develop interests of the organization. District meetings were held at Valentine and Mullen. Community meetings were held at the main trade centers through the county. Mr. W. W. Derrick, Animal Husbandry specialist from the state office, and the local agent discussed distribution of sandhills feeder cattle at these meetings.

The organization is estimated to have assisted with the sale of more than two million dollars worth of livestock for the year. This figure is based on county membership only. The total sales for membership from Cherry County operators are estimated to be as follows: 6600 head of 2-year old steers (a few 3's and a few spayed heifers included); 1200 cows, which were mostly young breeders and a few fat cows. No reports have been received for culls and cutters; 2400 2-year old heifers; 7900 yearling heifers; 10,600 head of yearling steers; and 10,700 head of calves.

133 Cherry County ranchers are listed as members in the Sandhills Feeder Cattle Producers Association. Among the 15 directors are the following Cherry County operators: Sam R. McKelvie, Wood Lake, President; Ralph Baker, Valentine, Secretary; Harold Harmas, Wood Lake; Irwin Adams, Cody; D. J. Cole, Merriman; Roy Ross, Gordon; Robert S. Lee, Brownlee; J. E. Lowe, Mullen; and Raymond Gentry, Hyannis.

Besides the feeder cattle sales, the Extension Service has worked very closely with the purebred operators. Two association sales, one in the spring and one in the fall were conducted at Valentine. Four major private sales for Cherry County Purebred Hereford producers and other private treaty transactions were given publicity as occasion permitted.

**PUBLICITY**

5 weekly papers printed in the county and 6 weekly papers printed at stations outside the county borders have circulation serving Cherry County residents. 177 news stories concerning the Extension program were submitted to all or a part of these papers for publication. The editors have given space in their columns without charge. The county Extension office, in return for this favor, has at all times attempted to restrict the contributions to those of local interest.

The officers of the county Extension Service arranged with the editor of a ranch and farm journal published at Rushville for the more lengthy discussion articles related to the program. The agent of Cherry County in cooperation with other agents in the range counties furnish a definite program of articles. In return the publisher of the journal has
arranged to have their mailing list include practically all ranchers within the county.

42 circular letters were mailed directly to those interested in the subject matter. One announcement concerning the pasture-forage-livestock program was broadcasted over the radio from Yankton, South Dakota.

84 of the news stories were prepared in the county office. The remainder were submitted by leaders of project clubs. Of those submitted from the county office, 17 were devoted to the pasture-forage-livestock program; 15 to the general 4-H program; 9 to the home demonstration program; 4 to each of trees, livestock feeding, insect control, sorghum production; 3 to pasture improvement; 2 to each of home beautification, landscaping, cattle diseases, Extension organization, 4-H beef cattle work, and the land use committee work; and 1 to each of: project club lesson "Merry Christmas", livestock brands, outlook, livestock marketing, wheat variety plats, sleeping sickness, Bang's disease, gardens, agricultural conservation, agricultural engineering, ranch management and public problems.

PROJECT CLUBS

26 Home Demonstration Project Clubs with a total membership of 405 ladies enrolled during the year 1938-39. Training centers for leaders were conducted at Valentine, Merriman, Gordon, Hyannis, and Mullen. 14 clubs were represented in the Valentine center, 6 at Merriman, 4 at Gordon, 2 at Hyannis and 2 at Mullen.

The demonstrations given this year were: "Read for Facts and Sing for Fun", "Repair of Clothing and Household Linens", "Christmas Candies", "Storage of Clothing", "Business Procedures", and "Money Management".

At the Valentine Center Miss Verna Glandt conducted the training of leaders. As Home Demonstration Agent she serves Cherry and other counties to the east, with her headquarters at O'Neill. Miss Anna Smrha, with headquarters at Alliance, conducted the leaders' training at Merriman, Gordon, Hyannis, and Mullen.

The following is a list of the clubs and the officers directing them:

WOMEN'S PROJECT CLUBS
VALENTINE TRAINING CENTER
Mrs. Dwight Harder and Mrs. G. W. Andresen, Group Chairman.

