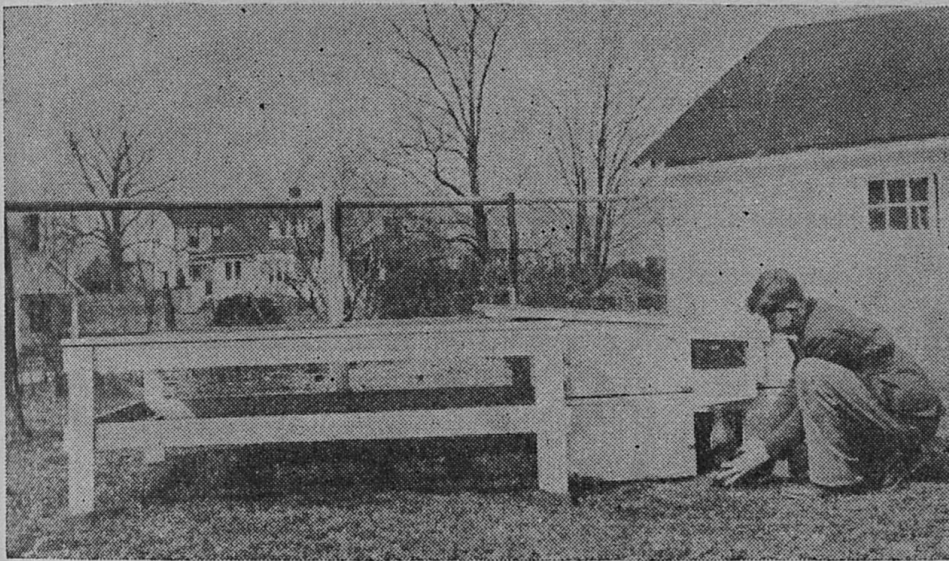


Poultry Project for 4-H Club Members

BROODING CHICKS



Lantern brooder, with sun porch, for 50 chicks

Circular 409

UNIVERSITY OF KENTUCKY
College of Agriculture and Home Economics
Agricultural Extension Division

Thomas P. Cooper, Dean and Director

REQUIREMENTS FOR THE PROJECT

Success with this project depends upon equipment, feed, disease control, good chicks to start with, and proper management. There should be enough chicks to make the project interesting. The requirements for the brooding project are:

1. Enroll by March 1.
2. Do your own work.
3. Keep a complete record.
4. Start not less than 50 chicks.
5. Complete your record by November 1.

Your county agent will give you such information as may be needed on special problems.

A WORD TO PARENTS

Suggestions in this circular are intended to help your sons and daughters become successful poultry raisers. They can learn to do the job well by carrying this project to completion. Whether or not they carry it on successfully is largely dependent on you. Encourage them to do their best. Help them become worth-while "grown-ups" by encouraging them now.

(This circular is a revision
of Circular 358.)

Poultry Project for 4-H Club Members

BROODING CHICKS

By C. E. Harris, Stanley Caton, and J. B. Brooks

EQUIPMENT

Brooding equipment needed will depend upon the number of chicks to be brooded. If 200-250 are to be raised, a brooder house is needed. Where 50 chicks are to be brooded, a lantern brooder may be used.

1. Clean and disinfect all equipment before using it.
2. The 10' x 12' brooder house, or similar house, is needed for 200-250 chicks (see Fig. 1). A brooder stove will be needed too. Plans for building the brooder house are in Circular No. 157.
3. The lantern brooder is large enough for 50 chicks. Plans for building it are in this circular. Heat may be supplied by a lamp or a lantern.
4. Operate the brooder stove or lantern brooder a day or so before the chicks arrive, to be sure it will give proper heat and ventilation.
5. Provide plenty of equipment for feed and water. Each 50 chicks need two feeders 2 feet long, 2 inches deep, and 4 inches wide; also two 1-quart jars with chick waterer caps, or a 1-gallon bucket made to be used according to Fig. 2.
6. Have a sun porch for either the brooder house or the lantern brooder.

CARING FOR THE CHICKS

1. Start chicks in March. Order them in January for March delivery. Buy only from a reliable hatchery. Use chicks of the general-purpose breeds, such as Barred or White Rocks. Rhode Island Reds, or New Hampshires.
2. Have feed, water, litter, and brooder ready for the chicks when they arrive. Use only dry sand as litter in the lantern brooder. **USE DEEP DRY LITTER IN THE BROODER HOUSE** (see Fig. 3).
3. Feed the chicks as soon as they are taken out of the box and placed in the brooder.
4. Keep chicks comfortable; reduce the temperature gradually.

