

# UNIVERSITY OF KENTUCKY

COLLEGE OF AGRICULTURE

Extension Division

THOMAS P. COOPER, Dean and Director

CIRCULAR NO. 332

## ANNUAL REPORT OF THE EXTENSION DIRECTOR FOR THE YEAR ENDED DECEMBER 31, 1938



Making farm homes convenient and beautiful both inside and out, is a favorite project with 4-H club members.

Lexington, Kentucky

June, 1939

Published in connection with the agricultural extension work carried on by co-operation of the College of Agriculture, University of Kentucky, with the U. S. Department of Agriculture and distributed in furtherance of the work provided for in the Act of Congress of May 8, 1914.

LETTERS OF TRANSMITTAL

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Experiment Station  
Lexington, Kentucky

President Frank L. McVey  
University of Kentucky

My dear President McVey:

I have the honor to present the annual report of the Division of Agricultural Extension of the College of Agriculture, University of Kentucky, for the year ended December 31, 1938. In this report will be found a statement of the various activities of the past year, a list of publications and a financial statement of receipts and expenditures.

Respectfully,

THOMAS COOPER  
*Dean and Director*

University of Kentucky  
Lexington, Kentucky

Honorable A. B. Chandler  
Governor of Kentucky

Sir:

In accordance with an act of the Legislature of the State of Kentucky, approved March 15, 1916, I herewith submit the annual report of the Division of Agricultural Extension of the College of Agriculture, University of Kentucky, for the year ended December 31, 1938.

Respectfully,

FRANK L. McVEY  
*President*

Circular No. 332

ANNUAL REPORT OF THE EXTENSION DIRECTOR  
FOR THE YEAR ENDED DECEMBER 31, 1938

Prepared By T. R. BRYANT, Assistant Director

The helpful influence of the Extension Service upon the affairs of farm people is increasing steadily. A growing appreciation of the value of the service is evident whether one studies reports or listens to the discussion of matters of farming and country life at meetings of farm people. This desirable result was obtained only by the most careful planning. Growing confidence in the extension program has encouraged wider participation on the part of farm people and more ready acceptance of carefully prepared plans for further extension work of a helpful nature.

Increased work has been done among negroes, especially in 4-H club work in gardening, in food habits and in home improvement. Many of the activities engaged in by white 4-H club members had not been fully available to negro children. Such activities as camps, fairs and contests were more fully provided in 1938. A successful Farm and Home Week was conducted at the State Industrial College for colored people, using that Institution as a meeting place. The development of volunteer leadership among negroes had its most successful year.

The following publications were issued during the calendar year 1938:

EXTENSION CIRCULARS

NUMBER

- 82. Revised. Corn project for 4-H clubs. E. E. Fish and E. J. Kinney.
- 84. Revised. Sow and litter project for 4-H clubs. Grady Sellards.
- 110. Revised. Poultry project for 4-H clubs. C. E. Harris.
- 157. Revised. Brooding chicks artificially. J. E. Humphrey and J. B. Kelley.
- 209. Revised. Grapes for the home. A. J. Olney.
- 211. Revised. The pig from birth to market in six months. Grady Sellards.
- 235. Reprinting. Raspberry culture in Kentucky. A. J. Olney and W. W. Magill.
- 252. Reprinting. Clothing—Unit I. Anita Burnam and Edith Lacy.
- 261. Revised. Killing, cutting and curing pork. E. J. Wilford and Grady Sellards.
- 289. Reprinting. Burley-tobacco project for 4-H clubs. E. J. Kinney.
- 293. Revised. Peach and plum spray schedule. A. J. Olney.
- 294. Revised. Apple spray schedule. A. J. Olney.

307. Potato growing. John S. Gardner.
308. Sweetpotato growing. John S. Gardner.
309. The vegetable garden. John S. Gardner.
310. Annual report of the Extension Director. T. R. Bryant.
311. Electric service for the farmstead. J. B. Kelley, Ida C. Hagman and Earl G. Welch.
312. Growing alfalfa in Kentucky. E. N. Fergus, Ralph Kenney and Wm. C. Johnstone.
313. Clothing project for 4-H clubs. Unit II. Edith Lacy and Anita Burnam.
314. Home canning. Florence Imlay and Pearl J. Haak.
315. How to estimate the cost of wiring, equipment and electric service for the farmstead. Earl G. Welch and J. B. Kelley.
316. Meal planning. Unit I. Florence Imlay and Pearl J. Haak.
317. Earth dams for farm reservoirs. Earl G. Welch and J. L. McKittrick.
318. Crimson clover and other winter legumes. E. N. Fergus, Ralph Kenney and Wm. C. Johnstone.
319. Electrically operated water systems for farms. J. B. Brooks.
320. One-dish meals. Florence Imlay and Pearl J. Haak.
321. 4-H food project. Unit I. Dorothy Threlkeld and Edith Lacy.
322. Same. Unit II.
323. Same. Unit III.
324. Home canning of meats. Florence Imlay and Pearl J. Haak.
325. 4-H woodworking project. Unit I. J. B. Brooks and E. R. Young.
326. Minerals for livestock. Animal Industry Group.
327. Health program for club members.
328. Suggestions for bird study for 4-H clubs. W. D. Funkhouser.

Crop record book for 4-H clubs. Reprinting.  
 Foods record book for 4-H clubs. Reprinting.  
 Clothing record book for 4-H clubs. Reprinting.

Poultry calendar. C. E. Harris.

#### LEAFLETS

Cover crops. Reprinting. Wm. C. Johnstone.  
 Lime and phosphate for Kentucky soils. Reprinting. S. C. Jones.  
 Recommendations for the control of leaf diseases of tobacco. Reprinting.  
 W. D. Valleau and E. M. Johnson.  
 Contour cultivation. Earl G. Welch and John L. McKittrick.  
 Soil tests for need of lime and phosphate. P. E. Karraker.  
 Rapid soil tests. P. E. Karraker.

Birds of Kentucky. 4-H Club Program for 1939. H. C. Brown.

Extension Service Handbook. E. J. Kilpatrick.

#### COUNTY AGENT WORK

This year was the first in which all counties in the state had county agents. In addition, 36 assistant county agents were employed during most of the year. The following were outstanding features of the work of county agents.

*Agricultural Conservation Program.* About 27 percent of the county agents' time was used on the several branches of this one item. This year, 203,143 work sheets were turned in. Thru the influence and with the help of county agents nearly 1,000,000 tons of limestone were used on the land in 1938, and 40,000 farmers bought and applied 33,000 tons of triple superphosphate.

*Rural Electrification.* This project grew very rapidly and since the small beginning in 1937, 5,080 miles of line have been constructed to serve over 18,000 customers, at an average cost of \$277.00 each. County agents, home demonstration agents, and extension field agents made contributions to the R. E. A. project in 104 counties, and 27 of these counties made very important progress toward completion during the year. A survey of 2,100 farm homes having electric lights installed during the year, shows that 680 refrigerators, 1,500 irons, 1,300 radios and 800 washing machines were purchased.

*4-H Clubs.* Under the immediate supervision of county agents in Agriculture and Home Economics 41,087 4-H club members were enrolled and 33,958 or 82.6 percent completed their projects.

*County Agricultural Program Planning.* Work was done in the counties by the county agents and the county planning committees, with the assistance of field agent, Bruce Poundstone. In building their extension programs for 1938, these workers made use of such long-time planning as had been developed in previous years. The extension program was coordinated as far as possible with other kindred agricultural programs such as the Agricultural Conservation work, Farm Security Administration and others. One of the principal features, however, was preparing a well-designed farm-management program for the county with a long-time view as a guiding principle. Special work was begun in seven counties and the results will be used as a foundation for the continuation of this program in 1939. In 102 counties two or more long-time planning meetings were held.

*Training and Use of Local Leaders and A. C. P. Committeemen.* One of the most important features of the year's work was training unpaid leaders in the usual extension projects, and training A. C. committeemen and clerks in their duties as paid workers. Full assistance was given by the State A. A. A. office both by personal visits and by group conferences. The extension field agents in soils

and crops were very helpful in training these committeemen to help farmers in earning payments thru soil-building practices.

*Erosion Control.* In adult extension work the use of grasses, terraces and contour cultivation to control soil erosion was advocated. Some 50 percent more farmers sowed legumes and grass seed than in any previous year. An increase in the amount of soil-building allowance earned indicates something of the work done to improve and conserve the soil thruout the state.

#### SYNOPSIS OF COUNTY-AGENT ACTIVITIES

	1937	1938
Counties with agents .....	119	120
County Extension Organizations .....	107	103
Membership—men .....	15,045	13,423
Communities that built extension programs .....	1,256	1,264
Community leaders in community-built programs .....	7,580	8,072
Leader-training meetings .....	1,830	2,566
Attendance of local leaders .....	23,583	37,992
Meetings held by local leaders, not participated in by county agents .....	5,513	7,954
Attendance .....	93,518	154,472
Number paid A. C. leaders in adjustment programs .....	2,474	2,687
Method and result demonstration meetings .....	3,200	3,755
Attendance .....	60,315	73,810
Other Extension meetings .....	13,634	15,475
Attendance .....	580,480	647,500
Farm visits made by county agents .....	71,326	74,952
Farms visited by county agents .....	38,271	40,097
Calls relative to work		
Office .....	873,632	1,091,392
Telephone .....	184,440	231,605
Individual letters written .....	242,682	214,514
Total all meetings held by county agents, including demonstrations, leader-training meetings, etc. ....	17,703	21,796
Attendance .....	682,013	759,302
Animals in 4-H club work completed		
Dairy .....	600	594
Poultry .....	128,492	135,103
Sheep .....	1,876	2,267
Swine .....	3,856	4,225
Beef .....	1,304	1,364

#### HOME DEMONSTRATION

Home demonstration agents were employed in 50 counties in 1938. Three counties with a large negro population have the services of two negro home demonstration agents. The program of work in each county was carried on thru the county homemakers

association, a federation of community homemakers clubs which are the study groups of rural homemakers interested in problems of homemaking and community improvement, under the immediate supervision of the home demonstration agents, assisted by a staff of supervisors and field agents from the College of Agriculture. Assistance was rendered by supervisors, field agents and home demonstration agents in 46 other counties not having home demonstration agents.

*Program of Work.* Major projects were undertaken in clothing, home management, home decoration, foods and nutrition, child care and family relations. Minor or special projects were undertaken in landscape gardening, rural electrification, reading in the home, better speech, music appreciation, handicraft, recreation, style trends, millinery and dress forms. The program undertaken in any county is determined by discussion, first in the community and then in county groups in order to have full participation of as many farm women as possible in first analyzing their needs and, later, determining a program based on those needs.

*Home Management.* Home management projects were undertaken in 12 counties. They dealt with conservation of time, energy and money thru good management. Efficient housekeeping saves time for other things. Convenient arrangement of working equipment in the home, labor-saving devices, improved equipment, efficient methods of work, adequate storage facilities, good business methods, adequate records, good money management, better buying and financial planning, are all part of a home-management program. During the year, 467 kitchens were remodeled and 79 new kitchens were added. In addition to complete renovation, numerous improvements were made, such as 1,217 refinished kitchen walls, 1,120 refinished kitchen floors, 1,075 improved kitchen furnishings, 2,044 families obtaining labor-saving equipment, 6,419 pieces of labor-saving kitchen equipment made or purchased, 3,991 pieces of labor-saving laundry equipment made or purchased, 5,081 useless articles removed. Two thousand, two hundred and sixty-nine families were assisted with such financial problems as budgets, home accounts, better buying, use of business methods in the home. Two thousand, four hundred and seventy-nine clothing closets were either built, remodeled or reorganized and 442 other storage units

were provided. Sixty sewage systems, 113 water systems, four central heating systems and 719 lighting systems were installed.

