

Building Soil, Security and Self-reliance

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Annual Report, 1940
AGRICULTURAL EXTENSION SERVICE
University of Missouri College of Agriculture
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Annual Report, 1940

(In Brief, Pictorial Form)

UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE
AGRICULTURAL EXTENSION SERVICE

J. W. BURCH, Director

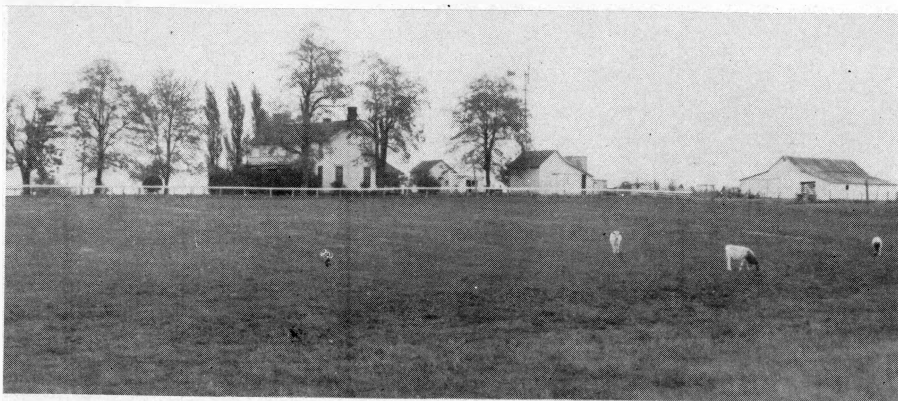
Concentrating the forces of science, experience, and organization upon the problems named as foremost by the people of Missouri's 114 counties, the Agricultural Extension Service, in 1940, helped solve these problems for more than three-fourths of the farm families of the State.

Better practices were adopted on 214,700 farms, reducing losses, lowering production costs, increasing incomes, and improving capital resources. Homes were made more attractive and convenient, health was improved, opportunities for children and young people were enlarged, and a more satisfying community life was developed.

Richer stores of fertility were deposited in a more adequately protected soil. Greater security for the country home was gained through sound planning and good farming. Self-reliance became a stronger fortress for the family earnestly applying skill and knowledge to make the most of all the resources of home and community.

Pasture farming had swept into dominant position in Missouri agriculture by the summer of 1940. Based on many years of work by the Experiment Station and the Extension Service, this new farming system is replacing the cash grain system and provides feed for larger numbers of livestock at the utmost economy of soil and labor.

More than one-third of the cultivated land in the State was in legumes. These soil-building, high-quality feed crops were grown on 6½ million acres of farm land, including 5½ million acres of Korean lespedeza. On forest and waste lands, it is estimated, grew another million acres of lespedeza.





The acreage of land cropped to corn was but little more than half that of 30 years ago. Legumes, improved permanent pastures, and small grains produced more feed with much less erosion of the soil.

Missouri's income from livestock, dairy, and poultry products was pushed upward from 185 million dollars to 214 million dollars in 1940—an increase of 15 per cent.

Missouri led all other states of the Union in the production and use of agricultural limestone, applying 1,382,974 tons of this basic soil improver. This material was quarried from local ledges, pulverized, and distributed by Missouri labor.

Missouri's cotton growers produced lint of higher quality than ever before, with 85½ per cent of their output stapling 1 inch or longer. Seven-eighths of the crop was grown from approved seed and all was sold by grade and staple length.

Beef cow herd demonstrations, together with sheep improvement work, increased the efficiency of herds and flocks in utilizing the rapidly increasing acreage of pasture and forage crops. Hog feeding demonstrations reduced waste of feed and lowered production costs.

Improvement of livestock through use of better sires was highly successful, resulting in the placement of 14,119 purebred sires in herds of cattle and swine and flocks of sheep.

Some 68,000 dairy farmers used supplementary pasture crops for midsummer, late fall and early spring, thereby cutting 7 cents a pound from the production cost of butterfat.

Poultry raisers cooperating with the Extension Service for egg improvement and marketing added \$1.15 a case to net receipts for eggs so handled.

In campaigns for greater good from the family garden, records were completed on 126 demonstration gardens that paid \$1.80 an hour for labor, or \$286 an acre for land used.

Land use planning committees were at work in all Missouri counties. After surveying and analyzing the problems and possibilities in all parts of their counties, these committees suggest lines of action for solutions and development.

More than 23,500 boys and girls shared the learning, the earning, and the cultural experiences of 4-H club work. On a sound basis of community sponsorship, club work became more successful in holding the older boys and girls, for the year's records show a greater proportion of re-enrollments and a higher percentage of project completions.

While the Agricultural Extension Service was responsible for the educational leadership in all these activities, recognition is given to other federal and state agencies, local institutions, and the farm people themselves for highly important contributions to the progress here reported.

For example, the Agricultural Adjustment Administration, through its grant-of-aid program and its soil building payments greatly facilitated the adoption of conservation practices.

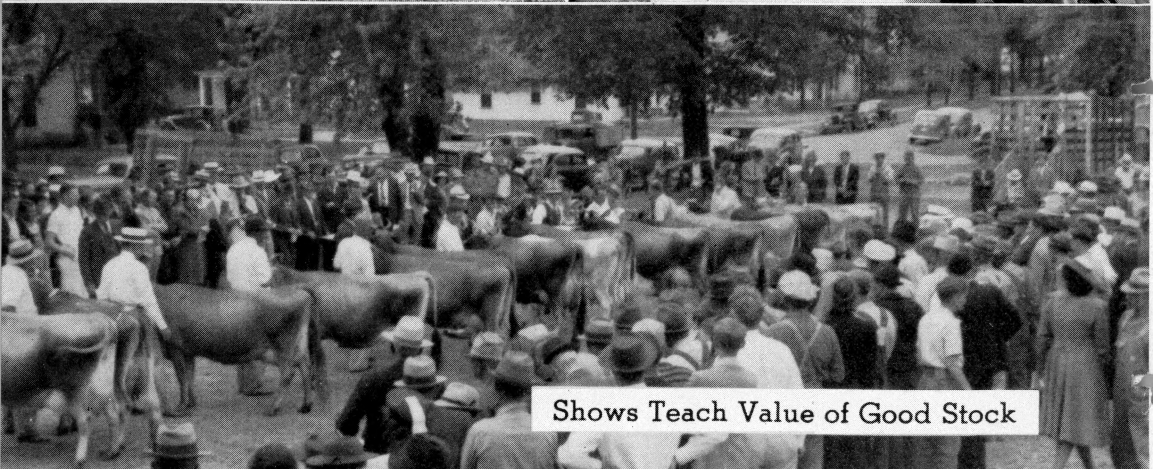
Participation in the Agricultural Conservation Program was the most successful to date, with farmers earning 89½ per cent of the State's possible soil building allowance. The total income from government payments was 25 million dollars.