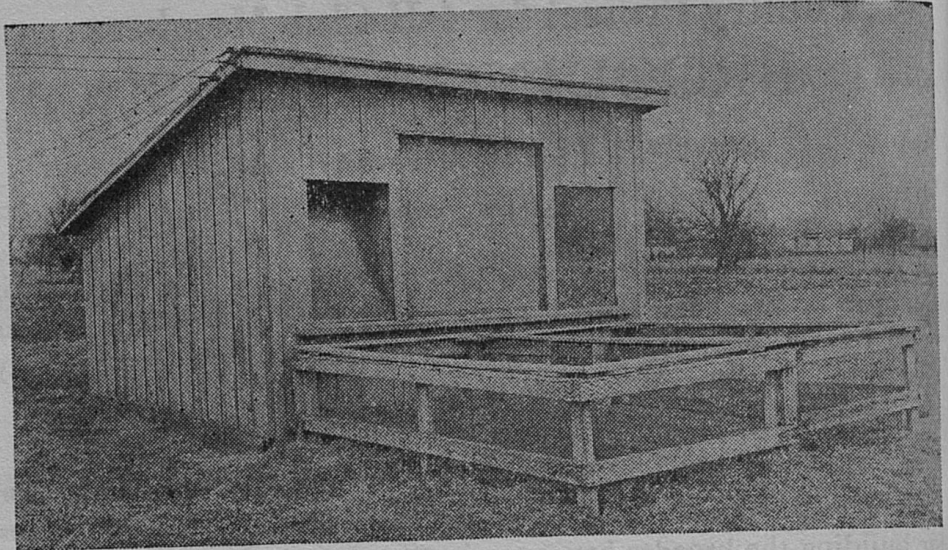


Fig. 1.— Brooder house and sun porch

5. Do not crowd chicks; 50 is enough for the lantern brooder, or 250 for a brooder house.

6. As soon as the chicks will use the sun porch, place feeder and water containers on it, as well as in the brooder house. Hang feed

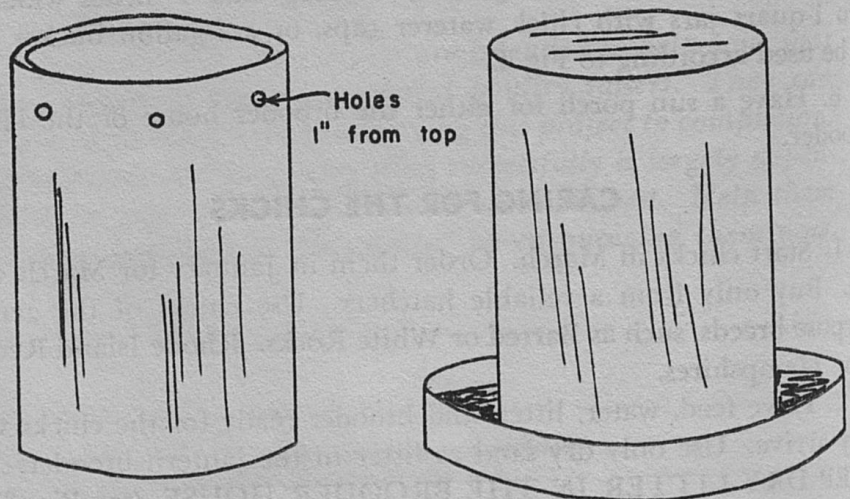


Fig. 2— Chick waterer made from 1-gallon bucket and a pan. Holes are punched 1 inch from the top of the bucket, the bucket is filled with water, a pan is turned down over the top of the bucket, and the bucket is then turned upside down, as shown at the right.

Fig. 3.

