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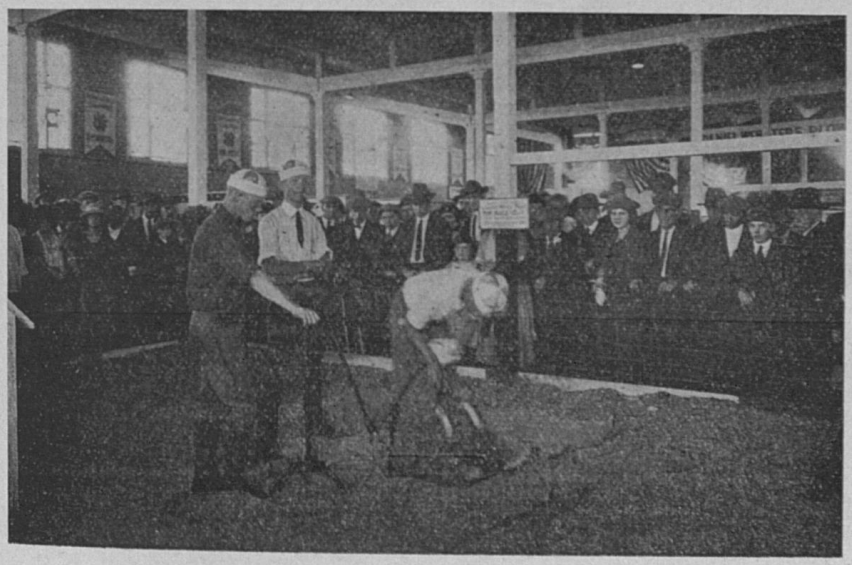
THOMAS P. COOPER, Dean and Director

CIRCULAR NO. 156

Team Demonstration Outlines V.
Junior Agricultural Clubs.

1. SHEEP SHEARING, WOOL TIEING AND GRADES.
2. INSECTS AND CONTROL MEASURES.
3. GRADING AND PACKING EGGS FOR MARKET.
4. CONCRETE.
5. A SIMPLE HOT AND COLD WATER SYSTEM FOR THE KITCHEN.



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CIRCULAR NO. 156

Team Demonstration Outlines V.
Junior Agricultural Clubs.

By E. E. FISH

INTRODUCTION

These outlines have been prepared as a guide in developing demonstration teams. The subject matter must be worked up either by the demonstrator or his leaders. The references given are for the use of the demonstrator in building up the body of the demonstration and to give a working knowledge of the subject. Certain details of the outlines may be altered if found desirable in order to suit local conditions. The combined ideas of the leaders and club members will serve to smooth out the details and make the demonstration a highly developt product. Originality in presentation is an important factor in holding the attention of an audience and in getting the lesson across. Ways and means for accomplishing this may arise spontaneously from a combination of circumstances or be the result of a carefully thought out plan.

The chief consideration is to teach a lesson. The aim of the team will be to show that lesson instead of telling it. Demonstrators will realize that common farm practis among certain specializing farmers may be a new and interesting venture in other localities. Methods, equipment and materials are easily improved upon and should be passed along to others.

The general instructions for developing demonstration teams as given in Kentucky Extension Circular No. 117, chapter 5, will apply to these outlines.

1. SHEEP SHEARING, WOOL TIEING AND GRADES

Wool constitutes about one-fourth of the income from the average farm flock of sheep in Kentucky. This demonstration deals with the handling of wool, preparatory to marketing.

General Suggestions

1. Equipment in first-class condition is necessary to assure success in this demonstration.

2. A sheep for clipping should be chosen with a view of making a speedy operation.

3. Charts may suggest themselves to the team and its leader which will make the demonstration more attractive.

4. Team members should not hesitate to venture an opinion as to the grade of wool shorn even tho members of the audience may later question the judgment.

5. Teammates will call each other by their first names during the demonstration.

References:

Extension Circular No. 72, University of Kentucky, College of Agriculture, Lexington, Kentucky.

Bulletins No. 215 and 243, Kentucky Agricultural Experiment Station, University of Kentucky, Lexington, Kentucky.

"A Bunch of Sheep on Every Farm." Price 15 cents. The International Harvester Company, Harvester Building, Chicago, Illinois.