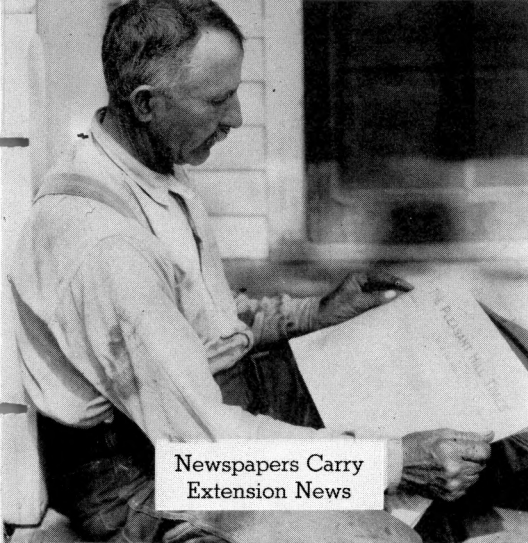
Training Future Leaders



Farmers Teach Their Neighbors



Shows Teach Value of Good Stock



Newspapers Carry
Extension News



County Agent Visits
Farm Demonstrator

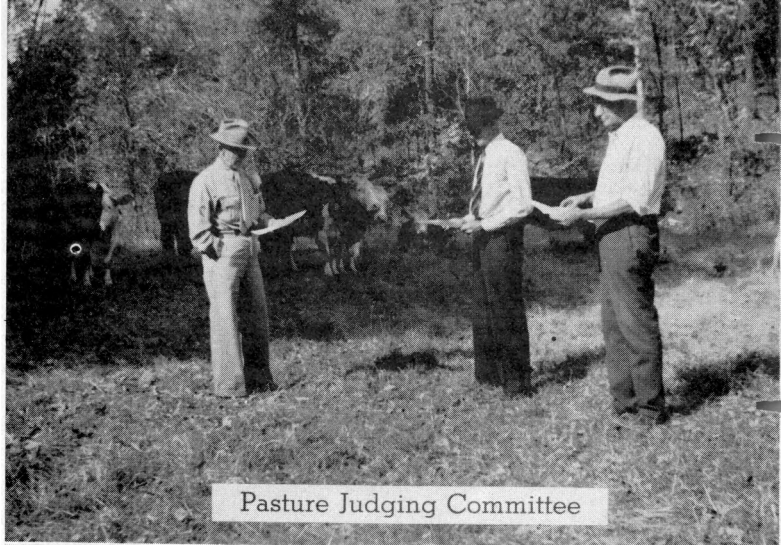


Organizing Egg Marketing Campaign



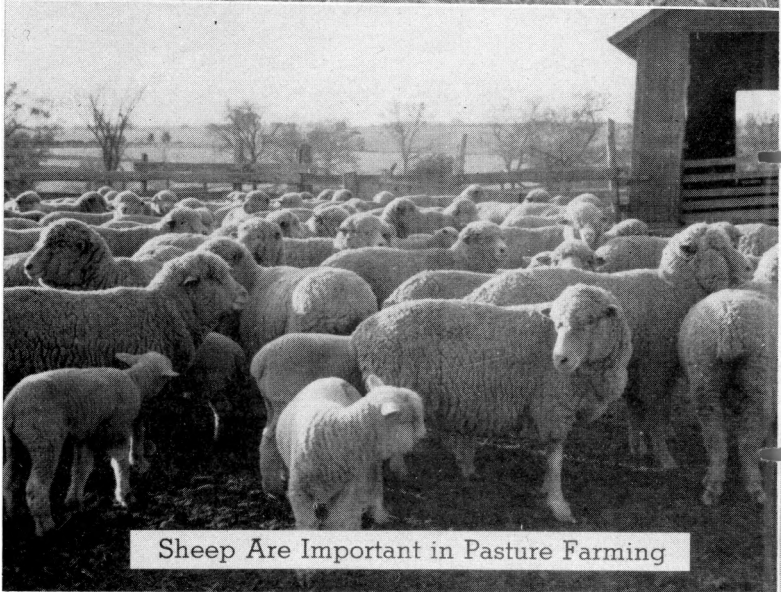
A 4-H Club Leader at Work

Records made in the pasture contest were used to help thousands of other farmers get better returns from land and livestock.



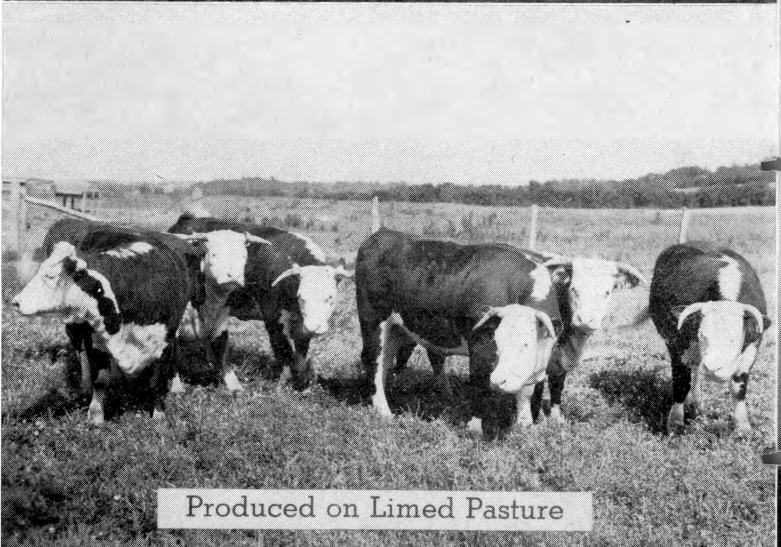
Pasture Judging Committee

Sheep numbers on Missouri farms were one-tenth greater than two years ago. Missouri early lambs were in wide demand at good prices.



Sheep Are Important in Pasture Farming

Beef cow herds, kept on pasture and roughage, raised a 94% calf crop to weaning time at a feed cost of \$15.86 per calf.



Produced on Limed Pasture

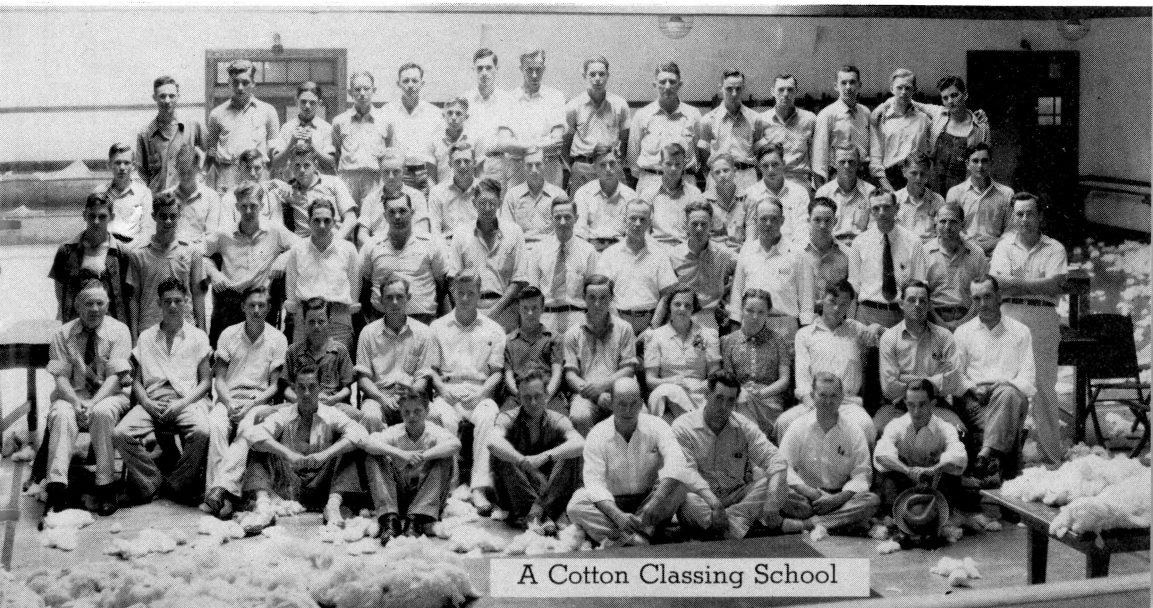
By cool storage of eggs, gathered often and marketed promptly, producers in the quality egg campaign earned \$1.15 more per case.



Cool Storage Adds 4c a Dozen

Higher quality butter, cheese, and ice cream are being made in Missouri plants and these products command higher prices in the major markets, as a result of Quality Cream and Milk campaigns. In this work thousands of dairy farmers and nearly all of the creameries and cream buyers cooperated.

Missouri's cotton income was increased by growing better cotton and selling it by grade and staple length. Dealers assisted in the program by sending employees to extension schools in cotton classing and then paying producers a premium for high-grade long-stapled cotton.