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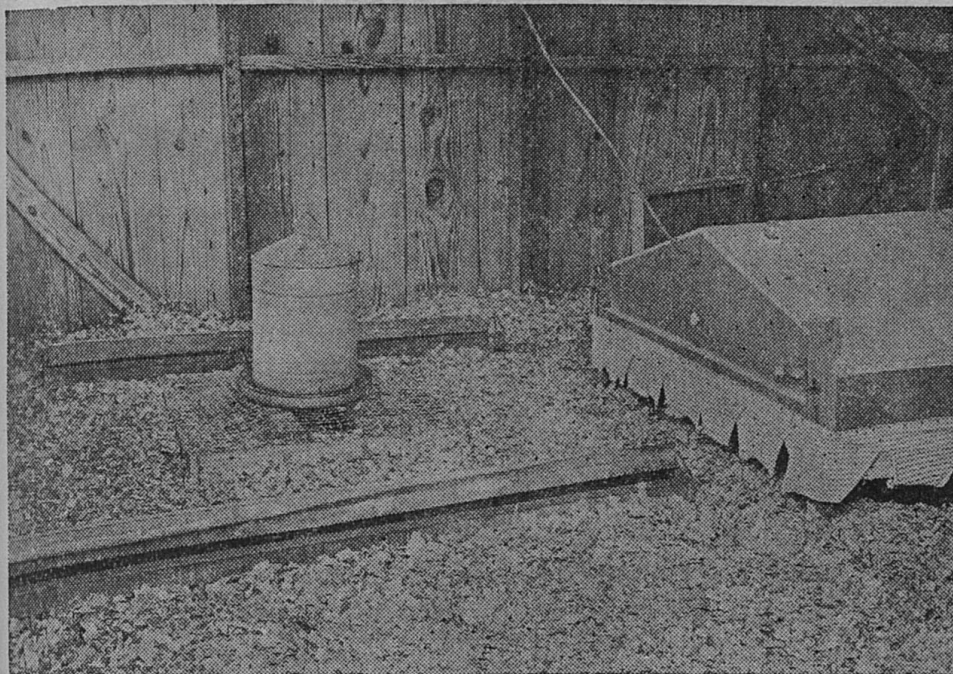


Fig. 3.— Ready for the chicks—feeders, waterer, dry litter, and electric brooder.

sacks on the windward side of the sun porch to make it more comfortable.

7. Use movable range shelters to keep growing pullets on clean ground and away from old chickens.

FEEDING CHICKS AND GROWING PULLETS

1. Buy a good starting mash.
2. Give chicks all they will eat at all times.
3. Start feeding some grain when the chicks are 4 or 5 weeks old.
4. Keep mash and grain before the pullets during the summer.
5. Water must be kept before the chickens at all times.
6. Pasture, such as bluegrass, alfalfa, lespedeza, and Sudan grass will lower the feed cost and make the chickens grow fast. Such greens as Swiss chard, Chinese cabbage or rape may be planted and the leaves pulled and fed to the chicks daily. A 100 ft. row of Swiss chard will provide about 10 bushels of green feed.
7. Do not feed milk during the summer. Milk draws flies and flies spread diseases and tapeworms.

THE LANTERN BROODER

It is best for those who want to brood small numbers of chicks (up to 50) to use the lantern or flat-bottom lamp brooder (see picture on front cover) rather than to depend on hens.

Operating the Lantern Brooder

The lamp in the bottom section of the brooder should be started 2 days before the chicks are put in. This gives enough time to learn how to regulate the amount of flame necessary to keep the brooder warm. Also the sand used as litter in the removable tray will become warm and dry. Be sure that there is at least 1 inch of space between the top of the lamp chimney and the floor of the brooder.

If the weather is very cold, the brooder may be placed in a building with the front of the brooder facing a window for light, but in ordinary weather the brooder should be placed on the south side of a building where it will be protected from the wind and will be in the sun. If the brooder is inside a building, less heat and less kerosene will be needed. In this case the floor around the brooder must be kept free from straw or other trash to avoid fire hazard.

Clean the brooder at least once the first week and twice a week thereafter. Never use straw for litter in this type of brooder, since it burns easily. Always use dry sand.

HOW TO BUILD THE LANTERN BROODER

(See detailed plans on pages 8 and 9)

Section 1 (bottom section)

The sides and ends of the bottom section are made of 1" x 12" boards. Before nailing the section together, cut out the 8" x 10" door as shown in one of the sides. The door may be hinged with small strap hinges or leather straps. Nail a 1" x 2" x 2' strip above the door on the inside to strengthen the weakened side. Cut the boards to correct lengths, allowing for thickness of boards, so that the section will be of exactly the dimensions shown. Three 1/2" openings should be provided on two sides of this section for ventilation.

