

The Agricultural Extension Service, Missouri College of Agriculture; Annual Report for 1936



With a 38 per cent increase in enrollment over the preceding year, 4-H club work conducted by the Extension Service in 1936 was shared by 17,861 Missouri farm boys and girls. The above picture was taken at the Linn county 4-H club fat lamb show.

COLUMBIA, MISSOURI

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J. W. Burch, Assistant Director in Charge of the Extension Service

Agricultural Extension Service

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TABLE OF CONTENTS

	Page
Introduction	5
Agricultural Adjustment Administration	11
County Agent Work	15
4-H Clubs	17
Animal Husbandry	23
Dairy Husbandry	27
Poultry Husbandry	30
Horticulture	35
Forestry	38
Agricultural Engineering	40
Soils and Field Crops.....	44
Soil Conservation	52
Agricultural Economics	55
Entomology	61
Veterinary Science	64
Home Demonstration Work	65
Clothing	67
More Attractive Homes	67
Food for the Farm Family	69
Home Management	70
Press Service and Publications	71
Members of Extension Staff	75

TO HIS EXCELLENCY
HONORABLE LLOYD C. STARK
GOVERNOR OF MISSOURI

SIR:

In accordance with the provisions of the Smith-Lever Act, I am transmitting herewith the Agricultural Extension Service Report for the year ending November 30, 1936.

Respectfully submitted,

FREDERICK A. MIDDLEBUSH
President, University of Missouri

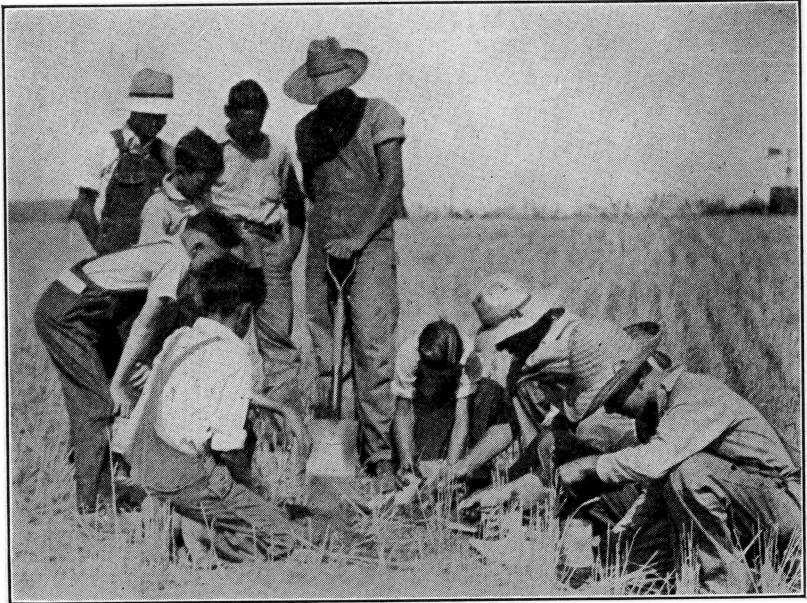
PRESIDENT F. A. MIDDLEBUSH
UNIVERSITY OF MISSOURI
COLUMBIA, MISSOURI

SIR:

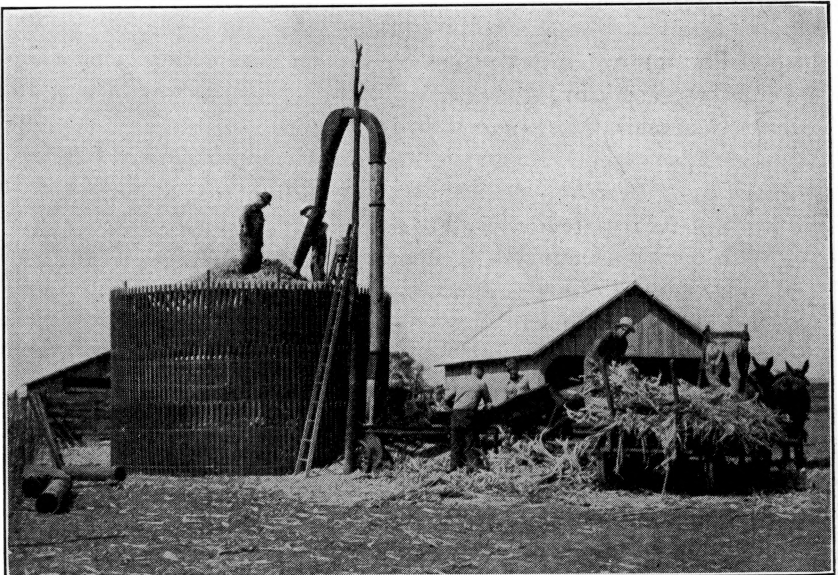
As required by the Federal law, I am transmitting herewith the Annual Report of the Agricultural Extension Service for the year ending November 30, 1936.

Respectfully submitted,

F. B. MUMFORD,
Director



Clinton county 4-H soil conservation club taking soil samples.



Temporary silo with a capacity of 40 tons on R. A. Dinwiddie's farm, Boone county. Materials for its construction cost \$31.80.

The Agricultural Extension Service, Missouri College of Agriculture: Annual Report for 1936

J. W. BURCH

(Assistant Director in Charge)

In larger numbers than ever before the farm people of Missouri cooperated with the Agricultural Extension Service to overcome both the commonplace and the extraordinary difficulties of 1936. Along with the growing demands for information there came, fortunately, a corresponding increase in both the material and human resources placed at the disposal of extension workers.

To the cumulative effects of a prolonged deflationary period and the steady decline of soil fertility there were added in 1936 the problems of a second major drought within three years, an unprecedented scourge of grasshoppers, and urgent need for a working knowledge of the new soil conservation program and other federal measures rich in benefits to be realized only when fully understood.

In meeting this situation and rendering impartial service to farm families in all of Missouri's 114 counties, the Extension Service had the active assistance of more than 27,100 men and women who served as volunteer local leaders; many of them with years of experience, and all eagerly accepting intensive training for their tasks. More than 300 community newspapers, together with metropolitan dailies and farm journals, gave unceasing support to the educational campaigns and to the work of local groups.

With such support the Extension Service and its cooperators were able to meet the feed shortage resulting from the 1936 drought with a statewide campaign of filling silos, sowing fall pastures, using grain substitutes, and preventing the liquidation of valuable flocks and herds. In temporary silos more than a million tons of succulent feed was saved from drought-scorched cornfields—feed easily worth \$3,500,000 from immature corn that otherwise would have been almost worthless. Half a million acres of fall pastures were produced by seeding small grains early in September, effecting savings of grain and hay running into additional millions of dollars.

When midsummer brought to Missouri, on the heels of the drought, the worst grasshopper invasion in the history of the state, local leaders again joined with extension workers and federal forces and laid down

a barrage of 2,500 tons of poisoned bait that checked the advance and reduced the damage on 20,000 farms.

Through intensive and repeated educational campaigns covering every county in the state, the Extension Service explained the details of the new Soil Conservation and Domestic Allotment program to farmers in every community, and with such success that more than 170,000 farmers participated in the benefits offered. The final results of this work will far exceed the cash grants obtained for cooperators, since the long-time benefits of actual soil conservation were emphasized. The acreage of Korean lespedeza in the state was increased to 1,500,000 acres and a large proportion of the stands obtained from 1936 seedings were held despite the drought and permitted to reseed themselves. The use of limestone was trebled, outstanding increases were made in the application of commercial fertilizers, and the seeding of all legumes. Corn acreages were decreased with a corresponding increase in acreages of small grains and pastures. Every effort was made to aid farmers in taking advantage of the services offered by the Soil Conservation Service.

A full-time specialist in forestry was added to the extension staff and aid was given farmers in reforestation planting in cooperation with the United States Forest Service and the Soil Conservation Service.

Consistently, through all branches of the Extension Service, there was maintained a constant endeavor to safeguard for every farmer willing to accept them the advantages of a sound national policy for agriculture and a good system of individual farm management. To accomplish this purpose the Extension Service seeks to present clearly and truthfully to all farmers alike the working plans of the federal conservation program and all the most efficient methods in production, marketing, farm finance and management, and home economics.

The response to these efforts in 1936 was most encouraging as already stated, not only among the farmers but also on the part of farm women, boys, and girls. Great advances were made in home economics work during the year, for the number of home demonstration agents at work in the state was increased from 17 to 44. The number of women's extension clubs grew to 1,665 and the number of members to 31,203. The number of 4-H clubs reached a new high mark with 17,861 boys and girls enrolled under 1,910 adult leaders.

Organized activity directed toward the common good of all made a most encouraging growth in 1936, with all farm organizations and unorganized groups working together in greater harmony than ever before. Outstanding accomplishments in county-wide organization were made in many lines of work, but nowhere were they more noticeable than in the administration of the federal programs for farm

betterment. Rural electrification projects were approved in 12 counties with local cooperatives incorporated for the building of 1,687 miles of high lines serving 5,831 families.

In the following brief paragraphs a hint is given of the scope of the work done in 1936, while the more detailed reports are given by projects beginning on page 11.

Boys' and Girls' Club Work.—Missouri farm youth in greater numbers than ever before—17,861 or nearly 5,000 more than in 1935—were served through 4-H club work. Through the assistance of 1,910 volunteer club leaders these groups were organized in all but three of the counties in the state. While their tangible accomplishments were highly important, these boys and girls gained more than cash profits and manual skills from their club activities. Strengthened character, ability to work with others, enlarged vision of agriculture, ability to think and speak clearly, and increased self confidence were important products of the 4-H club program. (Page 17).

Animal Husbandry.—Dependable methods for profitable livestock production are extremely important, with the gross income from livestock in the state exceeding \$206,000,000 a year. In hog feeding alone it is estimated that a saving of more than \$3,300,000 can be made annually by the use of more economical rations than are now used on 44% of the state's hog producing farms. In following recommended practices for sheep improvement, flock owners treated 482,000 sheep for internal parasites and handled more than 1,000,000 lambs according to approved plans. (Page 23).

Dairy Husbandry.—Almost 40,000 Missouri dairymen following the recommendations of the Extension Service in seeding drought resistant pastures obtained pasture crops with a supplementary feeding value of more than \$1,350,000. Of equal importance were the 440,440 acres of late fall and early winter grain pastures that had a value estimated at more than \$1,500,000. Improved production and marketing practices have given the state nation-wide recognition for its sweet cream. (Page 27).

Poultry Husbandry.—Missouri poultry growers by following the recommendations of the Extension Service, realized benefits amounting to more than \$700,000. These benefits were shared by more than 48,700 farm families and will have additional cumulative value from the better developed and healthier stock for future operations. Economical and comfortable housing for farm flocks was a feature of the accomplishments attained. This creditable showing of Missouri's poultry industry was made in spite of discouraging drought conditions. (Page 30).

Horticulture.—Economical garden practices, well rounded orchard management, adapted spray schedules, garden and orchard record

keeping and melon grading were among the profitable methods followed by Missouri farmers in 1936. The result accruing from these practices had a distinct value in spite of the drought and hot weather. The Extension Service made a distinct contribution in the aid given in the purchase and distribution of surplus apples to needy families by the Federal Surplus Commodities Corporation. (Page 35).

Forestry.—Completion of the arrangements for the planting of 160,000 seedlings for farm reforestation in the spring of 1937 was the outstanding accomplishment of extension forestry work in the state this year. With the experience gained in this initial planting program, Missouri farmers should be able to carry on reforestation work in a profitable manner. (Page 38).

Agricultural Engineering.—Helping Missouri farmers construct silos in which to salvage as succulent feed a corn crop that had been made worthless as a grain crop by the drought was an important contribution of the Agricultural Extension Service. Through the use of temporary silos more than 1,183,416 tons of drought corn and cane



Hedge log dam and spillway in ditch on farm of W. A. Hargadine in Linn county.

fodder were saved, the estimated value of this bulk of valuable feed being \$3,550,248. Farmers were helped in the economical construction or remodeling of farm buildings, with terracing problems, and in the better utilization of farm machinery. (Page 40).



Township truck loading poison grasshopper bait at Marshfield mixing station.

Soils and Field Crops.—In meeting the problem of providing adequate feed for livestock and at the same time maintaining soil fertility, more than 180,000 Missouri farmers profitably followed suggestions of the Extension Service in 1936. More than 250,000 acres of winter barley were seeded as a drought resistant small grain substitute for corn, which can be used for pasture as well as grain. The large volume of Korean lespedeza now maintained—1,500,000 acres—indicates the increasing importance of this legume crop in soil conservation. More than 400,000 tons of limestone were used in insuring greater success with legume crops. Distinct results were achieved in preserving seed stocks of all kinds. (Page 44).

Soil Conservation.—More than 8,000 farmers organized in soil conservation associations and committees found helpful cooperation from the Extension Service in carrying a program of soil conservation to every county in the state. An increased capital value of \$166,040 accrued to 24,340 acres of sloping land through terracing alone. Some 35,655 farmers followed suggestions on crop rotation and soil treatment for building up or retaining soil fertility. (Page 52).

Agricultural Economics.—Dependence of Missouri farmers on outlook information in farm financing, production, and marketing has given substantial increases in farm income. Detailed assistance in individual farm planning was accepted by farmers in 36 counties. Marketing pro-

grams for cotton, cream, and eggs resulted in notable gains in the income from these products. Training in group discussion methods has produced many active discussion leaders. (Page 55).

Entomology.—Missouri farmers were given assistance in combating one of the worst insect invasions known in the history of this state. Some 20,000 farmers used almost 2,500 tons of poison bait in saving crops and trees from grasshoppers. In the fight against chinch bugs 40,000 acres of corn were protected by barriers. (Page 61).

Veterinary Science.—Profitable gains in the elimination of Bang's disease from Missouri beef and dairy herds were achieved, resulting in smaller losses from disease, better gains with less waste of feed, and fewer failures in breeding with less expensive replacements. These gains were made in every county in the state. Work stock was improved through the eradication of bots and other internal parasites. (Page 64).

Home Demonstration Agent Work.—Missouri farm women were helped to perform their household tasks more efficiently, economically improve their homes inside and out, find time for cultural and recreational activities, and to develop greater satisfaction and pride in country life. These results were achieved largely through the membership of almost 32,000 women enrolled in women's extension clubs representing practically every county in the state and working with 44 home demonstration agents. Almost 12,000 volunteer leaders gave unselfish service in sharing with their neighbors the benefits of home economics work. (Page 65).

Clothing.—Helpful suggestions in making, remodeling, and care of clothing enabled more than 58,000 farm women to have their families more satisfactorily clothed. The saving in one item alone—dry cleaning and making over garments—was estimated at \$130,114. (Page 67).

More Attractive Homes.—Well directed efforts toward improving the appearance of home surroundings and community centers brought well deserved pride in the results. Most of the improvements achieved were accomplished with the use of home labor and materials. (Page 67).

Food for the Farm Family.—Missouri farm families were helped measurably in producing their own food at home and preserving or storing it for the best use throughout the year. This was emphasized in making garden plans, preparing food budgets, storage, and meal planning. (Page 69).

Home Management.—Missouri farm families were helped to achieve more comfortable and more economically managed households, with better balanced utilization of time. Through the use of farm and home budgets families in 83 communities acquired better utilization of the farm income. (Page 70).

AGRICULTURAL ADJUSTMENT ADMINISTRATION

Two hundred and sixty-five thousand farmers* located in every Missouri county were furnished information by the Missouri Agricultural Extension Service concerning the provisions of the federal agricultural conservation program. One hundred seventy thousand of these indicated their intention to participate in this movement to conserve soil resources.

Information was disseminated through meetings and individual conferences. Meetings provided the most effective contact with 216,313 persons in attendance at 6,373 meetings held by county agents and 41,388 in attendance at 1,746 meetings held by committeemen.

These producers provided information necessary to execute work-sheets and establish soil depleting bases on 286,000 farms.† This work, together with time spent in educational activities, checking performance and other necessary functions required more than 100,000 days' time on the part of 5,070 local leaders.

Agricultural Conservation Program

Applications for inspection of farms under the new SCDA program were received from two-thirds of the farmers in Missouri indicating definite progress toward the state and national goal of shifting land from soil depleting to soil conserving uses, even though the extreme drought prevented full realization of producers' intentions. A quantitative report of changes made as a result of this program cannot be given until all applications for payment have been completed and tabulated.

These achievements were made possible only by the complete and close cooperation of local and state leaders and every member of the Agricultural Extension Service.

The responsibility for the administration of the program in the state was left in the hands of the Missouri Agricultural Conservation Committee composed of: Xenophon Caverno, Canalou, Chairman; J. W. Burch, Columbia, Vice-Chairman and Extension Representative; Howard M. Shirky, Richmond; F. V. Heinkel, Robertsville; and C. W. Sheppard, Warrensburg.

This committee served entirely as an executive, policy making body, whose plans were carried out by the state extension agents and a group of farmer fieldmen.

*The number of farmers advised includes owner-operators, landlords, share-tenants, and share-croppers.

†The term "farm" as used in connection with the 1936 Agricultural Conservation Program means "all tracts of farm land in the same county under the same ownership, operated as all or part of a single farming unit by the same operator in 1936." This results in a larger number of "farms" than recorded in census reports since a producer farming land owned by different landlords is considered as operating as many farms as there are different owners involved in his operations. Conversely an owner renting tracts to different tenants is considered as renting as many farms as there are different operators involved in the operations.

Administration within any county was left to the local producers through their elected representatives. Each community was represented by a committee of three farmers elected from within the community.

The county board of directors was composed of the chairmen of the various community committees. Its business was transacted by a county committee consisting of the president and vice-president of the association and one other director.

After a series of educational meetings in April, community committeemen visited practically every farm in the state to secure data required in establishing soil depleting bases. The total acreage available for depleting bases in any county was determined on the basis of the relationship between depleting acreage and total farm land permitted by the ratio established by the North Central Division.

These ratios, developed from data in the files of the Bureau of Crops and Livestock Estimates, appeared to be unsatisfactory when matched with totals reported on the worksheets for the different counties. Generally speaking, these county limits appeared to permit soil depleting bases in the northern third of the state in decided excess of requirements. This relationship between the depleting acreage needed and that permitted appeared to be geographic, being most favorable in the north, about right through the center, and decidedly inadequate in the southern part of the state (the southeastern delta excepted since its ratios were quite favorable).

Members of the State Committee spent between two and three months in an attempt to correct the inequities caused by these ratios. An agreement was reached finally with the North Central Division which permitted, for 1936, such adjustments as appeared necessary in the light of entries on county listing sheets. Thirty-seven counties, all in the southern half of the state were given ratios which permitted a more equitable relationship between soil depleting bases and total farm land.

The figures finally approved for the state and comparable figures from 1935 federal and state census reports include:

	On Listing Sheets	1935 Federal Census	1935 State Census
Farms	283,534	278,454	
Farm acres	33,949,396	35,054,542	
Soil depleting crops harvested	10,052,937		10,212,258
Idle crop acres	2,781,983		2,668,346
Total soil depleting acres	12,834,920		12,880,604
Original maximum depleting base	11,922,076		
Final revised maximum depleting base	12,078,087		
Special bases approved			
Cotton	418,576		
Tobacco	7,608		
Rice	208		

Additional community meetings were held after the bases were released, for the purpose of discussing again with producers various methods of adjusting their farming methods sufficiently to participate in the program.

The advent and continuation of the state-wide drought with the subsequent necessary changes in the conservation program necessitated holding another series of community meetings at which producers were advised regarding these modifications and the further adjustments in farm management required to meet these altered conditions most satisfactorily.

