

DUPLICATE

UNIVERSITY OF KENTUCKY

COLLEGE OF AGRICULTURE

Extension Division

THOMAS P. COOPER, Dean and Director

CIRCULAR NO. 150

ANNUAL REPORT

FOR THE

YEAR ENDING DEC. 31, 1922



Lexington, Ky.

January, 1923

Published in connection with the agricultural extension work carried on by cooperation 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.

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Letters of Transmittal

President F. 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, 1922. In this report will be found a statement of the work as carried on through the Extension Division covering briefly the various activities of the past year, also a list of the publications and in addition a financial statement by the Business Agent of receipts and expenditures.

Respectfully,

THOMAS COOPER,

Dean and Director.

Lexington, Kentucky.
January 15, 1923.

To the Board of Trustees, University of Kentucky:

I herewith submit the annual report of the Division of Agricultural Extension, established under act of the Legislature of the State of Kentucky, approved March 15, 1916, containing an account of the Extension Division of the College of Agriculture, University of Kentucky for the year ended December 31, 1922.

Respectfully,

FRANK L. McVEY, President.

Lexington, Kentucky.
January 15, 1923.

Hon. Edwin P. Morrow,
Governor of Kentucky,
Frankfort, Ky.

Sir:

I transmit herewith the annual report of the Division of Agricultural Extension of the College of Agriculture, University of Kentucky, for the year ended December 31, 1922.

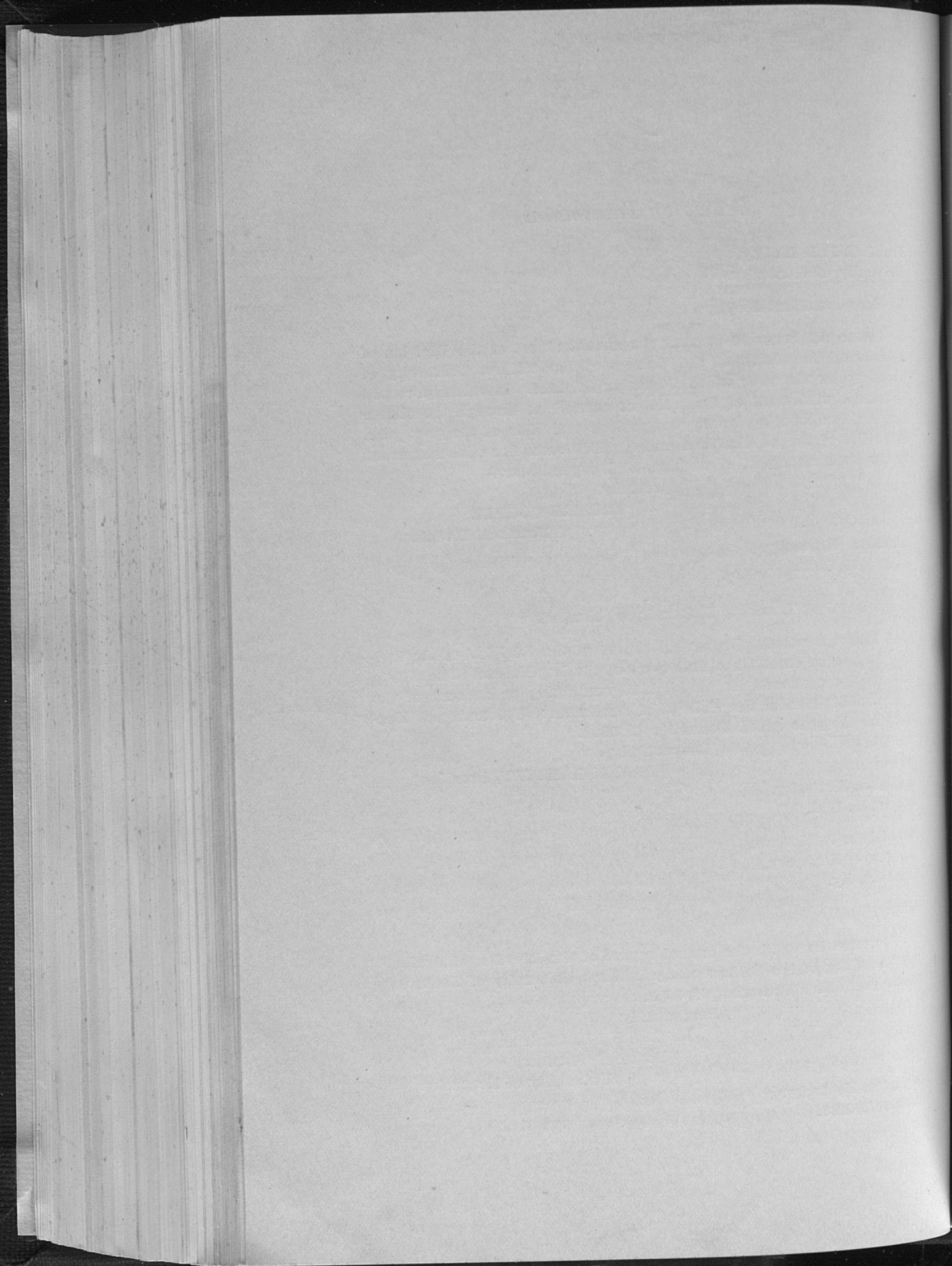
Respectfully,

R. C. STOLL, Chairman,

Board of Trustees,

University of Kentucky.

Lexington, Kentucky.
January 15, 1923.



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CIRCULAR NO. 150

Annual Report of the Extension Division, 1922.

Prepared by

T. R. BRYANT,

Assistant Director of Extension

Extension work in agriculture and home economics as planned and carried out in the United States is not only the most extensive effort of its kind in the world but also is unique in most of its features. As a matter of fact it has as one of its primary purposes an object essentially different from that of such work carried on in any other part of the world. This purpose is to forestall any danger of our rural population becoming a peasant class, as has happened in the countries of the Old World.

It has been alleged that there is a tendency on the part of our brightest and most ambitious young people to seek the towns and cities where opportunity for making money, for comfortable living, and social enjoyment appears more promising than in the country and that such a movement will eventually result in leaving the rural districts populated by those of less ambition, talent and ability who thru lack of those qualities would eventually become virtually a peasant class.

The United States Government and the Land Grant Colleges in the several states propose to take no such risks and further propose to lend such assistance to our present rural population that they may remain a strong, self-reliant, capable and enlightened people, continue to make their invaluable contributions to the national well-being, retaining a right proportion of the best talent and ability in the rural districts and making farming a reasonably profitable and satisfying business and mode of living.

It is not possible in such an undertaking to lose sight of the fact that it would not fill the need if we merely succeeded in making the farm a profitable business enterprise. The average farm home must be made a more comfortable and convenient place in which to live. The farmer's wife must be relieved of some of the drudgery by more home conveniences and the opportunity for wholesome social enjoyment must be as good, in the country as in the cities, if not better.

Bearing these things in mind, the nation-wide system of demonstration work is called Extension Work in Agriculture and Home Economics.

The work as carried on in Kentucky, like other states, embraces a system of teaching, largely by demonstration, better and more economical methods of production and disposal of farm products of all classes, better equipment and management of the home, greater efficiency in the various domestic duties of the housewife and also seeks to assist in community improvement.

The Extension Staff of the Agricultural College of the University of Kentucky, which is prosecuting this demonstration work, is composed of (1) Administrative or supervisory officers; (2) Specialists in the various branches such as Agronomy, Animal Husbandry, Horticulture, Poultry, Dairying, Home Economics, etc.; (3) County Agricultural Agents, and (4) County Home Demonstration Agents, the last two classes being resident in their respective counties, the others having headquarters at the University, from which place they proceed to all points in the state.

The work itself is divided into certain projects as follows: Administration, County Agents, Home Demonstration Agents, Agricultural Engineering, Agronomy, Animal Husbandry, Dairying, Farm Management, Horticulture, Junior Clubs, Marketing, Movable Schools, Poultry, Veterinary Science and Publications.

It is the duty of county agents in both Agriculture and Home Economics to carry on a more or less general program of demonstration work in their counties.

It is obvious that certain questions must frequently arise in their work which require advice and assistance of a specialist

in the particular matter involved. It is the duty of the specialists working on the projects above enumerated to give assistance to the county agents when occasion demands and also to prosecute their particular lines of work in those counties that have not as yet availed themselves of the services of a county agent.

The purpose of this report is to convey an idea of the progress that has been made by this system of demonstration work during the past year. As a matter of fact this report is the first made since July 1, 1921. The reason is that the former custom of reporting the fiscal year which ends June 30 has been found to be quite inconvenient and it has been decided to make reports in the future for the calendar year as this method gives opportunity to report the crop year which was not possible under the former system.

It is gratifying to be able to report creditable progress during the past year. That the work is held in high esteem by the various counties is attested by the fact that even in the face of the hard times that have been experienced and the general trend toward retrenchment and curtailment of expenses, the number of counties employing agents in cooperation with the University has remained constant.

Greater efficiency is being continually gained in the planning and execution of the work. The community and county plan of work system is becoming more or less universal in its use. Under this plan, work is undertaken in a county by calling a series of community conferences. The agent secures a meeting of a number of leading citizens of a given neighborhood. Together they discuss and analyze the local farming business and other matters concerning the welfare of the people of that community, taking into full consideration all favorable and unfavorable aspects and they attempt to determine the efforts that should be recommended to overcome the difficulties. In a few days a mass meeting of the people is called to ratify or amend the procedure recommended and to confirm the selection of certain persons to act as leaders for the different projects agreed upon. Having a community program of work thus established in each of several localities in the county, the building of a county program then becomes a matter of harmonizing

or federating these community programs. This is usually accomplished by the project leaders from the various sections meeting in conference with the county agent.

A better idea of the building of a community program may be gained from the diagram on the opposite page. The best thing that can be said about this method of procedure is that experience in large numbers of counties has established the fact that it works.

MARKETING AND OTHER COOPERATIVE ENTERPRISES

The farming business is primarily concerned not only with more efficient and economical production and management but also with the development of improved methods of disposal.

Questions of marketing are not as easy of solution as are those concerning production.

The question of disposal immediately involves such matters as the standardization of products, such as grain, live stock, tobacco, wool, dairy products, poultry, eggs and other produce, problems of transportation, warehousing, distribution, salesmanship, the human equation and other factors.

The extension staff attempts as earnestly to give help and information in these matters as they do in questions of production. Much investigational work needs yet to be done in marketing and other economic problems.

THE RURAL HOME

If living in the country under average conditions is less agreeable than living in the city, the cause is to be found not mainly in financial difficulties but rather in the lack of conveniences about the farm home and other matters of home economics.

The majority of the time of all members of the family is spent in or about the farm home, and in most cases the greatest return in comfort and contentment for a given expenditure of money and effort is to be had from the improvement of the home, its surroundings and its activities.

With these facts in mind the Extension Service devotes great effort toward helping in such matters as home equipment, foods, clothing, household management and social betterment.

I. C. Graddy, County Agent

BELL'S CHAPEL

Community Program

| Farm Activities | Limits of Profit | Remedy | To be done this year | In Charge | Goal |
|-------------------------------|---|---|--|-------------------|---|
| TOBACCO | Market Field Quality | Co-op. market Smaller acreage Better cultivation Fertility | Fertility Demonstration | J. N. Burrus | Two fertility demonstrations |
| CORN | Poor seed Poor cultivation Yield | Field selection and testing Limestone Phosphate Clover | Field selection | W. E. Thornhill | Six farmers (field selection) |
| WHEAT | Poor yield Poor seed | Lime, phosphate and clover | Limestone and phosphate demonstrations | E. O. Bell | Two farmers to demonstrate |
| DAIRYING | Markets Low product Poor feeding | Co-op. market Purebred sires Balanced rations | Two demonstrations in feeding | Wm. Bell | Two feeding demonstrations |
| POULTRY | Scrubs Poor layers Poor feeding and housing | Purebreds Culling Balanced rations | Culling Better feed | Mrs. H. G. Webber | Six flocks culled and six flocks fed balanced rations |
| Community Activities ROADS | Muddy | Drainage and dragging | Drainage and dragging demonstrations | Wm. Wilson | ½ mile on 3 roads from school |
| SCHOOL | Poor water Ugly school building Poor co-operation with teachers | Fixing well Decorating school Co-operation with teachers | Fix up school house Co-operation with teacher | C. E. Moore | Parents to visit and fix up school building |

COOPERATING AGENCIES

In prosecuting its extension work in Agriculture and Home Economics the University has sought and secured the cooperation of any existing agencies, a portion of whose purposes was parallel to its own. Among these should be mentioned schools, boards of trade, the various farmers' associations and organizations, banks, commercial houses, community clubs, improvement leagues, parent-teachers' associations, boards of health, Y. M. C. A. and many others. Without the help of such cooperating agencies, many of the accomplishments of the Extension Service would have been impossible or much more difficult.

HOW COUNTY AGENTS IN AGRICULTURE AND HOME ECONOMICS ARE SECURED

When a county has decided that it desires to cooperate with the Extension Division of the College of Agriculture in improving its agricultural condition thru the employment of a county or a home demonstration agent or both, the interested persons get in touch with the Extension Division of the College of Agriculture which sends a representative to outline the terms upon which the University and the U. S. Department of Agriculture will cooperate financially and otherwise in the employment of an agent. When these terms are fully understood the fiscal court is asked, by a committee from the county, to make an appropriation sufficient to cover approximately half of the cost of such work. In certain cases the necessary local funds have been provided by popular subscription, by local associations or farmers' organizations, but in the majority of cases the local funds are provided by the fiscal court, as the county agent must be regarded as a public servant and must serve all persons alike whether they have contributed directly toward his salary or not. After the necessary funds are provided a memorandum of understanding is arranged between the University and the local cooperating parties providing for the selection of the agent and the projects to be undertaken. This memorandum of understanding serves as a sort of constitution under which the agent's work is organized and conducted.

The University attempts to serve all portions of the State equally, but it is obvious that a county with a county or home

demonstration agent or both is in more direct touch with the University and the U. S. Department of Agriculture and the specialists from the college will be requested oftener to come into the county for work than would be the case in a county that has no agent.

COUNTY AGRICULTURAL AGENT WORK

During the past year the efforts of the county agents have been largely devoted to strengthening and solidifying their system of work thru the building of definite community programs of work and the development of local leadership, by which method they have been able to increase the volume and efficiency of their work. The agents have also found that a greater percentage of the tasks undertaken can be definitely finished and reported where good local leadership has been found and utilized.

It has been the policy to strengthen the work of the agents in those counties where they are employed rather than to dissipate the energy of the supervisory officers in attempting to get appropriations in new counties. By following this plan of development 173 community programs have been built and of this number 154 have been classed as successful. In order to be considered successful programs, it is required that at least one-half of the projects undertaken under the program shall have been completed. To further strengthen the work, the assistant state agents have made county analyses in 18 counties. In such analyses, made with the cooperation of the county agent, the weak spots in his program were indicated and steps were taken to strengthen these weak places.

Another device which has been useful in bringing about this same result is the building of a calendar of work. This has been used in 31 counties. - This calendar has been very useful in showing agents how to think ahead of their work and how to distribute their time. The result has been that their time has been used to better advantage and they have avoided conflicts which would certainly have occurred had not their schedule been previously planned.

There have been no marked changes in the number of agents employed. A year ago 61 counties had agents, while at this

time 65 counties either have agents actually at work or have made provision for their employment. One of the most serious difficulties which have been encountered is the rather rapid turnover in agents. During the year 12 agents have resigned and in several of these cases the change has been harmful to the work. The evil resulting from this cause has been very greatly minimized by the system developed two or three years ago of keeping in the employ of the Department three or more assistant county agents who are assigned for several weeks or months to work under and with an experienced and successful agent. When a resignation makes replacement necessary the best prepared of these assistant agents is usually given preference in filling the vacancy. By making substantial growth in the quality and volume of the work done by the individual county agents and by slightly increasing their numbers, the Department finds itself in a position to take immediate advantage of better financial conditions as soon as they return. It has taken no little effort on the part of several counties to maintain their normal operating expenses, with their revenues showing a tendency to decline.

Several group conferences for county agents have been held in different localities, at which places certain specialists have carried their plans and methods to lay before the agents to be criticized and amended, and to give each individual agent the opportunity to incorporate the particular line of work in his county plan if it seems desirable. This plan affords certain advantages over that of the general state-wide conference of agents, where too many are gathered in one group for the various special lines, such as poultry, horticulture, agronomy, etc., to be properly discussed and the projects decided upon by the individual agents.

An inspection of the following extracts from the rather lengthy tabulated reports of county agents will serve to give an idea of the variety of undertakings and the degree of accomplishment which has been attained by the agents during the last year.

| | |
|---------------------------------------|--------|
| Number of visits made by agents..... | 32,764 |
| Calls on agents relative to work..... | 41,500 |

| | |
|--|---------|
| Number farm meetings held..... | 11,972 |
| Attendance (approximate)..... | 262,911 |
| Number auto tours..... | 204 |
| Attendance (approximate)..... | 6,041 |
| Number of days spent in office..... | 4,541 |
| Number of days spent in field..... | 11,851 |
| Number letters written..... | 37,920 |
| Number articles for publication..... | 4,027 |
| Number circular letters..... | 1,458 |
| Number copies | 182,342 |
| Number farms keeping cost records..... | 992 |
| Completed demonstrations..... | 416 |

| Subject. | No. Demon. | Acreage or Quantity. |
|--|------------|--|
| Limestone | 775 | 5,329 acres in demonstrations. 30,967 tons lime used. |
| Corn—seed selection | 2,948 | |
| Tobacco | 42 | |
| Tomatoes | 27 | 12 acres. |
| Wheat—seed treatment | 380 | 6,668 acres. |
| Rye | 1,831 | 18,086 acres. |
| Red clover | 1,340 | 10,727 acres. |
| Sweet clover | 752 | 5,231 acres. |
| Soybeans | 1,451 | 13,138 acres. |
| Irish potatoes—seed treatment | 611 | 1,047 bu. |
| Orchards | 1,543 | 2,375 trees. |
| Poultry culling | 1,045 | 49,586 chickens. |

Livestock—Purebreds Introduced Into Counties.

| | |
|-----------------------------|-----|
| Stallions | 7 |
| Mares | 8 |
| Dairy bulls | 167 |
| Beef bulls | 189 |
| Dairy cows | 291 |
| Beef cows | 142 |
| High grade dairy cows | 300 |
| High grade beef cows | 98 |
| Sheep—Rams | 261 |
| Ewes | 148 |
| Hogs—Boars | 418 |
| Sows | 965 |

HOME ECONOMICS

Home economics extension work has as its ultimate aim the bettering of rural life. This does not mean improvement of the material side of rural life alone, but also the spiritual, social and intellectual sides. In order to afford some opportunity for the development of the last three, there must be leisure, physical and mental health and incentive. To accomplish these objects, relief must be had from some of the drudgery and long hours of work thru labor-saving devices and better methods of work in the farm home. They demand a knowledge of foods and habits, proper clothing and protection that makes family health the rule instead of the exception. They need the introduction of the elements of beauty thru orderliness, cleanliness, well-served meals, improved homes and surroundings, and more becoming clothing for the family. Sound practices in the earning and spending of the family funds go a long way toward producing a home atmosphere of mutual self-respect and affection, and making the home a place where a healthy, happy family may work, play, worship and become self-reliant citizens and producers.