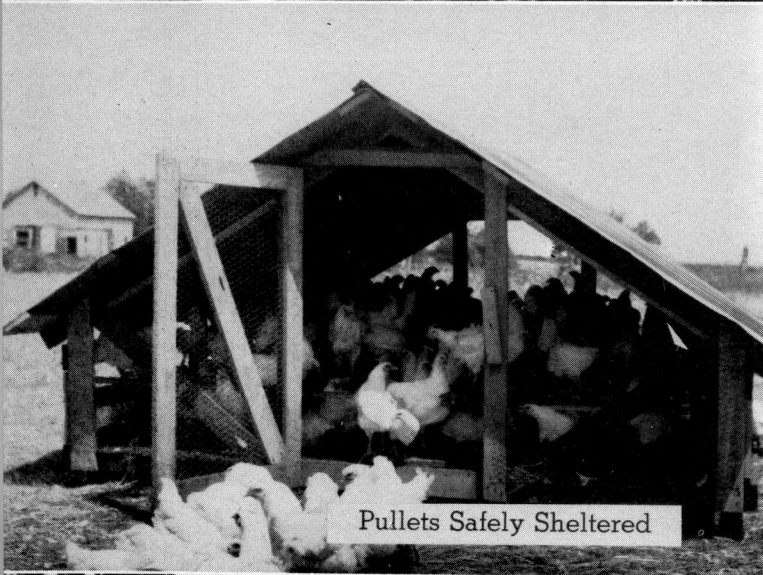


A Cotton Classing School



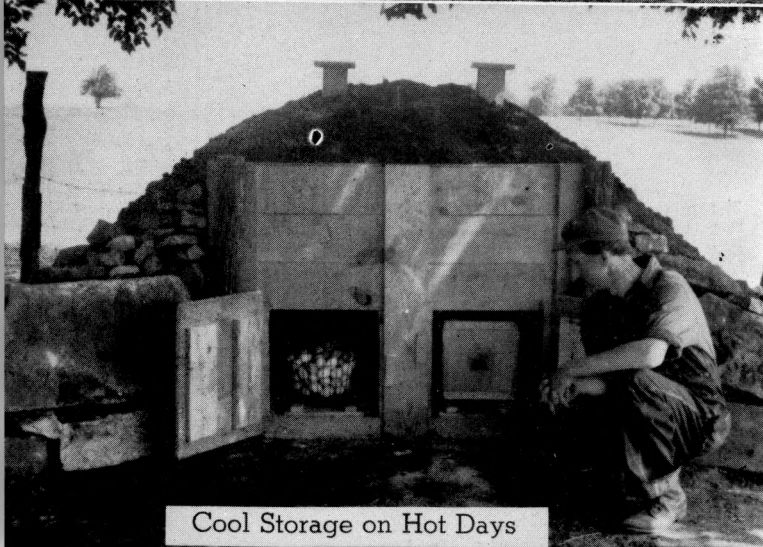
A Growing Missouri Enterprise

Better methods of hatching, brooding, and feeding have made turkey growing a dependable enterprise—now five times as great as it was ten years ago.



Pullets Safely Sheltered

Better poultry equipment built last year included 823 new range shelters, 748 new laying houses, and 1252 remodeled laying houses.



Cool Storage on Hot Days

Better feeding and housing of pullets on 8099 farms produced larger, more vigorous hens capable of laying 24 more eggs per hen their first year.

Home-made egg coolers aided in quality egg marketing, cooling eggs quickly and protecting them until promptly marketed.

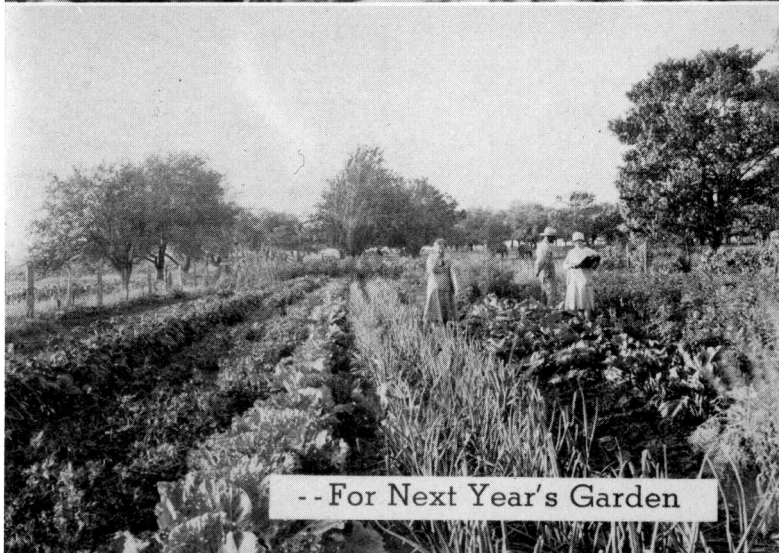
Many families now maintain two garden areas in yearly rotation; one for this year's garden, the other growing nitrogen and organic matter plowed under for next year's garden.

More than 20,000 Missouri farm families made gardening budgets—planting, storing, and canning enough vegetables to supply the family for a year.

Statewide interest was aroused in building caves and cellars, storage rooms in basement, bins for vegetables, shelves for canned foods.



Plowing Under Plant Food --



-- For Next Year's Garden

Complete records, kept on 126 home gardens in Missouri last year, showed average returns of \$1.80 an hour for labor, \$286 an acre for land.



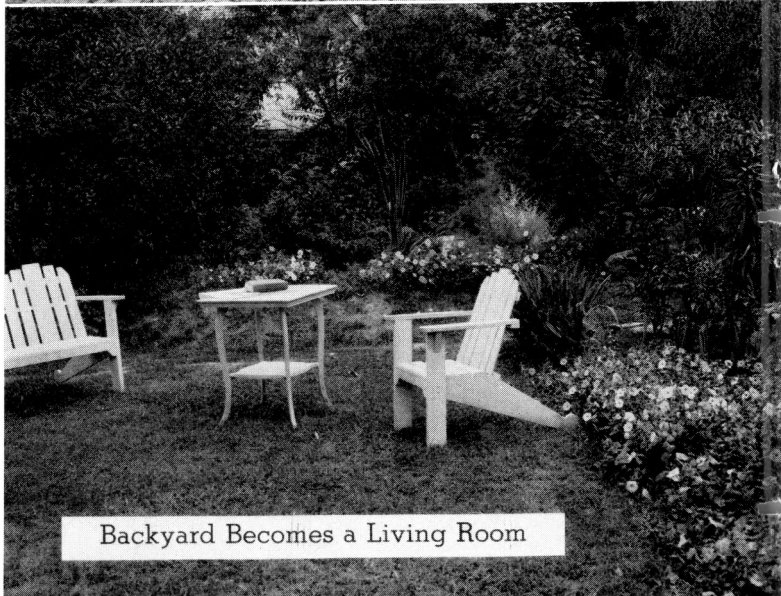
Paid \$400 a Year--

Garden records in the Plant to Prosper Contest gave gardens top credit in saving family income. One family produced \$400 worth of food in their home garden. The average was \$235 per family.

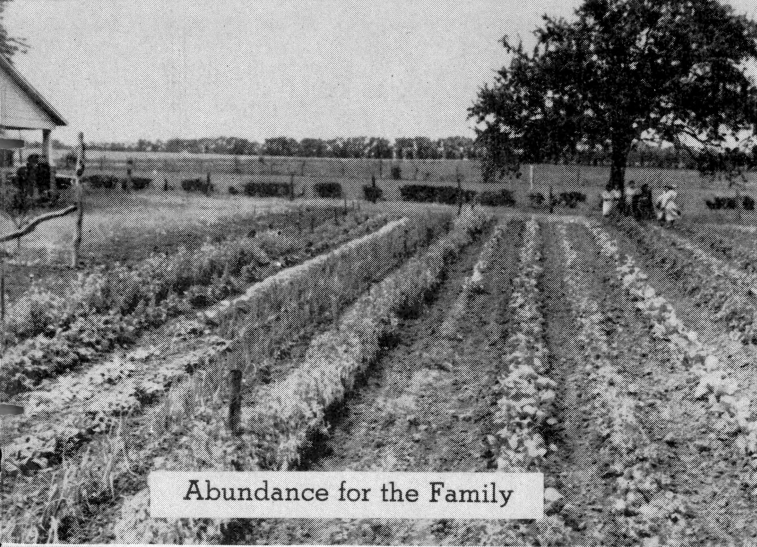


--and Fed Family of Health Winners

Some 25,000 farm families improved lawns, planted trees and shrubs, repaired and repainted buildings, made outdoor living rooms, or similar improvements.



Backyard Becomes a Living Room



Abundance for the Family

Plowing under successive crops of oats and soybeans on alternating garden areas and planting in long rows, made gardening easier and more profitable.