Probably the biggest single task ever undertaken by farmers and the Extension Service was the checking of performance by producers participating in the Agricultural Conservation Program and the execution of forms related to this activity.

This undertaking included the designing and procurement of the equipment needed, the development of methods for determining areas and preparing the various forms used.

Permission was secured from the U. S. Department of Agriculture to employ aerial photography in the following seventeen counties: Atchison, Holt, Gentry, DeKalb, Daviess, Buchanan, Platte, Clinton, Clay, Caldwell, Ray, Jackson, Lafayette, Saline, Cass, Johnson, and Henry. Photographs taken in Andrew and Nodaway counties in 1935 were used to determine areas affected by the 1936 program.

It appears at the close of the year that federal supervision of some farm program will become a permanent fixture in our national economy. It is to be hoped that the state forces will continue to have some part in the development of the policies to be adopted in the state and some voice as to the method of administration of the program within the state.

The Agricultural Extension Service stands ready to continue its assistance with the program in the future as in the past, with perhaps greater emphasis on the strictly educational features of the program.

Closing 1934 and 1935 Contracts

With the cooperation of county corn-hog control associations, and the Corn and Hogs Section, 96,017 contracts signed in 1935 were completed in 1936. Benefit payments totaling \$7,986,986.01 were made on 1934 and 1935 contracts between December 31, 1935, and October 31, 1936, bringing the total payments up to \$40,821,290.32. Direct benefit payments were made to approximately 150,000 Missouri farmers and farm owners.

Fifty-one cotton contracts for 1934 and 1935 from six counties, and 2,952 compliance forms from all counties were checked and for-

warded to Washington. Missouri and Illinois cotton producers received approximately \$524,000.00 from rental and parity payments during this period.

The State Cotton Office handled applications for cotton price adjustment payments from 12,435 producers out of a possible 16,987 in Missouri and Illinois. Producers received \$585,744.64 from this source.

One hundred and forty-seven ginners out of the 156 in Missouri and Illinois have received \$43,770.25 as compensation for additional expenses incurred, during the 1935-36 ginning season, in connection with operating their gins under the Cotton Act of April 21, 1934, as amended. The applications of five ginners for \$1,120.25 are still outstanding, but it is expected that these applications will be paid as soon as they can be approved by the General Accounting Office. When this program has ended the ginners will, therefore, have received \$44,890.50 from this source.

During the past year completion was effected on nearly all of the 1,428 tobacco adjustment contracts executed in Missouri, Kansas, Oklahoma, and Arkansas. The amount paid to tobacco producers on these contracts during the ten months ending October 31, 1936 was \$32,384.21, bringing the total payments up to \$312,622.28.

Tobacco growers located in thirty-seven Missouri counties, five Kansas counties, one Oklahoma and one Arkansas county had combined to control production of burley tobacco in 1934 and 1935. Most of the contracts were executed in the tobacco district of Northwest Missouri centered around Weston.

Missouri wheat growers received benefit payments in the amount of \$1,184,082.81 for cooperating in the wheat control programs during the ten months period ending October 31, 1936. These payments were made to approximately 13,000 farmers and landowners who cooperated in controlling production during the years of 1933-34-35 and 36.

COUNTY AGENT WORK

The largest number of volunteer leaders in the history of extension work in Missouri gave willingly of their time and effort in 1936 to assist the county agent staff in programs for the improvement of Missouri farms, farm homes, and the economic position of agriculture in this state. The 157 county agents, emergency agents, and assistant agents were assisted by 27,191 men and women serving without pay as leaders in these lines of improvement for their respective communities.

An important advance was made also in the use of local public funds in the support of extension work during the past year, with 102 county courts making appropriations for this purpose as compared to 96 the preceding year. County courts, farm organizations, and extension boards supplied in support of county agent and home demonstration agent work during the year a total of \$178,796.00, all of which was applied on the strictly local expenses of the work.

The number of Missouri counties that enjoyed the exclusive service of regular county extension agents was 77, the number served by emergency agents on the basis of one county per agent was 20, while 17 counties were served by 8 district agents. The efforts of these men were supplemented also by the work of 52 assistant agents.

Missouri county agents assisted the county agricultural conservation associations and Agricultural Adjustment Administration with the Soil Conservation and Domestic Allotment program involving 179,244 farms. The agents have trained committeemen and office workers, through 1,756 training meetings attended by 21,771 leaders or committeemen. In addition, in performing their work of keeping the farming public informed as to the details of the SCDA program as it affects the local farm and the agricultural industry of the nation, county agents held 6,373 meetings which were attended by 216,313 people.

Even though the county agent staff, the past year, helped obtain for Missouri farmers the most nearly universal participation yet experienced in the national agricultural conservation program, they also were able to devote 62½ per cent of their time to helping local leaders, farmers, farm women, boys, and girls in the problems of production, marketing, community improvement, and homemaking.

Included in these lines of work were erosion control, farm management, farm record keeping, economy production of livestock, improved methods of marketing farm commodities, improved soil management, introduction of better pasture crops and pasturage

systems, the growing of adapted legumes, economical poultry production, and countless other problems arising daily on the farms and in the farm homes of Missouri.

In serving the entire farm population of the state the 157 county agents employed in 1936 conducted a total of 20,351 meetings that had a total attendance of 616,026. This is an average of 194 meetings per county with an average attendance at each meeting of 30 persons. The agents also attended and took part in 13,188 meetings arranged by agencies outside of the Extension Service and thus gave agricultural information to an additional attendance of 202,475.

The agents also had an important part in the organization of 4-H clubs, the training of leaders, and the follow-up work necessary for the completion of projects and activities. The number of 4-H club members enrolled in 1936 reached a new high record of 17,861 boys and girls.

In their contacts with the farm people in their respective counties during the past year the county agent staff received 762,852 office calls, distributed 5,382,967 copies of 11,824 circular letters, and supplied to their local newspapers a total of 24,355 news stories.

Work with Cooperating Agencies

In the service of Missouri agriculture throughout the past year the county agent staff has worked with many agencies and groups, including besides those already mentioned chambers of commerce, civic clubs, county superintendents of schools, instructors of vocational agriculture, rural school teachers, and many other official and unofficial groups.

The Agricultural Extension Service in the state and in the counties has cooperated with all of the federal agencies whose work affects the rural people. Those agencies which have given assistance in improving the income of the farmers or have assisted in making rural life more attractive and which have had the cooperation of the Extension Service are as follows: Agricultural Adjustment Administration, Rural Rehabilitation Administration, Soil Conservation Service, Rural Electrification Administration, Farm Credit Administration, and Works Progress Administration.

The county agent has served as a technical adviser to the rural rehabilitation supervisor in the county and has assisted with the establishment of sound farm plans for rural rehabilitation farms. The county agent has been considered as the local source of information for subject matter by the rural rehabilitation supervisors.

4-H CLUB WORK

Missouri 4-H club work took a vigorous step forward in 1936. Through the efforts of the Extension Service and 1,910 volunteer club leaders 4-H groups were organized in 111, or all but 3, of the state's counties. All previous records of participation fell, as 17,861 farm boys and girls enrolled in clubs. This number surpassed the previous year's total by nearly 5,000.

Twenty-four projects formed the basis of activity for the members. The projects included the following: corn, grain sorghum, cotton, grain judging, sweet potatoes, Irish potatoes, garden, home grounds,



A scene from the musical drama presented at the State 4-H Club Round-Up, August, 1936.

forestry, soil conservation, poultry, bees, dairy, beef, sheep, swine, colt, stock judging, farm management, food preparation, food preservation, clothing, house furnishings, and health. The percentage of club members keeping business records on their projects and submitting reports was 67.9.

The clothing project was the most popular with the girls, 5,439 of them making 3,278 dresses and 9,666 other pieces of wearing apparel. Health was of great interest to both girls and boys with a total of 4,824 participating in health improvement activities. Other highly popular projects were food preparation with 2459 members enrolled, soil conservation with 1,339, and forestry with 1,133 members.

STATISTICAL SUMMARY OF 4-H CLUB WORK, 1936

Club Project	Clubs	Members		Accomplishments or Products
		Enrolled	Completing	
Corn.....	25	258	135	4,667 bushels corn
Grain Sorghum.....	1	10	10	50 bushels seed
Cotton.....	3	26	7	23,080 pounds cotton
Grain Judging.....	16	136	103	
Sweet Potatoes.....	2	17	6	
Irish Potatoes.....	2	31	23	154 bushels potatoes
Garden.....	21	222	114	1,024 bushels produce
Home Grounds.....	25	272	176	
Forestry.....	98	1133	592	18.5 acres planted
Soil Conservation....	114	1338	800	236 acres terraced
Poultry.....	38	376	242	7,474 chickens
Bees.....	5	40	31	71 colonies
Dairy.....	28	262	165	200 animals
Beef.....	73	675	559	548 calves
Sheep.....	53	430	273	1,039 lambs
Swine.....	35	318	165	772 pigs
Colt.....	15	148	83	119 colts
Stock Judging.....	21	183	94	
Farm Management.	5	45	27	
Food Preparation....	261	2459	1876	32,294 dishes, 8457 meals prepared
Food Preservation... 16	132	95	2,146	quarts, 220 lbs. food stored
Clothing.....	603	5403	3760	3,278 dresses and 9,666 other garments
House Furnishings. 21	155	123	101	rooms furnished, 350 article made
Health.....	424	4824	3252	1,801 improved health habits
Miscellaneous.....	5	64	58	

A total of 80,000 black locust and catalpa seedlings were set out by 1,500 club members in an effort to control erosion and produce useful wood.

These boys and girls gained from their club activities more than cash profits and manual skills. Strengthened character, ability to work with others, enlarged vision of agriculture, ability to think and speak clearly, and increased self confidence were important products of the 4-H club program.

State 4-H Club Round-Up

The high point in the year's club work came when the state 4-H club round-up was held at the College of Agriculture in August. Defying drought and blistering temperatures, a record breaking crowd

of 624 members and 155 leaders came together for the four-day program. The boys and girls attending were county champions and outstanding members. Contests and demonstrations filled most of the program.

A new feature of the evening programs was a musical drama presented by club members and leaders from 38 counties. A total of 280 persons took part in depicting seven periods of American history.

The tenth annual leaders' conference was held as a part of the round-up. Those attending heard talks and participated in discussions concerning leadership methods.

4-H Club Camps

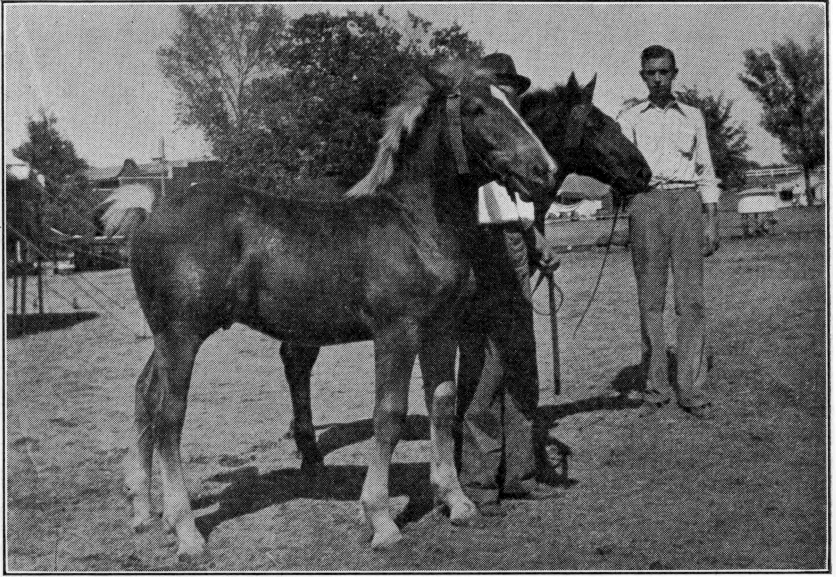
A total of 1,662 members and leaders from 52 counties participated in the 10 camps conducted during the year. The camps consisted of nine district camps and one state conservation camp.



Model winter feeding shelter for quail made at the State Conservation Camp by the Linn county champion forestry club demonstration team, Scotty and Billy Wright.

Nature study was stressed at each of the district camps. Insect study was featured at seven and forestry work at two of these. Extension specialists with the assistance of county agents, home demonstration agents and local leaders conducted the camps. The 4-H club members also shared in the responsibilities of running the camp.

The state conservation camp was held in the Ozark Region early in the fall. Members won the trips to the camp by conducting outstanding conservation activities during the year. The program there was devoted to the study of soils, forestry, and wildlife. Recreation included archery, games, and group singing.



These colts owned by Keith Jones and Harvey Shackelford, Warrensburg, were champion and reserve champion 4-H club colts at the Missouri State Fair in 1936.

Judging and Achievement Days

Club members from 36 counties attended the seven district judging days held in the State. A total of 68 leaders brought 551 club members to these. There they were given instruction by specialists in the judging of dairy cattle and other livestock.

A total of 48,028 persons attended the 972 achievement days held in the State. These days were held by communities and counties to give recognition to the work of 4-H club members and to choose representatives to other 4-H club meetings.

Miscellaneous Activities

Seven counties conducted extension work with 22 groups of young people over the 4-H club age. Young women and men enrolled in these groups numbered 586.

The first annual rural youth conference was held in connection with Farmers' Week. It gave training to young leaders of the State

in using the discussion method of studying current problems and in training them in recreation and singing leadership.

Club members took part in radio programs given over eight stations.

Jackson county conducted a 4-H club fair at which 19,000 persons attended. During the two-day event, club contests similar to those used in the state round-up were held.

There are now 201 former members enrolled in the Missouri College of Agriculture. With club members in other departments of the University they form the membership of the University 4-H club.

In order to assist club leaders some 250 leaders' conferences were held.

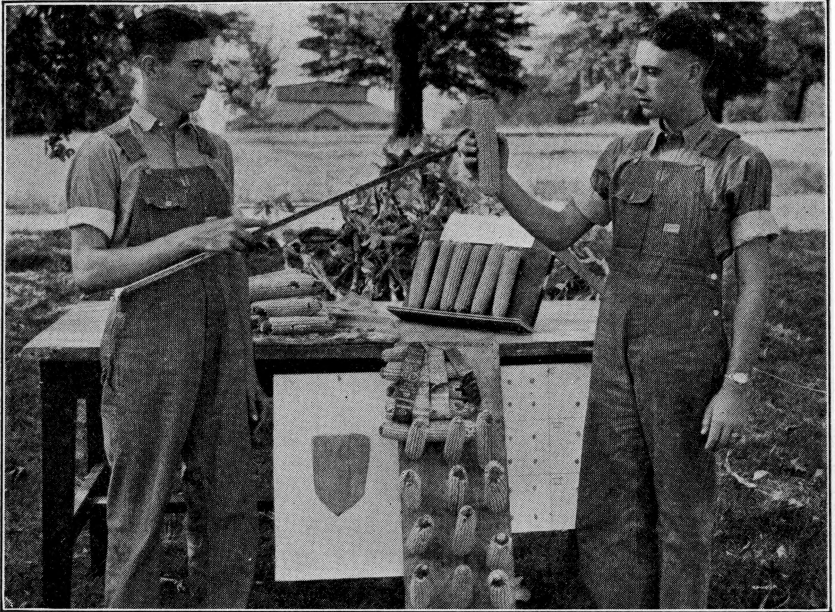
Eight counties reported special church services being held in observance of 4-H club Sunday. In many other churches in the State reference was made to the work on that day.

Participation in Contests

Missouri was represented at the National 4-H Club camp at Washington, June 18-24, by Betty Heffernan, Pettis county; Mary Ida Sullivan, Jackson county; J. Alton Riffle, Cass county; and C. L. Buoy, Jr., Howard county.

At the Missouri State Fair in August, a total of 170 entries were made by 4-H club members. Outstanding rewards received included the following: LeRoy Hulse, Jackson county, champion litter of 4 Chester White pigs; N. C. Ewing, Jackson county, champion litter of 4 Spotted Poland China pigs; Wattman Miller, Scotland county, grand champion Shorthorn; Troy W. Moffett, Scotland county, reserve champion Angus; H. H. Shackelford, Jr., Johnson county, champion colt. In home economics winners were Helen Van Dyke, Jackson county, wash dress and slip; June B. Brundage, St. Louis county, undergarments and dress; Frances Thomas, Cass county, window treatment; Margaret Ferguson, Pettis county, best exhibit of jars for emergency dinner; Flora Brune, Jackson county, best exhibit of fruit for salads and desserts.

At the St. Joseph Interstate Baby Beef and Pig Club Show, awards won by club members included the following: Charles Collins, Worth county, reserve champion pen of three Poland Chinas; Billy Hobuetzel, Buchanan county, champion single barrow; Hale Fletcher, Worth county, champion Poland China barrow; Ruth Anne Scott, Buchanan county, champion Angus; Evan Evans, Jr., Linn county, champion Hereford; James Shell, Nodaway county, champion Shorthorn.



Every 4-H club member learns to conduct demonstrations in public. This is the 1936 Grand Champion agricultural demonstration team, Lloyd Egger and John Hunziger representing Holt county at the State Round-Up.

Missouri was represented by 180 official club delegates at the American Royal Livestock Show. The Lafayette county team consisting of Billy Bertz, C. R. Bertz, and Donald McKean won first in livestock judging. J. Allton Riffle, Cass county, had the champion Shorthorn, and Howard Bradley, Henry county, the champion Angus in the club beef show.

Nina Ytell, Jasper county, had the champion Hereford in the Joplin Interstate Baby Beef Show. Walter Slack of Henry county exhibited the champion Shorthorn.

Howard Bradley, Henry county, exhibited the champion Hereford calf at the St. Louis Producers' Baby Beef Show and Sale. After the showing he sold it for \$336.

Missouri exhibited 169 calves in the St. Louis Exchange Calf Show and Sale. Donald Detring of St. Francois county had the champion Hereford and Walter W. Slack of Henry county the champion Shorthorn.

At the National 4-H Club Congress, Jerry Cowan of Greene county was one of the three blue ribbon winners in the boys' health contest. June Brundage, St. Louis county, was in the blue ribbon class with her exhibit of a complete clothing outfit. Missouri was represented by 32 outstanding boys and girls and 5 leaders at the 1936 National Congress.

ANIMAL HUSBANDRY

Interest in all possible measures for economy in livestock feeding was greatly intensified during 1936 by the drought, with the result that Missouri farmers gave more serious study to feeding problems than ever before. Depleted soil fertility and unfavorable weather had decreased feed supplies, particularly roughages, to such an extent that it was necessary to end the year's extension work with a statewide series of meetings for the discussion of nutrients in various feeds, the cost of nutrients, and the use of this information in making up efficient rations from the feeds available.

The possibilities offered in the application of this information on Missouri farms are almost beyond estimate, since the gross income from livestock in Missouri was more than \$206,000,000 in 1935. In hog feeding alone it is estimated that a saving of more than \$3,300,000 could be made annually by the use of more economical rations than are now used on 44% of the state's hog producing farms. Actual records on cost of production on demonstration hog farms in 1936 revealed a difference of \$1.22 a cwt. in the costs of producing pork, or \$2.44 a head on each 200-pound hog marketed, due solely to differences in choice of rations from the feeds available. The efficient use of feeds will effect similar savings in the production of other classes of livestock.

Naturally, therefore, much emphasis was given to feeds and feeding in the 1936 extension teaching in animal husbandry.

Extension work in this project was closely coordinated with that in field crops, soils, soil conservation, and dairy husbandry; all working toward the improvement of permanent pastures and the provision of supplementary pastures to furnish year-round pasturage and to aid in erosion control.