*Clothing.* Major projects in clothing were undertaken in 13 counties and special projects in 50 counties. Rural families are becoming clothes conscious as a means of making them more at ease in a group and of expressing individuality. There is no better looking or better dressed group in Kentucky than the rural homemakers who attend the Farm and Home Convention at Lexington, not because they spend a large amount of money on clothes, but because they have spent intelligently what little they had and because they have been enabled, thru information, to make what they have on hand "look like what it isn't". During the year, 19,393 individuals were reached with clothing information; 44,704 garments were made, at an estimated value of \$84,042.02; 9,974 hats were reconditioned by cleaning, renovating, blocking dyeing or trimming, and 795 new hats were made, at a saving of \$9,404.88. Over 11,000 garments were remodeled at a saving of \$25,293.39. Dry cleaning costs were cut thru better methods of home cleaning. In all, the clothing program saved Kentucky homemakers \$85,081.59. The money value, while important, does not compare with the value to the farm homemaker of being able to have for herself and her family, clothing that is becoming, appropriate, well made, economical and modish, which objective she has been able to attain thru knowledge of color, line, design, construction processes, clothing selection, better buying and better grooming. In the better grooming project, 13,687 improved practices were reported in the three counties carrying this project. These included use of perspiration check, care of hands, hair, skin, teeth, use of cosmetics, better care of clothing. Quantities of home-made perspiration check, hand lotion and tooth powder were made at a saving of thousands of dollars. The reconditioning of old sewing machines took sewing out of the drudgery class of tasks for many homemakers. The special project offered in the spring and fall on style trends in clothing and millinery reached a very large percentage of the homemakers in home demonstration counties and is largely responsible for well-dressed rural Kentucky.

*Home Furnishing.* The home furnishing program carried in 35 counties is creating a desire for more livable and beautiful homes and for higher standards of living and is giving the homemaker the



information, appreciation and skills which are making it possible for her to achieve these desires. The home furnishing program starts with providing pleasing backgrounds for the furnishings, pictures and even for the family itself. A study of walls, floors, and windows resulted in 7,125 new or reconditioned floors; 8,396 rooms with walls repainted or papered; 19,179 windows with new or reconditioned shades, curtains or draperies; 5,363 rooms with refinished woodwork, and 4,145 new or improved floor coverings. The selection, arrangement, reconditioning and remodeling of furniture, pictures and accessories are further steps in making a truly livable home. Homemakers were taught how to make the most of what they have thru crafts and skills. As a result 11,827 pieces of furniture were repaired, remodeled, refinished, upholstered, re-seated, slip covered or made; 5,270 new pieces of furniture were selected; 6,831 rooms were rearranged for beauty, comfort and convenience; 1,696 rugs were hooked, braided, crocheted or knitted; 9,474 pictures purchased, framed, reconditioned or rehung; and 22,391 other accessories were made.

Homemakers not only learned many crafts and skills, but gained an appreciation of good design and color as applied to home decoration, and developed taste thru the opportunity to see and handle choice fabrics, pictures and other furnishings. They are experiencing untold enjoyment of the results they were able to attain thru the pleasure and appreciation of their families and the contribution of more beautiful, comfortable and livable homes to happier, fuller and more satisfying country living.

*Foods and Nutrition.* Interest in the foods and nutrition project in Kentucky has extended over a period of years. The project includes food production, food preservation, meal planning, meal service and nutrition. Major projects in foods and nutrition were carried in 21 counties. Kentucky farm families are better fed because of more adequate production and utilization of the farm food supply. Budget gardening, budget canning and storage, the dairy, poultry flock and home-butchered meats are saving farm families between \$300 and \$600 a year, besides meeting their nutritional needs and building for health and resistance to disease. Thru this project, 4,551 families raised at least 15 varieties in their vegetable gardens; 2,283 families used a food preservation and storage budget

to ensure adequate supply and variety of foods for the non-growing season; 457 pressure cookers were purchased; 536 storage structures were either built or improved; 6,609 families improved methods of food preparation; 2,269 used time and labor saving methods of food preparation; 1,376 individuals were helped to correct some definite nutritional disorder, such as overweight, anemia, pellagra, and constipation. Assistance was given to 13,346 families in canning or otherwise preserving fruits, vegetables and meats. The estimated value of products canned by members of homemakers clubs in 46 counties was \$434,515.06. Seven thousand families reported planning better-balanced meals.

*Homemakers Curb Markets.* There are in Kentucky five homemakers markets which offer homemakers the opportunity to market surpluses of the farm and to supplement the farm income. Over these markets superior products are sold to discriminating buyers. The profits go into home improvements, education and a higher standard of living for farm families. Local merchants have given excellent cooperation, realizing that the homemakers who sell on these markets are not their competitors. The homemaker sells what she produces in order that she may buy what she can't produce. Her profits go into the tills of the local merchants. Market sellers have been helped, thru discussions and demonstrations, to grade and judge products, to standardize methods of production and preparation of foods for market and to improve continually the quality of goods sold. Forty-seven sellers on the five markets have made sales totalling \$13,006.59, or an average of \$276.72 per seller. Most of the markets operate on Saturday mornings.

*Child Care and Training.* This program was offered especially for mothers of young children. Requests for help came from groups of mothers in 14 counties. The work included a study of the principles of habit formation and the application of these principles to building good habits and reconditioning poor habits, the use of positive rather than negative methods of discipline, and better understanding of the children. Problems of adolescence were also discussed with these groups. Parents of 1343 children, 945 mothers and 268 fathers, participated. Four hundred and twenty-four families reported improving habits of children; 334 were successful in substituting positive for negative methods of discipline; 513 pro-

vided play equipment or adapted furnishings to needs of young children in the home; 504 worked to improve the social life of adolescent children in the home, and 404 provided recommended play equipment. Over 400 books relating to child development were read.

*Reading in the Home.* Reading in the home has been carried on as a special project for several years in the interest of developing better reading habits, creating interest in reading and making good books available to farm families. Out of the project a number of activities have developed. This year 327 farm families used public library facilities for the first time, and 113 communities assisted in providing library facilities. Club libraries provided a method for book exchange in the homemakers clubs. A number of county homemakers libraries were established in the home demonstration agents' offices. The most outstanding development of the reading project this year was the establishment of a Kentucky Homemakers Library at the Experiment Station. During the year, 3,611 books on suggested reading lists were read by homemakers and 1,081 families reported creating a desire to read.

*Recreation and Community Life.* A short period at each club meeting is devoted to recreation, including pantomime, dramatization, folk games, active and quiet games, table games, skill games, mental teasers, stunts, music, etc. As part of their regular club meetings, 499 communities had 4,872 recreational programs. Recreation in the home and community was encouraged and training schools were held for recreational leaders. Suggested entertainment in the home was used by 1610 families. Homemakers, realizing the need and value of more and better recreation in their communities sponsored 877 social functions for the entire community, in 409 communities. Among these activities were dramatics, operettas, minstrel shows, amateur radio programs, peace programs, pageants, folk game evenings, carnivals, costume parties and many others.

*Homemakers Vacation Camps.* Five homemakers vacation camps and one county camp, with 897 attending, were held. The program included handicraft, music, relaxation, nature hikes, camp fires, folk games, vespers and discussion of the recreational needs. Homemakers are increasingly aware that providing recreation is part of the serious business of providing a full and satisfying life in rural Kentucky.

*Community Projects.* It is the goal of every homemakers club in Kentucky to undertake during the year some community improvement project. Among projects undertaken were clean-up campaigns, improvement of schools and school grounds, improvement of other public grounds and buildings. Twenty-one community club houses were established, 76 communities made a study of their social needs and 503 communities were assisted with problems of community organization and activities.

*Kentucky Federation of Homemakers.* Homemakers in Kentucky have a great deal of pride in their organization whose membership now includes 13,376 homemakers in 50 counties. The organization sponsored better publicity for home demonstration work, increased civic endeavor of homemakers, legislation of interest to homemakers, world friendship, state homemakers library, state and district meetings. The interests of Kentucky homemakers have been broadened thru membership in the National Home Demonstration Council and Associated Country Women of the World. Kentucky homemakers had the privilege of acting as hostesses to the national organization which met in Lexington in November. About 25 Kentucky homemakers and staff members will attend the international meeting in London in June, 1939. Thus they become a link in a chain which reaches around the world. The interest of homemakers in their organization was evidenced by the attendance of 3,027 homemakers at the district meeting in May. Membership in the state federation, national council and international organization broadens the horizon of women and makes them aware of matters of national and international significance to homemakers.

*Farm and Home Convention.* Attendance and interest continue to grow. Over a thousand registered delegates, from 67 counties, attended. Farm and Home Week is an outstanding annual event and has attracted state-wide interest of homemakers. The reports which delegates carry back to their counties make the influence of this meeting very far-reaching.

*Junior Home Economics.* Steady growth and interest were shown in 4-H club work. During 1938, 22,262 club girls were enrolled in one or more projects. The home economics projects were clothing, foods, canning and home furnishings. Each of these subjects has four units or outlined projects of work, except home furnishings.

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which has two, making 14 units of home economics work available. Reports from all agents show the following results by projects:

Clothing, 14,371 enrolled and 11,282 completed.

Foods, 4,820 enrolled and 3,841 completed.

Canning, 3,065 enrolled and 2,490 completed.

Room improvement, 268 enrolled and 190 completed.

In counties with home demonstration agents, reports show the following results:

In the 4-H clothing project, 26,648 garments were made, which denotes a saving of \$19,049.85.

In 4-H foods projects, 34,816 dishes were prepared and 8,071 meals served.

In the 4-H foods preservation projects, 53,491 quarts of fruits and vegetables canned and 6,690 containers of jams, jellies, etc., conserved.

The project work with the girls is conducted in each community by one or more project leaders who are given help and training for their work thru individual conferences and county-wide training meetings. Each leader holds eight to ten project meetings with her group. At such meetings discussion on project or related subject matter is conducted, demonstrations put on, individual help given and assignments for home work made. Girls in these 4-H groups get much more than the completing of garments, cooking some simple dishes and canning jars of food. They get much in the way of developing initiative, standards and right attitudes.

SYNOPSIS OF ACTIVITIES IN HOME ECONOMICS

Homemakers clubs .....	620
Enrollment .....	13,376
Junior clubs .....	632
Enrollment .....	11,145
Adult leaders of homemakers clubs .....	5,537
Adult leaders of junior clubs .....	1,076
Older club girls leaders of clubs .....	277
Training schools for local leaders (adult) .....	794
Attendance .....	12,608
Training schools for local leaders (junior) .....	196
Attendance .....	2,747
Farm and Home visits made by home demonstration agents .....	16,977
Office and telephone calls .....	56,511
News stories written .....	9,215
Annual meetings held .....	50
Attendance .....	8,248

Method-demonstration meetings .....	15,330
Attendance .....	167,346
Other meetings not previously reported .....	3,309
Attendance .....	195,569
Homes in which changes in practices have resulted from the home demonstration program .....	26,093
Meetings held by local leaders (adult) .....	1,859
Attendance .....	35,183
Meetings held by local leaders (junior) .....	5,329
Attendance .....	81,000
Estimated economic value of productive activities in canning, sewing and home furnishings .....	\$715,849.88



Handicraft is an important feature of 4-H club work. It develops skill and stimulates originality.