Section 2 (removable tray)

The tray is made of 1" x 4" boards fastened together with 1/2" corrugated wood fasteners driven at an angle to the grain in the boards. A tin bottom is nailed to the tray with small shingle nails. The tin

is placed on the bottom of the tray so that the lamp flame will not come in contact with wooden parts. This prevents a fire hazard. After building Section 3, 1" x 1" x 4" blocks are nailed on the top and bottom sides of the tray to keep it from slipping.

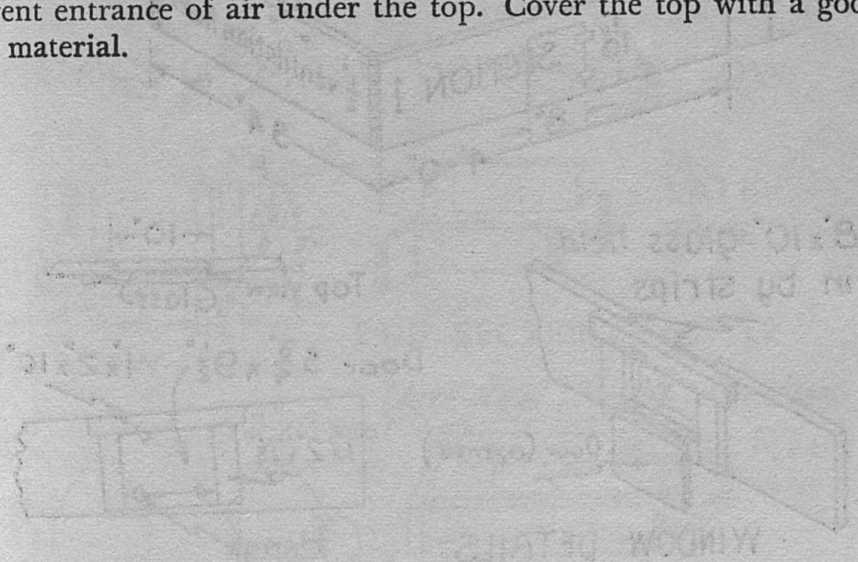
Section 3 (section over tray)

The sides of this section are made of 1" x 12" boards trimmed to the dimensions shown. At the front is shown a 1" x 6" board under which a drop curtain of burlap is tacked. The rear board is 1" x 8". The 1" x 12" boards are trimmed to provide slope for the roof. A window should be placed in both sides of this section to furnish light in the brooder. A door should be provided for closing the window opening and keeping the brooder warm at night and during periods of cold weather.

(Note) A 1" x 1" nailing strip can be put in Section 3 to hold in place a glass or transparent cover. On warm, bright days, the top can be raised or laid back, thus providing more light in the brooder.

Section 4 (top)

The top is built of flooring or matched boards, and is braced with 2 or 3 1" x 4" pieces. The bracing should fit just inside of Section 3, to prevent entrance of air under the top. Cover the top with a good roofing material.