KILGORE PROJECT: 7 members. Mrs. J. A. Rothleutner, Kilgore, President; Mrs. C. H. Feezer and Mrs. C. Clausen, Kilgore, Leaders.
NIOBRARA RIVER RAT: 15 members. Mrs. Jack Galloway, Sr., Kilgore, President; Mrs. Frank Joseph and Mrs. Thelma Galloway, Kilgore, Leaders.
ROUND TABLE: 22 members. Mrs. George Andresen, Valentine, President; Mrs. Earl Kaplan and Mrs. A. P. Starkjohann, Valentine, Leaders.
HAPPY HOMEMAKERS: 15 members. Mrs. George Cowell, Valentine, President; Mrs. M. E. Kirkpatrick and Mrs. L. J. Crossett, Valentine Leaders.
PLEASANT HOUR: 19 members. Mrs. George Heimburger, Valentine, President; Mrs. B. F. Wilkinson and Mrs. John Frew, Valentine, Leaders.
SIMON PROJECT: 14 members; Mrs. Harold Harms, Simeon, President; Mrs. Carl Daniels, Simeon, and Mrs. Ward Sharp, Valentine, Leaders.
WANTA NO IT: 18 members; Mrs. Roy Best, Wood Lake, President; Mrs. Eugene Babcock and Mrs. Grant Masters, Wood Lake, Leaders.
COUNTRY CLUB: 13 members; Mrs. P. N. Tetherow, Wood Lake, President; Mrs. G. W. Kreycik, Wood Lake, and Mrs. John Lovejoy, Valentine, Leaders.
HOME MAKERS: 20 members; Mrs. Fred Crowe, Wood Lake, President; Mrs. Frank Cronin, Wood Lake, Leader.
SPARKS DEMONSTRATION: 21 members; Mrs. Frank Kaplan, Sparks, President; Mrs. Claude Andrews, Sparks, and Mrs. A. L. Swearingen, Valentine, Leaders.
MILITARY: 19 members; Mrs. Art Simmons, Valentine, President; Mrs. Louis Nollett and Mrs. Dewey Shelbourn, Valentine, Leaders.
HOME INDUSTRY: 16 members; Mrs. W. J. Weaver, Crookston, President; Mrs. Harry Babcock and Mrs. Elwood Turner, Crookston, Leaders.
WILD ROSE: 18 members; Mrs. Jake Stasch, Nenzel, President; Miss Frances Crowe, Nenzel, and Mrs. N. V. Kehr, Nenzel, Leaders.
BUSY BEE: 28 members; Mrs. Harry Wobig, Cody, President; Mrs. Homer Hint- on and Mrs. Ray Bennett, Cody, Leaders.

MERRIMAN TRAINING CENTER
Mrs. Carl Gardiner, Group Chairman

RE SQUARED: 19 members; Mrs. Gus Wickman, Eli, President; Mrs. Bart Nicklin and Mrs. Guy Belsky, Eli, Leaders.
HI-WAY: 10 members; Mrs. Virgil Passmore, Merriman, President; Mrs. Allen Parker and Mrs. Wm. Barclay, Merriman, Leaders.
ROCKFORD: 11 members; Mrs. Glenn Slocum, Merriman, President; Mrs. Mel- vin Dahlgrin and Mrs. Ray Suhr, Merriman, Leaders.
CENTER: 10 members; Mrs. A. Thayer, Merriman, President; Mrs. Howard Co- der and Mrs. R. Goucher, Merriman, Leaders.
WILLING WORKERS: 19 members; Mrs. R. C. Lessert, Merriman, President; Mrs. Frank Dowd and Mrs. Earl Gardiner, Merriman, Leaders.
MERRIMAN HOMEMAKERS: 13 members; Mrs. Paul Metzger, Merriman, President; Mrs. Carl Gardiner and Mrs. Jay Gardiner, Merriman, Leaders.

MULLEN TRAINING CENTER

DUMB DORA: 7 members; Mrs. Guy Mercer, Mullen, President; Mrs. E. C. Bullington, Mullen and Mrs. C. L. Phipps, Seneca, Leaders.
DRY VALLEY HOMEMAKERS: 11 members; Mrs. Ralph Phipps, Mullen, President; Mrs. Ralph Robinson and Mrs. Lee Carr, Mullen, Leaders.
ROSE VALLEY: 10 members; Mrs. G. W. Merz, Seneca, President; Mrs. Emma Robinson and Miss Rosa Miller, Seneca, Leaders.
PRAIRIE HOPEFUL: 10 members; Mrs. W. B. Sherman, Mullen, President; Mrs. E. H. Howarth and Beatrice Carpenter, Mullen, Leaders.
HYANNIS TRAINING CENTER

LAKEVIEW: 10 members; Mrs. L. A. Calkins, Ashby, President; Mrs. A. L. Castle and Mrs. Fred Engel, Ashby, Leaders.

OPPORTUNITY: 16 members; Mrs. Renold Macumber, Hyannis, President; Mrs. L. S. Huffman and Mrs. Ambler Rothwell, Hyannis, Leaders.

GORDON TRAINING CENTER

SANDHILL SOCIAL: 11 members; Mrs. Lee McDonnell, Gordon, President; Mrs. Hap Vinton and Mrs. Henry Ledly, Gordon, Leaders.

