

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF OKLAHOMA

D. P. TRENT, Director

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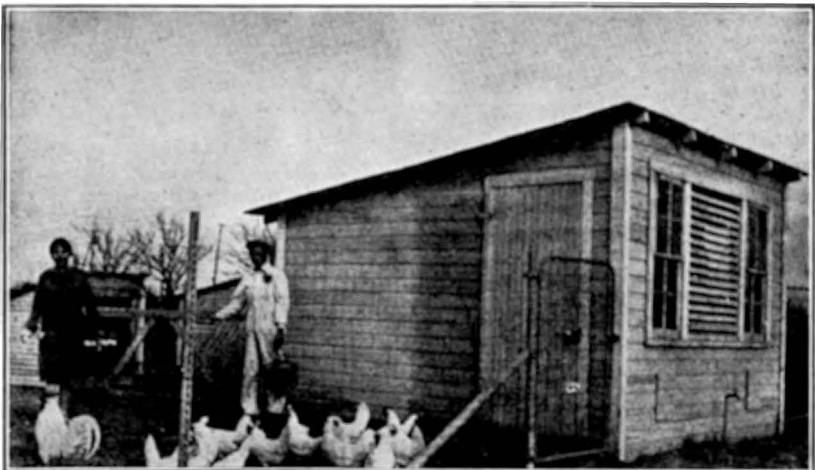
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Poultry Management
for
4-H Club Members
and
Farm Flock Owners

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Extension Poultryman



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REFERENCE BULLETINS AND CIRCULARS

A. & M. College Poultry Department, Stillwater, Oklahoma

- "The A. & M. College Way to Feed Laying Hens"
- "The A. & M. College Way to Feed Baby Chicks"
- "Poultry Green Feed Calendar"
- "Monthly Report of Oklahoma Egg Laying Contest"

Experiment Station Bulletins, A. & M. College, Stillwater, Oklahoma

- 202 Growing Turkeys in Confinement
- 67 Time to Hatch
- 69 Shade and Green Feed for Chickens
- 167 Time to Hatch. (More complete)
- Report Science Tests Poultry Practices

Extension Service, A. & M. College, Stillwater, Oklahoma

- Cir. No. 227—Poultry Culling and Judging Chickens for Egg Production
- Cir. No. 229—A Home for Hens
- Cir. No. 255—Eggsactly What You Need
- Cir. No. 282—Poultry Equipment for 4-H Poultry Club Members
- Cir. No. 241—Poultry Management for 4-H Club Members and Farm Flock Owners
- Cir. No. 268—Chick Management

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

Farmers' Bulletins Numbered:

- 287—Poultry Management
- 686—A Simple Trap-Nest for Poultry
- 801—Mites and Lice on Poultry
- 849—Capons and Caponizing
- 1052—Standard Varieties of Chickens III—The Asiatic, English, and French Classes
- 1112—Culling for Eggs and Market
- 1377—Marketing Poultry
- 1378—Marketing Eggs
- 1409—Turkey Raising
- 1506—Breeds of Chickens I—American
- 1507—Breeds of Chickens II—Continental
- 1508—Poultry Keeping in Back Yards
- 1524—Farm Poultry Raising
- 1538—Incubation and Brooding of Chickens
- 1541—Feeding Chickens
- 1554—Poultry Houses
- 1614—Poultry Records
- 1652—Poultry Diseases

Leaflet Series of Farmers' Bulletins

- 39—Eggs at Any Meal
- 64—Construction and Packing of an Egg Case

INTRODUCTION

During the past 10 years members of the boys' and girls' 4-H poultry clubs have made rapid improvement in the quality of poultry produced. They have added good breeding males to their flocks which have proven valuable in improving the quality of the flocks, increasing the egg production and bringing about more desirable shape, as well as color and size of the birds.

Many new laying and brooding houses have been built and a number of old houses remodeled to meet the needs of the modern hens. Feeders, water containers, nests and dropping boards have been added to the poultry farms. The proper kind of equipment was badly lacking in many instances, and the club boys and girls have helped to add the necessary equipment where it was needed.

A fine showing has been made by the 4-H club exhibitors with their birds in the county and state fairs, and state poultry shows. While some fine work has been accomplished by these young poultry growers, there is much good work to be done yet. Club members who have been successful should not slack up in their work, but continue to improve the flocks on their farms and help others to get the most out of their club work.

The club manual should be carefully read and instructions followed, if the best results are to be obtained.

OBJECT

The objects of the boys' and girls' 4-H poultry club are:

1. To give greater knowledge and a better understanding of the business principles underlying the successful growing of poultry.
2. To increase the efficiency of the young poultry keeper in the management of poultry.
3. To improve the farm flock by the use of carefully selected females mated to males from high producing standard bred ancestry.
4. To teach the poultry club members how to select hens for breeders and the essentials necessary in the culling of hens for egg production.
5. To bring before the poultry growers the value of green feed, clean water, shade and sanitary measures needed in keeping birds healthy.
6. To impress upon the young breeders the fact that success depends more on knowledge than upon luck.

GENERAL REQUIREMENTS

1. Boys and girls 10 and under 21 years of age are eligible to enroll in poultry club work.
2. Only pure bred chickens and turkeys can be used.
3. A poultry record book must be kept, and presented to the county or home demonstration agent upon completion of the year's work.
4. There shall be a poultry club captain in charge of poultry work during the club year from the time the club is organized until the final reports are made.
5. A trio of birds—one cockerel and two pullets—should be exhibited at community and county fairs each year.
6. Poultry club members must do their own work, follow instructions and attend club meetings.

7. An achievement day or club round-up shall be held during the club year.

8. The poultry club year ends October 31.

All poultry club members are required to carry out their demonstrations as conducted by:

1. Their county and home demonstration agents.
2. The 4-H Poultry Club Manual.
3. The 4-H Poultry Club Report.
4. The Extension News.
5. Their club coach and club captains.

The poultry demonstration extends over a period of four years. Chickens and turkeys may be grown. In shows where premiums are not offered on turkeys in the junior class, they may be shown in the open class.

REQUIREMENTS BY YEARS

First Year

1. Hatch or purchase 50 pure bred chicks not later than May 1.
2. Clean the farm poultry house once a week.
3. Make one feeder.
4. Kill and dress several chickens during the year.
5. Show one cockerel and two pullets at the county fair.
6. Show one cockerel and two pullets at community and county poultry shows.

Second Year

1. Hatch or purchase at least 100 pure bred chicks not later than May 1.
2. Make a shipping coop according to instructions given in this manual.
3. Clean the poultry house and spray it when necessary. Use one of the standard disinfectants that has been mixed at the rate of one pint of disinfectant to 12 quarts of water.
4. Feed the baby chicks a complete ration.
5. Enter one county or state judging contest.
6. Show one cockerel and two pullets at the county fair and county show.
7. Mate a breeding pen consisting of one male and 15 females, when practical to use a breeding pen.

Third Year

1. Hatch or purchase 100 or more pure bred chicks not later than May 1.
2. Assist the parents in managing the farm poultry flock.

3. Cooperate with parents in feeding the farm poultry flock and baby chicks.
4. Make two feeders—one for baby chicks and one for laying hens.
5. Cull the farm poultry flock between June 15 and October 15.
6. Select pullets in September for the laying house.
7. Enter county or state judging contest.
8. Show one cockerel and two pullets at the county and state fairs and shows.
9. Mate a breeding pen consisting of one male and 15 females, when practical.

Fourth Year

1. Hatch or purchase at least 150 chicks not later than May 1. Part of the chicks should be from poultry kept by club members during the third year poultry work.
2. Spray or paint inside of the poultry house with carbolineum once during the year, if mites are present.
3. Remodel or construct a poultry house if needed.
4. Show one cockerel and two pullets at county and state fairs and shows.
5. Cull the hens for egg production between June 5 and October 15.
6. Enter state judging contest.

DAILY SCHEDULE OF WORK

1. Carefully clean water containers.
2. Keep containers filled at all times with clean, fresh water.
3. Provide dry mash in a feeder that has been constructed to prevent the droppings or hens' feet coming in contact with the feed.
4. Feed green feed in troughs.
5. Feed grains in troughs daily, unless an all mash ration is being fed.
6. Gather eggs at least once daily, and more often if the weather is extremely hot or cold.

SCHEDULE OF WORK BY MONTHS

January

1. Mate a breeding pen by the first of the month or earlier.
2. Begin saving eggs for early hatched chicks.
3. Overhaul incubator and brooder stove and order necessary parts needed for repairs.
4. Keep the birds confined to laying house during extremely cold or rainy weather.