Work was done in 102 counties during the year. A total of 487 meetings were held with a combined attendance of 31,243.

Sheep Production

Improved practices in sheep production were widely adopted during the year, with 482,600 sheep treated for internal parasites, 1,110,000 lambs docked and castrated, 1,381, flocks dipped for the control of external parasites, 24,425 lambs sold on a graded basis, and 2,535 registered mutton-type rams purchased. Since demonstrations have shown that lambs sired by registered mutton-type rams return the producer \$2.11 more per head than lambs sired by grade rams, this last named practice alone may easily add \$160,000 to one year's lamb crop since each ram sires an average of 30 lambs.

In grading lambs and selling same on a graded basis the producers gained as much as \$1.00 per head, as shown by a report from Pettis

county. In this county 614 lambs marketed by grade averaged 70 pounds per head and sold for an average of \$11.85 a cwt., or \$7.91 per head. Grading and marketing costs amounted to 61 cents a head on these Pettis county lambs. In Shelby county 888 lambs were sold on a graded basis with equally satisfactory results.



Sheep pasturing winter barley on Basil McClintock's farm, Jasper county. The solid turf was obtained by drilling barley both ways.

The essential practices taught for the improvement of income from sheep and wool were the following: (1) Use of registered mutton rams, (2) treatment of flocks for internal parasites, (3) breeding for early lambs, (4) proper winter care of ewes, (5) docking and castrating the lambs, (6) grain feeding the lambs, (7) marketing lambs before July 1, (8) marketing lambs on a graded basis, (9) proper shearing and care of wool, (10) dipping of flock for external parasites.

Horse Production

A growing interest in the production of work stock was shown during the year, with 183 stallions and jacks purchased, 144 colts entered in the newly established Missouri Colt Production Contest, and 15 colts shown by 4-H club members at the Missouri State Fair. The multiple hitch was used on 2,735 farms, and farmers turned out in large numbers to attend 14 demonstrations on the care of horses' feet. In the bot control campaign, carried on jointly with the work in

entomology and veterinary science, 70,500 horses and mules were treated for the elimination of this expensive parasite.

In a demonstration with four good Percheron horses averaging 1,300 pounds each, Luther Marks in Lewis county produced 60 acres of corn, 18 acres of soybeans, and 15 acres of oats, did the usual farm hauling, and hauled 100 loads of manure with a total of 2,326 horse hours costing 9.3 cents per hour.

The horse production improvement program included the following essential points: (1) Use of registered sires of correct breed and type, (2) use of good mares for breeding purposes, (3) feeding colts to produce rapid growth, (4) control of parasites, (5) working young horses after 2½ to 3 years to help earn their keep, (6) adjusting production so that brood mares also perform some labor, (7) encouragement of the colt production contest and 4-H club colt shows.

Beef Cattle Production

For the improvement of Missouri beef cattle herds 1,280 registered bulls were purchased in 1936. Beef cow demonstration herds were continued, showing the possibilities of such herds in utilizing home grown roughage. Even in a year of high feed prices the average cost of producing a good beef calf in demonstrations was \$25.84, including the year's feed cost per cow, cost of feed consumed by the calf, bull service, interest, and taxes. At sales of feeder calves in North Missouri choice calves brought \$32.20 a head.

Records were completed on March 28 in a demonstration on feeding ear corn silage on the farm of J. R. Harness of Montgomery county. In this demonstration 14 acres of frosted corn were made into silage and fed during the period from November 11, 1935 to March 28, 1936, to good young cattle. A detailed record of all feeds used together with gains made and value of same showed that the corn thus saved had a value of \$23.36 an acre.

In a demonstration of the use of winter barley as fall pasture on the Carl H. Crawford farm in Saline county 23 head of young cattle made 2,410 pounds gain in 39 days. Figured at 6 cents a pound this gain showed a value of \$124.60 or more than \$4 per acre for the 30-acre field. The 39-day test period terminated on November 26 with a satisfactory growth of barley remaining on the field for protection of the stand during the winter.

The essential practices taught during the year for improvement of Missouri's beef cattle enterprise were as follows: (1) Use of good cows with herds culled to eliminate irregular and undesirable breeders, (2) use of only good registered bulls, (3) use of maximum roughage and grass in maintenance of cows, (4) precautionary measures to pre-

vent abortion, blackleg, and tuberculosis, (5) feeding of calves in accordance with regional feed supplies and market demands.

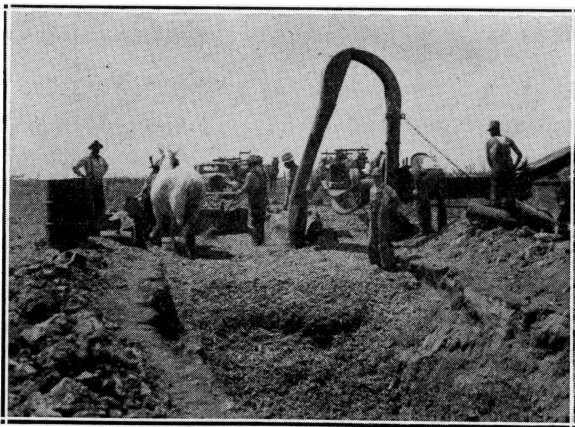
Hog Production

Missouri hog producers waged war on parasites during the past year, 6,195 men practicing some form of louse and mange control in their herds. Improvement of breeding stock also received wide attention with 2,396 registered boars added to herds of cooperators. A total of 1,204 new portable farrowing houses were made.

Forty-three hog feeding demonstrations were completed, with protein supplements such as tankage, milk, linseed oil meal, and soybean meal. Under the price relationships existing last year the use of ground wheat as a corn substitute made a reduction of \$1.26 a cwt. in the cost of gains. Demonstrations included the use of commercially produced complete feeds, and a comparison of the records on both types of rations revealed that pork was produced with home grown grains and standard protein supplements at a cost \$3.59 a cwt. lower than with commercial feeds.

County agents reported that 47,661 producers used a standard protein supplement with home grown grains for fattening their hogs.

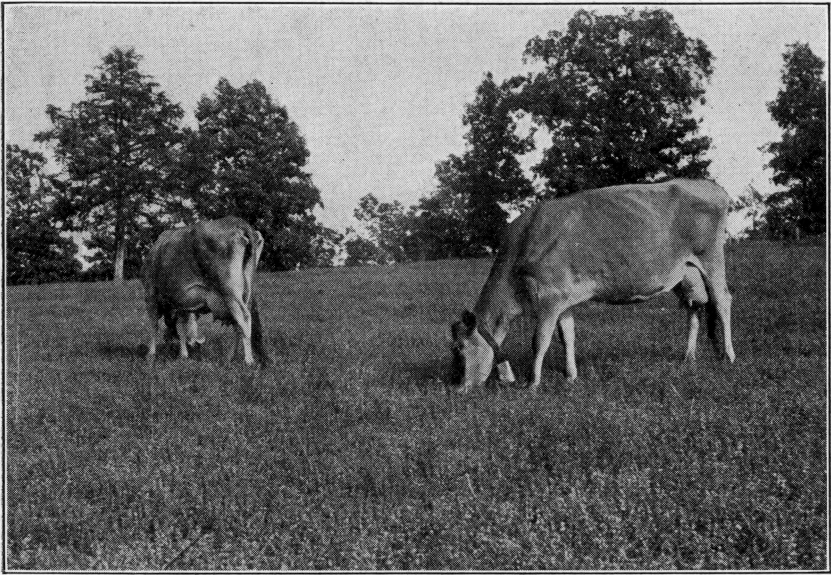
The hog improvement program emphasized the following practices: (1) Production of two litters per year farrowed in February-March and August-September, (2) full feeding of pigs to bring them to marketable weight in six months, (3) sanitation for the production of healthy pigs and prevention of waste of feed, (4) use of good pasture, preferably legumes, (5) feeding protein supplement to increase efficiency of corn and increase rate of gain.



Filling a gully with drought corn on the J. W. Jones farm in Montgomery county. A horse was used to pack the silage. The sides of the gully were smoothed off and this dirt was used to make a diversion dike protecting the silo from surface water.

DAIRY HUSBANDRY

Pasture crops for use during the hot summer months, with a supplementary feeding value of more than \$1,350,000, were produced by 37,137 Missouri dairymen following the recommendations of the Agricultural Extension Service in seeding drought resistant pastures of sweet clover, Korean lespedeza, or Sudan grass in 1936. This value is estimated by giving the 450,243 acres of such crops used a conservation value of \$3 per acre.



Lespedeza on the Noel Curry farm, Barry county. This stand, covering 25 acres uniformly, was obtained from $2\frac{1}{2}$ pounds of seed per acre sown in the spring of 1935. (Photographed August 8, 1936.)

Supplementary pastures for late fall and early spring, involving 440,440 acres, were obtained by 40,755 farmers. These pastures were winter barley, wheat, crimson clover, vetch, rye, and winter oats and were worth over \$1,500,000 saving in feed that would have needed to be purchased because of the corn and hay shortage. The pasture gained was in addition to the valuable grain crop furnished by the small grains, and enabled dairymen to produce butterfat at a feed cost of 6 to 8 cents per pound lower than that of the average farm.

A well authenticated instance of the value of supplementary late fall pastures is found in the dairy herd improvement association records from Cass county. Bliss Van Sandt, president of the association, sowed 125 acres of winter barley for pasture on September 7 and turned his dairy cattle and other livestock on the fields just 20

days later. With 34 Jersey cows on test, the feed cost per pound of butterfat in Van Sandt's herd dropped from 35 cents in August to 27 cents in November even after charging for the pasture at \$1 per head per month. A 25% increase in pounds of milk per cow per day was also recorded in this herd in November as compared to their September record, and the cows also showed a 20% improvement in flesh. The herd was maintained thus successfully on the barley pasture for three months, together with 113 head of other livestock.

Roughages and Mill Feeds

There were 11,274 dairy farmers who grew and fed 225,000 acres of legume hay as a part of their roughage during 1936. In conserving the feed value of immature drought corn, more than 10,000 temporary silos were used for storing over 400,000 tons of silage that had an additional feeding value over corn fodder. At a conservative estimate of \$3 per ton this silage was worth over \$1,200,000.

More than 5,000 farmers mixed and fed the grain ration recommended by the Extension Service, with 237 mills and feed mixing plants cooperating in mixing and offering for sale grain rations as recommended by the Missouri College of Agriculture.

Improvement of Dairy Products

As a result of the continued campaign for improvement in the quality of Missouri dairy products and marketing methods, new markets for Missouri sweet cream have been established because of its improved quality, and the state has received nation-wide recognition for its sweet cream. The volume of No. 1 cream purchased at buying stations and creameries has been increased, with a corresponding decrease in the volume of No. 2 cream produced on Missouri farms. As a commendable part of this campaign, sanitation was improved and cooling facilities were installed in more than 2,000 cream buying stations, and the more frequent delivery of cream to stations and creameries was encouraged.

Improvement in Breeding

Bull associations have proved the most practical means of establishing community dairy breeding centers in Missouri. Five new ones were organized in 1936, bringing the total to approximately 30 owning 103 selected sires. Members of these associations obtained selective breeding at an average cost of less than \$40 per farmer.

Through the county sire exchange system, 1,105 purebred sires were purchased by dairymen and 42 sires were exchanged. Many of the new bulls replaced scrubs. Through this system exchanges are made that save money for the owners, while many good bulls are saved.

Dairy herd improvement association testing activities have extended into about half of the counties of the state, with services available in nearly every dairy section. Twenty-three associations operated during the year, with 288 dairymen obtaining records of production, feed, and income on each of 6,330 cows in their herds. Through this information these owners were enabled to feed according to production, cull their unprofitable cows, and establish desirable breeding programs whereby they could secure progeny performance records on their sires and keep the daughters of the superior sires and the best cows.

The testing program resulted in the elimination of more than 900 low producing and boarder cows from herds in the testing associations. The removal of such cows saves the owners from \$5 to \$30 on feed costs, because such cows were not able to produce sufficient milk and butterfat to pay for feed costs alone. If the products from these cows had been sold as cream for buttermaking during the last year, all cows producing less than 150 pounds of butterfat would have returned their owners only about \$5 per cow above feed costs, maintenance, etc.

On the other hand, those cows that produced 275 pounds or more of butterfat per year would have returned their owners approximately \$45 per cow above feed cost.

A still greater achievement of the associations during the last year was the furnishing of animals of superior quality for the maintenance and building up of quality milk-producing stock in the state in general. The elimination of a large number of low-producing cows not only renders the farmer a service by increasing his immediate income, but reduces the damaging influence of low producers among the females bred in the herds of the state at the present time and during coming years.

Disease Control

Work in the eradication of Bang's disease was the principal item in disease control during 1936, with 17,638 farms following a disease control program. There are now 370,584 head of breeding cattle, or 21½% of all breeding cattle in the state, under supervision in the Bang's disease eradication program.

Breed Exhibits

Nine Jersey parish shows held during the year had over 500 registered Jerseys exhibited by 130 owners, and were attended by more than 1,300 persons. Seven of the show districts showed their district herds at the State Fair. The Holstein Black and White shows were held for the first time in Missouri during 1936, with five shows exhibiting more than 200 head of Holsteins. Four herds were exhibited in the Black and White Show at the State Fair.

POULTRY HUSBANDRY

Measurable current benefits amounting to nearly three-quarters of a million dollars in immediate savings and increased earnings were received during the past year by the Missouri Poultry producers who cooperated with the Extension Service in its poultry improvement program. This total includes \$126,480 saved through reduction in the loss of baby chicks, \$385,250 gained through better development of early laying pullets, \$163,913 reduction in cost by use of chick starter made of home-grown feeds, \$35,827 saved by control of disease, and \$9,417 added to egg sales through quality improvement and better marketing.



Part of the 1,700 turkeys raised according to the best feeding and sanitary practices by McCarty Brothers, Polk county.

These benefits were shared by more than 48,700 farm families who applied one or more of the recommended practices in their poultry operations during 1936. Such widespread participation would have been impossible without the active cooperation of the 1,544 farm leaders who contributed time and effort to the improvement of poultry practices in their respective communities throughout the state. Valuable assistance was given also by progressive hatcherymen, produce dealers, the Missouri Farmers Association, the Missouri Farm Bureau Federation, and the newspapers and farm journals of the state.

These steps in poultry improvement have been of great importance to consumers also; not only because of the increased purchasing power thus developed for use in general industry, but also because of their tendency to maintain the supply of poultry and eggs more nearly in line with consumer demand. This has been particularly important in relation to the supply of eggs following an extremely unfavorable drought year when decline in production and the liquidation of poultry flocks have been unusually severe. The application of sound and economical production practices not only eased the problems of the producer, but will also more nearly insure a supply of eggs within reach of the average consumer's purchasing ability. In addition, efforts directed toward the improvement of poultry and egg quality will result in ultimate benefit to the general consuming public.

Growing Healthy Chicks and Pullets

Nowhere in the poultryman's enterprise were larger opportunities for saving found than in the brooding of chicks and the development of the pullets that were later to constitute the laying flocks. It is worthy of note, also, that while many thousands of dollars were saved during the past year by economical feeding, sanitary brooding, and careful management of the growing stock; so also the potential earning power of next year's laying stock is made greater by a similar margin because of the larger size, better condition, and more timely maturity of the pullets thus developed. Thus it is seen that the benefits of this year's work will continue over into the succeeding year, for records on hundreds of Missouri flocks have shown that pullets raised by the "Grow Healthy Pullet Plan" produce an average of 24 more eggs a year and return a 40% larger income than pullets raised by ordinary methods.

Demonstrations involving all the practices included in this plan of growing healthy pullets were conducted last year by 317 producers who successfully raised 97.6 per cent of the 129,442 chicks placed in their brooder houses. Furthermore, 13,175 additional producers followed the same essential practices under less formal supervision and raised to the age of eight weeks an average of 120 more chicks per farm than the average producer of the state, or a total of 1½ million additional chicks saved by the better methods. Reckoned at the cost of baby chicks only, 8 cents each, and taking no account of waste of feed under ordinary methods, these producers realized a saving of \$126,480 on the extra chicks saved. From these additional chicks these cooperators developed to healthy maturity some 527,000 pullets, thereby adding \$385,250 to their net inventory.

In following the best sanitary practices, producers on 851 farms vaccinated 143,000 pullets to prevent chicken pox infection which annually reduces the net income 25 per cent per bird in infected flocks. This action prevented losses which normally would total \$35,827 on these farms. On one Jasper county farm the loss from this disease resulted in the death of 240 hens in 1936. This flock was vaccinated in 1936 and no loss was experienced.

Very welcome savings in feed were realized by those growers who used 16,391 tons of home-mixed chick starter feed in utilizing farm grains in combination with commercial meat scrap and dried milk. The savings resulting from the use of these rations averaged \$10 per ton, or a total of \$163,910 with home-grown grains valued at market prices.

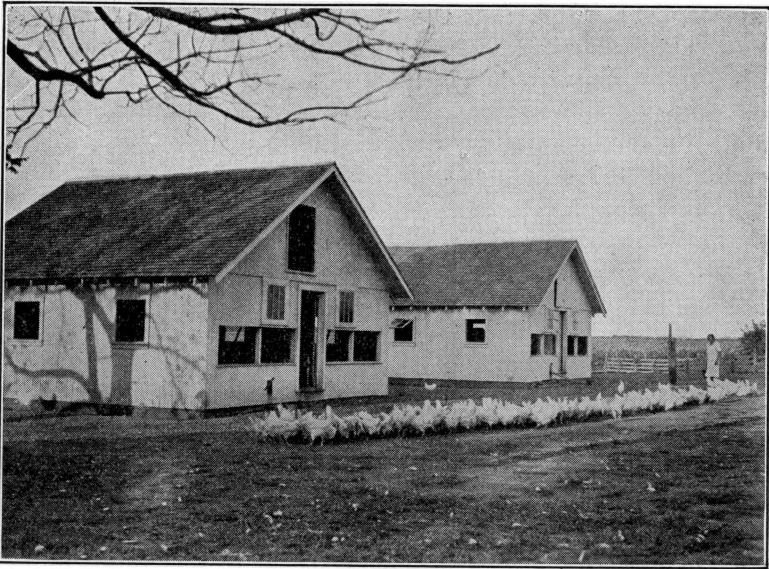
Reports of successful pullet production through the application of essential production practices were reported from all sections of the state. The following are brief typical examples: Mrs. Melvin Watt and Mrs. C. K. Carver of Sullivan county raised 96 and 98 per cent respectively of the 825 chicks started. A. E. Marte, Barton county, raised to maturity 299 of 300 pullets handled according to recommendations, as compared to 35 of 100 under ordinary conditions on the same farm. In Dallas county, M. V. Rea lost only 11 of 320 chicks during the first 8 weeks, and Mrs. J. W. Owensby obtained 50 per cent egg production in September from pullets hatched March 25.

In addition to some 13,000 producers who followed all the essential recommendations, 35,773 other producers followed one essential of hatching or purchasing their chicks before May 1; 26,734 fed their developing pullets adequately; and 9,271 went an additional step in providing roomy, sanitary quarters which are necessary if the best quality pullets are to be matured.

Feeding, Housing, and Breeding

Missouri poultry raisers experienced one of the most difficult situations in three years, beginning in July and continuing through October, 1936. Drought conditions not only adversely affected egg production and growth of young stock but also resulted in unusual feed price advances which created a most unfavorable relationship between the selling price and production costs of poultry and eggs. Leading poultrymen in 68 counties cooperated with and assisted the Agricultural Extension Service in publicizing and applying recommendations which helped to make the best of this situation.