The work of the home economics division is carried out along the following lines:

- I. Nutrition.
- II. Foods.
- III. Clothing.
- IV. Home Problems.

I. NUTRITION.

In county programs there is no work more fundamental than the promoting of health. Nutrition work gives the opportunity for correcting ill health and lowered vitality due to improper nutrition. It also has as one of its aims the encouraging of surgical or remedial measures to remove physical defects that interfere with proper use of food in the body. The nutrition work is taught under two heads:

A. *School Lunch.*

Twenty-five new school lunches have been established and are being conducted quite satisfactorily.

The short term of years which the average teacher holds a position in a rural school and the many changes in the teaching force make it very difficult for the project to carry over from year to year. This year, however, thru working with the Parent-Teachers' Association a more permanent organization for the school lunch work is being accomplished. A school lunch is never encouraged in any community whose milk supply is insanitary.



No. 1.—With little planning and less expense any kitchen can be so remodeled.

In every case the teachers in the schools where hot lunches are served report that the discipline is much easier since the pupils have something warm at noon.

Due to interest in health of the child aroused by the school lunch, one teacher at Buechel, Jefferson County, has been able to have all children with adenoids and diseased tonsils in her school operated upon, and also to have bad eyesight remedied.

Numerous cases have occurred where similar beneficial results have been accomplished from this branch of the work.

B. *Nutrition Class.*

The nutrition class is a direct effort to establish good health and to correct cases of lowered vitality that may be due to improper or insufficient food. Assistance is obtained from physicians and nurses in the examination of the children for ailments that need treatment or surgery. Gain in weight is only one indication of improved physical condition, yet it is about the only check available. When children have adenoids, diseased tonsils or defective eyesight, gain in weight is slow and correction of the defect opens the opportunity to gain in weight and vitality.

Two nutrition groups were established and very satisfactory results have been attained. It was impossible in the two localities in which the classes were conducted to get much cooperation from the parents, so there was practically no supervision of home conditions of health and diet during the time the experiment was going on. However, all the children in each group came up to the normal weight. As a result a good many scales have been put into use in the schools of this county; also, arrangements have been made for individual drinking cups for the children.

Several individual demonstrations were carried out by giving directions and having the children keep their own records. The prospects for this work for the next year are very much better. Work will be started in counties where the cattle have been tuberculin tested and where the milk supply is adequate and well cared for.

A page of health and food habits has been put into the record books for all Junior Agricultural courses. At the beginning of the courses these health and food habits are checked and the children are graded on their improvement in this respect when the final course is given.

II. FOODS.

A. *Bread Contest.*

The most outstanding work in the food work for women has been the bread campaign. One campaign was held in June. This was the first light-bread contest that had been held in the state. Only six counties took part in this contest. None of the bread was particularly good, but it was hoped that the campaign had at least started people to thinking about using less hot quick-bread. The prizes for this contest were: first, \$25.00 in kitchen aluminum given by the Fleischman Yeast Company; second, a Pyrex baking set given by the Pyrex Company, and, third, a set of Fry Glassware presented by the Fry Ovens Company.

The second bread contest has been completed and it is felt that there really is a growing interest in bread work, for in this contest fourteen counties participated. The first two prizes will be trips to the State Farm and Home Convention. These prizes have been made possible thru the generosity of the Northwestern Yeast Company and the Ballard Milling Company of Louisville. One county agricultural agent conducted the bread campaign in his county and presented very creditable exhibits.

The next bread contest will be in October, 1923, and it is hoped to have at that time a corresponding increase in interest. There is a big need for better bread in this state, and it is felt that thru campaigns more will be accomplished than in any other way.

B. *Girls' Food Clubs.*

This work aims at knowledge of selection, preparation, care and serving of food. It is conducted by means of three courses and is open to both girls and women, tho primarily planned for girls. This is the most difficult line of work to extend as the equipment is expensive. There is no greater need in the rural districts of Kentucky than for better nutrition and a greater knowledge of the food needs of human beings.

The aims are:

1. To cultivate an appreciation of home.
 2. To gain simple dietetic knowledge and habits.
 3. To eat and enjoy a variety of wholesome foods.
 4. To teach personal and household hygiene.
 5. To teach scientific principles thru the cooking of simple meals.
 6. To help prepare the girl to take an active part in the preparation of meals for the family.
 7. To cultivate an appreciation of the home-maker.
 8. To gain some knowledge of the cost of foods.
- Number of girls taking part in food work, 913.

C. *Girls' Canning Clubs.*

Canning is usually given in conjunction with the food work when the garden and orchard products are ready for preservation.

There are four courses in the making of jellies, jams and canning of fruits and vegetables. The purposes of this work are:

1. To secure a larger use of fruits and vegetables during the winter season.
2. To teach essentials for successful canning.
3. To eliminate as far as possible unpleasant and unnecessary practices, thus making canning a pleasure.
4. To teach thrift thru canning of surplus of home produce during the summer season.
5. To introduce use of "Cold Pack" method into home.
6. To give members of group opportunity to earn money.

Number of girls and women in canning work 1,204.

III. CLOTHING AND MILLINERY.

- A. Millinery has become one of the most popular lines of work. There have been many good results not alone in better hats and judgment in selection of types and

materials, but also a distinct raising of standards, in general habits of dress, has resulted in several cases.

Two meetings were held in each community where the work was given. At the first meeting the selection of hats was discussed and where it was possible to get the hats the various types were tried on the women who joined the class. In many cases faces were measured to see if they were of average proportion. A demonstration in the making of a hat on a commercial frame was then conducted by the specialist usually making the hat for the home demonstration agent or



No. 2.—The specialist instructs a group in hat making.

a friend. The classes were usually limited to eight women, but as many as so desired were allowed to observe. At the second meeting the women made their own hats.

In all, 404 hats were made. It has not been possible to get the exact statistics on the number of hats made outside of class, tho many were thus made. In Daviess County one woman earned \$50.00 making hats for friends and neighbors. In Muhlenberg County one woman made nineteen hats and another six. Where good qualities of velvet or duvetyn were used as much as \$10.00 was saved on a hat. The average saving per hat was about \$5.00 or \$6.00. The woman's time

was not counted in the cost. The following is the average cost as made and the cost of hats if bought in a store in one county where the best materials were used:

Cost as made, \$4.53. Cost if bought, \$14.11.

The women were always advised to get good materials, but in many cases they were not able to do so, and many have not yet learned to know good materials.

Most of the hats were as well made as the average hand-made hat on the market. The aim in this course is not only to teach the women to make hats but also how to select them and wear them.

B. *Clothing Courses for Girls.*

Four outlines furnish courses of instruction to give a good background for technical clothing knowledge and skill.

Effort is made to attain the following aims:

1. To teach the girl simple and good methods of garment making and the care and repair of clothing.
2. To gain some proficiency in the use and alteration of simple patterns.
3. To be able to choose simple materials wisely.
4. To establish thrift in clothing.
5. To stimulate pride in neat, tasteful and modest dress.
6. To promote interest in home improvements, thru beautification of girl's room.

These courses are designed for both girls and women.

Number of girls and women in these courses 3,219.

C. *The Dress Form.*

This is made of gummed paper strips over a stockinet foundation and is constructed on the individual. It makes a most satisfactory model for the fitting of clothing. As the manipulation is very simple, it is easy after once making one to pass the work along.

Number of dress forms made 187.

D. *Clothing Efficiency.*

The purpose of this work is to give to women the principles of satisfactory clothing, all standpoints considered. Personal comfort, good health and proper carriage are essential to good dress. Beauty and appropriateness of design and workmanship are emphasized as well as time-saving methods of execution.

The first instruction in a county is carried on by the specialist. The class consists of home demonstration agent and from five to seven pupils with as many observers. The preliminary course comprises six all-day meetings, a week apart. The group is urged to carry on the meetings after these lessons to perfect themselves in the methods before taking the leadership of their own groups. As soon as a sufficient degree of proficiency is attained, six lessons in the development of the principles taught in the first course are given to the original group and extended to other groups.

The Harrison County group of 6 pupils and 6 observers completed seven sets of patterns, seven combinations, seven petticoats and seven dresses. The women were eager to learn and aside from the clothing work they have developed wonderfully in self-confidence. Tho never before interested in club work and thinking they could not leave home for a whole day each week, they are now carrying on a regular program and want all the other courses in clothing. The corset demonstration was the most important thing accomplished there. None were properly corseted. One woman of fifty years said it was the first real comfortable corset she had ever owned. Another woman tells that for the first time she came home Sunday afternoon and did up her night work with a corset on.

There are six groups in Harrison County now ready for development course. This will be given to

each by sending a leader to the county seat for the work.

| | Number Counties. | Number Taught. | Number Women Course. |
|---------------------------------|------------------|----------------|----------------------|
| Dec. 1, 1921, to Feb. 23, 1922 | 14 | | 550 |
| Sept. 1, 1922, to Dec. 21, 1922 | 6 | | 96 |

E. *Tailoring.*

There was just one group of women in tailoring. This was in Harrison County. Each of five home dem-



No. 3.—The Farm Bureau office become a millinery display window.

onstration clubs was to send two representatives to Cynthiana. The meeting lasted four days and four coats of the sport type were made. There were at least ten women working all the time and many others came to observe at different times. Two sewing machines were loaned by the Singer Company and the use of a heavy electric iron and ironing board was donated by the alteration department of a department store, where the meeting was held. The coats were beautifully made and were of excellent material. The following is quoted from a card written by a member of the class:

“I know you will be surprised to hear from me so soon. I finished my coat Saturday. Wore it to Buena Vista Saturday night and to Republican Church Sunday. So many people over there knew of our work last week. There was so much talk of it and examination that I felt like the coat was on exhibit. Have had a telephone call already this morning to make two.”

The women who took the course are to meet with their clubs later and teach the other members what they have learned in tailoring.

IV. HOME PROBLEMS.

Reaching the needs of the home maker is a problem that has been very difficult to solve. One method chosen was the organization of home demonstration clubs for women to study home problems. More clubs are being organized on a more permanent basis with a constitution and charter.

A manual has been prepared during the past year giving information on methods for organizing a new club, suggestions for conducting meetings and a program of study for home demonstration clubs. In this manual the problems of the home have been divided into nine series, each one containing from one to six courses for study. The nine series are: food, textiles and clothing, care of children, care of the sick and first aid, household management, home improvement, gardening, poultry problems and clothing efficiency.

Home Improvement.

During the past year the clubs have been promoting home improvements. Some very simple types of water systems were installed which have proved very satisfactory, especially in some of the mountain counties. One woman in McCreary County reported that her barrel system outside her kitchen window furnished her with water for dishes and washing clothes thruout the year with the exception of a few days during a dry spell. The barrels

were supplied with water from the rain that drained from the roof of the house. It is now necessary to carry water from the well for drinking and cooking only.

Better wells have been constructed in a few places. In Muhlenberg County the construction of better wells has enabled the agent to give demonstrations in making good butter, as the cold water was necessary in making the butter.

Besides improvements in water supply, there have been improvements in the kitchen and other rooms of the house. The field agent has been assisting with this phase by demonstrations in several of the counties. Thirty-five demonstrations on home improvement have been given by one field agent in 14 counties to 1,297 people during the past year.

The meetings and discussions on home improvements have been quite worth while. When the home improvement was first started in these counties the women seemed to feel an aversion to having the field agent come into their homes, but later on they were anxious to have her see their improvements or visit their homes and give suggestions.

SUMMARY OF THE WORK OF SPECIALISTS OR FIELD AGENTS

Field Agent in Food and Nutrition—January 1, 1922-December 31, 1922:

| | |
|--|-----|
| School lunch lectures | 50 |
| Nutrition lectures | 35 |
| Clothing lectures | 12 |
| Home Management lectures | 12 |
| Miscellaneous (see Club Report below). | — |
| Total | 109 |

Field Agent in Home Management—January 1, 1922-December 31, 1922:

| | |
|---|----|
| Interior decoration demonstrations | 30 |
| Cold pack canning demonstrations | 6 |
| Pressure cooking demonstrations | 3 |
| Kitchen improvement talks | 5 |
| Meal planning talks | 5 |
| Table setting and etiquette demonstrations..... | 8 |
| Bread demonstrations | 1 |
| Miscellaneous (see Club Report below). | — |
| Total | 58 |

Field Agent in Clothing Efficiency—September 1, 1922-December 31, 1922:

| | |
|--|-------|
| Groups given Clothing Efficiency..... | 6 |
| Women taught by Field Agent | 37 |
| Pupils taught by women | 67 |
| | <hr/> |
| Total number taught | 104 |
| Sets of tested patterns..... | 37 |
| Undergarments made | 52 |
| Outergarments made | 48 |
| | <hr/> |
| Total number of garments | 100 |
| Miscellaneous (see Club Report below). | |

Field Agent in Women's and Girls' Clothing—January 1, 1922-December 31, 1922:

| | |
|--|-------|
| Millinery demonstrations | 35 |
| Dress Form demonstrations | 5 |
| Tailoring Demonstrations | 1 |
| Miscellaneous (see Club Report below). | |
| | <hr/> |
| Total | 41 |
| Hats made | 404 |

Miscellaneous Talks and Demonstrations Given by the Home Economics Extension Field Agents—January 1, 1922-December 31, 1922:

| | |
|---------------------------------|-------|
| Junior Agricultural Clubs | 39 |
| Other organiaztions | 30 |
| | <hr/> |
| Total | 69 |

COUNTY HOME DEMONSTRATION AGENTS' WORK 1922

The need in 1922 to convert new fiscal courts to the desirability of appropriating for home demonstration work made the situation more difficult than usual, but it progressed, nevertheless. Two new counties were added and none were discontinued during the year, making a total of twenty-five counties carrying on the work. There were also fewer changes necessary in the personnel of the workers than for several years past. This was a decided advantage to the work.

Figures on some of the activities of the agents in the counties are given below, but some of the most important accomplishments are not shown by them. The value of the millinery work which enables women to make hats which anyone would be glad to wear at an average cost of one-third the price of the ready-made, cannot be shown in a statistical report. One county reports 583 hats made by the women in the past year. Last spring the federated woman's club in the county seat passed a resolution of thanks to the Extension Division because the local milliners reduced their prices on hats as a result of the home millinery work accomplished thru the home demonstration clubs.

Rest rooms for farm women are maintained in a number of county seats under the direction of the home demonstration agent. These not only serve as a place to rest while waiting for others or in which to eat lunch, but also are used as a means of bringing together the women of the county. In one county an informal social gathering was held once each month with one community acting as hostess to the others.

In two counties home demonstration clubs have established community houses and in a third, the women have already earned funds and bought the lot on which they will build as soon as possible. One of these houses is in a little settlement in the mountains, another in a hill county and the third in a rural community in the southwestern end of Kentucky. These houses are used not only as meeting places for the women and girls' clubs, but also for the community entertainments and gatherings for which there was previously no suitable place.

A yeast bread contest was conducted and was entered by women from all parts of the state. Many learned to make good light-bread for the first time, or to improve their methods in making it. The state champions received trips with all expenses paid to the Farm and Home Convention in Lexington or other desirable prizes provided by the generosity of a commercial firm.

The saving of food and of money represented by the canning done by the women and girls cannot be accurately estimated. The better nourishment of the family due to the fruits and vegetables provided in the winter when they are scarce is an even more important result of the canning work.

Not only in the girls' food clubs but in connection with the hot school lunches which the home demonstration agents supervise the girls are taught simple and attractive ways of preparing food. They are also learning what foods are desirable for a healthy, strong body and mind, and are putting this knowledge to use in their own eating.

Community and county fairs and exhibits have been helped or organized by home demonstration agents in seventy-nine communities and have been very helpful in strengthening interest and developing community pride as well as spurring on efforts for improvement.

These are only samples of the varied kinds of good work being carried by the home demonstration agents in cooperation with the Home Economics and other specialists of the extension force.

The following figures give some idea of the extent of the work done in certain lines:

| MISCELLANEOUS DATA | | |
|--|--------|-------|
| | Girls | Women |
| Total enrollment | 5,107 | 2,988 |
| Total completing | 3,494 | 1,955 |
| Number visits to H. D. club members..... | 5,890 | |
| Total number junior club members visited..... | 4,087 | |
| Total attendance | 56,986 | |
| Total number other meetings | 906 | |
| Total attendance | 91,689 | |
| Total number club members who are bank depositors | 295 | |

HOME IMPROVEMENT

| | |
|---|-----|
| Number kitchens improved by screening | 295 |
| Number kitchens improved by rearrangement of equipment | 217 |
| Number water systems installed | 56 |
| Number septic tanks installed | 157 |
| Number girls' rooms improved..... | 306 |
| Number shade trees and shrubs planted | 567 |

FOOD AND NUTRITION

| | |
|--|-------------------------------|
| Number schools serving hot lunch thru influence of Home Demonstration Agents | 68 |
| Number pupils attending these | 3,628 |
| Number children benefited by increased use of milk thru influence of Home Demonstration Agents..... | 2,308 |
| | Girls Women |
| Number qts. vegetables canned | 111,710 435,817 |
| Value vegetables canned | \$33,700.30 \$121,001.60 |
| Number qts. fruits canned | 20,763 254,820 |
| Value fruits canned | \$11,897.55 \$57,526.50 |
| Number qts. jelly, preserves, jams..... | 4,133 39,900 |
| Value jelly, preserves, jams | \$2,768.20 \$26,863.00 |
| Number lbs. meat canned | 6,783 |

POULTRY

| | | |
|---|------------|-------------|
| | Girls | Women |
| Total number demonstrators enrolled | 295 | 851 |
| No. doz. standardbred eggs purchased | 844 | 2,755 |
| No. doz. eggs used at home | 986 | 18,023 |
| No. doz. eggs sold | 3,505 | 401,000 |
| No. doz. eggs preserved in water glass | 125 | 3,552 |
| Value all chickens and products sold.. | \$2,155.38 | \$43,727.73 |
| Value all chickens and products used at home | \$515.00 | \$13,773.50 |

CLOTHING

| | | |
|-------------------------------------|--------|-------|
| | Girls | Women |
| Number demonstrators enrolled | 3,219 | 555 |
| Number garments made..... | 16,047 | 2,414 |
| Number hats made | 208 | 1,260 |
| Number garments remodeled | 517 | 1,746 |

MOVABLE SCHOOLS

Movable Schools were held in 29 counties in 1922, which is more than twice the number held last year. The maximum length of time for holding a school is two days. In some counties the school was held at the same place both days and in others it was held at different places, thus making the school more accessible to the people in the various parts of the county. The maximum number of subjects taught was four, Home Economics being required as one of the four. Arrangements were made for the school and the subjects selected by a committee from the community where the school was held. A list of subjects and outlines for the plan for organizing the school and publicity material for the local newspapers were furnished by the Extension Division. The schools have been very successful as a means of getting definite information to a large number of people and at the same time creating an interest in a specified line of work. The daily average attendance for the 29 schools was 102.