February

1. Clean brooder house and move to clean ground.
2. When the brooder house cannot be moved, the soil should be plowed and planted to some seasonal green feed crop. If the yards or runways are small, two or three inches of the top soil may be moved and replaced by clean soil.

3. Set up brooder stove and put in operation two days before chicks are to arrive.
4. When new brooder houses are to be built, construction of house should begin at least two weeks before the chicks are to be received.
5. Prepare ground for green feed that is to be planted for pasture crop.

March

1. Clean the brooder house at least once a week and more often if necessary.
3. Control ticks, mites and other insects in hen house.
3. Remove weak and diseased chicks from the flock.
4. Observe the breeding and feeding of young chicks.
5. Plant green feed.

April

1. Discontinue the saving of hatching eggs after April 10.
2. Increase size of mash and grain feeders for young chickens.
3. Separate cockerels from pullets as soon as sex can be determined, or before cockerels weigh two pounds.
4. Sell or pen male birds after April 10.
5. Plant sudan grass, and Swiss chard for green feed.

May

1. Discontinue the hatching of chicks on or before May 1.
2. Clean brooder stove and place it in a dry place immediately after the brooding season.
3. Sell cockerels when they weigh 1½ to 2½ pounds each, unless they are to be used for breeders the next season.
4. Mark the promising breeding cockerels.
5. Observe National Egg Week.

June

1. Begin culling for egg production.
2. Gather eggs at least twice daily and store the eggs in a clean, cool, well ventilated room.
3. Examine young chicks and older birds for worms and external parasites.

July

1. Continue culling for egg production.
2. Treat chickens for worms, if flock is wormy.
3. Paint inside of poultry house with carbolineum to destroy mites.
4. Attend county judging school, if any are held in the county.
5. Plow ground that is to be planted to wheat pasture.

August

1. Continue culling for egg production.
2. Locate the mash, grain and water containers in that part of the poultry house, or near the poultry house that has the most comfortable temperature for the chickens.
3. Select and leg band the most promising cockerels and pullets for the fairs and shows.
4. Construct a mash feeder for hens, for 4-H club birds or parents flock

September

1. Move pullets into laying house.
2. Select and leg band cockerels that are satisfactory to sell as breeders.
3. Construct a coop to use in transporting poultry exhibits to fairs and shows.
4. Enter poultry judging schools and contests held in county and state.
5. Thoroughly scrub out interior of poultry house and spray.
6. Plant wheat pasture in regions where wheat will grow.
7. Remodel poultry house when improvements can be made that will improve the poultry house.
8. Wash windows to admit the greatest amount of sunlight.

October

1. Enroll in the Farm Flock Demonstration work, providing as many as 50 hens or pullets are in the flock.
2. Make a complete report of your poultry work, and send it to your community or home demonstration agent, October 31.

November

1. Exhibit one cockerel and two pullets at school house poultry show held in school district.
2. Secure a special market for eggs, if possible.
3. Exhibit in county poultry show.

December

1. Make an exhibit at one of the Oklahoma State Poultry Federation Shows.
2. Purchase breeding stock that is to be used for the next year.

SELECTING EGGS FOR HATCHING PURPOSES

Hatching eggs should be carefully picked and handled, if the best results are to be obtained. The hatchability of the eggs and livability of the chicks can be greatly increased where proper care is given the eggs from the time they are laid until they are placed in the incubator or under the hen. The following factors are considered valuable in the selecting of hatching eggs:

1. Remove hatching eggs from the nests two or three times daily. More often in freezing cold weather.
2. Eggs should be selected for size, shape, shell texture and color. Standard size is 2 5-16 inches in length and 1 1-8 inches in width. The length measurement is made from center of the large end to the center of small end. Width is the distance through the egg at the thickest point.
3. Shape—Eggs that conform somewhat to proper shape are considered best. Long, large, round, or rough shelled eggs are not desirable to hatch.
4. Holding Hatching Eggs—Eggs should not be held more than one week. They should be held at a temperature with maximum degree of 61°F. and a minimum degree of 40°F. They should be turned daily while being held for hatching purposes.
5. The storage space should be free from oil, grease, and bad odors. The space should be large enough for the caretaker to work in comfortably.

ARTIFICIAL INCUBATION

1. Deciding Time for Hatching:

Chicks should be hatched early so that they will mature, come into production in the early fall and also be standard size and weight for the fairs.

It has been conservatively estimated that the most profitable time to hatch birds of the Asiatic varieties is from February 1 to February 15; American varieties, February 15 to March 15, and the Mediterranean varieties about March 15 to April 15. It seldom pays to hatch chicks after May 1.

2. Estimating the Capacity Needed:

The number of chicks hatched and raised will depend upon the selection of eggs and their management and care. With poor management the capacity can not be estimated. With the best of care, one pullet should be raised from five eggs set, or one pullet raised from three chicks hatched. A 70% hatch of all fertile eggs is considered good.

3. Choosing the Incubator:

Select an incubator that has proven satisfactory in your community. The chicks to be hatched and the number of hatches will determine largely the size of incubator needed.

In selecting the incubator, ask yourself the following questions: "Is this machine convenient to operate?" "Does it have adjustable ventilation intake and outlet?" "Does the burner work after the lamp heats?" "Does it carry a fire underwriters' approval?" "Are the walls, top, and bottom insulated to make it economical to heat?"

4. Selecting a Desirable Incubator Location:

The incubator house must be free from drafts, and have sufficient ventilation to carry off the foul air and at the same time maintain a regular temperature. It must not allow the direct sunlight to fall upon the machine. It may be found satisfactory to stretch muslin cloth over window spaces, then window lowered or raised to meet the desired temperature. A wet bulb thermometer should be used to determine the desired moisture.

5. Preparing the Incubator:

Several steps are necessary in preparing the incubator for operation:

- A. Level the incubator with a carpenter's level.
- B. Place a new wick in the lamp, if needed. The wick should be long enough to allow two inches to rest on bottom of lamp.
- C. Disinfect incubator by spraying with a standard germicide several days before eggs are placed in the machine.

6. Testing the Thermometer:

In order to be sure that the thermometer is correct, test it with two thermometers that would be acceptable to a physician. Both thermometers, with bulbs close together are placed in lukewarm water, and then while stirring the water, hot water is slowly added until the thermometers register 103°.

7. Care of Lamp:

The lamp is to be filled, the wick trimmed, and the burner cleaned at the same hour each day after the eggs have been turned. It is not always necessary to cut the wick, except corners to eliminate side darts, but a match should be used to rub the charred crust from the wick. Use a medium flame, and adjust the thermostat to it. If a high flame is used, the lamp will smoke.

8. Regulating the Incubator:

The directions that come with the machine should be followed carefully. The incubator should be in operation two or three days before setting the eggs so that necessary adjustments can be made to maintain the machine at even temperature.

9. Starting the Hatch:

After the machine has proved to be properly adjusted, place the eggs in the egg tray with the small end down slightly sloping backward and to one side. Never place eggs one on top of the other as the egg chamber is warmest near the top.

10. Maintaining the Proper Temperature:

In all incubators the temperature is regulated or controlled by a thermostat. The thermostat must be sensitive so that when the temperature rises above the desired degree, the expansion of the thermostat lifts the damper and allows the surplus heat to escape. When the temperature is proper the damper should stand about one-eighth inch above the opening in the top of the heater. The proper temperature is 103°F., at the level of the top of the eggs.

11. Turning the Eggs:

It has been found that a greater number of chicks die in the shell when eggs are not properly turned. The eggs should be turned at least twice daily from the second day to the eighteenth day. It is not necessary to turn the eggs completely over when turning. Rolling with the open hand is satisfactory.

12. Supplying the Moisture and Ventilation:

The ventilation of the incubator should be such as to carry away carbon dioxide as rapidly as it is given off and bring fresh air into the egg chamber as rapidly as it is needed. Too much ventilation cannot be given. provided proper temperature and moisture conditions are maintained in the egg chamber. A wet bulb hygrometer reading should be followed according to the manufacturer's recommendation.

13. Cooling the Eggs:

Whether or not it is best to give the eggs special cooling, other than the cooling they receive while being turned is debatable.

14. Testing the Eggs:

The first test that is made on the seventh day is for the removing of infertile eggs and those eggs with dead embryos. An infertile egg will be clear when held before the candle. Eggs with a dead embryo will have a small dark spot, or blood ring, while a fertile egg has small pink lines with a central dark spot resembling a large spider.

Another test should be made on the fourteenth day to remove embryos that have died after the first test. On the fourteenth day, the chick will be approximately one-third developed.