Producers were advised not to market their flocks indiscriminately because of the immediate loss experienced from prevailing low poultry prices and the pyramiding of these losses in terms of high replacement



In these Missouri poultry houses on the Jay Hickman farm, Hickory county, home-mixed rations were used to develop a healthy laying flock and to maintain it for profitable performance during the following fall and winter.

costs in the spring and summer of 1937. Marketing of undesirable hens and unthrifty pullets, adequate feeding, and proper flock management were recommended as a means of maintaining egg production and the vigor of developing young stock. Economical ration formulas were prepared involving the use of small grains available on the farm. Prevailing egg prices and the outlook for 1937, as well as producer results, reported from widely scattered points in the state, proved the soundness of these recommendations.

A concrete example of this comes from Henry county where P. J. Mayer, I. N. Howerton, L. H. Beaty, and V. Kupka in following these recommendations obtained an average of 36 eggs per bird during September, October, and November, as compared to other producers in the county who received less than one-third as many eggs from their birds. These successful producers obtained a monthly gross income which averaged \$110 per month as compared to \$10 monthly gross returns from other farms where records were available. H. H. Hill of Adair county reported a net yearly income of \$1 per hen by following the recommended feeding and management practices despite the unfavorable feed situation.

Adequate comfortable poultry housing constitutes one principal consideration having a direct relation to net income. Satisfactory

returns, even with the best of feeding and breeding, are dependent upon this type of physical equipment which must be adequate but economical. Many poultry houses over the state lack the requirements of comfortable housing but can be economically remodeled to provide these essentials. Such remodeling was done this year on 1,717 farms in 91 counties at extremely low cost because in the majority of instances the work involved rearrangement of the houses and utilization of existing material in the house and on the farm.

Records indicate that comfortable housing, as compared to less adequate housing, not only increases egg production at least 18 eggs per hen annually, but also affects distribution of this production in favor of higher priced winter eggs. Based upon the adequate housing of 150 birds in each of the remodeled houses, using 18 additional eggs, and a 6 cent average net value per dozen which prevailed during the year, this remodeling work of 1936 should swell net poultry incomes by a total of \$23,179 during 1937. Remodeling costs on demonstration farms reveal that this increased net return will more than pay the total cost the first year.

Mrs. William Niehoff, Dade county, remodeled a decidedly unsatisfactory poultry house, doubling its size, improving its proportions and providing comfortable quarters for 200 birds, or twice the number formerly housed. The total cost of this work, including the installation of a thin-section concrete floor, was only \$19.35. In Jasper county, Carl McClintock doubled his housing capacity at a cost of \$23.72, at the same time transforming an inefficient house into one embodying all the better features.

In carrying out the clean range essential of growing healthy chicks, 1,669 portable brooder houses were constructed, and 560 less satisfactory stationary brooder houses were made portable. Additional new construction included 766 summer shelters and 547 wire sunporches.

To head their breeding flocks during the year, 1,437 farmers in 66 counties used record of performance males, or males from certified matings. While the actual value of this breed improvement work in its ultimate effect on the poultry industry is difficult to determine, records covering a 15-year period show that hens laying more than 200 eggs return \$2.33 more per year than hens laying fewer than 100 eggs annually. Cassel Welker of Madison county, in reporting the net returns from well bred pullets obtained from an outstanding breeder, as compared to 1200 birds of good but less productive breeding comprising his general flock, said that if the production per bird of his general flock equalled that of his breeding stock his annual net income would be approximately \$1,000 greater.

Record Keeping

The fundamental problem of business analysis was attempted by 652 poultry raisers in 102 Missouri counties in 1936. The year's record was completed by 315 of these, and each was supplied with a summary of his poultry enterprise. The value of this information to the producers who kept these records stands out as a major activity in the extension poultry program. Actual financial comparisons obtained from such records serve frequently as a basis for a shift in emphasis from some crop or livestock enterprise to poultry production.

National Poultry Improvement Plan

The National Poultry Improvement Plan made slight gains in Missouri in 1936. The number of Record of Performance breeders increased from 15 to 18 and that of U. S. Certified breeders from 60 to 80. The number of hatcheries participating in the plan increased from 1 to 24 having a combined incubating capacity of 1,153,000 eggs.

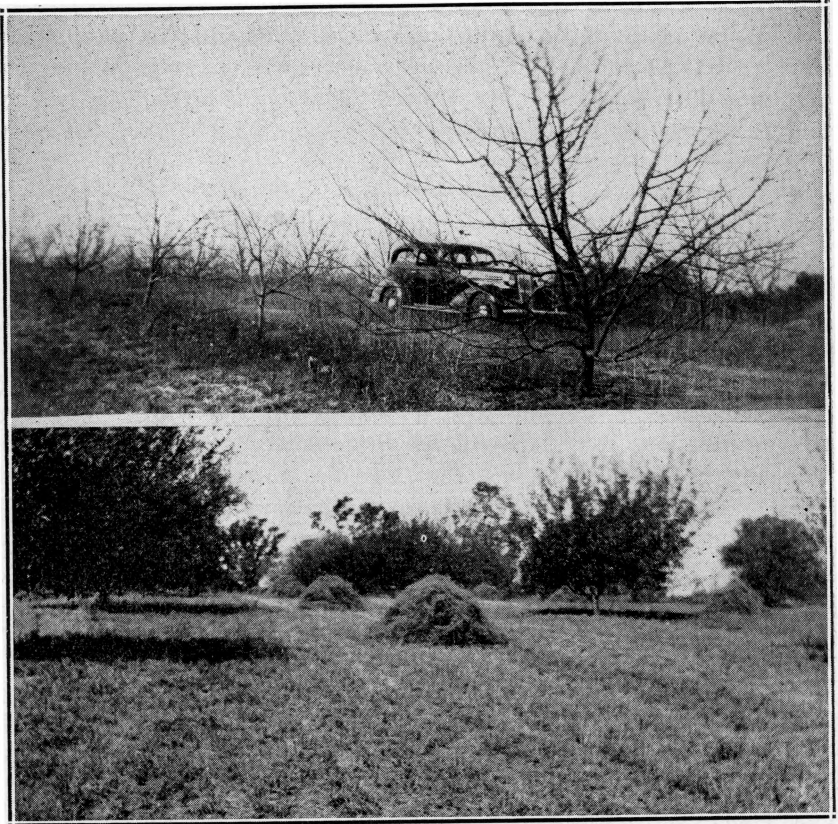
HORTICULTURE

Horticulture extension work proved of value to a large number of fruit and truck farmers in 1936 despite the unfavorable weather of the season. Economical garden practices, well-rounded orchard management, adapted spray schedules, garden and orchard record keeping, and melon grading were stressed particularly.

A total of 10,809 farmers followed the gardening practices recommended by the Extension Service. Records kept by home garden cooperators showed that they made an average net profit of \$48.25 per garden. Early season crops produced satisfactory yields in many parts of the state but the later maturing ones were severely damaged by the weather. Extension workers gave out information on planning the garden, planting and caring for it, growing a fall garden, and preparing ground for the next year's crops.

Orchard management work stressed the use of proper spray schedules, the local adaptation of schedules, and the partial control of biennial bearing. Regular monthly orchard management meetings were held in 11 districts serving 22 counties. A spray letter service went to commercial orchardists telling of insect pest development and giving them spray suggestions.

Special emphasis was placed on teaching growers to adapt the general Missouri spray schedule to the particular season and to their par-



The orchard shown in the upper picture was not protected against grasshoppers; while that shown in the lower picture was protected by poison bran bait. Both orchards were in the same locality in Andrew county.

ticular location and varieties. Detailed information was given concerning spray materials, life history of insects and plant diseases, varietal behaviors and the value of a definite spray schedule for each variety, and the determination of the amount and kind of spraying that is most economical for individual conditions.

Biennial Bearing

In an effort to partially control the biennial bearing habit of fruit trees, extension workers emphasized three practices. They were the applying of fertilizer with nitrogen in the spring and fall of the "off" year and no fertilizer during the "on" year; heavy pruning, if necessary, during the dormant season following the heavy crop; and the early and heavy thinning of fruit during the "on" year.

Orchard Account Keeping

A new phase of orchard management work was the offering of direct specialist supervision and assistance to cooperators in keeping accounts. Fifty-one orchardists started the accepted accounting system and 16 completed their records.

Melon Grading

The work done on grading melons returned a premium of more than \$20 per car to those cooperators who participated. The Bertrand grading club of Mississippi county kept records which showed that a car of graded melons sold for \$150 while ungraded melons of the same average weight sold for \$130. Other clubs had similar experiences. This increase was obtained with no additional cash outlay. If these recommendations were followed by all commercial melon growers in Missouri, the increased income to the melon section, based on the 1936 production of 3,780,000 melons, would amount to \$75,600.

Commercial Gardening

Some 5,865 commercial truck crop growers used practices recommended by the Extension Service. Use of commercial fertilizer, seed treatment, new varieties adapted to the particular district, quality improvement, and disease and insect control were the subjects stressed in commercial work. Extension workers gave valuable assistance in the rehabilitation of the strawberry industry.

Aid was given by the Extension Service in the purchasing of surplus apples by the Federal Surplus Commodities Corporation and their distribution to needy families by the Missouri Relief Commission. These purchases included 47,826 packed bushels and 416,840 pounds of bulk apples.

FORESTRY

Extension forestry work in Missouri—established in July, 1936—has made a forward step in replanting throughout the State, through an agreement with the U. S. Forest Service whereby planting stock will be distributed from the Federal nursery at Licking to farmers for spring planting at nominal cost. This proposal has brought a ready response from farmers in all sections of the State, and 33 counties have applied for 160,000 seedlings for farm reforestation in the spring of 1937.

Under this agreement 150,000 black locust, 50,000 shortleaf pine, 10,000 American elm, and 5,000 silver maple seedlings will be available at nominal cost to farmers for use in participation in the Agricultural Conservation Program. Limited amounts of other conifers for demonstrations in experimental planting of windbreaks and waste farm areas will also be supplied through the Extension Service.

All of the stock distributed in the spring of 1937 will be handled through county agents, and the extension forester will personally supervise at least one planting project in each county. Forest planting stock has never before been available to Missouri farmers except by purchase from commercial nurseries.

Negotiations are now under way for the Forest Service to raise 1,000,000 tree seedlings for farm planting under the Agricultural Conservation Program during the planting season of 1937-38. With the experience gained in the initial planting program in the spring of 1937, Missouri farmers will be able to carry on planting in a profitable and satisfactory manner.

There is wide public interest in farm forestry throughout the State, and the forestry project of the Extension Service has received very satisfactory cooperation in all of its relationships with local leaders and existing organizations.

One county-wide forestry 4-H club meeting was held in Ellington in late November, which was attended by 275 members and 65 others. This meeting was held in cooperation with the county superintendent of schools and with the U. S. Forest Service, which furnished the afternoon program and transported all club members and leaders in E.C.W. trucks from outlying district schools.

One county-wide forestry meeting and tour of vocational agriculture students and teachers was held in Bates county by the Extension Service and Soil Conservation Service cooperating. One hundred twenty-five high school students and four teachers attended this meeting, which was held at the CCC camp at Butler.

Instruction in forestry was given at two district 4-H club camps, and at the State Conservation Camp. An all-day tour of the Gardner National Forest area was the main feature of the Conservation Camp, with visits to forest road and trail construction projects, stand improvement projects, a forest fire lookout unit, and the federal tree nursery at Licking, which had an output this year of approximately 11,000,000 trees for reforestation. A total of 524 members of 4-H clubs received instruction in forestry during the five days spent at these three camps.



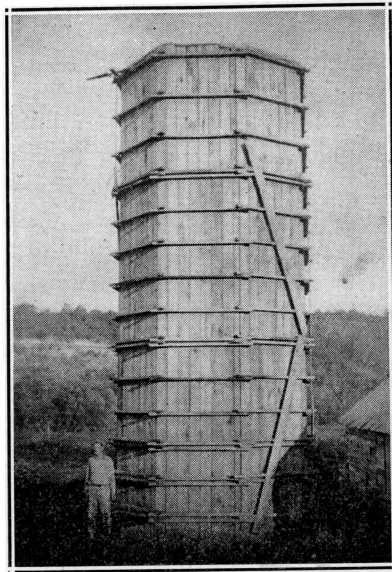
Hardy catalpa planted about 1910, Cooper county. Best trees are now 14 inches in diameter at breast height.

Two meetings have been held with home demonstration agents and women's club leaders for instruction in shade and ornamental tree planting, yard improvement, and pruning and fertilization of trees seriously weakened by the 1936 drought.

Farm forest land comprises almost 9,000,000 acres in Missouri. Over 2,000,000 acres additional have been retired from farm use because of low productivity. This makes a total of 11,000,000 acres or 25% of the entire area of Missouri, directly concerned with a farm forestry program.

AGRICULTURAL ENGINEERING

In a year of severe need for conserving feed for livestock, Missouri farmers following the teachings of the Agricultural Extension Service were able to turn into valuable succulent feed a corn crop so badly injured by the drought that it was worthless as a grain crop and of questionable value as fodder. In temporary silos, 1,183,416 tons of drought corn and cane fodder were salvaged, adding \$3,550,248 to the worth of these crops on the basis of a \$3 per ton increase in feeding value as silage compared to that of plain fodder.



A native oak lumber silo in Phelps county, typical of hundreds built last summer throughout the Ozark Region. This silo has a capacity of 60 tons. The material cost \$30.

As a result of the severe drought of 1936 it was imperative that all available farm feeds be saved. Throughout the entire state most of the feed available last summer consisted of roughage in the form of dry, standing, immature corn that would make good feed only if properly preserved. The value of the temporary silo for salvaging the food value in drought fodder had been adequately proven in 1934, and was again reemphasized in 1936. Through the use of trench silos many farmers have found that they can keep a reserve supply of forage for use in "off" years.

Since six years ago when the first trench silo was dug in the state, there has been a great increase in the number of this type of structure—

12,354 of them being used in 1936. The paper sack silo, requiring but a small amount of labor in its construction, has also increased in popularity—3,430 of them being used in 1936. There were 1,850 wood silos and 1,440 of other types used, making a total of 19,164 silos with a total estimated capacity of 1,183,416 tons, or an average of 62 tons each.

Rural Electrification

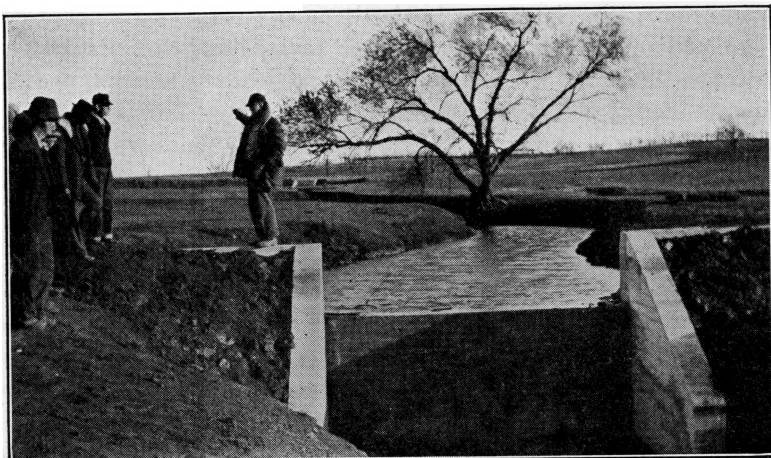
With a quickening of interest in rural electrification, the Extension Service was ready with suggestions to aid farmers in securing electric service. Allotments have been approved by the Rural Electrification Administration for 12 Missouri counties, covering 1,687 miles of line for 5,831 customers and involving a cost of \$1,614,000. In Lewis county, 105 miles of line are now under construction, and specifications have been approved for 155 miles of line in Marion county. Other REA projects for which allotments have been approved are as follows: Callaway county for 110 miles of construction serving 334 families; Boone county, 127 miles serving 478 families; Andrew and DeKalb county project, 195 miles serving 585 families; Ralls county, 300 miles, serving 973 families; Howard county, 130 miles serving 450 families; Dent-Phelps-Texas project with 153 miles of high line serving 585 families; and the Perry county project with 127 miles of line serving 613 families. The magnitude of this program is shown by the fact that these projects involve one-third as many Missouri farms as the total number now having central station electric service.

Farm Buildings

The construction of temporary silos was only a part of the assistance given in connection with building or repairing farm buildings. More than 11,500 buildings were constructed in accordance with suggestions from the Extension Service, with a total value in service or savings of \$670,800. Other buildings were remodeled, repaired, or painted with total value of service or savings amounting to \$78,578. Low cost methods of remodeling old buildings were stressed, particularly with poultry house remodeling. A typical example is that on the farm of Carl McClintock in Jasper county, where an old 12x20 shed-type poultry house was remodeled into a gable roof 24x20 house. This complete remodeled job was done at a cost of less than \$50 which included the concrete floor.

Terracing and Drainage

Almost 26,000 acres of Missouri farmlands were terraced in 1936, bringing the total of terraced acres in the state to 139,210. Farmers



Concrete dam designed to stabilize a gully on a Jackson county farm.

who own and operate terraces have made estimates as to their worth per year—this estimate ranging from \$20 per acre with some farmers in some years, down to \$1.50 per acre per year with others. If the lower figure (\$1.50) is used, it means that the state now realizes \$210,207 per year because of these terraces. This figure is based on the annual increased income due to the terraces and does not include the value of the conserved soil for years to come. If the average figure of \$5 per acre estimated by many farmers was used, it would place the annual income to the state at \$697,442 from terracing alone.

An example of the value placed on terraces by individual farmers comes from Cooper county where Morton Tuttle has 275 acres terraced, starting this work six years ago. Among the fields terraced is one which Mr. Tuttle thought was practically ruined before it was terraced, but after terracing, liming, fertilizing, and using a good cropping system he feels that the terracing and soil treatment on this field are the best investment he ever made. A 20-bushel per acre superiority in yield in 1935 on this terraced field, over that of adjoining unterraced fields, he attributes to the fact that the field was terraced and contoured. One short rain of high intensity came when the crop was in great need of moisture. On other fields practically all of this rain was lost, but on this particular field nearly all of it was retained. This accounts for the difference in yield, Mr. Tuttle believes.

The need for maintenance of existing drainage ditch construction resulted in profitable work on 88,702 acres, which had an estimated value of \$163,970. One of the most important contributions was correction of difficulties caused by overfalling laterals. In one typical case

a main drainage lateral in the Little River Drainage District had been so dammed up, within a month after redredging, that its effective depth had been reduced three feet. The introduction of specially designed overfall structures made of thin section concrete, and economical enough to warrant rather extensive use, found ready acceptance in correction of this trouble.

Conserving Water Supply

The succession of dry years has forced many Missouri farmers to realize their dependence upon ponds for stock water, and how inadequate their present ponds are in very dry years. As a result, 2,876 new ponds were constructed in 1936. An additional 12,638 ponds were cleaned out or reconstructed. As a result of succeeding droughts several Missouri farmers have turned to irrigation systems. Eighteen farmers using some form of irrigation in 1936—on a total of 216 acres—reported savings estimated at \$11,924.