In addition to the Movable Schools held thruout the State, three special meetings for farmers were held at the Experiment Station farm. April 26th was Poultry Day. Twenty-four counties were represented with an attendance of 210. August 10th was Tobacco Day. Six counties were represented with an attendance of 130. This meeting, of course, was interesting only to the Burley tobacco section of the state. The Farm and Home Convention was held January 31 to February 3, with a daily attendance of between 550 and 600.

At the State Fair, which was held at Louisville, twelve departments of the College of Agriculture exhibited material in agriculture and home economics under the supervision of the Extension Division.

The constantly increasing demand for motion picture films and stereopticon slides during the past year, indicates the increased interest in these lines of visual education. Thirty-four films and sixty-five sets of slides have been used by the county representatives and the Smith-Hughes men this year.

HORTICULTURE

The extension activities for the Department of Horticulture for the year 1922 consisted of the work done with vegetable growers and fruit growers.

The activities for vegetable growers have been centered upon three major projects, Irish potatoes, sweet potatoes and tomatoes for canning. In addition several minor pieces of work have been done with cucumbers for pickling, early cabbage, greenhouse lettuce, tomatoes and the market garden crops in general.

The market garden section about Louisville was visited periodically and help given to meet current needs. In Paducah the gardeners met in monthly meetings, where a regular program was rendered, consisting of discussions of late research and general experience. In three greenhouses in Owensboro and one in Paducah instruction was given in arranging apparatus and timing the applications of steam sterilization for lettuce drop and the control of nematodes. Also in Henderson assistance was given in the control of tomato wilt with the wilt resistant seed of the U. S. Department of Agriculture (Marvel variety).

The early cabbage growers about Louisville have considerable difficulty in growing profitable crops, because of the "yellows" disease. Four demonstrations of one-tenth acre each were conducted, using Iowa Copenhagen and Wisconsin All Season strains of seed, both of which showed from 90 to 94 per cent of good heading and an almost total freedom from yellows, in contrast with checks of ordinary strains which succumbed to the extent of over 80 per cent and of which 4 per cent headed satisfactorily.

The pickle cucumber work was done in Breckinridge and Kenton counties. The seed was treated with corrosive sublimate for control of anthraenose and angular leaf spot. The practice of reinforcing manure with acid phosphate was introduced. All milkweed and wild cucumber plants were cut out because they harbor mosaic disease. The plant lice which infest these weeds become inoculated with the disease and in turn attack the cultivated cucumbers. Further work was done in striped beetle

control and a successful spray mixture was used consisting of a modification of the Missouri arsenate of lead-Paris green mixture to the following:

| | |
|------------------------|------------|
| Arsenate of lime | 2 pounds |
| Slaked lime | 4 pounds |
| Water | 25 gallons |

The work involved 32 demonstrations in Breckinridge County and 4 in Kenton.

The leading phase of the sweet potato work consisted in seed treatment for Black Rot control, and was placed among 127 cooperators in seven counties. Another phase of the sweet potato project was a series of demonstrations in the use of acid phosphate in amounts ranging from 200 to 600 pounds per acre. There were twenty-three demonstrations in five counties. The use of the acid phosphate increased the yield. In all cases the tests suggested that 600 pounds per acre is considerably below the profitable maximum.

The canning tomato work was conducted under five divisions:

1. Use of wilt resistant strains in three counties, 67 cooperators. Also 47 home gardeners have undertaken this work.
2. Use of acid phosphate at the rate of 400 pounds per acre, in three counties, 21 cooperators. A maximum increase of $2\frac{1}{2}$ tons was secured.
3. Transplanted plants versus seedlings. This resulted in $\frac{1}{4}$ tons to $1\frac{3}{4}$ tons per acre more for the transplanted plants.
4. Transplants grown in steamed soil versus those grown in unsterilized soil. This was a project in cooperation with the Heinz Company, the field agent being an observer. There were twelve cooperators in one county. The transplants from steamed flats and cold frames started off better after field setting and produced somewhat better than those grown in the customary way, due probably to their having been farther advanced

when leaf spots became epidemic. Their superior vigor, however, did not prove a control for wilt in wilt-infested land.

5. Bordeaux dust control for leaf spot. One county, four cooperators. No appreciable difference was observed between any plots including untreated "check-plots."

The potato project has many phases, among which are:

1. Forming of certified seed growers' associations.
2. Introducing good strains of seed.
3. Improving varieties already in use by field selection and "rogueing" for disease.
4. Fertilizer demonstration.
5. Seed treatment for scab.
6. The use of flour of sulfur on fresh cut seed potatoes to dry and disinfect the surface.
7. Assistance to boys' clubs in tuber unit seed improvement.
8. Potato scab control by treatment of the land with sulfur.

Jefferson County with 47 members and 127 acres produced 2,100-bushel surplus for sale in 1922-1923. This is over and above the amount saved as seed for both early and late planting. The Shelby County Association with 4 members and 11 acres produced 735 bushels for sale in 1922-1923 over and above seed reservations. The interest demonstrated in the introducing of good strains of seed was manifested when McCracken County purchased, in 1922, 1,200 bushels, against 3 bushels purchased in 1921. The project of improving locally developed seed stocks by field selection was carried on in 11 counties, 45 demonstrations. The fertilizer demonstrations were carried on in four counties with 7 demonstrations. In all cases acid phosphate plus a legume crop proved superior to equal amounts of any mixed fertilizer with or without a legume, so that phosphorus is apparently a limiting element. Seed treatment for scab was carried on in 6 counties with 113 demonstrations. Concerning the introduction of the use of flour of sulfur to dry off and heal over cut seed, as well as to act as a prophylactic against the various organisms causing rot of seed in storage before planting,

a significant statement is that Jefferson County potato growers used, in 1922, six tons and one barrel of this material. Translated into acres, the seed for 1,100 acres was so treated, approximately 10 per cent of the late crop acreage. Assistance was rendered to 63 boys with 100 tubers each in the seed improvement work. In the potato scab control work, no control was reported except where sulfur was applied at the rate of 600 pounds per acre and the effect then was probably more apparent than real. This work was done in 8 counties with 18 cooperators.

The work with orchard growers has been directed along three main projects: (a) orchard renovation, (b) management of commercial orchards, (c) planting of new orchards.

Kentucky has a large number of neglected farm orchards which range in size from a few trees up to several hundred. Due to ravages of insects and diseases and to starvation these orchards are in many cases gradually dying out. In the spring of 1920 the work of renovation was begun on seven typical neglected orchards. This number increased in 1922 to 54 orchards in 37 counties representing a total of more than 2,900 trees. Complete reports of the outcome from six representative orchards show the following: 346 trees yield 1,253 bushels, cost of production \$196.90; gross returns \$1,296, total profits \$1,099.10. Assuming that these six orchards were representative in size, yield, cost of production, etc., the 54 orchards have yielded over 11,000 bushels, giving a total profit of more than \$11,000.

Among the demonstration plots was a small neglected farm orchard in Christian County, consisting of cherry, peach and apple trees. In the past the peaches and cherries have rotted before maturity, and due to the ravages of worms and various diseases the apples would never hang on the trees until fully ripe. Thru the efforts of the Extension Division the grower was influenced to spray during the past year. The cherries naturally ripened first, his six trees producing 110 gallons above the amount used for home canning. He found a ready sale in the neighborhood at 75c per gallon, giving a return of \$82.50 from the six trees. These early sales gave the grower an idea

of the advantage of spraying so he proceeded with new vigor. One Red Cling peach tree which had never ripened enough peaches in the past to make a pie, produced a crop which sold for \$18.20 and the gross sales of the little farm orchard were in excess of \$360.00. The expense of spraying included a \$15.00 barrel spray outfit, \$12.00 for spray material, with $12\frac{1}{4}$ days labor at \$2.00 per day amounting to \$25.00 or a total cost of spraying of \$52.00. The grower still has his spray outfit and some spray material on hand. In one mountain county where conditions are not considered to be especially good for fruit production, an orchard consisting of 40 apple trees, 10 to 15 years old, 15 bearing peach trees and 3 cherry trees, under the direction of the Extension Service was sprayed for the first time and gave a gross return of \$590.00, while the cost of spraying amounted to less than \$50.00.

Under the Orchard Management Project, 37 orchards in 14 counties have been under the supervision of the Extension Division. The work consisted for the most part of demonstrations with nitrate of soda or sulfate of ammonia with clean culture during early summer followed by cowpeas in midsummer and rye in the early fall. The results of this campaign may be measured by a comparison of the amount of nitrogenous fertilizers used in 1921 and 1922. One county which used 4 tons in 1921 used 22 tons in 1922, or an increase of 550 per cent. In another county 45 tons were used in 1921 and 65 tons in 1922. This application of 87 tons in the two counties in 1922 indicates the treatment of approximately 34,800 trees in these two counties alone. One fruit grower who used 5 pounds of nitrate of soda per tree on 200 trees reports an average of $1\frac{1}{2}$ bushels per tree over the average for untreated trees.

Assistance was given in starting 9 young orchards, the growers being advised as to the varieties, site, planting plan and orchard management for the first season's growth. The "Orchard Tour" method has proved quite effective in placing the results of the demonstration projects before the growers. During the past summer one or two-day tours were conducted in six counties including McCracken, Ballard, Christian, Crittenden, Daviess and Henderson, and were attended by 368 interested growers. On these tours three or more orchards were

visited. At the noon hour each day a picnic lunch was served followed by addresses on such subjects as orchard fertilization, cover crops, cultivation, varieties, nursery stock, insects, diseases, pruning, etc. In a number of cases growers came from adjoining counties and states to observe the effects of certain orchard practises. By the request of the growers in each of the above counties, these tours are to be continued annually and in addition three other counties have requested tours next year.

As a result of a few demonstrations and lectures on the application and value of paradichlorobenzene for control of the peach borer, 1,850 pounds of the material have been used this year for the first time. This amount has treated approximately 31,400 trees. In three counties a number of trees 1 to 3 years old have been treated to determine the possible injury to young trees. These demonstrations are being observed with much interest by peach growers thruout the state. The value of a proper and systematic spray schedule for peaches was clearly demonstrated this year in several of the counties. In Jefferson County the farmers of one section, where peaches are grown commercially, sprayed their fruit with arsenate of lead alone, not adding any lime to prevent burning. The leaves were burned and fell off and the peaches themselves soon withered, causing a loss of at least 3,000 bushels valued at \$6,000.00. The growers have since, with the assistance of the Extension Division, organized a County Fruit Growers' Association for educational purposes.

BEEF CATTLE

Extension work in beef cattle has consisted primarily of steer feeding demonstrations, placing purebred bulls on farms not already having such animals, in working with the Baby Beef Club members, by interesting counties in this club work thru the selection of calves and the giving of instruction in the club work. Much miscellaneous instructional work has been given in club camps, movable schools and other meetings, also in judging beef cattle and other live stock at club shows and fairs.

Feeding demonstration work was carried on in ten counties, mostly in cooperation with county agents. Records of feeds fed and gains produced were kept thru the feeding period. Field meetings were held in Daviess, Hart, McLean, Nelson and Madison counties, so that others might learn of the results of the demonstrations. Other counties in which cooperative steer feeding demonstration work was done and records completed were Muhlenberg, Todd, Warren, Fayette and Wayne.

The following table gives a summary of the winter feeding work:

| | |
|--|---------|
| Total steers on feed | 555 |
| Number of droves fed | 22 |
| Average number of steers to drove | 25.2 |
| Average length of feeding period, days | 131 |
| Average weight of steer at start, pounds | 814 |
| Total gain per steer, lot wts., pounds | 236.5 |
| Average daily gain per steer, pounds | 1.8 |
| Average feed cost per 100 pounds, gain | \$11.61 |
| Feed fed: | |
| Average silage fed (18 droves), pounds | 40 |
| Average C. S. meal fed (22 droves), pounds | 2.6 |
| Average hay fed (22 droves), pounds | 5.5 |
| Average corn, pound | 5.6 |
| Average initial cost of steers | \$5.53 |
| Average sale price of droves | \$6.87 |
| Average sale price need to break even (avr. droves) | \$6.87 |
| Average margin received | \$1.34 |
| Average loss on feeding total of 555 steers, feed alone counted | \$0.70 |
| Average side expenses for steer (including labor, interest, taxes, bedding, rent of barn, and miscellaneous) | \$7.63 |

| | |
|---|---------|
| Manure made per steer, tons | 6.7 |
| Pork produced per steer (computed for all droves), pounds..... | 31 |
| For 441 steers, pounds | 39 |
| Average margin needed to break even in lot on lot wts. | \$1.34 |
| Average profit per steer (manure and pork counted) on 555 steers | \$4.83 |
| Values used—1921-1922: | |
| Labor at 15c and 20c an hour, interest 6% on value of cattle, purchase price. | |
| Feed values: | |
| C. S. meal, ton | \$41.00 |
| Corn (average), bushel | \$0.50 |
| Silage, ton | \$4.00 |
| Hay (average), ton | \$14.00 |
| Pork sold on market. | |
| Manure credited \$1.50 and \$2.00 a ton. | |

When manure and pork were both credited, the average steer returned a net profit of \$4.63 above all expenses when sold. This is for the winter and spring period in which the cattle were marketed from the feed lot. Many poor feeding practises were corrected, such as feeding too much cottonseed meal, feeding in too small a space and keeping the cattle too closely confined, having a poorly balanced feed ration or insufficient water supply.

In Fayette, Nelson and Madison counties, many cattle are carried thru the winter, to be finished on grass. In the latter two counties, the feed lot meetings which were held were for the purpose of showing the best rations to be used in carrying cattle thru the winter, which were to be later finished on grass. Some men were using nearly double the amount of corn needed for greatest profits. More work of this kind is to be carried on next year.

BETTER SIRE CAMPAIGN

In the better sire work during the past year six hundred members were enrolled to use nothing but purebred sires on all of their livestock to be bred. This makes a total present enrollment of 750, which places Kentucky in fourth position among the states in the work. At the beginning of the year, her place was seventh and when the work was begun, four years ago,

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5.6
\$5.53
\$6.87
\$6.87
\$1.34
\$0.70

\$7.63

Kentucky stood forty-seventh. Plans are now being formed which will place her still farther ahead.

Better sire bull sales were held in Wayne, Lincoln, Montgomery and Jefferson counties. All of them were either originated thru extension work or else were assisted in organizing and getting animals and buyers together. Two hundred bulls were placed on farms in the State in this way. A number of private breeders held sales in addition to this.

SUMMARY OF THE WORK

- 235 visits were made to demonstrators.
- 501 visits were made to other farmers.
- 70 meetings were held.
- 5,882 attendance.
- 80 average attendance at all meetings.

SHEEP

Extension work in sheep husbandry has consisted mainly in the standardization of Kentucky spring lambs by docking and castrating, in treating sheep for stomach worms, introducing purebred sires and better and more uniform breeding ewes.

DOCKING AND CASTRATING CAMPAIGN

More emphasis was placed on the docking and castrating of lambs than upon any other one project. The 1922 campaign which started in January and extended thru April was largely confined to Bluegrass counties. At these demonstrations, 9,860 lambs were docked and castrated and a total of 1,988 farmers were present. Most of the farmers present were taught to perform these operations by actually docking and castrating some of the lambs, so they could work on their own flocks. As a result of these demonstrations, reports show that more than 50,000 lambs were docked and castrated last year. In following these lambs to market it is gratifying to note that in no case did they fail to spring the market at least 50c per hundred pounds and in most cases more. It was not uncommon to find that car lot shipments sprung the market as much as \$1.00 or \$1.25 per hundred pounds. Aside from this fact, the trimmed lambs went practically 100 per cent tops and the wether lambs averaged about two and a half pounds heavier than the buck lambs. In a letter received from the president of the Bourbon Live Stock Exchange in reference to the improved quality in lambs as a result of the campaign, he comments as follows on the docking and castrating work: "A substantial improvement in quality has been noted in the last two years, which I think would approximate 25 per cent. The number of docked and castrated lambs was considerably in excess of last year. These lambs ran 100 per cent tops, while 15 per cent of the others not so treated ran seconds. The docked and castrated lambs sold at a premium of 50c to \$1.25 over the others. There was not a day but what a difference of 50c per hundredweight was made and many more could have been sold, while some days a few unaltered lambs were carried over unsold. This year the

seconds were sold at a discount of \$5.00 to \$7.00 per hundredweight."

When we consider that 15 per cent of the lambs went seconds because the buck lambs had not been castrated; that the trimmed lambs sold at a premium of from 50c to \$1.25 per hundredweight; that the wether lambs averaged about two and a half pounds heavier than the unaltered lambs, it is evident when taking the marketing season as a whole that the castrated lambs are worth about \$2.30 per hundredweight more than buck lambs.

This work has had the hearty cooperation of all buyers of lambs. In some counties the local buyers pay from one-half to one cent a pound more for the trimmed lambs. In some counties the buyers helped the farmers castrate their lambs and paid more for them than they did for untrimmed lambs.

In a letter to the University, Mr. C. V. Whalin, in charge of marketing live stock and wool, U. S. Department of Agriculture, said with reference to docking and castrating lambs: "We have heard much of the good work you are doing and it was brought forcibly to our attention by commission men on the Jersey City markets last summer."

PUREBRED RAM CAMPAIGN

The purebred ram campaign has resulted in a greatly increased demand for purebred rams to head grade flocks. This campaign has been conducted thru meetings in the field, culling demonstrations and publicity thru extension circulars and posters. A list of rams for sale in the state was compiled, but this supply was soon exhausted and it was necessary to locate rams in other states. Owing to the increased demand, an effort was made to get more breeders interested in purebred flocks and, thru extension activities, eight new flocks were established this year.

STOMACH WORMS OF SHEEP

Demonstrations in the treatment of sheep for stomach worms have been held in various parts of the State, mostly in connection with the docking and castrating demonstrations. These, in many cases, have been followed up by farmers and county agents with good results. The bluestone treatment has

been used. The following instance will serve to show something of the value of the treatment of sheep and lambs for stomach worms. Mr. B. W. Rash of North Middletown reported in July that his lambs were dying and he could not determine what was the cause. The trouble was diagnosed as stomach worms. The lambs were treated immediately with a one per cent solution of bluestone and no further losses occurred.

SUMMARY

| | | |
|---|-----|------------------|
| Demonstrations | 164 | Attendance 1,988 |
| Evening meetings with sheep breeders..... | 24 | Attendance 1,226 |
| General animal husbandry meetings with farmers, schools and conventions..... | 12 | Attendance 1,340 |
| | — | — |
| Total number of meetings | 200 | Attendance 4,554 |

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SWINE

Extension work in swine husbandry during the past year has been mainly along two lines: (1) demonstrations in the economical feeding of swine, including forage crops, and (2) demonstrations in the proper cutting and curing of pork.

(1) In the feeding demonstrations records have been kept of feeds used and cost of same. The use of mineral mixtures has been emphasized in these demonstrations. Thirty-three feeding demonstrations have been carried on, fourteen of which are completed. So far these results show that the cost of pork production varied from \$3.50 per hundred pounds to \$7.75, the net profits varying from \$1.16 to \$6.50 per hundred. The average cost of producing 100 pounds of pork was \$6.00 and the average difference between this cost and the selling price was \$3.15 per hundred. The largest profits were secured where corn was supplemented with good pastures, nitrogenous concentrates and mineral mixtures. On the other hand, the greatest cost was where corn only was used. In practically all cases the results of these demonstrations were published in the local papers and Associated Press.