15. Hatching and Hardening the Chicks:

After the eighteenth day the eggs should not be turned. The first 24 hours do not count, following that, begin counting days. The door of the machine should be kept closed after the eighteenth day, and temperature read from the outside. Twenty-four hours after the chicks have hatched, they should be removed from the incubator. At the end of the twenty-first day, clean out surplus egg shells and eggs that did not hatch. The chicks are generally left in the machine and given plenty of ventilation for 24 hours, and then placed in a brooder that is prepared for them. Disinfect machine thoroughly after removing chicks.

NATURAL INCUBATION, OR HATCHING WITH HENS**Dimensions of the Nest:**

A comfortable nest for a sitting hen can be made by nailing 12-inch boards together in such a way as to have a bottomless and topless box. The dimensions should be 12 inches wide, 14 inches long, 12 inches high on three sides, and 6 inches high on the fourth side. Two or more nests may be joined together. There should be a partition between the nests.

Location of the Nest:

The nest should be placed in a quiet, secluded, partially darkened place, and entirely separated from the laying flock. This bottomless nest should be placed upon clean, well drained ground, because moisture from the earth is desirable for good hatching.

Nesting Material:

Nest boxes that do not rest on the ground should have a four to six inch layer of fresh, damp or moist, soil in the bottom. Bright wheat straw, oat straw, or prairie hay which has been broken into approximately six inch lengths, make good nesting materials. The center of the nest should be hollowed out, so that the eggs will stay well placed. Nesting materials should be about one inch deep.

Selecting the Broody Hen:

Pullets and hens of the lighter breeds, as a rule do not make good sitters. Plymouth Rock, Rhode Island Reds, and Orpingtons are considered good for setting. A healthy hen of medium size, free from lice, and which shows persistent broodiness should be selected for hatching. The willingness to stay on the nest may be tested by using false or old eggs for a period of three or four days before putting the good eggs under her.

A Setting of Eggs:

The small hen should have 13 eggs under her, the medium hen 15, and the large hen 17 in mid-season, and two less in each case in early season. An odd number is used in order the eggs will fit in the nest in a circle.

Setting the Hen:

The hen should have been treated with some good louse powder such as sodium fluoride, applied by the "pinch" method, the nest and nest material disinfected and the eggs placed. The plans should be completed before dark. The hen should be moved to the nest after dark. She should be held firmly by the wings and legs and placed on the nest in a careful manner. The legs and wings should be released gradually in order that she may feel the eggs before her full weight is allowed to rest upon them.

Feeding the Sitting Hen:

Grain is the only feed needed for the sitting hen during her sitting period. Avoid laxative feeds. Plenty of fresh, clean water should be supplied. Since a majority of sitting hens are inclined to go without sufficient food, it is advisable to remove them from the nest at least once each day for food, water and exercise. This plan protects the vitality and health of the hen during the incubation period.

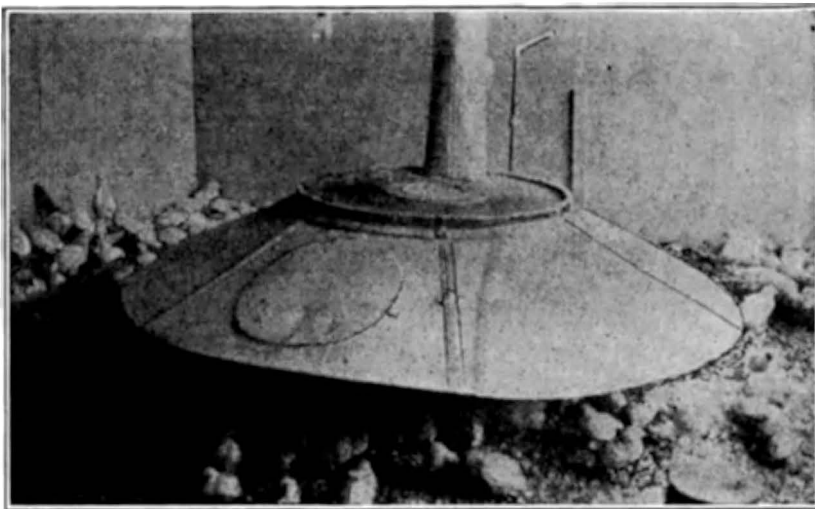
Hatching period:

The normal hatching period for hen eggs is 21 days. The first 24 hours is not counted in the 21 day period, due to the fact that it takes the eggs about that long to become warm. Egg shells should be removed from the nest often to make space for the chicks as they are hatched.

ARTIFICIAL BROODING

Success or failure in the poultry club work depends largely upon the raising of strong, vigorous chicks. Good chicks plus good feeding practices will not make good mature birds unless they are housed in a brooder house that is well ventilated and has sufficient sunshine, ample floor space, and a

brooder stove that furnishes a satisfactory temperature for the comfort of the chicks.



A Brooder Stove Big Enough for the Job

1. **Selection of Brooder Stove:** Select a brooder stove that has proven satisfactory in the community in which you live for a period of at least two years. The size of the brooder stove will depend on the size of the brooder house. It will also depend on the number of chicks to be brooded at one time. Not more than 350 to 400 chicks should be kept under one hover. More can be kept under one hover, but it requires more attention to keep chicks from over-heating, and there is danger of more chicks dying. The coal burner, kerosene, oil burner, gas, and electric brooders are on the market, all of which have proved satisfactory, but none of them will entirely take care of themselves.

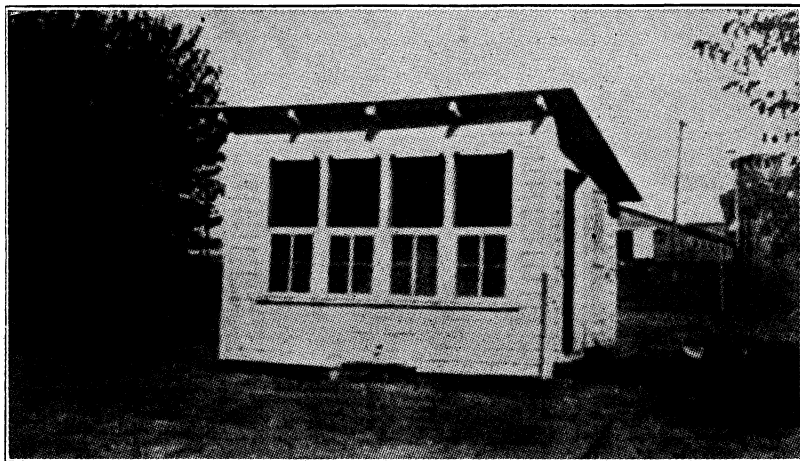
2. **Selection of Brooder House:** A brooder house that will accommodate from 300 to 350 chicks is highly satisfactory. Sanitary precautions must be followed to reduce the losses from diseases and parasites. It is, therefore, advisable to use a movable brooder house. A movable brooder house should have a wood floor, be warm and dry, and have sufficient light and ventilation. Allow about one square foot of floor space for every three chicks.

In brooder houses, a space 10x12 feet is large enough to accommodate 300-350 chicks. With an oblong brooder house the brooder stove can be placed to one end. The cool end serves as a feeding and exercising compartment, and aids to harden the chicks.

3. **Location of Brooder House:** The brooder house should be built on runners so that it can be moved to clean soil. The moving of the brooder house to new soil each spring is a means of preventing disease and parasites. Since green feed is an important part of the ration, the brooder house should be located where tender green feed is available. Locate the brooder house on a well drained soil.

The Oklahoma shed-type portable brooder house is 12 feet long and 10 feet deep. The height of the house is 8 feet in front and 6 feet in the back.

The floor is made of wood. Two 4"x4" runners are placed under the brooder house in order that it may be moved to clean ground. The front of the house has 4 windows. The bottom of the window is 30" from the floor. The top half of the windows are covered with muslin cloth fitted into a frame that is the same size as the window space. The muslin is for the purpose of preventing a draft, yet permitting a slow circulation of air, in and out of the house. During the summer months the muslin frames may be removed and stored in a dry, clean place. Detail plans for Oklahoma shed-type brooder houses may be secured by writing to the Extension Division, A. & M. College, and asking for Circular No. 268—Chick Management.



Portable Brooder House

4. Preparation of Brooder House: Before the hatching season begins, the brooder stove should be examined carefully to see if all the parts are on it, and in working condition. Repairing should be done, if needed.

All old litter, sand and droppings should be taken from the interior of the house, and a hot lye water solution applied with a scrub brush. (Use 1 can lye to 10 gallons of water).

Make all necessary repairs to the building such as patching cracks in the floor or replacing window lights.

Thoroughly disinfect every part of the interior of the house with a Government approved disinfectant at least two weeks before putting the chicks in the house.

Fine cut straw or alfalfa should be placed on the floor, but not under the hover. A 2-inch layer of sand should be placed under the hover immediately adjacent to the stove. This will absorb moisture from the droppings and keep the floor at a more even temperature.