Farm Machinery

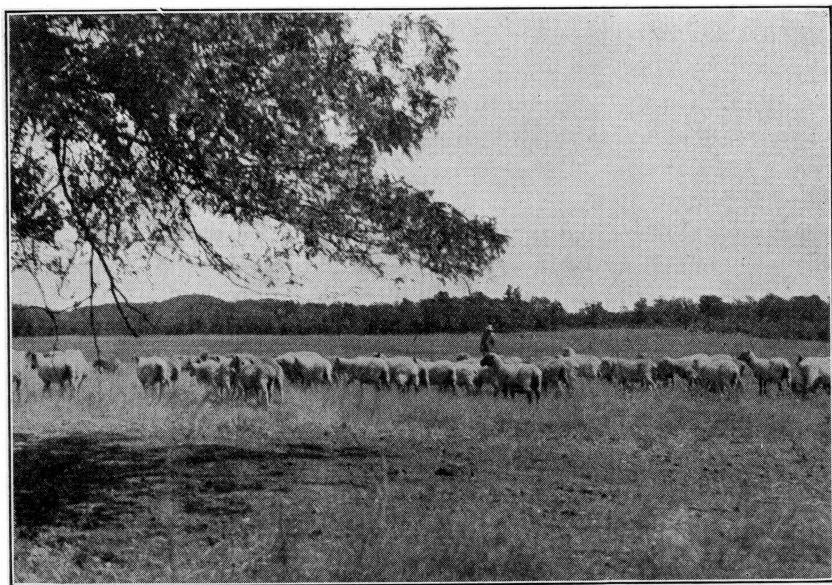
Suggestions given in the use and repair of farm machinery had particularly good returns, realizing a total estimated saving of \$23,851. The use of better types of machines for particular jobs had an estimated saving or service of \$13,085; 1,913 machines were repaired and maintained at a saving of \$9,319; and 344 farms made more efficient use of their machinery at a saving of \$1,447.

Quality Egg Program

Cooperative assistance was given other extension projects in the Southwest Missouri quality egg production and marketing program in 10 Southwest Missouri counties. Plans were furnished for the construction of commercial and farm egg coolers, and for the remodelling of farm basements for egg storage.

SOILS AND FIELD CROPS

More than 180,000 Missouri farmers followed suggestions of the Agricultural Extension Service in 1936, in meeting the problem of producing crops adequate for profitable livestock maintenance and at the same time retaining or building up the fertility of their soil. The extent of this beneficial cooperation is seen in one item alone—the seeding of 250,000 acres of winter barley. This, with the increase in the acreage seeded to wheat and rye, indicates that Missouri farmers are reducing corn acreage and substituting small grains which can be used for pasture as well as grain, and which escape drought hazards much better than corn.



Ewe flocks of Joe H. Ayres, Barry county, early in August, 1936, after they had been put into good condition for breeding by pasturing down a combination of barley stubble and crimson clover. They are here shown on lespedeza pasture.

The seeding of 1,500,000 acres of Korean lespedeza on crop land indicates the important position of this crop in the conservation system of farming being developed in the State. With the exception of Korean lespedeza, the spring seedings of legumes were mostly killed by the drought but the lime applied, fertilizer and legume inoculation used, the acreage of fall seedings and the preparations for spring seedings in 1937 all indicate definite advances in soil conservation through the use of adopted legumes. In spite of the drought, more than 400,000 tons of limestone were used by some 12,000 farmers in insuring greater

success with legumes on their farms. This represents an increase of more than 200% over the amount of limestone used in 1935. More than 11,000 farmers used legume inoculation, while commercial fertilizer was used by 53,939.

The Use of Pure Seed

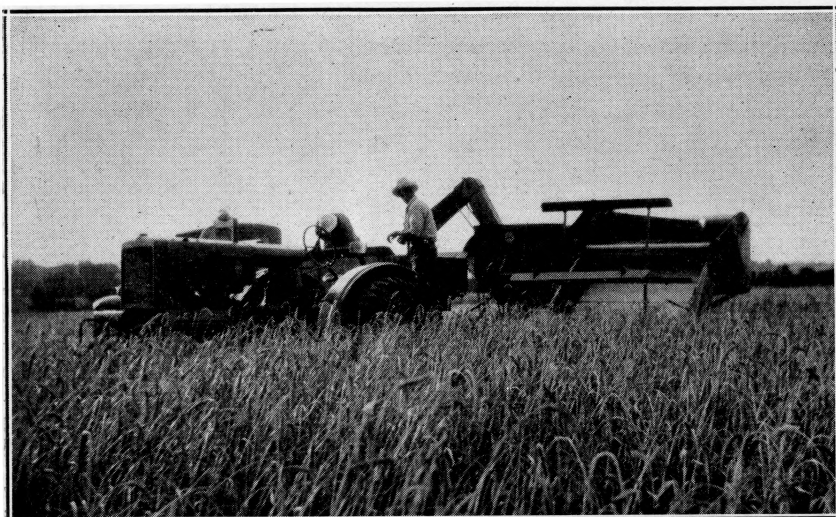
An estimate of the value Missouri farmers placed on the system of seed inspection and certification carried on cooperatively by the Missouri Corn Growers' Association and the Agricultural Extension Service is seen in the large increase in the use of certified seed in 1936. In 100 counties 5,867 farmers used certified seed, compared to 3,234 in 87 counties in 1935. In 98 counties 10,485 farmers had seed tested for germination and purity. The total number of bushels of seed certified included 48,742 of barley, 32,000 of cotton, 31,863 of oats, 14,875 of wheat, and 1,973 of corn.

Because of the apparent value of Missouri Early Beardless Barley, a special effort was made to increase the stocks of certified seed of this variety. As a result of this effort, 48,742 bushels of barley were produced for certification. A similar effort is being made with Early May wheat and it is expected that from the 1,500 bushels of seed distributed this year enough seed will be available to put out acreage sufficient to furnish ample seed stocks in 2 to 3 years.

With seed stocks of all kinds at a low point throughout the state, every effort was made to encourage the saving of seed, especially corn, kafir, lespedeza, and red clover. The adoption of new cropping systems in the state shows the need for reliable and dependable sources of these crops. It is the aim to meet this need by helping make available, at a reasonable price, pure seed of the varieties of crops used in each community. A survey of the seed corn situation last fall revealed that 26 counties have available for sale and in excess of their own needs 700,000 bushels of corn suitable for seed while 25 counties have enough for their own needs, and 63 counties will have to buy 200,000 bushels.

Cereal Production

More than 145,000 farms adopted one or more recommended practices of the Extension Service in the production of cereal crops in 1936. With 250,000 acres of winter barley seeded, this crop has assumed an important place in Missouri agriculture. The extreme droughts of 1934 and 1936 served to emphasize the adaptability of this crop under Missouri conditions. As a result of demonstrations showing its value as a fall pasture, and as a spring grain crop maturing before drought, chinch bug, grasshopper, and other crop hazards, the acreage seeded in 1936 was limited only by the seed available.



Combining a field of Missouri Early Beardless barley on the Roy Clough farm in Saline county.

Typical results from the use of winter barley are those of Louis Wehrman, Lincoln county, who in the fall of 1935 seeded 8 acres of medium quality bottom land to Missouri Early Beardless barley, using 2 bushels of certified seed and an application of 200 pounds of 16% phosphate per acre. During the fall of 1935 and the spring of 1936 he obtained 66 cattle days of pasture per acre. In addition to this feed in the form of pasture, he harvested 25 bushels of high quality grain per acre in a year in which his corn crop was almost an entire failure.

Legume Production

Increased emphasis was given legume growing this year through the impetus of the SCDA program. It is estimated that 1,500,000 acres of Korean lespedeza were grown on crop land in the state this year. Due to the ease with which lespedeza fits into continuous rotation systems with small grains, thus producing a legume on the land each year for soil conservation and a small grain for hay or pasture, great emphasis is now placed on methods of handling the crop in a rotation system.

With seed for new seedings so high as to be practically unobtainable, volunteer stands assume great significance in maintaining the acreage of this legume. From Barry county comes a report of how some 28,000 acres of Korean lespedeza went through the drought this year: "The rains began in September and farmers all over the county

began to report the wonderful recovery made by the lespedeza stands. During October, SCDA reporters began to come in with reports of good stands of lespedeza all over the county. Only two reports have come in of seed to be harvested this year, and only one report of lespedeza hay having been harvested. It is felt, however, that Barry county will have about as large an acreage of lespedeza in 1937 as it had in 1936, and with normal conditions prevailing in 1937 should harvest enough seed to enable farmers to continue to seed lespedeza until all the wornout, eroded land is covered with this crop and all the small grain crops are grown in combination with it."

Alfalfa continues to be a legume of importance in the state. The experience of R. H. Watson, Gentry county, shows the possibilities of this crop in Missouri. Mr. Watson, who limed and fertilized 30 acres of bluegrass land for alfalfa, secured a perfect stand. In the second year of the crop (1936), despite dry weather and the grasshopper invasion, he harvested three cuttings of excellent hay, making more than 3 tons per acre.

Sorghum Production

Sorghums, particularly Atlas Sorgo, proved their value as forage producers in Missouri under severe drought conditions of 1936. The experience of John Jack, Dent county, emphasizes the value of this

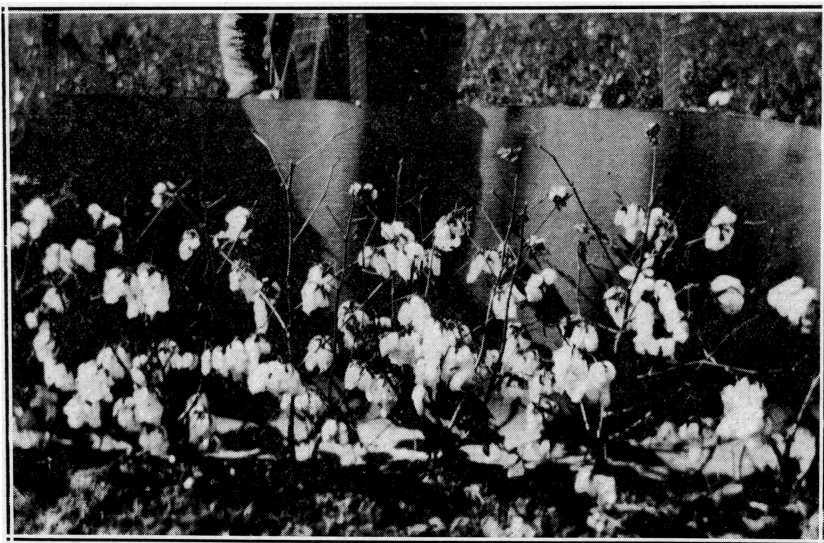


Atlas sorgho in Dent county. This field of 13 acres on the farm of John W. Jack, yielded 8,750 pounds of seed that sold at 8 cents a pound; also made a second growth yielding 175 tons of silage which was sold at \$4 a ton. Total gross return \$1,400. Corn on similar soil yielded 15 bushels an acre.

crop. From 13 acres of Atlas Sorgo, Mr. Jack harvested 175 bushels of seed worth around \$700. He also put up 175 tons of silage which he sold in the silo for \$700. Thus the 13 acres gave a cash income of approximately \$1,400 in a year when corn in an adjacent field failed to mature any grain.

Cotton

Work in cotton variety improvement was continued in 1936, with the program definitely started in Pemiscot, New Madrid, Mississippi, and Stoddard counties. This program, based on the one variety cotton community idea, involves making available at each gin center pure seed of the recommended varieties, and in securing the cooperation of the gin operator so that the seed will be kept pure and will be used.



Stoneville 4A cotton on the J. R. Long farm in Mississippi county. This field of 16¾ acres yielded 29 bales of cotton weighing 500 pounds each.

In the four counties in which this program was in operation this year, cotton from the pure seed has been selling on the market for as much as 120 points above the average cotton from the community. This added value of around \$6 per bale, in addition to the increased production secured by the use of the better adapted varieties, is going to have much influence in causing growers to adopt the better varieties, especially when the ginners in their communities have available the purebred seed at a price very little above the price of ordinary seed.

All Year Pasture Improvement Contest

In the pasture improvement contest, sponsored by the Missouri Agricultural Extension Service and the agricultural departments of the Kansas City and St. Louis Chambers of Commerce, J. L. Stone of Newton county was state winner. In addition to winning the silver trophy for state championship he also won \$30 for placing first in the southern district of the state. Other winners in this district were George Stark of Iron county (\$22.50) and Frank Johnson of Mississippi county (\$15).

Other district winners who won similar prizes were as follows: Northwest district, W. A. Crouch, Clay county and J. R. Houx, Johnson county; North Central district, Chenault Todd, Howard county, J. H. and J. R. Gibbs, Howard county, and Earl Lowden, Linn county; Northeast district, Richard Tarleton, Marion county, and P. N. Day, Lewis county.

Despite adverse weather conditions this year most entrants were able to make worthwhile progress in developing an all-year pasture system. This enabled them to produce their livestock at a lower unit cost, improve their permanent pastures, reduce the amount of soil erosion on their farms, and maintain their soil fertility.

Agricultural Limestone

As an aid in establishing successful stands of legumes and other soil conserving crops, 403,821 tons of agricultural limestone were used by 12,885 farmers in 105 counties, in 1936. This is more than three times the amount used last year, and nearly twice as much as the previous high record in 1929. By far the largest part of the total tonnage of limestone used was crushed by local pulverizers. The SCDA program was largely responsible for the big increase in the total amount of lime used, while the activities of the Federal Soil Conservation Service and CCC camps were largely responsible for the large increase in the total crushed by portable pulverizers. There were 241 portable pulverizers in operation in Missouri during the year.

Benefits resulting from the application of limestone are emphasized in an example from Lincoln county: "Martinek Brothers, who operate a farm about 4 miles west of Troy on Highway 47, harvested this year 38 tons of choice clover hay from a 40-acre field which was treated to 3 tons of agricultural lime per acre in 1934. They sold this hay in Troy at \$18 per ton, realizing a return of \$684. When consideration is given the fact that this land is rather thin Putnam upland soil, valued at possibly \$25 per acre before it was treated to the lime, it is quite evident that Martinek Brothers were well repaid for the time and trouble

of applying lime in order to realize a return of \$684 in cash during the drought of 1936.”

In addition to the large tonnage of regular agricultural limestone, 2,603 tons of fine limestone were used in connection with the seeding of legume crops. Fine lime is drilled in either at the time of seeding the legume or shortly before, the fundamental idea being to furnish the calcium needs of the legume plant rather than to correct the acidity of the soil itself.

As a result of the increased interest in the use of agricultural limestone, 2,209 samples of rock and ground limestone were tested for calcium carbonate equivalent at the College of Agriculture. This was an increase of 230% over the number of similar tests made in 1935.

Measuring the need for use of limestone, 6,881 soil tests for lime requirement were made. Nine-tenths of these were made by county agents and the remainder at the College of Agriculture. The need for soil testing is cited in this example from Pettis county: “The effects of soil erosion and heavy cropping were brought out very vividly in a series of soil tests on 97 farms this year. Out of the total number of samples tested, only 5 showed no need for lime.”

Commercial Fertilizers

The advantages of commercial fertilizers were realized by 53,939 farmers who made applications of 93,587 tons. This was nearly 100% more than was used in 1935, and 41% more than that used in 1918 when the greatest amount previously used in the state was recorded. There were 39,291 farmers who followed fertilizer recommendations on cereal crops; 11,764 on legumes, forage crops and pastures; and 2,486 on such special crops as potatoes, corn, and tobacco:

Some of the benefits resulting from fertilizer application are cited in this information from Johnson county: “Fertilized wheat made 27 bushels per acre while the unfertilized produced only 14 bushels. Henry Blaine made \$11 per acre by fertilizing his wheat on Oswego soil in 1936.”

Legume Inoculation

Legume inoculation was used by 11,248 farmers in inoculating 15,439 bushels of seed. This included enough inoculation for 1,053 bushels of alfalfa, 2,116 of cowpeas and lespedeza, 1,099 of alsike and red clover, 1,016 of sweet clover, 9,889 of soybeans, and 266 miscellaneous.

In spite of unfavorable weather conditions, 12,555 farmers turned under legume crops for green manure. Of this number 2,664 turned under sweet clover, 1,353 red alsike clover, and 8,538 used soybeans or cowpeas as their green manure crop.

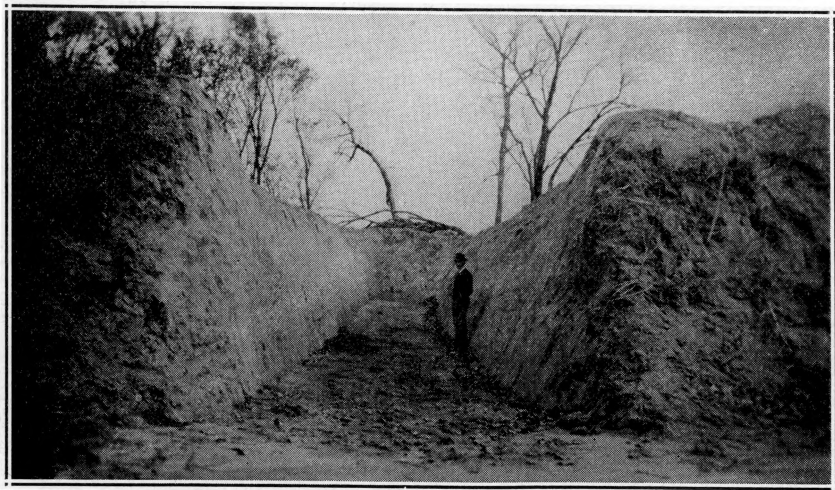
Clover and Prosperity Conferences

For the first time since their beginning 13 years ago, Clover and Prosperity conferences were held in all of the 114 counties of the State in 1936. In addition, these conferences had the largest total attendance ever recorded, with 13,576 persons, or an average of 119 per county attending. A more definite and concerted effort than ever before was made this year to coordinate the Clover and Prosperity conferences with other projects.

The value put on these conferences is indicated in this expression from Webster county: "The real value of these annual conferences was shown at the 1936 meeting, when 75% of the delegates reported that they had incorporated into their farming systems the practices formulated at past conferences."

Drought Emergency Meetings

Specialists in soils and crops cooperated in conducting a series of county-wide drought emergency meetings which were held in every county in the state in August. Some of the results of these meetings are glimpsed in such reports as these: Pettis county: "Pettis county farmers built 108 trench silos, 15 picket silos, and 26 permanent silos. There were 239 silos filled with 19,163 tons of ensilage which will feed approximately 9,000 cattle through the winter months." Bollinger county: "As a result of 5 trench silo demonstrations, 38 farmers built trench silos and saved approximately \$6,600 worth of feed."



This trench silo, 75 feet long, 10 feet deep and averaging 10 feet wide, was dug on the John Sly farm in Atchison county at a cost of \$40. It held 113 tons of silage.

Experiment Station Field Days

As a means of giving farm leaders throughout the state an opportunity to study at first hand experimental work being done with soils and field crops, field days were held at five experimental fields during May and June. This series of meetings was attended by 1,300 selected farmers and farm leaders, many of whom drove 150 to 200 miles to attend. Attendance at the various fields was as follows: Sikeston 338, Green Ridge 282, Columbia 475, Cuba, 182, and Elsberry 47.

