

# UNIVERSITY OF KENTUCKY

COLLEGE OF AGRICULTURE

Extension Division

THOMAS P. COOPER, Dean and Director

CIRCULAR NO. 208

ANNUAL REPORT  
FOR THE  
YEAR ENDING DECEMBER 31, 1926



1. Accounts kept by this Kentucky farmer under the direction of the field agent in Farm Management showed that costs were reduced and profits increased by the use of larger teams and implements. This man is cutting his labor expense in half in the preparation of his corn land for planting.

Lexington, Ky.

May, 1927

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

## *Letters of Transmittal*

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Lexington, Kentucky,  
January 3, 1927.

President Frank L. McVey,  
University of Kentucky.

My dear President McVey:

I have the honor to present the annual report of the Division of Agricultural Extension of the College of Agriculture, University of Kentucky, for the year ended December 31, 1926. In this report will be found a statement of the various activities of the past year, a list of publications and a financial statement of receipts and expenditures.

Respectfully,  
THOMAS COOPER, *Dean and Director.*

Lexington, Kentucky.  
January 10, 1927.

Honorable William J. Fields,  
Governor of Kentucky.

Sir:

In accordance with an act of the Legislature of the State of Kentucky, approved March 15, 1916, I herewith submit the annual report of the Division of Agricultural Extension of the College of Agriculture, University of Kentucky, for the year ended December 31, 1926.

Respectfully,  
FRANK L. McVEY, *President.*

## CIRCULAR NO. 208

### ANNUAL REPORT OF AGRICULTURAL EXTENSION WORK IN 1926.

T. R. BRYANT, *Assistant Director*

The Agricultural College of the University of Kentucky maintains a Division of Agricultural Extension Service which is a part of the educational system of the State. This extension work in Agriculture and Home Economics is carried on in close cooperation with the U. S. Department of Agriculture which contributes certain funds to assist in the execution of the work and also lends aid in a number of other ways. The Director is the joint representative of the University of Kentucky and of the U. S. Department of Agriculture.

The Extension teaching in Agriculture and Home Economics had made very satisfactory progress as this and other annual reports clearly indicate and in fact the system compares favorably in organization and accomplishment with similar work which is being done in all the other States.

Progress, in 1926, was made in both the quantity and the quality of work. Credit for such progress should be given to a large body of unpaid public spirited citizens, who have assisted in carrying out the plans of work agreed upon for the communities and for the counties. These persons are known as "local leaders." They serve as demonstrators and assist the county agent and other full-time extension workers not only by demonstrating improved practices in their own homes and on their farms, but also by serving to teach others the improved methods. The paid extension workers would be greatly handicapped if it were not for the unselfish service of these people whose only reward is their knowledge of having helped somebody and having made the community a better place in which to live.

Extension work is becoming better understood by the public generally and its value is recognized more each year. Also the county agents and other extension workers are rapidly developing more efficient methods of multiplying the effectiveness of their work.

An evidence of the fuller appreciation of Extension Work is found in the fact that in spite of the depressed financial condition of agriculture the number of county agents employed is the greatest since the work was inaugurated in Kentucky. There are additional counties with appropriations made, and ready to employ agents, waiting only to secure properly qualified agents or until the University can provide its share of the funds. The resources of the University are fixed and since it joins the counties in providing the necessary money, there is a limit to the number of counties with which the University can join in the employment of agents. The only way that the University with its present funds can cooperate financially with any greater number of counties is to reduce its allotment per county.

It is quite apparent that expansion of the work within the counties can be accomplished in both volume and quality and that this expansion will be facilitated thru the work of more volunteer local leaders.

The organization of farmers and home-makers within the county is a very effective aid in the accomplishment of the work in its various phases. Thru such organizations a better understanding of what ought to be done and how to do it, can be had and the effects are made to reach more people.

The work of the home-makers clubs has been very noteworthy. During the year the number of these clubs in Kentucky increased to 225 with a membership of 4485 women. Out of this number there have been developed 1388 leaders who carry work to neighborhood groups. Their work has embraced many phases of food, clothing, home management, home conveniences millinery, home furnishing and decoration and a variety of community improvement projects.

Another evidence of progress is the greater percentage of club boys and girls who carried to successful completion their

club projects. It is difficult with the present force to carry an enrollment above 20,000 which has been the approximate number for the past three or four years and so the principal effort had been placed upon greater thoroughness with those enrolled.

The work in sheep improvement has been gratifying. Despite the fact that the State specialist spent a large portion of the year on leave of absence to study the sheep industry in Australia, New Zealand, South Africa and England, the work accomplished was as great in volume and quality as that of the preceding year, due to the spread of influence of previous demonstrations, and with the return of this specialist, further expansion is now taking place.

In the work for introducing purebred sires in all classes of livestock, Kentucky still holds first place among the States in the Nation wide campaign. Union county won the distinction of being the first county in America to replace all scrub and grade sires with purebreds. This achievement gave a large amount of favorable publicity to Kentucky livestock interests. This publicity was heralded all over the United States.

The excellence of the Kentucky baby beef show has become recognized all over the country. This show has become an annual event and according to available information is the largest State show in the Union.

During the year eight camps were held for the benefit of farm women. The previous summer two camps were held as experiments and were so successful that the number was increased to eight in 1926. The farm women rarely have opportunity for any kind of vacation. One of the primary purposes of these camps is to afford a week of rest for farm women. The occasion is made agreeable and educational by a program of work consisting of lectures, home craft, music, setting up exercises, dramatics and motion pictures. The enthusiasm of the women who have attended these camps attests the success of the project.

The improvement of the country home probably comes nearer solving the problem of discontent with farm life, if such

exists, than anything else can do. The improvement has extended all the way from simple kitchen conveniences, improvised or made at little or no money cost, to heating, lighting and water systems. When it was found that according to plans furnished by the University simple water systems could be installed for one half the price of a very cheap automobile, home improvement work took on a new impetus. This work reaches the real heart of the farm problem and is limited only by the number of places that it is physically possible for the Extension workers to render aid.

In addition to Extension Work in those counties where county agents are employed the field agents who travel from the University are attempting to render aid in counties without agents. Good results have been obtained, but the task is quite difficult where there is no local agent to do the followup work.

A report of the year's activities would be quite incomplete without an appreciative statement of the assistance rendered by railroads, banks, business houses, boards of trade, civic clubs, farm and home organizations, parent teachers associations, school boards, Y. M. C. A., boards of health and other helpful agencies. The railroads give many prize trips to boys and girls to various State and National functions of a helpful nature. Business houses and individuals give numerous scholarships to short courses and other events to deserving boys and girls. It should be mentioned in this connection that 40 percent of the students in the College of Agriculture are former club members. This does not mention the large numbers pursuing higher education in other branches of the University of Kentucky or those studying agriculture, home economics or other branches in other institutions of learning. Liberal education is one of the factors that will do much to develop the State of Kentucky. The State needs better farming and better farm homes and more industries which in themselves besides developing the State, will aid farming, and Kentucky can best be developed by the trained minds and hands of her own young people.

Extension Work is progressing, but it is already feeling the need of further research to strengthen its message. Clear

examples of this fact are seen in the need for intensive research in plant and animal diseases, not to mention other branches.

With aggressive research and efficient extension teaching the State will reap large rewards.

## COUNTY AGRICULTURAL AGENTS' WORK

C. A. MAHAN, *State Leader*

For six years an effort has been made to guide county agents into community program building as a better method of doing Extension work. While this may have seemed slow in developing to the present basis of 516 community programs, it nevertheless has seemed better to let this plan grow rather than to force its sudden adoption.

To have community programs succeed necessitates the cooperation of county agents, the subject matter specialists, and the local leaders. The final success of this plan of carrying on Extension work within a county is indicated by the number of local leaders participating and the attention they give the projects assigned them. Four thousand, two hundred and nine such leaders were assigned projects and duties in 1926, and it is these public spirited men and women that made the year's accomplishments possible.

In the process of devising means of developing a project the use of local leadership becomes an important factor and this has been used with excellent results.

The ultimate goal is to have agents depend upon their community programs as a foundation and pre-requisite for their county programs and to depend upon well directed local leadership for the success of the program.

The demand for agents, in new counties has been increasing. A helpful feature, has been that in many counties appropriations have been made for a term of three years. This adds a degree of stability to the work that has long been needed.

Below is a list of such counties with the period of appropriation indicated.

County	Length of Appropriation
Adair .....	2 years
Anderson .....	2 years
Bath .....	3 years
Carter .....	3 years
Gallatin .....	3 years
Green .....	3 years



County	Length of Appropriation
Greenup .....	3 years
Harrison .....	2 years
Lawrence .....	3 years
Logan .....	3 years
Owen .....	2 years
Pendleton .....	3 years
Pike .....	3 years
Russell .....	4 years
Todd .....	3 years

This is believed to indicate more confidence on the part of many counties in county agent work as a part of the Extension program.

The closer supervision by the four assistant state agents has resulted in more carefully built community programs, better training of the local leaders and lastly more uniformity and exactness in reports.

Local leaders reported this year have not been leaders in name alone, but have really discharged the work which they undertook. Demonstrations were completed with names, dates, and records on file in the county agents' office.

The following extracts from the reports of some of the county workers indicate the high esteem in which they hold the work of local leaders, and how essential they regard this leadership in the accomplishment of good and lasting work.

J. L. Miller—Bracken County: "Junior Club Work in Bracken County this past year included 196 members with a total of 216 projects. Of this number, 157 members completed their work with 175 projects finished. This makes a completion record of 80 percent for members enrolled and 81 percent for projects finished. This high percentage of work completed is made possible by having an active aggressive group of 19 Junior Club local leaders. Three of the eight clubs have 100 percent records for completion work."

C. L. Hill—Pendleton County: "The outstanding piece of work in dairying was the formation of a Bull Association as a part of the Portland Community program. Mr. J. H. Kelly was made leader of this project. Immediately after the program was planned Mr. Kelly began to work upon it and some reported that he had interested a number of his neighbors. A meeting was scheduled and 14 of his neighbors attended. After a thoro discussion of the idea, a contract

was circulated and cows enough were signed to form two blocks. With Mr. Kelly, I visited selected leaders in the other sections and soon they had signed cows enough to assure the four block association. Practically all of this work was done by the local leaders and is a splendid example of such leadership."

Clyde Watts—Carroll County: "Five community programs were organized and leader training meetings were used to train these leaders. Thru these community programs, outstanding sheep and poultry projects were carried out. One hundred and fifty club members were enrolled and 80 percent completed their projects. The work was carried on thru project groups which accounts for this high percentage of completion."

J. H. Atkerson—Green County: "Four of these programs functioned nicely with the appointed leaders active in the adoption of projects and in the dissemination of information. . . . With the development of local leadership that is now apparent, the correlating and crystallizing of the sympathetic forces of the county, the whole program can be put into operation much more effectively."

J. F. Graham—Caldwell County: "A number of local leaders, some of whom are members of our county extension committee, have been very active in developing the Extension program of work."

The principal statistics of county agents' reports for 1926 are as follows:

No. counties with agents for 8 or more months.....	70
No. of counties with agents for less than 8 months.....	10
No. communities building extension programs .....	516
No. local leaders in community built programs.....	4,209
No. demonstrations by county agents and local leaders.....	18,184
No. result demonstrations carried thru year.....	11,336
No. farm visits made by agents .....	38,427
No. farms visited .....	18,537
No. home visits made by agents .....	4,904
No. homes visited .....	2,795
No. office calls relative to work—Office.....	56,831
Telephone .....	43,697
No. individual letters written .....	47,974

#### MEETINGS HELD

No. training meetings for local leaders.....	251
Attendance of local leaders .....	2,146
No. demonstration meetings held .....	5,327
Attendance .....	87,590

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No. farmers' institutes and short courses .....	136
Attendance .....	10,284
Junior Club camps assisted .....	27
Total attendance (including adults) .....	18,258
Other meetings .....	4,300
Attendance .....	305,229

MISCELLANEOUS

No. breed associations organized, dairy cattle .....	3
No. breed associations organized, other stock .....	12
Total No. members in purebred sire campaign.....	3,450
No. farms installing drainage systems .....	89
Acres drained .....	1,670
No. water systems installed .....	50
No. lighting systems installed .....	21
No. farms clearing land .....	105
Acres of land cleared .....	670

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## HOME ECONOMICS

MYRTLE WELDON, *State Leader*

The problem of providing a beautiful, healthful and smoothly managed home is a matter of great concern to the rural home-maker and for that matter to the entire family. Providing a satisfactory social life for the family, good books and magazines to read, adequate recreation in the home and community is also a matter of great importance. The farm woman is rapidly becoming conscious of her larger responsibility to the community which involves the question of better education, community health, clean, wholesome recreation and opportunity for satisfactory social life in the community.

In the past the farm woman has had few opportunities to gain useful information which would help her in the discharge of her many duties. Neither has she had the opportunities for self development which would give her the courage and confidence to grapple with the problems about her.

The county program is carried on thru an organization of home-makers known as the County Home-makers' Association. The association is made up of community Home-makers' Clubs. The members of these clubs are home-makers who are interested in studying their problems, in exchanging ideas, in community improvement, and who wish to receive the benefits of the extension program. Each club elects its own officers and local leader for both junior and adult work.

The purpose of the extension program is to help people to help themselves, and to develop people thru a program. The selection of a program and the direction of the affairs of the organization is left to a county advisory council of the Home-makers' Association. This council is composed of the chairmen of the community Home-makers' Clubs. It has been exceedingly gratifying to note the growth in initiative and responsibility on the part of the women and particularly on the part of the officers and leaders in the organization. These councils have taken part in financing the work, have also promoted county fairs and exhibits, and have planned county programs and taken an active part in executing them.

The effort to develop leadership among rural women is meeting with continued success. The development of a county program of work and a county organization has made it possible to define more clearly the duties of a leader. The leader, who is selected by the members of her group, feels directly responsible to them. Most of the work of the Home Economics Extension field agents is carried to the rural communities by leaders who receive this training from the field agents at regular intervals. In the dispatch of their duties as leaders, the rural women have grown in consciousness of power, in courage to undertake new problems and in unselfish spirit of service. This is a great improvement over the extension program of a decade ago when the program was largely limited to such activities as demonstrations in cooking, growing and canning tomatoes, and drafting seven gored skirts all of which are commendable, but which represent only a small phase of satisfactory home and community life.

#### PROGRAM OF WORK

The extension projects carried on in Kentucky may be classified under five main headings: Food, Clothing, Home Improvement, Home Health and Sanitation and Community Activities. The program carried on in any county is one of its own building. A community program-planning meeting in each community forms the basis of a subsequent meeting of the advisory council at which time the county-wide program is planned. The field agent trains the local leader who is the teacher in her community. The home demonstration agent helps to select the leader, makes all local arrangements, secures local cooperation, plans local meetings, checks up on local leaders, secures records, supervises demonstrations.

#### FOOD

*Food Preparation.* The object of this course is "To teach the food value of commonly used foods and the best methods of preparation to save their food nutrients, make them more

appetizing and improve their digestibility." The four lessons are:

1. Vegetable Cookery, which emphasizes the necessity for a variety of vegetables and the cooking of them to retain food nutrients.
2. Cereals, selection and preparation with emphasis placed on long cooking and the daily use of whole cereals.
3. Meat, the selection and preparation of meat, stressing cooking according to the cut.
4. Salads and salad dressings, encouraging the use of foods which the women already have.

This project has been given in Ballard, Daviess, Graves, Harlan, Lee, Mercer, McLean, Oldham and Jefferson Counties. Leaders tell of spending hours at the telephone giving recipes and directions for preparing food to women who were unable to attend the club meetings or are not members of the club. One leader keeps her mimeographed sheets hung near the telephone for convenience.

The field agent has used with good results a daily food score which has increased the use of vegetables, milk, fruits and whole cereals. The use of heavy pastries, rich desserts, vegetables cooked with fat, and an excess of coffee and meat are discouraged.

*Food for Health.* The Food for Health work is a continuation of food selection and preparation. The four meetings are:

1. The kinds and amounts of foods needed every day, meal planning.
2. Food for underweights and overweights.
3. Foods and exercises for overcoming constipation.
4. Child feeding.

The use of the daily food selection score card continues here. Reports of gains and loss of weight have some times been startling. Every club has reported favorably on the diets and exercises for overcoming constipation. School lunches are taken up with child feeding. Club members are urged to study the school lunch situation in their home schools and if possible see that they have one hot dish. The psychology of successful child feeding particularly interests the women.

This project has been carried on with home-makers in Callo-way, Christian, Lee and Oldham Counties.



2. Home-makers' Vacation Camp. McCracken County.

*Gardening.* The necessity for having a good variety of vegetables is made clear in the vegetable lesson and in the daily food scoring. This usually results in a request for special work in gardening which is done by Mr. J. S. Gardner, field agent in horticulture. Henderson County has completed an exceptionally good gardening project.

*Food Preservation.* A food preservation course comprising four meetings was carried on in Muhlenberg County. Other food preservation work was carried on by the home demonstration agents in their counties.

#### CLOTHING

In September, 1924, a four-year program of work in clothing was inaugurated in the State. The subjects emphasized each year are as follows: First year, Clothing Selection; second

year, Elementary Dressmaking; third year, Renovation and Remodeling of Woolen Garments; fourth year, Advanced Problems in Sewing.

*Clothing Selection.* Clothing Selection is practically a completed project, there being now only a few counties having home demonstration agents which have not carried on the project. Improvement in dress and general personal appearance of club members and local leaders indicate satisfactory results. The following quotation taken from a local leader's report is typical, and at the same time indicates objectives and results.

"All our club members express themselves as having a new point of view on clothing selection, especially of lines and colors. Outside our club members many have gotten ideas from our work and have improved in the selection of clothing materials. One sees more fast-color wash materials in this community than before. Sewing work done in connection with this course was applied to the making of undergarments. Patterns selected by the field agent in charge were cut off by home demonstration agents and local leaders, and as a result many more sensible and serviceable undergarments are now being made by club members."

The following is taken from another leader's report:

"Your underwear patterns are the most sensible and comfortable we have ever had. All who have used them are delighted with them."