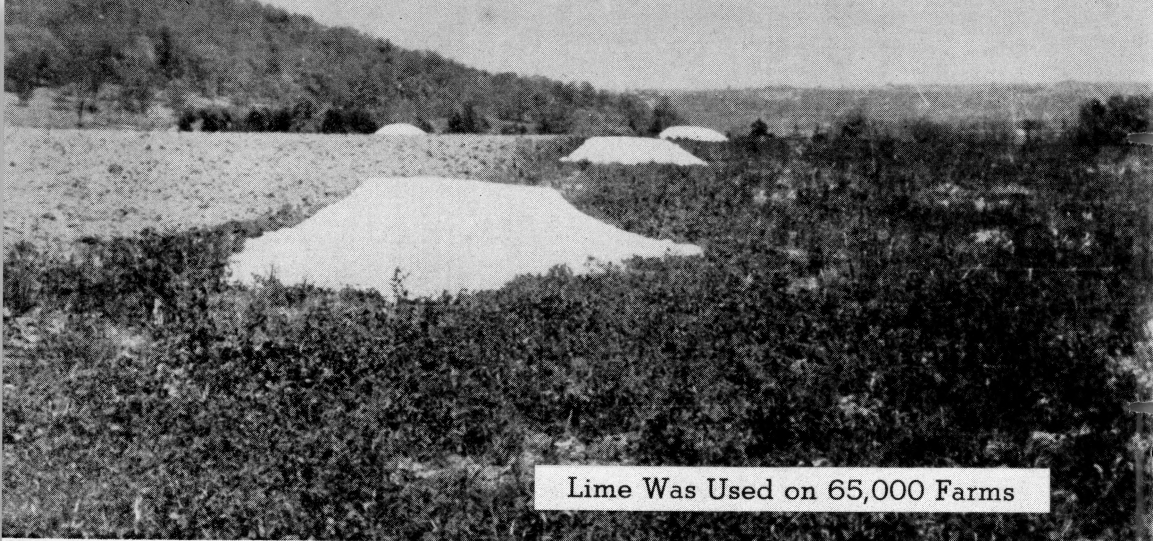
Vegetables on Contour

Truck gardeners, as well as general farmers, used contouring to save soil, conserve moisture, and reduce power costs.



At \$1.50 per Hour

Making the most of home resources, 20,000 farm families followed extension plans for canning vegetables, fruits, and meats—thus storing $3\frac{1}{2}$ million quarts of food.



Lime Was Used on 65,000 Farms



Sweet Clover -- Cash Crop and Soil Builder



Lime and Phosphate Gave Results

To feed their crops, Missouri farmers used nearly 75,000 tons of commercial fertilizer, besides green manure, barnyard manure, and 1½ million tons of lime.



This Had Phosphate-- --but This Had None

Drouth-resistant sorghums for grain and silage, preferably planted on the contour, are rapidly replacing corn on the thinner upland soils.



Drouth-Resistant Crop on Contour
Makes Utmost Use of Rainfall

County courts, soil improvement associations, extension committees, and many other groups and agencies joined the fight against bindweed.



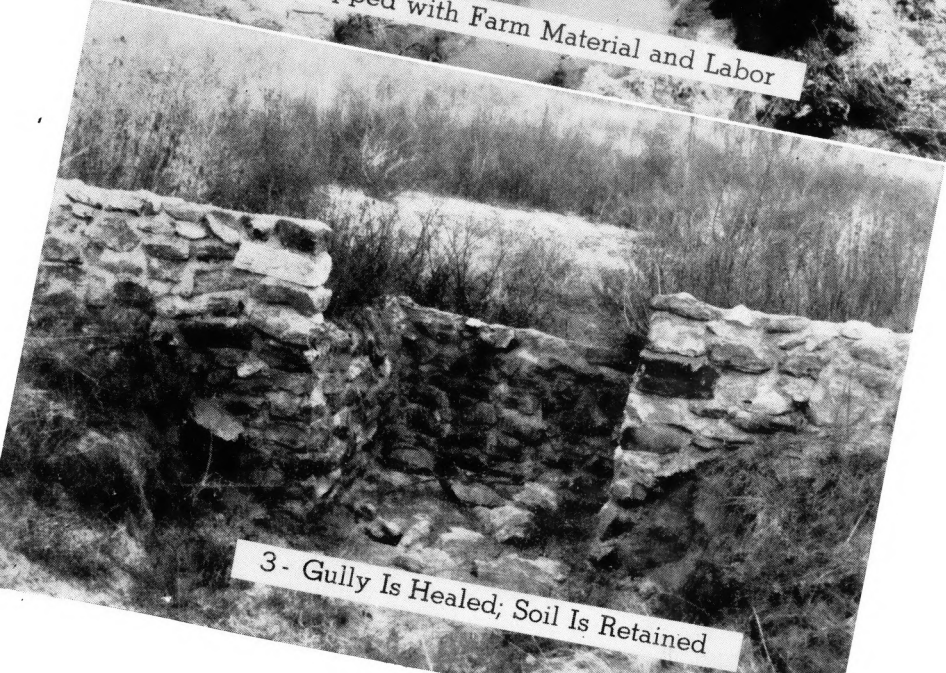
Chemical Control of Bindweed



1 - Toward the River and the Sea



2 - Stopped with Farm Material and Labor



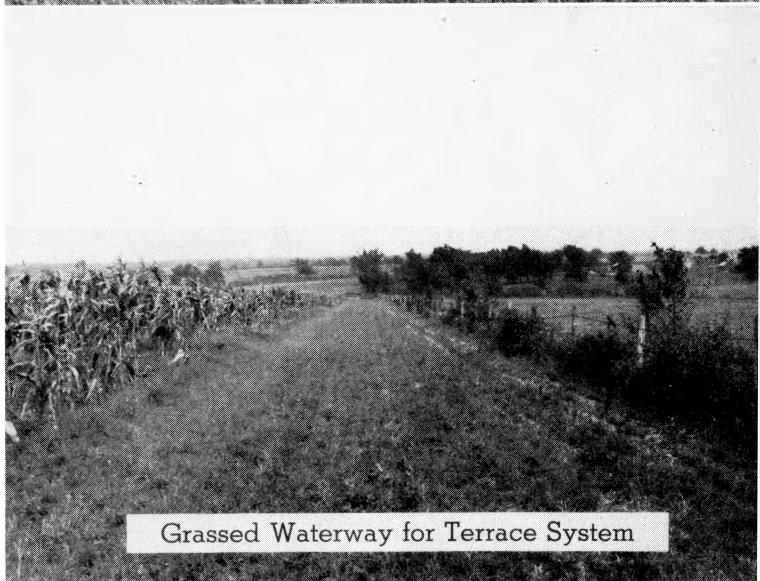
3 - Gully Is Healed; Soil Is Retained

Fully 400,000 acres of Missouri's better upland fields were protected last year by contouring, strip cropping, and terrace systems.



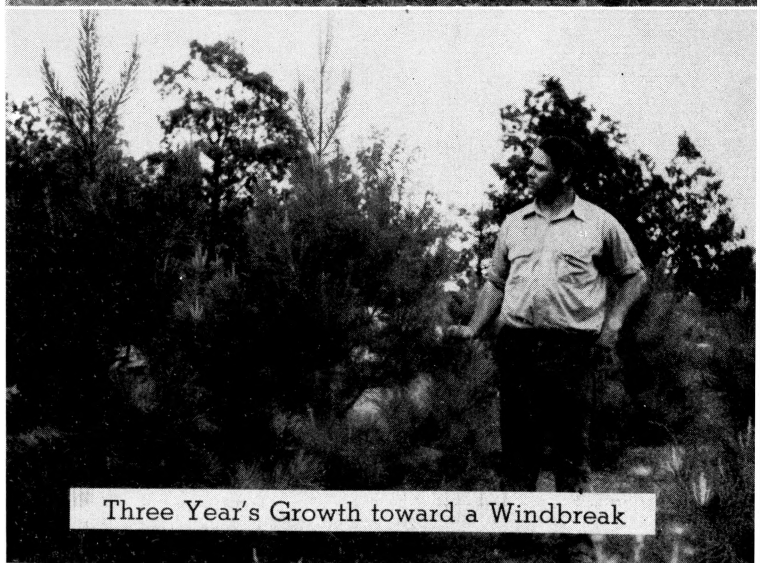
Strip Cropping Protects 80-Acre Field

Supplementing mechanical means of erosion control, cropping systems planned for soil conservation were used on nearly 3 million acres.



Grassed Waterway for Terrace System

More than one-fourth of the 1,055,000 forest tree seedlings used by Missouri farmers in 1940 were set out for windbreaks and shelter belts.