#### 4-H CLUB WORK

*Enrollment.* The year showed further progress in 4-H club work. The enrollment was 41,087, an increase of 3,575 over last year. A total of 33,958, or 82.6 percent of those enrolled completed their

projects. Of the 41,087 4-H club members enrolled, 22,543 or 54.87 percent are girls and 18,544 or 45.13 percent are boys. A total of 894 young men and young women were enrolled in Utopia Clubs and all carried projects. Utopia club work is directed and supervised

by the 4-H Club Department. When the Utopians are added to the 4-H club enrollment the grand total is 41,981.

*Local Leaders.* Four thousand, five hundred and eight local leaders helped in carrying the 4-H club work. Two to four general leader-training conferences were held in most of the counties. A total of 291 volunteer leaders attended three district conferences. One of the goals of the 4-H program this year was to form a 4-H leaders' council in each county. This goal was not reached but more county councils were organized and functioned than in any previous year.

*Junior Week.* Junior Week was held again on the campus of the University of Kentucky, June 6-11, with 356 girls and 336 boys, from 101 counties, in attendance. The theme of the program was "Abundant Rural Living."



This 4-H Club girl made this tailored suit and wore it in the State show at Lexington and in the National 4-H Style Dress Revue at Chicago.

An attempt was made to bring before the delegates some of the opportunities of life on the farm and in the open country. In the district team demonstration contests, 160 teams took part, 82 of which had home economics demonstrations and 78 agricultural demonstrations. The highest scoring home economics and agricul-

tural demonstration team in each district contest represented the district in the State Contest held at Junior Week. The State Terracing Team Contest was held again this year with 15 county champion teams entered. Sixty-five county champion girls, enrolled in the 4-H Clothing Project, entered their costumes in the State 4-H Club Style Dress Revue. This is the largest number ever entered in this contest. The judges reported that the quality of the work had improved along with the quantity.



The high quality of work done by 4-H club boys and girls is attested by the excellence of the animals that they exhibit each year at the Baby Beef Show at the Bourbon Stock Yards in Louisville.

*4-H Club Camps.* Thirteen district 4-H club camps were held again this year, attended by 2,234 club members, 200 local leaders and 5,575 visitors. Club members from 110 counties attended these camps.

*Judging Schools.* Seven one-day schools for training 4-H club members in judging livestock were held again this year, attended by 255 club members representing 49 counties. Members of the Animal Husbandry Department gave the instruction.



*State 4-H Club Baby Beef Show and Sale.* A total of 452 4-H club members put on feed 1,061 calves to be entered in the state show and sale held at the Bourbon Stock Yards, Louisville, November 9, 10 and 11. The grand champion carlot sold for \$16.75 per hundred.

*National Club Congress.* Twenty-nine 4-H club members attended the National Club Congress. Kentucky had entries in the Style Dress Revue, clothing, room improvement, canning exhibit and the Non-Collegiate Livestock Judging contest. Kentucky entries were awarded first on wool suit and second on school dress, room improvement and canning. Kentucky's entrant in the Style Dress Revue placed in the Blue Ribbon group in the National Contest.

*District 4-H Club Shows and Sales.* Eight District 4-H Club Tobacco Shows and Sales were held for 4-H and Utopia Club members. These shows are put on with the cooperation and assistance of the Tobacco Board of Trade and individual warehousemen. The sponsors provide the premiums.

#### EXHIBITS AND RADIO PROGRAMS

A fifteen-minute daily radio program for farm people was broadcast thruout the year, using the facilities of Station WHAS of Louisville from Extension studios on the University of Kentucky campus. These programs consisted of talks and interviews by staff members, comments on agricultural news and the answering of questions. The subject matter covered the varied phases of agriculture and home economics, especially those peculiar to Kentucky. A gratifying response in public interest is noted.

An educational exhibit, filling an entire building, was prepared and displayed at the 1938 Kentucky State Fair in Louisville. A careful check made on the number of visitors showed that 29,485 persons inspected this display.

The annual Farm and Home Convention, held during the week of January 25 to 28, attracted a record attendance of Kentucky farm people and was considered to be a highly successful meeting. Speakers on the program included, besides staff members of the University, some of the outstanding leaders in agriculture and home economics in the United States. Registration totaled 1,460 persons from 72 different counties.

Visual education material such as motion pictures, film strips, and stereoptican slides were distributed to field workers as their demands made such equipment necessary.

#### PUBLIC INFORMATION

The Department of Public Information furnished a nine to eleven page weekly service of agricultural information to about 250 newspapers and farm journals published in or circulating in Kentucky. This is seasonable information of interest to farmers and homemakers which many newspapers wish to publish in their farm sections or otherwise. Cooperation is maintained with daily newspapers and other publications and press associations in getting to the public news of various events, such as the Farm and Home Convention, the Louisville fat cattle show, Junior Week, and State Fair, field meetings, Experiment Substation meetings, and the like. The department also presents each week a radio program over WHAS called, "Doings of Kentucky Farm Folk." Numerous requests from newspapers and other publications for specially prepared agricultural material were received by the Department. The press in general makes constant use of the material furnished because it is prepared in usable form, is free from propoganda and presents only those items that have real value to farm people and to the public in general.

#### AGRONOMY

This was a banner year for Kentucky farmers in the use of both lime and phosphate. Reports show that 35,496 farmers used 810,314 tons of ground limestone; 3,486 farmers used 95,725 tons of marl and 1,338 farmers used 10,037 tons of burned lime, a total of 40,320 farmers, who used 916,076 tons of lime material. This was approximately 75,000 tons more ground limestone, 19,000 tons more marl and 1,200 tons more burned lime or 95,000 tons more lime materials than were used in 1937. Figures compiled by the National Lime Association show that Kentucky ranked second among all the states in the tonnage of lime materials used during 1937, the latest report available, but when measured in terms of acres of crop land, Kentucky not only ranked first but was far ahead of any other state. The 10 counties leading in the use of ground limestone used 255,336

tons. Christian County ranked first with 50,400 tons and Hardin County second with 35,027 tons.

A number of mountain counties are now using large tonnages of ground limestone. Laurel and Carter Counties have been large users of lime for a number of years. Laurel used 22,000 tons and Carter 17,000 during 1938. Other counties in Eastern Kentucky using in the neighborhood of 10,000 tons were Rockcastle, Wayne, Knox and Boyd. In 53 counties 96 large stationary crushers were in operation and 211 portable crushers operated in 64 counties.

All past records were broken in the development and use of marl. In 55 counties, 3,486 farmers used 95,725 tons of marl, which was 19,000 tons more than was reported for 1937. The 10 leading counties used 56,849 tons or more than twice as much as in any previous year.

Truckmen played an important part in expanding the use of both ground limestone and marl, not only by loading and delivering lime materials, but in soliciting greater business and in many instances completing the work by spreading lime materials for farmers.

There was also a marked increase in tonnage of burned lime used. Thirteen hundred and forty-nine men in 38 counties used 10,037 tons of burned lime which was an increase of 1,186 tons over the figures for 1937. Agents' reports show that 247 lime kilns were burned in 27 counties.

*Phosphate.* Another outstanding accomplishment in soil improvement was the large tonnage of 45 percent triple superphosphate used. Of the 55,401 tons of triple superphosphate available for the seven states in the East Central Region, Kentucky used 33,263 tons. Probably an equal amount of phosphate was applied to Kentucky fields in 20 percent superphosphate and other fertilizers purchased. The work with TVA triple superphosphate demonstration farms in 40 counties was continued. The seven counties in the Tennessee River Valley have added a few demonstrations with calcium metaphosphate in each county.

*Cover Crops.* Approximately 80 percent of all land used for clean-tilled crops in Kentucky is left unprotected by cover crops during the fall and winter, resulting in an enormous loss of soil and of plant food thru erosion and leaching. Twenty-four demonstrations showing the adaptability and comparative growth of various cover crops were started in 12 counties in 1937. These were visited

by approximately 5,000 farmers in 1938. They proved so successful in promoting interest in cover crops that over 200 demonstrations were started in 68 counties in the fall of this year.

There is a very noticeable increase in the acreage of two particular crops, winter barley and ryegrass. Barley sowing has increased from an acreage estimated at 30,000 in 1937 to 70,000 in 1938. This acreage has resulted primarily from introduction of winter-resistant varieties such as Kentucky No. 1, Kentucky No. 2 and Missouri Early Beardless. On account of the low cost of seeding, its high pasturage value and ease of seeding, especially in the mountain areas, the acreage of ryegrass is showing an even more rapid increase than



A hybrid seed corn plot in Eastern Kentucky. This shows how the plot is isolated from other corn to avoid cross pollination. (The field in the foreground is tobacco.)

that of barley. Logan County reports that the acreage of ryegrass seeded in 1939 is expected to reach 10,000. There is a considerable increase in the acreage of crimson clover, vetch and rye.

*Corn.* Almost one-fourth of the total crop land of the state is planted to corn each year. Most of the corn land is left unprotected by cover crops in the winter making that crop responsible for a very large part of the soil losses. A principal objective in the corn program is to bring about a decrease in its acreage, substituting other crops, especially sod crops, for part of the corn and increasing the corn yields by the use of lime, phosphate and better rotations and by the use of hybrids. Hybrid corn is fitting into this general program because its larger yield permits smaller acreages; its stronger

stalks and earlier maturity encourage wider use of cover crops and because its greater resistance to adverse conditions makes its culture less hazardous.

One hundred and twenty demonstrations with corn hybrids were established this year. Records from these show that the Kentucky White hybrids normally outyield local varieties about 18 percent and that adapted yellow hybrids outyield other yellow varieties about 15 percent. Acres of corn planted with hybrids increased from 2,100 in 1937 to 15,000 in 1938. In 1937 two growers produced certified commercial seed of corn hybrids whereas in 1938, there were



A part of the pasture improvement program of the Extension Service. These hills are covered with Korean lespedeza 10 inches high with bluegrass sod beneath.

65 commercial growers and 45 beginners. A total of 200 acres hybrid corn for seed was produced in 1938. Two leaflets were prepared for printing, one entitled "Hybrid Corn in Kentucky," the other, "Better Corn Culture to Reduce Soil and Plant Food Losses."

*Hay, Pasture and Pure Seed.* Demonstration work on meadow and pasture improvement was greatly expanded during the year. With more than 1,000 TVA demonstration farms annually treating one or more fields with liberal applications of lime and high-analysis phosphate fertilizer, followed by seedings of grasses and legume mixtures, a large number of records on the stands resulting from such treatments and sowings is available. These records indicate upward of 50 percent failure to get stands of all varieties except Korean lespedeza. An effort is therefore being made to demon-

strate the value of new practices and also the value of some grasses which, altho old and well known under cultivation, have not been sown extensively in Kentucky.