*Elementary Dressmaking.* Elementary Dressmaking was the chief clothing course carried on during the past year. The goal was to teach as many women as possible to construct simple, attractive and well-made garments for their families, at a saving of time and money. This meant giving them instruction in more efficient care and use of the sewing machine, selection and use of commercial patterns, correct styling and fitting of garments, correct methods of making and using various seams and finishes suitable for wash dresses, and the use of the one-hundred per cent dress form.

A quotation from a leader's reports is given to show what the course has meant to the women.

"After our last lesson in the course we had a style show. Ten dresses were made and worn for criticism. They were of gingham.



linen, crepe and prints. The colors, materials and styles of these were carefully selected, patterns altered and neat and correct finishes used. . . . I now test and alter my pattern and then with my dress form make my dresses without even trying them on."

#### MILLINERY

So much millinery has been given in most of the counties where there are home demonstration agents that only one-day training schools have been held at which women have been told of any changes in hat construction and of the decided changes in style. Models of new trimmings have been shown by field agent and copied by the leaders. Late in the spring most of the counties had another day's meeting where they were taught how to remodel and trim old straw hats and also to trim new ones. In the fall the leaders were taught to make a frameless hat which was very popular, also tamoshanters which were especially popular for children. Models of these were shown by field agent and copied for their use by leaders. Millinery has been carried on in 18 counties as a result of which 1281 hats have been made.

#### HOME IMPROVEMENT

Two projects in Home Improvement were carried on during the past year in eleven counties. The two projects were Home Furnishing and Wife Saving Kitchens. The projects include studies of wall treatment, floors and woodwork, windows and their decoration, arrangement of furniture, selection and hanging of pictures and the proper use of room accessories. In the Wife Saving Kitchen project special emphasis was placed on treatment of walls, floors, windows and disposal of household waste and destruction of flies and vermin. The programs of these projects were presented to leaders representing local clubs. As a result of these leaders' training schools 206 leaders were trained. Improvements were made in 7,984 rooms as a result of the Home Furnishing project. Seven hundred and seventeen kitchens were improved.

Thruout both projects special emphasis was placed on the improvement of furnishings already in the home and the elimi-

nation of useless articles and equipment rather than on the purchase of a new furniture. The improvements were shown to club members and friends by means of county tours which were held during June and July. A county tour usually included six



3. Leaders' Training School learning use of sewing machine attachments. McCracken County.

to ten homes representing various communities. The homes which were selected had put into practice the various principles which were emphasized thruout the two projects. At each home the visitor had an opportunity to hear discussions with regard to all improvements which had been made. The discussions included suitable wall treatment as a background for pictures and furnishings, the arrangement of furniture and proper use of runners, treatment of the mantel and selection of rugs and draperies. In dining rooms the principal points for discussion were in regard to the use of the plate rail and the arrangement of china, etc., in the china closet, treatment of the buffet and the dining room table between meals. By means of these discussions in the homes, it was possible to bring out more clearly many of the points which had been included in the leaders' training schools.

COMMUNITY ACTIVITIES

It has been the purpose in Kentucky to have every Home-makers' Club feel responsible for doing some needed task for the community. Several counties have gone over the top 100 percent with every community carrying to completion a community project. This unselfish service is strengthening the Home-makers' Clubs and is widening the interests of rural women.



4. Setting-up exercises whet the appetites of these Graves County campers.

*Fairs.* Women carrying on extension work exhibited in 173 fairs. In many instances the women not only exhibited but also took an active part in promoting the fair project. They served on committees, raised money for premiums, and took the full responsibility of various departments. It may be observed that the result of this active participation of the Home-makers' Association is a higher standard of products exhibited and increased educational value to the fair.

*School Improvement.* Perhaps the Home-makers are more interested in the school than in any other institution. It is safe to say that almost every Home-makers' Club in Kentucky has done something for its school. Some clubs have raised considerable sums of money to install water and heating plants, sanitary toilets, etc. Others have planted shrubbery and trees on school grounds, redecorated school rooms, purchased books, pictures and equipment for school use.

*Rural Recreation.* The problems of supplying adequate wholesome recreation has been recognized by rural home-makers. Several counties are making recreation for the community a part of their extension program. Jefferson County has adopted a county-wide project in recreation and has planned a series of get-together meetings for all the members of the community. The women have given plays, pageants, old time parties, costume parties, holiday festivals, etc. Many counties have adopted the plan of having a short time given to recreation on every program. These recreational get-together meetings are welding together the people of the community and are bringing greater social satisfaction to rural communities.

*Home-makers' Vacation Camps.* Many a rural home-maker has never had the opportunity to take a vacation. The home-makers' vacation camp was initiated for the purpose of offering rural home-makers an opportunity to spend a short vacation profitably and at little expense. Two years ago the home demonstration agent in Jefferson County, with the help and cooperation of the University attempted a county Home-makers' Vacation Camp. The camp was very successful and the news spread. In 1925 two counties had camps and in 1926 eight counties in Kentucky have fostered such vacation camps with and enrollment of about 300 campers and about 2,000 visitors.

The camp is sponsored by the County Home-makers' Association which is the county women's extension organization in Kentucky. Only members of this organization may attend. The University cooperates by sending instructors and leaders. Each woman brings food supplies. She pays an enrollment fee varying from \$1.50 to \$2.50 for the week. This fee pays for cooks, rental of tents and cots, trucking and such food supplies as milk, cream and bread.

It is understood that no children are allowed. Husband, families and friends may come to visit on guest day.

The camp program usually is as follows:

6:30 A. M.—Rising.

7:00 A. M.—Flag raising and setting-up exercises.

7:30 A. M.—Breakfast.



5. Union County campers learning how to make reed baskets.

8:00-9:00 A. M.—Free time.

9:00-12:00—Classes in hand craft such as reed and raffia, basketry, chair caning, stenciling and stippling of sanitas, tie dyeing, plaster-crome work.

12:00-1:00—Dinner.

1:00-3:00—Rest and free time.

3:00-4:00—Community singing and lecture.

4:00-5:00—Recreation—music, games, stunts, etc.

5:00-6:00—Time for camp committees to meet.

6:00-7:00—Supper.

7:30—Vespers.

8:00-9:30—Community singing and evening program. This program has consisted of such things as:

Community party.

Entertainment by local talent.

Lectures.

Motion pictures.

Stunts by campers.

Pageant by campers.

The women seem to enjoy camp beyond their fondest hopes. Some like the class work best. One woman said she enjoyed the setting-up exercises most of all. All seem enthusiastic over the recreation and fun part of the program.

It is not uncommon to hear women remark, "This is the first vacation I have ever had," "I never enjoyed a week so much in my life," "This has meant more to me than anything that ever happened to me before."

*Farm and Home Convention.* During the past three years the delegations of women attending Farm and Home Convention from distant parts of the state have grown rapidly. These women are sent by their clubs to get information and inspiration which they, in turn, give to their clubs. Farm and Home Convention is becoming a real means of establishing a bond of fellowship between the women of Kentucky and their University.

#### JUNIOR HOME ECONOMICS EXTENSION

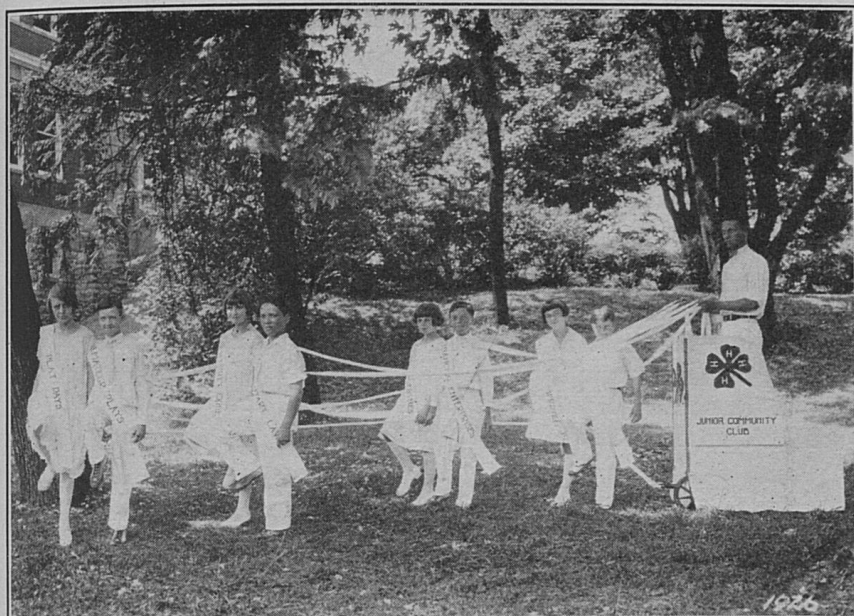
Clothing, foods, canning and room improvement are the home-making projects which have been conducted by the club girls this year. Reports from thirty-five counties show that eleven of these carried on food projects, thirteen canning projects, three room improvement projects and all thirty-five carried clothing projects. As can be seen from this, clothing has been by far the most popular project. A large percentage of all the junior home extension work was given to the community groups by local leaders. In most cases the result of the leaders' work has shown up splendidly, both in the number of completions and in exhibits at the county and the state fairs.

*Clothing.* The state slogan for the girls' clothing project—"Be well dressed" by no means typifies the broad scope of the clothing work. The three thousand and ninety-two girls completing this work have taken up the subject of clothing from the standpoint of both selection and construction. In the first two units, "The Junior Home-makers' Outfit" and "The Club Girl's Underwear," construction, keeping of clothing in repair; and health were stressed. In the third unit, "The Complete Costume" the club member learned more of selection of garments and materials for the occasion and the wearer. In the fourth unit, "The Club Girl's Wardrobe" much time was devoted to planning the wardrobe and to problems of budgeting.

*Foods.* The foods projects, "Family Breakfasts," "Family Dinners" and "Family Suppers" were planned for the club

girls with the idea of teaching both preparation and selection of foods for themselves, and for their families. Thru these courses the girls have learned to prepare wholesome attractive food, and to select and combine foods which make for a well balanced diet.

*Canning.* In order to have a well balanced diet, some preparation has to be made by the rural family for the winter



6. The Junior Community Club Episode of the Junior Club Pageant which depicted in a dramatic way many phases of club work.

months. Therefore, three units of canning work are offered to club girls. This includes the canning of fruits and vegetables, the making of jellies and jams, the canning budget or canning to meet the family needs. During 1926, the canning project members canned 24,038 jars of food. The state fair exhibit of junior club canned products was of excellent quality and quantity.

*Room Improvement.* The room improvement project has been planned to aid the girls in making their rooms more attractive, comfortable and convenient. Every girl desires a beauti-

ful room. However, the beauty of the room is not always determined by the amount of money spent. The girls in this project have been encouraged to make the most out of the furniture and articles which they had on hand. In the club pageant held at Junior Week this year the room improvement episode cleverly depicted this phase of club work.

*Demonstration Teams.* The leaders of the girls' project groups have been encouraged to have their girls give simple demonstrations at each meeting of their group. In this way every girl is given a chance to take part in a demonstration, and the most outstanding team is then selected to demonstrate at the county contest.

The home demonstration agent in Campbell County followed this plan for demonstrations:

1. Every girl in the clothing project studied and then gave a demonstration on, "The care and use of the sewing machine," and "How to use one attachment."
2. At the community test day the two outstanding girls were selected as the community team.
3. A county contest was then held and the winning team was sent to Junior Week at the University.

The winning team at Junior Week, the Graves County team, who gave "First Aid" won second place at the International Livestock Exposition and Boys' and Girls' Club Congress at Chicago in December.

#### CONCLUSION

No report of Home Economics Extension work is complete without giving credit to the county home demonstration agent. She has been described and defined in many ways. The county home demonstration agent is the supervisor of the Home Economics Extension program in the county. She creates the machinery for carrying on the program, perfects the organization, details responsibilities, helps to plan the program and helps to initiate and direct the activities of home-makers. She helps to select the leaders and then sees to it that they function. She is a woman trained in home economics and is always on hand to give help and advice to home-makers who wish to con-



sult her. She gives talks and demonstrations to groups of women. By her enthusiasm she encourages the home-makers to greater endeavor. Too much cannot be said of the importance of the home demonstration agent in executing a strong worthwhile program in the county.

Many worthwhile things have been accomplished, few of which can be reported in this brief space. The tangible results which can be measured and counted tell only part of the story. Such intangible results as increased pride in the profession of home-making, the development of powers of leadership, a growing social consciousness and increased community pride are equally if not more important and will surely bear fruit in happier and more satisfying farm home and community life.

STATISTICAL SUMMARY

The following figures taken from the reports of the county home demonstration agents give an idea of the activities and results of the year's work.

	Women	Girls
No. communities carrying on Home Economics Extension program .....	403	
No. local leaders actively engaged in carrying on Ext. program .....	1,388	366
Membership in Homemakers' Clubs .....	4,485	
Membership in junior home economics project groups .....		4,624
Home visits made .....	4,312	
Individual letters written .....	12,648	
Training schools for local leaders:		
Number .....	395	
Attendance .....	4,971	
Method and result demonstration meetings:		
Number .....	4,730	
Attendance .....	79,680	
Miscellaneous meetings:		
Number .....	505	
Attendance .....	34,769	
Demonstration teams trained .....		188

## FOOD PREPARATION

	Women	Girls
No. project groups .....	102	72
No. members enrolled .....	1,942	734
No. homes adopting improved practices in food preservation .....	1,998	

## FOOD PRESERVATION

No. project groups .....	79	77
No. members enrolled .....	1,554	556
No. homes adopting improved practices.....	959	

## NUTRITION

No. project groups .....	76	34
No. members enrolled .....	1,627	539
No. homes balancing family meals .....	1,002	
No. homes adopting improved practices in child feeding .....	223	
No. homes adopting improved practices in nutrition ....	2,418	

## CLOTHING

No. project groups .....	192	239
No. members enrolled .....	4,036	3,530
No. individuals adopting improved practices in selection, construction, costume design, renovation and remodeling .....	6,564	
No. dresses and coats made .....	3,532	2,194
No. undergarments made .....	7,153	4,591
No. hats made .....	1,054	227

## HOME IMPROVEMENT

Project groups .....	159	2
No. enrolled .....	3,227	10
No. homes adopting improved practices in home furnishings .....	2,666	
No. rooms improved .....	7,984	
No. kitchens improved .....	717	
No. home obtaining labor saving devices .....	525	
No. homes screened for first time .....	126	
No. home grounds planted according to directions.....	27	
No. school and community grounds planted .....	11	
Total homes adopting improved practices in beautifying home grounds .....	170	

HOME GARDENS

	Women	Girls
No. project groups .....	47	10
Members enrolled .....	647	74
Total homes adopting improved practices in gardens....	1,203	

MISCELLANEOUS

No. members enrolled in miscellaneous projects .....	2,454	78
No. baskets made .....	774	41
No. homes adopting improved practices in recreation....	545	
No. homes adopting improved practices in health and sanitation .....	750	

Girls  
72  
734

77  
556

34  
539

239  
3,530

2,194  
4,591  
227

2  
10

## JUNIOR CLUB WORK

J. W. WHITEHOUSE, *State Leader*

The club department undertook to increase the efficiency of its work this year by improving local club organizations. Eight hundred and nine Junior Community Clubs were organized and carried on their work as a unit. Fifteen hundred and forty-two adult volunteer leaders assisted with the club program.

The members of the department visited all county and home demonstration agents and assisted them in planning their club programs. Assistance was also given in securing and training local community club leaders and project group leaders. Four leaders' meetings were recommended for the Junior Community Club Leaders as follows:

To plan a program. January, February or March.

To give specific instructions and encouragement on starting projects. March and April.

To plan special and recreational activities, such as exhibits at fairs and shows, camps, picnics and parties. May or June.

To check up results of year's work. October or November.

A member of the Club Department assisted with all of these meetings.

In a few counties all of the leaders of certain projects were called together and a program for their group was outlined by the field agent of that project.

Those who tried this method of getting the needed instructions to their project leaders liked it and are planning similar meetings for 1927.

The best results were obtained in clubs where:

1. Regular monthly meetings were held;
2. Active community club leaders were in charge;
3. A project leader for each project group;
4. Some community activity undertaken which required the united efforts of all the members of the club.

It should be explained that in Junior Club Work an effort is made to secure a local leader for the club as a whole and also project leaders for each project undertaken. For example cer-

tain members are enlisted in the pig project, others in gardening or poultry, etc., each project group having a leader.

As an example of efficiency of club leaders the results in Bracken and Fayette Counties are cited. There were 195 club



7. Room Improvement Episode in 4-H Club Pageant.

members enrolled in Bracken County and 166 or 85 percent completed their projects. Fayette County had 283 enrolled and 77 percent completed. The leaders from all clubs in these counties,

with the exception of one, attended the county achievement exercises and gave written or oral reports of the activities and accomplishments of their clubs.

#### SUPERVISION

Wherever possible the club field agents plan a program with the county agents and make definite dates to visit the county and assist in carrying out certain phases of the program. During the past year the club field agents have given more time to the leadership phase than to any other and the general feeling is that a foundation has been laid in many counties which will mean more and better club work in the years to come.

#### JUNIOR WEEK

Junior Week, or State Junior Encampment, was held on the University campus in Lexington, June 7-12. Four hundred and thirteen club members from 71 counties were in attendance. These club members were accompanied by 50 local leaders.

A new feature of the program this year was a club pageant, staged by 200 members, showing by a series of episodes the work of the major club projects.

Forty-three county champion demonstration teams competed in the State Contest for the premiums and two silver trophies. The demonstrations were decidedly better this year than in previous years.

Twenty county champion boys and 12 girls were entered in the State Health Contest held at Junior Week. The boy that scored highest in this contest was entered in the National Health Contest and was declared the National Health Champion.

#### LIVESTOCK SHOWS AND SALES.

Two livestock shows and sales were held for club members this year. One thousand and forty-nine spring lambs were raised and exhibited in the Lamb Show which was held in June. Four hundred and seventy-six baby beeves were fattened and exhibited in the State Baby Beef Show. These calves as a whole

yielded a nice profit to the club members. Both of these shows and sales were held at the Bourbon Stock Yards in Louisville.

#### CAMPS

Twenty-seven club camps were held this year which were attended by 1,962 club members from 53 counties. Sixteen thousand visitors also attended the camps. The camps open Monday afternoon and close Friday morning. The club members bring their own provisions which makes the attendance at camp require very little outlay of money. Each camp is under the direction of one of the field agents of the Club Department. The camp director is assisted by instructors in Agriculture, Home Economics, Nature Study, Y. M. C. A. Secretaries, and Local Leaders.