Materials and Equipment

One flexible-shaft two-man sheep clipping machine with close-fitting plates. Ball of paper twine for tieing fleeces. Box containing wool samples, loaned to County Agent for use of team by University of Kentucky, Junior Club Department, Lexington, Ky.

Demonstration Outline

DEMONSTRATOR 2	CAPTAIN	DEMONSTRATOR 3
Stands in place and acknowledges the introduction.	Introduces members of the team, tells where the team is from and the purpose of the demonstration.	Stands in place and acknowledges the introduction.
Brings sheep to platform and holds in place for further demonstration. Places one hand under neck and other in rear of animal in holding.	States the status of the wool industry in Kentucky (Ky. Bulletin 215), the present price of quarter and three-eighth blood wools as shown by the market report.	Brings in the flexible-shaft clippers, oils the working parts and assembles.
Swings animal into position for shearing. Starts clipping using method as advocated in Extension Circular 72, pages 5 and 6.	Calls attention to the oiling process, also method of holding sheep. Cautions audience about catching and holding sheep by wool because of injury to animal. Explains the position of animal being held by companion and the ease with which sheep may be placed in that position and conveniently handled. Calls attention to the clipping process, explains in detail method being used by companion. Reviews methods of clipping sheep; shears, hand clippers and power machine. Gives preferences of certain operators, time required, etc.	After sheep is placed in position for shearing, takes proper position with machine, so as not to interfere with the view of the audience, hands clippers to companion and starts to operate the machine.
	Relieves companion No. 3 at the machine and continues operating.	
When clipping is finished, hands clippers to captain and removes sheep to place of security.	Receives clippers from companion, disengages them from machine, cleans and puts them away. Removes the machine to the rear of the platform	Gets ball of paper twine and exhibits to audience, explains its composition, use and desirable features. Cuts suitable length of twine (8 to 10 ft.) for tieing fleece and lays aside the remainder.

DEMONSTRATOR 2	CAPTAIN	DEMONSTRATOR 3
Returns to the fleece, lays it out, flesh side down, removes badly soiled tags, folds and rolls together according to direction in Ext. Cir. No. 72, page 7. When companion gets the twine in place, lifts the bundle of fleece and lays it across the two strands, in the middle. The two strands will then lie about one-third the distance from the ends of the bundle. The two ends are brought together on the top of the bundle, the loose ends passed thru the closed end and passed oppositely around the bundle at right angles to the original strand. The bundle is then inverted and tied.	Receives twine from companion, folds in the center and lays it down on the platform near where companion is rolling fleece and in plain view of the audience. Places the two strands parallel and about eight inches apart. Assists companion in arranging the wrap and tie as the method is being explained by the other member of the team.	Hands the cut piece of twine to captain. Explains the process of laying out and rolling, being demonstrated by companion. Explains the process of tieing, including such points as gaging the length of twine according to the size of fleece to be tied, laying out the twine before placing the fleece and the method of tieing.
When sample case is opened, examines wool samples to see that all are in proper place and then takes up discussion of wool grades. Explans that sheep differ very much in the amount and quality of wool they produce and that wools are priced according to quality at the market. Reads the current market prices on such grades as are shown in the sample case. (Market report as published in various papers.) Points out the various samples of wool in the case, explaining the percentage of Kentucky wools selling under each grade at some large wool buying market. Shows how breeding will raise the quality of fleece. Also the importance of care in handling so as to prevent reject fleeces. (See references.) Asks companions their opinion as to grade of fleece recently shorn. Invites audience to inspect samples and fleece at close of demonstration.	Gets the wool sample case and places it in position to be plainly seen by the audience. Opens and arranges case in a secure position. Assists companion in determining the quality and grade of fleece recently clipped.	Moves the properly tied fleece to one side and takes out a sample of wool from the shoulder section for comparison with wool samples in the case. Compares sample of fleece with those in case to determine as well as possible the grade in which it is likely to fall when placed on the market.