More than 700 sowings of crimson clover were made on old lespedeza fields, both with and without preparation of the seed bed, early in the fall of 1938. At the same time more than 800 sowings of Italian ryegrass, under similar conditions, were made over the same extended territory which represents all parts of the State. In some cases the crimson clover and the Italian ryegrass were mixed, equal parts by weight of each. Where sown alone, 10 pounds per acre of either was used and when mixed, 10 to 20 pounds per acre.

A serious fall drouth set in about September 10 with no appreciable rainfall from that time until late November. As a result the seedings that were made before the beginning of the drouth made some stands, but in many cases were seriously damaged by insects. The seedings made during the drouth had little opportunity to sprout until late fall rains. As a result of these conditions, the demonstrations are causing farmers to learn quite rapidly the advisability of early fall seeding.

From 5 to 15 trial sowings of the less well known grasses were made in each of 30 counties, and sowings were made on all TVA demonstration fields established in 30 counties in the fall of 1938. The grasses used were Italian ryegrass, Canada bluegrass, meadow fescue, tall oatgrass and smooth brome grass. These are broadcast in strips immediately after the entire field has been sown to the grass mixture which the farmer considers best adapted to his field.

Much interest is being shown now in Italian ryegrass. The reason for it may perhaps be best illustrated by the methods followed and results obtained from one of several farms using this grass during the past season. An old lespedeza field in Graves County was disked lightly in the fall of 1937 and 15 pounds of Italian ryegrass seed per acre was sown broadcast without further covering. A grass seed crop was harvested with a combine harvester the first week in July and two tons per acre of lespedeza hay were harvested from the same land later in the summer. Sufficient seed fell on the ground during the harvesting of the Italian ryegrass crop to produce a volunteer stand of grass that came up before the fall drouth set in and on November 15, the entire area had grass from three to five inches high suitable for grazing.

The following figures are pertinent in this connection.

Common lespedeza seed was harvested by 577 men in 13 counties, with a total of 96,600 pounds.

In 100 counties, 13,639 farmers harvested an estimated 34,162,000 pounds of Korean lespedeza seed.

In 20 counties, 783 farmers harvested an estimated 507,700 pounds of Kobe lespedeza seed.

Every county in the State sowed Korean lespedeza. The total reported is 13,777,000 pounds.

With this being perhaps the best red clover year in the past 30 years in Kentucky, 2,766 men in 77 counties are reported to have harvested 27,656 bushels of red clover seed.

Every county in the State harvested Korean lespedeza hay, with a grand total of 1,500,000 tons for home use.

Fall sowings of alfalfa had 22,317 acres, and spring sowings totaled 26,577.

The seedings of crimson clover broadcast on old grass or lespedeza land totaled 1,118 trial sowings.

Italian ryegrass seeded in the same manner on old grass and lespedeza fields totaled 986 trials.

In 27 counties 455 farmers are reported to have harvested 5,190 bushels of crimson clover seed.

The work in pure seed production carried on by certification of seed thru the Kentucky Seed Improvement Association is of small volume in so far as small grains, legumes and open-pollinated corn is concerned. On the other hand, the certification of tobacco seed was carried on by 27 growers of Burley tobacco No. 16, and the certification of hybrid corn was carried on by approximately 60 growers producing both Kentucky white hybrids and six yellow hybrids considered to be among the best adapted for planting under Kentucky conditions.

*Tobacco.* Enough seed of No. 16 White Burley was produced in 1937 to provide for between one-fourth and one-third of the tobacco grown in 1938. Approximately 100,000 acres of No. 16 White Burley was grown in 1938. The wide use made of this variety indicates its value in tobacco production in Kentucky. In yield, quality and returns per acre No. 16 demonstrated in 1938 its place as an outstanding variety.

In the early months of 1938 a large number of meetings were held

to inform growers of the value of Bordeaux mixture as a preventive of wildfire and angular leafspot. Many plant bed demonstrations were held and as a result approximately one-tenth of the beds in Kentucky were treated one or more times with Bordeaux mixture. Results indicate Bordeaux was effective in reducing wildfire and angular leafspot in the bed and in some cases the good effect was apparent six to eight weeks following setting in the field. In addition to reducing the injury from leafspot diseases, Bordeaux proved valuable in delaying the appearance of blue mold in plant beds. In some plant beds treated with Bordeaux there was no blue mold at all but in most there was a delay of a week to 10 days in the appearance of the disease. Also, in many cases, the disease was in mild form where Bordeaux had been applied.

Farm tours to study fertilization, production methods, barn improvement, and curing were held in 12 counties. Over 2,000 people studied tobacco and other crops on these tours.

Curing continued to be the most important problem of tobacco growers, and interest in improved curing was wide-spread. Two fuels relatively new to tobacco growers, briquette charcoal and petroleum coke, were used. More fuel was used than in any previous year and the number of men using heat in curing tobacco was nearly double that of the preceding year. Reports from farmers indicate that tobacco properly cured weighs more than tobacco improperly cured and its value is increased 15 to 35 percent. On the average, properly cured tobacco returns one-fourth more than tobacco even slightly houseburned.

Grading and sorting demonstrations were held in 114 counties and included work in Type 22, Eastern dark fired tobacco; Type 23, Western dark fired tobacco; Type 24, Henderson stemming; Type 31, Burley; Type 35, Green River, and Type 36, One sucker. A total of 15,544 people were reached in these meetings.

#### AGRICULTURAL ENGINEERING

Educational work was conducted in rural electrification, farm buildings, water supply and sewage disposal, drainage, soil erosion, and 4-H and Utopia Clubs.

*Rural Electrification.* The rapid development that has taken place in Kentucky during the past three years in providing farms



with electric service created a great demand for extension agents to conduct educational programs on the various phases of this subject. Approximately \$5,077,000 has been loaned to 20 Kentucky Cooperatives to build 5,080 miles of electrical distribution lines to serve 18,295 customers, or 3.5 customers per mile, at an average investment of approximately \$277 per customer. This does not include the customer's additional investment for wiring and appliances. By December 1, 1938, 11 of the 20 cooperatives had portions of their lines energized and 5,266 farm homes were receiving service. Private utilities also made numerous extensions of their lines in rural communities. Data are not available from all the companies but the reports received from three utilities show that they added 3,471 rural customers during the year.

Data from five cooperative projects with 2,222 homes show the following number of electrical appliances in use about six months after the lines were energized:

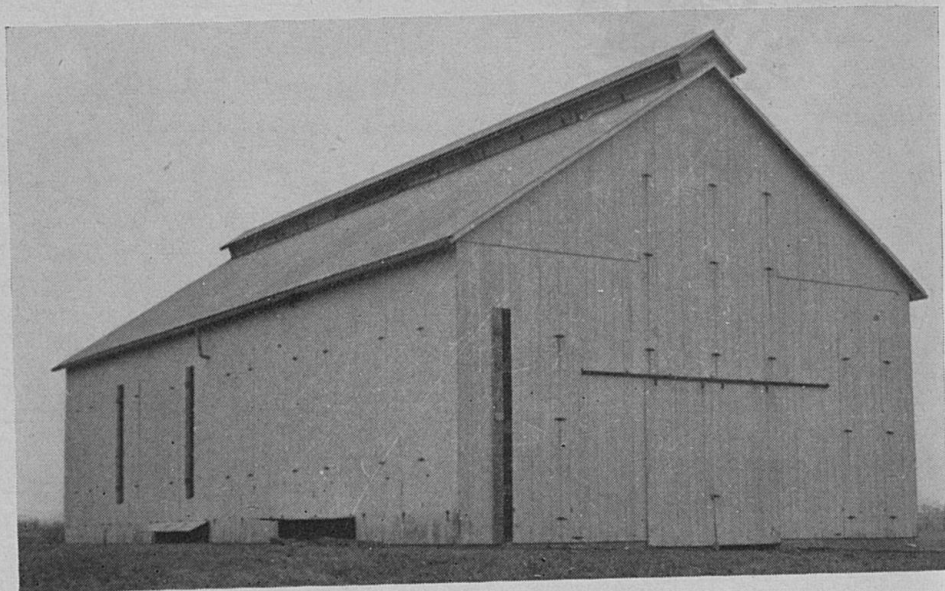
County	Owen	Nelson	McCracken	Jessamine	Meade	Total
Number customers	250	875	472	275	264	2136
Refrigerators	115	328	75	85	77	680
Irons	248	511	400	200	166	1525
Radios	248	422	350	136	164	1320
Washing machines	102	184	300	135	88	809
Miscellaneous	—	175	190	—	80	—

In this development, extension workers are challenged so to direct the educational program that rural people will get the maximum of convenience and profit from electrical service.

*Farm Buildings.* Farmers in Kentucky should spend annually approximately 17 million dollars to repair and replace farm buildings if all farm families, poultry and livestock are to be adequately housed. The requests received from farmers for assistance with their farm building problems are continually increasing. During the year extension workers assisted farmers in every county in the State, thru personal interview, correspondence, distribution of plans and circulars, radio talks, news items, and educational meetings. Thirteen hundred eighty-nine sets of blue printed plans of farm buildings and equipment were sent upon request to 107 counties in Kentucky and 23 other states. Approximately 8,600 structures were built or

remodeled on 4,900 farms in Kentucky thru extension activities. The estimated value of this service to the farmers was about \$250,000.

*Water Supply and Sewage Disposal.* A survey made on 2,359 farms in 12 representative counties shows that Kentucky farms are not adequately supplied with water for household and farm use. The survey indicated that 46 percent of the farm houses and 58 percent of the livestock are supplied from sources such as cisterns, tanks, ponds and streams. Sources are directly dependent on rainfall and since the present storage capacities are limited, there is a shortage of water during drouths. During the year special emphasis was placed on educational work on providing adequate water storage struc-



The ridge ventilator which the Extension Service recommends to Kentucky farmers, which greatly improves the quality of tobacco. Notice also the base doors and the vertical ventilators.

tures as well as pumping systems. Meetings were held with the leaders of women's clubs for presenting information on sources of supply and pumping systems.

*Drainage.* Much money has been spent for tile drainage systems that are not effective because of careless planning and installation. During 1938, 30,924 acres of land were drained, on 434 farms in 47 counties. The extension activities consisted in establishing method and result demonstrations on farms upon request, for the purpose of encouraging the drainage of wet land and developing leaders

who can promote the work and teach others the value of engineering service to improve the drainage service. Field Agents worked in an advisory capacity with county agents in eight counties, in helping the officials of CCC Camps to provide surface drains by improving dredge ditches.

*Soil Erosion.* The usefulness of land for the present and future generations is being unduly impaired by erosion and by the filling of stream channels, causing them to overflow and injure bottom land and other farm property. More Kentucky farmers are becoming interested in engineering practices in soil management to control erosion, by terracing, contour cultivation, and hillside ditching, which are especially needed when fields are cultivated in row crops. Terracing was promoted in 11 counties, in cooperation with soil improvement associations owning power terracing equipment, and this year several counties made provision for the construction of terraces by custom operators, operating tractors and terracers with power supplied by the farmer. Planting and cultivating on the contour were stressed thru demonstrations, pamphlets, radio talks, news stories and 4-H Club work. An effort was made to provide engineering service to farmers for terracing, terrace outlet construction, and farm reservoir construction. When conditions warranted, an effort was made to have groups of farmers provide their own engineering service. Graves and Shelby counties provided such service in the form of engineer-managers who perform the engineering service, supervise the equipment, and bill the farmers for the number of hours the equipment is operated.