The program is planned to give useful and practical instruction, enjoyable recreation and to inspire those who attend to make country life more enjoyable and attractive.

#### JUNIOR WEEK GIVES CLUB MEMBER NEW VISION

Conrad Feltner of Laurel County attended Junior Week at the University of Kentucky in 1924. One of the courses offered club members at this meeting was small fruit culture. Conrad took this course and became so interested that he decided to start a project in small fruit growing. His father allowed him the use of an acre of land and he planted it in dewberries, raspberries, blackberries and strawberries. The first year he planted watermelons between the berry vines and sold melons enough to pay for cultivation. The second year Conrad sold 68 quarts of raspberries, 41 quarts of blackberries, 144 quarts of dewberries, and 369 quarts of strawberries. The total receipts for all berries sold were \$113.55. All the work connected with the project was done by Conrad who is 13 years old.

#### A CLUB MEMBER CARRIES ON A SUCCESSFUL DEMONSTRATION

The farmers of Fairbanks, Graves County, were slow to take up a soil improvement program. The county agent decided to put on some demonstrations with Junior Club boys. The par-

ents discouraged the projects outlined by the county agent. This boy, William Rhodes, took half an acre of land, applied 100 pounds of 16 percent acid phosphate and one ton of ground limestone, and planted it in tobacco. The results of this demonstration have attracted the attention and aroused the interest of



8. Club members who participated in a health circus which taught that proper food, exercise and fresh air are necessary for the full development of boys and girls.

many farmers in the community. William's half acre produced 1,025 pounds of tobacco which sold for 15c per pound. The half acre adjoining William's plot which received no soil treatment produced 645 pounds and brought \$6.66 per hundred.

#### CLUB WORK DEVELOPS LEADERSHIP

George M. Harris, of Carroll County, who is 16 years old and a junior in high school, has been a club member for six years. During this time George has been vice-president of the county club organization and has not missed a meeting in three years. He represented his county twice in the State demonstration team contest at Lexington, his team placing fourth and second. He was a member of the Carroll County livestock judging team



which was placed first in the State contest, and participated in the National Livestock Judging Contest. George has attended three county club camps, was elected tribe leader and was one of three each year to receive a medal camper badge. He has served as president of the Kentucky Association of Junior Agricultural Clubs. He is now a member of the high school basket ball team, president of a glee club and treasurer of the Latin Club.

For his project work George has fattened and shown eight baby beeves and exhibited them in the State Club Show. He has won \$286 in premiums, made \$450 profit on his work and now owns eight Southdown sheep, eleven Duroc hogs, and one Holstein cow. All his livestock are registered.

UNIVERSITY 4-H CLUB

In 1926, two hundred and fifteen club members and former club members enrolled in the University of Kentucky. They formed themselves into an organization called the University 4-H Club.

The purposes of this organization are:

1. To keep in touch with each other and with club work in their home counties.
2. To influence club members to go to college.
3. To greet new student club members who enter the University for the first time and help them to get happily located.

Forty percent of the students now enrolled in the College of Agriculture received training in club work before going to College.

GOALS AND ACCOMPLISHMENTS OF CLUB WORK

Work Undertaken and Goals Set for 1926

1. A local volunteer leader for each Junior Community Club and one project leader for each project group in the county.
2. All projects outlined for leaders.

Accomplishments of 1926

Fifteen hundred and forty-two leaders assisted in carrying on the work of 809 clubs.

All requests for outlines on projects were filled.



9. State Champion Farm Practice Demonstration Team, demonstrating poultry house construction. Palaski County.

#### Work Undertaken and Goals Set for 1926

3. Every Junior Community Club to make a yearly program which will require at least six monthly meetings.
4. Have demonstration teams developed in thirty counties.
5. Have judging teams developed in thirty counties.

#### Accomplishments of 1926

All chartered clubs submitted programs for six or more regular meetings. Sixty charters were issued this year.

Two hundred and twenty-nine teams were trained. Home practice demonstration teams were developed in 23 counties and farm practice teams in 22 counties.

Four hundred and eighty teams or 1,440 club members received training in livestock judging in 61 counties. Fifty-seven counties sent teams to the State Livestock Judging Contest.

Work Undertaken and Goals Set for 1926

Accomplishments of 1926

6. Insist on the exhibit of club projects at community, county and state fairs.

A community or county exhibit was made a part of a very large percent of the county junior program. A larger number of club exhibits were sent to the State Fair this year than last.

7. Conduct a state show and sale of spring lambs with 2,000 lambs entered. Conduct a state show and sale of baby beeves with 500 animals entered.

A state show and sale of spring lambs grown by club members was held at Louisville, June 24, with 1,019 lambs entered. A state show and sale of baby beeves fed by club members was held at Louisville, November 16th. Four hundred and seventy-one calves were exhibited in this show.

8. Junior Camps:

a. Junior Week was held the second week in June at the University of Kentucky. Four hundred and thirteen club members from 71 counties attended. Fifty volunteer leaders, 20 home demonstration agents and 48 county agents were also in attendance.

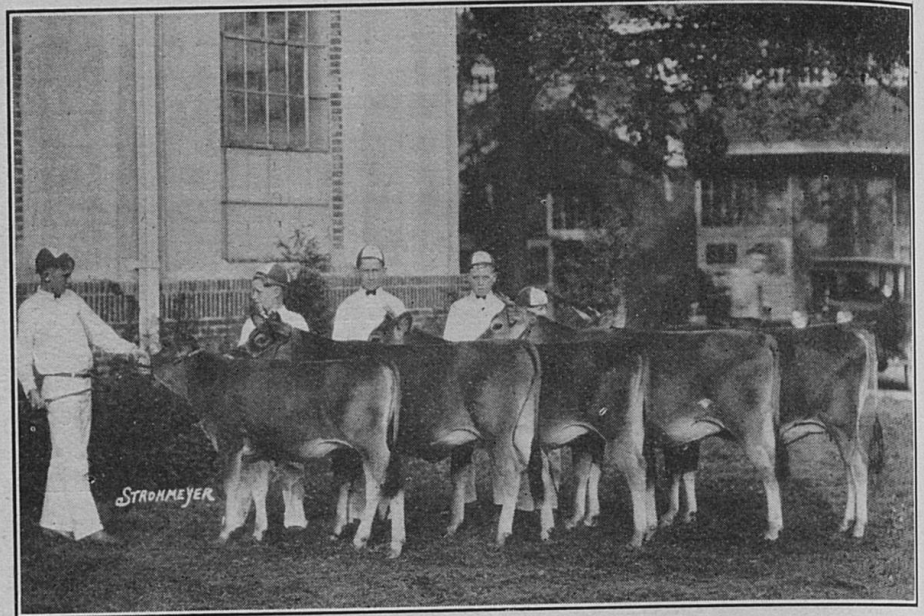
a. Junior Week or State Encampment. Five hundred club members and 65 volunteer club leaders in attendance.

b. Hold twenty-seven county camps with club members from 58 counties attending.

b. Twenty-seven camps were held with an attendance of 1,962 club members and 16,125 visitors. Club members from 53 counties attended the camps.

9. All projects more efficiently carried out.

In 1925, sixty percent of projects undertaken were carried out. This year sixty-five percent of the club members who started projects completed them.



10. Todd County Junior Club members' first exhibit at the National Dairy Show, 1926. They won second prize on this exhibit.

**Work Undertaken and Goals Set for 1926**

- 10. Achievement exercises held in each county that has an enrollment of 100 or more club members.
- 11. Leadership and good citizenship developed in all clubs.

**Accomplishments of 1926**

- Thirty-three counties ordered 2,877 achievement cards.
- No club member has been before a Juvenile Court.

**MISCELLANEOUS**

No. of club charters issued .....	60
No. of merit certificates issued .....	200
No. of achievement cards issued .....	2,877
No. of community or local leaders.....	1,542
No. of clubs carrying on extension work.....	809
No. of club members in Junior Club Work, four years or more— boys 729, girls 1,023.....	1,752
Judging teams trained.....	480 club members 1,440
Demonstration teams trained .....	229 club members 458



11. State Champion Home Practice Demonstration Team, demonstrating "First Aid."

CLUB ENROLLMENT—1926

Club Members Enrolled by—	Enrolled	Completing	Percent Completing
County Agents .....	11,432	7,334	
Home Demonstration Agents.....	4,691	3,358	
Colored Agents .....	973	677	
<b>Total .....</b>	<b>17,096</b>	<b>11,369</b>	<b>66.5</b>

Club Projects Enrolled by County

Agents—

Livestock—

Poultry .....	4,744	3,004
Swine .....	1,913	1,168
Sheep .....	502	387
Dairy calf .....	521	371
Baby beef .....	341	257

Crops—

Corn .....	641	337
Alfalfa .....	11	8
Soybeans .....	303	210
Potatoes .....	316	228

	Enrolled	Completing	Percent Completing
Tobacco .....	269	179	
Cotton .....	22	20	
Miscellaneous .....	1,074	653	
Foods .....	39	30	
Clothing .....	1,246	802	
<b>Total</b> .....	<b>11,942</b>	<b>7,654</b>	<b>64</b>
<b>Club Projects Enrolled by Home Demonstration Agents—</b>			
Foods .....	1,678	1,205	
Clothing .....	3,650	2,290	
Miscellaneous .....	735	594	
<b>Total</b> .....	<b>6,063</b>	<b>4,089</b>	<b>67.4</b>
<b>Club Projects Enrolled by Colored Agents—</b>			
Swine .....	89	54	
Poultry .....	287	207	
Corn .....	85	50	
Potatoes .....	97	68	
Tobacco .....	30	22	
Miscellaneous .....	92	73	
Foods .....	350	320	
<b>Total</b> .....	<b>1,030</b>	<b>794</b>	<b>77</b>
<b>Grand total</b> .....	<b>19,035</b>	<b>12,537</b>	<b>65.8</b>

DEPARTMENT OF PUBLIC INFORMATION

C. A. LEWIS, *Editor*

During the year a total of 1338 articles were sent to the public press of the State.

In addition 8 to 12 brief articles, taken from county agent reports were distributed to the press each week. There were also sent out each week three articles in the form of farmers questions and the answers to all the newspapers of the State.

Many of the newspaper articles were specially prepared or represented reports of meetings and conferences such as the annual Farm and Home Convention, Junior Week, Agronomy Field Day, Lamb Show and Sale, Robinson Harvest Festival, Kentucky State Fair, County Agent Conference, Poultry Short Course, Fat Stock Show and Sale, meeting of the Kentucky State Horticultural Society, etc.

On each day of such important meetings as the above it was necessary to prepare special articles for the press including one for the Associated Press. Approximately 125 articles were prepared at the time of these meetings, not considering special publicity given them in advance.

The special series of weekly garden articles, prepared by the field agent in truck crops, was continued with success this year. Short series were also used to advance the work of the field agent in farm economics, and the work in animal husbandry pertaining to sheep.

A special series of news editorials was furnished the county agent section this year, for use in connection with surveys preliminary to inaugurating county agent work in Montgomery, Gallatin and Bath counties. Their object was to help acquaint the people with the purposes of extension work.

The work has been well received by the press generally and the use of the material continues to become more general.

## MOVABLE SCHOOLS

N. R. ELLIOTT, *Leader of Specialists*

During the year, twenty-seven Movable Schools were held in as many different counties. This is an increase of eight counties over the previous year. Practically all phases of Extension Work were represented in these different schools, altho there is a tendency to develop the specialized school.

Of these twenty-seven schools, eleven were of a general nature and sixteen were of a special nature. In the special schools only one or two subjects were taken up, usually one.

For a general school a two-day program seems to be the most satisfactory. At schools of this kind two or three subjects in agriculture and one or two in home economics are all that can be given satisfactorily, and arrangements have to be made where the women can have seperate sessions.

The attendance at these schools average over seventy-five people per day. This is a slight increase over the preceding year.

## EDUCATIONAL EXHIBIT

For the past seven years the Extension Division has had an exhibit at the State Fair. These exhibits portray some of the outstanding things being taught by the Extension workers. This year the exhibits attracted more attention than ever before.

The exhibit was made up of contributions from the following departments: Junior Clubs; Animal Husbandry; Marketing; Dairying; Vegetable Gardening; Fruits; Agricultural Engineering; Home Economics; Poultry; Soils, Crops and Farm Management.

## FARM AND HOME CONVENTION

The fourteenth annual Farm and Home Convention was held in Lexington, January 26, 27, 28 and 29. In many ways this was the best one of these meetings that has been held. People were in attendance from forty-seven different counties. The program proved to be both interesting and instructive.



The attendance at the women's sessions increased materially. This was on account of the efficient work of the Section of Home Economics, as the Home-makers' Clubs that are being organized are very active in sending representatives to this Convention. Twenty-six counties were represented by one-hundred and twenty-five women who represented one-hundred and fifteen Home-makers' Clubs.

A special two-day meeting was held for those interested in poultry, and twenty-four different counties were represented by those in attendance at this section of the Convention.

#### LANDSCAPE WORK

Demonstrations in landscape work were put on in fourteen counties in 1926. The work was done thru the cooperation of the county superintendents of schools.

In no case was individual work done. It was done thru groups dealing primarily with the improvement of school grounds. In counties where the work was being carried on in connection with the program of the home demonstration agents lectures and demonstrations were given before leaders of the Home-makers' Clubs who carried back the information to their own clubs. This made it possible to reach a large group. In every county where the work was carried on plans were given for the planting of one or more school grounds. Definite results were accomplished in fourteen counties, the number of school grounds which were planted ranging from two to seven per county.

During the year 1926, definite plans were drawn for thirty-seven schools and suggestions were made for plantings of fifty-three other schools.

The interest is growing continually as is manifested by the number of requests that have been received for additional assistance along this line.

#### MOTION PICTURES

The year 1926 showed a marked increase in the use of motion picture films in Extension work in Kentucky. Twenty-

five county agents now have machines and several others have access to the use of these machines. This is an increase of about 35 per cent over those who had machines in 1925.

The film library of the Extension Division consists of fifty pictures at the present time, ten of which were purchased in 1926, relating to Dairying, Home Economics, Animal Husbandry and Club Work.

Films from other sources than those owned by the Extension Division were used throught the year. Most of these films were loaned thru the courtesy of the United States Department of Agriculture.

Attendance reported where Extension films have been shown during the year, aggregated over 48,000 people as compared with an attendance of 32,000 in 1925.

AGRONOMY

GEORGE ROBERTS, *Head of Department*

SOILS

The efforts of the extension workers in soils have been directed chiefly toward a larger use of liming materials, phosphates and legumes as the primary essentials for improving the productiveness of soils. A study of the crop yields on Kentucky farms furnishes conclusive evidence that there can be no high level of prosperity at any prices that are likely to obtain for farm products until the acre rate of production is increased. A study of the kind of crops grown shows that the proportion of legumes in the cropping system is so small that there is no hope of very much improvement in crop yields until the nitrogen content of the soil is built up thru the proper use of legumes. There should be one acre of legumes in four or five acres of harvested crops, and all pasture mixtures should contain legumes if productivity is to be increased to a satisfactory level. The ratio now is about one acre of legumes in fifteen in the harvested crop acreage. Since in most of the area of the State satisfactory growth of legumes is dependent upon the use of lime or phosphate or, as is generally the case, upon both, the efforts of extension forces are centered upon this problem.

LIMING MATERIALS

In 61 county agent counties reporting the use of lime, 102,185 tons of ground limestone were used on 4,615 farms. However, 46,335 tons were used in ten counties. There are 134 portable limestone crushers in 24 counties. Twenty-four of these machines were purchased in 1926.

In the 26 county agent counties containing marl, 9,317 tons were reported used on 317 farms. The ten leading counties used 7,377 tons of this total.

In 16 counties having county agents 3,677 tons of burned lime were used on 1,077 farms. About one-third of the burned lime used was burned in home-made kilns. Russell County alone burned 53 kilns in 1926.

While these statistics have to do with only those counties in the State which have county agents, it is safe to say that practically all the lime used in these counties is known to the county agents and that the larger part of it has been used thru their influence. It is also safe to state that most of the lime used in the State is used in county agent counties. In 1923, 60,000 tons of ground limestone were used in county agent counties; 75,000 tons in 1924, 91,000 in 1925 and 102,000 in 1926. This increase is gratifying, but when it is considered that there are more than 250,000 farms in the State, most of which need lime, the use of only 115,000 tons of total lime materials in a year does not look very encouraging for the future productiveness of our soils. At this rate it will take over 200 years to lime the improved land of the State. This statement is not one of discouragement, but is made to call attention to an actual situation which requires the efforts of farmers, lime producers and dealers for its solution.

The College of Agriculture has proved to the satisfaction of all reasonable farmers by experiment and demonstration the value of lime and the farmer who is not converted to a belief in its value is rare. The limited use of lime is largely due to the fact that it is not a *retail commodity obtainable at any time and in any quantity*. It is confidently believed that if it were so obtainable its use would increase enormously. An example of the effect of a retail supply of lime on the amount used is found in Laurel County. In 1924 only three men used lime for the first time. At this time the only means of obtaining lime was to ship in ground limestone in bulk in carload lots. The chief source of supply was only 30 or 40 miles away; the limestone was of high quality and reasonably priced, costing about \$2.50 per ton delivered to the farmers' railroad station.

In 1925 a dealer in London, Kentucky, decided to handle finely ground limestone retail in bags. In three spring months 314 tons of this limestone were sold and 110 tons of unbagged limestone were sold retail by another dealer. Four hundred eighty tons were ordered cooperatively in car lots. The price of the bagged lime was two to three times as much as the lime ordered cooperatively. It seems that convenience in getting the

lime was a more important factor than the price. In that year (1925) 98 men used lime for the first time and a total of 1,664 tons was used. In 1926, 242 men used lime for the first time and a total of 2,119 tons was used, some of it being hauled as far as 27 miles. Eight hundred and sixty-seven men used lime on 4,562 acres in 82 out of the 87 school districts of the county. County Agent Fred B. Wilson says that without a retail supply of lime he could not have accomplished these results. Finely ground limestone in paper bags was on sale at retail just like any other article of merchandise at five different points in the county.

