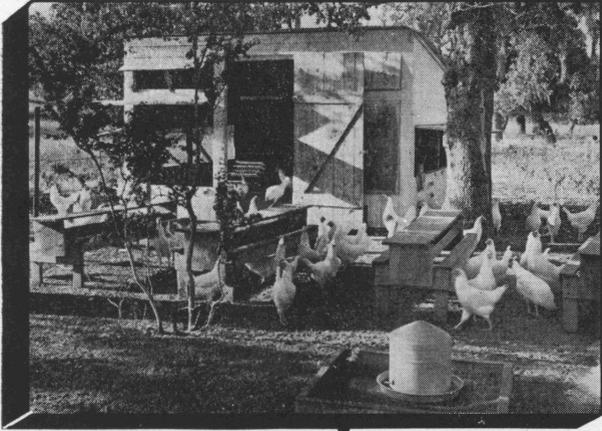
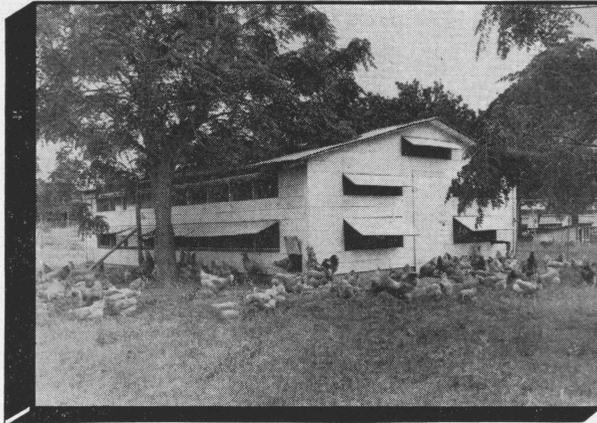


Managing The Laying Flock



THIRTY



THREE-HUNDRED



OR MORE

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Managing The Laying Flock

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The production of commercial and hatching eggs is becoming a specialized industry in Texas. In 1951 the gross income from eggs produced in Texas was \$96,871,000. Texas hens produced approximately 153 eggs per hen. For the United States as a whole, the average was approximately 175 eggs per hen. There are a number of things responsible for this low production per hen in Texas. Housing, feeding, parasite and disease control and general management factors are important in determining the rate of laying. Breeding is also one of the important determining factors. The egg producer is particularly concerned with the number of eggs per pound of feed he can get from his hens. The breeding of the hen is in part responsible for both rate of laying and efficiency of production.

Size of Flock

Do you need 30 or 300 hens? For home food supply 30 or less. For commercial production 300 or more. Smaller flocks can be profitable, but with larger flocks the returns per hour of work are greater.

A flock of 300 or more hens should contribute a worthwhile sum to the total farm income. A well managed high producing flock of 300 hens or more will net enough profit to be out of the "pin money" class. When a poultryman has this size flock, there is enough at stake that he can appreciate and see the need of

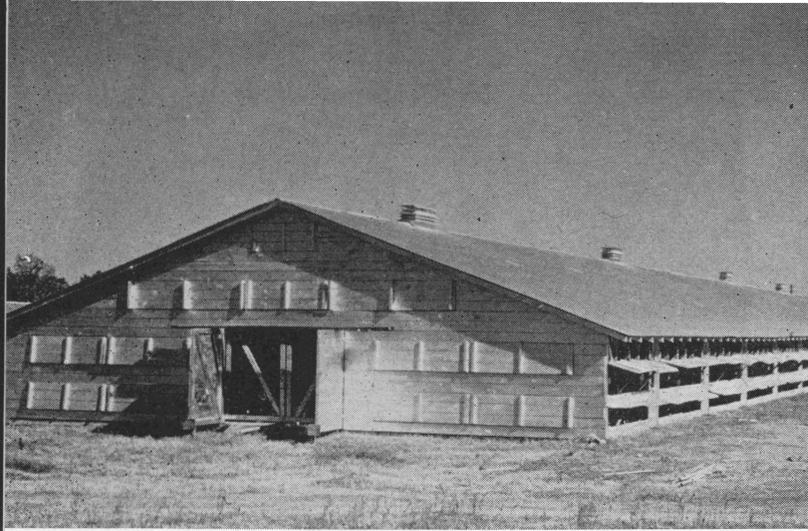
spending those few minutes each day to gather eggs more often, keep records, and look the flock over carefully every day to make sure everything is in good shape. He can give more attention to feed, give more careful consideration to breeding and disease control measures when ordering chicks. In his thinking poultry will find its rightful place as an important part of his farm program.