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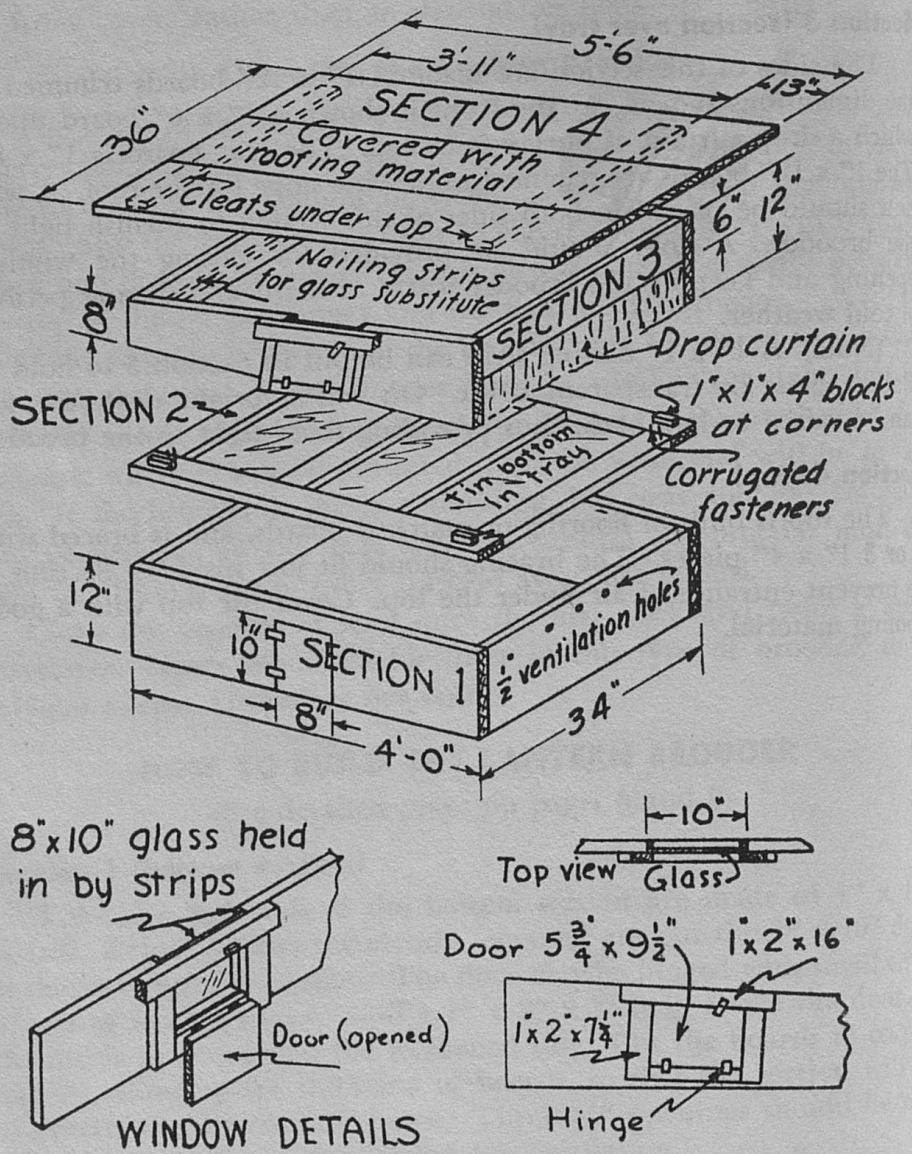
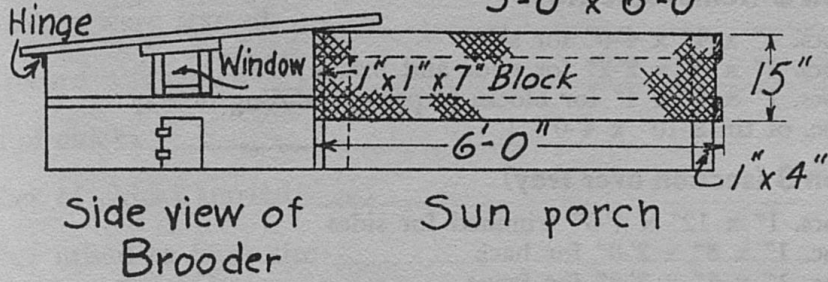


Fig. 4.— Details of lantern brooder

Top & sides of sun porch covered with 1" mesh poultry netting. $\frac{1}{2}$ " hardware cloth bottom

Top of sun porch on separate frame & removable, 5'-0" x 6'-0"



DETAILS OF MASH HOPPERS BELOW

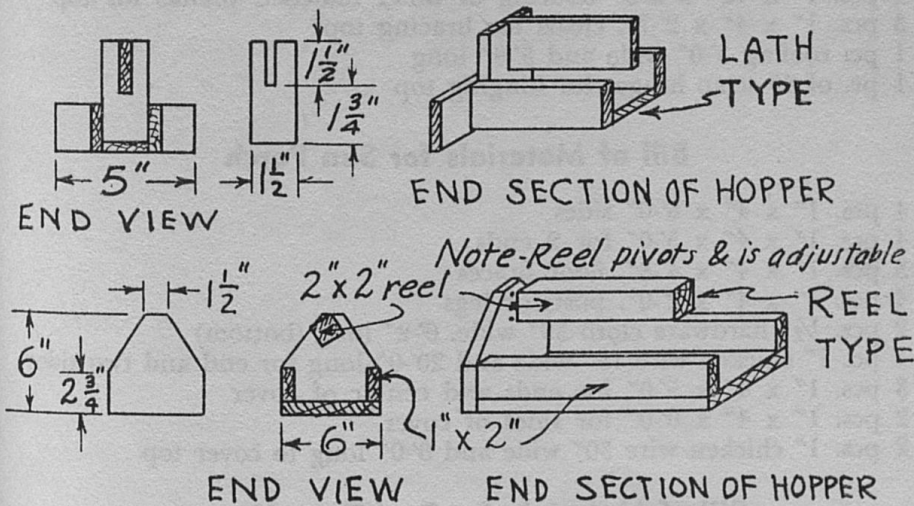


Fig. 5.— Details of sun porch and mash hoppers

Bill of Materials for Lantern Brooder

Section 1 (bottom section)