In Knox County in 1921 only 100 tons of lime were used. In 1924, 500 tons were used with only 12 men using it for the first time. In 1925, 1,000 tons were used with 26 men using it for the first time. In 1926, 1,200 tons were used with 62 men using it for the first time. A retail supply was available for the first time in 1926. The great advantage of the retail supply is that a large number of people can be induced to try the use of lime on a small scale without the outlay of much money. A demonstration on a small acreage is just as convincing as a large one, and once a farmer is convinced of the profitableness of lime, he will use it if he can get it readily.

#### MARL

The importance of marl as a source of lime in Kentucky was discovered in the fall of 1923. Since that time marl deposits have been found in more than 60 counties and samples from 3,000 deposits have been analyzed and reported upon during this time. The presence of marl has been well advertised and its value as a source of lime thoroly proven by numerous demonstrations.

In 1924, 138 farms in 16 counties were reported using 4,624 tons;

In 1925, 437 farms were reported using 9,311 tons;

In 1926, 317 farms were reported using 9,317 tons.

A number of farmers report the cost of 25c to 50c per ton for digging and spreading the marl.

Marl averages from 50 to 60 percent lime. The lime is the same kind as in ground limestone and is more effective per pound of actual lime contained than is the average ground limestone.

The discovery and making known the location of marl deposits and their composition has been one of the most important pieces of service rendered by the Agricultural College in its history, and if these deposits are properly utilized they will be one of the most valuable assets in the State. The College has done its full part in making the location and value of these deposits known. It is estimated that there are three million acres of land in Kentucky that can be limed with marl within a three mile haul, much of the marl is on the farms where it is needed.

Why is not marl more generally used? The answer is largely that farmers do not believe it has any value. A quotation from County Agent Spence indicates a too prevalent attitude on the part of farmers.

"We have large deposits of marl in southern Madison, but it is a hard proposition to get farmers to realize that there is any value in using 'poor dirt' as it is called. We planned for 170 tons to be used but due to a lack of faith in it only 73 tons were used. The four men using the 73 tons see an advantage in using marl, especially in growing legumes. Twenty-two samples from 170 farms were analyzed, analyses running from 50 to 67 percent calcium carbonate."

A number of instances are known of farmers buying ground limestone when they had an abundance of good marl on their farms. A common statement is that marl is "no good" because it is so poor nothing will grow in the "blue clay." It is so rich (in lime) that nothing will grow in it. They would not expect anything to grow in a pile of ground limestone.

The case of lime and marl is dwelt upon at length because there is responsibility in the matter that rests upon farmers and dealers which can be discharged only by them. It is not all upon the county agent and extension field agents. They can point the way and they are doing it well. More retail dealers in lime are needed and a more investigating attitude is needed on the part of farmers that will lead them to make a trial of methods proposed by the College.

#### NEW DISCOVERIES OF MARL

Marl beds have been discovered in the following counties in 1926: Boyle, Bourbon, Fayette, Mercer, Fulton, Hancock, Daviess, Henderson, Union and Webster.

#### BURNED LIME

An interesting development in the lime situation is the burning of lime in Taylor County with natural gas. The burned lime is ground and bagged and sold at a price that makes it an easy competitor of ground limestone and has the advantage that in slaking in the soil it is reduced to a much finer state than it is practical to grind limestone.

#### USE OF SMALL AMOUNTS OF LIME

For some time the University has been recommending to farmers who have a long haul, the mixing of acid phosphate with fine lime in the ratio of 2 or 3 parts of lime to 1 part of acid phosphate and using the mixture at the rate of 1,000 pounds per acre. Mixtures of approximately this ratio were used on 1,558 farms in 28 counties. The results from its use are generally favorable. County Agent Mayhew of Knox County reports 40 demonstrations in which 1,000 pounds of lime and 125 pounds of acid phosphate per acre were used on soybeans with an average increase of 1.2 tons of hay per acre.

County Agent Wilson reports 835 farmers using a mixture of acid phosphate with a small amount of limestone. This number was possible because of the favorable results in his demonstrations the year before.

County Agent Bryan of Taylor County reports that demonstrations with 1,000 pounds of lime and 300 pounds of acid phosphate gave a return of over \$8.00 for each dollar spent for the materials.

#### FERTILIZERS

All Kentucky soils outside of the better Bluegrass lands are deficient in phosphorus and a phosphate fertilizer is just as essential and often more so than lime in the improvement of the soil.

County agents report 22,000 farmers using phosphate fertilizers in the counties represented by county agents. They report 17,366 farmers using complete fertilizers of which 12,836 used them on tobacco; 4,266 used them on corn and 1,843 used them on wheat.

Farmers are rapidly coming to see the value of the lime-phosphate-legume system for maintaining productiveness.

#### ALFALFA

Reports show that demonstrations in growing alfalfa were conducted in 40 counties. Some notable accomplishments in extending the acreage of alfalfa are as follows:

Grant County had 3,800 acres of alfalfa in 1920, County Agent McKenney began work in 1924. That year through his efforts 5,000 acres were seeded; in 1925, 1,200 acres and in 1926, 3,000 acres. Alfalfa has become a cash crop with an estimated shipment of 200 carloads from Grant County in 1926.

In Spencer County, W. M. Howat, county agent, began work in 1924. Farmers considered alfalfa impossible. In 1925, 115 bushels of alfalfa were sown and 223 bushels in 1926, making about 1,300 acres on which alfalfa is growing well.

In Green County when County Agent Atkerson began work in 1924 alfalfa was practically unknown. He found marl but had a hard time getting anyone to use it, but succeeded in getting two men to use it. It did well. In 1925, six men spread marl and sowed alfalfa or sweet clover with uniform success. In 1926, 109 men sowed alfalfa and 60 men sowed sweet clover.

There are many other equally successful efforts upon the part of county agents, but these are cited as representative of successful efforts.

The crops field agent has supported the alfalfa campaign with news stories, posters, exhibits at the Bluegrass Fair at Lexington and at the State Fair, by personal work with county agent and a lime and legume meeting on the Experiment Station Farm which was attended by about 500 farmers.

Reports for 1926 show more than 37,000 acres sown by 857 farmers. The estimate for the entire State is 50,000 acres sown in 1926.





12. The western Kentucky method of curing soybean and cowpea hay.

SOYBEANS

Some outstanding examples of increase in soybean acreage are:

*Russell County:* When County Agent Sassar began work in 1924 he could find only three men who grew soybeans the previous year and these grew less than five acres each. In 1924, he induced 141 men to grow the crop. In 1925, he had 742 new growers, with only two of the previous growers failing to plant the crop. In 1926, 6,300 acres were sown. Two combined harvester threshers have been brought into the county. There is no railroad in the county.

*Spencer County:* With 125 bushels of seed planted in the county in 1924 Mr. Howat, the county agent, has succeeded in increasing the seeding to 5,800 bushels in 1926.

*McCracken County:* An increase thru the efforts of County Agent Johnstone from 1,660 bushels planted in 1925 to 3325 bushels in 1926.

The estimates for soybean plantings for the State are:

Planted with corn .....	40,000 acres
Planted for seed .....	6,000 acres
Planted for hay .....	125,000 acres
	<hr/>
The estimated total acreage for 1925	171,000 acres
was .....	95,000

## SWEET CLOVER

The estimate for the sowing of sweet clover in the State is 70,000 acres including the acreage in which it was used in a seed mixture. The seeding in 1925, was estimated at 30,000.



13. Lespedeza holding the gullies. Graves County.

## LESPEDAZA

County agents report a total of approximately 16,000 bushels of lespedeza seed sown in the spring of 1926 and approximately 16,000 bushels harvested in the fall of 1926. Most of the seed is sown in mixtures with other grass and clovers and a large portion is sown by itself on old pastures and meadows. Three hundred ninety-one men sowed lespedeza in old Bluegrass pastures.

Lespedeza hay was harvested this year for the first time in Bracken, Boyle, Nicholas, Pike, Owsley, Pendleton, Spencer, Anderson, Kenton and other counties while seed was harvested for the first time in Spencer, Shelby, Christian, Boone, Hopkins, Kenton and other counties. Lespedeza for pasture improvement is thus shown to have become widespread in the past three years and promises to be the cheapest and surest means to this end.

AGRICULTURAL ENGINEERING

The agricultural engineers carried on the following projects during 1926:

1. Control of soil erosion.
2. Drainage.
3. Sanitation and water supply.
4. Farm buildings.
5. Lime burning.

ORGANIZATION

As far as possible all work is done thru the county organizations as arranged by the county and home demonstration agents. The various lines of work are included in community programs of work with local bodies in charge. Where the work is new, such as is often the case with drainage and terracing, demonstrations are first established with interested farmers and an effort is made to convince them so thorly on the subject that they will be willing to serve as leaders of the work in their community.

TEACHING METHODS

1. Considerable personal instruction is given county agents on the various projects. Many of the agents carry on the work without the assistance of the field agent.
2. Demonstrators on whose farms demonstrations are conducted are given sufficient training or information so that later they may serve as local leaders.
3. Terracing schools are conducted during the early spring months and every farmer interested in the problem of erosion is invited to attend.
4. The benefits to be derived from tile drainage are kept before the people by large signs showing the cost of the drainage work and the increased yields which result from it.
5. With the cooperation of the field agent in Home Economics in charge of home improvement, the leaders of women's clubs were given instruction in the installation of simple water supply and sewage disposal systems. The leaders in turn presented the information to their local clubs.
6. Plans and instructions for building and burning lime kilns and limestacks are distributed thru the office and in circular form. Demonstratons in constructing lime kilns are conducted as arranged with county agents.

7. Farm building plans are distributed as requested thru the office. Special visits are made where the demonstration warrants and instructions are given to farmers and carpenters concerning reading blueprints and in construction details. New designs are made as the need for them develops. County agents are furnished office copies of plans in blueprint form.
8. The newspaper is considered a very valuable medium for teaching farm men and women. The material for newspaper stories is furnished thruout the year, the stories consisting of the results obtained from demonstrations which have proved to be of greatest value.

### *Soil Erosion*

The worn out, abandoned fields in many parts of the State are due in large measure to soil erosion. Terracing, in connection with cover crops and increased humus content, has proved to be an effective method for preventing erosion and an aid to the reclamation of worn out fields.

A new use for terracing in preventing erosion in Kentucky has been in connection with young orchards. Terraces have also been constructed in old orchards where erosion has been a serious problem. The Spring Hill Orchard Company, of McCracken County, terraced a 20 acre field in the spring of 1926 before planting peach trees. The trees made an unusual growth in spite of the drouth during early summer. More land will be terraced this winter for additional orchard planting. As a result of the Spring Hill demonstration, eight other terracing demonstrations were conducted by County Agent Johnstone.

A terracing school was conducted in Breckinridge County during January of 1926. Thirty-five farmers attended the school for two days. The forenoons were devoted to lecture work on the laying out and construction of terraces while the afternoons were spent in field work at which the actual work of terracing was done. This year 417 acres were terraced in Breckinridge County.

### *Drainage*

In 1924, a small tile drainage demonstration was established on the farm of Stanton Academy in Powell County, and because

clay tile could not be purchased economically it was recommended that homemade concrete tile be used. A hand tile machine was purchased and a small surplus of the tile produced was sold to adjoining farmers. From this beginning an industry has developed which provides employment for students at the academy, and furnishes tile to farmers in any quantity desired. This year ten thousand feet of four-inch tile and one thousand feet of six-inch tile were made and distributed to farmers of Powell County at a moderate cost. Without this local supply, practically no tile would have been used in the county.

Morgan County farmers have demonstrated the value of tile drainage to their neighbors by greatly increasing their crop yields without a great expenditure of money. With a cash outlay of \$100.00, Shade Combs has drained an old four-acre swamp. This year the land yielded 50 bushels of corn per acre.

R. K. Nickell, of Mize, Kentucky, increased the yield of an 8-acre piece of wet land from 15 bushels of corn per acre to 40 bushels per acre with an expenditure of \$125.00.

The highest average yield of corn per acre in Muhlenberg County was made on land that three years ago was considered practically worthless for agricultural purposes. The land was tile drained at a cost of approximately \$47.00 per acre. This year the average yield of corn per acre on a 13½ acre field was 70 bushels per acre.

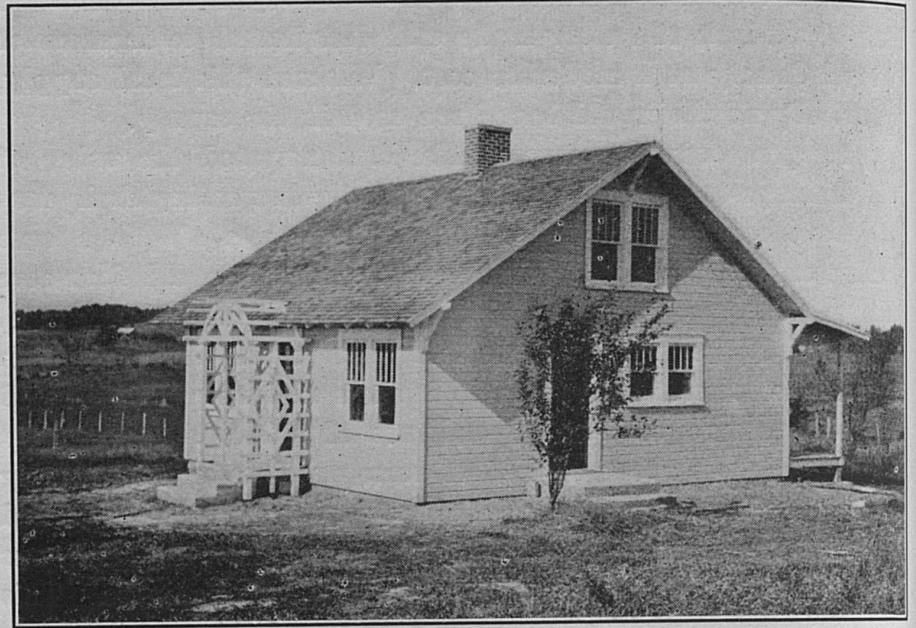
#### *Sanitation and Water Supply*

Approximately 40 percent of the water samples sent to the Public Service Laboratory for examination show sewage contamination. Only about one out of 53 rural homes has water piped into the house.

#### *Farm Buildings*

The farm building project was started in 1919 and since that time has made steady progress. The first year only 16 sets of plans were prepared and distributed. At present there are available for distribution 102 different sets of building and equipment plans, and this year 566 sets were sent out upon request into 90 different counties in Kentucky and also into 21 different states. Five new plans and a hog house circular were

prepared this year for distribution. During 1926 the county agents reported the following buildings having been built according to plans furnished: Barns, 92; hog houses, 133; poultry houses, 992; silos, 27 and other buildings 203, making a total of 1447 buildings.



14. An attractive, inexpensive, convenient, sanitary tenant house, built in Caldwell County.

The chief problems of the building project are as follows:

1. To demonstrate to farmers the importance of having more sanitary, convenient buildings and also that modern, convenient buildings may be constructed at a very little increase in cost over the cost of building the insanitary pioneer types they have been using.
2. To get some one in each of the various communities to erect a demonstration building according to plans so as to blaze the way for the rest of the farmers.
3. To teach carpenters, the essential requirements of farm buildings; how to read blueprints, and to encourage them to attempt new and better types of construction.
4. To design inexpensive, convenient, sanitary tenant houses.

*Lime Burning*

The factors determining the selection of the lime burning project are as follows:

1. A need for lime which can be hauled over poor roads for long distances in a concentrated form.
2. A need for lime which can be prepared for field use from materials on the farm without a cash outlay.

In Taylor County limestone rock is being burned, crushed and sacked and 500 tons have been sold to farmers in 100-pound sacks at \$5.50 per ton, which is much cheaper than other forms of lime can be secured. Natural gas is used as fuel; a gas well with a capacity of a million cubic feet per day was put down at a cost of approximately \$400.00. In order to establish the industry and create a market for the product on the small amount of capital available, kilns were first constructed of limestone rock with "eyes" running thru them. Modern draw kilns will be constructed later.

The burned limestone when crushed can be applied thru the fertilizer attachments of wheat drills and meets the lime requirements of the farmers in a very satisfactory manner.

County Agent M. H. Sasser of Russell County has had 53 lime kilns burned with a production of 680 tons of lime.

A condensed summary of the work accomplished under the project of agricultural engineering is as follows:

Amount of lime burned on farms, tons.....	1,383
Number of acres terraced .....	1,515
Number of acres tile-drained .....	1,670
Number of water supply systems installed .....	84
Number of sewage disposal systems installed.....	58
Number of farm buildings other than dwellings constructed .....	1,462

## ANIMAL HUSBANDRY

E. S. GOOD, *Chairman of Animal Industry Group*

## BETTER SIRES WORK

The work in Better Sires in Kentucky for the past year has dealt largely with replacing scrub and grade sires with purebreds. To this end use was made of purebred sires exhibits, news articles and surveys in addition to concentrated efforts in a few counties. The enrollment work for Better Sires members was continued as in former years. Kentucky still heads the list among the States of the Union in the total number of Better Sire members which she has enrolled. The number in the State to date is 3,450.

Special campaigns were conducted in Franklin, Lee, Boone, Union and Campbell Counties. Special mention should be made of Union and Campbell Counties. Union County has achieved the distinction of being the first county in the United States in using only purebred bulls. This work is the result of five years effort towards livestock improvement in that county. The work was started in Union County in 1920 while Lawrence Brewer was county agent and was completed with R. O. Wilson as county agent. The Better Sire work was placed before a committee of livestock breeders in Union County by the field agent in 1920. At least two weeks each year have been devoted to enrolling members in Better Sire work and holding Better Sire meetings in the county. At these meetings lantern slides and moving pictures showing livestock improvement have been used. Many districts in Union County did not have a single purebred bull five years ago. The county now has reached the point that all the bulls, jacks, stallions and boars are purebred. Ninety percent of the flocks of chickens are purebred. Five years ago hardly 10 percent of the flocks in this county were of pure breeding.

Six years ago the field agent met with a number of cattle breeders in Campbell County which meeting resulted in the formation of the Campbell County Cattle Breeders Association. When this association was formed, 90% of the bulls in use in Campbell County were of scrub or grade breeding. Several



meetings have been held each year in which better livestock breeding was discussed and a number of purebred sales have been held. The county has been thoroughly covered in this way. In 1924 a survey in the county revealed there were 119 grade and scrub bulls left. By January 1, 1926, this number had been reduced to 43. All of the owners of these bulls were visited by an extension worker from the College of Agriculture and a committee of local men interested in better livestock and as a result 27 of these remaining scrub sires were disposed of and replaced by purebred bulls. This leaves only 16 scrub or grade bulls in this county and all but three of the owners of these animals have agreed to replace them with purebred bulls.