Start a fire in the brooder stove two days before the chicks are to be placed in the brooder house. This may avoid a heavy chick loss. Have the brooder operating at an even temperature when chicks are placed in brooder house. This temperature should be 95 to 100 degrees, 2 inches from the floor at edge of the hover. The brooder house is the chicks' first home, and the brooder hover is their mother. If it is a good mother, it will give the proper amount of heat. It cannot call chicks; therefore they must be placed under the hover and kept close to it by a circular fence around the

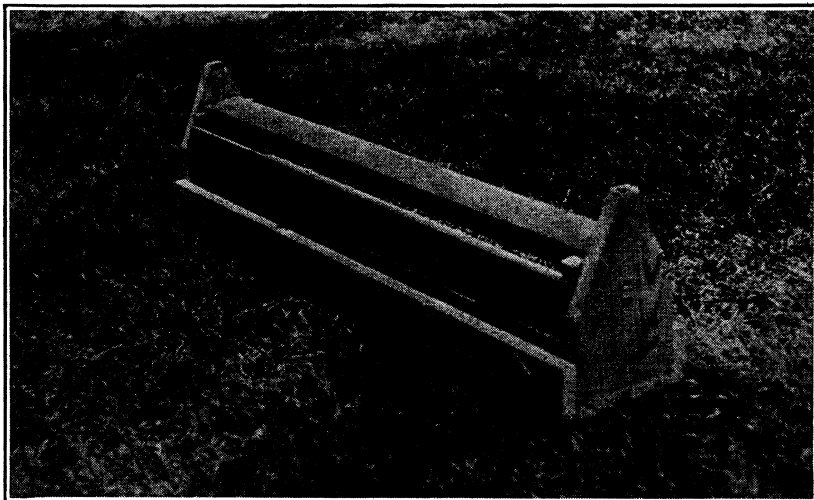
hover. Then fence may be made 12 inches high of hardware cloth or doubled ne inch mesh poultry netting. The ends of the fence should overlap so that the circle may be gradually enlarged as the chicks grow older.

5. Moving the Chicks to the Brooder: The chicks should not be taken from the incubator until 24 hours old. To transfer chicks from the incubator to brooder, shallow boxes or baskets, with cloth covering the chicks, should be used. Chicks moved in the evening will become acquainted with their new house before daylight.

All the chicks should be under the hover and quiet before they are left for the night. This is a very critical time of the chick's life and to become too hot or too cold will mean serious trouble in raising the chicks.

6. Training the Chicks: After removing the fence around the hover watch the chicks closely to see that they use the hover and do not pile up in the corners of the brooder house at roosting time. Square corners in the brooder house are to be avoided as chicks often crowd up in the corners.

Perches should be placed in the brooder house during the first week of the brooding period. The roosts, built low at the start, and provided with a sloping runway from the floor makes it easy for the chicks to get on the roosting poles.



Reel-type Mash Feeder Keeps Chicks from Scratching Mash from Feeder

Chick rations and methods of feeding young chickens have made rapid changes within the past three years. The improved method of feeding is more sanitary and the chicks grow faster during the first few weeks. This plan consists of feeding an all-mash during the first eight weeks. Scratch grain need not be fed until after the chicks are eight weeks of age. When an all-mash is fed during the first eight weeks, the chicks grow more rapidly, because of a higher protein ration.

Mash Mixture (First feed to maturity)

25 lbs. bran	5 lbs. poultry meat and bone scraps
25 lbs. shorts	5 lbs. dried buttermilk
25 lbs. yellow cornmeal	5 lbs. cottonseed meal
7 lbs. alfalfa leaf meal	3 lbs. mineral mixture

The mineral mixture consists of one pound of powdered limestone or oyster shell and one pound of salt.

Grain Mixture (Eight weeks to maturity)

The grain mixture consists of equal parts of whole oats, kafir, wheat and cracked yellow corn.

When to Start Feeding Chicks: Chicks should be fed as soon as they are removed from the incubator. It is not necessary to wait until the chicks are 48 to 60 hours old before giving the first feed. Mash should never be fed on newspapers, as this is one way of spreading disease.

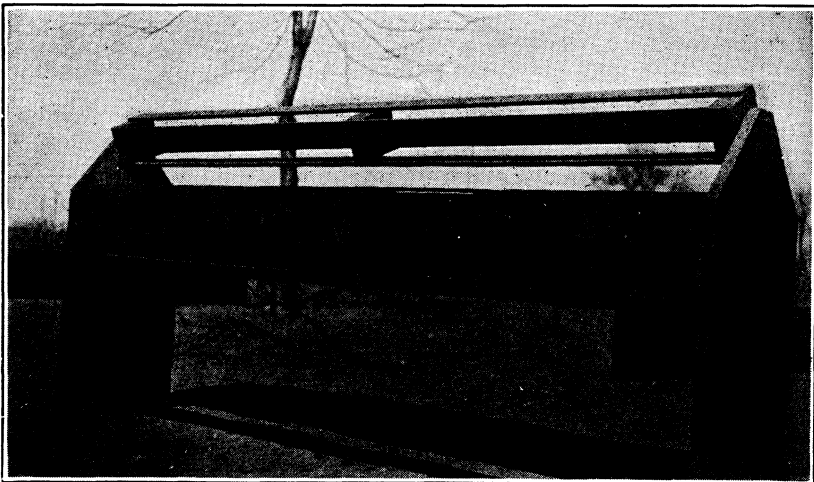
The Feeding of Mash: Mash should be kept constantly before the chicks after the first feed. Fresh mash can be placed in the mash feeders daily. It is necessary to provide one feeder three feet long for each 75 chicks to give the necessary feeding space. After chicks become 10 weeks old, larger feeders should be used.

Grain Feeding: Grain is to be fed in feeders the same as mash. After the chicks are eight weeks old the grain can be kept constantly before them. Additional feeder space should be added for the feeding of grain.

Cod Liver Oil: When the chicks do not receive the direct sunlight cod liver oil should be mixed in the mash at the rate of not more than one pound per 100 pounds of mash. When chicks are kept confined to a house, cod liver oil is essential. Usually one-half to 1 percent is a sufficient amount.

Water Containers: Usually three one-gallon, or seven or eight one-quart fountains are sufficient for 300 chicks.

Green Feed: Green feed is a source of Vitamin A. When young chicks do not have the necessary Vitamin A, they will become thin, develop a watery discharge from the eyes and nose. The throat will often contain small pinhead white spots. This condition gradually comes on the chickens and usually is not noticed until in the fall after it is too late to be corrected. Swiss chard is a good source of green feed.



A Reel Mash Hopper for Hens

A Reel-type Mash Feeder is simple, and economical in construction. The feeder box is 5 feet long, 12 inches wide, and 6 inches deep, and will accommodate 75 to 100 hens.

THE OKLAHOMA A. AND M. COLLEGE WAY TO FEED LAYING HENS

1. Hens are allowed to have laying mash all the time every day during the year.

2. The laying mash is made as follows:

- 200 pounds bran
- 100 pounds yellow corn meal or kafir meal
- 100 pounds pulverized barley or oats
- 100 pounds shorts
- 75 pounds meat scraps
- 50 pounds alfalfa leaf meal
- 40 pounds cottonseed meal
- 15 pounds dried buttermilk
- 12 pounds bone meal
- 6 pounds calcium carbonate (powdered limestone)
- 6 pounds salt

3. Grain is scattered in clean straw on a dry floor in the house every day of the year.

4. The amount of grain that the hen eats is governed by the amount of mash that the hen eats, also her physical condition, and the temperature. The hens should be given about the same amount of grain in pounds as they will eat of mash. That is, if a hen eats 40 pounds of mash she should have 40 to 45 pounds of grain a year.

5. The daily portion of grain varies from 8 to 15 pounds per 100 hens depending upon the above factors and the breed of chickens being fed.

5. The grain is fed between the hours of 10 and 11 o'clock in the morning and from 3 to 4 o'clock in the afternoon, depending upon the season, feeding earlier in the winter and later in the fall, spring and summer.

7. Whole oats are fed in the morning. The oats equal about one-third of the total amount of grain, by measure, that the hen will receive for the day.

8. The remaining two-thirds of the grain is fed in the evening. It is a mixture of cubed yellow corn and wheat or kafir, which ever is cheapest.

9. The amount of yellow corn varies from one-fourth to one-half of the mixture to be governed by seasons, and appetite of hens.

10. Water crocks are washed daily and refilled as often as needed during the day. Insufficient water cuts down egg production. It is kept from freezing in winter by using a heater, and is put in the house or shade in summer, so that the hens will drink all day.