All Pullet Flock

An important management practice to follow is that of selling every hen left on the farm after one full year of production. This practice will increase profit for the following reasons: (1) Hens are normally expected to lay from 15 to 20 per cent less during the second laying year than during the first. (2) After the first laying year when hens are molting and out of production, the cost of their upkeep before coming back into produc-

Range shelters on clean range provide protection from weather, stray dogs, and other animals.



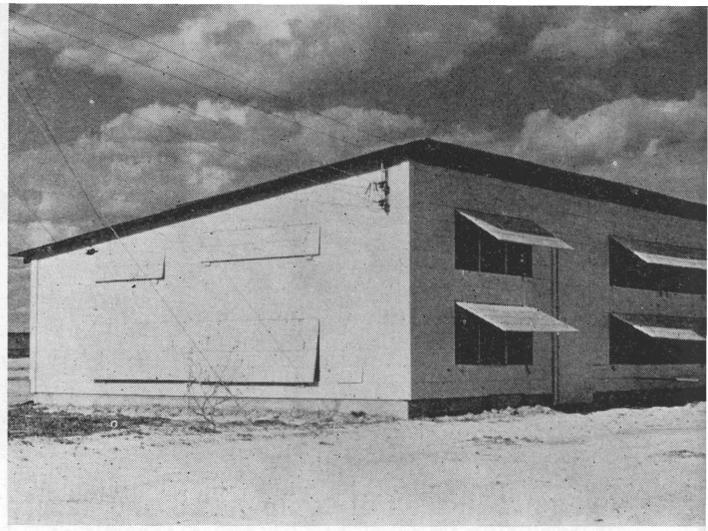


Gable roof laying house with roof top ventilators and windows that provide good ventilation.

tion in many cases is about the same or more than the cost to replace them. Pullets should be ready to be moved from the range shelter into the laying house when the hens finish their first year of laying. (3) This system of replacing the flock every year and keeping the ages of the birds completely separated will result in the prevention of the older birds transmitting to the younger birds respiratory diseases. The older birds may have become immune to these diseases but can pass them onto the younger birds when birds of different ages are mixed. Sell every old hen on the farm at the end of one laying year. Thoroughly clean and disinfect the laying house and leave it open and vacant for at least two weeks. Clean and disinfect all feeders and waterers. (4) As the birds get older, the death loss increases. By selling the hens after one year's production, more birds will be sold than would be sold at a later time.

Range for Pullets

If possible provide a range for growing pullets, when the birds are 8 to 10 weeks old. A range shelter should be provided and the pullets should be confined every night to prevent losses from stealing or from attack by animals.



Shed roof laying house with ample window ventilation used for flocks up to 300 hens.

The soil on which the range is located should be well drained, and have had no poultry on it for at least two years. It should also be located where the pullets will never come in contact with older birds. The best time to house a laying flock is when the pullets are ready to lay their first eggs. Choose the best pullets for your laying flock. These are the ones that are healthy, full-fleshed, heavy, large, deeply pigmented and sexually mature.

Housing

A good laying house is not merely a place where the birds roost at night, but a home for them both day and night and a protection against rain, wind, temperature extremes and predatory animals. The laying house should provide plenty of floor space; at least 3 square feet for light breeds and 4 square feet for the heavier breeds. Feeders, feed hoppers, water fountains, roosts and nests should also be conveniently and properly placed inside the house.

Flock health and egg production are often influenced by seasonal fluctuations in temperature. The extreme hot weather in Texas is more harmful to egg production and health of the birds than our cooler weather. Consequently, the houses

should be constructed so that the entire side walls can be opened during the extreme warm weather. By having such construction the windows can be closed in cooler weather and maintain the proper amount of air movement and temperature. The most satisfactory type of house now being used is the gable roof type with either "ridge" type ventilators or "continuous ridge" type ventilators.

Double doors or doors that provide ample room for driving a pick-up truck, manure spreader, and other equipment into the house are very essential. They are especially valuable for saving time and labor in cleaning houses, putting in new litter, and provide another means of ventilation and light for the house.

For flocks up to 300 hens, the shed type roof house with ample ventilation, which includes floor line as well as ceiling line ventilation is satisfactory. For a larger size flock the gable type roof, long, wide houses is proving more satisfactory.