(2) It is well known that in some seasons, especially when warm weather prevails, considerable pork is lost because the carcass is not properly cooled and the different cuts are not properly cured. Some of this loss is due to improper methods of bleeding the hog. Fifteen demonstrations as to the proper method of slaughtering, blocking, cutting and curing of pork have been given this season, and as many more will be given within the next month. The total attendance at the eleven demonstrations was 293. Not only were demonstrations given but it was also the aim to allow some local man at each gathering to cut up half the carcass according to instructions so that he might aid others in the work if they did not fully understand the method. The method emphasized in the cutting of pork was the splitting of the backbone, which facilitates cooling out the carcass and makes possible the removal of pork chop cuts. This improves the value of this part of the carcass from five to ten cents per pound and often enables the farmer to dispose of his surplus of fresh meat to the local butcher, who cannot use it to

advantage if cut in the old way. Along with the cutting demonstrations proper methods of curing pork have been given. We estimate that by the use of these methods over old methods the farmers can improve the quality of their meat from \$25 to \$30 per family. Not only does our method of curing increase the value of the product, but it also minimizes loss from skipper attacks. It was suggested that more of the cheaper cuts be used for sausage, thus greatly enhancing their value. Methods were given by which sausage may be kept and served during the year. The possible criticism that we find of the present methods of curing meat is the length of time the meat is allowed to remain in salt, this being as much as four or five months in some cases. As a result the meat is too dry and hard to be palatable. Lessening the time of curing and the use of sugar or sorghum in conjunction with salt make a much more tender product.

In addition to the above work, pig club shows have been judged and explanations for placings given. Assistance has been given in distributing sixteen purebred boars in the mountain sections, to be used as community boars. The purchase of purebred stock has been emphasized. Twenty demonstrations were given as to the capsule treatment for worms in hogs.

Summary of the work follows:

| | |
|---|-------|
| 1. Visits to farmers | 155 |
| 2. Meetings held | 25 |
| Attendance | 2,760 |
| 3. Junior camps instructed | 4 |
| 4. Visits to schools | 25 |
| 5. Articles published in farm papers..... | 3 |
| 6. Articles published in newspapers | 15 |
| 7. Mimeographs mailed and given out | 3,000 |

DAIRY EXTENSION WORK

The accompanying map shows the counties where dairy extension work is under way, the principal lines of extension work, as shown on the map, embracing (1) Cooperative Bull Associations, (2) Cow Testing Associations, (3) Boys and Girls Dairy Calf Clubs, (4) County Dairy Cattle Breeders' Associations, and (5) Official Testing of Cows. In addition the Department has conducted exhibits at fairs, the judging of cattle and cream grading.

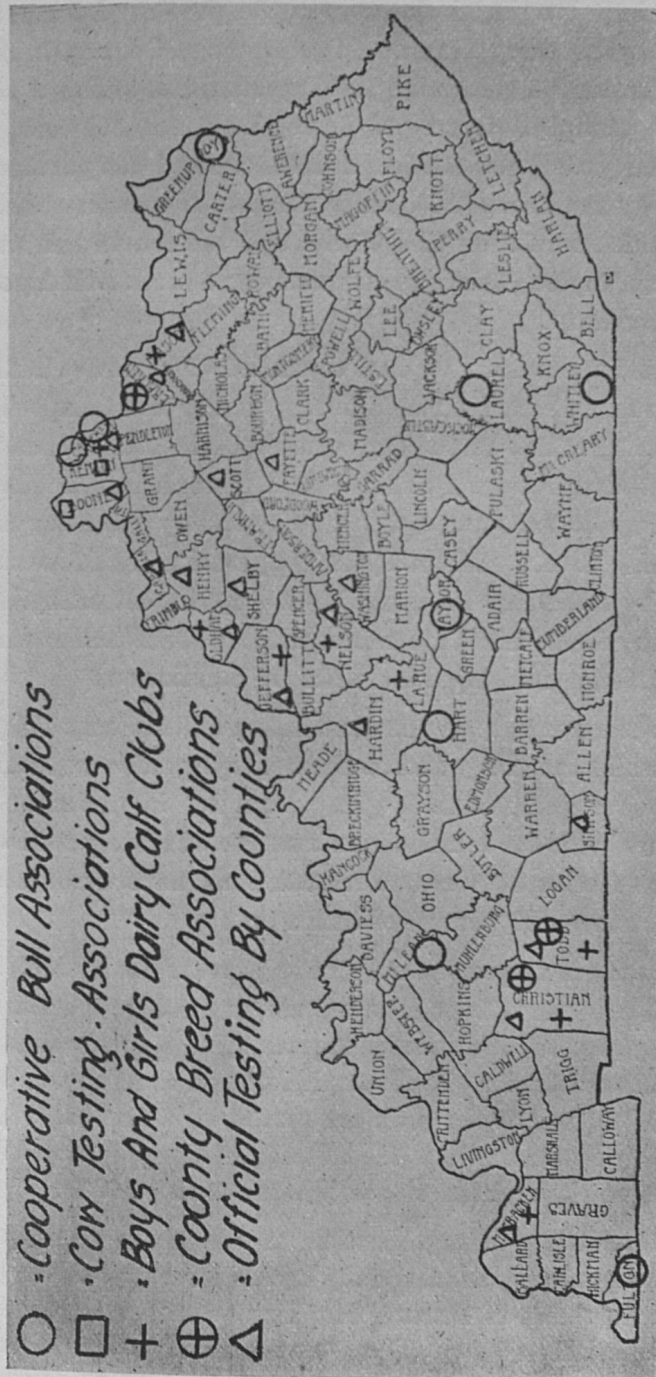


No. 4.—Represents the Boys' and Girls' Jersey Calf Club organized in Larue County. (31 in all.)

COOPERATIVE BULL ASSOCIATIONS

A principal phase of dairy extension activity has related to the establishment of Cooperative Bull Associations for the introduction of pedigreed sires into counties where they are needed. In this way farmers of a county are induced to cooperatively purchase three or four high-bred bulls to displace any grade and scrub sires that may have been used in the past.

During the calendar year, the dairy extension field agents have assisted in the organization of bull associations in the following counties: McLean County, 3 registered Jersey bulls to be used on 152 cows, owned by 42 farmers; Boyd County, 3 Jersey bulls for 125 cows owned by 25 farmers; Hart County, one



Jersey bull bought, three more to be purchased for 175 cows owned by 30 dairy farmers; Breckinridge County, 3 Holstein bulls, association completed in November, but bulls not yet purchased; Campbell County, 3 Jersey bulls for 150 cows, owned by 30 dairymen; also the fourth Holstein bull was purchased last spring by the Campbell County farmers to complete their Holstein Bull Association of 4 blocks, and the fourth bull was purchased in Taylor County to complete the 4 block Bull Association in that county.

Previous to 1922 we had organized Cooperative Bull Associations in Fulton, Laurel, Whitley, Taylor and Campbell Counties, which, added to the ones completed in 1922, makes a total of eight Cooperative Purebred Bull Associations in Kentucky, embracing 30 bulls and 1,450 cows owned by 300 dairy farmers. According to the "Directory of Cooperative Bull Associations" issued by the Dairy Division, U. S. Department of Agriculture, Kentucky is the ninth state in number of such bull associations, Pennsylvania ranking first with 27 associations.

As the average cow of our State produces only 135 pounds of butterfat annually, and as the average grade cow should produce 250 pounds, there is great room for improvement and it will come with the introduction and use of more purebred sires. The sires selected for bull associations have dams with test records above 400 pounds of butterfat.

There are at present only 1,192 purebred dairy bulls for the 520,000 dairy cows kept in our State, and this proportion should be improved, but the average farmer owns only two to five cows and cannot afford a purebred sire. Thus the Cooperative Bull Association, where the cows are served by a fine bull kept on a centrally located farm, is the solution of the problem. We hope to increase the number of associations during 1923.

In addition to organization of the above named associations, the dairy extension field agents have assisted in placing community bulls in Harlan, Hopkins and Fayette counties and dairy specialists have helped numerous farmers to purchase excellent cows and heifers.

COW TESTING ASSOCIATIONS

We have not pushed the work of cow test associations during 1922, believing from four years' experience in Kentucky that the time is not ripe for these associations, due to the fact that the herds owned by Kentucky farmers do not on the average contain a large enough number of cows, which would make the cost per cow rather excessive. However, the Campbell County Cow Testing Association organized two years ago is still progressing nicely and a second association is being organized in that county at the present time, which will be completed immediately.



No. 6.—Represents the Boys' and Girls' Jersey Calf Club organized in Bracken County. (23 in all.)

BOYS' AND GIRLS' DAIRY CALF CLUBS

In November, 1922, the dairy department assisted the Mason-Bracken County Jersey Cattle Breeders' Association to place 22 registered Jersey heifer calves in the Boys and Girls' Calf Clubs for these two counties. These heifers were purchased by a committee of farmers in Ohio at a cost of \$100 each, \$2,200 for the lot, and notes for their purchase price were arranged by the children and their parents with the assistance of the local banks.

The dairy department has also been active in assisting county agents organize Boys and Girls' Dairy Calf Clubs in various other localities, as this work with the children is a useful and important field of service and often serves to introduce purebred stock into a county. During 1921 and 1922 we have

assisted in the organization of the following Boys and Girls' Heifer Calf Clubs: Christian county, 40 children owning Jerseys; Oldham county, 14 children owning Holsteins and Jerseys; Nelson county, 10 children owning Holsteins; Jefferson county, 10 children owning Jerseys; McCracken county, 15 children owning grade Holsteins; Todd county, 18 children owning Jerseys; and Mason-Bracken county, 22 children owning Jerseys.

All the above named clubs are using registered heifers except McCracken county, as noted. Thus we have been instrumental in placing 160 dairy heifers among the children of Kentucky. The children take care of the heifers and keep accurate notes regarding their feed and growth.

COUNTY DAIRY CATTLE ASSOCIATIONS

In June, 1922, Mr. R. D. Canan of the American Jersey Cattle Club was assisted in organizing the Todd County Jersey Breeders' Association with ten charter members and with a program of work embracing the following items: (1) to take a carload of Todd county show cattle to the State Fair, (2) to increase Register of Merit testing, (3) to increase interest in the Boys and Girls' Calf Club, (4) to give active support to the purebred sire campaign in the county, (5) to increase publicity and advertisement of Jerseys in the county. A large part of this program has been carried out.

In August, 1922, the Mason-Bracken Jersey Breeders' Association was assisted in organizing with sixteen members and with virtually the same program of work for this club as outlined for the Todd county club.

OFFICIAL TESTING OF COWS

In the past three years the dairy department has helped 75 farmers to complete official test records of their registered cows; thirty farmers are now testing, of which number ten started this year. At present thirty farmers are testing 160 cows. As there is a demand for calves from tested cows this work has provided a market for the sale of surplus bull calves which have heretofore been a drug on the market and hard to sell at better than beef prices. In Christian and Todd counties

alone, extensive test records have aided in the sale of something over \$22,000 worth of stock from these two counties in two years, which stock has been purchased by farmers elsewhere in the State to replace scrubs and grades. It can thus be seen that our assistance in this work is mutually helpful to breeder and farmer. A monthly "Honor Roll" is mimeographed showing the highest records and these sheets are sent to 100 interested farmers.

This department helped in carrying out the first annual Jersey tour for the State, in which fifty breeders traveled 152 miles in automobiles, visiting 20 Jersey herds. The tour was held August 2, 3 and 4.

Assistance has been given the eleemosynary institutions of the State in operating their dairy herds. Weekly reports are received from each institution.

During the year 68 cream grading demonstrations, or schools, have been held in 49 counties. Seventy counties in the state have cream stations. Twenty of the counties not visited have less than three cream stations. The operators from adjoining counties frequently visited the demonstrations. The counties visited represent 322 cream buying stations, while those not visited represent 37 stations. At each of the 68 demonstrations held, from five to fifteen farmers were in attendance.

The purpose of the work in cream grading is to acquaint farmers with proper methods of producing good, clean cream. The cream now sent to the creameries by Kentucky farmers produces five million pounds of butter annually that scores 87 points and sells for 6c to 8c a pound less than the best butter that scores 92 points that is produced by farmers in some other states. The lowered price for butter is passed to the farmer. The creameries are now paying more for first-class cream and many farmers are now producing better cream than formerly.

Aside from the demonstrations held for station operators and farmers, seven meetings were held during the year for creamery managers and field men, in the interest of cream grading. As a result of these meetings personal letters have been sent to each of the patrons of the different companies explaining the system of grading and giving instruction as to care of cream and the dairy utensils. By this method we were able to acquaint

practically every farmer producing cream in the State with our plan and to offer suggestions as to how to improve the quality. Large grading cards were issued and conspicuously posted in each cream buying station.

A grading report was prepared by each company and returned to the station operator regarding each shipment to show how nearly the buyer was grading with the plant. A copy of this report was mailed each day to the field man in charge of the territory.

Five farmer* meetings were held in which cream grading was the main topic of discussion. Three movable schools were attended at which the value of cream grading was stressed. Two Junior Agricultural Club camps were attended at which instruction was given in the methods of handling cream.

In addition, seven calls were answered concerning the manufacture and storage of butter and the purchase and location of machinery in creameries and ice cream plants.

An interesting and important dairy exhibit was shown at the State Fair at Louisville, and at the McCracken County Fair, and attracted so much attention that it was borrowed by the University of Tennessee for display at their State Fair at Nashville.

The extension specialist in dairy manufacture was superintendent of the Dairy Products exhibit at the State Fair, and succeeded in raising several hundred dollars in premiums and secured a great many exhibits of milk and cream, and farm and creamery butter.

Minor phases of extension work which have been covered in the past year include the judging of dairy cattle at a number of fairs. Specialists have also given advice and assistance to hundreds of farmers regarding rations for dairy cattle and better management of herds, and have carried on an extensive correspondence.

EXTENSION WORK IN POULTRY

During the calendar year of 1922 five poultry projects have been under way, namely: (1) standardization or community breeding; (2) culling and selection; (3) farm flock demonstrations; (4) certification of poultry flocks; (5) winter egg laying project.

STANDARDIZATION OR COMMUNITY BREEDING

This project involves the distribution of purebred hatching eggs during the spring months and the returning and auctioning of the pullets during the fall. One pullet is returned for each setting of eggs received. This project has been carried on continuously since 1915. As the project grows in popularity a large number of purebred flocks are established in each county. The owners of these flocks sell hatching eggs direct to their neighbors, which means that the distribution of purebred eggs is far larger than a report could include.

During the spring of 1922, 262,458 purebred hatching eggs were distributed in 54 counties thru a bank, local business house or the county poultry association. The bank or business house virtually loans the money for the purchasing of the hatching eggs and is reimbursed in the fall after the auction sale. White Rock eggs were distributed in 18 counties, Rhode Island Reds in 16, Barred Rocks in 11 and White Wyandottes in 9.

Most of the eggs distributed in this way were secured by people who had mongrel flocks. By means of this project 1,678 new purebred flocks were established in the State in 1922.

During the fall of 1922, 19 pullet auction sales were held. The growth of these sales is shown by the fact that 5 were held in 1920 and 16 in 1921. Considerable interest was manifested at each of these auction sales and the bidding was spirited. Five thousand five hundred and nine pullets were sold at the auction sales, the total receipts from the sales being, \$4,892.37. This low average per bird was due to the fact that 870 culls were sold at the market price at about 15c per pound. Coops of five or six birds sold at the various auctions as high as \$2.50 to \$3.00 per bird. Many produce dealers offered premiums on mongrel

hens that were brought in immediately prior to the sale, if the money would be spent at the auction sale in buying purebred pullets.

One of the outstanding developments of the Standardization program has been the formation of 31 county poultry associations during the past 3 years. These associations have a membership largely composed of those farm men and women who have become interested in poultry thru the Standardization work. The three purposes of these associations are: (1) the



No. 8.—Just before the pullet auction sale. Note coops with graded pullets.

study of up-to-date methods of poultry keeping, (2) holding an annual poultry show and (3) the sale and marketing of hatching eggs and breeding stock. Reports from the secretaries of 11 of these associations show that thru their organizations 117,222 hatching eggs were sold this past spring. These eggs brought the members \$7,178.13. During the past winter and early spring 1,946 head of breeding stock, mostly cockerels, were sold thru the associations, bringing the members \$3,642. These associations furnished a nucleus from which the county agent and the poultry specialists may develop the poultry projects in these respective counties.

CULLING AND SELECTION

In June, 1922, the county agents were given special lectures and practis during a two-day conference at the University, so that they would be prepared to hold culling demonstrations without the assistance of a poultry specialist. This left the poultry specialists free to devote more time to the counties which have no county agents and to the counties where the agent was just getting his poultry work started. Culling demonstrations were held in 13 counties where there are no county



No. 9.—Seeing is believing. A culling demonstration.

or home demonstration agents. There were 1,807 people in attendance at 71 of these demonstrations, which is an average of 25 persons per demonstration. This is an exceptionally good average when it is considered that there was no county agent on the ground to work up interest in the demonstration. Considerable interest was manifested not only in the culling work but in county agent work. Since the culling campaign, appropriations for county agent work have been made in four of the 13 counties. The attached reports show the results secured by three of the flock owners in these counties. Mr. Franklin Bell, one of the magistrates of Bourbon County, stated that the culling work alone would justify a county agent for his county.

During the campaign the poultry specialists held 221 demonstrations and there was a total attendance of 4,561 people. The county agents held 864 demonstrations at which there was a total attendance of 9,498 people. In addition 1,280 farmers reported that they culled their flocks immediately after the demonstration, handling 61,660 hens of which 17,807 were marketed as culls.

A representative report of 32 flocks that were used in the demonstration is given below :



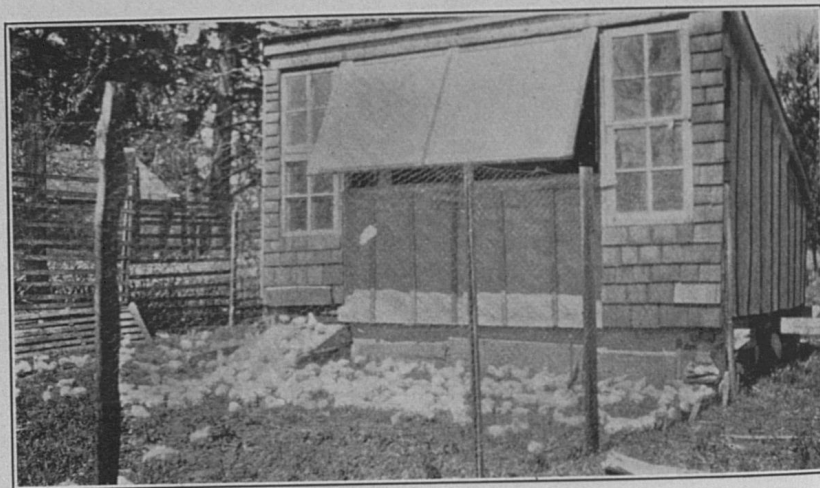
No. 10.—A certified pen of White Wyandottes in a Henderson County demonstration flock.

| | |
|---|------------|
| Total number of hens..... | 2,177 |
| Total number of culls..... | 554 |
| Total production one week before demonstration..... | 4,323 eggs |
| Total production one week after demonstration..... | 5,029 eggs |
| Total production of culls for one week..... | 167 eggs |

It will be noted that the remaining 1,623 hens laid more eggs the week after the demonstration than the total of 2,177 laid one week previous to the demonstration. This increase is largely due to the fact that the hens remaining after the culls were taken out of the flock received more feed per bird and were not so crowded. Proper feeding was also emphasized in the demonstration and this undoubtedly counts for some of the increase in production.