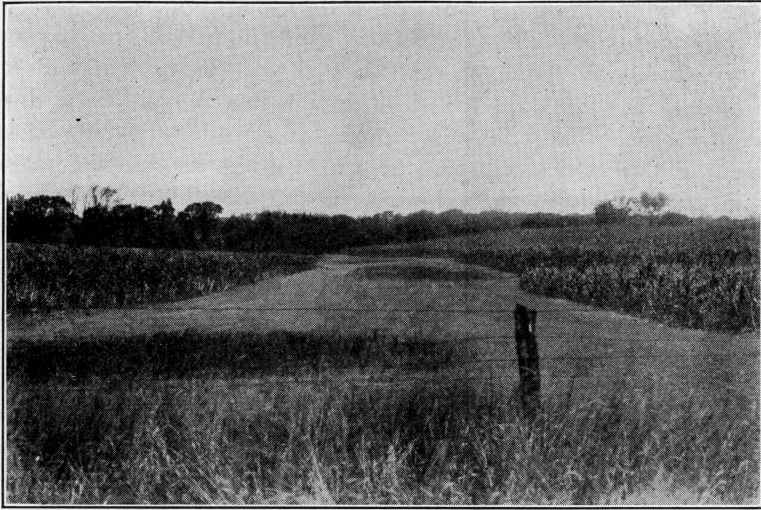
SOIL CONSERVATION

A program of soil conservation was carried to every county in the State by the Extension Service with the help of 8,000 farmers organized in 49 soil conservation associations, 18 soil conservation committees, and 114 soil conservation and domestic allotment committees.

An increased capital value of \$166,040 was given 25,340 acres of sloping land through terracing. Tons of limestone used numbered 403,821 as compared to 125,000 tons in the preceding year. The amount of commercial fertilizer used was 93,000 tons, or almost double that used in 1935. Contour farming was adopted by 448 farmers. A total of 2,471 boys and girls were given training in soil conservation and forestry through 4-H clubs.

A total of 35,655 farmers followed crop rotation and soil treatment practices recommended for purposes of conservation. Crop rotations with legumes or legumes and grasses were used by many farmers as the most economical soil conservation measure capable of quick adoption. The use of limestone and commercial fertilizers became more widespread as shown in the report of County Agent Burk of Johnson county: "The amount of fertilizer and the number of men using it show about a 100% increase in the fall of 1936 as compared to 1935." Commercial fertilizers were included in agreements of cropping plans made between the individual farmer and the Soil Conservation Service, between owners of demonstrational areas and CCC camps, and between farmers and those in charge of the WPA projects. Much of this fertilizer was used on small grains upon which clovers and grasses will be seeded next spring.

The number of farms on which rotation pastures were used increased to 28,637. The value of a definite pasture plan was well illustrated on the farm of George Stark of Iron county. He had all



Grass waterway through field of corn, Grundy county.

of his farm in pasture crops and kept a herd of dairy cows. Careful inspection of his land showed little noticeable erosion.

Farming across the slope or on the contour was practiced by 449 farmers in 33 counties. This effective combination of mechanical and vegetative measures for the conservation of soil and water was used on both terraced and unterraced fields. Each corn row, drill and plow furrow, and implement mark acted as a miniature terrace in slowing the flow of run-off water and permitting more absorption. After using contour planting of wheat, Edwin Huber of Perry County said, "I'll never drill small grains up and down the slope again."

Approximately 400 farmers in 42 counties practiced strip cropping. Strips of closely growing crops or sod 60 to 120 feet in width, crosswise to the slope and approximately on the contour, were alternated with strips of corn or other intertilled crops to filter the run-off water from the intertilled crops.

Farmers are rapidly learning the value of natural grass waterways in protecting areas subjected to harmful concentration of run-off water. There were 2,708 additional farms using such waterways, an increase of more than 200 per cent over the number already established.

The widespread acceptance of terracing as a mechanical preventative of soil loss was indicated by the large number of terraces estab-

lished. The total number of farms upon which terracing has been done reached 2,918 and the acreage protected 69,429. The value of the practice was described by County Agent Singleton as follows: "The group of farmers in Benton county who have terraced their land and observed its operation on cultivated crop land, turned in their average estimates of its value to be \$2 per acre when a cultivated crop is grown and a permanent value of \$11 per acre to the land." Ed Maze of Dade county liked his terraces and said, "My terraces have done everything they are supposed to do. During the heavy rains this fall they never failed to carry the water. My only regret is that I did not terrace my entire farm." With the increase in terraces came an increase in the number of terrace outlets constructed.

Stabilization and healing of unsightly gullies and the conservation of soil and water were started on 3,838 farms this year in 66 different counties. These check dams were built from the material available on the farm.

An example of how an earth dam was used to heal a gully and provide a stable terrace outlet comes from the farm of John Rosewicz in Barry county. This farm is located in the rolling prairie section



Inlet view of a newly constructed soil saving dam on the farm of John T. Rosewicz, Barry county.

of southwest Missouri where gullying is most frequent. The gully had a drainage area of about 50 acres and was 12 feet wide and 6 feet deep. An earth dam was constructed across the gully in order to stabilize it so that it could be used for terrace outlets for a 30-acre field. The cost of this construction was only \$28.30 in addition to the labor. This structure will not only save much soil but will provide a suitable outlet for the 20-acre terraced field.

The county soil conservation associations and committees played a large part in the soil conservation work of the State. Twelve new associations were formed bringing the total number of these to 49. One of the undertakings fostered by many of these associations was a lime crushing program, often conducted in cooperation with government agencies. Through this means it was possible to save farmers some \$20,000 in using limestone. Typical of the experiences of counties was that of Monroe county. The association there had a membership of 174 and owned a 47-horse power motor, pulverizer, and limestone spreader. They prepared 5,000 tons of limestone for members.

In their work the soil conservation specialists cooperated with other project workers, with the Soil Conservation Service, the Civilian Conservation Corps, and the Works Progress Administration. The work was aided by the Soil Conservation and Domestic Allotment Act.

AGRICULTURAL ECONOMICS

The need and demand for extension teaching in agricultural economics have never been so generally evident as in 1936. Therefore, extension in farm management and marketing in serving all counties in the state without question has influenced more farmers and has more vitally affected farm incomes than in any previous year.

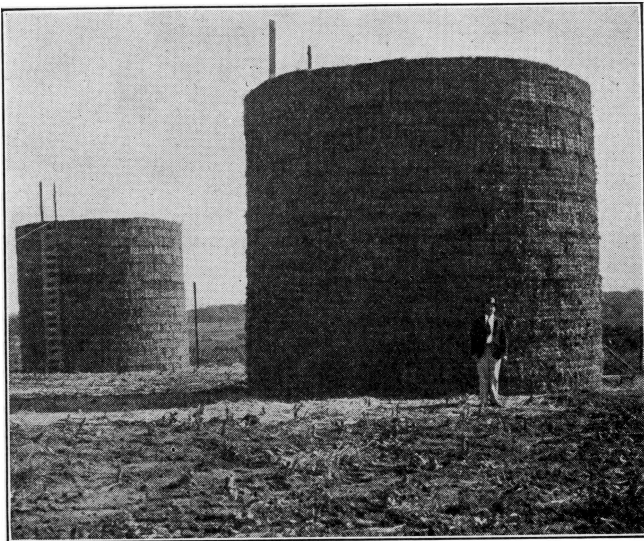
Following a period in which external economic forces brought about a general agricultural collapse, it is logical that the attention of the farmers has come to center about these forces.

At a time when national programs are being directed to bring about adjustments in farm finance, in farm prices, and in land use, adjustments which can be accomplished in the aggregate only through the changes made on individual farms, it is obvious that farmer attention must center upon farm management problems.

In a state where the extent of soil erosion necessitates so radical a change in crop and livestock production and therefore in farming systems, it is evident that the need of farm management extension work has become general and insistent.

As the changes which are being enforced by external factors ultimately constitute a lowering of farm costs per unit of product, reductions in marketing costs are involved, as well as internal adjustments in farm organization. Therefore extension in marketing, as well as in farm management, is playing a vital part in the reconstruction of Missouri farms.

Farm management and marketing extension work during the year has been of service to Missouri farmers in supplying two broad needs. A general understanding of the external economic trends which so



Straw bale silos on the farm of Guy Q. McDaniel, Polk county, represent one of the several types of emergency silos used in 1936. Silage having an estimated value of \$3,550,248 was stored in the 19,164 emergency silos.

vitality affect farm incomes is required to disclose the necessary adjustments in farm financing, production, and marketing. The dissemination of farm price outlook and other economic information is accomplishing this end through "The Agricultural Outlook," "County Agricultural Planning" and "Group Discussion" projects.

However, such adjustments in the individual farm business are complicated and in a state where these adjustments are of a radical nature farmers are in dire need of such assistance as the extension project "Planning the Individual Farm Business" supplies.

Similarly, the reduction of farm marketing costs presents many complicated problems which characteristically involve group action. Extension in Marketing is giving invaluable direction to such action.

The Agricultural Outlook

This year marked the completion of a decade of farm outlook work in the state. More persons than ever before used this service to guide them in their farming operations. A total of 62,105 farmers attended outlook conferences conducted by the Extension Service and local leaders. Some 77,000 copies of the monthly economic review and outlook publication went to those requesting it. Answers to mail inquiries regarding individual economic problems numbered 2,763. A large amount of timely information on economic subjects was carried by newspapers and radio stations. Evidence in large volume showed that farmers were guided by outlook information in farm financing, production and marketing, and that increases in farm income resulted thereby.

A correspondence service was established for the first time in 1936. County agents, Rural Resettlement agents, and vocational agriculture teachers collected farmer inquiries regarding outlook and farm management problems. They then sent these questions into the state extension office for answer. The replies were distributed back to their source through the collecting agencies.

Intention surveys were conducted among farmers concerning their probable hog marketing, hog breeding, and cattle feeding operations. These surveys disclosed farmers' intentions under varying individual situations and make possible the analysis of prevailing trends and the probable outcome under expected prices. Some 650 persons contributed information to these surveys.

County Agricultural Planning

All except two counties of the state joined in county agricultural planning—another new activity undertaken by the Extension Service. A total of 41,196 persons attended the program planning meetings. There farm opinion and practice were compared with research recommendations as to farm adjustments in land use, production and income necessary to control soil erosion. Information obtained in the work is being used in making more effective the local and national agricultural programs.

An agricultural planning committee of from 15 to 20 members was formed in each participating county. They assisted in conducting community conferences. This project brought about widespread farmer consideration of the radical adjustments necessary to stop soil erosion. It provided additional impetus toward turning farm land to sound and effective use.

Farm Management

Detailed assistance in individual farm planning was given to 415 farmers in 36 counties. Changes in systems or practices resulting from the development of these plans occurred on 291 farms. A total of 278 farmers were aided in securing sounder credit arrangements as a result of developing careful farm plans.

The experience of cooperators in this work has shown that this type of planning is highly profitable. Six Franklin county farmers spent two days with the county agent carefully going over their farm plans for 1936. One changed his entire farming system, another decided to self-feed corn and tankage to his hogs, and all reported good results from the changes made as a result of their planning. In Lincoln county, Wenker Meyer changed his plan of cattle feeding as a result of his planning and added \$600 to his net farm income.

Farm planning demonstration meetings held in 18 counties were attended by 1,666 farmers. These demonstrations were held on typical farms for the dual purpose of illustrating needed adjustments in local farming systems and of pointing out ways in which farmers can measure in terms of net income, the effectiveness of different systems under average climatic and similar price conditions.

These complete farm unit demonstrations are in answer to the recognized fact that efficient production methods are frequently offset by improper organization of the farm business or by unwise financing. Therefore, as far as feasible, all projects in the Missouri Extension Service, as well as the St. Louis office of the Farm Credit Administration, participated in conducting these demonstrations.

In most instances, the aim has been to increase the livestock capacity and at the same time adopt farming systems which will control erosion. This is largely done by reduction of intertilled crop acreages and increase of small grain and rotation pastures. The tillable land on a great many Missouri farms will yield from 20 to 25 bushels of corn per acre on the average. In a majority of such cases, the proposed system including more small grain would result in a maintained if not increased total feed grain production. This indicates that current farm incomes can be maintained and soil conservation effected through increasing rotation pastures and small grain for feed purposes.

The following instance illustrates probable results of adjustments made in the interest of increasing current and long time incomes on farms below average in productivity:

A 200-acre farm in the Putnam-Lindley section is showing effects of erosion. Corn yields for the past six years have averaged approximately 20 bushels per acre. The total investment per acre is \$29.

Careful estimates indicate that reducing row crop acreage by 44%, and increasing small grain acreage by 130%, would result in an increase of 8% in feed grain production. These shifts, plus increasing rotation pastures from zero to 100 acres would increase the pasture carrying capacity of the farm by 140%. At the same time, man labor requirements for crop production would be reduced 31%.

On the basis of normal yields for the farm and prospective prices, the gross cash income would be increased 229%, the cash expenses increased by 289%, and the net cash increased by 200%.

A similar analysis was developed for each farm used as a basis for farm planning demonstrations.

Through continued demonstrations, made possible by the cooperation of typical farmers throughout the state, the Extension Service is leading farmer thought and action in directions which will bring current farm incomes to the highest levels consistent with maintenance of long time income production ability.

Extension in Marketing

Two and a half times as much was accomplished in egg marketing work this year as in 1935. Premiums of from 3 to 10 cents per dozen for first grade eggs went to producers participating in the quality and marketing improvement program sponsored by the Extension Service in Southwest Missouri. Cooperating in the work were 61 exchanges in 21 counties as compared with the 21 exchanges in 5 counties of the preceding year. In addition to the cash premiums gained, the program resulted in convincing many producers that practices advocated by the College of Agriculture result in eggs of high quality, regardless of weather conditions. The program also brought recognition by eastern markets of the fact that Missouri can produce eggs of the highest quality.

One produce company paid \$7,416.82 in premiums above the current receipt price to more than 800 producers shipping 12,440 cases of quality eggs. Seventy-eight Webster county farmers reported an average total premium of \$42 per farm for the season.

A total of 1,112 farmers in this territory improved their production and marketing equipment and practices. Twenty farm egg coolers were built and 231 farm basements were remodeled and prepared for the proper storage of eggs. Local egg receivers built 26 commercial coolers.

That the practices used in the program produced high quality eggs was proven by the fact that even through the hottest days of the summer, the 10 per cent of producers who followed the program most faithfully marketed eggs which graded 80 per cent "U. S. Extras."

More than \$20,000 was added to the receipts from 2,400 acres of cotton grown under the cotton standardization and marketing project begun last year in four counties in Southeast Missouri. The work demonstrated the possibilities of cotton standardization and resulted in the production of local supplies of certified seed sufficient to secure the same per acre benefits on 50,000 acres in 1937.

Cooperative marketing associations were given assistance in organization work. Associations helped included those handling dairy products, livestock, turkeys, melons, grain, lumber, electricity, and consumers' supplies. Assistance in the solution of business and membership problems was given to cooperative producers of milk, grain, wool, poultry, and to consumer cooperatives.

Improved Group Discussion

Training in group discussion resulted in 655 persons becoming active discussion leaders. Although this was the first year in which the work was offered, it was presented in 40 counties. In more than 20 of these counties discussion demonstrations were held. Some 1,500 persons attended 89 training meetings. Leaders trained at these meetings conducted 331 discussions with 9,204 persons attending. Group discussion was used with older young people in seven counties.

Subjects used by the groups included such as these: "Should American Agriculture Seek Recovery of World Markets or Arrange to Live at Home?"; "What Should Determine Whether or Not a Young Man or a Young Woman Should Make Farming a Life Work?"; "What is the Chief Cause of the Agricultural Depression?" In improved discussion work members of the group do more than share the information and ideas they happen to have. While seeking to conserve the friendly and open-minded spirit of the informal group, definite steps were taken to make new information available.

Some of the measures taken for the accomplishment of this end include: Fixing in advance a definite topic for discussion; wording the topic for discussion rather than for debate; having one or more discussion leaders make special preparation as to subject matter available (first to leaders then to group members) a supply of literature that will bring out not one but all the more significant aspects of the topic.

Cooperation in the 4-H round-up and assistance in the discussion conference of older young people held during Farmers' Week were included in the program. Assistance was given at both the spring and summer sessions of the Shannondale Folk School in Shannon county. The specialist cooperated with the 4-H club project in making arrangements for the first annual observance of 4-H Sunday. A panel discussion was conducted at the four-county camp of women's extension clubs held in McDonald county.

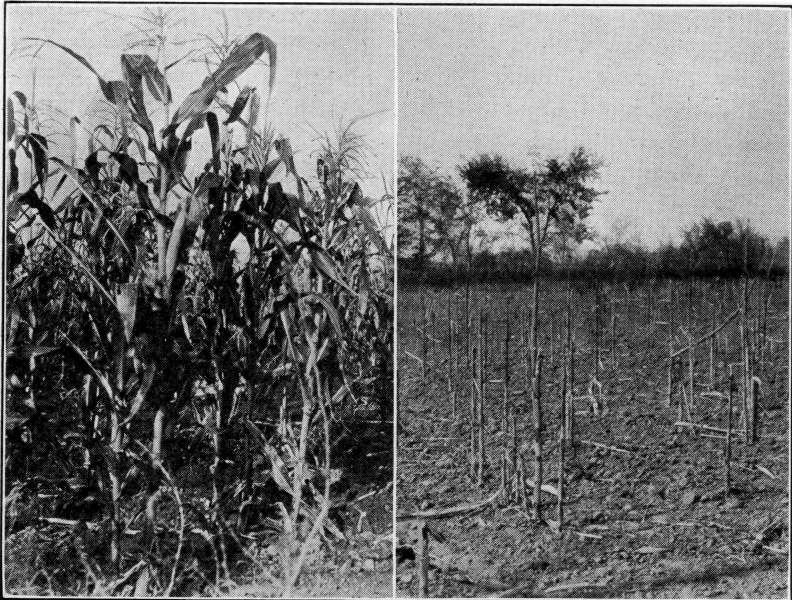
ENTOMOLOGY

Not in recent years has the Extension Service been called on to assist in combating so many serious insect invasions as in 1936. Emergency measures had to be used in many cases to control the insect epidemics. In addition to this work, efforts were continued to reduce the damage caused by the usual insect pests.

Field Crop Pests

Although the severe grasshopper infestation ruined many acres of crops, several hundred thousand dollars' worth were saved by farmers following the control program. Approximately 20,000 farmers distributed some 2,000 to 2,500 tons of poison bait consisting of sodium arsenite mixed with bran or bran and sawdust. Most of this was furnished by the Federal government. Before the material arrived in the individual counties, county agents were given instructions as to its use. The agents then assisted in forming county committees to handle and distribute the material. Printed instructions were prepared explaining how it was to be applied. Some 55 cars of bran and 4 cars of poison were distributed in the 70 counties seriously infested.

The value farmers placed on this service is shown in the words of R. J. Whitely, Grundy county: "Of the 375 acres of corn I planted,



This field of corn (left) on the R. J. Whitely farm, Grundy county, was protected from grasshoppers with poison bran. The field at the right, on the same farm, was not protected.

the hoppers got 75 or 100 acres before I started poisoning. Receiving the poison formula from the county agent, I mixed my own poison, spread 2,800 pounds, and protected over 250 acres. Hiring an extra man to spread poison every day, I killed the hoppers in such numbers along a hedgerow that the smell was overpowering. One acre of my best corn will repay me for my entire expense."

With Hessian fly threatening to repeat its devastation of 1915-16, by building up to an alarming population in the summer of 1935, some 500,000 acres of wheat in 60 counties were threatened and farmers were advised to wait until after the safe seeding date to sow their crop. Those who followed the recommendations saved thousands of dollars as the 1936 harvest proved, since the earlier planted wheat was damaged so severely in many cases that numerous fields were abandoned. One plot of wheat in Boone county, sown after the safe seeding date, threshed out twice as much as another field sown early. In a campaign for safe seeding in the fall of 1936 the county agent of Warren county was able to get 90% of the wheat growers in his county to wait until the fly-free date before seeding their 1937 crop, and he estimates on the basis of this year's experience that they have saved approximately \$100,000 by doing so.