- 2 pcs. 1" x 12" x 4'-0" for sides
- 2 pcs. 1" x 12" x 2'-8" for ends
- 2 small hinges or leather straps for hanging 8" x 10" door
- 1 pc. 1" x 2" x 2'-0" to strengthen weakened section over door

Section 2 (removable tray)

- 2 pcs. 1" x 4" x 4'-0" for sides
- 4 pcs. 1" x 4" x 2'-2" for ends and braces
- 8 pcs. 1" x 1" x 4" for blocks to prevent sliding of tray
- 1 pc. of tin 2'-10" x 4'-0"

Section 3 (section over tray)

- 2 pcs. 1" x 12" x 4'-0" trimmed for sides
- 1 pc. 1" x 8" x 2'-8" for back
- 1 pc. 1" x 6" x 2'-8" for front
- 1 pc. of burlap to cover front
- 2 pcs. 1" x 1" x 4'-0" {
- 2 pcs. 1" x 1" x 2'-8" { nailing strips for transparent cover or glass
- 2 pcs. 1" x 2" x 4'-0" for windows
- 6 pcs. 1" x 1" x 12" strips to hold 8" x 10" glass
- 2 - 8" x 10" window panes
- 4 small hinges or leather straps

(Note) Save parts cut out of sides for making doors.

Section 4 (top)

- 3 pcs. 1" x 12" x 5'-6" flooring or other matched planks for top
- 3 pcs. 1" x 4" x 2'-7", cleats for bracing top
- 1 pc. roofing 3'-0" wide and 5'-8" long
- 1 pr. of 4" strap hinges for hinging top

Bill of Materials for Sun Porch

- 4 pcs. 1" x 4" x 6'-0" sides
- 4 pcs. 1" x 4" x 5'-0" for 2 ends
- 3 pcs. 1" x 4" x 4'-8", floor braces
- 4 pcs. 1" x 4" x 2'-0", posts or legs
- 2 pcs. 1/2" hardware cloth 30" wide, 6'-2" long (bottom)
- 1 pc. 1" chicken wire 15" wide and 20'-0" long for end and two sides
- 3 pcs. 1" x 4" x 5'-0" for ends and center of cover
- 2 pcs. 1" x 4" x 6'-0" for sides of cover
- 2 pcs. 1" chicken wire 30" wide and 6'-0" long to cover top

Bill of Materials for Reel-Type Hopper

- 1 - 2" x 2" x 4'-0" - Reel
- 2 - 1" x 6" x 6" - Ends
- 2 - 1" x 2" x 4'-0" - Sides
- 1 - 1" x 6" x 4'-0" - Bottom

Bill of Materials for Lath Hopper for Small Chicks

4 lath strips $\frac{3}{8}$ " x $1\frac{3}{8}$ " x 48"
4 doz. 3d lath nails

BROODING RECORD

Date chicks were started _____
Date record was closed _____
Breed of chicks _____
Number of chicks started _____
Number raised to fryer size _____

FEED RECORD

Month	Pounds mash fed	Pounds grain fed	Cost of feed
March			
April			
May			
June			
July			
August			
September			
October			
Season TOTAL			

Cost of other feed (milk if used) _____

Total cost of all feed _____

Cost of baby chicks _____

TOTAL COST _____

RECEIPTS

Fryers sold, No. _____ Value _____

Fryers eaten, No. _____ Value _____

Chickens on hand at close of Project No. _____ Value _____

Total value and receipts _____

Gain or loss from project _____

STORY

(Give information about your project and how you did it.)

STORY (continued)

STORY (continued)

NAME _____

ADDRESS _____

CLUB _____

Years in Club work _____

Years in Poultry project _____

COUNTY _____ Year 194_____

Lexington, Kentucky

October, 1944

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