*4-H and Utopia Club Work.* Agricultural Engineering activities were conducted for the 4-H and Utopia clubs, special emphasis being placed on soil erosion, handicraft work, and rural electrification. The following report is given as an example of what results may be obtained as a result of this educational program.

"This spring 4-H club members from the Clarkson 4-H club gave a demonstration at 4-H Club Rally Day, on construction of check dams. A team composed of Brownie Balton and James Langley won the contest and demonstrated at Bowling Green, Lexington, Leitchfield and CCC Camp. These boys built 50 check dams on their fathers' farms this spring. This fall a neighbor built five large check dams on his farm as a result of the demonstration."

## ANIMAL INDUSTRY

This year's extension work with the producers of beef cattle was devoted largely to the method of using more grass and hay and less costly grain in beef cattle production. To successfully prevent erosion on most Kentucky farms it is necessary to keep larger acreages in grass. To have an income from the grass and hay it is necessary to use more roughage and less concentrates. Since the beef cows can live in summer on grass and in winter mainly on hay, the beef calf of 400 lbs. to 500 lbs. can be produced on the farm for far less than it can be purchased in the west and shipped to Kentucky. This method of utilizing the cheaper forage on the farm to grow the stock cattle was emphasized throught the year and many farmers are assembling herds of utility beef cows expecting to produce their own feeders.

Demonstrations on many farms showed that "feeder" cattle can be made to fit into the plan of more forage and less grain. Yearlings run on good pasture in the summer need little grain during their second winter if the hay is clover, alfalfa, or lespedeza or even a mixed grass and legume hay. If they are to be marketed as long two-year-olds they can be run on pasture and fed the last ninety days on corn on pasture, or can be sold as fat grass cattle.

During the year, 103 meetings with a total attendance of 9,300 were held. Extension workers were instrumental in placing 686 purebred bulls on farms; and 560 farmers were assisted in obtaining purebred or high grade females. In the last 20 years the percent of purebred bulls in farm herds has increased from 20 to 65 percent.

The November cattle show and sale in Louisville was the largest held in the year. There were 1,387 head, of an average weight of 904 pounds. The top car loads brought, after the show, from \$12 to \$19 per hundredweight, with a final average for all cattle of \$10.65 per hundred weight.

The beef cattle extension work was carried on with the aid of county committees, county agents, and by personal work. A successful phase of the work was the large number of barns for beef cattle production remodeled so as to supply water in the barn and to keep the cattle under shelter at all times, thus conserving all the manure.

*Swine.* Complete records were obtained from 33 of the 60 contestants in the ton-litter contest. This contest gives opportunity to demonstrate in a somewhat spectacular way the advantages of good breeding, sanitation and balanced rations and also the profit from having pigs farrowed early and kept growing so as to be ready for market when prices are usually near the highest for the year. All those reporting showed substantial profit.

Complete records were obtained from 10,042 producers who fed balanced rations and 3,340 who practiced swine sanitation. Many of these were, of course, the same individuals. Some of those in the sanitation project reported saving as much as two bushels of grain per hog. The amount saved by 6,697 producers, by the use of balanced rations, was estimated at \$170,327.

The state leader gave 16 demonstrations of proper methods of cutting and curing the home pork supply and supervised 75 other demonstrations conducted by county agents and other leaders. Reports from 6,590 farm families who followed instructions were favorable, without a single exception. The improvement in the quality of the bacon and other cuts, the absence of losses, and the canning of meats all make a strong appeal to farm families. A simple plan for farm butchering equipment was prepared and was sent to 447 farmers on request.

*Sheep.* The most noticeable extension work in sheep husbandry was perhaps that done with ewes brought into the State for breeding. It has been well demonstrated that certain types of range ewes are far more profitable for lamb production than many of the ewes saved from home flocks. Too often ewes saved for breeding are late lambs or lambs that had parasites or which for some reason were not good enough to sell during marketing season. More than half the ewes in Kentucky are of western origin. Approximately 200,000 range ewes were brought into Kentucky in 1938 to be bred to purebred rams. The use of range ewes, free from parasites in other ways adapted to Kentucky needs, has given impetus to the sheep industry in Kentucky and profit to the producers of spring lambs. The demand for breeding rams far outran the supply in the hands of Kentucky breeders and several hundred were imported from other states. Kentucky now has 40 percent of the Southdown registrations in the United States and claims 60 percent of the Southdown blood. The purebred sheep industry in Kentucky has

trebled in the last few years, due largely to the influence of extension work. This deliberate effort has been made in the hope of producing at least a sufficient supply of breeding animals of suitable quality to supply the home need.

The usual extension activities in sheep husbandry were continued, including parasite control, feeding demonstrations and field meetings, as well as housing and management. One result of these activities was the extension of the sheep industry into the eastern and western ends of the state, where comparatively few sheep have heretofore been produced.

### DAIRYING

*Cream Grading.* Cream grading has been conducted in 29 counties in Western Kentucky for the past 11 years. During this time the volume of cream marketed under this plan gradually increased. In the first year, 1929, 2,175,000 pounds of butterfat were marketed, of which 46.9 percent was sold at the premium price. In 1938 4,170,000 pounds were marketed, of which 62.5 percent brought the premium price. This was made possible by the cooperation of 12 creamery companies in Kentucky, five in Tennessee, five in Indiana, three in Illinois, and one in Missouri. A significant fact is that the larger percentage of increase in cream marketed during 1938 was in the premium or better-quality cream. A comparison of the percentage of premium cream purchased by the different companies shows very uniform results. This would indicate the adaptability of this plan of buying and also the cooperation the companies are giving, altho they are scattered over a wide area. Butler county was added to the territory during the year. Over 400 buyers of cream and numerous truck routes are using this plan of purchasing cream, which is evidence that the cream-grading plan is workable and practicable under a wide range of conditions. A comparison of 1938 with 1937 shows a decreased number of under-grade churnings and that both the premium and No. 1 churnings were scoring higher.

The project to improve the quality and increase the use of dairy products in the farm home reached a larger number of counties than in previous years. More than 295 families made approximately 4,000 pounds of farm cheese as a result of demonstrations; 661 families adopted the recommended method of making cottage

cheese, and 622 families are using the recommended method of butter making.

The usual number of miscellaneous services on manufacturing problems were given to ice cream and milk plants.

The dairy herd improvement association project completed 300 demonstrations. It furnished 6,500 cow records in 300 cooperators' herds. This is the largest number of demonstrations of this nature ever completed in any year in Kentucky. Farm visits were made to 126 dairy leaders in regard to this project. A total of 103 dairymen were reached in dairy herd improvement reorganization meetings. Seven hundred and forty-two additional dairymen were reached thru general dairy meetings and dairy herd improvement association field days and 139 others on three dairy herd improvement association tours. Twelve monthly dairy herd improvement association news letters containing a statistical report of the various associations and examples of improvement for each month were prepared. The mailing list for the news letter included 600 names. Fourteen individual dairy herd improvement association annual reports were prepared and distributed to the members, and a state annual report was sent to 600 persons interested in dairying as a source of farm income.

Approximately 1,000 identification records and 850 production records were forwarded to the Bureau of Dairy Industry in Washington to be recorded permanently. Fifteen sires were proved in Kentucky from these records. The Dairy Section of the College of Agriculture furnished the necessary forms for keeping the records.

The extension dairyman assisted in starting five herds on dairy demonstration herd tests. An additional 35 sets of record forms were distributed by the dairymen, 4-H club members and future farmers.

Twenty-eight feeding schools were attended by 592 farmers. Questions asked and interest manifested by dairymen are evidence that many improved dairy feeding and management practices will be adopted as a result of these schools. Approximately 100 dairymen attended the state-wide breeding school held at the College of Agriculture and 39 additional dairymen attended two other breeding schools. These schools resulted in an increased interest in improved dairy breeding practices and in the demand for bulls sired by proved sires and out of tested dams. Fifteen dairy leaders' training

and planning meetings were attended by 181 dairy leaders. These meetings gave opportunity for the discussion of the needs for a dairy program, after which discussion, county-wide dairy programs were formulated.

Five 4-H club and future farmer dairy cattle judging schools were attended by 87 junior dairymen. The extension dairymen judged 4-H club, future farmer, and adult classes at local shows thruout the State. At these shows, reasons were given for placing the animals as they were, in order that the show might be made educational from the standpoint of both the exhibitors and the spectators.

### POULTRY

Since the problems confronting poultrymen have not changed greatly, the same general plan of work was followed, namely, replacement of dead or culled hens with good, healthy pullets; economical production thru good management practices; and effective marketing of poultry products. A decided improvement in conditions has occurred during the past 10 years. The improvement in pullorum disease control, quality of chicks, breeding programs, and feeding practices is most notable. Progress has been made also in disease control, other than pullorum, and in the marketing project.

A survey of one community in Grayson County shows that in 1927 two men used brooder houses to brood 400 chicks. In 1938, in the same community, 33 brooder houses were used, to brood approximately 10,000 chicks. This progress was brought about by the combined efforts of the extension service and local leaders. In Elliott County during the past year 16 new laying houses, 17 brooder houses and 24 brick brooders were built, and 57,000 chicks were brooded, with a mortality of only five percent. There were no laying houses of modern type in the county in 1930, while in 1938, 136 good houses were in use.

A summary of the year's work is as follows: Meetings, 490; attendance, 10,850. Visits to demonstration farms and other farms, 1,673; to dealers, 29; to schools, 30, and to feed dealers, 29. Fourteen radio talks were prepared and given by the poultry staff. Methods employed consisted in holding poultry schools, conducting demonstrations on culling, breeder selection, caponizing, egg grading,



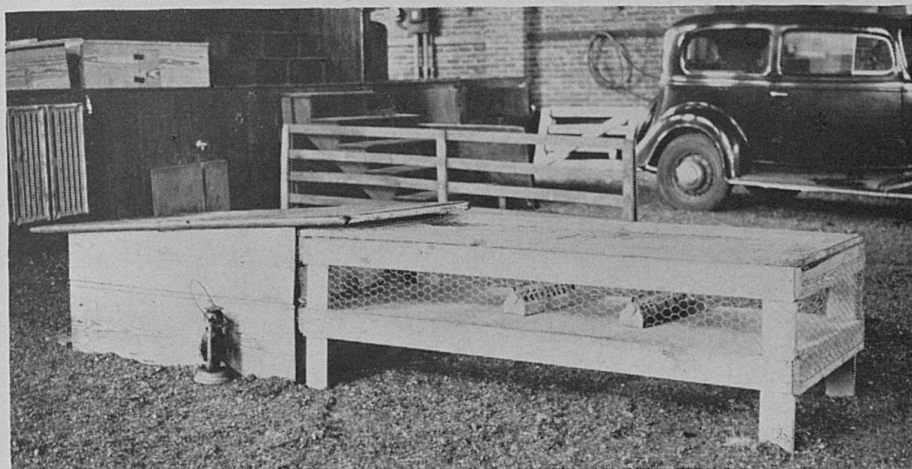
blood testing, brooding, field meetings and tours, leader meetings and community meetings.