Chinch bugs showed up in several different areas of the state. Some 40,000 acres of growing corn were protected by barriers and more than 1,000 farmers used barrier oil. As the grasshoppers became more abundant, less attention was paid to chinch bugs.

The cotton leaf worm again threatened the crop in the cotton areas of the state. Some 500 farmers followed recommended control measures and prevented losses which on neighboring untreated fields averaged about \$16 an acre. The cost of treating ranged from 50 to 75 cents an acre.

Fruit and Garden Insects

A very poor apple and peach prospect discouraged many growers from giving the usual amount of attention to the pests affecting these fruits. However, there was a considerable demand for the codling moth information gathered by the Extension Service with the cooperation of growers. Some 40 stations were established for observing the actions of the codling moth in different parts of the state. Reports from the stations provided growers with timely information of value in planning spraying operations. More than 2,000 growers received this information by mail and many more listened to it when given over radio stations.

Garden insects such as melon aphids, striped cucumber beetles, Colorado potato beetles, harlequin cabbage bugs, squash bugs, and

other common garden insects caused some loss, but persons following recommended treatments reported good control of these insects.

Livestock Insect Parasites

Horse bot control was carried on in 70 counties with a total of 70,500 horses and mules treated. This was the largest number ever so treated. The treatment meant an approximate increase in value of \$2 per horse, or a total increase of \$141,000. The county agent in Ralls county reported that farmers were so well pleased with the work that they came in months ahead of time to list their animals for treatment.

Some progress was made in controlling flies around dairy barns. One dairyman reported that he saved more than \$25 by making his own spray. Poultry insect recommendations were more widely used. The practice of putting used crank case oils on the roosts to control mites became general. More poultry raisers used recommended treatment for killing lice.

Rodent and Household Insect Control

Some 500 farmers reported that they adopted recommended control measures for such rodents as gophers, rats, mice, etc. Though the damage done by rodents usually is not spectacular, it does amount to a large figure over a period of time.

Work progressed on controlling such household insects as ants, mosquitoes, roaches, silver-fish, moths, flies, and others. Approximately 500 persons were given assistance in controlling termites and other building insects.

Insect Study at 4-H Club Camps

More than 1,700 boys and girls attending 4-H club camps received training in insect study. Each club member was to collect at least ten different kinds of insects, pin and label them. Illustrative material was available for study and the boys and girls used it to good advantage.

VETERINARY SCIENCE

Profitable improvement in Missouri beef and dairy herds—denoted in smaller losses from disease, better gains with less waste of feed, and fewer failures in breeding with less expensive replacements—was realized by Missouri farmers who accepted the assistance of extension work in veterinary science in 1936. Improvement in a similar measure was realized in the better condition of workstock and added returns from its use.

The Federal-State cooperative Bang's disease project for the elimination of beef and dairy cattle reacting to the blood agglutination test was carried on more extensively than during any previous year. For the first time blood samples for test originated in every county in the state. These samples came to a total of 425,250, of which 378,735 or 89% showed non-reactors, 16,670 or 3.9% suspicious, and 29,834 or 7% reactors. This total number of samples represents 36,695 herds of which 12,389 herds were units being retested. In the number of units listed for the first test, Barry county led with 1,412 herds and had 381 herds up for retest.

In large measure this interest in the elimination of Bang's disease is made possible by the Agricultural Extension Service which lends strong cooperative support to the progress being made. The existence of Bang's disease in a herd means on the average a 30% reduction in milk, 40% reduction of the calf crop, 40% decrease in calving efficiency, calving every 20 months instead of every 11½ months as is the case with clean herds, one sterile cow out of every 5 that abort, and 30% increased need for replacements due to breeding troubles, sterility, and mastitis.

The campaign for the eradication of bots and other internal parasites of horses was conducted in 92 counties. Cooperating in this work were 16,529 farmers who had 70,500 horses, mules, and colts treated by local veterinarians at a cost of approximately 38 cents per head. The actual cash returns from this expenditure cannot be determined but most owners feel that the value of the work is far in excess of the cost. Animals which have been down in flesh, due to the parasites, will gain and become well conditioned when treated—some animals gaining as much as 1 pound per day for 60 or more days after treatment. Improved condition is noted by sleek hair coats, ability to do heavy spring work, and ability to withstand the heat of summer. Horses free from parasites have fewer cases of colic.

HOME DEMONSTRATION WORK

Tangible savings of more than \$154,000 were realized last year by Missouri farm homemakers who followed suggestions of the Agricultural Extension Service in carrying on the duties of the farm home. Of extreme importance were these suggestions in helping farm families stretch limited incomes to secure more comfort and pleasure, perform tasks more efficiently, improve farm plants inside and out with the least expenditure, keep and build up the morale of farm families, promote cultural and recreational activities, and foster greater satisfaction and pride in country life.

This volume of help was brought to Missouri homemakers through the activities of 44 home demonstration agents serving 71 counties—a considerable increase over the 17 agents that served the state in 1935. Of corresponding importance was the increase in the number of volunteer leaders who gave unselfish service in extending the benefits of home economics work—11,852 such volunteer workers making a definite contribution in 1936. These workers held a total of 16,313 meetings in giving this help, the total time required in this presentation being the equivalent of 24,573 days.

Women's Extension Clubs

Much credit for the increased influence of home economics work throughout the state was due to the 1,665 women's extension clubs, with their membership of 31,203 women, representing every county of the state except four. An equal number of additional women also shared the worthwhile information supplied by the Extension Service to these clubs, since each member agrees to pass on such information to a woman not a club member. More than a quarter of a million of suggestions for doing a better job of homemaking were adopted by members and non-members thus influenced. There were 36,113 farm homes and 6,628 others, or a total of 42,741 homes, reporting that they had made definite and profitable changes.

Women's clubs carried on numerous commendable activities such as making their communities better by improving parks, cemeteries, churches, and school houses. By such activities 1,140 pieces of community property were improved. Social and recreational programs included picnics, parties, pageants, choruses, home talent plays, and other activities that brought farm people together in worthwhile social contact. Twelve encampments for farm women and 23 for 4-H club groups were held, with 1,286 adults and 1,746 boys and girls thus given opportunity to enjoy camp life.

Educational and cultural activities included classes in music appreciation, English and book reviews, folk dancing, and physical

culture. Bible classes and Sunday Schools were organized, and libraries and reading rooms established. Child development and parent education were carried on, definite improvement being reported in the training of 5,760 children.

Service Widely Diversified

In following suggestions of the Extension Service in the matter of saving food, 5,000 families preserved an amount of food estimated to be worth \$58,583. In 72 counties 6,899 families were helped to make food budgets and buy more wisely, while 5,501 families enjoyed better planned meals due to the study of food selection and combinations. More than 6,800 school children were benefitted through the improvement of school lunches.

More than 10,500 families were helped in planning, buying, and making clothing, the total saving in this respect being \$79,307. The 23,033 women and 10,269 girls who followed some suggestions of the Extension Service in solving clothing problems used a total of 156,508 beneficial practices.

Homemakers accepted suggestions on house furnishing to the extent that 4,061 articles of furniture were refinished and 1,190 reupholstered for an estimated value of \$12,476. Materials that were otherwise useless were used in making 3,982 rugs. Almost 4,000 rooms were made more comfortable and enjoyable for living purposes. In Howard county an achievement day exhibit of 99 rugs attracted attention that resulted in many orders for this product.

Arrangement and mechanics of the household were improved by 3,634 families who followed approved suggestions in the matter of home management. In 576 homes budgets were made and accounts kept, while 2,447 families reported an improvement in living through buying more wisely and making needed adjustment. More time for leisure and rest was gained by 1,686 women who used a total of 9,715 improved practices of doing their work.

Farm families were so interested in the improvement of health that 6,564 families followed suggestions of the Extension Service in acquiring better health habits. Largely due to the activity of women's extension clubs, 6,609 children were vaccinated against smallpox or immunized against diphtheria. Better health practices were adopted in 20,926 instances.

In carrying out the home economics program, the 44 home demonstration agents paid 3,996 visits to 2,524 different homes, received 17,999 callers at their offices, and answered 13,801 telephone calls. They wrote 19,911 personal and 1,591 circular letters, distributed 28,257 circulars, and prepared 3,629 articles for publication.

CLOTHING

More than 58,000 Missouri farm women were enabled to have their families more comfortably, becomingly, and economically clothed in 1936 through instruction given by the Agricultural Extension Service in the making, remodeling, and care of clothing. Besides utilizing this help for the benefit of their own families, 5,088 women served as local leaders in carrying this service into the homes of their neighbors—with a total of 64,037 women receiving this instruction.

The total number of better methods used in clothing problems was 156,508. The adoption and further spread of these methods were taken up in a systematic way by women in 1,665 organized neighborhood groups having 31,203 members and as many women individually outside of these groups.

Interest in clothing methods was especially centered in dry cleaning, making over garments, and in the renovation of hats. The estimated saving of this work was \$130,114. More than 22,000 families were assisted with some form of renovation or remodeling of clothing.

Suggestions of the Extension Service in the matter of buying methods were appreciated to the extent that 11,599 families followed these suggestions. Economy through budgeting the family clothing expenditures was reported by 1,272 families. Service to young homemakers was indicated by the fact that 6,570 women were aided with children's clothing. Improved practices in mending were followed by 7,399 women. Greater use of the sewing machine not only saved time spent in the repair of clothing but also resulted in the cleaning and repair of many machines.

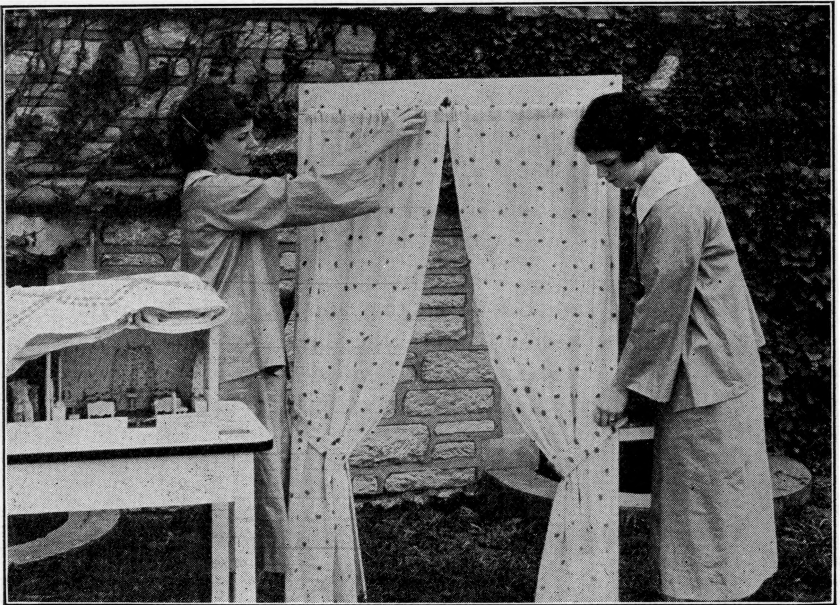
MORE ATTRACTIVE HOMES

Improvements that could be accomplished with the use of home labor and materials were emphasized. The women showed great interest in the work and large numbers responded to suggestions. The most worthwhile results of this project were those which could not be translated into figures. The well deserved pride of the homemakers in the comfort of their new improvements, the family's satisfaction in an improved standard of living, and increased respect for the job of homemaking were among the very real but less tangible results.

Home Beautification

Recommendations of the Extension Service were followed in improving the exteriors of 2,248 houses and buildings. Rubbish was removed from yards by 9,439 families; 4,558 lawns were graded and seeded; 1,950 families planted trees and shrubs; unsightly buildings were removed from 1,161 door yards, and 1,034 walks and driveways were made.

Among the more expensive improvements were 472 new or remodeled homes. Some 2,250 dwellings and outbuildings were painted or whitewashed. The many outdoor living rooms, rock gardens and



When the best home economics 4-H club demonstration teams met in contest at the State Round-Up last August these girls, Berneta Alexander and Frances Thomas representing Cass county, were declared grand champions.

lily pools constructed indicated that farm families appreciated their value. Numerous small repairs were made according to extension recommendations.

Among the 1,140 pieces of community property improved were 288 community grounds, 26 parks, 180 churches, 449 schools and 197 cemeteries. The Eleven Points Club of Oregon county, winner of the three-year community development contest, landscaped the grounds of their recently constructed community center. The Boston Mountain

Club of Daviess county reported the following: "A small piece of property in the community was available if anything could be done to reclaim it. The extension club members decided it would make an ideal community park, so they took the development of the park as one of their projects. The natural setting was studied and all improvements made around them. They made a rock garden, some benches and other conveniences."

House Furnishings

The estimated savings effected by the house furnishings program amounted to \$12,476.73. In 48 counties, 3,905 rooms were made more livable; 2,856 women followed recommendations in furniture arrangement; 2,247 families reported improvements made in walls, woodwork and floors; 4,061 pieces of furniture were refinished, including 1,190 pieces upholstered and 1,322 slip-covered; 3,982 rugs were made. Mrs. James Venrick of Clay county followed extension recommendations in refurnishing her somber appearing living room. The woodwork was painted an ivory color. Paint on the fireplace was removed and it was sanded and waxed. The walls were papered with a plain ivory paper. The drapes were cut off so that they came only to the edge of the apron of the window. Then the drapes were moved out on each side. The lace curtains were removed entirely and light tan shades replaced green ones. Mrs. Venrick was delighted with the cheerful appearance of the room.

FOOD FOR THE FARM FAMILY

Helping Missouri farm families produce food at home and preserve or store it so its use could be wisely distributed through the year was the contribution of the Agricultural Extension Service in 1936 through suggestions on nutrition. These suggestions included help in making garden plans, preparing food budgets, canning and storage, and food preparation and meal planning to demonstrate the best possible use of food on hand.

In getting better returns for money expended for food, 3,113 families followed food buying suggestions of the Extension Service; and 1,084 families budgeted their food expenditures for a year. In 26 counties 1,114 families found it advantageous to produce and preserve their home food supply according to a definite plan.

The cumulative effect of several years work by the Extension Service in urging better food practices has resulted in a definite trend toward a more general use of home produced foods in well planned meals. In 56 counties 5,501 families served better balanced meals in 1936.

In six counties most of the homemakers were reported to have made some substantial changes in their methods of making yeast breads, and 2,139 other homemakers reported some help on bread making. From many counties come reports of a large percentage of the farm women who have formed the habit of looking for the quality grade on the foods they buy.

Gratifying improvement in the food habits and nutrition of rural children was recorded during the year. In two counties—Carroll and Lafayette—county-wide clinics were held in which 84 children were examined by physicians and dentists and their recommendations for feeding were followed up. Recommended methods for child feeding were followed by 2,243 families. In improving nutrition of school children 2,231 families improved the school lunches packed at home, 321 schools followed suggestions for a hot dish or school lunch, and 6,860 school children enjoyed some improvement in their school lunch.

HOME MANAGEMENT

Helping Missouri farm families achieve more comfortable and more economically managed households, and at the same time acquire a better balanced utilization of time and the physical resources of the family group, was an essential contribution of the Agricultural Extension Service in 1936.

Better utilization of the farm income was secured in 83 communities by families who established and used farm and home budgets. This was secured largely through acquiring an understanding of the interdependence of farm and home business—the realization that the portions of the family living coming directly from the farm and through purchases with cash, respectively, are dependent on the farming system as well as the net cash income from the farm.

Coordination of farm and home plans makes it possible to determine the extent to which the farm can be depended upon to produce an all-year-round liberal, moderate, or minimum cost adequate diet for the farm family. The income, the homemaker's time and energy, the

production costs of farm-produced foods, and marketing facilities enter into the appraisal for the plan of producing and purchasing foods.

Timely economic information as a basis for readjusting family living was utilized by 601 families. The keeping of household accounts was found profitable by 441 families in developing current and long-time plans.

In adopting suggestions for making the physical arrangement of homes more convenient, 932 farm kitchens were rearranged and improved to make the work done there more quickly and easily accomplished. Labor saving equipment was added by 680 families. Improved methods of the care of the house were adopted by 1,343 families, and 2,840 homemakers included rest periods as a part of their daily schedules.

PRESS SERVICE AND PUBLICATIONS

The information service of the Missouri College of Agriculture reaches the public chiefly through the newspapers and farm journals of the state and through its own publications. These two branches of the service differ widely in character, scope, and distribution; each being supplementary to the other.

Articles for the press are brief, popularized summaries of the advantages of improved farm and home practices, reports of the activities of groups and individuals who plan to apply these practices, and statements of the results obtained through such application. Offered to the press at the season of greatest current interest, these articles are designed to attract attention, arouse interest, and create desire. They seek to lead the reader to the actual adoption of the better practices described. Such articles, seeking as they do to draw new believers from the great mass of general readers, require the wide circulation that only the Press can supply.

It is only when a new cooperator has been interested in the plans and methods offered by the College of Agriculture that more formal and detailed information must be supplied in the form of the official publications of the College. The reader whose interest has been aroused in a general way by the newspaper report of his neighbor's successful venture in scientific farming is now ready to try out the plan on his own farm. In order to do so safely and profitably he must have each step of the plan in accurate detail. Such information

can best be supplied in official circulars prepared by recognized authorities, double-checked for accuracy of printing, and supplied promptly on request when needed.

The numerical relationships involved in these two classes of information show the enormous value of the service rendered to farm readers by the newspapers and farm journals, as well as the importance of this cooperation in the work of the Extension Service. More than 300 Missouri county newspapers, including both dailies and weeklies, with a total circulation of 500,000, print regularly each week an average of 1½ columns of authoritative reports from county extension offices concerning the plans, activities, and achievements of local people in the application of scientific information to their farm and home problems. Metropolitan newspapers and farm journals reach a much larger total circulation with an equivalent amount of information originating in Extension work. Conservatively estimated, the Press of Missouri disseminates each week of the year printed information equivalent in volume to one-half million four-page circulars.

All the official publications of the Extension Service in 1936, including 29 circulars, 7 club circulars, 2 manuals, and 11 leaflets, reached a total bulk equivalent to 1,150,000 four-page circulars—about equal to two weeks' contribution of the Press to the cause of better farming and happier farm life.

Because of the foregoing relationships, it is the constant endeavor of the staff of the Extension Service, especially of the county agents and home demonstration agents, to supply their newspaper cooperators promptly at the beginning of each week with timely and well written reports of the plans and activities of local people, concise and interesting descriptions of the methods they are using to meet current farm and home problems, together with accurate statements of the results obtained. Such reports are *bona fide* news copy and good extension teaching—valuable alike to the newspaper publisher, to his subscribers, and to the agricultural industry of county and state.

During the year just ended the county agents and home demonstration agents of Missouri supplied their local newspapers with a total of 27,984 different news articles, including 24,355 written by county agents and 3,629 written by home demonstration agents.

The College Press Service

Through the Missouri Farm News Service, issued each week jointly by the Extension Service and the Experiment Station, 693 items of information on agriculture and home economics subjects of

timely importance to farm people were conveyed directly from the College to the Press of the state during the past year.

The Special Press Service, designed especially for the news syndicates and larger dailies, was continued throughout the year, supplying 119 spot news stories, many of which were accompanied by news photographs.

A special manuscript service was also supplied to farm journals and magazines.