A number of other counties are making rapid progress in this line of work. Several meetings were held this year in the mountain counties of Kentucky. A number of purebred beef bulls were placed in Breathitt, Owsley, Leslie and Morgan Counties this year. The plan now on foot to get more purebred animals into this section of Kentucky where many feeder and stocker steers are produced.

#### BEEF CATTLE

The work in Beef Cattle Extension has been carried on along the following lines: (1) demonstration in winter and summer fattening of cattle, (2) the replacing of scrub bulls with purebred beef bulls, (3) demonstrations as to what constitutes quality in beef, (4) the establishment of herds of beef cattle.

In demonstration work more emphasis was placed upon feeding methods which have shown the most efficiency and profit in the past. Sixty feeding demonstrations were held in 12 counties. Besides these a large number of other cattle feeders were influenced for better feeding through field meetings, movable schools, correspondence and news items.

During the year there was a continuation of the work in correcting the excess feeding of corn and cottonseed meal which was practiced in the past by many feeders in most sections of the State. These feeders are now using a more efficient and economical ration. On the other hand some men who were not using the proper amount of protein feed to balance the ration

have been induced to provide the same in proper amount by the use of a nitrogenous concentrate or a nitrogenous roughage. Considerable money was lost during the latter part of the year by those following the old methods of feeding. This was due in part to the low market during spring and early summer. Those cattle fed by methods advocated by extension workers returned a profit above all costs. The profit in some cases amounted to over \$30 per head.

In a demonstration conducted on the farm of Mr. Catesby Spears of Bourbon County in which one lot of steers was wintered on silage, grain and cottonseed meal and the other lot wintered on shocked corn, it was found that the lot which received the silage during the winter made cheaper gains and returned a larger profit to the owner, which results are in accordance with tests made at the Experiment Station. Both lots of steers were finished on grass with grain.

A demonstration on Chaney Brothers' farm at Woodburn, Kentucky, showed that 100 yearling steers made better and cheaper gains on sweet clover pasture than did 100 two-year-old steers.

In replacing the scrub bulls with purebred beef bulls, Union County again leads the counties in the State. Of the 140 purebreds in this county 120 are beef bulls. Through the extension workers in the State, 140 purebred beef bulls were placed in thirty counties. Most of these bulls replaced grades or scrubs.

An educational meat exhibit was shown at the State Fair which brought out plainly the difference in quality of cuts of beef from different grades of cattle. Loin and rib cuts were on display from a prime steer, a baby beef, a common steer and a cutter cow.

A number of new beef breeding herds were started in the State this year. This interest was especially evident in Bracken and Mason counties. In Bracken County the field agent assisted six different men to select good Angus breeding heifers and bulls. Each of these men started a herd of Angus cattle of good type and breeding. A purebred beef cattle breeders association was formed in Mason County. These men are selecting

good foundation stock. One carload of Hereford cows was sold this fall by one of the leading breeders of the State, in Mason County. These animals were purchased by different men in the association. Cows and heifers of high grade or pure beef breeding were placed on 56 farms in 17 different counties.

Beef cattle field meetings and tours were held in Oldham, Mercer, Boyle, Union, Caldwell, Madison and Fayette Counties. All of these meetings were well attended by the cattle feeders of their respective counties.

#### SHEEP

In 1920 the large packers stated that Kentucky produced some of the best lambs in the country, but that the comparative percentage of choice lambs was far too small and that lambs from the western part of the State were noticeably poor in quality. One big packer referred to western Kentucky lambs as "tree climbers." "They are leggy, rough and bucky," he said. "You fellows need to castrate lambs and use more purebred bucks." With this information from the packers together with a working survey of the sheep industry of the State, a lamb standardization campaign was begun which has since been prosecuted under four main heads as follows:

1. The use of purebred rams as flock heads.
2. Trimming lambs so they may be marketed in car lots as ewes and wethers.
3. Control of stomach worms thru periodical drenchings and rotation of pastures.
4. Better feeding and management.

This has been an aggressive campaign conducted thru barn meetings and demonstrations, state and sectional lamb improvement conferences in which the leading packing companies from Chicago and the East have cooperated by furnishing speakers. Motion pictures have been used to some extent. A two-reel production "A Kentucky Product" and the one reel production "Blood Will Tell" having been especially prepared for the purpose. These productions have been shown in practically

every part of Kentucky and have been an important factor in the teaching of better methods of production.

#### CASTRATING AND DOCKING LAMBS

The castrating of lambs is now a general practice with more than 70 percent of Kentucky sheep owners, while at the beginning of the campaign six years ago only a small percent made it a general practice. Actual sales figures on more than a million lambs show that castrated lambs average at least one dollar a hundred pounds more than buck lambs. The difference is less in the early season and greater during July, August and September. The 793 demonstrations up to 1926 in which more than sixty thousand lambs were handled has resulted in most of the farmers being able to do their own work.

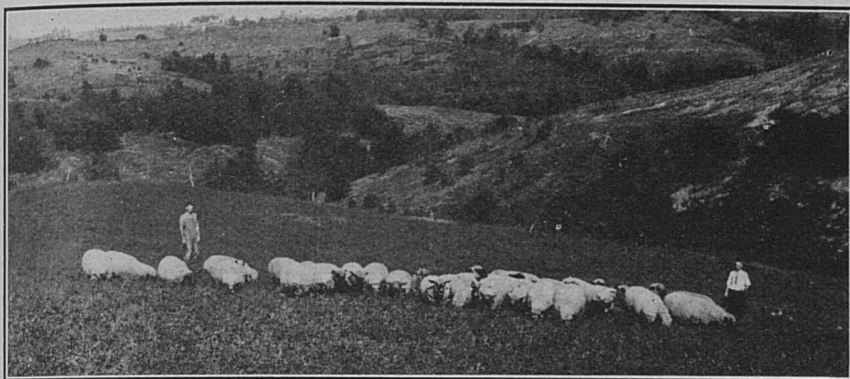
#### STOMACH WORMS

A dry spring and early summer during 1926, largely prevented stomach worm trouble until late summer. The wet, late summer and early fall, however, was ideal for infestation and as a result many sheep owners suffered heavy losses. Fifty-four drenching demonstrations where 3,240 sheep were handled were conducted by the extension field agent largely in counties without agents. While the treatments by bluestone, nicotine sulfate and iodine were all used at different times with the various demonstration flocks, the iodine seems to have largely won the favor of the farmers. One thing, however, stood out clearly during the past season, the farmer who drenched his flock early in the spring, and continued the treatment at intervals until cold weather, had no trouble from stomach worm infestation.

#### PUREBRED RAMS

As Kentucky purebred breeders were unable to meet the demand for purebred animals, the College gave the usual assistance in locating and selecting desirable breeding sheep. Two hundred and seventy-six head were located in the northern states and by the field agents.

These make a total of 2,244 head of purebred sheep brought to Kentucky as a result of extension sheep work since the beginning of the campaign in 1920. This is thought to be the largest number of purebred sheep ever brought to any State in America east of the range section in a similar period of time.



15. Typical hill country land with flock on alfalfa in the foreground.

Fortunately most of these shipments went to sections of the State where farmers were not making extensive use of purebred rams and instead of injuring the demand for Kentucky bred rams, greatly increased it by opening up new territory. An example can be had in the case of Grant County where five years ago there were practically no purebred rams and where seven car loads of purebred sheep have since been shipped in. During this period Grant County farmers have purchased more purebred rams from Kentucky producers than ever before. Hopkins, a small sheep county in western Kentucky, had but few purebred sheep three years ago. She now has nearly two hundred head. The interest started with a small purchase of purebred rams and now arrangements have been made for a purebred sale at Madisonville in cooperation with the Kentucky Accredited Purebred Sheep Breeders Association next year.

The Kentucky Accredited Purebred Sheep Breeders Association organized three years ago has become an effective agency in furthering the purebred industry of the State. While the plan of organization originated with the Agricultural College,

the governing body of the association is an executive committee. The committee for 1927 is composed of William Belknap, William Hinton, Richard Cobb, P. B. Gaines, J. D. Weil, Owen Booker, W. W. Cassidy, Carl Kinzer, A. J. Thaxton, T. P. Black, Norton Garth, and S. K. Warrener. The purebred sale conducted by the association in Lexington during 1926 was a decided success. Plans call for two sales during 1927, one in central and the other in western Kentucky. Membership in the association is limited to owners of accredited purebred flocks.

Two years ago an eastern packer reviewing the quality of lambs coming to market from Kentucky stated that in his opinion the standardization campaign was saving the state one-half million dollars annually. On October 26, 1926, Jonas Weil, a leading lamb buyer in central Kentucky, prepared a statement for publication part of which follows:

"It can be safely stated that good ewe and wether lambs are worth at least \$1.00 per hundred pounds more than good mixed buck and ewe lambs for the reason that buck lambs are uncertain as to good color of meat and dressing percentage while ewe and wether lambs kill more consistently and dependably. . . . When strictly ewe and wether lambs are sold against ewe and buck lambs there will be a difference of \$1.00 per hundred pounds and when there is a plentiful supply of ewe and wether lambs a full \$1.50 may be the difference. . . . Buck lambs can not be held back after a certain age and must be marketed regardless of low prices while in case of ewe and wether lambs when market prices look unfavorable, the reduction of supplies quickly stiffens prices.

"The man who still insists that he gets by with his buck lambs would soon find out that if all his neighbors followed the same method he would be a sure failure as a lamb producer and the wonderful reputation built up for Kentucky standardized lambs would fall flat and we would all be losers. . . . Ewe and wether lambs can be kept over as feeders and marketed in the fall and bring good prices. . . . I would place the value of lamb standardization work in the bluegrass counties from three hundred thousand to one-half million dollars annually."

#### MEETINGS

A total of 128 field meetings including demonstrations in grading market lambs, drenching of sheep for stomach worms

and the classing of breeding sheep, were conducted during 1926, with a total of 4,641 people in attendance at these meetings.



16. The cost of producing pork was materially reduced on this Fayette County farm by the use of rye pasture during the late fall, winter and early spring, according to cost accounts kept under the direction of the field agent in Farm Management.

### SWINE

A successful program of swine extension work has been completed this year including the following projects: (1) Ton Litter Demonstrations, (2) Demonstrations of the Cutting and Curing of Pork, (3) Demonstrations of Swine Sanitation, (4) Rendering Assistance in Increasing the Use of Purebred Hogs over the State, (5) Demonstrations of Proper Feeding and Hogging Down Corn.

#### TON LITTER WORK.

This was the most successful year of ton litter work. One hundred and sixty-five farmers were enrolled in the contest. Of this number 90 finished the work and 65 grew litters that weighed a ton or more at 180 days of age. The 90 litters weighed 196,159 pounds, an average of 2179.5 pounds per litter. Since the average number of pigs raised per litter was 9.85, this was an average weight of 221 pounds per pig. The cost per hundred pounds of pork produced was \$7.34 and the selling price \$12.90. This shows that the margin of profits was \$5.56 per hundred pounds of pork or \$120.71 per litter. The cost records took

into account the feed costs, a labor and pasture charge. Other items of cost were offset by the manure produced by the pigs. Several business firms donated prizes in cash and commercial products valued at \$1,000. The Kentucky State Fair also offered \$325 in cash prizes on litters shown at the Fair. Ten litters were shown.

#### CUTTING AND CURING PORK.

Great interest was shown in the improvement of the home pork supply. Twenty-nine demonstrations were given by the field agent with an attendance of 723 farmers. At each demonstration a man was taught to do the work. One Breathitt County farmer has given 15 demonstrations in two seasons to his neighbors. At these demonstrations, the thoro cooling out of pork previous to putting it into cure was stressed. Thirteen demonstrations were given by county agents. The agents report that interest is increasing in the proper cutting and curing of the home pork supply.

#### SWINE SANITATION

Demonstrations of raising hogs among sanitary surroundings have proved that they can be grown undisturbed by the common parasites and ailments. This system is known as the McLean County (Illinois) system and has for its chief purpose the prevention of round worms in hogs. This system, modified, was employed by the majority of the ton litter contestants with the result that the high average of nearly 10 pigs raised per litter was made by ton litter feeders, as opposed to the state average of a little more than 5. Fourteen demonstrations were given in administering treatment for round worms.

#### PUREBRED BREEDING HOGS

Assistance was given in locating and selecting 156 purebred breeding hogs. One hundred mimeographs containing abbreviated feeding directions on feeding and caring for breeding hogs were prepared by the field agent and mailed to club members.



PROPER FEEDING AND HOGGING DOWN CORN

Seventeen demonstrations of the proper feeding of hogs and hogging down corn and soybeans were finished. In one case a farmer received \$1.47 a bushel for the corn and soybeans that he hogged down.

## DAIRYING

J. O. BARKMAN, *Acting in Charge.*

## DAIRY EXHIBIT

In order to carry to the people pertinent dairy information a dairy exhibit was sent to six county fairs. The educational dairy exhibit housed in its own tent and transported by truck took dairy information to about 10,000 people. The tent housed valuable information pertaining to good practices for successful dairying, as follows:

1. The value of the silo as to its economy for furnishing feed and its necessity as part of dairying.
2. The value of the legume feeds and the importance of growing these on the dairy farm and the methods of successfully curing these crops.
3. The value of the purebred sire for permanent improvement in the dairy herd and the purebred bull association.
4. The importance of the cow testing association from the standpoint of profit by weeding out the unprofitable cows and also the increased production received in stock from the high producers.
5. The advisability of properly caring for milk and cream, the value of marketing when fresh and methods of handling under farm conditions that would make this possible.
6. A model dairy barn was displayed to show proper construction, installation of equipment necessary for a well managed dairy.
7. The value of perservation of manure and methods of handling was stressed.

Two representatives of the College answered questions and gave information to visitors. The exhibit was displayed at the following county fairs: Green, Taylor, Woodford, Jefferson, Fleming and Bracken. The expense of preparing this exhibit was shared by the Kentucky Dairy Products Association.

## COOPERATIVE PUREBRED BULL ASSOCIATIONS

There are now 22 cooperative purebred bull associations in Kentucky formed for the joint ownership, use and exchange of good bulls. The members of each association have cooperatively purchased excellent bulls to use in their herds. These associations are located in the following counties: Pendleton; Mc-

Cracken, 2; Campbell, 3; McLean; Grayson; Muhlenburg, 2; Boyd; Taylor; Warren; Graves; Shelby-Spencer; Bracken; Mason and Harlan. During 1926 the following bull associations were organized: McCracken, 2, composed of 27 farmers owning 300 cows; Pendleton composed of four blocks, 48 farmers owning 190 cows. A new block was added to the Holstein bull association in Campbell County.

#### BOYS' AND GIRLS' DAIRY HEIFER CLUBS

There are now 25 Boys' and Girls' Heifer Clubs in Kentucky. During 1926 the following clubs have been organized: Fayette, Pendleton, Caldwell and Trimble. Todd County reorganized with 85 members.

#### COOPERATIVE COW TESTING ASSOCIATIONS

During 1926 two cow testing associations have been organized; in Shelby County 25 farmers testing 450 cows, and the Oldham-Jefferson Association composed of 26 farmers testing 425 cows. Work was also started in Hopkins County.

#### PUREBRED SIRE CAMPAIGNS

These campaigns have been held in Franklin, Campbell, Caldwell, Carlisle, Laurel and Boone Counties. Sixty-six bulls have been placed in these counties as a result of this work.

#### CATTLE BREEDERS ASSOCIATIONS

There have been organized two cattle breeders associations, one in Breckenridge County composed of 14 members with a program of work adopted which consists of purebred sire work and abortion testing of all the herds, and the other in Christian County with 15 members, with a program of work consisting of Register of Merit testing and junior calf club work.

#### REGISTER OF MERIT TESTING CIRCLES

A Register of Merit testing circle composed of 16 breeders has been organized in Christian and Todd Counties for obtaining official records upon their cattle.

## GROW YOUR OWN FEED CAMPAIGNS

Hundreds of farmers have been reached in meetings, personal visits and otherwise to make use of those crops which can be produced on the farm for feeding their cows. For the year of 1925, 31,365 tons of dairy feed were sold in the State or 6,740 tons less than in 1924. One reason for this is a tendency on the part of many feeders to grow more materials on their own farm and buy only the materials necessary to supplement their home grown products.

## MISCELLANEOUS EXTENSION WORK.

The dairy field agents prepared the dairy exhibit for the Kentucky State Fair, one served as assistant superintendent of dairy cattle at both the Kentucky and Bluegrass Fairs and one as superintendent of dairy products at the Kentucky State Fair. Dairy field agents judged dairy cattle at several county fairs. The dairy extension staff have helped many individual farmers with their problems during the year, have prepared numerous articles for the press and have assisted in the upbuilding of the dairy herds at the State Asylums.

## POULTRY

J. HOLMES MARTIN, *In Charge*

In undertaking extension work in poultry, the State had been divided into three sections with a field agent definitely assigned to each section. The same general projects are used thruout the State with slight variations made to suit local conditions.

During the year the work was outlined under the five year poultry improvement plan, using the following projects:

1. Standardization or Community Breeding.
2. Culling and Selection.
3. Winter Egg Laying Project.
4. Farm Flock Demonstrations.
5. Certification of Poultry Flocks.

The chief problem is the low egg production per hen, due to poor quality stock and improper management. The above mentioned projects are outlined with the idea of taking each county thru an orderly process of development, thereby getting better stock on the farms, these flocks being culled annually, fed a balanced ration and housed properly. The method of procedure has been as follows:

### STANDARDIZATION OR COMMUNITY BREEDING

Purebred hatching eggs and breeding stock are distributed. In this project, bankers, produce dealers, poultry associations and business organizations cooperate by putting out eggs from purebred flocks either at cost or on the plan of getting back one pullet, two cockerels or one dollars worth of produce in the fall for each setting distributed. This produce is then sold to reimburse the cooperating organization. If pullets or cockerels are returned, they are graded by one of the poultry field agents and sold at auction.