The demonstration flock project was carried on with 100 flocks. The results were very satisfactory as the following summary shows:

Flocks	Hens	Eggs per hen	Feed cost per hen	Labor income per hen
100	12,063	162	\$1.98	\$2.14

Since annual replacement is one of the most important problems much attention was given to this project. Certain farmers were selected in many counties, to follow a definite program of management. The results from demonstrations were then made known thru newspapers and demonstration meetings. A summary of the first 12 weeks on this project is as follows:

Number of chicks	Percent raised	Total cost	Total income	Net cost per chick raised	Pounds of feed per chick
8,724	96	\$2,116.06	\$1,258.47	12.4 cts.	6.6



A home-made brooder heated by a lantern or a lamp.

Good vitality and low-priced feed made the demonstrations outstanding. A summary of pullet costs to maturity is as follows:

Pullets housed	Total expense	Total income	Net cost per pullet	Chicks started per pullet raised
1,445	\$1,192.82	\$878.28	21.7 cts.	2.9

Poultry improvement, which is conducted largely with hatcherymen, flock owners and breeders in cooperation with the Kentucky Poultry Improvement Association, had a very successful year. As

a result of such cooperation more than 300,000 birds qualified as Kentucky U. S. approved pullorum tested. It is estimated that more than 500,000 birds (both in and out of the National Plan) will be tested for pullorum before the present culling and testing season is over.

The percentage of reaction to pullorum disease has decreased from about 20 percent in 1927 to about four percent in the 1937-38 season. The flocks of those cooperating with the plan, which were tested last year, had on an average three percent reactors.

Trapnesting and R. O. P. work, conducted by breeders of Leghorns, White Rocks and Rhode Island Reds, are making available an excellent source of breeding stock.



The Extension veterinarian determined the cause of poultry losses by careful post mortem examination in presence of owner and neighbors.

#### VETERINARY SCIENCE

*Parasites of Poultry.* To promote the control of parasites in poultry, 169 visits were made to farm demonstrators; 32 demonstrations were given, with 426 in attendance; 69 educational meetings were held, the attendance being 1261. Assistance was given to 54 county agricultural agents; and 42 counties were visited. In Elliott County, work was undertaken to enable poultrymen to sell eggs from pullorum-tested flocks to hatcheries, at an increased price over

market eggs. In this county there are 132 new, modern poultry houses and almost as many new brooder houses. In the State, over 500,000 hens were tested for pullorum disease during the year. In the educational meetings, methods of prevention were stressed instead of a remedy after parasitic infection.

*Control of Sheep Parasites.* Twenty-six meetings in 13 counties were held to stress the methods of control for parasites in sheep. While drenching for stomach worms must be done in infected flocks, farmers were instructed in pasture rotation to prevent infestation which is far better than any remedy for infected animals. There were 541 farmers in attendance at the meetings in which prevention was emphasized rather than cure. To give information and assistance, 23 farm visits were made and contacts were made with 25 agricultural agents.

Visits were made to 9 counties to hold educational meetings on parasite control, at which 642 4-H club members were in attendance. There were 28 demonstrations given for them and the interest manifested by the members was most gratifying. It appears that the methods of livestock sanitation can be easily given to interested 4-H club members.

### HORTICULTURE

*Landscape Work.* This work was extended to 50 counties with organized activities where meetings and demonstrations were held to train local leaders. Among the visible results of this work are the following:

New lawns started .....	554
Old lawns improved .....	4,004
Clean-up demonstrations .....	8,225
Shade trees planted .....	9,854
Undesirable trees removed .....	1,399
Shrubs planted .....	16,833
Shrub plantings rearranged for home grounds .....	2,848
Individuals improving walks and drives .....	1,855
Individuals who demonstrated growing annual flowers, under instruction of field agent .....	5,456
Individuals who demonstrated perennial flowers under instruction of the field agent .....	2,014

For schools, churches and other public institutions 23 planting plans were made.

*Orchards and Small Fruits.* Meetings and demonstrations on strawberry crown borer control reached more than 1,000 growers. Two strawberry plant nurseries free from crown borer were established. Strawberry cooperative marketing associations were assisted by packing and grading demonstrations, introduction of federal inspection service and demonstrations of cultural practices to improve the quality of the berries, with the result that the growers received the highest prices for their crop.

Meetings and demonstrations with orchardists included pruning, spraying, fertilizing, rodent control and harvesting practices. A demonstration of picking peaches at a well-ripened stage instead of in the customary green condition resulted in an increased price of 25 cents per bushel for the well-ripened fruit. The use of cool-air storage houses netted growers an increase of 20 cents per bushel over harvest-time prices. Tours and summer field meetings were held in eight counties.

*Vegetable Gardening.* The results of a potato project in 10 mountain counties exceeded expectations and provided adequate home supplies for the first time, for many individual families, and also supplied a large part of the requirements of the local market. The project was organized with local leaders who stressed, at meetings and field demonstrations, the importance of certified seed, seed treatment, soil preparation, fertilizers and sprays. Other potato projects show increased use of certified seed and demonstrations continued to show marked superiority of certified seed. In the home garden project, 320 local leaders were enlisted. For their training, 31 leaders' meetings and demonstrations were held.

#### FARM ECONOMICS

*Farm Management.* Extension work in farm business analysis was greatly enlarged, much effort being spent in educating farmers to the need for records in order to make their farm plans more effective, to show how and why records should be kept and how their effectiveness may be measured. The ultimate goal of farm management extension work is to help farmers to think more effectively about the organization and operation of their businesses.

Groups of farmers were brought together and were given instruction and demonstrations in the actual recording of inventories in their farm account books and for actually setting up the record on

their own farms. During the summer these men were visited and were given assistance with their records and farm management problems. For the farm budget project each budget cooperator used a detailed plan of organization which seemed most profitable for his farm, considering price, area, choice of enterprises, kind of land, and available labor.

Farm business analysis work was promoted by means of news articles, letters, radio talks and meetings. Each farm-accounting cooperator received a summary of his last year's business showing a detailed comparison of his own farm with other farm business summaries in the same locality. During the summer, these accounts were returned by personal visits. The field agent made over 300 such farm visits when the county agent and the farm management field agent sat down with each cooperator and discussed with him the most significant features of the accounts and the relative efficiency of the various parts of his business.

*Other Work.* The farm-management field agent cooperated with workers of the Farm Security Administration in order to work out farm budgets for the clients, to revise their records, and to select farms for the Tenant Purchase Program. He also worked with the Production Credit Administration in holding meetings with their supervisors and in providing facts for their clients. He worked with the Courier-Journal and Louisville Times in setting up a contest on farm improvement and helped in the judging of the final records.

*County Agricultural Planning.* County Agricultural Planning was carried on in practically all counties thru the activities of local County Planning Committees. At least one meeting of each committee was held during the year. Special work was continued or initiated in 16 counties. Methods were developed for studying individual farm differences within type-of-farming areas in certain counties to provide local planning committees with more definite information for drawing up recommendations. A new phase of the County Planning work was undertaken in a few special counties during the year; namely that of assembling facts about farms in the county which would give a complete farm-organization picture for as many farms as possible. The information thus made available will aid County Planning Committees in establishing long-time goals and year-to-year plans, not only for sections of the county but for individual farms according to their type and size.

The Regional Agricultural Conference at Henderson studied problems confronting farmers having bottom, overflow or wet land in Type-of-Farming Area 7. This was the first organized attempt to analyze problems of this type and resulted in much constructive thinking. Following the conference a report was prepared which summarized the discussions. The conference was attended by 90 leading farmers.

#### SYNOPSIS OF ACTIVITIES IN FARM ECONOMICS

County or area farm business analysis reports for 1937 prepared and mimeographed .....	10
Farms used in these reports .....	389
Individual farm analyses made for farmers .....	421
Farm account books placed for 1938 .....	703
Farm account books checked in, closed and summarized for 1937 .....	352
New accounting cooperators .....	329
Budget or reorganization demonstrations supervised .....	14
New budget or reorganization demonstrations started .....	3
Meetings held in 29 counties for discussing the basic principles underlying profitable farm management .....	34
Farmers attending these meetings .....	545
Farm visits made to work out improved farm management procedure ....	344
Issues of Kentucky Farm Management Notes .....	5
Number of copies .....	25,400
Farms starting enterprise records .....	249
Farms on which enterprise records closed .....	222
Farms in six counties on which survey records were taken .....	200
Farmers on a farm management tour .....	43
Farms on which the field agent helped the Farm Security Administration to inspect for prospective purchase to rehabilitate tenants .....	40
Number of new account books prepared and printed .....	5,000
Number of inventory sheets prepared and printed .....	4,000
County planning meetings attended by the field agent .....	46
Farmers attending county planning meetings .....	853
Regional conference held in counties .....	7
Attendance .....	110

#### RURAL SOCIOLOGY

Marked progress was made in developing rural community leaders and encouraging groups to join their efforts for more effective action for the betterment of civic and educational conditions. Rural boards of education were mobilized to take the lead. Every school board member in Kentucky was invited to take an active part and this invitation received a very wide-spread and enthusiastic response. These civic leaders came together in regional conferences in seven of the 11 educational areas of the State and several hundred of them joined in a state-wide conference group

which outlined a comprehensive long-time, state-wide and regional civic betterment programs and arranged definitely for an active follow-up of these plans. This project is significant in that it is meeting a great need, a problem which heretofore has been left entirely untouched.

The fourth annual short course for town and country pastors and lay leaders was held at the College of Agriculture in April and exceeded the other three in both attendance and the enthusiasm and in benefit received by those in attendance. Upward of 250 pastors and lay leaders, representing 14 denominations and 60 counties, attended.

The College of Agriculture was required by circumstances to extend much help in the Tenant Farm Purchase program in Kentucky, as requested by the Farm Security Administration. This involved active assistance in interviewing the tenant clients and inspecting and passing on a large number of farms, of which 53 were selected and purchased for tenants, in 11 Kentucky counties, under the Bankhead-Jones Tenant Purchase Project. In addition to this service, the College was called upon thruout the year to give counsel and assistance in behalf of tenants and other clients of the rural rehabilitation project of the Farm Security Administration.

At the request of the Governor of Kentucky, the Director of Extension appointed a committee of field agents to inspect and study the eight institutional farms of the Kentucky Department of Welfare, a total of 6,937 acres, and to prepare plans and recommendations for the improvement of these farms in order that they may better serve the welfare of the inmates. The field agent in rural sociology served as chairman of this committee, and took the lead in making the study and writing the report. The committee visited these farms, examining their topography, type of soil, state of fertility, depth of soil, their adaptability for growing crops of various kinds and their suitability for the production of livestock and livestock products appropriate to the needs of each institution. The committee also studied the farm buildings, machinery and equipment, storage facilities, man labor and horse work requirements and other factors vital to the successful operation of these farms, and brought together these findings in a detailed report with recommendations.

## MARKETS AND RURAL FINANCE

Giving farmers information which enabled them to buy and sell to better advantage was an important service. They were assisted in a study of market conditions early in the year when county-outlook meetings were held in 70 counties, and again in the summer when the outlook for wool, lambs, hogs and cattle was discussed in 22 counties. A wider distribution of current market information was accomplished by means of one or more radio talks each month, a monthly market news letter and news items published in both local and metropolitan newspapers.