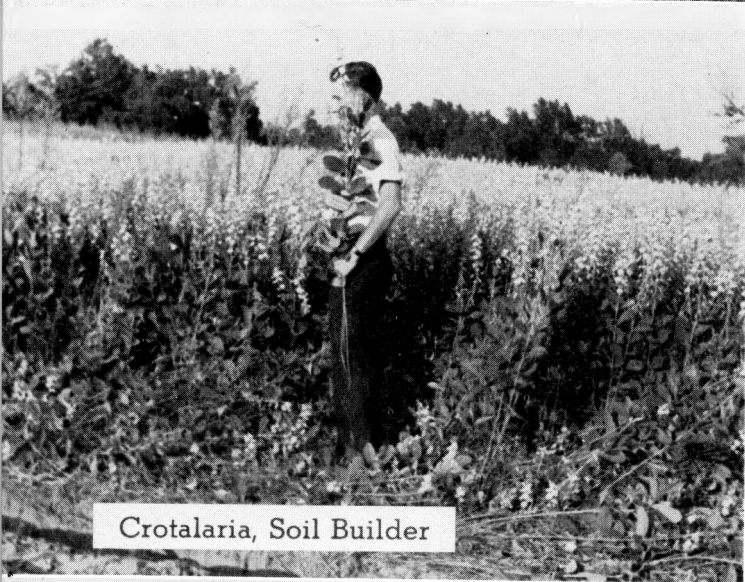


Three Year's Growth toward a Windbreak



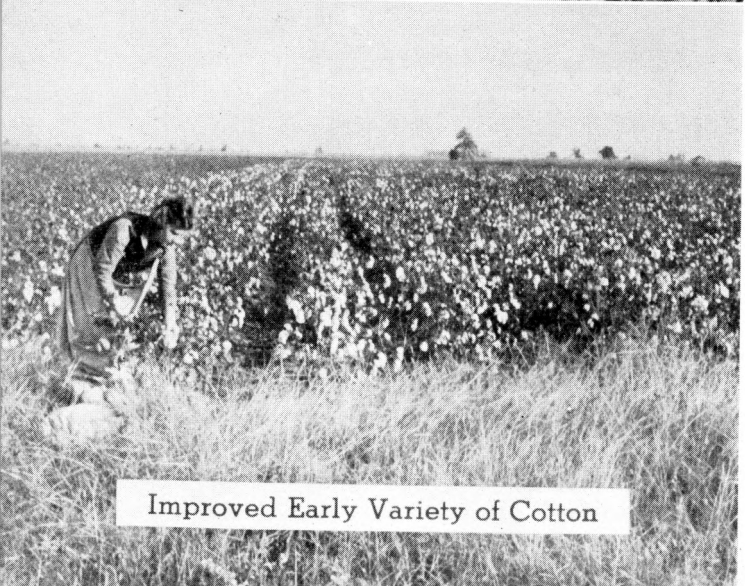
Strip Cropping Protects Sloping Land

More than 1000 men were trained in 9-day county schools last year to lay out contour and terrace lines, construct terraces and outlets, and help their neighbors in other phases of soil conservation.



Crotalaria, Soil Builder

Rich deposits of nitrogen and organic matter were put into the soil by 19,000 farmers who plowed under sweet clover or crotalaria—the latter in Southeast Missouri.



Improved Early Variety of Cotton

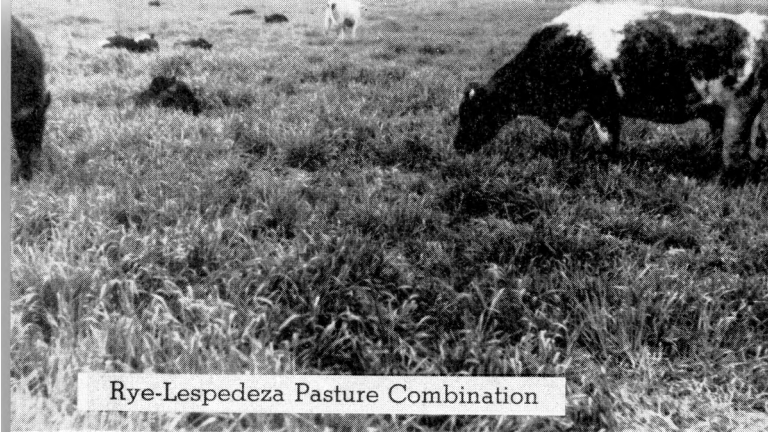
Pure seed of improved varieties used on 87 per cent of Missouri's cotton acreage in 1940, made yields averaging 448 pounds of lint per acre—one-fourth more than that from gin-run seed.



Contoured Soybeans a Safe Crop



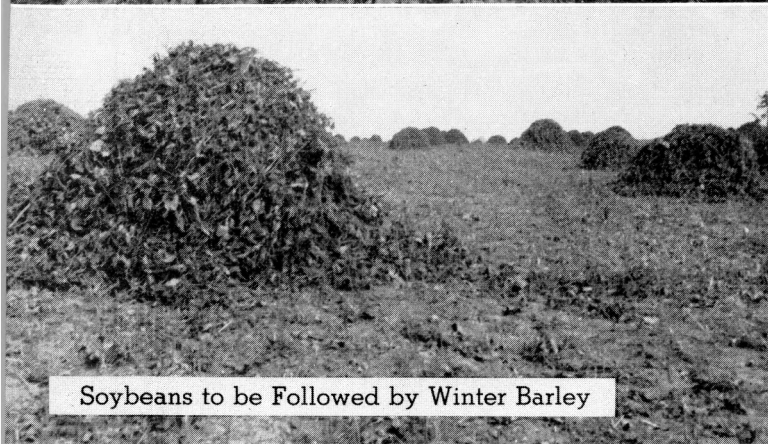
A Fine, New Stand of Red Clover



Rye-Lespedeza Pasture Combination



Legumes Reduce Feed Costs



Soybeans to be Followed by Winter Barley

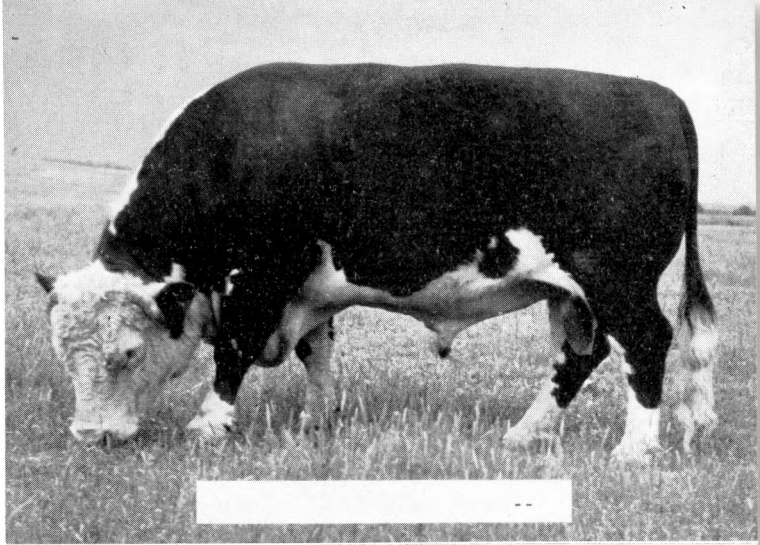


The percentage of cultivated land in legumes increased from 27% to 33% in 1940. Lime and phosphate treatments increased both the yield and feeding value of these crops.

The number of farmers using small grain and legume combinations—involving either Korean lespedeza or soybeans—increased 30%.

This field of Missouri Early Beardless barley turned out 50 bushels of feed per acre early in June—with lespedeza thick in the stubble.

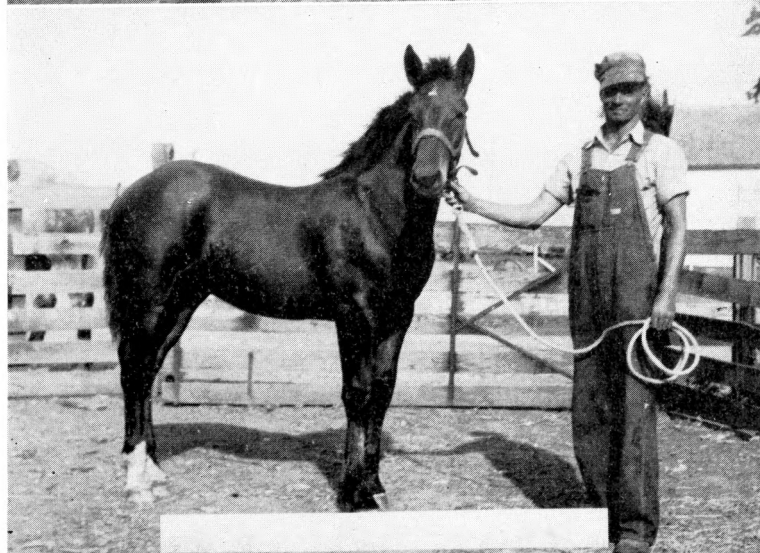
To improve herds and flocks, Missouri farmers bought registered sires as follows: 3759 beef bulls, 1738 dairy bulls, 4452 boars, and 4170 mutton rams.