11. Oyster shell is provided in open hoppers or boxes where the hens can get at it any time.

12. Green feed used is long sprouted oats or barley in winter, and Swiss Chard, kale, sudan grass or vetch and oats at other seasons. All green feed is put through feed cutters and hand fed.

13. A box of grit is in every yard.

14. Each house is provided with a feed hopper with capacity of not less than one and one-half inches of feeding space per hen.

NOTE.—Clean water, grit, shell and mash are to be kept before the birds at all times. Green feed should be supplied daily. The scratch ration can be made from one part of whole oats, one part of yellow corn, and one part of kafir, milo, or feterita, and fed in clean litter and preferably in troughs, twice daily. Never feed grain on the ground.

A PROTEIN, MINERAL, VITAMIN CONCENTRATE TO BE USED WITH HOME MIXED LAYING MASH FOR HENS

Due to the fact that there is usually a large quantity of grain available on the farms of Oklahoma, there is a need for a mixture of concentrates to be used with home produced ground grain. For this purpose the Okla-

homa A. and M. Poultry Department has prepared a combination of concentrates which are desirable to use with the grains that are available on the farms. The grains mixed with this concentrate should be pulverized and of good quality. The concentrate is composed of:

- 20 pounds alfalfa meal
- 25 pounds cottonseed meal
- 50 pounds meat scrap
- 25 pounds bone meal
- 5 pounds salt

125 pounds TOTAL

The above 125 pound mixture should be added to 300 pounds of ground grains. The ground grains may be most any combination of two or more grains found on the farm. It is not desirable to use one kind of grain alone with this mixture. Many combinations are possible, such as:

- 100 pounds fine ground wheat
- 100 pounds fine ground kafir
- 100 pounds fine ground oats
- or
- 100 pounds fine ground yellow corn
- 100 pounds fine ground wheat
- 100 pounds fine ground oats
- or
- 100 pounds fine ground kafir
- 100 pounds fine ground oats
- 100 pounds fine ground white corn
- or
- 100 pounds fine ground kafir
- 100 pounds fine ground milo
- 100 pounds fine ground wheat

GREEN FEED CALENDAR**

Month	Planting date*	Available Green Feed
January		Wheat pasture Rye pasture Barley pasture Sprouted barley Turnips Carrots Beets Alfalfa (dried leaves)
February	Oats (20th) Barley (20th) Kale (28th) Rape (28th)	Wheat pasture Rye pasture Barley pasture Sprouted oats Sprouted barley Turnips Carrots Beets Alfalfa (dried leaves)
March	Stock or sugar beets (1st week) Oats (1st)	Sprouted oats Some alfalfa Sprouted barley

Month	Planting date*	Available Green Feed
March (Cont.)	Barley 1st) Mustard (1st) Carrots (15th) Swiss chard (15th) Cabbage (15th)	Small amount of oats pasture Small amount of sweet clover pasture Small amount of wheat pasture Small amount of rye pasture
April	Swiss chard (1st) Carrots (1st) Beets (1st) Sudan grass (20th)	Oat pasture Wheat pasture Rye pasture Sweet clover Mustard
May	Sudan grass 1st)	Oat pasture Wheat pasture Alfalfa pasture Sweet clover Cabbage Mustard
June		Sudan grass Swiss chard Cabbage Alfalfa
July		Swiss chard Sudan grass Kale Rape Alfalfa Cabbage Beet tops and small beets
August	Alfalfa (last of August if ground is moist)	Swiss chard Sudan grass Kale Rape Alfalfa Beet tops and small beets
September	Turnips (1st) Mustard (1st) Alfalfa (if ground is moist) (1st) Wheat (15th) Swiss clover (15th) Rye (15th)	Alfalfa Sudan grass (if tender) Swiss chard Kale Rape
October	Alfalfa (if ground is moist, (1st)	Alfalfa Mustard Swiss chard Turnips (tops and small turnips) Kale Rape

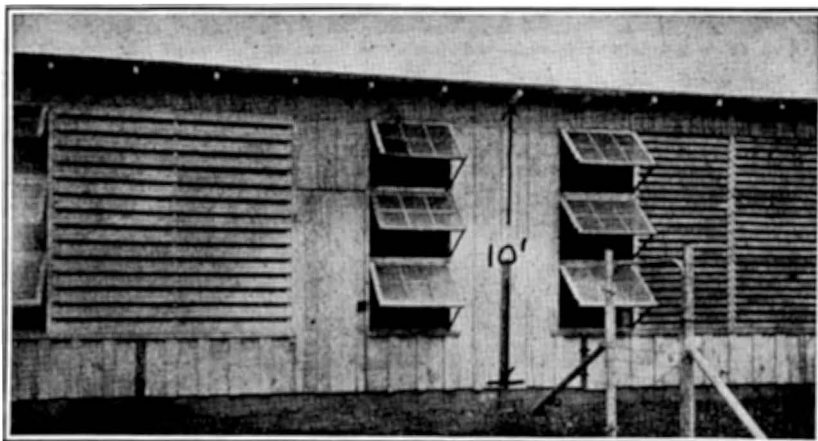
Month	Planting date*	Available Green Feed
November		Alfalfa Wheat pasture Rye pasture Barley pasture Mustard Swiss chard Turnips Kale Rape Beets Carrots
December		Alfalfa Wheat pasture Rye pasture Barley pasture Sprouted oats Sprouted barley Carrots Turnips Kale Rape Beets

*These approximate planting dates are for the central part of the State. In the northern part of Oklahoma, plant one week later. In the southern part of the State, plant one week earlier.

**Compiled by Robert Penquite of the Poultry Department.

POULTRY HOUSES

The poultry house, the home of the hen, should be thought of in the terms of a home. Considering the poultry house from the hen's point of view it should give her comfort, contentment and happiness. Since the poultry house is the place where she spends most of her time, the house



Front View 20x20 Poultry House

should afford her the most comfort possible during the summer and winter.

The modern business hen is required to lay around 100 eggs before she becomes profitable under the average farm conditions. For the benefit of her owner she is confined, given to eat whatever he considers fit for her to have and he is the sole judge as to whether or not she shall survive through another season. From nature's point of view the modern hen is weakened and is lacking in vitality which has been sacrificed for heavier production. She must be properly housed and fed if she is to measure up to the standard production.

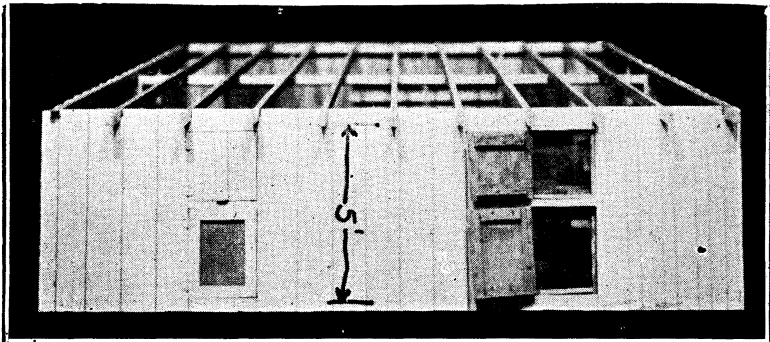
Location of Home

In selecting a location for the poultry house, the requirements for an ideal location should be met as nearly as possible. A well drained loamy soil sloping gently to the south and east is most desirable. In case the house is to be located on level ground the foundation of the house should be built 8 to 10 inches above the level of the soil and then filled in. A poultry house should never be built on low wet soil. Wet soils are germ breeders, cause dampness in the house, undesirable for birds to walk in, and cause dirty eggs from hens' muddy feet.

Shed-Roof Type of House

The shed-roof type of house is recommended by the Oklahoma A. & M. College Poultry Department, and is more widely used in the State than any other type house. In comparison with other houses it is simple to construct and the lowest in cost. With the louvers as recommended by the A. & M. College, shed-roof type poultry house a uniform circulation of air can be had without draft.

The $\frac{1}{4}$ pitch roof has enough slope to force the warm air slowly upward along the roof and out without causing a draft. The shed-roof type house is built in units of 20x20 feet. That is 20 feet long and 20 feet deep. The front of the house is 10 feet high, and the back 5 feet high. The depth of the house is 20 feet. It permits the birds to roost far enough back from the front to prevent the cold air striking the birds with full force or while in rapid circulation. The partition is for the purpose of preventing drafts, caused by a cross current movement of air in the poultry house. The house is built 10 feet high in front in order that an abundance of sunlight may fall upon the floor of the house.