During the second year standardization is continued and culling demonstrations are given in the county. These are usually given on the farms where eggs or stock were placed the year before. In some cases where there is considerable pure-

bred poultry in the county, culling demonstrations are given the first year.



17. Used as a poultry house by a farmer in McCracken County before Extension Division representatives visited his place and induced him to enroll as a demonstration farmer.

The third year's work consists of enrolling poultrymen in the Winter Egg Laying Project in addition to the first two year's work being continued. In the winter egg laying project the cooperator keeps a record of the egg production from November 1st to March 31st. This project is for the purpose of stimulating interest in better feeding methods and also to give the county agent a line on people who would make successful demonstrators the next year.

During the fourth year those poultrymen who secured good results in the winter egg laying project and who have good stock and equipment are enrolled in the Demonstration Flock Project. These people agree to keep complete records on their poultry flocks and to follow as nearly as possible the recommendations made to them by the county agent and field agent. These farms then serve as demonstrations of approved poultry

practices. In order to show these methods to others, meetings of various kinds are held on these farms.

The fifth year is the Certification of Farm Flocks. All flocks that have successfully served as demonstrations for one year have gotten satisfactory egg production, have good buildings and equipment and meet the requirements of the executive committee of the Certified Poultry Breeders Association and the College of Agriculture, are eligible to be certified. This work consists of banding with a sealed leg band the eligible hens in the flock. These are then mated during the hatching season to male birds from 200 egg hens. Eggs from these hens may be sold as certified eggs and cockrels raised may be sold as certified after they have been handled and banded the same as the hens were. The purpose of this project is to develop a supply of breeding stock that is from strains of known high production. The distribution of these cockrels should increase the egg production of the flocks to which they are added.

The ultimate State goal is to make every flock of chickens in the State profitable. The immediate goal is to have demonstration farms in every community in the State in order to show the value of practices recommended by the Agricultural College.

Subject matter is taught principally thru two agencies, namely: County Poultry Associations and Demonstration Poultry Flocks. Many of the county associations have adopted an educational program which constitutes regular meetings that are held for the purpose of discussing poultry problems. Some of these meetings are held on farms of the members while others are held in the county seat. These meetings have been very helpful in disseminating subject matter and in keeping the members interested in the Association. Field meetings are held on demonstration farms. These are all day meetings in which the morning is taken up with an inspection of the stock and equipment and the afternoon with a program. This program usually consists of talks by a few local people, the county agent and the field agent. County tours are also held in which three or four of these farms are visited. On these tours one definite practice is pointed out on each farm.

Other methods of teaching subject matter are general farm meetings, culling and caponizing demonstrations, poultry short courses put on in cooperation with the County Poultry Associations, and demonstrations and talks given at poultry shows. This project has been carried on for a number of years thruout the State and is not needed as much as it was a few years ago. There are however, some new counties in which the project was used this year for the first time. In Franklin County the State National Bank cooperated by putting out 2,000 settings of Barred Plymouth Rock and Rhode Island Red eggs. The Blue Grass Produce Company, Carlisle, continued to distribute eggs for the third year. Many other organizations, especially county poultry associations put out a number of eggs, but the breeders kept the pullets which eliminated the necessity of holding a pullet sale.

During the year four new county poultry associations were organized. These are a direct result of the standardization work and are organized as soon as there is a demand from the poultrymen in the county for such an organization.

#### CULLING AND SELECTION

Due to the fact that culling work has been carried on in most of the counties for a number of years nearly all the county agents are qualified to carry on this work without assistance from the field agents.

#### WINTER EGG LAYING PROJECT

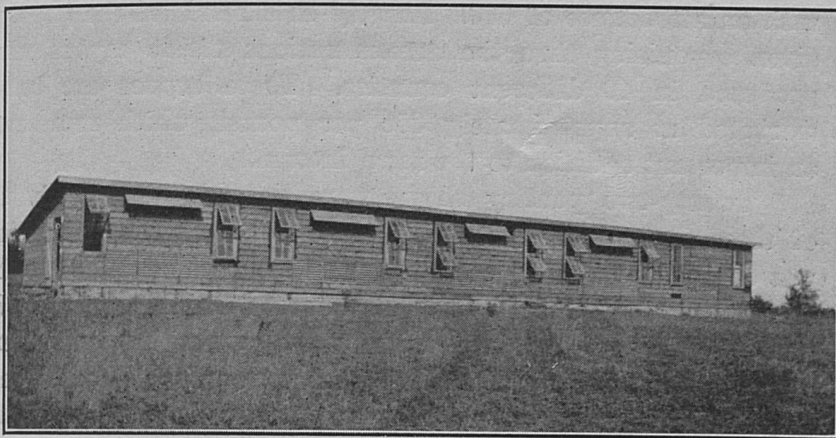
This project is carried on altogether by the county agents. The Poultry Section cooperates by furnishing the Poultry Calendar (Extension Circular 175) and cards for reporting the monthly production. This project is carried on by most of the county agents, the number in each county varying from 10 to 200.

#### FARM FLOCK DEMONSTRATIONS

This project is not only growing in popularity each year, but also in results obtained. During the year 299 flocks in 57



counties were enrolled in the project and 224 of these completed the year's work. During 1927, there will be an effort made to increase the quality of these demonstration flocks rather than the number. There will be demonstrators enrolled in a few more counties as there are now approximately 80 counties in which work is being done.



13. This house was built after the man had kept records on his flock housed in the shack. This good house enabled his hens to be more efficient.

During the year 317 visits were made to these farms for the purpose of helping the cooperators plan their work or to arrange for meetings or tours. There were also 183 visits made to other farmers, most of which were for the purpose of getting new demonstrators for future years. Twenty-two field meetings were held with a total attendance of 827. Five tours with a total attendance of 412 were held.

#### CERTIFICATION OF POULTRY FLOCKS

During the fall the certified poultry breeders association financed the employment of Mr. J. C. Acree to assist with this work. In all 183 flocks, 5184 hens were certified. The interest in this project is growing each year.

The great development during the year has been the increase in the number of poultrymen trap-nesting their flock. This is a result of the certification project.

Another advancement is shown in the record made by a number of poultrymen this year. Nine flocks averaged over 200 eggs per hen which shows the value of constructive breeding and improving the flocks.

#### MISCELLANEOUS AND EMERGENCY WORK

During the year 28 caponizing demonstrations were given with an attendance of 633. Largely as a result of the impetus given caponizing thru the demonstrations 48,880 capons were produced in 40 different counties. These capons are being marketed at approximately 35c per pound, which represents an important addition to the farm income.

Twenty-two poultry shows were judged. Practically all of these shows were essentially educational and no admission was charged. In many cases the placings were explained to the exhibitors. Eight poultry schools were held with a total of 370 people attending. At sixty general farming meetings, talks were given to 3,834 people. Breeding pens were selected for 26 persons. Six leaders' conferences were attended and the poultry work explained.

VETERINARY SCIENCE

W. W. DIMOCK, *Head of Department*

The Veterinary Service of the Extension Division has been rendered mainly thru educational meetings, demonstrations, farm visits for the purpose of diagnosing disease, giving advice as to its control, consultations with veterinarians, county agents, farmers and stockmen, and other allied interests for the control of diseases of livestock and poultry.

This year considerable time has been given to poultry diseases, due to the economic importance of poultry. Bacillary White Diarrhea, in poultry is becoming more prevalent because the disease is spread thru infected eggs and baby chicks. Meetings were held in eight counties of the State and demonstrations were held on bleeding of poultry for testing for bacillary white diarrhea. In these demonstrations 826 birds were bled. The different diseases and parasites of poultry were also discussed at these demonstration meetings since the object of this work was not only to render assistance where disease was present, but also to establish sources of supply for those who desire to purchase healthy chicks and disease free eggs for hatching. Assistance rendered to hatcheries in the State, which expect to hatch chicks from blood tested flocks, will mean the bleeding of about 5,000 head of poultry for the test. Several outbreaks of disease in large flocks in counties, where the owners did not have veterinary service, were visited and diagnosis made. Some of these flocks had sustained heavy losses.

Outbreaks of disease have occurred in different parts of the State and caused alarm, because the nature of the disease in question was not understood and was new to the community. A disease of cattle resembling Infectious Cellulitis and characterized by skin eruptions, sloughing and abscess formation, made its appearance in several counties in the State during the late summer and early fall. In one county this condition developed in dairy cattle on about 40 farms. Some of the herds were quite large.

Mycotic Stomatitis developed in the western part of the State and caused alarm because it resembled foot and mouth

disease. An immediate diagnosis was made to dispel the alarm, and treatment was suggested.

Necro-bacillosis of sheep manifested by lip and leg ulceration and foot rot forms was the cause of visits made to thirteen farms in one county.

Hog cholera was responsible for many visits. Other diseases of swine were diagnosed and suggestions were made concerning disorders to digestion. During the year 172 farms were visited on such missions.

#### EDUCATIONAL WORK ON THE IMPORTANCE OF TUBERCULOSIS ERADICATION

This work has been carried out by holding 31 meetings in four counties in the State. The county agents, veterinarians and others have assisted the Extension Veterinarian in an endeavor to enlighten the citizens concerning the control of this disease. The economic loss from tuberculosis is great, but considering the fact that bovine tuberculosis is readily transmitted to human beings, the value of this work becomes more apparent. The counties in which educational meetings were held are Lee, Oldham, Bracken and Daviess.

#### FARM SANITATION AND PREVENTION OF DISEASE

Many farms visits were made to advise stockmen and farmers how to eradicate and control both contagious and parasitic diseases present in the herd, also how to do away with infection harbored on the premises. One of the most insidious diseases dealt with is contagious abortion.

Six hundred and ninety-seven head of cattle were tested for abortion. Demonstrations on the drawing of blood were made for veterinarians who desired help. Examinations concerning infectious abortion were made in twenty-one counties. The spread of this disease is of great economic importance. A paper was read at the sectional meeting of the National Holstein Friesian Association of America, on "Abortion and Its Control." One outbreak of Johne's disease was investigated and control measures outlined.

## HORTICULTURE

C. W. MATHEWS, *Head of Department*

### POMOLOGY

The report of Pomology extension work can best be given as a progress report on work, started this year, as well as during the past years. It takes some time to grow such crops as tree fruits and berries and each year's operations are merely steps in the development of such enterprises.

The work in Pomology has been directed along six main lines:

1. Management of commercial orchards.
2. Planting new orchards.
3. Developing a cooperative peach packing organization in the Purchase Region.
4. Care of farm orchards—Spray Rings and Junior Club Work.
5. Strawberry production—fertilizers and crop rotation.
6. Cool storage of apples.

Some of the problems confronting the Kentucky Fruit Growers in 1926, were as follows:

1. Insect and disease control.
  - a. Dusting vs. spraying.
  - b. Will lime sulfur sprays in early spring hinder a set of apples?
  - c. Can a combination of bordeaux and government oil emulsion be successfully used for dormant spraying of peaches?
  - d. Tarnish plant bug injury to peaches.
2. Are we using too much nitrogenous fertilizer on apples and peaches?
3. Cultivation vs. sod for bearing apple orchards.
4. Maintaining loyalty in the Strawberry Association.
5. To what extent can the commercial planting of strawberries and peaches be profitably expanded in Western Kentucky?

### TEACHING SUBJECT MATTER

During the early part of the year a series of field meetings was held in the commercial apple, peach and strawberry sections. At these meetings the general subjects of pruning, spraying, fertilization, culture, preparation for market, etc., were discussed in considerable detail and cooperators were selected. In several

counties all this work is carried on thru local fruit growers societies which are organized strictly for educational purposes, and not as buying and selling organizations. These groups meet at definite periods thruout the year.

#### ORCHARD MANAGEMENT

During the past several years spraying has been a limiting factor in the production of marketable fruit. With this fact in mind a considerable share of the discussion presented at the winter meetings of the various County Fruit Growers' Associations was that of more timely and thoro spraying operations thruout the season.

A general survey of the 1926 fruit crops shows that insects and diseases have been controlled more satisfactorily than ever before in the commercial orchards with the possible exception of codling moth. Apple scab in the Winesap and Delicious orchards thruout Kentucky was very satisfactorily controlled this season. The prepink and pink sprays with lime sulfur are now a general practice. San Jose scale, which only two years ago destroyed so many trees, is now well under control, probably due largely to the invention of the government oil emulsion, and more thoro work in applying sprays. The oil preparations have proved to be low in cost, convenient to apply, and in general far more satisfactory than the concentrated lime sulfur for the dormant spray.

Peach leaf curl, a fungus causing defoliation of peach trees in early spring, has been completely controlled by the standard Bordeaux mixture being added to the government oil emulsion. This combination for dormant spraying of peaches was used in Kentucky for the first time in 1926, reducing the cost of this winter spray more than fifty percent.

#### DEMONSTRATION PEACH ORCHARD

Production records have been continued in the B. W. Scott peach orchard in Kenton County. This little orchard better serves as a living monument to the value of a systematic detailed program of peach orchard management than any other fruit

extension work of northern Kentucky. A field meeting was held in this orchard about ten days before the fruit ripened, and was attended by growers from four counties. Mr. Scott, in discussing his methods of management, pointed out that no one or two factors were responsible for a crop of fruit like that on his trees, but that it was a general combination of pruning, fertilization, cultivation, spraying and thinning that was responsible for his success on this block of trees.

The following figures tell the story of the orchard:

One hundred and forty-five trees were planted in spring of 1919, on slightly less than an acre of land.

1922—138 bu. @ \$1.60 .....	\$220.80
1923—238 bu. @ \$2.95 .....	613.10
1924—396 bu. @ \$2.85 .....	1,028.60
1925—552 bu.—	
522 bu. No. 1 @ \$2.52	
30 bu. No. 2 @ \$1.50 .....	1,391.04
1926—704 bu.—	
470 bu. No. 1 @ \$1.54	
34 bu. No. 2 @ \$1.00.....	1,084.16
	\$4,337.70
Total income since 1919 .....	

All the crop is sold to a fruit commission dealer in Cincinnati. The above listed prices are the net returns to Mr. Scott, after paying the selling charges.

It is interesting to know that Mr. Scott always finds a ready sale for his peaches, in spite of a glutted market. This season, during the Elberta movement, mongrel northern Kentucky peaches were a slow sale on the market as prices of 50c to \$1.25 per bushel, yet there was always a fair price for quality fruit.

#### THE McCracken County Peach Growers' Association

The McCracken County Peach Growers' Association produced and marketed their first commercial crop of peaches in 1926. Forty-six car loads were sent to northern markets, besides several thousand bushels sold and consumed around Paducah. The College has taken an active part in this development since

1922. When the first meeting was held in the Paducah Court House in July of 1922, to discuss the desirability of growing peaches commercially, there was only one farmer in the county who grew as much as five acres of peaches. From the very start, cooperative efforts were advised. As a result all nursery stock was ordered thru their own association at a big saving, and plans were gradually made for all peaches to be graded and packed in a centrally located house, so as to establish a high standard of pack.

#### PLANTING NEW ORCHARDS

The commercial peach acreage of western Kentucky has gradually increased during the past 12 months. Graves County has planted 225 acres, Carlisle County over 100 acres, and McCracken County over 250 acres, Jefferson County 150 acres and Webster County 100 acres. All this planting has been limited to the Elberta with about 20 percent Hale.

When discussing possibilities with men interested in peach growing, considerable care is taken not to over-sell the idea. In general, the competing crops now raised on the general farm of these localities are dark tobacco, corn, small grains or horticultural crops such as berries and sweet potatoes. With the possible exception if sweet potatoes and strawberries as a cash crop, the peach growers feel they can grow peaches at \$1.00 per bushel, f. o. b. western Kentucky towns, and compete with other farm crops raised in their sections.

#### FERTILIZER AND PRUNING DEMONSTRATION PLOTS FOR APPLES

The failure of several Henderson County orchards to set a crop in 1924 and 1925 led several of the prominent growers to agree that the crop was being destroyed by lime-sulfur sprays in the pink and calyx sprays. In order to verify this contention a block of about 2 acres in the bearing orchard of Mr. Ben E. Niles was used and the complete schedule of liquid sprays applied. All the rest of the orchard was dusted with a modern duster. In addition to this spraying work, pruning and fertilization work was included. This demonstration will be con-



tinued five years. During this time harvesting records will be kept, general vitality and vigor of the trees studied, together with the comparative merits of dusting vs. spraying.

#### COMMERCIAL STRAWBERRY GROWING

The Paducah strawberry association has gradually expanded until this year the organization, with 1,020 members, harvested 1,800 acres, shipping 217 car loads, at an average price of over \$4.00 per 24-quart crate, above the marketing charges, returning \$401,000.00 to the section. A still larger acreage will be harvested in 1927.

The commercial acreage has also increased in the Bowling Green, Franklin, Russellville, Pembroke and Hopkinsville sections. Henderson County planted approximately 140 acres, and Hopkins County planted 65 acres.

All these sections are working along conservative lines, gradually substituting an acre of berries for an acre of tobacco or in other words, adding a new cash crop to their present system of farming.

George Button, a Simpson County farmer near Franklin, became dissatisfied growing dark tobacco and selling at very low prices and planted a commercial acreage of berries in the spring of 1925. In 1926 from this 10 acres of berries he marketed 1,208 crates, at an average price of \$3.25, returning \$3,926.00. Allowing the customary charge of \$1.00 per crate for the crate, picking, packing and hauling, he received \$2,926.00. In addition to his berry acreage Mr. Button has 12 acres of young apple orchards near bearing age, and slightly less than 3 acres of peaches in their sixth growing year, from which he sold over \$1,000.00 worth of peaches this year.

#### WORK WITH JUNIORS

Thru Junior Club work the interest in farm orchards has been developed considerably in 1926. Realizing that Junior Club members are eager to take up new lines of work, and that they are not alarmed about having to use various chemicals for spraying, a project was prepared in conjunction with the Club Department.

The club member agrees to care for from 8 to 15 trees, apply a fertilizer, at least three sprays, exhibit ten plates of fruit at the State Fair and keep cost accounts and harvesting records.

A good sized barrel sprayer was purchased on credit by the club and was paid for from the returns of the orchards. All trees were either well manured or else treated with about five pounds of nitrogenous fertilizers in early spring.