DEMONSTRATOR 2	CAPTAIN	DEMONSTRATOR 3
Makes ready to answer questions relating to wool grades, the possible grade of the fleece recently shorn, and the improvement in wool grades by improved breeding and handling.	Summarizes the demonstration as presented, emphasizes care and breeding in order to improve grades of wool, asks for questions and answers those regarding the handling and shearing of a sheep. When questions seem to have been all answered, asks the audience to be free to examine the wool samples at the close of the meeting, expresses appreciation of their interest and announces that the demonstration is closed. Bows to audience.	Answers such questions as relate to paper twine, the proper method of rolling together a fleece and the process of tieing.
Bows and smiles in unison with companions.		Bows and smiles in unison with companions.

Questions

1. Where may paper and twine be obtained and what does it cost?
2. Why is the best part of the fleece rolled to the outside?
3. Is it profitable to invest in a clipping machine where there are only twenty sheep in the flock?
4. Can closer clipping be done with clippers than with hand shears?
5. Is one fleece divided into more than one grade?
6. How much wool does the average Kentucky sheep shear?
7. How much do burs lower the value of the fleece?

2. INSECTS AND CONTROL MEASURES

The object of this demonstration is to promote a more general knowledge of insects, their habits and the means for their control. The team consists of two members. The captain discusses the classification of insects and the natural means for control. His teammate directs attention to artificial means of control, including spray materials together with means for application.

General Suggestions

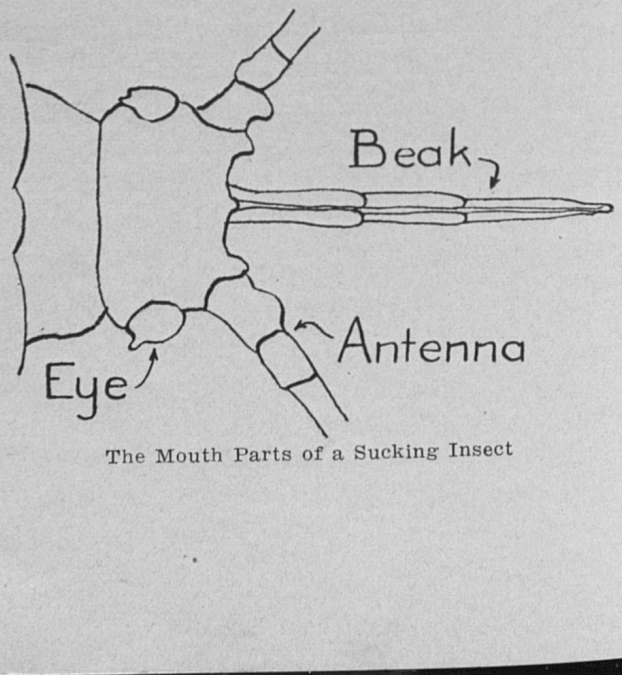
1. Manufacturers of insecticides are glad to cooperate and furnish empty containers for use in this demonstration.
2. Hand sprayers and standard nozzles may be borrowed in the neighborhood or secured thru the county agent.
3. Charts for this demonstration should be prepared carefully and made sufficiently large to be seen by a large audience.
4. Always address teammate by first name during the demonstration.

References:

Extension Circular No. 118, University of Kentucky, College of Agriculture, Lexington, Kentucky.

Farmers' Bulletin No. 908, U. S. Department of Agriculture, Washington, D. C.

Yearbook 1921, U. S. Department of Agriculture, Washington, D. C.



The Mouth Parts of a Sucking Insect

EQUIPMENT

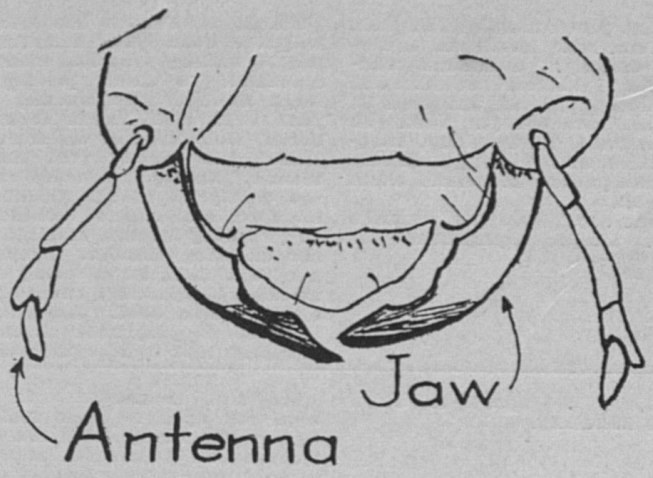
Empty containers for standard spray materials.