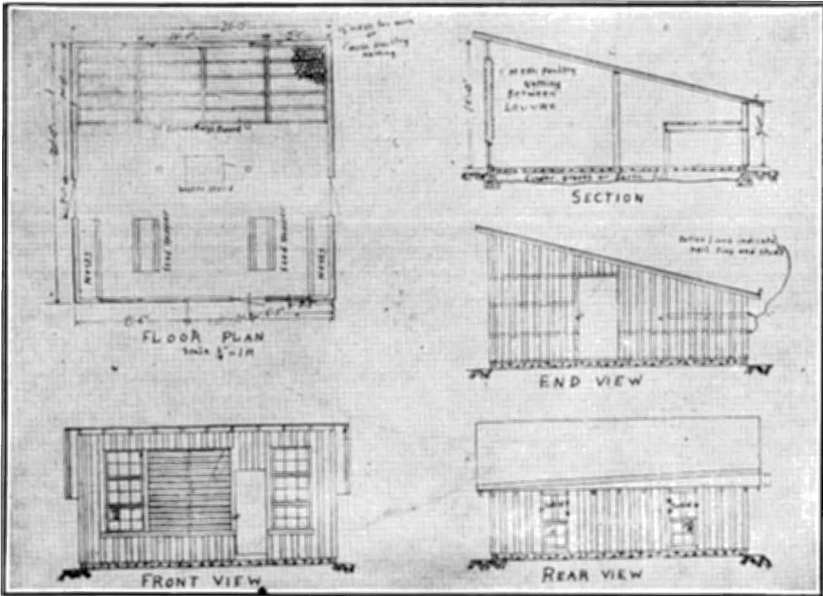
Rear View, 20x20 Poultry House

The back of the poultry house is 5 feet high. That is of sufficient height for full windows and allows a greater slope in the roof which is desirable.

Concrete floor is recommended for poultry houses. Construct the outer forms for the foundation and fill in the floor space with 6 to 8 inches of sand or dirt. The floor does not need to be finished with a top coat. A straight edge to level the concrete for the floor is all that is necessary. A concrete floor eliminates trouble with rats, is easy to clean, and if the ventilation is sufficient, the floor will not be damp. Straw litter two or three inches deep should be kept on the floor during the entire year. Whenever the straw becomes fine, dusty, or dirty it should be replaced with fresh, clean straw.

MATERIAL FOR HOUSES

A number of different kinds of building materials are used in constructing poultry houses. Boxing for the poultry house with 1x4 battens is often used. Poultry houses have been successfully constructed with cobble stone in sections of the state where cobble stone is commonly found. Drop siding, concrete, hollow tile, and concrete blocks can be used. Cost of material should not be overlooked in choosing the material to be used in building the poultry house.



Floor Plan, Front View, Section, End View and Rear View

Sunshine as well as fresh air is important in a poultry house. Experiments prove that when sunlight passes through window lights that some of the beneficial ultra-violet rays is filtered out.

In Oklahoma with farm poultry flocks, it is not necessary to become alarmed about the deficiency of Vitamin D, because most poultry flocks are confined to the poultry house only for short periods.

The house should be provided with openings or windows for the sunlight to pass through for the purpose of keeping the house clean and dry. The moisture in the poultry house depends upon the humidity of the air and the system of ventilation. A poultry house that is not well ventilated and does not admit sunshine will soon become damp. Improper ventilation of a poultry house lowers the resistance of the poultry flock and allows colds and roup to develop. The hens themselves give off a great amount of moisture. It has been estimated that in 24 hours, 100 hens will give off 18 pounds of moisture in their droppings, and nine pounds of moisture in breathing. During the day the air is capable of holding this moisture but at night in poorly ventilated poultry houses the moisture is far more detrimental than low temperatures.

A poultry house for a small flock is more expensive to construct per hen than a poultry house for a large flock. A floor space of 400 square feet, when covered and surrounded by a house, will provide necessities for 100 to 150 hens. The 400 square feet of floor space is most economically constructed in square houses. A square unit 20x20 feet is about the maximum size for economical construction and operation. It is also a desirable size so far as ventilation and comfort for the hens is concerned. In building a house for more than 150 hens, another 20x20 unit should be added. Partitions are essentially used to control ventilation and prevent drafts. A 20x20 foot house is satisfactory for 150 hens. For detailed information on poultry house construction, ask the Extension Service, Oklahoma A. and M. College, Stillwater, for Circular 229, "A Home for Hens."

CULLING POULTRY

Culling is the examination of each bird in the flock by handling to determine if they will be profitable to keep for the coming year.

Time to Cull

Culling for egg production should be practiced from June 15 to October 15. The hens that lay only a few eggs in the spring and start molting early can be distinguished by the yellow pigment in the shanks, condition of the pelvic bones and characteristics of the head. The high producing hen will continue to lay during the summer and early fall before showing any signs of molting. The late molter or high producer will take only a short time to molt and get back into production. The early molter requires a longer period to complete molting and does not begin laying as soon as the late molter. A flock of hens can be culled more accurately by giving it proper feed and care. A well balanced ration should be fed daily if the best results in culling are to be obtained.

Age to Cull

A well developed hen will usually lay more eggs in her first year, than she will in her second year, providing other factors such as feeding and management are the same. Experiments show that the first year production is 12% to 15% higher than the second year production. Even though some hens have the desired shape and color, and possess the characteristics of high production, they should not be kept longer than the third year, unless individual hens are to be used as breeders. Pullets cannot be culled the same as hens. In culling hens, factors indicating laying conditions, such as head characteristics, molt and pigmentation are considered.

Maturity: Pullets are generally considered mature when they have laid their first egg. Pullets that are small in body size and lacking in breed, shape, and color, for their respective varieties, should be removed from the flock.

Head. The condition of the head is an indication of either high or low vitality. The desirable bird will have a large, bright, prominent eye, broad head, large, red, waxy comb and wattles, and a medium curved beak. Low vitality is shown by the crow-headed bird with long pointed beak.

Body Conformation: A broad and rather deep chest, flat, fairly wide back are usually on the better pullet. Pullets with crow heads, high shoulders, short, narrow backs and rumps should be discarded.

Condition of Skin: The quality pullet has a soft skin. A poor quality pullet has thick, tight skin.

Culling Principles

Head

Good Layer	Poor Layer
Large, bright, red, waxy comb and wattles	Small, pale comb covered with powdery scales
Large, prominent, oval eye	Small, sunken, round eye
Medium curved beak with yellow color bleached out	Long, sharp beak with yellow color present

Body Capacity

Body broad and angular in shape, having long, flat back and width carried well back over rump	Body narrow and round in shape, having narrow, short back and cramped over rump
Keel bone slopes downward	Keel bone slopes upward
Lateral processes prominent and pointing outward	Lateral processes hard to find and point inward
Pelvic bones wide apart, flexible, point straight back and have thin tips	Pelvic bones close together, rigid, curve in and tips are thick

Abdomen

Wide, deep, soft, pliable, and covered with soft, loose, silky skin	Narrow, shallow, hard, fatty, and covered with thick, dry skin and underlaid with fat
---	---

Vent

Large, dilated, moist, with color bleached out	Small, contracted, dry and yellow in color
--	--

Legs and Toes

Smooth, flat, pliable legs with color bleached out	Round, rough legs, yellow in color
Short, blunt toe nails	Long, pointed toe nails

Plumage

Close feathered with worn, soiled, lifeless plumage	Loose feathered, showing signs of molting
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Reference. Circular 227, "Poultry Culling and Judging Chickens for Egg Production."

EGG SCORE CARD FOR SHOWS

	Perfect Score	Defects and Cuts
Size	20	Eggs must weigh from 24 to 30 ounces to the dozen. One and one-half points will be cut for each ounce or fraction of an ounce over this limit. Two points will be cut for each ounce or fraction of an ounce under this limit.
Uniformity of size	12	A maximum of one point may be cut for each egg varying from the average.
Uniformity of shape	12	A maximum of one point may be cut for each egg varying from the average shape of the exhibit.
Uniformity of color	20	A maximum of one and one-half points may be cut for each egg that is not chalk white or for each brown egg that varies from the color of the majority of the dozen.
Shell	24	A maximum of two points will be cut for each egg with any one of the following defects: Ridged or wrinkled shell, blind chicks, weak tips, porous shell, rough spots or any other shell defect.
Condition of shell	12	A maximum of one point will be cut for each egg that has been washed, that is shiny and has bloom removed, that is dirty or stained.
Disqualifications		Cracked or broken egg, egg unfit for food. An extra egg should be sent with the exhibit, wrapped and marked in such a way that the show management will know it is the alternate to be used in case of breakage.