FARM FLOCK DEMONSTRATIONS

Fifty farmers in the State, distributed in 27 counties, have kept complete records of their poultry flocks which have served as a demonstration in their respective communities. Thirty-five of these farmers have completed their records for the year 1922. These demonstration flocks have been fed and managed according to recommendations of the poultry specialists. Meetings have been held in various counties on the farms where a demonstration flock is kept. Farm tours were held in several counties during the year and the demonstration flocks were



No. 11.—Colony brooding is practiced where early hatches are denied.

visited on these tours. The first attempted poultry field day was held at the farm of Mr. A. J. Culver near Hopkinsville. Mr. Culver has been serving as a demonstrator for two years. Over 200 persons were in attendance at this meeting to learn of Mr. Culver's success and his methods. Mr. Culver, in talking before the farmers at the meeting, stated that his success was largely due to the cooperation that he had received from the Poultry Section of the College of Agriculture.

CERTIFICATION OF POULTRY FLOCKS

In order to improve quality of stock and increase the egg production of the poultry flocks in Kentucky the certification project has been undertaken. The project consists of the selec-

tion and mating of special breeding pens and the distribution of cockerels produced from these pens. Certification is limited to farmers who have served as demonstrators for at least one year and secured a satisfactory egg production. The flock is gone over carefully during October or November, at which time the outstanding, high-producing hens of the flock are banded with a sealed leg band on which is stamped, "Certified U. of K. 1922." These certified hens are mated to a male bird out of high-producing blood lines to produce cockerels which are eligi-



No. 12.—Studying poultry house construction by means of a model.

ble for certification. Cockerels from this mating that show exceptional vigor, good breed type and productive qualities are certified and are available in turn for distribution in the State.

During the fall of 1922 hens have been certified in 20 of the 50 demonstration flocks. The smallest number certified in any one flock was 8 hens and the largest number 139 hens.

WINTER EGG LAYING PROJECT

During the winter of 1921-22, 992 farm flocks in the State were entered in the Winter Egg Laying project. The owners of these flocks kept production records thruout the five winter months and served to demonstrate proper methods of feeding and housing in their respective communities. As a result of this



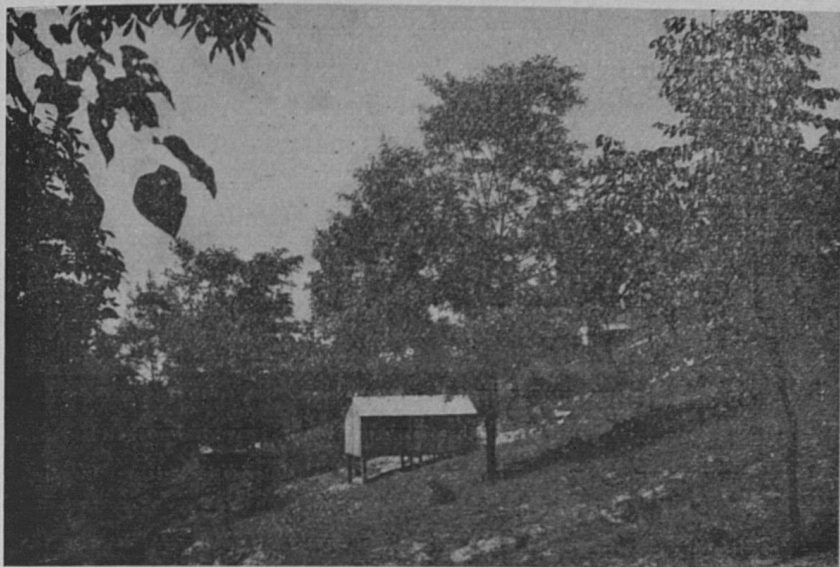
No. 13.—“Home, Sweet Home,” not applicable in this case. The poultry house should be a home for the flock and not merely a place to roost.

project and the demonstration flock project, 262 new model poultry houses have been built this year and 472 houses have been remodeled. For the winter of 1922-23, 1,260 farmers have entered their flocks.

A number of persons who enrolled their flocks last year in



No. 14.—Farm women securing pure bred hatching eggs. For each setting secured they will return a pullet in the fall.



No. 15.—A hillside demonstration flock has proven highly profitable. Note colony houses scattered along the hillside.

the Winter Egg Laying project have agreed to serve as demonstrators for the coming year.

Monthly poultry pointers containing timely suggestions are sent thruout the year to each of the persons enrolled in the Winter Egg Laying project. The county agents report that this project has done more to stimulate proper methods of housing and feeding than any other work they have undertaken.

FARM ECONOMICS

Cost of Production and Farm Organization.—Cooperative demonstration work in cost of production and farm organization was continued during the year on farms in Fayette, Spencer, Christian and Fleming counties, the number being increased to twenty-six. These farms have kept a detailed record, under supervision, of all costs in the production of the various kinds of crops and livestock.

Farm Accounts.—A new edition of the Kentucky Farm Account Book was prepared during the year. This embodied improvements suggested by the experience with the book during the past five years. Three thousand copies were distributed.



No. 16.—A one-day farm management school in farm accounting.

Representatives of the Farm Management section supervised the taking of inventories and started entries of farm receipts and expenses on approximately 500 farms.

Special group demonstrations in farm accounts were carried on in three counties, in Larue with approximately 50 records, Fleming with 40 records and Bourbon with 75 records. It is intended to summarize these records at the end of the year and make an efficiency factor sheet for each of the counties.

Farm Management Schools.—The one-day Farm Management Schools held during the early part of the year were again

very useful and were exceedingly popular. Fourteen schools were held with a total attendance of 290 persons. Each of these schools consisted of a morning and an afternoon session. Each farmer recorded his farm inventory in a copy of the Farm Account Book and then was instructed in the details of recording receipts and expenses and given practice in summarizing a record of the year's business so as to determine farm profits, these factors being illustrated in most cases by data obtained from the farm records kept in each particular locality during the previous year. Follow up visits were made during the year to farmers who started accounts at these schools.

Lectures on various phases of the farmer's economic problem were given at three Movable Schools.

In addition to the adult Farm Management Schools visits were made to 14 schools and instruction given to classes of students in the keeping of systematic farm records.

Farm Management Survey in Purchase Region.—A period of about ten weeks was devoted to making a complete business analysis of 150 farms in Marshall, Calloway, McCracken, Graves, Carlisle, Hickman and Fulton counties. The various factors of efficiency were determined for these farms. The resulting tabulations indicate the points wherein the most successful farms in that section of Kentucky differ from the less successful ones and furnish data showing how farms should be cropped and stocked for maximum profits.

Farm Management Tours.—One of the most valuable features of the year's work was the farm management tours to successful farms. These were held in Mason, Kenton and Spencer counties. Groups of farmers accompanied by the extension demonstrator and county agent went in automobiles to a number of farms which are demonstrating profitable farm management principles. A careful study was made in each case of the details of management and farm organization. A total of 140 farmers participated in these tours. Results attained in this phase of the work justify a considerable increase in the number of tours to be held during the coming year.

Fairs and Exhibits.—At the annual State Fair at Louisville the exhibit of the department of Farm Economics served

to teach some fundamental business principles underlying profitable farming. Farm profits as affected by efficient farm organization were represented by the water in a huge white barrel, holding four hundred gallons. The staves were marked to represent various factors, including crop yields, production of live stock, cost of labor, diversity, volume of sales, use of capital, etc. In a number of the staves were leaks, thru which the profits were escaping. A small booklet was handed out, suggesting ways for stopping the leaks.



No. 17.—A cooperative auction sale of Kentucky spring lambs at Lexington.

The marketing idea was set forth in a series of stair steps, upon which were marked the various "steps in marketing," including assembling, grading, transporting, financing, storing, etc. Farmers standing around the exhibit were heard to discuss among themselves the question whether any of these steps could be dispensed with and, if so, which one and how.

Farm Layout.—The problem of more efficient farm layout was presented by farmers in different sections of the state. These farms were visited and suggestions made as to the rearrangement of fields and buildings for more economical results.

Farm Leasing.—About 1/3 of the farm operators in Kentucky are tenants, most of whom operate on a share basis. The

Department of Farm Economics has gathered leasing contracts from a large number of farms and has made a special study of those leases which have proved most satisfactory to both landlord and tenant. These were embodied in an extension circular entitled "Farm Leasing Contracts in Kentucky" and were sent out to a large number of farmers requesting assistance along this line.

MARKETING

The extension work in marketing has been devoted to aiding in the development of plans for organizing cooperative marketing associations; to giving information on problems connected with the sale of their products such as methods of marketing, importance of grading, uniformity and quality, also assisting farmers in finding outlets for their marketable products.

Assistance and suggestions were given in connection with the formulation of plans for the Fayette Lamb and Wool Growers' Association. Fifteen thousand lambs were sold by auction thru the cooperative sales arranged for by this organization. The prices received compared favorably with Louisville and Cincinnati prices and general satisfaction is expressed.

Organization plans were discussed with fruit growers and a suggested plan of organization was outlined in detail as a basis for the organization of fruit growers. Assistance was given in the establishment of a central information office by the strawberry marketing associations in Western Kentucky. A central marketing news station was established at Bowling Green for the principal marketing season. Local associations paid part of the expense of maintaining this news station and the Federal Government paid the rest.

Cooperative sales of poultry were held at several points in Western Kentucky with very satisfactory results.

At the request of orchard grass seed growers detailed organization plans were drawn up for a marketing association for this product and these plans were explained at meetings of growers. Steps were taken to form an organization in accordance with the plans suggested, but the organization did not have sufficient time to obtain the required sign-up so the plans are being held in abeyance for the time being.

At the last session of the legislature a cooperative marketing bill was passed. A careful study of this law has been made by the Marketing Department and plans have been prepared for the guidance of organizations desiring to incorporate under this law. These plans include articles of incorporation, by-laws and forms of contracts. The following statement in a letter from a farmer is suggestive of the helpfulness of such organization



No. 18.—Selling tobacco by auction on a loose leaf floor.

plans and discussions of cooperative marketing: "I consider them ideal publications (two extension circulars containing plans for cooperative marketing) along the line of cooperative marketing. I can get them into the hands of farmers who will study them and thru these circulars they can form some idea of the way we expect to operate when organized."

Since the organization of the Burley Tobacco Growers' Association, the necessity of proper grading at stripping time has become an important factor in the marketing of tobacco. Ar-



No. 19.—Selling tobacco by sample thru the cooperative marketing association.

rangements were made with the Burley Association for the assistance of expert graders to carry on demonstrations of grading in several counties in the burley district. The county agents made local arrangements for these demonstrations, which were held in the stripping rooms or barns on farms conveniently located for the surrounding communities.

Conferences were held with traffic representatives of the Bourbon Stock Yards and the Louisville Livestock Exchange and other interested persons regarding the increase in rates on live stock shipments proposed by the railroad companies in the Southern Districts. Data showing the effect of the proposed

increase upon the agriculture of the state and regarding the farmers' ability to bear any additional burdens were assembled and formed the basis for the testimony given by the Dean and Director at the hearing held by the Interstate Commerce Commission in Louisville in September. The outcome of the hearing was a compromise, with the adoption of rates per hundred-weight and minimum weights per car instead of the old system of a definite charge per car. Instead of the very large increase requested by the railroads the compromise resulted in rates not greatly different in amount from those previously charged.

A representative of the Section of Markets was a member of the Kentucky Committee of the War Finance Corporation which passed on applications of loans from banks for agricultural purposes. His acquaintance with agricultural conditions and requirements has been very helpful to farmers as well as to the committee.

Representatives of the Section of Markets have been called upon to attend a number of meetings to discuss marketing problems. This work is helpful in stimulating constructive thinking on marketing problems and in developing a better understanding of the many questions which marketing involves. The following is suggestive of results obtained from such work: after a talk which analyzed the services and functions which must be performed in marketing of farm products, a farmer came up and said that he had been free with his criticism of marketing and middlemen, but had not realized before, the number and importance of the functions which must be performed by some one in marketing.

These discussions are not designed as a defense of existing methods but have for their purpose the emphasizing of marketing facts in order that a better understanding of the true situation may be had. Too much of the thinking along marketing lines has its origin in misconception and prejudice and this is detrimental to the effecting of constructive improvements in the methods of handling and marketing farm products.

Included in the meetings attended by representatives of the Section of Markets were several movable schools and Junior Club camps. Altogether about 100 public meetings attended by

approximately 6,000 persons were held. In addition, a number of conferences with county agents, individually and in groups, and with farmers, were held during the year.

Replies have been mailed to letters asking for information on marketing questions. These inquiries have covered a wide range of subjects. Suggestions regarding possible outlets for products, lists of dealers, information regarding marketing methods, and plans for cooperative marketing, are among the lines handled in this manner.

Material for news articles on marketing methods and development has been prepared and furnished to the editor.

REPORT ON EXTENSION WORK OF THE DEPARTMENT OF AGRONOMY

Extension work in agronomy has more or less naturally divided itself into two general classes; first, soil improvement work, and, second, demonstration work with crops. In the nature of the case the two phases of the work interlock, since crops have to be used in soil improvement work and, on the other hand, soils must be improved to make successful crop demonstrations. However, in this report the soils and the crops work are reported separately and the numbers of demonstrations reported are not duplications. Likewise, the work done on the demonstration fields in connection with the eight experiment substations is reported separately.

An idea of the work being done on the demonstration plots in connection with the eight experiment fields located on the various soil types of Kentucky may be had from the following account of results on the Berea demonstration field.

The demonstration field at Berea, reported in Circular No. 113 for the year ending June 30, 1921, was planted to corn in 1921 and yielded 43 bushels per acre against 10.3 bushels on untreated soil. In 1922 the crop was soybeans, and yielded 2,500 pounds per acre against 1,000 pounds on the untreated soil. The season was a very dry one. This land was limed in 1916 at the rate of two tons per acre and has had no lime since. After removing the soybeans, part of the land was relimed and part left without reliming. Sweet clover will be seeded next spring to get the residual effect of the first liming and the effect of reliming. Inasmuch as this demonstration joins the Berea Soil Experiment Field the field itself becomes a demonstration to the many visitors. The average yields of corn, soybeans and clover per acre are as follows:

| | Corn 10 yrs. Bus. | Soybean Hay 9 yrs. Lbs. | Clover Hay 5 Yrs. Lbs. |
|---|-------------------------|-------------------------------|------------------------------|
| No treatment | 17.0 | 1,500 | 106 |
| Manure, limestone and acid phosphate | 42.0 | 4,100 | 2,000 |

The alfalfa demonstration on the farm of the Lincoln Institute in Shelby County was plowed up after yielding an average of 1.7 tons of hay per acre per cutting for 12 cuttings in 4 years, and was planted to corn in 1921. The yield of corn was 45 bushels per acre in a very dry season.

In the case of several of the fields, however, the demonstrations took on more distinctly the nature of restoration of worn land.

These demonstration and experiment fields have been exceedingly useful as object lessons. They are visited contin-



No. 21.—Field after hogging down corn and soybeans.

uously by individuals and groups and the Extension Division has annually arranged field days at these fields for the purpose of lectures and discussions of the results being obtained. The meetings in 1922 had an average attendance of 280.

The soil demonstration work has been done mostly under the five classifications following:

1. Short-time limestone and phosphate demonstrations.
2. Long-time soil fertility demonstrations.
3. Farm manure conservation.
4. Demonstrations with legumes.
5. Cover crops demonstrations.

Under the short-time limestone and phosphate demonstrations 65 have been put into operation with 24 reports thus far.

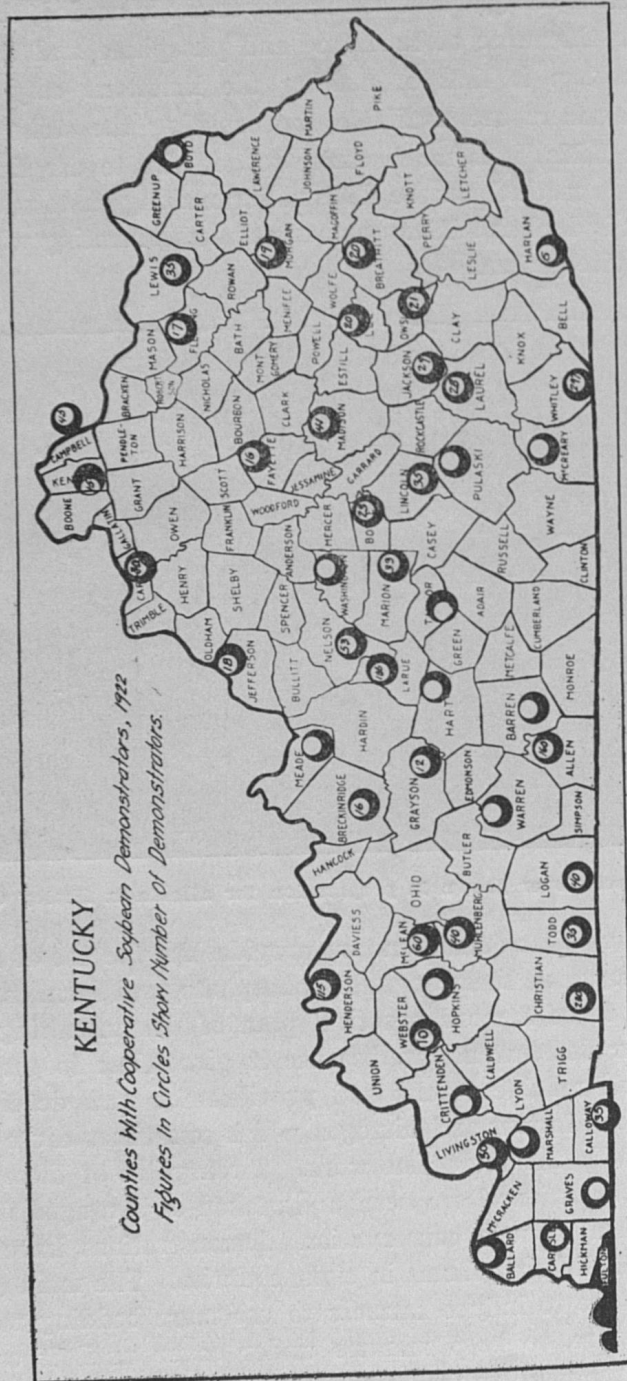
As a general thing, where soil improvement is needed, the farmers know the value of limestone and phosphate and the principal problem is that of making the limestone easy to get. Where crushers are available for crushing the stone on the farmer's fields, it is much easier to get him to use limestone. Until some method can be devised for making limestone easier to get, it is doubtful if any amount of demonstrating will make its use quite general.