Hand sprayers and knapsack sprayer.

Standard nozzles

Charts showing insect mouth parts, yields of various standard crops in Kentucky and cost per tree for applying lime sulfur and arsenate of lead sprays.

Small can of machine oil for use in caring for spray nozzles.



The Mouth Parts of a Chewing Insect

DEMONSTRATION OUTLINE

CAPTAIN	DEMONSTRATOR 2
Introduces companion and self. Tells where the team is from and the purpose and extent of the demonstration.	Stands in place and bows to the audience as companion makes the introduction.
States that insects injure all agricultural crops to some degree, cites instances familiar to the audience of common insects attacking field, orchard and garden crops. Shows the yearly agricultural receipts in the state as shown on charts. States that insects destroy on the average ten per cent of all field crops and fifteen per cent of fruit, according to general estimates thru a period of years. (See Yearbook 1921.) Gives instance of estimated loss on some single crop from one insect for one year. Names the natural enemies of insects, such as birds, snakes, toads, other insects, dust and disease. Briefly discusses above. Explains that these agencies cannot be relied upon for complete control.	Gets and hangs up placards giving the value of orchard fruit for one year in Kentucky. Also placards for acreage of important cereal crops and tobacco. Allows space for other placards but arranges so as to be plainly seen by audience.

CAPTAIN	DEMONSTRATOR 2
States that insects, from an economic standpoint, may be considered as beneficial and harmful. Emphasizes that by far the greater number of insects are classed as harmful. Shows that from a control standpoint, insects are classed as chewing and sucking insects. Explains. Calls attention to mouth parts as shown on charts.	Gets charts showing drawing of the mouth parts of chewing and sucking insects and places in plain view of audience so companion may explain.
States that companion will explain means of control. Arranges equipment for display. Standard containers for various commercial spray materials. Small amounts of ingredients for sprays such as arsenate of lead, lime sulfur, nicotine sulphate and soap. Exhibits these as companion mentions them in discussion. Brings out hand sprayers, nozzles and other simple equipment for spraying.	States that man has tried many ways of destroying harmful insects before finding practical means. Calls attention to hand picking potato bugs and tobacco worms, using a pole with a kerosene torch to destroy web worms on fruit trees, shaking a tree or vine and other means. Shows that these means are too costly in labor. Outlines present means of control, contact sprays for sucking insects, stomach poisons for chewing insects. Properties of a spray, such as covering capacity, sticking properties, effect on foliage and relative cost. Explains briefly the use of gas, such as carbon bisulphide and hydrocyanic acid gas.
Takes sprayers apart to show method of handling. Places chart showing cost per tree for applying lime-sulfur and arsenate of lead sprays.	Explains means now in use for applying spray. Calls attention to equipment being exhibited by companion and points out any features of interest. Talks on care of sprayers, particularly as to care of nozzles. Talks about high pressure spraying, under field and orchard conditions, cost of applying, as shown on chart and referring to the original source of data. States some objections to spraying, such as possible poisoning of birds and honey bees and emphasizes benefit of spraying.
States that this concludes the points to be brought out in this demonstration. Summarizes the demonstration as presented.	Removes spray materials and equipment, leaving placards and charts in position until after the questions have been completed and audience dismissed.
Asks for questions. Answers those relating to forms of insects and their relation to plants, also crop yields and the natural enemies of insects. When questions are completed, the audience is invited to participate in any further activities of the junior agricultural club and thanked for their interest in the demonstration.	Stands in place and answers questions relating to measures for insect control and equipment for spraying.

QUESTIONS.

1. When should the dilute spray be prepared?

2. What kind of containers are suitable for making dilutions?

3. Will contact sprays kill both the insects and their eggs?

4. Can a combination spray material be prepared to kill both forms of insects?

5. Do power sprayers produce better results than hand sprayers? If so, why?

6. Do spray materials deteriorate with age?

3. GRADING AND PACKING EGGS FOR MARKET

By D. G. Card

The old belief that "An egg is an egg" must be abandoned. This is true in Kentucky and middle western states as well as in eastern states, because eggs are being carefully graded and packed in California and shipt to compete successfully in our eastern markets, with nearby eggs. The importation of frozen eggs from China and other foreign countries is also a factor in our egg market today. This demonstration should teach the fact that good quality and uniformity are necessary to market eggs or any other products successfully.