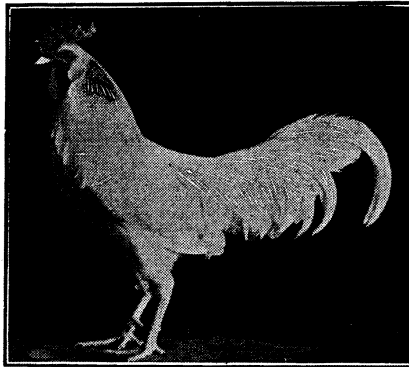
SUMMER CARE OF EGGS

The male bird is used only to fertilize the egg for incubation purposes. Good males should be retained as long as they are good breeders, but should be penned away from the hens as soon as the breeding season is over, which is about April 10. Surplus males should be placed on the market as soon as they have served their usefulness in a breeding pen.

Buyers and producers agree that high quality products are more profitable. Many egg buyers are offering small premiums per dozen for clean, fresh and infertile eggs that weigh 24 ounces or more per dozen, or are given preference on the terminal market. Small, dirty, and poor quality eggs are undesirable on the market. Producers in many instances are taking better care of their eggs and offering an improved quality product to the consuming public. The following suggestions are offered for improving the quality of eggs:

1. Isolate or sell all male birds at the end of the breeding season.
2. Gather eggs once daily, and during hot weather they should be gathered three times daily.
3. Place eggs in a desirable container and keep them in cool well ventilated room free from offensive odors.

4. Eggs are a perishable product and they should be given the same care as milk or fresh meat.
5. It is advisable to permit the body heat of the eggs to pass out before they are cased.
6. Eggs should be sent to market soon as is found practical. Market eggs at least once each week, and two or three times in hot weather.
7. Protect eggs from extreme heat while they are being taken to market.
8. Sell eggs to a dealer who wants high quality eggs, and who will take as much care of them as you have. If the eggs are kept around a grocery store the quality is soon ruined.
9. Use as many small, dirty and cracked eggs as possible at home. Market the large clean eggs.
10. Small particles of dirt can be removed from the egg shell by use of a damp cloth or steel wool.
11. Provide clean, roomy nests for the hens. Construct nests that will prevent hens from roosting in them.
12. Provide one nest for every five hens. Remove broody hens from nests daily.
13. Pack market eggs in strong containers that have new or good used flats or fillers. This will help reduce the number of cracked eggs placed on the market.



PREPARING AND EXHIBITING BIRDS AT SHOWS

Poultry club members should consider the making of an exhibit one of the important phases of the year's work. A trio of birds and a dozen of eggs should be exhibited at the school house poultry show, township, county, and state fairs, and one of the state poultry shows.

The trio must consist of one cockerel and two pullets raised by the club member making the exhibit. It would be advisable for the club members to exhibit an old pen consisting of one cock and four hens at the various fairs in the adult department. This will allow the club member a means of advertising, and also comparing the exhibit with that of the adults.

SELECTING SHOW BIRDS FROM THE FLOCK

In most every club member's flock there are some birds that would make a creditable showing at most fairs. There are always some birds in the flock that come nearer approaching standard shape and color than others. It is the duty of the club member to select out of the flock when pullets and cockerels are separated the birds that are worthy of making an exhibit, rather than to wait until the last day and catch up the most convenient birds and thus take to the show undesirable birds, when perhaps better birds were left at home.

In order to select the birds for the show, it is necessary to become acquainted with the requirements of the breed and variety to be exhibited. This may be accomplished by obtaining the book entitled "American Standard of Perfection," and becoming familiar with the standard type and color of the birds that are exhibited. After selecting a number of the better birds on shape and color, each bird should be examined closely for defects and disqualifications. It is useless to enter the birds in the show which would be disqualified.

Club members can learn the disqualifications given in the American Standard of Perfection listed under "General Disqualifications" and also the specifications listed under the breed and variety.

WASHING SHOW BIRDS

To show to the best advantage, birds must be clean. They may be cleaned by washing, but under ordinary conditions only white birds are washed.

To wash birds, three tubs containing clean, soft water are arranged on a bench at convenient height. The temperature of the water in tub No. 1 is from 85 to 90 degrees F.; in No. 2, lukewarm, and in No. 3, fresh water with a temperature not less than 70 degrees F. In tub No. 1, suds are made by dissolving Ivory soap flakes or Lux in water. Birds are placed in the tub and sponged until all the dirt has been removed. The dirt from feet and shanks is removed with a scrub brush and pointed stick. The birds are placed in tub No. 2 long enough to remove all suds from the plumage. Then the bird is dipped into tub No. 3 for a final rinsing. The water is pressed, not rubbed, from the plumage.

The washed bird is then placed in a clean coop that is located in a room free from drafts and a temperature of about 85 degrees. If the temperature is too low, it will be uncomfortable for the bird. When the temperature is too high, the plumage will dry too quickly and curl some of the feathers.

Now the bird is ready to be leg-banded and placed in a coop similar to those in which the bird is to be exhibited. The bottom of the coop is covered with clean straw. While the birds are in the coop they will become coopwise, friendly, and trained to show to their best advantage.

POULTRY TERMS DEFINED

Poultry terms frequently used and which should be understood by all beginners are as follows:

"Cock"—A male bird one year old, or more.

"Cockerel"—A male bird less than a year old.

"Hen"—A female bird one year old, or more.

- "Pullet"—A female bird less than one year old.
- "Yearling Hen"—One having laid for 12 months, about 18 months old.
- "Broiler"—Young chickens weighing less than 2½ pounds and 8 to 14 weeks old.
- "Fryer"—It may be male or female weighing 2½ to 3½ pounds each, and from 16 to 24 weeks of age.
- "Fowl"—Mature females of all weights.
- "Capon"—An unsexed male bird distinguished by the undeveloped comb and wattles. This is done to improve the quality of the flesh for eating purposes.
- "Baby Chick"—A newly hatched chick, not over a week old. After that age they are "Chicks" until a month or two old.
- "Poults"—Young turkeys, a term used until sex can be determined.

STANDARD WEIGHTS IN POUNDS OF THE COMMON BREEDS OF CHICKENS, DUCKS, GEESE, AND TURKEYS

Chickens	Cocks	Cockerels	Hens	Pullets
Plymouth Rocks -----	9½	8	7½	6
Wyandottes -----	8½	7½	6½	5½
Rhode Island Reds -----	8½	7½	6½	5½
Jersey Black Giants -----	13	11	10	8
Light Brahmas -----	12	10	9½	8
Dark Brahmas -----	11	9	8½	7
Cochins -----	11	9	8½	7
Langshans -----	9½	8	7½	6½
Leghorn -----	6	5	4½	4
S. C. Black Minorcas -----	9	7½	7½	6½
S. C. White Minorcas -----	8	6½	6½	5½
Rose Comb White Minorcas -----	8	6½	6½	5½
R. C. Buff Minorcas -----	8	6½	6½	5½
Rose Comb Black Minorcas -----	8	6½	6½	5½
Anconas -----	6	5	4½	4
Orpingtons -----	10	8½	8	7
Sussex -----	9	7½	7	6
Dark and White Cornish -----	10	8	7½	6
White Laced Red Cornish -----	8	7	6	5
Ducks	Adult Drake	Young Drake	Adult Hen	Young Hen
Pekin -----	9	8	8	7
Roun -----	9	8	8	7
Geese	Adult Gander	Young Gander	Adult Goose	Young Goose
Toulouse -----	26	20	20	16
Chinese -----	12	10	10	8
Turkeys	Adult Cock	Yearling Cock	Cockerel	Hen
Bronze ----- Pullet 16	36	33	25	20
Narraganset ----- 14	33	30	23	18
White Holland ----- 14	33	30	23	18
Bourbon Red ----- 14	33	30	23	18

**COMMON DEFECTS OF SOME OF THE LEADING
BREEDS OF POULTRY**

Common Defects of Plymouth Rocks

1. Flat breast in males
2. Legs too long
3. Tendency toward knock knees
4. Narrow back
5. Improper carriage of tail
6. Pale or light color in ear lobes

Common Defects of Barred Rocks

1. Bars not running straight across feathers
2. Dark in under color
3. Solid black feather in wings or main tail feathers
4. Black feathers in back and breast of females

Common Defects in White Rocks

1. Brassiness in plumage
2. Dark ticking on feathers

Common Defects in Wyandottes

1. Shallow breast
2. Short shanks or long shanks
3. Back too short or too long, for the breed
4. Tail too long or pinched; improper carriage of tail
5. Light color in ear lobes
6. Comb not conforming to shape of head
7. Birds too small