No. 23.—Sweet clover grown in preparation for alfalfa in Shelby County.

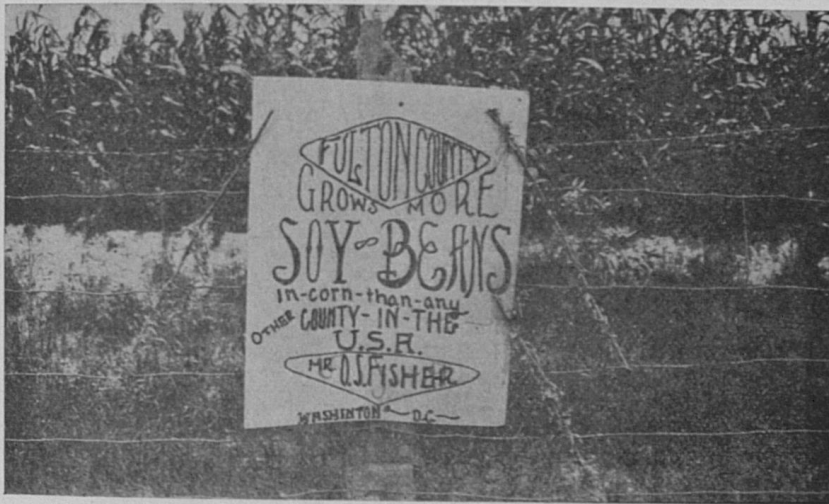
The long-time demonstration provides for the use of a crop rotation, legumes, limestone, acid phosphate, and farm manure. It proves to be a more practical plan of demonstrating than the shorter demonstrations, because it gives time to get more definite and reliable results and provides for such deficiencies as the lack of humus and nitrogen which sometimes cause negative results in the short-time work. Twenty-five of these long-time demonstrations have been undertaken or arranged for.

In farm manure conservation, demonstrations have been made on 20 different farms in eight counties. The main things attempted are to induce farmers to use more bedding to save liquid manure, to keep manure under cover until it can be spread in the field, to feed stock in the stable or on grass and



not in pens or yards, to make better use of straw, corn stalks, tobacco stalks and other residues and on dairy farms to build manure sheds and to spread the manure thinly, supplementing it with phosphate.

The need of more legume crops in Kentucky is quite urgent from the standpoint of soil fertility. Kentucky has only $1\frac{1}{2}$ acres of legumes (exclusive of Japan clover) per farm, or one acre of legumes to 30 acres of improved land. On exhausted soils it is often lack of nitrogen and humus that limits production. The use of legumes is the most economical way for the



No. 25.—What O. S. Fisher, U. S. Department of Agriculture, says about soybeans in Fulton County

live stock farmer to supply this deficiency. On unlimed soil, which comprises most of the state, cowpeas and soybeans are the most practical crops to use in these demonstrations. Thirty of these demonstrations were conducted thru the year.

The fall seeded cover crop is primarily for the purpose of holding the soil and preventing leaching. In most cases, however, it is also used for pasture, and often the residue is turned under in the spring for green manure. In the case of such crops as barley, wheat and winter oats, the crop is harvested for grain. The acreages of cover crops demonstrations are as follows: rye 20,010, wheat 36,520, barley 6,383, crimson clover 807, vetch 313, winter oats 4,020, sweet clover 100, alfalfa 100.

CROPS

INCREASING ACREAGE OF SOYBEANS

The acreage of soybeans in corn has been approximately doubled in Kentucky this year. Exclusive of Fulton county it has trebled. The increase in beans grown for seed is not quite sufficient to care for the demand from growers within the state. In the mountain section, a great increase in interest is shown for soybean hay.

In order to demonstrate the fertilizing value of beans grown in corn, representative lots were pulled up on 56 farms scattered



No. 27.—Comparative growth of Kentucky Experiment Station root-rot resistant tobacco and the ordinary non-resistant type (on infected soil).

over 15 counties and the soil shaken from the roots was examined. According to these records, the average bean crop grown in Kentucky corn contains \$6.27 worth of nitrogen, of which two-thirds, or \$4.18 worth per acre, came from the air. This year's bean crop has added \$250,000 to the soil fertility of the state.

Fifty-seven counties are now actively increasing the acreage of beans for all purposes.

CORN VARIETY TEST DEMONSTRATIONS

Yield data for 1922 were not available at the writing of this report, but a summary of records for the preceding year not previously published shows Pride of Saline in 18 tests averages 45.1 bushels per acre, Boone County White 41.1, and Reid's Yellow Dent 40.1. A total of 39 local strains were grown beside these varieties during that season. In 1922, 145 such tests covering 34 counties were planted.

WHEAT STANDARDIZATION

A total of 96 fields of Ashland wheat in 22 counties were inspected. Eighty-three of these were suitable for seed, as far as purity was concerned. These gave a yield of approximately 20,000 bushels.

Growers who had a good yield of Ashland wheat experienced no difficulty in selling it for seed. An example of this was in Fleming county, where nine men harvested Ashland this year under various conditions. None except the largest grower saved wheat for sale for fall sowing. This man sold his 500 bushels for seed and states that he could have sold a thousand bushels more, while 24 men sowed Ashland in the county this fall.

WHEAT VARIETY TESTS

Of 48 variety test demonstrations planted in the fall of 1921, records were secured on 43 this summer. In the fall of 1922, seed for 55 such tests had been distributed over a territory of 20 counties.

KENTUCKY EXPERIMENT STATION ROOT-ROT RESISTANT WHITE
BURLEY TOBACCO

This project was started in 1921 by Dr. W. D. Valleau, who distributed 80 lots of Kentucky Experiment Station Root-Rot Resistant White Burley tobacco seed. This year, 311 lots of this seed have been distributed. The fields of more than one-third of these growers were visited during the season. Ninety-eight per cent of all who were visited or who reported by letter,

expressed satisfaction and stated that this resistant sort is more vigorous, more uniform and earlier maturing than common sorts.

Several growers have saved small quantities of seed which have been disseminated. The information concerning the superiority of rot resistant tobacco has stimulated a demand for the seed exceeding the supply many times over.



No. 29.—Corn in soybeans in Grayson County.

A tobacco field-day meeting was held at the Station farm, August 10, and was attended by 350 Burley growers. Considerable publicity has been given these demonstrations and has resulted in making this project the most popular one in crops work in the Burley tobacco section.

AGRICULTURAL ENGINEERING

Extension work in Agricultural Engineering followed four major projects:

1. *Demonstrations in the control of soil erosion.*

Object: To demonstrate methods of controlling erosion by the use of terraces, various methods of filling gullies by obstructions, and the use of sweet clover and grasses in connection with terracing and gully filling.

2. *Drainage Demonstrations.*

Object: To encourage the use of the agricultural drain tile for removing surplus soil water, and to demonstrate the proper method of laying out plans for drainage systems and placing the tile in trenches to grade.

3. *Demonstrations in the erection of farm buildings.*

Object: To demonstrate the advantage of modern farm building designs by furnishing to farmers working plans and specifications and bills of material when necessary, together with instructions on the methods of planning and locating buildings for rural communities.

4. *Demonstrations in sanitation and water supply.*

Object: To better sanitary conditions and increase the convenience and comfort of homes in rural communities by encouraging and giving assistance in the installation of modern water supply and sewage disposal systems.

The demonstrations in the control of soil erosion were made by terracing demonstrations which were held in different counties. Terraces were laid out and constructed so that those attending could get a definite idea of the operations and factors to be considered in location and construction.

The first of these demonstrations developed the necessity of a terrace level simple enough to be made by the average farmer and yet easily adjusted so that the terrace could be given a variable grade. The Kentucky variable terrace level was

designed and plans and instructions for making it were furnished. Many county agents report that after demonstrations a number of farmers have terraced areas on their own farms.

The cost of tile draining land in Kentucky this year has averaged about \$35.00 per acre. A total of 16 demonstrations were held. Each farmer cooperating with the University in these demonstrations was furnished with a map of the field to be drained, showing the proper grade for all lines and the proper cut at each 50 foot station, also a bill of material and estimate of the cost of installing the entire system. The cooperating parties furnish the University, when the system is completed, with a detailed cost of doing the work. They also keep records of the yield secured from this drained land. Wherever drainage systems have been completed it has led other farmers in the same community to take up drainage as a method of increasing yields on their land. The report of the W. G. Duncan Coal Company Project at Luzerne in Muhlenburg county shows that a yield of 4,815 pounds of pea-vine hay per acre grew on a 10-acre field that had heretofore barely produced sufficient crops to pay for the cost of seed and cultivation. The pea-vine was valued at \$1.50 per hundred pounds, making an income of \$72.25 per acre.

Early in the year Circular No. 111 was published which gave a complete list of plans of buildings available for distribution. A large part of the farm buildings project consisted in visits to farmers in order to understand their individual building problems and furnish plans that would meet their needs. Thru blueprints mailed out and reports received from farmers using University plans, valuable data were secured regarding the cost of building in Kentucky.

During the year 25 water supply and sewage disposal demonstrations were established, which stand as permanent examples of the best practices along these lines. Two special surveys and designs for systems were made; the remaining 23 demonstrations were installed from stock plans which required no special survey. The sanitary project for Witherspoon College was completed. This includes a 35,000 gallon concrete water reservoir, pumping system and two septic tanks for sewage disposal. This demonstration is located in the heart of the eastern Ken-

tucky mountains where a large number of people, including boy and girl students, receive their first lessons in regard to sanitation.

Special emphasis has been placed upon the very simple water supply systems such as the pitcher pump and simple hot and cold water supply systems. The exhibit at the State Fair in Louisville was designed to show two farmsteads; one with sanitary conditions, the other with insanitary conditions. The causes and remedies of insanitary conditions were indicated by cross sections showing a well contaminated by sewage and seepage from a barnyard. In the sanitary layout this seepage was prevented by means of a manure pit, septic tank and well-protected water supply.

VETERINARY SCIENCE 1922

During the past year the work of the Field Agent in Veterinary Science has been principally along educational lines. This has been done in an effort to prevent and control contagious and infectious diseases in all kinds of live stock. Particular attention has been given to tuberculosis in cattle and to farm sanitation.

Many autopsies were held in the field to determine and to demonstrate the nature of certain diseases. Due to the cooperation of the county agents, physicians, county health officers and local veterinarians, large numbers of persons attended these meetings in the different counties. In some instances the buildings were not large enough to accommodate the crowds and overflow meetings were held on the outside. Intensive work was carried on in Campbell, Kenton, Fayette, Marion, Nelson and Lewis counties. As a result of the work quite a number of counties have veterinarians devoting all of their time to tuberculin testing.

The work in farm sanitation consisted principally in the disposing of animals dead of disease, preventing the spread of disease by streams, cleaning and disinfecting premises, buildings and hog wallows and advising as to control measures and disinfecting agents. These methods were demonstrated and in cases where disease such as anthrax, black-leg, glanders, hog-cholera, lip and leg ulceration and foot-rot were harbored, special attention was given. Especial effort was made to use as object lessons those cases where advice had been disregarded and where severe losses followed. Much stress had been laid upon the necessity for prompt and proper diagnosis of diseases.

The following is a tabulated report of the most important activities of the Field Agent in Veterinary Science:

| | |
|--|-----|
| Consultations | 854 |
| Farms visited | 181 |
| Post-mortems held in field..... | 41 |
| Meetings addressed | 50 |
| Demonstrations held | 42 |
| Number of cattle tested for Johne's disease..... | 38 |

JUNIOR AGRICULTURAL CLUB WORK

Governor Morrow issued a proclamation designating the week of November 14-19, 1921, as Junior Club Enrollment Week. Mr. George Colvin, State Superintendent of Public Instruction, addressed a letter to the teachers of the state urging them to assist in enrolling boys and girls as members of the Junior Agricultural Club.

The county agricultural and home demonstration agents, assisted by members from the club office, as well as extension specialists, put forth a special effort to secure a creditable enrollment. The state aim was set for 22,000 members. The following enrollment of club members for 1922 was obtained, as reported by agents, records of which are on file in the junior club office:

LIVE STOCK

| | |
|------------------------|-------|
| Swine growing | 1,827 |
| Swine breeding | 1,007 |
| Sow and litter | 255 |
| Dairy calf | 256 |
| Dairy cow-calf | 67 |
| Baby beef | 272 |
| Beef cow-calf | 43 |
| Sheep-lamb | 149 |
| Poultry laying | 372 |
| Poultry hatching | 4,383 |
| Bees | 24 |
| | <hr/> |
| | 8,655 |

CROPS

| | |
|--------------------|-------|
| Corn | 1,308 |
| Potatoes | 467 |
| Soybeans | 61 |
| Sweet clover | 11 |
| Small fruits | 19 |
| Alfalfa | 4 |
| Gardening | 594 |
| Tomatoes | 638 |
| Tobacco | 316 |
| | <hr/> |
| | 3,418 |

GIRLS' WORK

| | | |
|-------------------------|-------|---------------|
| Beginning sewing | 2,982 | |
| Elementary sewing | 910 | |
| Advanced sewing | 307 | |
| Home crafts | 83 | |
| Foods I | 721 | |
| Foods II | 272 | |
| Foods III | 20 | |
| Foods IV | 11 | |
| Canning I | 861 | |
| Canning II | 414 | |
| Canning III | 240 | |
| Canning IV | 203 | |
| Butter making | 1 | |
| | | 7,025 |
| Miscellaneous | 125 | 125 |
| | | <u>19,223</u> |



No. 30.—The Junior Club boys are following the "Calf Path" to prosperity.

FARM MAKERS (Colored)

| | |
|-----------------|-----|
| Corn | 115 |
| Potatoes | 49 |
| Gardening | 90 |
| Tomatoes | 49 |
| Tobacco | 33 |

336

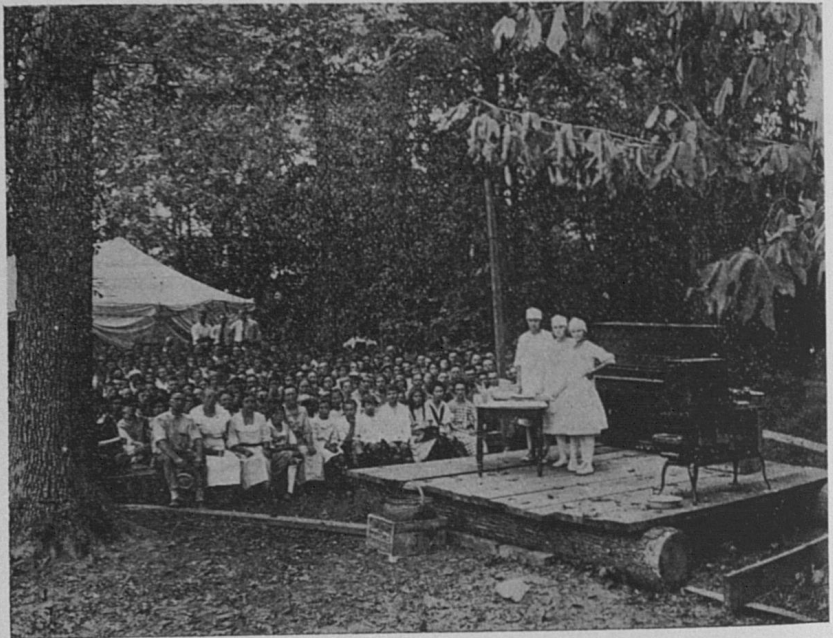
| | | | |
|-------------------------|--------|--------|--------|
| Swine growing | 55 | | |
| Swine breeding | 23 | | |
| Sow and litter | 12 | | |
| Dairy calf | 18 | | |
| Dairy cow-calf | 1 | | |
| Poultry laying | 133 | | |
| Poultry hatching | 246 | | |
| | | | |
| | | 488 | |
| Beginning sewing | 43 | | |
| Elementary sewing | 20 | | |
| Advanced sewing | 35 | | |
| Home crafts | 22 | | |
| Canning I | 53 | | |
| Canning II | 22 | | |
| Canning III | 10 | | |
| Canning IV | 12 | | |
| Butter making | 18 | 235 | 1,059 |
| | | | |
| | 20,282 | 20,282 | 20,282 |

Each agent filled out a county plan of club work in harmony with the needs of his county. The county agricultural and home demonstration agents, assisted by the county committee on club work, cooperated in adopting and promoting the plans accepted. By assembling the individual plans under proper headings, a state plan of work was constructed and arranged in calendar form.

STATE PLAN OF CLUB WORK CONSTRUCTED FROM
COUNTY PLANS SUBMITTED, ARRANGED
IN CALENDAR FORM

A. JANUARY, FEBRUARY, MARCH, APRIL, MAY

1. Club literature to facilitate and promote club work.
 - a. Instructions in club projects. Thirty-three projects are offered, twenty of special interest to boys and thir-



No. 31.—The demonstration team is always an interesting part of the Club Camp program.

teen of special interest to girls. Subject matter covering all the boys' projects has been printed. Circulars have been prepared covering the subject matter for six projects for girls. A government circular is used to cover the four canning projects while three projects for girls remain to be written and printed.

- b. Literature for leaders.
Circular 117, A Manual on Junior Agricultural Clubs.
Circular 91, Hints on Programs for Junior Agricultural Clubs.

Circular 96, Judging Farm Animals.

Circular 124, Wood Working Merit Course.

Special literature for radio clubs.

Collections, Books, Own Your Own Room, Farm Management (in preparation), Home Improvement and Health.

2. Certificates of merit were issued to 3,395 club members, in 30 counties, who finished their work during the year.
3. Charters. When a club is regularly organized—having elected officers, local leader and submitted a plan of work—a club charter is issued. The agents reported that they had 414 clubs organized in the state before January 1, 1921. Sixty charters were issued between December 1, 1921, and December 1, 1922.
4. Baby Beef Show in Louisville, November 23 and 24. Plans called for a carload entry (16 animals) from each county. Premiums amounting to \$1,475.00 were offered by the Bourbon Stock Yards of Louisville. Twelve counties were entered and 230 animals placed on feed by club members.
5. Judging Team Contest.
 - a. Forty-two agents agreed to promote the Live Stock Judging Contest. Thirty-five of them conducted a contest in 128 communities and seven conducted a county contest only. Thirty-six of the agents planned to enter their champion county teams in the state contest.
 - b. The State Fair Board offered \$200.00 and the Club Department secured \$100.00, which was offered as premium money to the 22 highest scoring individuals in the State Contest.
 - c. Twelve agents agreed to promote bread, canning or clothing judging contests in 44 communities. No state contest was planned for this work.
6. Demonstration Team Contest.
 - a. Eighteen agents agreed to promote demonstration team work. Sixteen of the agents conducted contests in 69 communities while the other three held a county con-

test only. Sixteen agents entered their champion county teams in the state contest held at Lexington Junior Week, June 19-24.

- b. The Stewart Dry Goods Company of Louisville offered \$300.00 to be used as premium money for the twelve highest scoring teams entered in the State Contest.
7. Junior Week, June 19-24, 1922.
- a. Program was completed by May 15th for instruction, recreation and contest at Junior Week. Details of program given under June.