To county extension agents, in addition to the Missouri Farm News Service, a more or less irregular mimeographed copy service was sent throughout the year, including a total of 85 skeleton stories in which local names and dates are inserted by the agent before transmittal to his local newspapers. With the body of the story containing the basic information underlying the activity reported, this type of story has been found very useful by county agents, especially in the campaigns of the SCDA, Drought Service, REA, and other well standardized statewide projects.

Radio Broadcasting

Daily broadcasts of timely information on agriculture and home economics were made during the year, through the courtesy of Radio Station KFRU at Columbia. A total of 312 such broadcasts were made, each being 10 minutes in length and including in many instances spot news as well as subject matter information. The hour of broadcast was 7:00 a. m. from December 1 to April 1; 6:15 a. m. from April 1 to October 1; and 6:45 a. m. from October 1 to December 1.

Additional outlets for radio information were supplied through the courtesy of Station KMBC, Kansas City; Station KFEQ, St. Joseph; Station KWTO, Springfield; and Station KFVS, Cape Girardeau. County agents and home demonstration agents from nearby counties personally made broadcasts over these stations making one to four broadcasts a week. Much extension information was cleared also by the station announcers of Station KWK, St. Louis; and KMA, Shenandoah, Iowa.

Extension Publications

Extension publications issued during the year included 25 new circulars, 4 reprinted circulars, 7 circulars for 4-H clubs, 2 manuals, and 11 leaflets. The list including serial number, title, size, and edition of each follows:

Circulars

330	Five Years of Poultry Record Keeping in Missouri.....	18	10,000
331	Castrating and Docking Lambs.....	4	10,000
332	Good Use of Farm Land in Missouri.....	8	10,000
333	Missouri Plan of Sheep Improvement.....	16	10,000
334	Missouri Poultry House.....	8	15,000
335	Seeding Meadows and Pastures.....	4	8,000
336	Soybean Hay Production.....	4	8,000
337	Red Sorrel	3	5,000
338	Bindweed and Its Control.....	4	2,000
339	Testing Soil for Acidity.....	4	10,000
340	Grain Sorghums for Grain Production.....	3	5,000
341	Sweet Sorghum (Cane, Sorgo) for Silage and Forage....	4	5,000
342	How to Plant Small Trees.....	6	15,000
343	Tree Windbreaks for Missouri Farms.....	7	15,000
344	Annual Report of the Director.....	60	7,000
345	Tree Planting for Erosion Control	7	15,000
346	Temporary Silos	8	5,000
347	Soybeans and Winter Barley in One-Year Rotation....	4	10,000
348	Improving Food and Cover for Wildlife on Missouri Farms	8	10,000
349	Growing Fall Gardens.....	6	15,000
350	Built-in Bedroom Closets for the Farm Home.....	7	8,000
351	Farm Ponds in Missouri.....	11	10,000
352	Home Grinding Limestone.....	4	5,000
353	Rations for Dairy Cows.....	8	15,000
354	Soil Treatment for Alfalfa.....	8	10,000

Leaflets

35	Better Practices in Oat Production.....	2	10,000
36	Rape for Pasture.....	2	5,000
37	The Oats-Korean Combination.....	2	10,000
38	Testing Seed Corn	2	5,000
39	Low Hop Clover	2	2,000
40	Canada Thistle	2	2,000
41	Millet for Forage and Grain.....	2	2,000
42	Growing Cowpeas for Hay.....	2	2,000
43	Sow Lespedeza in Corn.....	2	5,000
44	Lespedeza for Winter Pasture.....	2	5,000
45	Johnson Grass	2	2,000

4-H Club Circulars

15	Health and First Aid (Reprint).....	28	5,000
20	Ewe and Lamb Club (Reprint).....	36	3,000
45	4-H Forestry Club	102	5,000
46	4-H Colt Club	24	5,000
47	Soil Conservation I	38	5,000
48	Everyday Courtesies	20	10,000
49	School Lunch		5,000
	Club Manual (Leaders)	40	10,000
	Club Secretary's Record Book.....	28	10,000

Circulars Reprinted

276	Sudan Grass Production in Missouri.....	2	5,000
290	Feeding for Egg Production.....	8	10,000
338	Bindweed and Its Control.....	4	5,000
344	Annual Report of Director.....	60	2,500

MEMBERS OF THE EXTENSION STAFF

On November 30, 1936

F. A. Middlebush..... President of the University
 F. B. Mumford..... Dean and Director of the College of Agriculture
 J. W. Burch..... Assistant Director in Charge of the Agricultural
 Extension Service

State Workers

R. R. Thomasson..... Assistant Director of Agricultural Extension Ser-
 vice
 *John F. Nicholson..... State Extension Agent
 C. C. Hearne..... State Extension Agent
 F. E. Rogers..... State Extension Agent
 David Meeker..... State Extension Agent
 J. D. Monin, Jr..... State Extension Agent
 Jas. E. Crosby, Jr..... State Extension Agent and Extension Dairyman
 **A. A. Jeffrey..... Agricultural Editor
 Louis R. Grinstead..... Assistant Agricultural Editor
 Howard M. Dail..... Assistant Agricultural Editor
 Theodore T. Martin..... State Club Agent In Charge
 R. H. Emberson..... State Club Agent
 Jane Hinote..... State Club Agent
 D. C. Wood..... Extension Economist, Marketing
 Gordon B. Nance..... Extension Economist, Marketing
 D. B. Ibach..... Extension Economist, Farm Management
 Ralph Loomis..... Extension Economist, Farm Management
 T. A. Ewing..... Extension Animal Husbandman
 E. S. Matteson..... Extension Animal Husbandman
 M. J. Regan..... Extension Dairyman
 Warren Gifford..... Extension Dairyman
 George D. Jones..... Extension Entomologist
 J. Ross Fleetwood..... Extension Specialist in Field Crops
 A. W. Klemme..... Extension Specialist in Soil Conservation
 W. R. Martin..... Extension Horticulturist
 J. W. C. Anderson..... Extension Horticulturist
 O. T. Coleman..... Extension Specialist in Soils
 Amy Kelly..... State Home Demonstration Agent
 Julia Rocheford..... State Extension Agent
 Fra Clark..... Extension Economist, Home Management
 Madonna Fitzgerald..... Extension Economist, Home Management
 Flora Carl..... Extension Nutritionist
 Ruth Foster..... Extension Nutritionist
 **Paul L. Piercy..... Instructor in Veterinary Science

County Extension Agents

<i>Name</i>	<i>County</i>	<i>Headquarters</i>
Virgil M. Proffitt.....	Adair.....	Kirksville
Wayne M. Sandage.....	Andrew.....	Savannah
N. D. Wrinkle.....	Atchison.....	Rockport
Glen Mutti.....	Audrain.....	Mexico
T. T. McConnell.....	Barry.....	Cassville
Merle Vaughan.....	Barton.....	Lamar
John Burkeholder.....	Bates.....	Butler
O. V. Singleton.....	Benton.....	Warsaw
Wendell Holman.....	Boone.....	Columbia
Roscoe V. Hill.....	Buchanan.....	St. Joseph
W. F. James.....	Butler.....	Poplar Bluff
J. R. Paulling.....	Caldwell.....	Kingston
Harold Slusher.....	Callaway.....	Fulton

*On leave with Rural Rehabilitation Division.

**Half-time on extension work.

<i>Name</i>	<i>County</i>	<i>Headquarters</i>
E. T. Mallinckrodt	Cape Girardeau	Jackson
Albert Dyer	Carroll	Carrollton
Horace M. Hunt	Cass	Harrisonville
John H. Rush	Chariton	Keytesville
R. J. Laughlin	Clay	Liberty
Andrew Adam	Clinton	Plattsburg
William J. Keegan	Cooper	Boonville
T. F. Lueker	Cole	Jefferson City
Eugene Moore	Crawford	Steelville
E. H. Hess	Dade	Greenfield
R. S. McClelland	Daviess	Gallatin
C. W. Campbell	DeKalb	Maysville
C. R. Talbert	Dunklin	Kennett
Floyd Ingersoll	Franklin	Union
C. E. Klingner	Gasconade	Owensville
L. A. Saunders	Gentry	Albany
C. C. Keller	Greene	Springfield
Geo. P. Smith, Jr.	Grundy	Trenton
Lloyd Redd	Henry	Clinton
D. H. Carter	Holt	Mound City
Dan E. Miller	Howard	Fayette
R. S. Clough	Jackson	Independence
F. P. Ward	Jasper	Carthage
Earl T. Steele	Jefferson	Hillsboro
Virgil Burk	Johnson	Warrensburg
Paul Bebermeyer	Knox	Edina
Roy I. Copen	Lafayette	Higginsville
John W. Woodward	Lawrence	Mt. Vernon
Arnold Barber	Lewis	Monticello
Harold Canfield	Lincoln	Troy
J. Robert Hall	Linn	Linneus
Eugene Lee	Livingston	Chillicothe
Virgil Sapp	McDonald	Pineville
J. C. Caldwell	Madison	Fredericktown
F. R. Cammack	Marion	Palmyra
W. D. House	Miller	Tuscumbia
R. Q. Brown	Mississippi	Charleston
Raymond King	Monroe	Paris
Carl Lewis	Morgan	Versailles
R. R. Vadnais	Montgomery	Montgomery City
Leslie Broom	New Madrid	New Madrid
F. H. Darnall	Newton	Neosho
A. J. Dinsdale	Nodaway	Maryville
Leonard Voss	Oregon	Alton
John Falloon	Osage	Linn
M. D. Amburgey	Pemiscot	Caruthersville
J. A. Fairchild	Perry	Perryville
J. U. Morris	Pettis	Sedalia
S. E. Hargadine	Pike	Bowling Green
R. B. Baker	Platte	Platte City
Wm. A. Rhea, Jr.	Ralls	New London
E. M. Woods	Randolph	Huntsville
Ira R. Thornton	Ray	Richmond
T. P. Head	Ripley	Doniphan
H. W. Hamilton	Saline	Marshall
C. R. Pitney	Scotland	Memphis
Frank B. Veatch	Scott	Benton
R. A. Langenbacher	St. Charles	St. Charles
Vernon C. Jelley	St. Clair	Osceola
Paul H. Teal	St. Francois	Farmington
B. K. Miller	Ste. Genevieve	Ste. Genevieve
Russel Lander	St. Louis	Clayton
C. H. Alspaugh	Stoddard	Bloomfield

<i>Name</i>	<i>County</i>	<i>Headquarters</i>
L. J. Wormington.....	Webster.....	Marshfield
Herschel G. Crawford.....	Lewis.....	Monticello

County Extension Agents
(Serving More Than One County)

Hensley Hall.....	Camden-Laclede.....	Lebanon
Ted L. Joule.....	Carter-Reynolds.....	Ellington
Cloin Penner.....	Christian-Stone-Taney.....	Ozark
R. W. Bushnell.....	Dent-Phelps.....	Rolla
Earl Allen.....	Howell-Ozark.....	West Plains
Carl Durtschi.....	Maries-Pulaski.....	Dixon
R. C. Rubottom.....	Polk-Hickory.....	Bolivar
Paul M. Bernard.....	Washington-Iron.....	Potosi

Emergency County Agents

(Serving One County)

Harold Lemar.....	Bollinger.....	Marble Hill
W. E. Yates.....	Cedar.....	Stockton
Jamie Naggs.....	Clark.....	Kahoka
Thos. A. Blacklock.....	Dallas.....	Buffalo
Aubrey T. Gooding.....	Douglas.....	Ava
H. B. Steele.....	Harrison.....	Bethany
Garrett M. Barnhart.....	Macon.....	Macon
Miller Carpenter.....	Mercer.....	Princeton
Fowler Young.....	Moniteau.....	California
J. B. Carmichael.....	Shelby.....	Shelbyville
Alva Mix.....	Schuyler.....	Lancaster
Rolla A. Baugher.....	Sullivan.....	Milan
Ray S. Graham.....	Texas.....	Houston
L. W. Doran.....	Vernon.....	Nevada
Dorris Dudley Brown.....	Warren.....	Warrenton
John Marshall Baldwin.....	Wayne.....	Greenville
Drew E. Bellairs.....	Worth.....	Grant City
Ray Hargrave.....	Wright.....	Mountain Grove

Assistant County Agents

Ellsworth Dunkle.....	At Large.....	Columbia
Charles Costigan.....	At Large.....	Columbia
Albert Hagan.....	At Large.....	Columbia
Paul H. Meyer.....	Andrew.....	Savannah
Kenneth D. Parish.....	Andrew.....	Savannah
Herbert Koch.....	Atchison.....	Rockport
Russell Elsea.....	Boone.....	Columbia
Jesse Landenberger.....	Buchanan.....	St. Joseph
W. R. McCullough.....	Butler.....	Poplar Bluff
Edward Dickerson.....	Caldwell.....	Kingston
Wm. B. Roddy.....	Camden-Laclede.....	Lebanon
Elmer B. Winner.....	Cass.....	Harrisonville
Smith T. Powell, Jr.....	Chariton.....	Keytesville
James J. Cowan.....	Christian-Stone-Taney.....	Ozark
Chas. M. Christy.....	Cape Girardeau.....	Jackson
Don K. Spalding.....	Cole.....	Jefferson City
Richard Hartman.....	Cooper.....	Boonville
Clarence McGill.....	Dent-Phelps.....	Rolla
Robert Christeson.....	Dunklin.....	Kennett
A. C. Ausherman.....	Greene.....	Springfield
Stephen Russell.....	Howard.....	Fayette
Robert Bridges.....	Howell-Ozark.....	West Plains
John Matthews.....	Jackson.....	Independence
G. Winton Young.....	Jackson.....	Independence
Robt. W. Kallenbach.....	Jasper.....	Carthage
Ralph J. Martin.....	Jefferson.....	Hillsboro
Glen Pittenger.....	Lafayette.....	Higginsville

<i>Name</i>	<i>County</i>	<i>Headquarters</i>
Wm. E. Fisher	Lawrence	Mt. Vernon
George Hardy	Marion-Pulaski	Dixon
Ingolf Jorgensen	Marion	Palmyra
Leon Lane	Mississippi	Charleston
B. W. Harrison	New Madrid	New Madrid
Chas. R. Kyd	Newton	Neosho
James D. Meyer	Nodaway	Maryville
Elbert Waide	Pemiscot	Caruthersville
Donald M. Keyes	Perry	Perryville
Robt. H. Rumler	Pettis	Sedalia
Morrell Cowser	Pike	Bowling Green
Leland Ryan	Platte	Platte City
Raymond Smith	Ralls	New London
Norman Dickey	Ray	Richmond
Henry Allen	Randolph	Huntsville
John McClure	St. Charles	St. Charles
Wm. C. Roberson	St. Francois	Farmington
John W. Rogers	St. Louis	Clayton
Wayne D. Shier	Saline	Marshall
P. W. Horner	Stoddard	Bloomfield
H. H. Herman	Washington-Iron	Potosi

Home Economics Agents

Freida Mae Bennett	Andrew	Savannah
Letha Knight	Atchison	Rockport
Katherine Welker	Bates	Butler
Nine McCracken	Boone	Columbia
Elsie I. Jarrell	Buchanan	St. Joseph
Winefred Yancey	Caldwell	Kingston
Katie Marie Adkins	Carroll	Carrollton
Margaret Nelson	Cass	Harrisonville
Mrs. Nell Wright	Chariton	Keytesville
Oneida Blaser	Clay	Liberty
Thelma M. Ferrell	Clinton	Plattsburg
Rena Jenkins	Greene	Springfield
Mrs. Nelle Crouch	Holt	Mound City
Lorene E. Galbreath	Howard	Fayette
Elna J. Olson	Howell	West Plains
Florence Carvin	Jackson	Independence
Carmen Hensel	Jasper	Carthage
Opal John	Lafayette	Higginsville
Helen Kennedy	Lawrence	Mt. Vernon
Juanita Hopper	Lincoln	Troy
Lula Mae Pollock	Monroe	Paris
Anne Sillers	New Madrid	New Madrid
Lorene Dryden	Pemiscot	Caruthersville
Ruth Muhleman	Perry	Perryville
Mrs. Claire L. Montgomery	Pettis	Sedalia
Mary Esther Loughead	Ralls	New London
Mabel McMahan	Saline	Marshall
Veva Anthony	Scott	Benton
Inez Eckblad	Webster	Marshfield

Home Economics Agents

(Serving More Than One County)

Jessalee Mallalieu	Phelps-Dent	Rolla
Marian Johnston	Franklin-Gasconade- Crawford-Jefferson	Steelville
Helen Church	Audrain-Callaway-Pike- Randolph	Mexico
Ruby Corr	Benton-Henry	Clinton
Belle Forney	Gentry-Nodaway-Worth	Albany

Name	County	Headquarters
Louisa Moyer	Cole-Osage-Miller	Jefferson City
Ethel Nelson	Barry-Christian-McDonald- Stone-Taney	Cassville
Elizabeth Wierichs	Adair-Knox-Lewis	Edina
Anita Zagrodzky	Cooper-Moniteau-Morgan	Versailles
Ruth Lanz	Stoddard-Dunklin- Mississippi	Bloomfield
Mrs. Blanche Clinton	Montgomery-St. Charles	St. Charles
Mary Lou Baker	Camden-Dallas-Laclede	Lebanon
Lola Conley	At Large	Columbia
Dorothy Washington	At Large	

FINANCIAL REPORT
SUMMARY STATEMENT OF EXPENDITURES BY PROJECTS
For Fiscal Year Ending June 30, 1936

Project	Federal Funds				State and County Funds Used as Offset	State Funds Not Used as Offset
	Total	Smith-Lever	Capper-Ketcham	Additional Cooperative		
Administration	\$ 41,034.32	\$ 35,151.05	----	----	\$ 5,865.76	\$ 17.51
Publications	10,113.60	9,409.94	----	----	703.66	----
County Agent Work	447,208.18	247,586.40	\$15,000.00	\$28,795.00	155,826.78	----
Home Demonstration Work	62,732.62	35,100.12	15,000.00	----	12,518.32	114.18
4-H Club Work	15,544.84	8,131.25	6,381.63	----	1,031.96	----
Agricultural Economics	11,854.22	5,694.34	----	3,205.00	2,953.19	1.69
Agricultural Engineering	5,872.19	4,303.04	----	----	1,569.15	----
Animal Disease Control	2,471.34	2,033.45	----	----	437.89	----
Animal Husbandry	9,970.65	8,026.34	----	----	1,941.06	3.25
Clothing	4,437.22	3,479.42	----	----	957.80	----
Dairy Husbandry	10,895.32	8,816.55	----	----	2,075.87	2.90
Entomology	3,964.93	3,197.58	----	----	767.35	----
Farm Management	6,377.65	2,895.83	----	2,000.00	1,481.82	----
Farmers Week	667.49	55.62	----	----	611.87	----
Field Crops	5,926.31	4,414.48	----	----	1,511.83	----
Home Management	4,868.14	3,673.61	----	----	1,194.53	----
Horticulture	6,765.05	3,934.23	----	----	2,830.82	----
More Attractive Homes	2,986.33	1,734.51	----	----	1,231.82	----
Nutrition	6,257.53	5,186.51	----	----	1,071.02	----
Poultry Husbandry	6,158.21	4,474.82	----	----	1,683.39	----
Publicity	6,199.48	5,662.04	----	----	537.44	----
Rural Sociology	729.51	5.78	----	----	----	723.73
Soils	4,811.05	3,565.13	----	----	1,245.92	----
Soil Conservation	12,898.39	9,941.21	----	----	2,955.00	2.18
Total	\$690,744.57	\$416,493.25	\$36,381.63	\$34,000.00	\$203,004.25	\$865.44

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