P. W. CLUB: 14 members; Mrs. Ed Sones, Gordon, President; Mrs. Alvin Thayer and Mrs. Lloyd Cady, Merriman, Leaders.

HELPING HAND: 10 members; Mrs. C. H. Myres, Merriman, President; Mrs. P. T. Hart and Mrs. Ed Gay, Merriman, Leaders.

ODDS & ENDS: Mrs. D. A. Hathorn, Irwin, President; Mrs. H. T. Waddill and Mrs. Emil Fuchser, Irwin, Leaders. 9 members.

LAND USE COMMITTEE

In accordance with instructions outlined at the Mt. Weather conference in 1936, representatives met at Valentine, March 6, 1939. This instruction is outlined in the official circular letter Miscellaneous N. 397, dated July 12, 1938.

16 farmers and ranchers, representatives of the Agricultural Adjustment Administration, the Farm Security Administration, the Valentine Production Credit Association, Extension Service, the Farm Credit Administration, the civic clubs, the Livestock breeders association, feeder association and stockgrowers association, the Bureau of Animal Industry, the Federal Land Bank, the county commissioners, and the Agricultural Experiment Station were in attendance at this March 6 meeting.

A county advisory council of six members was named. They are: Mrs. Essie E. Davis of Hyannis, D. J. Cole of Merriman, Frank Simons of Sparks, Lloyd Harse of Wood Lake, John Keller of Cascade and C. J. Dau of Cody.

The 16 ranchers and farmers at the March 6 meeting were retained as the larger or land-use committee. The sub-committee, or county advisory council, held three meetings following their election. They made recommendations of policy to correlate the activities of the several credit agencies and the agricultural agencies. The Farm Security Administration was given some help in determining the stratum of operators to whom loans should be made.

The committee asked for assistance from the Bureau of Biological Survey for fire control in the range area.
The home agent, Miss Verna Glandt gave the leaders of home economics projects two days of training at Valentine and two days at Merriman. Mr. Walter Tolman assisted the agent to give the livestock project leaders help to conduct their respective programs. Two days were given to these latter leaders.

One day of training in judging work was conducted at Valentine in June. 130 attended. Classes arranged for judging were cattle, horses, sheep, hogs, baked foods, canning, girls room and clothing. 10 demonstration teams were trained and drilled in two days by the Home Demonstration agent Miss Smith. A group was given this help at Merriman and the other at Valentine.

Three clubs were represented at the district 4-H club camp. 22 members from Cherry County were present.

The Merriman community supported a very fine Achievement Day for both livestock and home economics projects. The cooking club at Valentine held an individual achievement program. The Sparks canning club held an individual achievement picnic.

The big 4-H event for the year was developed as a part of the county fair program. The livestock was well developed and given much support by the officers of the county fair association and by the Northwest Nebraska Hereford Breeders association. $240.00 was advanced for the 4-H club department as premiums. The 4-H livestock was housed as a unit. The barn was new and made a very fine headquarters for the 4-H members and their parents to assemble.

All livestock was paraded before the stands. A dress review was presented by the summer wardrobe girls.

A calf show was initiated at Mullen. Cherry County club members living in the south part of the county attended. This show should encourage more participation in club work in this part of the county. Special sales were arranged for the baby beeves at Valentine and for the feeder calves at Mullen in connection with the show at that place.

**GRASSHOPPER CONTROL**

4 tons of millrun bran, 22 tons of sawdust and 225 gallons of sodium arsenite were mixed at the Valentine plant and distributed as bait to control grasshoppers. 86 farmers used this bait. It is estimated that they protected 1500 acres of oats, 5000 bushels of corn, 1000 acres of alfalfa and 3000 acres of hay and forage crops. In addition, 500 acres of truck crops and some wild hay were protected. Valuation of that part of these crops which were saved is estimated at $16,525.00. This estimate is based on loss estimates of crops not protected.

This bait was distributed with a charge of 20¢ per bag of about 80 pounds each wet weight. The money thus collected totalled $114.90 and was used to pay labor costs and for tools used in mixing, truck charges for moving some materials, etc.
FEATURE STORY

COMMUNITY EXHIBITS

One of the innovations featured at the county fair was the community booths for exhibits. These exhibits were sponsored by the county Extension Service. Precincts, clubs, churches, schools, in fact any organized groups were assigned space and given the privilege of developing any theme they chose.

3 exhibit halls were partitioned into series of booths. The field crops and vegetable or truck exhibits were displayed in one hall. The floral, home economics and 4-H clubs were assigned to the second and largest hall. A part of the granstand building was used for the school exhibit.