Common Defects of White Wyandottes

1. Creaminess in undercolor
2. Brassiness of surface color
3. Dark ticking on feathers

Common Defects of Rhode Island Reds

1. Birds too small or too large and coarse
2. Male birds with shallow breasts
3. Narrow back with pinched tail
4. Light color in ear lobes
5. Smut or white in under color
6. Black on surface color
7. Surface color light or too dark
8. Unevenness of surface color
9. Ticking in hackle of male birds

Common Defects of White Leghorns

1. Large, beefy single combs; blades too heavy and turning to one side
2. High shoulders with back slanting downward
3. Tendency toward flat or shallow breasts
4. Brassiness in plumage
5. Red in ear lobes; ear lobes too coarse

Common Defects of Orpingtons

1. Body lacking depth
2. Shallow breast, short back; narrow back and body
3. Body too low set

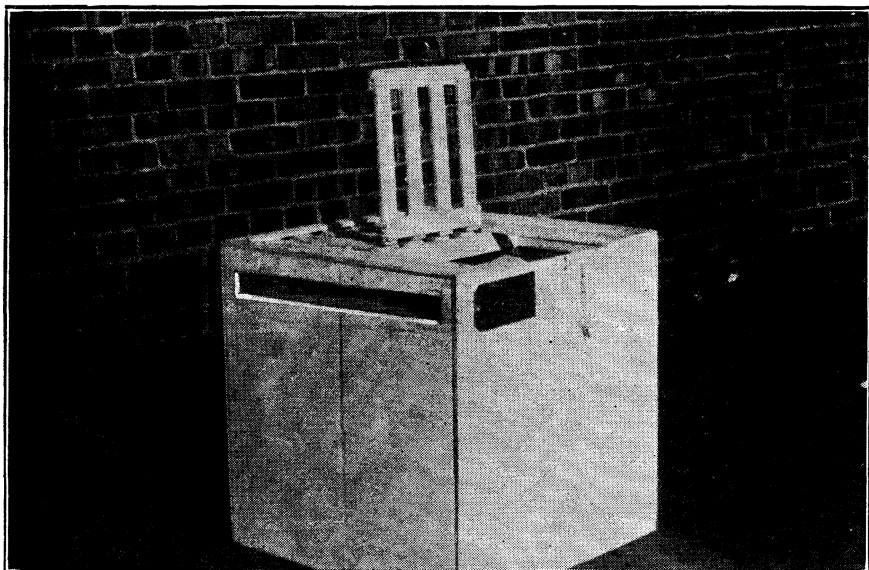
Common Defects in Buff Orpingtons

1. Lack of uniformity of surface color
2. Solid black or white in wings or tail; peppering in tail
3. Under color too light
4. Lack of uniformity of surface and under color

JUDGING INSTRUCTIONS

The following 10 points are for the purpose of assisting poultry club members in becoming acquainted with the correct way of judging poultry:

1. Identify the class, breed, variety and sex to be judged.
2. Stand a short distance from the birds in the coop, and compare one individual with the other before taking any bird from the coop.
3. Study the shape of each bird until the most desirable individual in shape has been selected.
4. Remove bird from coop by placing the right hand on the bird's back, and at the same time slip the left hand along the bird's breast, and grasp both thighs. Take bird from coop head first.
5. Hold the bird by the thighs with the left hand and let the specimen rest on the left forearm and against the body of the judge. Look for disqualifications.
6. Examine the surface and undercolor of hackle, tail, fluff and breast. Unfold the wings and observe the color markings of the primaries and secondaries.
7. Take each bird from the coop so that comparison of plumage can be made, and no disqualifications overlooked.
8. A bird found to be disqualified should not be placed in the class. A notation should be made on the placing card giving the nature of the disqualification.
9. Place the bird, after it has been examined, head first in the open door of the coop, so it can walk in the coop without damage to the plumage.
10. In making the final placing consider shape, feather patterns, and condition of the birds being judged.



A Shipping Coop Built According to the Following Score Card

A SHIPPING COOP

Each year a number of birds arrive at the State fairs and the State shows which cannot show to the best advantage because they were shipped in coops not large enough to be comfortable while in transit.

SCORE CARD FOR SHIPPING COOPS

SIZE -----	25
Size of the coop must be 22x22x22 inches. Outside dimensions -----	20
Size of the door must be 10x12 inches. Outside dimensions -----	5
WEIGHT -----	10
The weight of the coop must not be over 25 pounds. Three points will be cut for each pound over this limit.	
DURABILITY OF THE COOP -----	25
The bottom of the coop must be made solid -----	5
The four sides of the coop must be solid with the exception of the two openings for ventilation and hand holds on two sides of the coop. These spaces should be 1½ inches wide and full width of the coop. The openings to be near the top -----	5
The frame work should be made of material 1" thick and not more than ½" in width -----	5
Material for the sides and bottom of the coop should not be more than ⅜" in thickness -----	5
It is advisable to have at the top of the coop a cross brace made of material 1x½" and 22" in length. This will strengthen the top and give a solid support for the hinges of the door -----	5
PRACTICABILITY OF THE COOP -----	15
Coop must be simple in construction. Material to build coop should not cost more than \$2.00. The coop should be painted.	
DOOR OF THE COOP -----	5
The door must be in the top of the coop and be located six inches from two sides of the coop. The door is 10"x12" in size. The door must be hinged near the center of the coop. The fastener for the door must be a steel hinge hasp that will fasten the door to one end of the coop. A flat spring harness snap makes a satisfactory lock for the door.	
IDENTIFICATION OF THE COOP -----	15
A card must be tacked on the coop giving name, age and address and county, breed and variety of chickens, and the leg band number of each sex in the coop.	
INTERIOR OF THE COOP -----	5
Water container must be in the coop -----	2
Dry, clean stram, hay, or other satisfactory material, should be put in the coop -----	3
TOTAL SCORE -----	100

SUGGESTIVE TEAM DEMONSTRATION OUTLINES

The team demonstration work is proving quite satisfactory among the juniors to develop some particular phase of work. Several timely subjects are suggested that might be used in carrying out desired phases of poultry work. The captain of the team will take the part numbered with the odd figures and the team mate will take the part numbered with the even numbers. More information may be obtained from the Extension Service on request.

Caponizing

1. Purpose. 2. Method of holding birds. 3. Details of operation. 4. The performance of the operation. 5 Value of capons

Feeding for Egg Production

1. Value of feeding for egg production. 2. The study of the hen and different kinds of rations used. 3. The value of different feeds and where to obtain them. 4. The A. & M. College ration and how to mix it. 5. Importance of green feed and minerals. 6. When and how to feed poultry for egg production

Culling for Egg Production

1. Reasons for culling. 2. Factors influencing culling, such as age of birds. 4. Is the hen laying at present; has she been laying a great length of time; does she have the power to lay a large number of eggs. Explain these things fully. 5. Prove that there is no best breed and convince the listeners that the best breed for the individual is the breed that the individual likes best and will take care of.

Suggestive Team Demonstrations and References

1. Housing—A Home for Hens, Oklahoma Extension Circular No. 229; Farmers' Bulletin 1113.
2. Feeding for Egg Production—Oklahoma Extension Circular 230; N. Y. Cornell Reading Course, Lesson 157, published by Cornell University, Ithaca, N. Y.; Farmers' Bulletins 1541 and 1067.
3. Caponizing—Extension Bulletin No. 237.
4. Culling for Egg Production—Oklahoma Extension Circular No. 227; U. S. Farmers' Bulletin 1112.
5. Holding a Post-Mortem—Farmers' Bulletin No. 1337; Kansas Agricultural Experiment Station Circular 106, published at Manhattan, Kansas.
6. Feeding Baby Chicks—Oklahoma Extension Circulars 230, and 268; Farmers' Bulletins 1376 and 1108.
7. Dusting Hens for Lice—Farmers' Bulletins 801 and 1040.
8. Selecting Eggs for Show—Farmers' Bulletin 1376.
9. Selecting Eggs for Hatching—Farmers' Bulletins 1376, 585, 1106.
10. Packing Eggs for Shipping—Farmers' Bulletins 830, 1378.
11. Selecting Birds for Fairs—Kansas Agricultural Experiment Station Circular 127, published at Manhattan, Kansas; Farmers' Bulletin 1115.
12. Candling Eggs—Oregon Extension Bulletin 302, published at Corvallis, Oregon.
13. Selecting and Preparation of Fowls for Exhibition—Farmers' Bulletin 1115.
14. Simple Trap Nests for Poultry—Farmers' Bulletin 682.

NOTE.—Some Farmers' Bulletins may be had free upon request to the Division of Publications, Department of Agriculture; for others, obtained from the Superintendent of Documents, also at Washington, 5 or 10 cents may be charged. Oklahoma Extension Circulars and Bulletins may be obtained free from the Oklahoma A. and M. College, Extension Service, Stillwater, Oklahoma.