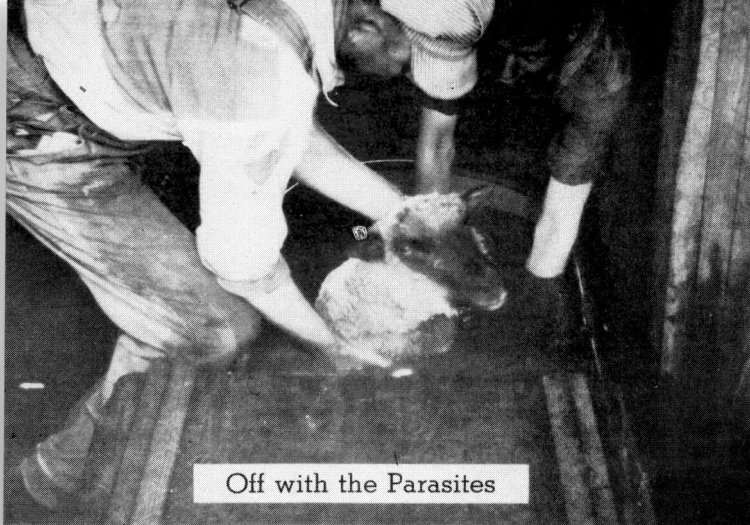


Utilizing pastures and home grown roughage, demonstration herds of beef cows in 38 counties brought calves to weaning time at an average feed-cost of \$15.86 per calf.



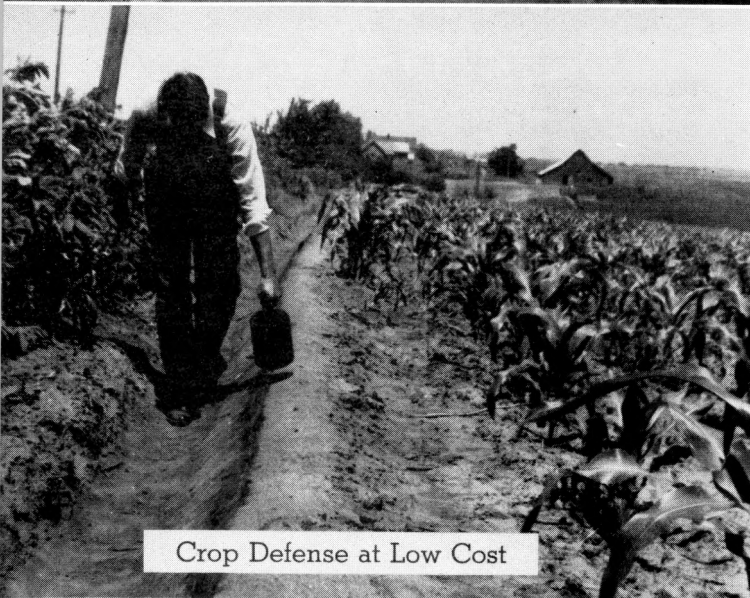
Colt production work showed that farm power can be produced economically, largely on roughage, with brood mares doing their share of farm work.





Off with the Parasites

About 9000 farmers dipped their sheep flocks for ticks and lice, while more than 12,000 treated their sheep regularly for internal parasites.



Crop Defense at Low Cost

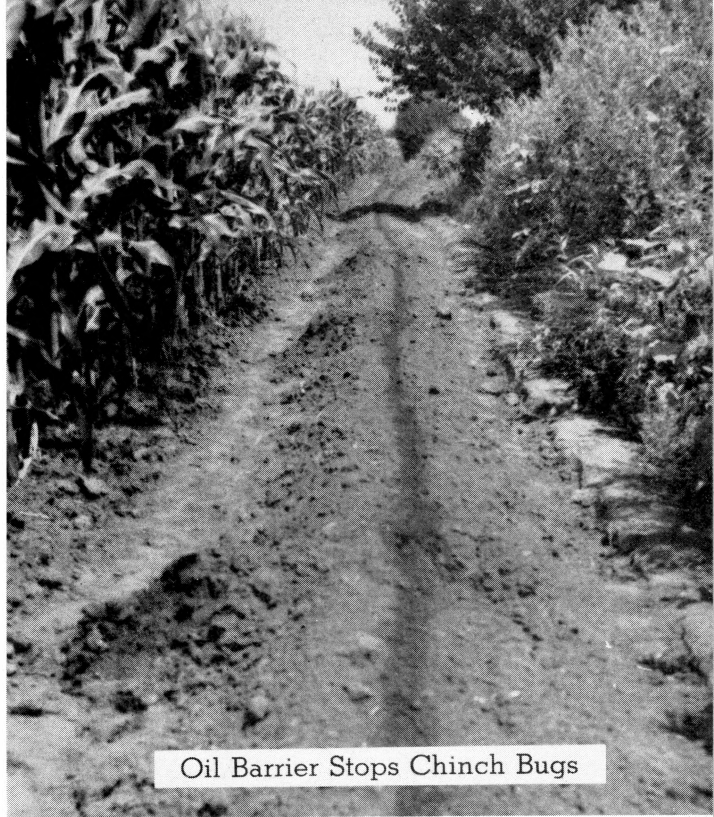
Dust-oil-and-posthole barriers were used in 58 counties to protect crops from chinch bugs—300,000 gallons of oil saved \$750,000 worth of corn.



Control of Parasites to Save Feed

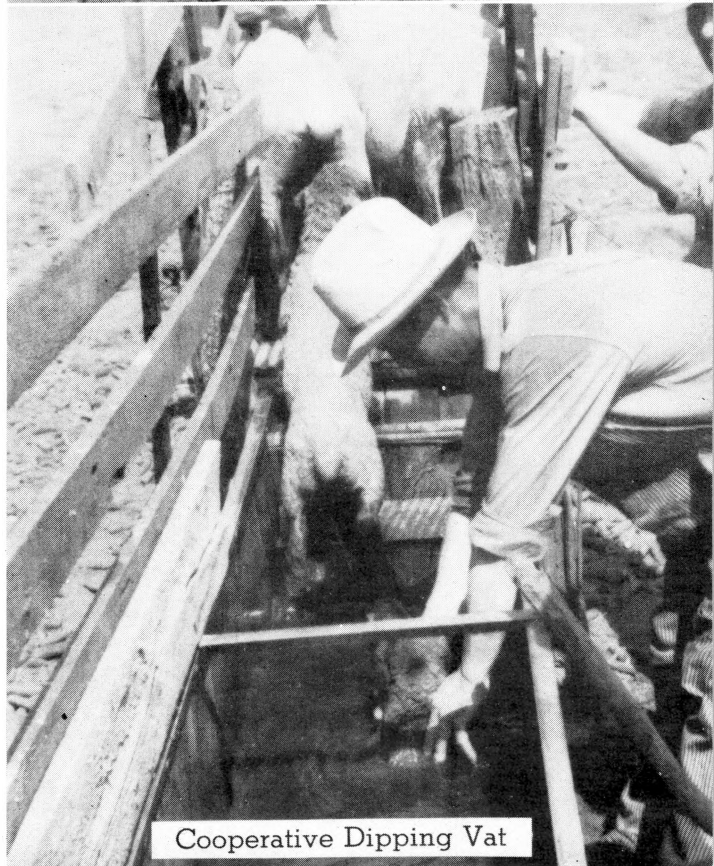
Spring pigs raised on clean ground, fed a balanced ration, and pushed to market at 6 months, produced each hundred pounds of pork with about 6 bushels of corn, or its equivalent, and 20 pounds of protein.

Insect pests of field, orchard, shade trees, and garden were held back by control campaigns. Poisoned bait saved 35,000 acres of crops from grasshoppers.