General Suggestions

1. Use eggs which vary in size, color, cleanliness and quality so that practically all grades into which eggs must be classified may be illustrated.

2. Have the eggs so arranged that all kinds may be easily seen by the audience. Shallow trays or boxes will be found useful for this purpose.

3. A simple candler may be made of a small wooden box or pasteboard shoe box, large enough to have an electric bulb or kerosene lamp inside. Manufactured candlers may often be borrowed for demonstration.

4. Egg cases, pads, fillers, etc, usually can be borrowed from a local dealer. These should be new and in good condition.

References:

"The Care of Eggs on the Farm," Extension Circular No. 105, University of Kentucky, College of Agriculture, Lexington, Ky.

"How to Candle Eggs," U. S. Department of Ariculture, Washington, D. C., Bureau of Chemistry Bulletin No. 565.

"The Community Egg Circle," U. S. Department of Agriculture, Washington, D. C., Farmers' Bulletin No. 656.

"High Quality Market Eggs," by George H. Pond in Hints to Poultrymen, November, 1921, New Jersey Agricultural Experiment Station, New Brunswick, N. J.

"Packing Eggs for Market Shipment," Circular No. 32, New Jersey State Department of Agriculture, Trenton, N. J.

"The Handling and Marketing of Eggs," by Harry M. Lamon, page 467, U. S. D. A. Yearbook for 1911.

Other articles in the Yearbooks of the U. S. D. A. for 1914 and 1912.

Equipment

1. A cake of Bon Ami or Sapolio, a few moist, soft cloths for cleaning eggs and a basket for cleaned eggs. A little corn meal and soda for cleaning eggs.

2. One home made or manufactured candler. A chart showing eggs as they appear before the candle may be secured from the U. S. Department of Agriculture or from the New York State College of Agriculture, Ithaca, N. Y.

3. Several dozens of eggs varying in size, color, cleanliness and quality.

4. Four or five shoe box covers or wooden trays or boxes about eight inches square and an inch deep for displaying eggs.

5. One 30-dozen egg case complete with fillers, dividers and six excelsior pads. Nails, tacks, shipping tags, hammer, etc.

6. If egg scales can be borrowed they are useful in grading eggs.

7. A suitable box nest can be constructed about twelve inches square to show how a clean nest containing eggs should appear. An orange crate may be used.

Demonstration Outline

CAPTAIN	DEMONSTRATOR 2	DEMONSTRATOR 3
Introduces companions and self. Tells where team is from and the purpose of the demonstration.	Stands in place and acknowledges the introduction.	Stands in place and acknowledges the introduction.
Explains that one of the most important factors in marketing any product is quality. Tells why. Tells why dirty eggs do not keep or sell as well as clean ones. Explains how proper care results in clean eggs.	Gets and holds box nest containing clean straw and eight or ten clean eggs, so audience can see the construction of the box and its contents.	(After the audience has had opportunity to see the nest.) Removes eggs carefully and places them in basket or other suitable recepacle for gathering eggs.
States that a few eggs will be soiled and explains why they should not be washed but can be cleaned with proper care by other means. The white, chalky appearance of the egg should not be destroyed.	Displays several stained eggs and removes stains by applying Bon Ami or Sapolio to moist cloth and gently wiping egg.	Arranges materials for Demonstrator 2 and cleans one or two eggs with cornmeal or soda and cloth.