Training in better marketing consisted in instruction and demonstrations of proper grading, packing and handling of products so as to increase the margin to farmers between total cost and sale value. This helped especially the growers who were organizing the Louisville Produce Growers' Association. Farmers in Larue, Hart and Meade Counties developed a market for graded eggs thru their local creamery, and in Grayson County dealers were induced to buy eggs on grade. Federal-State inspection of fruits and vegetables was introduced and this helped farmers' marketing associations get more money for their products.

The cooperative tomato cannery at Beaver Dam was assisted in financing its operations by the Bank of Cooperatives and it was thus enabled to reduce costs so that returns to members were increased 50c per ton. The canning cooperative at Calhoun was assisted in making similar plans for 1939.

Farmers were informed about plans of the U. S. Department of Agriculture to extend loans on wool and many found that loan helpful. Its influence on the local market price was also evident and helped all growers to realize three to six cents more per pound for their 5 million pounds of wool.

Tobacco marketing problems came to the front during the year as a result of a decline in market prices of Burley tobacco. Frequent conferences were held with groups of farmers to consider better marketing methods. Special consideration was given to an analysis of such important problems as the shorter marketing season, the price variations on a given day as well as seasonal and yearly fluctuations, and the possibilities of cooperative marketing. Other projects included work with cooperative milk-producers' associations,



cooperative cream shippers, strawberry-shipping associations, sheep-protective associations, a survey of farmers' telephone service, an exhibit at the State Fair and arrangement with retail stores to develop a better market for sorghum sirup.

### EXTENSION WORKERS

(January 1st to December 31st, 1938)

#### ADMINISTRATION

Thomas P. Cooper, Dean and Director  
T. R. Bryant, Assistant Director  
D. H. Peak, Business Agent  
S. K. Slaughter, Secretary  
O. M. Farrington  
W. L. Rouse

#### AGRONOMY

George Roberts, Head of Department  
Ralph Kenney, Field Agent in Crops  
S. C. Jones, Field Agent in Soils  
William C. Johnstone, Field Agent in Soils  
Russell Hunt, Field Agent in Tobacco

#### AGRICULTURAL ENGINEERING

J. B. Brooks, Field Agent  
J. B. Kelley, Field Agent  
Earl G. Welch, Field Agent  
Charles E. Denton, Field Agent

#### ANIMAL HUSBANDRY

E. S. Good, Head of Department  
Wayland Rhoads, Field Agent, Beef Cattle  
R. C. Miller, Field Agent, Sheep  
Grady Sellards, Field Agent, Swine

#### CLOTHING

Iris Davenport, Field Agent in Clothing  
Edith Lacy, Field Agent in Home Economics

#### DAIRYING

J. O. Barkman, Field Agent  
George Harris, Field Agent  
James B. Smathers, Field Agent

#### FARM MANAGEMENT

R. E. Proctor, Field Agent  
Bruce Poundstone, Field Agent

#### FOODS

Florence Imlay, Field Agent  
Pearl J. Haak, Field Agent

19638

## FORESTRY

W. E. Jackson, Field Agent

## HOME MANAGEMENT

Ida Hagman, Field Agent  
Vivian Curnutt, Field Agent

## HORTICULTURE

W. W. Magill, Field Agent, Orchard  
J. S. Gardner, Field Agent, Truck Crops  
N. R. Elliott, Field Agent, Landscape

## 4-H CLUBS

J. W. Whitehouse, State Leader  
J. M. Feltner, Field Agent  
M. S. Garside, Field Agent  
Anita Burnam, Field Agent  
G. J. McKenney, Field Agent  
E. E. Fish, Field Agent  
Carl W. Jones, Field Agent  
Dorothy Threlkeld, Field Agent  
H. C. Brown, Field Agent

## MARKETS

L. A. Vennes, Field Agent  
Edwin A. Johnson, Field Agent

## PUBLIC INFORMATION

C. A. Lewis, Editor  
L. C. Brewer, Assistant in Short Courses and Exhibits

## POULTRY

J. Holmes Martin, Field Agent  
J. E. Humphrey, Field Agent  
C. E. Harris, Field Agent  
Stanley Caton, Field Agent

## RURAL SOCIOLOGY

W. D. Nicholls, Head of Department

## VETERINARY SCIENCE

T. P. Polk, Field Agent

## HOME DEMONSTRATION WORK

*State Leader—*

Weldon, Miss Myrtle

Experiment Station

Lexington

*Assistant State Leaders—*

Logan, Miss Lulie

Experiment Station

Lexington

Monroe, Miss Zelma

Experiment Station

Lexington

White, Mrs. Helen M.

Experiment Station

Lexington

Name-

Barnes  
Betha  
Brown  
Byerly  
Clark,  
Colley  
Collis,  
Davis,  
Davis,  
Evans,  
Ewing  
Fleming  
Gillasp  
Gillett  
Grime  
Grubb  
Harrar  
Hart,  
Hatch  
Hedge  
Hemb  
Henni  
Hicks,  
Hunt  
Hutch  
Irelan  
Jackso  
Johnso  
Kelley  
Kruen  
Latim  
Lovel  
Meade  
Moore  
Perkin  
Pieda  
Robert  
Scott,  
Scrugh  
Sharp  
Sherm  
Steele  
Stewa  
Thom  
Tomp  
Van Y  
Vaugh  
Whee  
Whitt  
Wilg  
Wilso  
Word  
Wyatt

## COUNTY HOME DEMONSTRATION AGENTS

<i>Name—</i>	<i>Official Station—</i>	<i>County—</i>
Barnes, Miss Grace	Paintsville	Johnson
Bethea, Miss Hattie (Colored)	P.O. Box 44, Hickman	Fulton-Hickman
Brown, Miss Sarah	Russellville	Logan
Byerly, Miss Zelma	Independence	Kenton
Clark, Miss Eleanor	Stanford	Lincoln
Colley, Miss Sunshine	Pineville	Bell
Collis, Mrs. Eula C.	Postoffice, Richmond	Madison
Davis, Miss Frances (Asst.)	Frankfort	Franklin
Davis, Miss Rachel (Colored)	113 Liberty St., Hopkinsville	Christian
Evans, Miss Anna	Carrollton	Carroll
Ewing, Mrs. Vivian Muster	Leitchfield	Grayson
Fleming, Mrs. Frances W.	Hopkinsville	Christian
Gillaspie, Miss Mary Hood	Burlington	Boone
Gillett, Miss Leone	Henderson	Henderson
Grimes, Mrs. Mavourneen R.	Paris	Bourbon
Grubbs, Mrs. Jennie C.	Junction City	Boyle
Harralson, Mrs. Ruth E.	Farm Bureau, Madisonville	Hopkins
Hart, Miss Mamie E.	Georgetown	Scott
Hatcher, Mrs. Elizabeth H.	Berea	S. Madison-R'kastle
Hedges, Miss Camille	Dixon	Webster
Hembree, Miss Lilah	LaGrange	Oldham
Henning, Miss Alda	Federal Bldg., Paducah	McCracken
Hicks, Miss Ruth	Greenup	Greenup
Hunter, Miss Ruth	Alexandria	Campbell
Hutchison, Miss May	Lancaster	Garrard
Ireland, Miss Jeanne	Shelbyville	Shelby
Jackson, Miss Mary Lou	Wickliffe	Ballard
Johnson, Mrs. Catherine T.	Room 8, Fed. Bldg., Louisville	Jefferson
Kelley, Mrs. Miriam J.	Bowling Green	Warren
Kruempel, Mrs. Florence S.	Nicholasville	Jessamine
Latimer, Miss Ruth	Rm. 408, Fed. Bldg., Lexington	Fayette
Lovelady, Miss Venice	Owensboro	Daviess
Meador, Miss Mary E.	Elkton	Todd
Moore, Mrs. Alma	Greenville	Muhlenburg
Perkins, Mrs. Roxie C.	Harlan	Harlan
Piedaloe, Miss Irene	Winchester	Clark
Roberts, Miss Mildred	Calhoun	McLean
Scott, Miss Mary Louise	Robinson Substa. Quicksand	Breathitt
Scrugham, Miss Nancy	Princeton	Caldwell
Sharp, Mrs. Lois Husebo	Courthouse, Catlettsburg	Boyd
Sherman, Mrs. Helen Morgan	Lawrenceburg	Anderson
Steele, Miss Pearl	Franklin	Simpson
Stewart, Mrs. Marcy Davis	Hartford	Ohio
Thompson, Mrs. Catherine C.	Hickman	Fulton
Tompkins, Mrs. Jeannette H.	Frankfort	Franklin
Van Winkle, Miss Doris	Maysville	Mason
Vaughn, Miss Anne Elizabeth	Barbourville	Knox
Wheeler, Mrs. Dorris Kirkman	Pikeville	Pike
Whittinghill, Miss Eleanor	Cadiz	Trigg
Wilgus, Miss Sadie	Farm Bureau, Morganfield	Union
Wilson, Miss Jessie	Clinton	Hickman
Word, Miss Elizabeth	Munfordville	Hart
Wyatt, Mrs. Loretta Markham	Mayfield	Graves

## COUNTY AGENT WORK

<i>State Agent—</i>		
Mahan, C. A.	Experiment Station	Lexington
<i>Assistant State Agents—</i>		
Graddy, Ivan C.	Experiment Station	Lexington
Kilpatrick, Elmer J.	Experiment Station	Lexington
Lickert, Raymond H.	Experiment Station	Lexington
Link, Harold F.	Experiment Station	Lexington
Wilson, William Clark	Experiment Station	Lexington
<i>Agent, Charge of Negro Work—</i>		
Burnette, A. C.	179 Deweese Street	Lexington
<i>County Agent—</i>	<i>Official Station—</i>	<i>County—</i>
Acree, John C.	Calhoun	McLean
Adair, Walter B.	Brownsville	Edmonson
Anderson, Shirley W.	Louisville, Rm. 8, Fed. Bldg.	Jefferson
Bach, John	Salysersville	Magoffin
Bell, Clarence S.	Scottsville	Allen
Blue, John W., III	Eddyville	Lyon
Bohanan, Samuel C.	Wickliffe	Ballard
Boyd, Guy F.	Booneville	Owsley
Brabant, Stuart	Elkton	Todd
Brown, John C.	Danville	Boyle
Bryan, Charles V.	Campbellsville	Taylor
Burdine, Howard W.	Inez	Martin
Carter, Wilmot	Williamsburg	Whitley
Cochran, John T.	Murray	Calloway
Coffey, Wallace	Frenchburg	Menifee
Collins, Jesse L.	Maysville	Mason
Collins, John R.	Versailles	Woodford
Collins, William B.	Brooksville	Bracken
Colson, Clay A.	Whitesburg	Letcher
Crace, Allington	Hazard	Perry
Craigmyle, Beach	Bedford	Trimble
Day, Carl B.	Louisa	Lawrence
Dickerson, Henry H.	Greensburg	Green
Dye, Jas. (acting)	New Castle	Henry
Ellis, Justus L.	Tompkinsville	Monroe
Elston, Charles B.	Bardstown	Nelson
Faulkner, Robert T.	Leitchfield	Grayson
Feltner, John C.	Jackson	Breathitt
Finch, John H. (Colored)	Bowling Green (7th Col. St.)	Warren
Flege, John B.	Columbia	Adair
Ford, Robert H.	Lawrenceburg	Anderson
Forkner, Holly R.	Burlington	Boone
Fortenbery, Blumie W.	Lancaster	Garrard
Gabbard, Charles E.	Campton	Wolfe
Gayle, H. K.	Morganfield	Union
Gibson, Harry B.	Hawesville	Hancock
Goebel, Nevin L.	Taylorsville	Spencer
Goff, Charles L.	Morehead	Rowan
Graham, John F.	Princeton	Caldwell
Griffin, Marshall C.	Whitley City	McCreary
Grimwood, Phillip G.	London	Laurel