Oil Barrier Stops Chinch Bugs

Farmers saved feed and horse-flesh by having 62,000 horses treated for bots. They dipped 314,000 sheep for outside parasites and nearly twice that number for internal pests.



Cooperative Dipping Vat



Nearly half a million trees were planted to stop erosion on steep land, to check gullies, and to protect areas draining into ponds.

Farmers in 91 counties built 5174 stock ponds more than 8 feet deep. Fenced, piped to tanks, and draining protected watersheds, deep ponds give a year-round water supply.

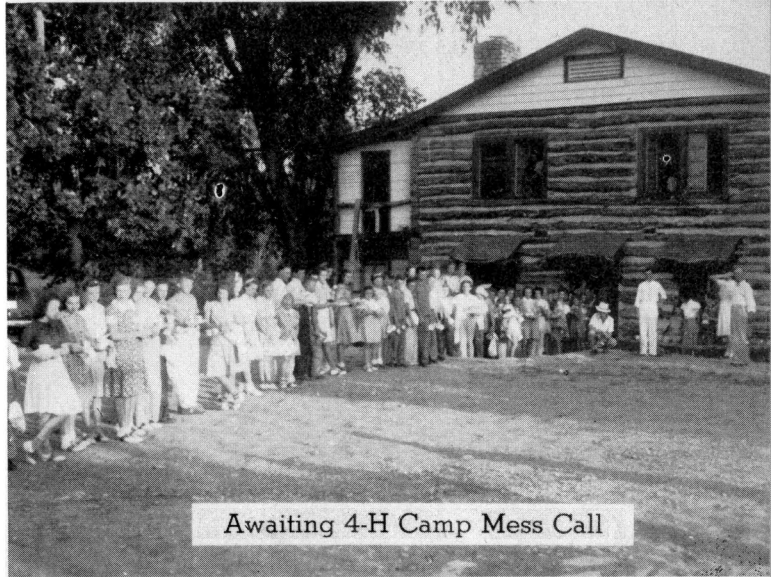


Wildlife conservation was popular among 4-H club members. They put out feed for quail, sowed 15 tons of lespedeza seed, planted trees and shrubs, and helped improve ponds.



Winter Feeding for Quail

Nearly 3500 club members attended 4-H club camps last summer. These included 10 county camps, 23 district camps, and 1 state conservation camp.



Awaiting 4-H Camp Mess Call

Instruction was given 4-H club members in 26 phases of farming, homemaking, and community service. The number of boys and girls enrolled was 23,561.



4-H Club Camp Council -

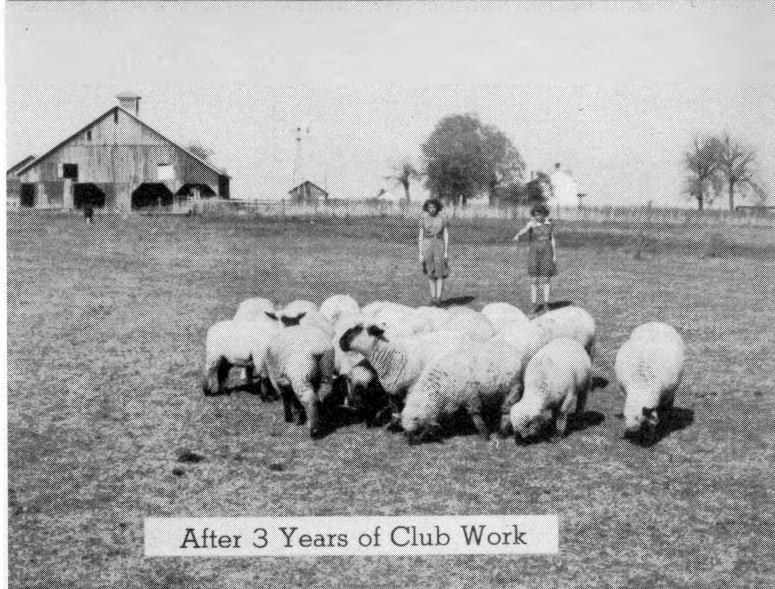
For young people just beyond the 4-H club age, 34 Rural Youth Organizations were sponsored and assisted in 22 counties.

Club experience includes learning how to conduct meetings properly, how to make demonstrations, and how to judge farm and home products.



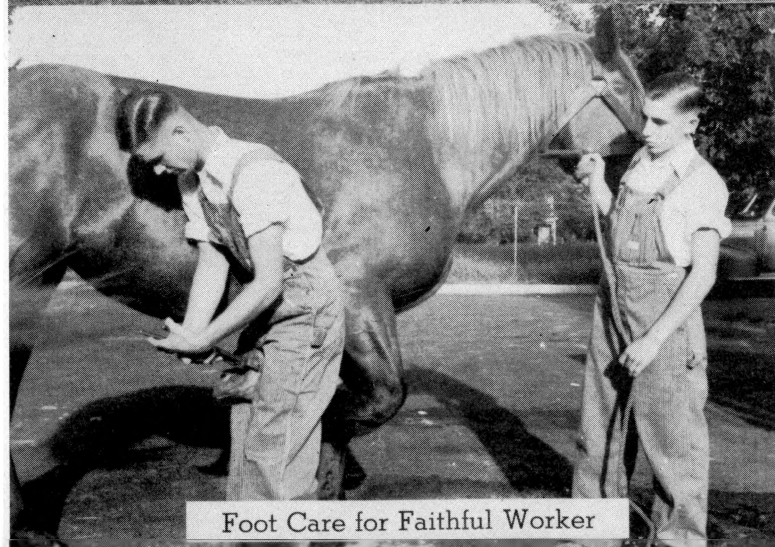
Learning Self Reliance

More than one-third of the 1160 students in agriculture and home economics at the University of Missouri are former 4-H club members. Earnings from club projects have helped many pay their way.



After 3 Years of Club Work

In teaching better farm and home practices, 4-H club work uses actual life situations that are interesting and important.



Foot Care for Faithful Worker



HOME ECONOMICS EXTENSION WORK

Extension work with farm homemakers was statewide in its scope last year. The efforts of 79 home demonstration agents were supplemented by 112 county extension committees, several thousand local leaders, and 2215 home economics extension clubs.

These clubs, with a membership of 41,593 women, met at least once a month, appointed leaders to attend training meetings in varied phases of homemaking, and sent delegates to county planning conferences.

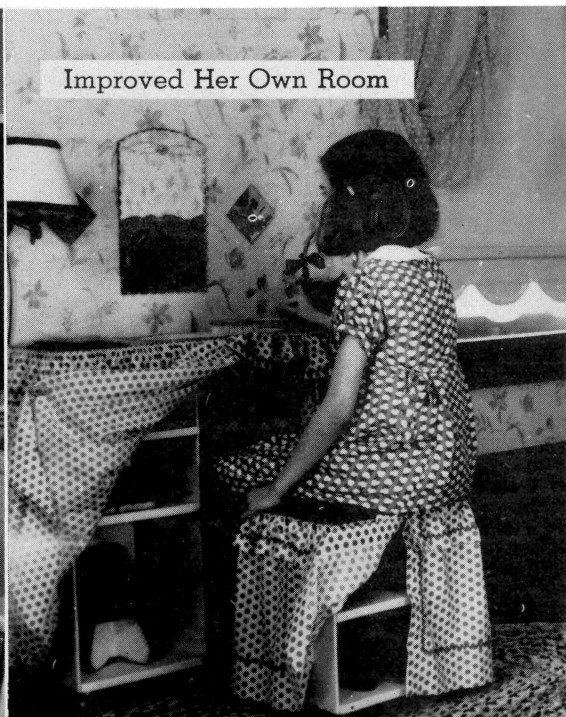
They improved their homes, conserved family budgets, clothed and fed their families more efficiently, promoted health, and learned how to buy supplies more wisely. Each member also was pledged to share new ideas with non-member neighbors.

These women sponsored 4-H clubs; improved parks, schools, and churches; organized health clinics, musical and dramatic groups. They conducted magazines exchanges and established libraries. They sponsored recreation and singing.