CAPTAIN	DEMONSTRATOR 2	DEMONSTRATOR 3
States that altho clean eggs keep and sell better than soiled ones, the outward appearance really indicates little of the quality. Tells what candling is and its purpose. Calls attention to work of companion.	Arranges candler and candles eggs, placing stale or defective eggs by themselves. (If the audience is small they may be shown the defective eggs before the candler.)	Displays home-made candler showing its construction, and arranges eggs for Demonstrator 2. Prepares trays, etc., for grading demonstration to follow. Partially fills trays with graded eggs to avoid delay.
Illustrates briefly (with charts, if possible) what defects may be detected in eggs by candling. Tells how age can be roughly determined. Explains difference between fertile and infertile eggs in keeping. Tells why producer should candle eggs.		
Assists Demonstrator 3, in grading and displaying trays of graded eggs.	Discusses market demands, value of grading and peculiar requirements of some markets. Explains importance to consumer of grading eggs since they are sold by the dozen. Tells something of market grades, necessity of grading eggs for storage and the effect which cold storage has on the egg market.	Completes grading of eggs and helps display trays.
Assists Demonstrator 2.	Explains case carefully, explains nailing of case, places pads and starts filling with graded eggs. (Empty fillers may be used in center of crates to save time in filling.) Places eggs of uniform size and color in top layer and covers with excelsior pads.	States that when possible each grade should be packed for shipment in a separate case. Describes placing of eggs in crates, use of excelsior or pads, fillers, dividers, etc. Tells how case should be carefully inspected before use, explains nailing of cover and use of wooden strips or wire if cover is split or case needs reinforcing.
Places cover and nails at both ends. Shows how wire or wooden strips may be used at ends to strengthen case. Tacks shipping tag bearing address on both ends of the case.	Assists Captain.	States that cases should be properly and plainly labeled on both ends for shipment.

CAPTAIN	DEMONSTRATOR 2	DEMONSTRATOR 3
Explains that individuals willing to produce high quality eggs and care for them properly will usually profit by direct marketing. Since volume is essential the same advantages can be brought to more producers thru cooperative marketing. States that county agent and the College of Agriculture are willing to assist in organizing cooperative egg marketing associations. Tells how local communities and clubs can develop such organizations. Thanks audience for kind attention.	Clears away material, places all eggs in basket or case, removes candler, etc.	Assists Demonstrator 2 and answers questions.

Questions

1. What egg candling regulations do we have in Kentucky?

2. How does the cold storage of eggs benefit the producer and consumer?

3. What are some of the essentials for successfully selling eggs cooperatively?

4. Can duck eggs be marketed with hen eggs?

4. CONCRETE

Many farmers are not taking advantage of the many uses of concrete. This may be overcome by a more general knowledge of materials needed, equipment and methods. This demonstrotion aims to supply much of that knowledge.

The team consists of three members. The captain suggests many farm uses for concrete and explains the use and type of tools necessary for hand mixing. Teammate No. 2 explains the desirable features of a good form or mould for making various structures and the reinforcing of concrete. Teammate No. 3 talks on materials, the methods of mixing concrete, various mixtures and the wetting process.

General Suggestions

1. The material for this demonstration is bulky and therefore must be supplied or built in advance of the actual time of demonstration.
2. Outdoor conditions are well suited to the handling of this demonstration.
3. Sand or pebbles or coarse aggregate should be of a known quality to make results relatively uniform.
4. Maintain an appearance of neatness thruout the demonstration and do not mix more material than is actually needed to prepare the article being made.
5. Call companion by first name during the demonstration.
6. Forms for concrete posts are easily constructed. A form for two posts would be very desirable. See "Home and Farm Uses of Concrete," page 27.
7. A concrete hog trough is a desirable piece of equipment to make and may be substituted for fence posts in the demonstration. See "Concrete on the Hog Farm," pages 13 and 14.

References:

Farmers' Bulletin No. 1279, The U. S. Department of Agriculture, Washington, D. C.

The following bulletins may be obtained from The Portland Cement Association, Chicago, Illinois:

"Concrete Around the Home."
"Concrete on the Hog Farm."
"Concrete Fence Posts."
"Concrete Basements and Foundations."

Equipment

1. Screen for separating sand and pebbles.
2. Mixing board.
3. Measuring box.
4. One wheelbarrow.
5. Water barrel and bucket.
6. Quantity sand, gravel and cement.
7. Two short-handled, square-point shovels.
8. Plasterer's trowel.
9. Form for filling with concrete.
10. Eight ⅜-inch round steel rods, 7 feet long.
11. Two-foot rule.
12. Spading and Tamping tools.