The six members of the Breathitt County club cared for about 10 trees each, at a cost of less than 25c per tree for spray material and fertilizer. The average production was 3.6 bushels per tree. These orchards in the club project were the only orchards for the section to bear clean crops of fruit that were marketable. The club fruits sold at \$2.00 to \$3.00 per bushel, in competition with mongrel fruit grown in the county selling at 50c per bushel.

More than fifty boys and girls of club age plan to enroll in the project in 1927 in Breathitt County, as a result of this year's activity.

#### FARM STORAGE FOR APPLES

The fruit grower who has built his own marketing organization during past years, better realized its value in handling the 1926 crop than ever before. With the largest commercial apple crop ever produced in Kentucky, as well as thruout the United States, the grower who has always depended on selling his entire crop to some buyer at harvest season was unlucky this season.

Fortunately there are enough farm cool storage houses thruout the State to demonstrate their value, especially during a year like 1926, for such a storage enables the grower to hold his crop until the low grade, mongrel fruit from the nearby orchards gets out of the way. With the exception of the Henderson and Paducah sections, the local grown fruit is off the market before Christmas season, leaving an open market for the man who has a farm storage house and cares to cater to local sale.

#### ORCHARD TOURS

Orchard tours continue to be a popular method of developing horticultural work. The usual number of tours, about 14,

were held in 1926. The largest of these was in McCracken County in late July. In spite of a very hot day and thick dust everywhere, over 700 attended the tour. At one time during the day 172 machines were in the line of march. The Henderson, Graves, Carlisle and Jefferson County tours were especially well attended.

The fruit display at the State Fair shattered all previous records for magnitude and quality. The competition was far closer than ever before, especially in the various peach and apple classes.

The Second Annual Peach Show, sponsored by the Paducah News-Democrat, was a great improvement over the 1925 show, in volume, general attractiveness and local interest.

The Fifth Annual Strawberry Show of the Purchase Region, sponsored by the Paducah Evening Sun, also held a larger show than in any previous year. Approximately 100 crates were entered for the \$250.00 of prize money.

#### VEGETABLE GARDENING

Among the chief problems confronting vegetable growers is that of increasing revenue from potatoes, sweetpotatoes, tomatoes, beans and pickle cucumbers, and to increase the efficiency of home gardens thruout the State.

There are several other problems such as those of groups of garden serving city markets or shipping markets, also of public institutions who strive to produce their food supply themselves.

#### POTATOES

The ultimate goal in the work with potatoes is to use no seed except those that are certified or of certified grade. The State goal for 1926 was not definitely set except that it was to be an increase, as large as possible, over 1925, in the substitution of certified potatoes for common seed stock. Seed certification was to be expanded 10 per cent. This project is more or less statewide, but particular stress is placed on certified growing in the counties of Jefferson and Fayette.

The matter of using better practice in growing potatoes and certified seed in place of common seed was presented in talks before community meetings. To swell the list of certified growers a letter was sent to selected men and those who replied were further consulted personally. One home garden patch in each community was to carry a demonstration of certified compared with common seed. Field meetings were held at which staking of good and bad hills was done, the two kinds of hills were dug separately and weights taken.

The demonstrations to emphasize the superiority of certified seed potatoes remain as being the most striking, since the crop is of such universal interest, since the time required is so short, and since the results are so easy of measurement. The innovation, this year, of staking mosaic and spindle tuber hills before the disease has progressed to the point that the laymen can see it, is almost as striking. This method is used to convince men who refuse to believe that their own stock is faulty.

Eight new certified potato growers were added, these growing 52 acres of certified seed. The total acreage for Kentucky in 1926, was 257 acres.

Records from "staking demonstrations" show a very satisfactory increase for "good" hills over those staked as "diseased."

#### SWEET POTATOES

Since sweet potato growers suffer loss thru black rot, and thru lack of housing it was determined, for 1926, to have every grower of an acre or over, treat his seed before bedding. In each of the counties where sweet potatoes are grown in quantity, Graves, McCracken, Carlisle, Fulton and Hickman, a goal of 19 curing houses was set.

The matter of seed treatment and sanitation was presented at community meetings with special attention to more extensive growers. The matter of housing was stressed, presenting plans and suggesting substitutions of materials and means at hand when feasible.

All of the men seen by county agents or by the field agent in vegetable gardening treated their seed. A survey of houses

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built in 1926 shows less than 5 percent of black rot in the 23,000 bushels stored. Sixteen houses with capacity for 23,000 bushels were built. As a result of their being attracted to Ballard County by the Vegetable Shippers Association formed this year at Barlow, a commission firm of Chicago erected a 60,000 hamper sweetpotato house which was about half filled in 1926.

#### TOMATOES

The ultimate goal for canning tomatoes is to secure a yield of more than 300 bushels per acre in every case. For 1926, the goal was set to have 10 men in each canning plant produce that yield. The canning plants are located in the counties of Hickman, Carlisle, Graves, McCracken, Bourbon, Montgomery, Nicholas, Scott, Jessamine, Mercer, Boyle, Woodford, Garrard and Carter.

General tomato talks at "signup" or seed distributing meetings were held at each station.

Bed preparation and seed sowing meetings were called at the home of one grower near each station, the bed was prepared during the meeting.

Demonstrations of plant bed spraying and dusting were given, using several practical types of apparatus.

Picking demonstrations at opening of picking season were given, one in each station, and "culling demonstrations" at the factory.

Subject matter and seasonal letters were sent, at the times appropriate to the above mentioned activities.

At the tomato "sign-up" meeting, the matter of inoculating bean seed and using fertilizers was brought up in a general way, and demonstrators who had a good attitude toward the project were chosen privately. The canning company posted the score of all bean growers daily, the "demonstrators" being so marked on the board.

Eighty-eight "300-bushel club" men reached the 300 bushel mark out of 112 entered in the club. In Carlisle County the third year of "300-club" work, 8 men succeeded.

## CUCUMBERS

For pickle cucumbers, an ultimate goal of \$200.00 minimum gross receipts per acre was set and for 1926, a goal was set of 5 such acres in each salting station. The counties are Breckenridge, Ohio and Grayson.

At a series of meetings at the larger "salting stations" a general talk on cucumber culture, including beetle and wilt control was given. The companies agreed to furnish the seed, treated with corrosive sublimate, and also to furnish nicotine sulfate and "Ohio formula" dust, at cost, and on credit. Demonstrators were chosen privately, not "volunteers" at meetings.

In 11 salting stations, 34 men who were acting as demonstrators competed. Of these, 22 got yields returning them in excess of \$200.00 per acre. This showed extremely well when compared to average yields. The acreage involved in the demonstrations was 84 out of a grand total at all stations of 2,800 acres. Average acre receipts for 1926, taken from the companies' books, were \$64.15. Twelve tons of cucumber beetle dust were furnished by the companies receiving the pickle cucumbers.

## HOME GARDENS

As for the garden, the ultimate goal is to produce vegetables enough for 21 servings per week from May to October, and 12 servings per week from November to April. For 1926, one garden in each interested community was to try to reach the above standard insofar as the food habit of the families permitted.

An "Ideal Budget" garden talk was presented before community meetings or before county meetings of "garden chairmen" of Home-makers' Clubs. A muslin chart garden plan was used with crop labels attached in their proper order, and in their proper garden rows, these labels were then removed and others inserted at their proper time to demonstrate succession planting and companion cropping. A follow up series of instructions in the form of mimeographed sheets entitled, "What to do in the Garden" was sent monthly to all presidents of Home-makers' Clubs and a weekly series of 400-word garden articles was re-

leased to every newspaper in the State. "Fall garden" meetings in those communities that request them were held as the schedule of the field agent permitted.

There were 42 demonstrator gardens. The average acre value of products was \$294.00.

The reports from those engaged in this project were that the garden demonstration were quite satisfactory.

### BEANS

The ultimate goal for canning beans is to secure in every case a minimum yield of 2½ tons. For 1926, five men in Carlisle County were chosen to demonstrate seed inoculation and fertilizers. Three men out of five in the contest grew 2½ tons of green beans per acre, and the others grew over 2 tons per acre. The demonstrations covered a total of 14 acres. One hundred and thirty-five acres of canning beans were grown in 1926, and the average acre yield was 2,400 pounds, or \$50.00 gross returns per acre.

### MEXICAN BEAN BEETLE

The Mexican Bean Beetle showed abatement in the early part of the season, but was troublesome from midsummer on.

Four newspaper articles dealing with the pest were published.

Two very closely supervised demonstrations of control were held. In one, counts made 6 days later showed 99.8 percent control, in the other 89 percent. Three additional dustings gave a 240 percent increased crop over undusted rows.

The vegetable exhibit of the State Fair featured the Bean Beetle, setting forth the proper methods of control.

A very clean-cut demonstration was that of properly timing the first Bean Beetle dust application. Arrangements were made with the county agent of Campbell, who kept under daily supervision, two plantings of beans, watching for the appearance of egg clusters. The field agent made his arrangements so that he could go, at a telephone call. The Alabama dust was used with a good under-nozzle duster, and undusted checks were left. Six days later a count was made of larvae of the first brood

and 99 and 89 percent, respectively, of killing was noted. The demonstration was staged alongside a much travelled highway and the persistent greenness of the dusted rows was noticeable up to the time the patch was plowed under.

#### MISCELLANEOUS

Four new vegetable shippers' associations were formed during the year, in McCracken, Christian, Logan and Ballard counties, embracing 162 acres. The field agents assisted thru meetings and visits concerning disease and insect control, grading demonstrations, suggestions as to possible markets, etc. This work will be repeated in 1927.

In three counties, Carlisle, Hickman and Graves, pool-selling movements were suggested to the growers of sweetpotatoes, who have houses.

A "green-wrap" tomato growers' association was begun, by the men themselves, in Graves County. Four educational meetings, with an attendance of 212, were held, and their manager aided in sundry ways.

The negro county agent of Fayette, and the field agent in Truck Crops, made survey of the grounds of the Fayette Colored Orphans' Home. As a result, a budget was made which included a crop layout, a seed list, a fertilizer list, recommendations as to hiring a full-time farmer, purchase of tools, etc. The acreage was  $7\frac{3}{8}$ . A total profit over all cash expenditures, of \$515.95 was made not counting a certain amount of labor of 20 boy-inmates. In other years this land was rented to neighbors for \$75.00 a year.

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## FARM ECONOMICS

W. D. NICHOLLS, *Head of Department*

The central purpose of the extension work done by this department is to show clearly to farmers the principles which underly the organization and administration of the farming business. A constant effort has been made to bring farmers to study their business and to adopt business methods.

The fact has been demonstrated that farmers operating under essentially similar conditions vary greatly in the economy of operation and in the net results accomplished. This fact is brought out by Table 1, which contrasts the yearly net earnings of the most successful farmers in several localities in Kentucky with the average farmers in the same localities. This table has been used in extension teaching during the year and has been effective in stimulating farmers to study ways and means whereby they can correct the weak places in their farming business thereby putting it on a more profitable basis.

TABLE 1.—Net Earnings of Successful Farmers in Various Sections of Kentucky Contrasted with Average Farmers in the Same Localities.

No. Farms	Location	Year	Average Yearly Earnings	Average of Most Successful 10 Farms
162	Shelby, Spencer, Oldham and Hardin Counties .....	1915	\$799	\$2,919
80	Kenton County .....	1916	871	1,866
241	Mason and Fleming Counties	1922	1,029	3,203
270	Union and Henderson Counties .....	1924	465	3,058
115	"Jackson Purchase" Region	1922	113	638
84	Larue County .....	1923	332	1,371

The chief factors responsible for the marked difference in the net incomes of farmers as brought out in research work in farm organization and management in the College of Agriculture have been stressed in extension work. Particular emphasis has been placed on the control of the expenses of production.

The difference in the control of expenses on different farms is brought out in Table 2 which shows a comparison of the control of expenses on the most profitable farms and on average farms in three Kentucky localities in which studies in farm organization have been made.

**TABLE 2.—Comparison of Most Profitable and Average Farms in Control of Expenses.**

Expenses Per \$100 Receipts	Average	Most Profitable Farms
Mason and Fleming Counties (1922) ....	\$52	\$42
Larue County (1922) .....	49	38
Union and Henderson Counties (1924)	54	33

In Mason and Fleming Counties the average farm in a total of 241 farms had \$52 of expenses per \$100 receipts, while the most profitable 12 farms had \$42 of expenses per \$100 receipts. In LaRue County the average expenses per \$100 receipts on 80 farms were \$49 and for the most profitable farms \$38. In Union and Henderson Counties the expenses per \$100 of receipts were \$54 for an average of 270 farms and \$33 for the most profitable 12 farms. Expenses include current expenses, the value of unpaid family labor, and decreases in inventories. They do not include the value of the operator's labor or interest on the capital invested in the farm business. Receipts include farm sales and increases in inventories.

One of the important factors in the control of expenses is the planning and execution of an effective labor program on farms. Examples of farmers in various sections of Kentucky who have secured a large accomplishment of labor per man thereby reducing labor costs per unit of product have been secured and these have been used effectively in extension work in discussion of ways and means of reducing production costs. Table No. 3 shows variations in labor accomplishment on different farms in three representative agricultural areas. Thus

on 241 farms in Mason and Fleming Counties, 258 productive days work per man were accomplished on the most efficiently operated farms as against 203 days on the average farm. On 84 farms in LaRue County, 264 days work were accomplished as against 218 days for the average farm, and on 270 farms in Union and Henderson Counties, 273 days work were accomplished as against 236 days for the average farm. (See Table 3.)

TABLE 3.—Comparison of Work Accomplished Per Man in Various Sections of Kentucky.

Locality	Productive Days Work Accomplish Per Man in Twelve Months	
	On Average Farm	On Most Successful Farms
Mason and Fleming Counties 241 farms, 1922 .....	203	258
Union and Henderson Counties 270 farms, 1924 .....	218	264
Larue County, 84 farms, 1922.....	236	273

Other factors affecting farm profits which have been stressed in extension work are yields per acre and the quality of the product as evidenced by the price received.

The influence of these factors is shown in Table 4 which contrasts the 10 highest-profit farmers with the 10 lowest-profit farmers of a group of 97 tobacco growers in Central Kentucky. The figures are taken from detailed records kept on these farms in 1922. The ten highest-profit producers made a profit of 24.5 cents per pound. The ten low-profit producers incurred a loss of 3.4 cents per pound. The cost to the high-profit producers was 11.8 cents per pound; and to the low-profit producers 22.3 cents per pound. The high-profit producers secured a yield of 1387 pounds per acre; the low-profit producers 874 pounds. The high-profit producers obtained a much higher quality of product than the low-profit producers and received 36.3 cents

per pound for their tobacco as against 18.9 cents per pound received by the low-profit producers.

TABLE 4.—Effect of Yield and Quality on Profits in Producing Burley Tobacco. (Farm Year 1922.)

	On Ten Highest Profit Farms	On Ten Lowest Profit Farms
Total cost of production per acre....	\$163.60	\$194.74
Yield per acre, pounds .....	1,387.00	874.00
Cost per pound .....	11.8	22.3
Price received per acre .....	503.31	165.29
Price received per pound .....	36.3	18.9
Profit or loss per acre .....	339.71	29.55 loss
Profit or loss per pound .....	24.5	3.4 loss

#### FARM ORGANIZATION THRU ACCOUNTS

Farm accounts offer one of the best means of studying the business of individual farms and groups of farms. The major extension project carried on during 1926 was that of farm organization through accounts. Approximately 1,200 account books were placed in the hands of farmers during the year.

*Farm Business Schools.* As a means of teaching groups of farmers how to analyze their business the one-day farm business school has been developed. This consists in assembling 15 to 20 farmers for a one day meeting at which, under the instruction of the farm management field agent and the county agent, each farmer uses a farm record book which he has kept during the year, or survey figures on his business, in summarizing and analyzing his business for the past year. Various important factors are worked out for each farmer present, the chief factors being, gross receipts per acre, expenses per \$100 income, productive animal work units per 10 acres land, acres pasture per animal unit, feed cost per animal unit, livestock receipts per animal unit, returns per \$1.00 of feed, crop acres per man and per horse, productive animal units per man, labor index, productive days of work per horse.

When the analysis is completed a graph is drawn for several individual farms in order to point out the strong and the weak points in a given system of farming.

The remainder of the day is spent in studying the farms graphically presented and in discussing possible ways and means by which a more profitable system could be adopted for each farm.

At the close of the session each farmer transfers his closing inventory to an account book for his beginning inventory for the new year.

Twenty-two of these schools were conducted in thirteen counties during 1926. The average attendance was 9.4 farmers. Of the farmers attending the schools 83½ per cent summarized and analyzed their farm business while 96 percent of the farmers attending the schools started records for 1926.

During the year individual calls have been made on some of the men who attended the schools. A large per cent of these farmers had their account books either up to date, or in a condition that could be readily brought up to date. There will be no definite check on the men until after January 1, 1927 when the series of schools will be repeated.

The same general plan with modifications will be followed in 1927. Each farmer's record will be checked over carefully and completed before the day of the school so that it will be ready to be summarized and analyzed at the beginning of the school.

*Farm Accounting Contest.* The farm accounting contest inaugurated in January, 1925, as a feature of the farm accounting project ended April 1, 1926. The purpose of the contest was to stimulate farmers in the keeping of farm records.

Prizes which were given by the Farmers Home Journal of Louisville were awarded as follows:

Ballard County, first prize.....	\$100
McCracken County, second prize .....	75
Graves County, third prize.....	50
Kenton County, fourth prize .....	40
Fleming County, fifth prize .....	30

*Special Regional Farm Organization Project in the Jackson Purchase.* This project was begun in the spring of 1924 and has been carried on since that time. Nineteen farmers have cooperated in keeping detailed records of income and expenditures and the amounts of man labor, horse work, and materials used in the production of the various crops and classes of livestock. During the year business analysis records were secured on 200 additional farms. These were analyzed and together with the detailed records of costs and returns for the various enterprises, furnished data which showed the enterprises and combinations of enterprises in the region which are giving the best net returns. These were brought together into a preliminary statement which was furnished to cooperating farmers and presented typical systems in use at present and the detailed net results of these systems together with detailed reorganization plans suggested on the basis of the figures obtained in the study.

*Cost of Production Work in Central Kentucky.* Detailed work with twenty farmers in cost of production was continued during the year in Fayette, Bourbon, Woodford, Jessamine and Montgomery Counties.