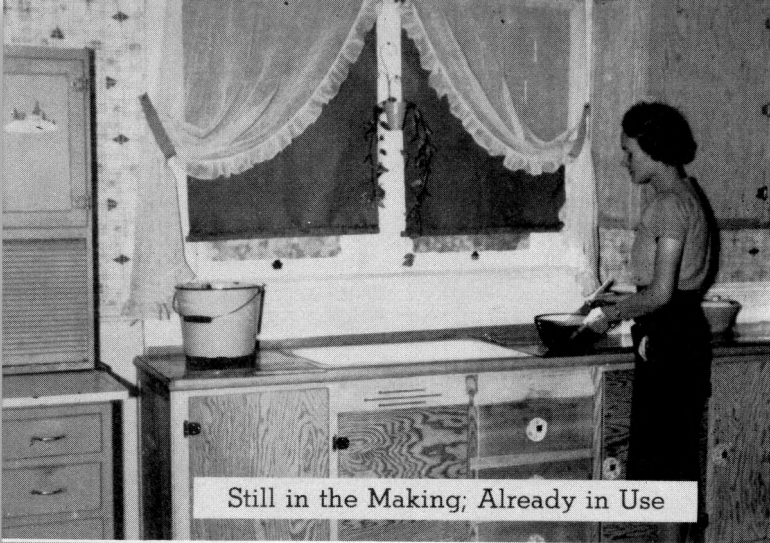
Altogether, within organized groups and individually, nearly 60,000 rural women joined in extension work last year, mastering better practices, rediscovering their neighbors, and developing resources of which they had not previously been aware.



Clothing Leader at Work

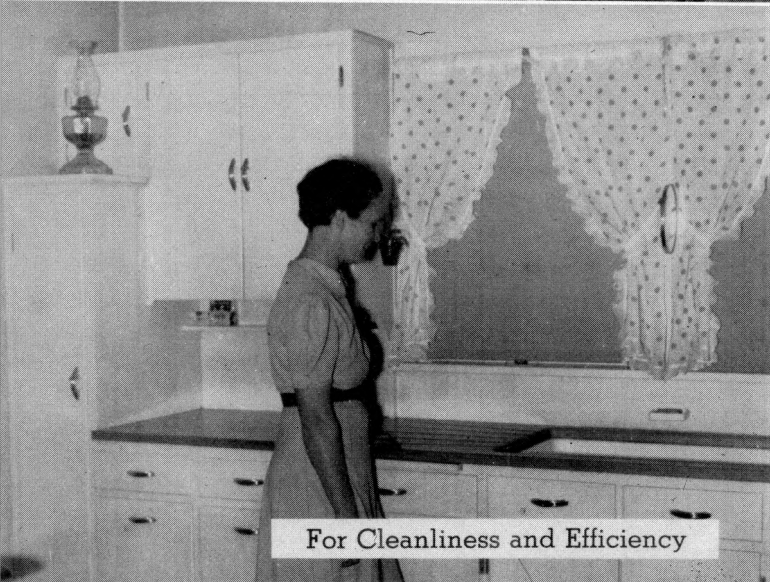


Improved Her Own Room



Still in the Making; Already in Use

From extension teaching on foods, 21,446 families enjoyed better balanced meals and greater appreciation of nutritive values.



For Cleanliness and Efficiency

More than 8100 families planned farm and home expenditures jointly, making budgets, keeping accounts, and using better buying methods.



Will Save Countless Steps

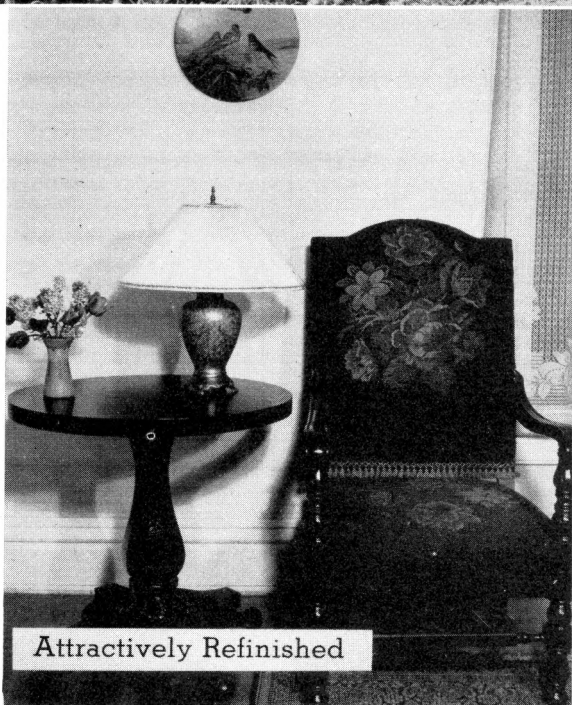
Labor - saving equipment was installed in more than 7200 farm homes, plus better lighting and re-arrangement of rooms and work units.

Handicraft and home skills were developed and applied in the making or repair of 52,300 items of living room and bedroom equipment.

Furniture was repaired and upholstered.

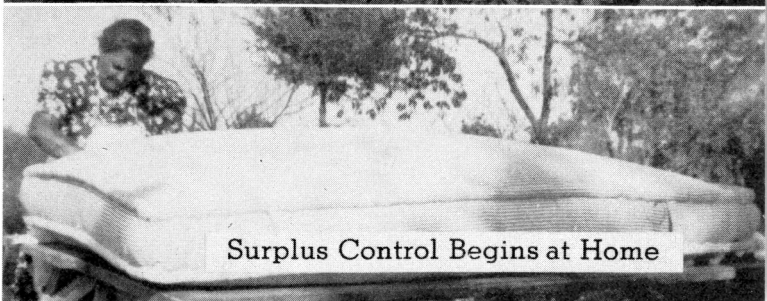


Family Recreation Center



Attractively Refinished

Using Missouri-grown cotton, local leaders in 144 communities aided in the making of 10,000 cotton mattresses. In this work, the Agricultural Adjustment Administration and the Surplus Commodities Corporation assisted.



Surplus Control Begins at Home

Home-made Games Are Fun



Wholesome fun at home and in community gatherings was sponsored by local leaders and extension workers. Rural groups put on 1244 home-talent plays before a total of 69,168 persons.

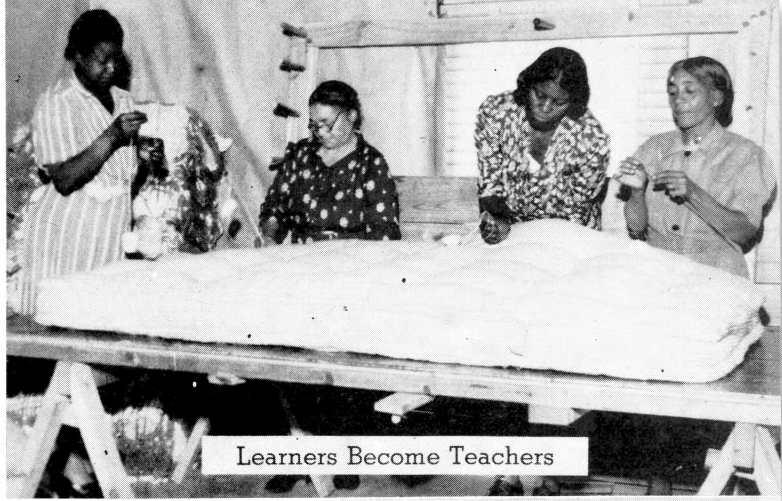


Home-grown wool was used in making comforts, while feathers and cotton were made into mattresses. Furniture was repaired and upholstered.

Instruction in making clothes aided 60,000 Missouri farm women in keeping their families well dressed. Similar skills were acquired by 6500 girls in 4-H sewing clubs.

Made Her Own Dress

Home demonstration work for Negro families was carried on in three Missouri counties last year. Benefits were shared by 679 families.



Learners Become Teachers

In the cotton mattress campaign last summer, 1860 full-sized 50-pound mattresses were made by Negro families in New Madrid, Pemiscot, and Mississippi counties. Leaders were trained by the home demonstration agent, materials were assembled with the aid of government agencies, and work centers were established. Working in homes, schools, churches, and gin porches, or under shade trees, these people made as many as 43 mattresses a day.



Negro women in 36 home economics extension clubs worked with their home demonstration agent to improve their family food supplies. In 1940, these women canned 70,000 quarts of food from their own gardens.





UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE AND THE UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

J. W. BIRCH, Director, Agricultural Extension Service
Distributed in furtherance of the Acts of Congress of May 8, and June 30, 1914

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