Demonstration Outline

DEMONSTRATOR 2	CAPTAIN	DEMONSTRATOR 3
Acknowledges the introduction with a smile and bows to audience.	Introduces companions and self. Tells where team is from and the purpose of the demonstration.	Acknowledges the introduction with a smile and bows to audience.
Helps companion to get and properly place tools for work. Carries water and puts it into barrel.	Briefly outlines the uses of concrete in structural work. Enumerates features which make it ideal for farm structures. Includes in his discussion the materials from which concrete is made and ease of securing them.	Arranges tools to be used in screening gravel, measuring materials and mixing the concrete.
Gets the bank-run gravel and wheels it to position in front of screen.	Explains the use of tools arranged by companions.	Takes shovel and screens the bank-run gravel as companion brings it up.

DEMONSTRATOR 2	CAPTAIN	DEMONSTRATOR 3
Shovels sand into measuring box on mixing board for companion and helps him to lift away the measuring box. Assists in handling and spreading cement over sand.	Places measuring box on the mixing board. Measures out 2 cu. ft. of sand, dumps and spreads out evenly on the platform. Gets sack of cement, opens and dumps on top of sand, then distributes evenly.	Takes up discussion here by explaining what bank-run gravel is, why it is screened and why necessary to measure. Explains size of gravel desired. States proportions and cu. ft. of material used in mixing concrete in this demonstration. Gives the number of cu. ft. of concrete this should produce.
Takes shovel and thoroly mixes sand and cement. Measures required quantity of pebbles and spreads in a layer on top of cement-sand mixture. Takes second shovel and assists companion in turning the mixture. As companion adds water, continues to turn mass until the desired consistency is obtained.	Arranges form for placing concrete while companion mixes sand and cement. Assists in placing pebbles over the cement-sand mixture. Takes shovel and turns the material until the pebbles are uniformly distributed thruout the mixed cement and sand. Forms hollow in center of pile, adds water as companion turns until the desired wetness is secured thruout the mixture. Finishes the arrangement of forms for receiving concrete if not already complete.	Explains the method commonly used in the hand mixing of concrete. Calls attention to companion's work. Explains the use of concrete mixing machines and gives an idea of their cost. States why different proportions of sand, gravel and cement are used for different kinds of work. Explains the wetting process, the proper wetness to be secured and the necessity for placing concrete in forms within one-half hour.
Takes up discussion by telling what the team plans to make with the concrete, the details of the form or mould already prepared and the method of placing concrete. Speaks of reinforcing materials, why necessary and how arranged in the concrete. States length of time forms should remain in place, proper care in removing forms for future use, care of concrete while hardening, etc.	Gets rods for reinforcing. Takes trowel and distributes concrete evenly in form as companion places with shovel. Puts in reinforcing rods at proper time and sees that they remain in place. Brings out a finished appearance on surface of structure by the use of the trowel.	Takes shovel and places concrete in forms. Uses care to make work appear neat and not wasteful of materials. Clears away surplus material, removes equipment and makes a neat appearance for the work done as time allows.

DEMONSTRATOR 2	CAPTAIN	DEMONSTRATOR 3
Assists in putting demonstration material and tools in order. Answers those questions asked by the audience which relate to the building and proper arrangement of forms for concrete and reinforcing materials.	Briefly summarizes the work done in the demonstration and the points brought out in discussion. Asks the audience for questions. Answers those dealing with general uses of concrete and necessary tools for home mixing. When questions are all satisfactorily answered, invites audience to attend future meetings of the Junior Club and thanks them for their kind interest.	Complete the orderly arrangement of the demonstration. Answers questions relating to concrete-making, materials, methods of mixing concrete, various mixtures and the wetting process.
Bows in unison with teammates.	Bows in unison with teammates.	Bows in unison with teammates.

Questions

1. What are the general qualifications of good aggregate?
2. Why should different sized aggregate be used for different classes of work?
3. What are good proportions of cement and aggregate for different kinds of work?
4. What is a satisfactory reinforcing material?
5. What are the essentials of good concrete construction?
6. Why is not a 1 to 6 mixture of cement and bank-run gravel equivalent to a 1-2-4 mixture?