*County*  
 Hafer,  
 Harris,  
 Hayes,  
 Heath,  
 Henson,  
 Hollan,  
 Hopper,  
 Hornin,  
 Howard,  
 Howell,  
 Hume,  
 Hurt, J.  
 Isbell, S.  
 Jackson,  
 Janes, I.  
 Jones,  
 Karnes,  
 Kent, S.  
 Kidd, J.  
 Killin,  
 King, I.  
 Kleiser,  
 Laine,  
 LaMast,  
 Long, I.  
 McClun,  
 McCorn,  
 McDan,  
 Matson,  
 Melton,  
 Michael,  
 Miller,  
 Moore,  
 Morgan,  
 Morgan,  
 Nichols,  
 Northin,  
 Nute, I.  
 Park, C.  
 Parker,  
 Parsons,  
 Pidcock,  
 Porter,  
 Quisen,  
 Rankin,  
 Ray, W.  
 Reynol,  
 Rice, F.  
 Ridley,  
 Routt,  
 Rudolp,  
 Sasser,  
 Shade,  
 Shelby,  
 Sparks,  
 Spence,

*County Agent—*

Hafer, Fred C.  
 Harris, Andrew M.  
 Hayes, Henry J.  
 Heath, Robert M.  
 Henson, Hollis  
 Holland, John W.  
 Hopper, Ray C.  
 Horning, Jess O.  
 Howard, Joe M.  
 Howell, William B.  
 Hume, Robert C.  
 Hurt, Joe  
 Isbell, Samuel L.  
 Jackson, Homer R.  
 Janes, Ernest L.  
 Jones, Thomas H.  
 Karnes, Gilbert H.  
 Kent, Samuel B.  
 Kidd, Jack S.  
 Killinger, John R.  
 King, Roscoe H.  
 Kleiser, William D.  
 Laine, Henry A. (Colored)  
 LaMaster, Orem  
 Long, Harry S.  
 McClure, John E.  
 McCord, Joseph R.  
 McDaniel, Floyd  
 Matson, Ralph J.  
 Melton, Frank G.  
 Michael, William J.  
 Miller, J. Lester  
 Moore, James F.  
 Morgan, Reuben  
 Morgan, Thomas W.  
 Nichols, Mahlon P.  
 Northington, Leroy W.  
 Nute, Raymond E.  
 Park, Curtis F.  
 Parker, J. Ed Jr.  
 Parsons, John E.  
 Pidcock, Justice L.  
 Porter, Samuel A.  
 Quisenberry, Henry A. (Asso.)  
 Rankin, Robert B.  
 Ray, William B.  
 Reynolds, Walker R.  
 Rice, Edgar  
 Ridley, Raymond D.  
 Routt, Grover C.  
 Rudolph, Robert L.  
 Sasser, Marshall H.  
 Shade, Cloide C.  
 Shelby, Oakley M.  
 Sparks, Ervan R.  
 Spence, Robert F.

*Official Station—*

Brandenburg  
 Benton  
 Monticello  
 Frankfort  
 Stanton  
 Shelbyville  
 Bowling Green  
 Glasgow  
 Mt. Olivet  
 New Castle  
 Williamstown  
 Paducah  
 Prestonsburg  
 Henderson  
 Owenton  
 Beattyville  
 Lebanon  
 Morgantown  
 Somerset  
 Stanford  
 Grayson  
 Greenup  
 Nicholasville  
 Flemingsburg  
 Winchester  
 Owensboro, Court House  
 Shepherdsville  
 Mt. Sterling  
 Carlisle  
 Hodgenville  
 Hindman  
 Richmond  
 Barbourville  
 Hyden  
 Cadiz  
 Greenville  
 Clinton  
 Vanceburg  
 Harrodsburg  
 Lexington, 408 Fed. Bldg.  
 Albany  
 Paintsville  
 Alexandria  
 Louisville, Rm. 8, Fed. Bldg.  
 Edmonton  
 Hardinsburg  
 Tyner  
 Sandy Hook  
 Hartford  
 Nicholasville  
 Smithland  
 Liberty  
 Irvine  
 Marion  
 Manchester  
 Berea

*County—*

Meade  
 Marshall  
 Wayne  
 Franklin  
 Powell  
 Shelby  
 Warren  
 Barren  
 Robertson  
 Henry  
 Grant  
 McCracken  
 Floyd  
 Henderson  
 Owen  
 Lee  
 Marion  
 Butler  
 Pulaski  
 Lincoln  
 Carter  
 Greenup  
 Jessamine  
 Fleming  
 Clark  
 Daviess  
 Bullitt  
 Montgomery  
 Nicholas  
 Larue  
 Knott  
 Madison  
 Knox  
 Leslie  
 Trigg  
 Muhlenberg  
 Hickman  
 Lewis  
 Mercer  
 Fayette  
 Clinton  
 Johnson  
 Campbell  
 Jefferson  
 Metcalfe  
 Breckinridge  
 Jackson  
 Elliott  
 Ohio  
 Jessamine  
 Livingston  
 Casey  
 Estill  
 Crittenden  
 Clay  
 Rockcastle

*County Agent—*

Story, Runyon (Colored)  
 Straw, William T.  
 Summers, John E.  
 Talbert, William D.  
 Thaxton, Andrew J.  
 Thompson, Herbert H.  
 Thompson, Joe R.  
 Travis, Ottie B.  
 Trosper, Raleigh V.  
 Wade, Campbell M.  
 Walker, Fletcher C.  
 Watlington, John R.  
 Watlington, Philip R.  
 Watts, Clyde  
 Watts, John B.  
 Wheeler, Boyd E.  
 Wheeler, Jewell A.  
 White, Robert W.  
 Whittenburg, Harry W.  
 Wicklund, Carl A.  
 Wiedeberg, William E.  
 Wigginton, Robert  
 Williams, Gray H.  
 Williams, J. B.  
 Williamson, Glynn E.  
 Wrather, Yandal  
 Young, Troll

*Official Station—*

Hopkinsville, 408½ S. Main  
 Warsaw  
 Franklin  
 Munfordville  
 Elizabethtown  
 Cynthiana  
 Owingsville  
 Jamestown  
 Pineville  
 Georgetown  
 Burkesville  
 Russellville  
 Paris  
 Carrollton  
 Bardwell  
 Pikeville  
 Dixon  
 Falmouth  
 Madisonville  
 Independence  
 Hopkinsville  
 Catlettsburg  
 Harlan  
 Hickman  
 Mayfield  
 West Liberty  
 Springfield

*County—*

Christian  
 Gallatin  
 Simpson  
 Hart  
 Hardin  
 Harrison  
 Bath  
 Russell  
 Bell  
 Scott  
 Cumberland  
 Logan  
 Bourbon  
 Carroll  
 Carlisle  
 Pike  
 Webster  
 Pendleton  
 Hopkins  
 Kenton  
 Christian  
 Boyd  
 Harlan  
 Fulton  
 Graves  
 Morgan  
 Washington

## ASSISTANT COUNTY AGENTS

*Name—*

Atterbury, Harry B.  
 Brabant, Kenneth A.  
 Brame, Forrest S.  
 Campbell, Wallace  
 Coleman, James V.  
 Colville, David E.  
 Coots, Woodrow  
 Cornette, Dean C.  
 Crawford, Sam K.  
 Cromwell, Kelly M.  
 Culton, Eugene Jr.  
 Cundiff, Ralph  
 Ellis, L. Holmes  
 Ewing, John H. Jr.  
 Foy, Samuel V.  
 Gilbert, Raymond H.  
 Griffin, William F.  
 Hoover, Wilson R.  
 Hubbard, William O.  
 Irvine, John W.  
 Johnson, Raymond O.  
 Klingner, Fred M.  
 Kurtz, George McW.  
 McMurtry, Gaven H.  
 Pirtle, Thomas L.

*Official Station—*

Richmond  
 Cadiz  
 Madisonville  
 Bedford  
 Owensboro  
 Lawrenceburg  
 Princeton  
 Paintsville  
 Lexington  
 Murray  
 Burlington  
 Monticello  
 Paducah  
 Leitchfield  
 Hickman  
 Shelbyville  
 Bowling Green  
 Mayfield  
 Morganfield  
 Elkton  
 Edmonton  
 Russellville  
 Winchester  
 Henderson  
 Smithland

*County—*

Madison  
 Trigg  
 Hopkins  
 Trimble  
 Daviess  
 Anderson-Mercer  
 Caldwell  
 Johnson  
 Fayette  
 Calloway  
 Boone  
 Wayne  
 McCracken  
 Grayson  
 Fulton  
 Shelby  
 Warren  
 Graves  
 Union  
 Todd  
 Metcalfe  
 Logan  
 Clark  
 Henderson  
 Livingston-Lyon

Name—	Official Station—	County—
Redd, Obie B.	Bardstown	Nelson
Richardson, Clyde M.	Frankfort	Franklin
Rothwell, Herman E.	Benton	Marshall
Routt, Wilson M.	Munfordville	Hart
Sandefur, Richard M.	Alexandria	Campbell
Simmons, James W.	Maysville	Mason
Stephens, James I.	Georgetown	Scott
Venable, Keith S.	Hopkinsville	Christian
Williams, Maurice K.	Independence	Kenton
Winchester, Frank D.	Pikeville	Pike

RECEIPTS AND DISBURSEMENTS  
For the Fiscal Year Ended June 30, 1938

RECEIPTS

Federal Smith-Lever, Supplementary and Bankhead-Jones .....	\$541,584.78
Capper-Ketcham .....	36,800.97
State Smith-Lever .....	119,900.00
State Non-Offset .....	100.00
Total .....	\$698,385.75

DISBURSEMENTS

PROJECTS	FEDERAL FUNDS		
	Smith- Lever Supple- mentary Bankhead- Jones	Capper- Ketcham	STATE FUNDS
Administration .....	\$ 17,357.29	\$	\$ 5,562.47
Publications .....	10,842.31		671.00
County Agent Work .....	377,321.22	11,286.81	
Home Demonstration Work .....	86,036.13	25,514.16	103.02
Clothing .....	2,652.15		5,316.68
Foods .....	2,496.33		5,133.34
Junior Clubs .....	13,670.27		27,438.62
Agronomy .....	4,950.85		16,062.00
Dairying .....	2,332.73		5,371.67
Animal Husbandry .....	3,857.93		10,300.00
Markets .....	5,205.36		1,434.50
Farm Management .....	1,214.54		5,380.00
Poultry .....	3,343.59		7,873.34
Horticulture .....	3,102.69		216.68
Veterinary Science .....	485.39		3,200.00
Rural Engineering .....	1,836.76		6,380.00
Public Information .....	1,531.82		6,023.34
Farm and Home Week .....	741.39		25.00
Home Management .....	2,180.63		4,533.34
Rural Sociology .....	425.40		975.00
Total .....	\$541,584.78	\$ 36,800.97	\$120,000.00

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of May