No. 32.—Girls' demonstration team explaining the removal of spots and stains from clothing.

- b. Letters were written to commercial clubs, newspapers and business men of the state recommending the purchase of scholarships for club members to attend Junior Week. A total of \$550.00 was collected from 13 contributors.
8. Junior Club Camp Schedule and Plans.
- a. The following objectives were listed.
 - (1) Securing cooperation of the State Department of Agriculture, State Y. M. C. A. and local organizations.
 - (2) Arranging a satisfactory schedule for 24 camps during July and August. (Schedule shown under July and August.)

- (3) Inspecting camp sites and furnishing directions and suggestions to agents for holding camps.
- (4) Perfecting program, assigning instructors, etc. Twenty-four junior club camps were planned and so located that 44 counties could send club members who wished to attend.

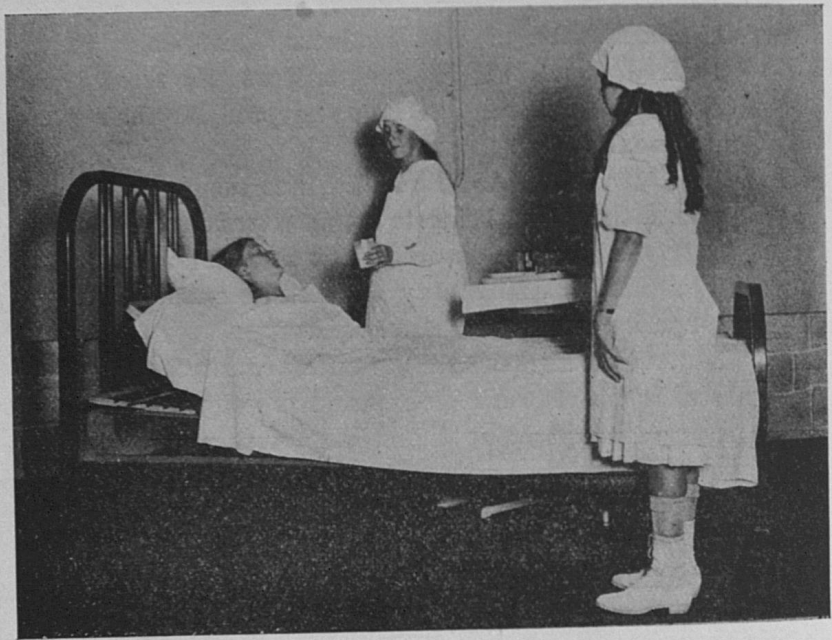
9. Miscellaneous Aims.

- a. Standardization of club projects. Thirty-four agents required their club members to grow the same breed of animals or variety of crops adopted for their work with adults.
- b. Plan of work. A score card was suggested to the agents, the object being to set up a standard for measuring the progress in club work in the counties, with the result that 28 county agents attempted standard, 6 superior and 4 star club work.
- c. Cooperative marketing. Seventeen county agents marketed some of their club products cooperatively, the major attempt being the selling of seven carloads of baby beeves.
- d. Financing club work in the county. Forty-two county agents reported that local banks cooperated in furnishing funds for purchasing live stock.

B. JUNE

1. The principal event this month was the holding of Junior Week at the University of Kentucky, June 19-24, 1922. The object of this event is to give an opportunity to club members to visit the University and learn something of its work. A program of instruction, recreation and inspiration was arranged. (Copy of the program is attached.) Many of the club members who attended won scholarships offered by newspapers, merchants and bankers. Two hundred and sixty-seven club members and fifteen leaders attended for the entire week. One of the principal events of Junior Week was the State Demonstration Team Contest. Twelve county teams were entered in the contest from twelve counties. Premium money amounting to \$300.00 was offered by a Louisville company.

2. Final arrangements for camp program were made. Each agent holding a camp was furnished a list of instructors and details of program. (Sample copy of program attached.) Instructors were given information concerning their respective camps.



No. 33.—Home nursing is taught thru the demonstration team by Junior Club girls.

C. JULY, AUGUST

1. Camp sites were inspected for suitability, sanitation and convenience and the following camp schedule arranged:

Three series were planned with a camp manager in charge of each series, the camp manager being an assistant from the club office. The first county mentioned below, under each date, indicates the county where the camp was held, while those in parentheses indicate the counties sending delegations.

2. Schedule of Camps.

| | Series I | Series II | Series III |
|-----------|--|-----------------|---|
| July 3 | Lewis (Fleming) | Simpson | Christian (Todd) |
| July 10 | Rockcastle | Warren (Butler) | Graves |
| July 17 | Lee (Powell, Owsley, Breathitt, Perry, Morgan) | Washington | Webster (Hender- son, Hopkins Muhlenberg) |
| July 24 | Knox (Clay, Harlan) | Marion | Crittenden (Union) |
| July 31 | Laurel (Jackson) | Taylor | Daviess |
| August 7 | Whitley (McCreary) | Nelson | McLean |
| August 14 | Pulaski (Lincoln, Wayne) | Barren | Boyle (Mercer, Garrard) |
| August 21 | Lawrence (Boyd, Knott) | Hart (Larue) | Campbell (Kenton) |

3. Camp Statistics.

| | | |
|--|------------|------------|
| | 1921 | 1922 |
| Number of camps held | 22 | 24 |
| Club Members enrolled | 1,833 | 2,119 |
| Local leaders | 106 | 113 |
| Total attendance | 1,939 | 2,232 |
| Cooks | 60 | 64 |
| Instructors used | 122 | 162 |
| Visitors attending | 6,890 | 14,975 |
| Total cost of holding camp | \$3,050.30 | \$3,263.60 |
| Paid registration fees | 1,202.00 | 1,655.60 |
| Collected from instructors— | | |
| Extension | 1,248.95 | 1,180.30 |
| State Y. M. C. A. | 172.00 | 168.00 |
| Commissioner of Agriculture | 96.00 | 64.00 |
| Amount necessary to balance account | 331.35 | 195.70 |
| Amount collected from food sold, contributions, etc. | 263.84 | 453.25 |
| *Deficit or balance | -67.51 | +275.55 |

*Deficit or balance handled by local treasuries.

TYPICAL PROGRAM FOR CAMP

LEE COUNTY CAMP

ST. HELENS, KENTUCKY

July 17-21, 1922

J. M. FELTNER, Manager

DAILY PROGRAM

| | |
|---------------------------------|----------------------|
| 6:00 A. M. Bugle | Star-Spangled Banner |
| 6:10 A. M. Flag Raising | |
| 6:30 A. M. Setting-up Exercises | |
| 7:00 A. M. Breakfast | Songs and Yells |

GROUP INSTRUCTION

| | |
|--------------------------------|---|
| Four-H Development..... | G. M. Summers, State Y. M. C. A. |
| Nature Study..... | L. F. Morgan, State Dept. of Agr. |
| Home Club Plans..... | J. M. Feltner, Ext. Div., College of Agr. |
| Health and First Aid..... | Dr. Smith, County Health Dept. |
| Agriculture..... | J. S. Gardner, College of Agr. |
| Home Economics..... | Miss Enright, College of Agr. |
| 11:00 P. M. Lecture | |
| Noon Recess | |
| 1:30 P. M. Leaders' Conference | |
| 1:45 P. M. Play and Recreation | |
| 4:30 P. M. Rest | |
| 6:00 P. M. Supper | |
| 7:30 P. M. Vesper Service | |
| 8:00 P. M. Camp Fire | |
| 9:30 P. M. Bed | |

JUNIOR WEEK, JUNE 19-24, 1922

DAILY PROGRAM

| | |
|---|--|
| 6:00 A. M. Reveille. | |
| 6:20 A. M. Inspection of Rooms. | |
| 6:30 A. M. Setting-up Exercises (M. S. Garside, University Campus). | |
| 7:00 A. M. Breakfast (Patterson Hall). | |
| 7:45 A. M. March to Classes. | |

JUNIOR WEEK, JUNE 19-24, 1922

DAILY PROGRAM

| | |
|---|--|
| 6:00 A. M. Reveille. | |
| 6:20 A. M. Inspection of Rooms. | |
| 6:30 A. M. Setting-up Exercises (M. S. Garside, University Campus). | |
| 7:30 A. M. Breakfast (University Cafeteria). | |
| 7:45 A. M. March to Classes. | |

GIRLS (Miss Burnam in Charge)

| A. M. | Monday | Tuesday | Wednesday | Thursday | Friday |
|-----------|--------------------------------|---|---|---|---|
| 8:00 | Registration Patterson Hall | Home Improvement Miss Miller Dicker Hall | Home Improvement Miss Miller Dicker Hall | Foods Miss Enright Chemistry Lecture Room | Foods Miss Enright Chemistry Lecture Room |
| 9:30 | | Health Dr. Holmes Physics Lecture Room | Home Conveniences Miss Miller Dicker Hall | Nature Study Professor Maxson Chemistry Lecture Room | Nature Study Professor Maxson Chemistry Lecture Room |
| 10:15 | | Story Telling Miss Bonner Dicker Hall | Girl Reserves Miss Bonner Dicker Hall | Clothing Miss Piedalue Dicker Hall | Clothing Miss Piedalue Dicker Hall |
| 11:00 | Lecture (Chapel) | President McVey | Dean Cooper | Rev. Fortune | Prof. Dantzler |
| 12:00 | DINNER | PATTERSON HALL | | | |
| P. M. | Inspection of University | DEMONSTRATION TEAMS | | | |
| 2:00 | Report on Athletic Field | Miss Burnam in Charge. (Chemistry Lecture Room) | | | |
| 3:30 | Shower Baths | Athletic Program, Group Games and Contest Garnett McKenney, Director (Stoll Field) | | | |
| 6:00 | Supper (Patterson Hall) | | | | |
| 7:10 | Sunset Service (Campus) | | | | |
| 7:45 | Moving Pictures (Dicker Hall) | | | | |
| 8:30 | Entertainment (Chapel) | | | | |
| 9:30 | Taps | | | | |
| | Sunset Service | | | | |
| Monday | ..... | Rev. Bush | Saturday | | |
| Tuesday | ..... | Rev. Walker | 6:00 A. M. Reveille | | |
| Wednesday | ..... | Rev. Ward | 6:30 A. M. Inspection | | |
| Thursday | ..... | Rev. Ecton | 7:30 A. M. Breakfast | | |
| Friday | ..... | Rev. Settle | 7:30 A. M. Good-bye | | |

BOYS (Mr. McKenney in Charge)

| A. M. | Monday | Tuesday | Wednesday | Thursday | Friday |
|---------------|--------------------------------|---|--|---|---|
| 8:00 | Registration Patterson Hall | Engines Mr. Kelley Engine Lab. | Engines Mr. Kelley Engine Lab. | Radio Prof. Webb Physics Lec. Room | Radio Prof. Webb Physics Lec. Room |
| 9:30 | | Foods Miss Enright Chemistry Lec. Room | Health Dr. Holmes Physics Lec. Room | Nature Study Prof. Maxson Chemistry Lec. Room | Nature Study Prof. Maxson Chemistry Lec. Room |
| 10:15 | | Soils Prof. Karraker Chemistry Lec. Room | Soils Prof. Karraker Chemistry Lec. Room | Poultry H. R. Jackson Chemistry Lec. Room | Poultry H. R. Jackson Chemistry Lec. Room |
| 11:00 | Lecture (Chapel) | President McVey | Dean Cooper | Rev. Fortune | Prof. Dantzler |
| 12:00 | Dinner | University Cafeteria | Rest Period | | |
| P. M. 2:00 | Inspection of University | Dairy Cattle Judging Pavilion Prof. Hooper and Barkman | Beef Cattle Judging Pavilion Prof. Horlacher and Harris | Sheep Judging Pavilion Prof. Good and Horlacher | Swine Judging Pavilion Prof. Horlacher and Wilford |
| 3:30 | Report on Athletic Field | Athletic Program, Group Games and Contest Garnett McKenney, Director (Stoll Field) | | | |
| 6:00 | Shower Baths | | | | |
| 6:30 | Supper (University Cafeteria) | | | | |
| 7:10 | Sunset Service (Campus) | | | | |
| 7:45 | Moving Pictures (Dicker Hall) | | | | |
| 8:30 | Entertainment (Chapel) | | | | |
| 9:30 | Taps | | | | |

| | | | | | |
|----------------|----------------|-------|-------------|-----------------------|----------------------|
| Monday..... | Rev. Bush | ..... | Rev. Ecton | 6:00 A. M. Reveille | 7:00 A. M. Breakfast |
| Tuesday..... | Rev. Walker | ..... | Rev. Settle | 6:30 A. M. Inspection | 7:30 A. M. Good-bye |
| Wednesday..... | Rev. Ward | ..... |  |  |  |
| | Sunset Service | | | | Saturday |

4. What some people say concerning the Junior Club Camps.

“The Junior Club Camps conducted by the College of Agriculture, University of Kentucky, are indeed an inspiration to the rural children of Kentucky. They not only return to their homes with more inspiration, but they are benefited physically, mentally and morally. They learn more about college life, what higher education means and the real importance of education in life. It helps them to find self-expression because few rural children are allowed this and are timid. The meaning of the golden rule is



No. 34.—The Junior Club Camp provides an interesting program of inspiration, recreation and learning for country youth.

brought to mind and put into practice at these camps.”—
Dr. E. D. Rose, Warren county.

“As a visitor to the Marion County Camp, I unhesitatingly wish to state that I conceive it to be one of the best all around educational forces in the state. There was enough instruction along technical lines so as not to become monotonous; enough wholesome fun to make the camp attractive, and enough religion to awaken aspirations for service.”—Mrs. R. N. Raaf.

“As a visitor to the Junior Club Camp of Barren County, I wish to state that I think it is one of the best all around educational forces in this state.”—Dr. W. Dipp.

7:00 A. M. Breakfast
7:30 A. M. Good-bye

6:00 A. M. Reveille
6:30 A. M. Inspection

Thursday.....Rev. Ecton
Friday.....Rev. Settle

Monday.....Rev. Bush
Tuesday.....Rev. Walker
Wednesday.....Rev. Ward

"I consider the Junior Club Camp to be one of the most beneficial and inspirational gatherings of young people that has ever been held in our county. The time is taken up in developing the minds and bodies of the boys and girls."—Mrs. J. W. Burke, Barren county.

"I have been in camp with the boys and girls of Washington county for the past five days and I will say that I have never seen or heard of a movement involving more enthusiasm and pep than that shown by the Junior Camp. I feel greatly honored to be a part of this club and I think it is the most inspiring and elevating move ever put before our boys and girls. I do not feel that this movement can be encouraged too greatly."—John T. Green, Washington county.

"I know of no one thing calculated to be of more permanent usefulness to the present and future generations of our country than the instilling into the minds of our boys and girls the ideas of clean living, clear thinking, and worthy citizenship than the work I saw being so successfully carried on by you at the Junior Camp."—Lorenzo K. Woods, County Judge, Christian county.

"You are carrying on a great work in this county and when I say this I feel sure that I speak the sentiments of the entire county."—H. G. Crenshaw, Jr., Christian county.

"I regard the Junior Camp as the beginning of a new era in rural life socially and economically. In our program of rural betterment, we have tried to revamp the fathers and mothers—in other words, we have tried to build from the top downward. The Junior Camp is building from the ground up. This is a step in the right direction."—L. E. Foster, Secretary of Chamber of Commerce, Christian county.

"I don't know of anything in its class that beats it."—T. W. Johnson, Superintendent of Schools, Webster county.

D. SEPTEMBER, OCTOBER

1. Junior club exhibits at Kentucky State Fair.
 - a. Nineteen hundred and thirty dollars in premium money was offered by the State Fair Association to be



No. 35.—Pure bred eggs are delivered to Club members by the County Agent.

awarded to boys and girls with winning exhibits in swine, sheep, dairy and beef cattle, poultry, sewing, canning and foods.

- b. The Boys' Judging Team Contest was featured with teams of three members each entered from 29 counties. Three hundred dollars was offered in premium money by the State Fair Association.
2. Club exhibits at County Fairs. Fifty-three counties reported that they had a separate club department at their county fairs. A club show was held in 121 communities. Members from the Club Department assisted in judging and managing many of these county and community shows during September and October.

3. Play Days—Tours. Club picnics or play days were held in 138 communities. Seventeen counties conducted club automobile tours, either locally or including adjoining counties. The object of these tours was to inspect the work of other club members and to observe good farming methods of adults.
4. Achievement Day Exercises. Twenty-four counties held achievement day exercises and 54 communities held special exercises to award certificates to club members completing their work.
5. County Conferences to Instruct Local Leaders. The Club Department arranged a series of conferences in cooperation with the county and home demonstration agents for the purpose of instructing local leaders in the plans and methods for organizing and promoting club work in their communities. Twenty-six county conferences were held during October and November and 218 local leaders attended the conferences. The conferences were held for one day and usually only one member from the Club Department was in charge.

E. NOVEMBER, DECEMBER

1. Writing and revising club literature for 1923. Circular 112, "Beginning Sewing"; 116, "Elementary Sewing"; 133, "Advanced Sewing"; 132, "Foods I", and 135, "Food II", written by the Home Economics Department, were ready for distribution in November. Circular 136, "Community Plan of Club Work", written by the Club Department, will be ready for distribution January 1, 1923.
2. Baby Beef Show for club members at Louisville. One hundred and sixty-four baby beeves were entered by 126 club boys and girls from eight counties in the Bourbon Stock Yards' First Annual Fat and Feeding Stock Show held at Louisville, November 23 and 24. The champion steer of the show and champion carload of animals were exhibited by club members. The champion steer sold for \$1,260.00 and won for his owner \$220.00 in premiums. The champion carload sold for 15c per pound and the average price for all the animals shown by club members was \$12.75 per 100

pounds. This show stimulated great interest in beef work among club members. Plans are being made now for a show next year.