The usual method of classifying the exhibits by type of entry was abandoned. Instead each precinct or group was permitted to prepare a composite entry. They chose their own central theme and developed it according to their own tastes and to the material available to their organization or geographic location in the county. Thus each group had the advantage of emphasizing their most opportune project. The entire display was unusually attractive.

Individual competition became secondary. Neighbors helped each other. Attractive group prizes were offered. In the aggregate, the premium budget was smaller and reached more people than a multitude of small individual class premiums.

Judging was based on the development of a central theme, quality of individual entries, number of persons cooperating (considering the organization involved), and beauty and symmetry of design.
HISTORY OF EXTENSION WORK IN CHERRY COUNTY

The Beginning.

During the months of February, March and April, 1918, Valentine was made headquarters for an emergency district for county agent work. Likewise Mullin was made an emergency station for a county agent. The area was served intermittently from April 1, 1918 through 1919 to March 31, 1920. No records of the work accomplished are on file.

No organized local sponsoring group within the county supported an extension program prior to December 25, 1933. At that time, the present agricultural agent was stationed at Valentine as an emergency agent. His activities during the first year were primarily concerned with administration of the A.A.A. corn-hog and wheat programs, drought relief and government cattle buying program. During 1935 one-fourth of the agent's time was devoted to a general Extension program. The Cherry County Farm Bureau was organized January 31, 1936.

4-H club work, women's home demonstration work, crops and livestock demonstrations and a general agricultural educational program was initiated. Local and county committees had been given a good deal of the duties of administering the A.A.A. program. Since 1936 the agent has gradually been relieved of the supervision of the federal emergency programs and has consequently been enabled to devote an increasing proportion of his time to the educational program.

Local Leadership.

Cherry County is 96 miles long and 63 miles wide. North and south travel is very difficult at best. To initiate an extension program into each community has been a problem of developing local leadership in these communities.

At first the scope of the accomplishments was limited to scattered communities personally supervised by the agent. Much more is to be done before it can be said that a satisfactory extension program is available to every community. The home demonstration program for women has developed many leaders. Some of these ladies and some of the 4-H local leaders have become very helpful directors of the county program as well as serving in their own communities.

Developing the Extension Program.

The county program of work has been slowly developed from the personal interviews of the agent with individuals as a beginning. The general program was referred to the directors from time to time. A county program committee was used in 1936. This was found to be inadequate. Since that time the executive committee has helped the agent place this responsibility on individuals representing nearly every part of the county. The plans for 1940 are to hold community entertainments well enough planned to insure good attendance. At these meetings the program of work will be assigned to individuals elected by ballot. Thus each part of the county will nearly be active in developing their own program.
Influence of Extension in the County.

At first the county agent was simply a government representative assigned to impartially administer state and federal programs of an emergency nature. As other interests became involved, there were those who looked to the Extension office as an assembly of sources of information. There were others who thought of the county agent as one whose business it was to "tell other people how to manage their business". Many resent a county agent because of this viewpoint. As people learn that the office is a coordinating and assembling service representing the several agricultural agencies, they are able to derive more benefits. The "exchange of ideas" at local meetings and with the agent as a "go between" has become one of the major influences of Extension in the county. The discussion meeting is becoming more popular and useful. Pictures to illustrate local practices are being added to the methods used.

Extension as a Life Profession.

To serve as an extension worker is inspiring. What could be more interesting than people? To study their problems and their successes on farms and ranches is an ever-changing view of rural life. The interest is maintained at its peak by reason of the ever-present challenge to help solve today's problems of the farm economy and sociology. As a life profession Extension work is the most fascinating of any branch of educational work.

It has its discouraging features too. In this county the position of county agent has been very insecure. At no time has there been an assurance of steady employment even if the work were performed well. This has been due to the method of financing by personal subscriptions from those participating. It would be difficult to finance our longestablished school systems by subscription. Adults as a rule are not conscious of a need for an educational system for their continued use. On the contrary, most of them resent an admission that more education is needed and available to them personally. This is characteristic of rural psychology as contrasted to an open eagerness for night classes and spare time education on the part of the urban business groups. The issue must finally be collective and sponsored by the states and federal government rather than private individuals and county governments. It is to be measured in terms of collective well-being more than individual service.

Some stations are more desirable than others from the viewpoint of the county agent. It is only human that he looks forward to advancement and promotion. With due deference to others' views it is the opinion of the writer that as an agent improves he should be given seniority when vacancies arise. Surely his experience is, or should be an asset worthy of consideration when appointments are made for the more desirable stations. Security is more desirable than salary level.

Again, from the county workers' standpoint, it may be in order to remark that increased emphasis should be given to using the specialist as an informer to the county agent. The agent has it all to win or