## MARKETS AND RURAL FINANCE

O. B. JESNESS, *Head of Department*

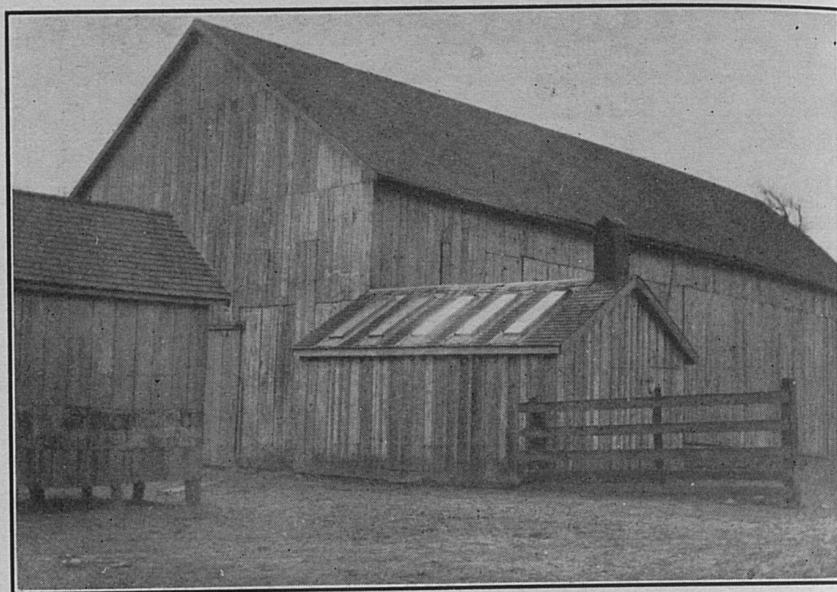
This work has been devoted primarily to tobacco marketing problems.

The purpose has been to develop more common use of practices which lead to quality production, to show the methods and importance of proper grading and to emphasize the need for adjustment of production to market requirements. Many of the difficulties of tobacco growers can be traced to lack of proper care. Part of this lack is explained by the over expansion of acreage, many growers producing more tobacco than they can handle properly. Thus, the low quality of the 1926 crop of burley was due in part to excessive acreage and resultant carelessness in handling. Acres of tobacco left to rot on the stalk and some even left on the stick in the field bore evidence of this. Numerous examples were found in both burley and the dark districts where careful handling and better methods would have increased the returns to the growers materially.

Burley acreage has been greater than warranted by market needs during each of the past five years. As a consequence, large stocks have accumulated. This situation has been called to the growers' attention with the recommendation that production be brought in line with market needs. The dark district has suffered not so much from an increase in acreage as a decrease in demand for its types and decreased purchases by certain foreign countries. The growers of dark tobacco therefore, have been urged to grow a smaller acreage and to strive for higher quality.

Personal visits, demonstrations, discussions at farmers' meetings and news articles have been employed by the field agent in carrying on this work. The form of demonstration found most effective has been to obtain from receiving plants and loose-leaf warehouses samples of tobacco illustrating poor methods of handling, improper grading or injury resulting from lack of care and by means of grade designations, prices, etc., show the effects.

A considerable amount of time was spent in educational work in cooperation with the field service of the Burley Tobacco Growers' Cooperative Association in community locals in Adair, Ballard, Green, Hardin, Harrison, Hart, Marion, Pendleton, Taylor and Washington Counties. There is frequent lack of



19. Overhead stripping light. The best that can be used.

understanding on the part of the Association members as to their personal responsibility as tobacco growers and members of a cooperative organization. They do not realize that practically every step in the production of a crop of tobacco has a direct relationship to the quality and value of the crop at marketing time. Nor do they realize fully the real meaning of cooperation and the part which individual members must take in a cooperative organization. When a better understanding of these things is brought about among the rank and file of tobacco growers, many of the most embarrassing problems of cooperative marketing organizations will be eliminated. This Department has been cooperating with the field service of the Association in an educational campaign to bring about such an understanding. Each of the thirty-five talks made at meetings of farmers in the



counties mentioned above was designed to meet the circumstances of the community concerned. Among subjects discussed were what a cooperative marketing organization is, what its purposes and limitations are, its essentials for success; the responsibilities of membership; principles of price and price-influencing



20. Variation in size of leaves within grade, due to careless classing. Hardin County.

factors; value of care in culture, curing and classing of tobacco and the importance of reducing acreage and diversifying crops.

While it is impossible to estimate even roughly the value of such meetings, excellent attention was given, farmers were greatly interested, and encouraging reports from many communities indicate that much good was done.

In addition to the work with tobacco, attention was given to various other marketing questions during the year. Information on methods of marketing strawberries, the outlook for strawberries and the methods of organization of strawberry marketing associations, was given to groups of farmers in various

parts of the State who were contemplating commercial strawberry growing. Fruit and vegetable marketing problems were discussed at several meetings. Representatives of the Department spoke at several meetings of farmers and other business interests on marketing and related questions.

A monthly letter entitled, "Notes on the Kentucky Agricultural Situation" was prepared and sent to the county agents. The purpose of these notes has been to supply the agents with a condensed summary of the market situation and the future market outlook for farm commodities of importance in this State. Special attention was given to the outlook for tobacco because of the importance of this crop and the great need for readjustment of production in line with market outlets. This service does not attempt prediction of future prices, but aims to point out trends and probable future developments.

Articles on various aspects of marketing, market outlook, prices and related questions were prepared for distribution to the press thru the extension editor.

The marketing exhibit at the State Fair was designed to show the essentials of cooperative marketing associations.

Information on market outlets and methods was supplied in response to requests coming from farmers and others in a large number of instances.

PUBLICATIONS IN 1926

- Circular No. 191. Windows and Their Decoration.
- Circular No. 192. The Homemaker's Association in Kentucky.
- Circular No. 193. Pig Projects, Junior Agricultural Clubs.
- Circular No. 194. Junior Clothing Manual.
- Circular No. 195. Junior Home Projects in Clothing.
- Circular No. 196. Annual Report of Director for Year Ending Dec. 31, 1925.
  
- Circular No. 197. Cutting and Curing Pork.
- Circular No. 198. Sunlight Movable Hog Houses for Kentucky.
- Circular No. 199. Touching up the Old Furniture.
- Circular No. 200. The Importance of Farm Accounts.
- Circular No. 201. Selection and Use of Commercial Patterns.
- Circular No. 202. Potato Growing in Kentucky.  
Food Manual, Junior Agricultural Clubs.  
Junior Week Program.
  
- Circular No. 54. (Revised) Soils.
- Circular No. 84. (Revised) Sow and Litter Project, Junior Agr'l Clubs.
  
- Circular No. 106. (Revised) Baby Beef Project.
- Circular No. 110. (Revised) Hatching and Raising Chicks, Junior Agricultural Clubs.
  
- Circular No. 118. (Revised) Orchardring.
- Circular No. 137. (Revised) Feeding and Care of Laying Pullets.
- Circular No. 152. (Revised) Stomach Worms in Sheep.
- Circular No. 159. (Revised) The Peach Borer and the Paradichlorobenzene Treatment.

**LIST OF EXTENSION WORKERS**

January 1st to December 31st, 1926.

**ADMINISTRATION**

Thomas Cooper, Dean and Director  
T. R. Bryant, Asst. Director  
D. H. Peak, Business Agent  
S. K. Slaughter, Secretary

**AGRONOMY**

George Roberts, Head of Department  
Ralph Kenney, Field Agent in Crops  
S. C. Jones, Field Agent in Soils

**AGRICULTURAL ENGINEERING**

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 Animal Husbandry (Beef Cattle)  
R. C. Miller, Agent in Animal Husbandry (Sheep)  
Grady Sellards, Field Agent in Animal Husbandry (Swine)  
L. J. Horlacher, Field Agent in Animal Husbandry (Sheep)

**CLOTHING**

Irene Piedalue, Field Agent in Clothing  
Isabelle Story, Field Agent in Clothing  
Edith Lacy, Field Agent in Home Economics

**DAIRY**

E. M. Prewitt, Field Agent in Dairying  
J. O. Barkman, Field Agent in Dairying

**FARM MANAGEMENT**

W. D. Nicholls, Head of Department  
†Thomas Baird, Field Agent in Farm Management  
Harry Ward, Field Agent in Farm Management

**FOODS**

Mary May Miller, Field Agent Foods  
Dixie Harris, Field Agent Foods

HORTICULTURE

W. W. Magill, Field Agent in Horticulture (Orcharding)  
J. S. Gardner, Field Agent in Horticulture (Gardening)

JUNIOR CLUBS

J. W. Whitehouse, State Leader of Junior Club Work  
J. M. Feltner, Field Agent in Junior Club Work  
M. S. Garside, Field Agent in Junior Club Work  
Anita Burnam, Field Agent in Junior Club Work  
G. J. McKenney, Field Agent in Junior Club Work  
E. E. Fish, Field Agent in Junior Club Work

MARKETS

†J. W. Jones, Field Agent in Markets  
Erle C. Vaughn, Field Agent in Markets

MOVABLE SCHOOLS

N. R. Elliott, Leader of Specialists

PUBLIC INFORMATION

C. A. Lewis, Editor

POULTRY

J. R. Smyth, Field Agent in Poultry  
J. H. Martin, Field Agent in Poultry  
J. E. Humphrey, Field Agent in Poultry  
C. E. Harris, Field Agent in Poultry

VETERINARY SCIENCE

T. P. Polk, Field Agent in Veterinary Science

HOME DEMONSTRATION

Myrtle Weldon, State Leader of Home Demonstration Agents  
Lulie Logan, Asst. State Leader of Home Demonstration Agents  
Zelma Monroe, Asst. State Leader of Home Demonstration Agents  
\*Ruby Miller Barlow, Asst. Home Demonstration Agent, Christian  
County  
Vashti Cave, Home Demonstration Agent, Oldham County  
\*Eula Conner, Home Demonstration Agent, Graves County  
†Rose B. Craft, Home Demonstration Agent, Knott County.  
\*Ruby Dalzell, Home Demonstration Agent, Boyd County  
Ziipha Foster, Home Demonstration Agent, McCracken County

Jennie C. Grubbs, Home Demonstration Agent, Boyle County  
 †Ida Hagman, Home Demonstration Agent, Graves County  
 Mattie Hodges, Home Demonstration Agent, Christian County  
 Lulu Holmes, Home Demonstration Agent, Ballard County  
 Catherine T. Johnson, Home Demonstration Agent, Jefferson County  
 †Helen Kennedy, Home Demonstration Agent, Mercer County  
 †\*Bruce E. Kirkman, Home Demonstration Agent, Union County  
 Ouida Midkiff, Home Demonstration Agent, Pulaski County  
 Beatrice Moller, Home Demonstration Agent, Muhlenberg County  
 Roxie C. Perkins, Home Demonstration Agent, Harlan County  
 Ruth Reilly, Home Demonstration Agent, Woodford County  
 \*Ruth Robertson, Home Demonstration Agent, Calloway County  
 †Emma Roseboom, Home Demonstration Agent, Mercer County  
 Mary Ella Rudy, Home Demonstration Agent, Campbell County  
 Laura Spence, Home Demonstration Agent, Laurel County  
 †Sidney Standifer, Home Demonstration Agent, McCreary County  
 Anna Streed, Home Demonstration Agent, Henderson County  
 \*Hazel Vincent, Home Demonstration Agent, McLean County  
 †Gladys Waddell, Home Demonstration Agent, Lee County  
 Helen M. White, Home Demonstration Agent, Daviess County  
 †Jessie O. Yancey, Home Demonstration Agent, Fayette County

#### COUNTY AGENTS

C. A. Mahan, State Leader of County Agents  
 I. C. Graddy, Asst. State Leader of County Agents  
 E. J. Kilpatrick, Asst. State Leader of County Agents  
 W. C. Wilson, Asst. State Leader of County Agents  
 H. F. Link, Asst. State Leader of County Agents  
 A. C. Burnette, in Charge of Negro Work  
 Willis Abner, County Agent, Pike County  
 L. M. Amburgey, County Agent, Boyd County  
 S. W. Anderson, County Agent, Nicholas County  
 \*†V. C. Ashby, County Agent, Hancock County  
 J. H. Atkerson, County Agent, Green County  
 G. W. Bacot, County Agent, Hickman County  
 \*J. C. Beavers, County Agent, Christian County  
 D. S. Bishopp, County Agent, Adair County  
 L. C. Brewer, County Agent, Fayette County  
 K. J. Bowles, County Agent, Estill County  
 Stuart Brabant, County Agent, Logan County  
 T. L. Britton, County Agent, Leslie County  
 John C. Brown, County Agent, Owen County  
 C. V. Bryan, County Agent, Taylor County  
 A. J. Chadwell, County Agent, Pulaski County

J. V. Coleman, County Agent, Larue County  
\*†Jasper Combs, Asst. County Agent, Breathitt County  
H. R. Cottrell, County Agent, Marshall County  
\*F. D. Crutcher, County Agent, Hardin County  
C. O. Dickey, County Agent, Webster County  
C. B. Elston, County Agent, Lincoln County  
H. R. Forkner, County Agent, Boone County  
P. M. Frye, County Agent, Owsley County  
C. E. Gabbard, County Agent, Morgan County  
G. W. Gardner, County Agent, Washington County  
J. B. Gardner, County Agent, Muhlenberg County  
P. H. Gooding, County Agent, Todd County  
J. F. Graham, County Agent, Caldwell County  
R. M. Greene, County Agent, Mason County  
H. J. Hayes, County Agent, Wayne County  
R. M. Heath, County Agent, Franklin County  
H. E. Hendricks, County Agent, Marshall County  
\*†Bird Hensley, County Agent, Lee County  
C. L. Hill, County Agent, Pendleton County  
J. O. Horning, County Agent, Barren County  
C. E. Houk, County Agent, Garrard County  
W. M. Howat, County Agent, Spencer County  
W. B. Howell, County Agent, Trimble County  
H. R. Jackson, County Agent, Shelby County  
William C. Johnstone, County Agent, McCracken County  
T. H. Jones, County Agent, Lee County  
S. J. Jones, County Agent, Mercer County  
R. H. King, County Agent, Harlan County  
†Homer J. Kline, County Agent, Hardin County  
J. E. Kuykendall, Colored County Agent, Warren County  
Harry Lane, County Agent, Anderson County  
Raymond Lickert, County Agent, Oldham County  
J. E. McClure, County Agent, Daviess County  
H. F. McKenney, County Agent, Grant County  
C. C. Malone, County Agent, Henry County  
Donald W. Martin, County Agent, Henderson County  
R. J. Matson, County Agent, Gallatin County  
Earl Mayhew, County Agent, Knox County  
F. E. Merriman, County Agent, Jefferson County  
Albert Middleton, County Agent, Christian County  
J. L. Miller, County Agent, Bracken County  
C. E. Miller, County Agent, Boyle County  
L. F. Morgan, County Agent, Magoffin County  
J. C. Nageotte, County Agent, Montgomery County

G. B. Nance, County Agent, Campbell County  
M. P. Nicholls, County Agent, Ballard County  
L. C. Pace, County Agent, Carlisle County  
J. E. Parker, County Agent, Bath County  
\*J. E. Parsons, County Agent, Lawrence County  
H. S. Patterson, County Agent, Grayson County  
W. R. Reynolds, County Agent, Jackson County  
Harry D. Rice, County Agent, Henry County  
W. H. Rochester, County Agent, Muhlenberg County  
G. C. Routt, County Agent, Graves County  
M. H. Sasser, County Agent, Russell County  
C. C. Shade, County Agent, Jessamine County  
E. R. Sparks, County Agent, Clay County  
Robert Spence, County Agent, Madison County  
W. D. Sutton, County Agent, Hopkins County  
E. P. Tichenor, County Agent, McLean County  
O. B. Travis, County Agent, Breckinridge County  
R. V. Trosper, County Agent, Breathitt County  
F. C. Walker, County Agent, Adair County  
P. R. Watlington, County Agent, Bourbon County  
Clyde Watts, County Agent, Carroll County  
†J. A. Wesson, County Agent, Meade County  
F. D. Wharton, Colored County Agent, Shelby County  
O. R. Wheeler, County Agent, Hancock County  
C. A. Wicklund, County Agent, Kenton County  
Warren Williams, Colored County Agent, Christian County  
F. B. Wilson, County Agent, Laurel County  
\*P. H. Wilson, County Agent, Calloway County  
R. O. Wilson, County Agent, Harrison County  
L. H. Woodhouse, County Agent, Jefferson County  
\*†S. D. Woods, County Agent, Harlan County

\*Appointed during the year.

†Resigned during the year.



RECEIPTS AND DISBURSEMENTS FOR FISCAL YEAR ENDED  
June 30, 1926

## Receipts

Federal Smith-Lever .....	\$152,241.30
State Smith-Lever .....	142,241.30
Federal Supplementary .....	45,100.93
Total .....	\$339,583.53

## Disbursements

Projects	Federal Smith- Lever	State Smith- Lever	Federal Supple- mentary	Total
Administration .....	\$6,998.02	\$9,953.67		\$16,951.69
Publications .....	3,620.41	742.50		4,362.91
County Agents .....	68,556.36	28,806.51	\$45,100.93	142,463.80
Home Demonstration .....	20,675.16	25,952.48		46,609.64
Clothing .....	3,655.33	6,406.93		10,062.26
Foods .....	2,581.66	3,811.66		6,393.32
Movable Schools .....	2,746.56	4,510.00		7,256.56
Junior Clubs .....	10,890.56	18,198.97		29,089.53
Agronomy .....	2,894.24	6,875.00		9,769.24
Dairy .....	2,723.67	3,691.66		6,415.33
Animal Husbandry .....	6,039.73	9,479.98		15,519.71
Markets .....	1,475.45	4,593.32		6,068.77
Farm Management .....	1,679.19	3,470.30		5,149.49
Poultry .....	3,474.27	6,428.32		9,902.59
Horticulture .....	3,319.25	5,775.00		9,094.25
Veterinary Science .....	3,736.81			3,736.81
Rural Engineering .....	5,352.06			5,352.06
Public Information .....	1,249.53	3,545.00		4,794.53
Farm and Home Week...	591.04			591.04
	\$152,241.30	\$142,241.30	\$45,100.93	\$339,583.53