5. A SIMPLE HOT AND COLD WATER SYSTEM FOR THE KITCHEN

By J. B. Kelley

The purpose of this demonstration is to impress the audience with the need and value of a hot and cold water system in every farm home, the ease with which it can be installed and with the fact that a successful, simple and inexpensive system can be obtained. The team is required to set up before the audience the simple hot and cold water system described in Circular 139 of the University of Kentucky, College of Agriculture, Lexington, Ky. The captain presents the needs and value of such a system and describes the equipment. Demonstrator No. 2 shows method of installing and demonstrator No. 3 explains the care and operation of the system.

General Suggestions

1. The team, with the aid of the County Agent, should obtain as much information as possible regarding the number of homes in the county needing such a system.

2. The team should fit and erect the equipment several times before the day of the demonstration.

3. All equipment should be carefully checked and arranged on the stage.

4. Supports for the sink and pump should be placed before demonstration starts and the stove or heater and range boiler should be placed in position ready to be connected.

References:

Farmers' Bullletin No. 941, U. S. Dept. of Agr., Washington, D. C.

Extension Circulars No. 125 and 139, Univ. of Ky., College of Agr., Lexington, Ky.

Extension Bul. No. 9, Kansas State Agr. College, Manhattan, Kans.

Extension Bul. No. 50, Cornell Univ., Ithaca, N. Y.

Equipment

Extension Circular No. 139, of the University of Kentucky, College of Agriculture, Lexington, Ky., gives a complete list of material required for an average installation. The team, aided by the County Agent, should be able to borrow the tools needed from a local dealer and he should be willing to assist in teaching the team how to erect the equipment.

Demonstration Outline

DEMONSTRATOR 2	CAPTAIN	DEMONSTRATOR 3
Stands in place and acknowledges introduction. Then sits down until the captain has finished his introductory remarks.	Introduces team. Tells where the team is from and the purpose of the demonstration. Gives the outstanding facts regarding water supply system as follows: States the amount of water needed for a family; how running water in the home lightens the burdens of the farm women, improves the sanitary conditions and how increased use of water will improve the health of the family. The time required to install a system is not long and the expense is not excessive; also the work is such that almost any man can do it. The delay in the installation of a water system is due to lack of knowledge of water systems and how to install them. Mentions the kindness of local dealers in assisting in training the team and loaning them the equipment. Names essential equipment and gives cost of each article.	Stands in place and acknowledges introduction. Then sits down until the captain has finished his introductory remarks.
Shows and describes the tools needed. Clamps a piece of pipe in a vise and demonstrates to audience how to cut and thread it and how to make a watertight connection.	Announces that teammates No. 2 will explain how to install the system. Hands tools and pipe to companion for demonstration.	Assists in cutting and threading pipe.

DEMONSTRATOR 2	CAPTAIN	DEMONSTRATOR 3
Places sink in position and explains the importance of having sink placed at proper height and of having a trap. Describes the disposal system and how to install it. Directs the installation of the pump, mentioning the special features of the pump and the importance of having a well or cistern close to the house so that the pump cylinder will be within pumping distance of the water.	Assists in placing sink and connecting up equipment.	Assists in connecting up equipment.
Takes apart the 3-way cock and shows the audience the construction of it, points out the three positions of the handle by means of a chart similar to illustration in Cir. 139, p. 5.	Assists in holding chart.	Assists in holding chart.
	Announces that teammate No. 3 will explain operation of system.	Explains the various operations of the system in the order given on pages 6 and 7 of Univ. of Ky., Ext. Cir. 139.
Answers questions relating to use of tools and method of installation.	Asks for questions. Answers questions relating to equipment and the value of a water system.	Answers questions relating to operation.

Questions

1. Why do the farm homes in your community need hot and cold water systems?

2. Can the farmers in your community afford a hot and cold water system?

3. Why should the hot water pipe always be left open at the kitchen sink?

3. Why should a hole be drilled in the cold water pipe at (F) in the range boiler?

5. Why should the handle of the three-way cock be placed in position (A) between operations?

6. Why should the source of water be a shallow well or a cistern close to the house?

7. How can you prevent this system from freezing in cold weather?

8. How can a bathroom equipment be connected to this system?

9. What means should be provided for disposing of the waste water?

10. What are some of the other simple inexpensive water systems?

11. What are some of the more elaborate systems?