3. The county plan of club work was revised and mailed to all the agents. Each agent was requested to enlist the aid of his or her county committee on club work and together work out their plans for 1923. Upon receipt of the plan of work from all of the agents, a state plan of work will be prepared for 1923.
4. Statistical report of club work for 1923.

a. Summary of club projects reported by county agents.

| Project. | Organized Clubs. | Enroll-ment. | Members Reporting. | Value of Product Above Cost. |
|----------------------|------------------|--------------|--------------------|------------------------------|
| Corn | 217 | 1,310 | 596 | \$11,717.90 |
| Potatoes | 72 | 331 | 160 | 4,446.44 |
| Gardening | 33 | 194 | 121 | 707.85 |
| Swine Breeding | 260 | 2,208 | 1,347 | 15,089.83 |
| Sow and Litter | 51 | 248 | 140 | 5,530.31 |
| Dairy Calf | 26 | 193 | 118 | 1,807.32 |
| Dairy Heifer | 4 | 53 | 33 | 2,176.65 |
| Cow and Calf | 3 | 19 | 19 | 2,416.48 |
| Beef | 4 | 300 | 156 | 1,548.60 |
| Sheep | 31 | 85 | 47 | 954.12 |
| Poultry | 309 | 4,241 | 2,504 | 22,856.14 |
| Canning | 13 | 116 | ..... | ..... |
| Clothing | 17 | 440 | 213 | 798.50 |
| Tobacco | 4 | 81 | 28 | 1,889.64 |
| Tomato ..... | ..... | 400 | 300 | 900.00 |
| Miscellaneous ..... | ..... | 39 | 18 | 456.50 |
| Totals | 1,044 | 10,258 | 5,800 | \$73,296.28 |

Colored Agents—

| | | | | |
|----------------------|-------|-----|-----|------------|
| Corn | 23 | 488 | 276 | \$3,330.40 |
| Potatoes | 22 | 282 | 114 | 2,705.00 |
| Gardening | 9 | 261 | 144 | 1,195.00 |
| Tomatoes ..... | ..... | 7 | 5 | 17.00 |
| Swine Breeding | 17 | 99 | 64 | 610.00 |
| Sow and Litter | 4 | 15 | 14 | 600.00 |
| Dairy Calf | 4 | 46 | 25 | 170.00 |

| | Organized Clubs. | Enroll-ment. | Members Reporting. | Value of Product Above Cost. |
|--------------------|------------------|--------------|--------------------|------------------------------|
| Dairy Heifer | 2 | 28 | 8 | 570.00 |
| Poultry | 28 | 251 | 166 | 4,149.16 |
| Canning | 27 | 318 | 293 | 1,413.20 |
| Clothing | 14 | 184 | 114 | 1,254.50 |
| Totals | 150 | 1,979 | 1,223 | \$16,014.26 |

b. Summary of club projects reported by home demonstration agents.

| Project. | Organized Clubs. | Enroll-ment. | Members Reporting. | Value of Product Above Cost. |
|---|------------------|--------------|--------------------|------------------------------|
| Canning | 128 | 1,704 | 1,517 | \$19,565.85 |
| Sewing | 178 | 3,710 | 2,685 | 1,018.50 |
| Foods | 36 | 1,284 | 983 | ..... |
| Poultry | 98 | 548 | 308 | 2,250.00 |
| Other projects, including Garden Flowers, Orchard, Small Fruits, Milk and Milk Products, Drying, Brining, etc. | 60 | 1,435 | 446 | 4,277.90 |
| Totals | 500 | 8,681 | 5,939 | \$27,112.25 |

GRAND TOTALS

| Reported by— | Clubs. | Enroll-ment. | Reporting. | Per Cent. | Value. |
|-------------------|--------|--------------|------------|-----------|--------------|
| County Agents.... | 1,194 | 12,237 | 7,023 | 57.3 | \$89,310.54 |
| Home Agents..... | 500 | 8,681 | 5,939 | 68.4 | 27,112.25 |
| Totals | 1,694 | 20,918 | 12,962 | 62.8 | \$116,422.79 |

PUBLICATIONS

During the year, a total of 2,040 stories and articles have been sent to the press, including daily, weekly and agricultural papers and the press associations. These have been of varying length and type ranging from the shorter of 50 to 75 words to the longer feature stories of several thousand words with which illustrations have been furnished.

The 2,040 articles that have been sent out may be classified as follows:

Poultry, 182; animal husbandry, 128; dairy, 57; home economics, 15; county agent, 500; soils and crops, 205; farm economics, 48; horticulture, 135; junior agricultural club work, 93; veterinary, 18; miscellaneous stories, 101; movable schools, 19; botany, 3, and entomology, 20. These total 1,624. In addition, 156 special stories dealing with these various subjects have been prepared for weekly papers and 260 stories, including those on local meetings and things of local interest about the College of Agriculture, have been prepared for the local press. This last service also has included the handling of all stories dealing with county agent work in Fayette county, the agent having relied on the Section of Public Information for all news on extension activities in his county.

The majority of stories sent out by the section have gone to daily and weekly papers and to the press associations, although specialized mailing lists are maintained to take care of stories of special interest to certain classes of publications.

A total of 623 stories have been sent to the single press association in the state. This association not only has made use of all stories sent to it, but also has made numerous requests for special stories.

One of the important channels thru which material is sent out to papers of the state has been developed especially for daily and some of the larger semi-weekly papers. Two mailing lists are maintained for the service of these papers. One list carries stories on timely and practical farm and home subjects while the other carries stories of a more general news nature but of interest thruout the state.

A special service has been designed for weekly papers of the state, in view of the fact that they are not equipped to handle the longer stories taken care of by dailies. The service developed by the section for weekly papers gives them from two to three special short stories a week together with one longer story and a number of short items which also go to the dailies.

Special mailing lists are maintained in order that readers interested in certain subjects can be kept in touch with the work of the Extension Division along the line in which they are interested. No attempt is made to make the stories to these special lists regular, the articles being sent whenever something of special interest to a particular group presents itself.

Feature stories represent another line of work being developed by the Section, a number of these carrying illustrations having been furnished to agricultural publications during the year past. Among the papers that have used feature stories furnished by the Section during the year are: The Banker-Farmer, The American Sheep Breeder and Wool Grower, The Poland China Journal, The Southern Agriculturist, The Jersey Bulletin and The Indiana Farmers' Guide.

On the whole, cooperation of the press has never been as generously given as it has during the past year. As a result, the public thruout the state has been kept informed on the activities and accomplishments of the Extension Division and in addition has been furnished with timely and practical information on farm and home subjects.

The year has seen a marked development in the work of the Section, in view of the fact that the press generally has come to have a greater appreciation of the work being done and its value to the subscribers of the various papers.

As a result, the Section now receives frequent demands for additional material, whereas in previous times, stories and articles sent out from the Section thru its regular channels have been greeted in a matter-of-fact way.

Editorials appearing more frequently in papers of the state in connection with the work of the Extension Division furnish considerable evidence that the efforts of the Section of Public

Information are effective in bringing the work of the Division before people of the state.

While we have no definite way of checking up on the number of articles from the Section used by papers of the state, due to the lack of a press clipping service in Kentucky, we feel that it is conservative to estimate that more than 80 per cent of the papers in the state are using the articles sent out. Many papers in the state have started farm pages and standing farm sections in which they carry the material prepared by the Section.

A number of county agents thruout the state have been assisted with their local news problems during the year.

EXTENSION CIRCULARS FOR THE YEAR 1922

| | Pages |
|---|-------|
| 5,000 copies Circular No. 114, Beef Breed Project, Junior Agricultural Clubs | 16 |
| 5,000 copies Circular No. 115, Cooperative Marketing..... | 22 |
| 7,000 copies Circular No. 116, Elementary Clothing Project, Junior Agricultural Clubs | 31 |
| 4,000 copies Circular No. 117, A Manual on Junior Agricultural Clubs | 123 |
| 15,000 copies Circular No. 118, Orchardng | 48 |
| 5,000 copies Circular No. 119, Dairy Heifer Calf Project—II. Dairy Cow and Calf Project | 18 |
| 10,000 copies Circular No. 120, Hotbeds and Cold Frames | 16 |
| 5,000 copies Circular No. 121, Butter Making Project, Junior Agricultural Clubs | 13 |
| 5,000 copies Circular No. 122, The Cooperative Bull Associations in Kentucky | 13 |
| 20,000 copies Circular No. 123, Phosphate and Limestone for Kentucky Soils | 19 |
| 5,000 copies Circular No. 124, Wood-Working Merit Course, Junior Agricultural Clubs | 32 |
| 5,000 copies Circular No. 125, Pitcher Pump Installation | 4 |
| 5,000 copies Circular No. 126, Tomato Project, Junior Agr. Clubs | 11 |
| 5,000 copies Circular No. 127, Requirements for the Canning Project, Junior Agr. Clubs..... | 4 |
| 10,000 copies Circular No. 128, Building Plans for the Dairy Farm | 48 |
| 20,000 copies Circular No. 129, Soil Erosion | 34 |
| 6,000 copies Circular No. 130, Marketing Farm Products | 27 |
| 10,000 copies Circular No. 131, Septic Tanks for Sewage Disposal | 19 |
| 5,000 copies Circular No. 132, Food Project Course, No. I | 39 |
| 5,000 copies Circular No. 133, Advanced Clothing Project, Junior Agr. Clubs | 22 |
| 7,000 copies Circular No. 134, Plans for Cooperative Marketing | 36 |
| 5,000 copies Circular No. 135, Food Project Course, No. II | 27 |
| 5,000 copies Circular No. 136, Community Plan for Junior Extension Work | 32 |
| 10,000 copies Circular No. 137, Feeding and Care of Laying Pullets | 10 |
| 10,000 copies Circular No. 138, A Manual for Home Demonstration Clubs for Women | 56 |
| 7,000 copies Circular No. 139, A Simple Hot and Cold Water System for the Kitchen | 8 |

| | |
|---|----|
| 20,000 copies Circular No. 54, Soils, Study Course for Junior Agr. Clubs (Revised) | 39 |
| 20,000 copies Circular No. 56, Farm Crops, Study Course for Junior Agr. Clubs (Reprint) | 79 |
| 10,000 copies Circular No. 65, Feeding Dairy Cows in Kentucky (Reprint) | 15 |
| 10,000 copies Circular No. 59, Liming the Soil (Reprint) | 16 |
| 6,000 copies Circular No. 69, Elements of Beekeeping (Reprint) | 22 |
| 15,000 copies Circular No. 77, Management of Tobacco Plant-Beds (Reprint) | 4 |
| 1,500 copies Circular No. 78, Stomach Worms in Sheep (Reprint) | 8 |
| 10,000 copies Circular No. 82, Corn Project, Junior Agr. Clubs (Reprint) | 15 |
| 10,000 copies Circular No. 103, Swine Fattening Project (Reprint) | 11 |
| 5,000 copies Circular No. 109, Flea Beetles of Tobacco and Potato (Reprint) | 4 |

LIST OF EXTENSION WORKERS

January 1-December 31, 1922

ADMINISTRATION

- *Thomas Cooper, Dean and Director.
- T. R. Bryant, Assistant Director.
- F. J. Keilholz, Editor.

AGRONOMY

- *George Roberts, Head of Department.
- *E. J. Kinney, Field Agent.
 - Ralph Kenney, Field Agent in Crops.
 - R. E. Stephenson, Field Agent in Soils.
- *J. B. Kelley, Field Agent in Agricultural Engineering.
- Earl G. Welch, Field Agent in Agricultural Engineering.

ANIMAL HUSBANDRY

- *E. S. Good, Head of Department.
 - Wayland Rhoads, Field Agent in Beef Cattle.
- *L. J. Horlacher, Field Agent in Sheep.
 - R. C. Miller, Field Agent in Sheep.
 - H. Grady Sellards, Field Agent in Swine.

COUNTY AGENTS

- C. A. Mahan, State Agent.
- B. G. Nelson, Assistant State Agent.
- E. J. Kilpatrick, Assistant State Agent.
- N. R. Elliott, Assistant State Agent.
- J. W. Whitehouse, Assistant State Agent.
- A. C. Burnett, Agent in Charge of Negro Work.
- †A. M. Allen, Allen county.
- L. M. Amburgey, Boyd county.
- S. W. Anderson, Jefferson county (Assistant)
- G. C. Baker, Lawrence county.
- R. O. Bate, Lewis county.
- J. Robert Bird, McCracken county.
- L. C. Brewer, Union county.
- T. L. Britton, Leslie county.
- H. J. Childress, Marion county.
- †L. A. Clark, Clay county.
 - H. R. Cottrell, Marshall county.
 - Homer G. Cress, Christian county.
- †O. L. Cunningham, Hickman county.
 - L. E. Cutler, Webster county.

- C. B. Elston, Logan county.
†J. W. Farmer, Knott county.
Robert H. Ford, McLean county.
P. M. Frye, Owsley county.
W. R. Gabbert, Fayette county.
J. B. Gardner, Calloway county.
Morris M. Gordon, Hopkins county.
Ivan C. Graddy, Todd county.
R. M. Greene, Breckinridge county.
Robert T. Harrison, Harlan county.
H. J. Hayes, Wayne county.
Robert M. Heath, Washington county
†B. A. Hensley, Carlisle county.
C. L. Hill, Nelson county.
J. O. Horning, Barren county.
J. W. Jones, Larue county.
T. H. Jones, Lee county.
J. E. Kuykendall, Warren county (Colored)
Henry A. Laine, Madison county (Colored).
Harold F. Link, Campbell county.
B. B. McInteer, Meade county.
H. F. McKenney, Grant county.
Donald W. Martin, Henderson county.
Earl Mayhew, Knox county.
F. E. Merriman, Jefferson county.
J. L. Miller, Taylor county.
†B. H. Mitchell, Graves county.
†D. P. Morris, Owen county.
Gordon B. Nance, Oldham county.
L. C. Pace, Livingston county.
Thomas Payne, Simpson county (Colored).
†J. Stanley Pullen, Hart county.
R. B. Rankin, Morgan county.
W. R. Reynolds, Jackson county.
G. C. Routt, Carroll county.
Robert F. Spence, Madison county
†W. H. Rogers, Warren county.
John R. Spencer, Marion county.
†F. H. Spickard, Butler county.
W. D. Sutton, Boone county.
Charles L. Taylor, Boyle county.
†F. O. Townes, Muhlenburg county.
Raleigh V. Trospen, Breathitt county.
Edwin A. Whalin, Ballard county.
†W. R. Whitlow, Logan county.
C. A. Wicklund, Kenton county.

Warren C. Williams, Christian county (Colored).
 W. C. Wilson, Pulaski county.
 W. B. Woodward, McCreary county.
 Fred B. Wilson, Laurel county.
 E. Frank Davis, Whitley county (Assistant).
 R. W. Scarce, Grayson county.
 ‡J. E. McClure, Daviess county.
 †‡J. P. Ricketts, Owen county.
 ‡W. H. Rochester, Muhlenberg county.
 ‡Fletcher C. Walker, Pulaski county (Assistant).
 †‡H. R. Martin, Hickman county.
 †L. H. Woodhouse, Hart county.
 †E. H. Darnaby, Larue county (Assistant).
 L. A. Robertson, Boone county (Assistant).

FARM MANAGEMENT

*W. D. Nicholls, Head of Department.
 C. U. Jett, Field Agent.

HOME ECONOMICS

*Maybelle Cornell, Head of Department.
 Margaret Whittemore, State Agent.
 Margaret Jonas, Assistant State Agent.
 Lullie Logan, Assistant State Agent.
 Eleanor Enright, Field Agent in Foods.
 †Helen Harriman, Field Agent in Clothing.
 ‡Catherine Christian, Field Agent in Clothing.
 Irene Piedalue, Field Agent in Clothing.
 Mary May Miller, Field Agent in Foods.
 †Isabelle Allabach, Woodford county.
 Madie Beckerdite Walton, Henderson county.
 Else H. Brunhoff, Jefferson county.
 Lillian Cole, Campbell county.
 †Mary Joe Crook, Ballard county.
 Geneve B. Edwards, Logan county.
 Octavia G. Evans, Daviess county.
 Anna B. Goddard, Mercer county.
 Jennie C. Grubbs, Boyle county.
 Ida C. Hagman, Graves county.
 Jacqueline Hall, Harrison county.
 Maude Meguiar, Simpson county.
 Roxie C. Perkins, Harlan county.
 Elizabeth Roberts, Perry county.
 Laura Spence, Laurel county.
 Sidney Standifer, McCreary county.
 Joyce Syler, Garrard county.
 Catherine Taylor, Oldham county.
 Gladys Waddell, Whitley county.

Rheda Wadlington, Calloway county.
Cora Lee Wood, Muhlenburg county.
‡Elizabeth Cornelius, Jefferson county.
‡Lillias R. Warren, Knott county.
‡‡Ouida Midkiff, Oldham county (Assistant).
‡‡Rose Craft, Knott county.
‡‡Mary F. Meguiar, Simpson county (Assistant).
‡Martha I. Moore, McCracken county.
‡‡Myrtle Cooper, Daviess county (Assistant).
‡‡Ruth Hill, Harrison county (Assistant).
‡‡Elizabeth Carroll, Graves county (Assistant).
‡Madge Bennett, Christian county.
‡‡Julia T. Stewart, Union county.
‡‡Sena Roberts, Perry county (Assistant).
‡‡Eleanor Duffy, Harrison county (Assistant).
‡Laura Mae Seward, Ballard county.

HORTICULTURE

†H. R. Niswonger, Field Agent.
J. S. Gardner, Field Agent.
‡W. W. Magill, Field Agent.

JUNIOR CLUBS

C. W. Buckler, State Leader.
M. S. Garside, Field Agent.
J. M. Feltner, Field Agent.
Anita Burnam, Field Agent.
‡E. E. Fish, Field Agent.
‡Garnett J. McKenney, Field Agent.

DAIRY

E. M. Prewitt, Field Agent.
*J. O. Barkman, Field Agent.

MARKETS

†M. O. Hughes, Field Agent.
*Dana G. Card, Field Agent.

POULTRY

J. R. Smyth, Field Agent.
‡Homer R. Jackson, Field Agent.
‡Berlie Winton, Field Agent.
*‡J. H. Martin, Field Agent.

VETERINARY SCIENCE

T. P. Polk, Field Agent.

*Devotes only part time to extension work; the remainder to Experiment Station and resident teaching.

†Resigned during the year.

‡Appointed during the year.

RECEIPTS AND DISBURSEMENTS FOR FISCAL YEAR ENDING JUNE 30, 1922

RECEIPTS

| | |
|-----------------------------|---------------------|
| Federal Smith-Lever | \$134,894.80 |
| State Smith-Lever | 124,894.80 |
| Federal Supplementary | 52,039.50 |
| Total | \$311,829.10 |

DISBURSEMENTS

| Name of Funds | Adminis- tration | County Agent | Home Econ. | Junior Clubs | Exten. Schools | Agron- omy | Dairy | Animal Husb. |
|--------------------------------|---------------------|---------------------|--------------------|--------------------|-------------------|--------------------|-------------------|--------------------|
| Federal Smith-Lever | \$8,991.71 | \$54,801.03 | \$24,690.76 | \$9,004.22 | \$2,301.90 | \$3,555.80 | \$4,878.51 | \$4,702.89 |
| State Smith-Lever | \$17,145.00 | 20,389.51 | 37,585.24 | 11,780.97 | | 6,966.65 | 549.99 | 9,413.32 |
| Federal Supplementary | | 52,039.50 | | | | | | |
| Totals | \$26,136.71 | \$127,230.04 | \$62,276.00 | \$20,785.19 | \$2,301.90 | \$10,522.45 | \$5,428.50 | \$14,121.21 |

| Name of Funds | Markets | Farm Manag. | Poultry | Horti- culture | Vet. Science | Agricul. Eng. | Publica- tions | Totals |
|--------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------|
| Federal Smith-Lever | \$2,649.68 | \$1,971.71 | \$3,537.29 | \$2,977.76 | \$3,569.45 | \$1,339.46 | \$5,922.63 | \$134,894.80 |
| State Smith-Lever | 5,462.49 | 4,241.66 | 4,936.66 | 4,160.66 | | 2,251.65 | | 124,894.80 |
| Federal Supplementary | | | | | | | | 52,039.50 |
| Totals | \$8,112.17 | \$6,213.37 | \$8,473.95 | \$7,144.42 | \$3,569.45 | \$3,591.11 | \$5,922.63 | \$311,829.10 |