Roosts

Where and how chickens roost has been in keeping with size of the flock from the home flock to the commercial flock. Originally, range chickens were permitted to roost in trees. When housed, small size tree limbs were used for perches.

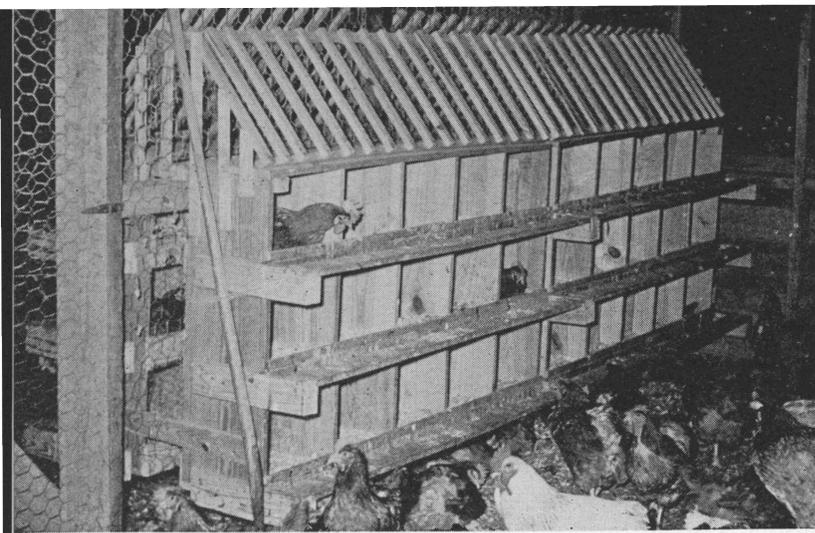
Dropping pits keep birds from coming in contact with droppings.

The perches were placed at different heights and only the strongest chickens were able to fight their way and maintain their place on the high perches. Others roosted wherever they could find a place. Since the birds will spend at least one-half of their time on the roost, it is necessary to make them comfortable. There are many types of roosts used in Texas poultry houses, and if a few simple rules are followed, they will all produce satisfactory results. Provide from 8 to 10 inches of roosting space for each bird and have the roosting poles about 12 to 14 inches apart. The roost should be parallel with the floor and about 18 inches high.

The "pit type" roost is used very extensively in the laying houses in Texas. The area to be covered by the roost is boxed in with boards or wire. A wire covered top immediately below the roost perches prevents the birds from getting into the droppings. The droppings accumulate for indefinite periods. The time to clean is determined by the number of birds and the depth of the pit. They should be cleaned often enough that the accumulation of manure will not make unpleasant odor and a distasteful appearance. The odor can be partially controlled by sprinkling from time to time a small amount of acid

When deep litter is used in the house, roosts without pits may be used.





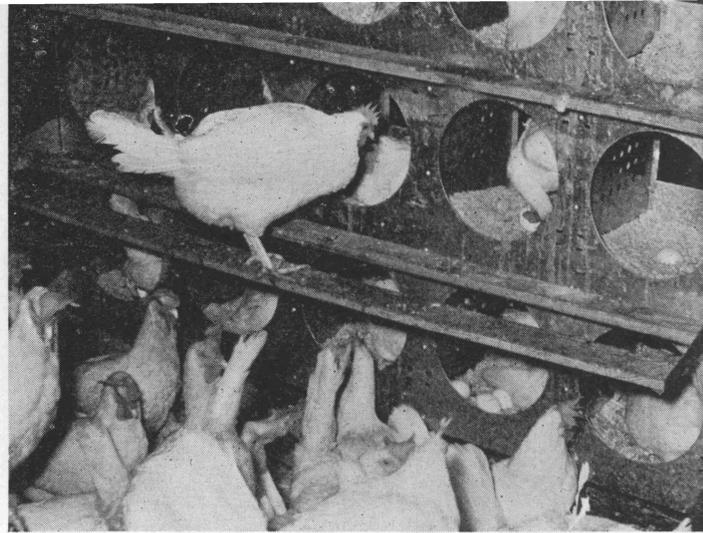
Individual type nest constructed of wood.

phosphate or lime over the droppings. This adds to the value of the manure.

Many producers are now using roosts similar to the "pit type" with the exception that the droppings are not enclosed. When deep litter is used in the poultry houses, and the birds have free access to the entire area they do not permit the accumulation of the droppings under the roost as they scratch and mix with the litter. Some prefer this type of roost due to the fact that it is unnecessary to clean from under the roosts at any time but during a general cleaning.

Some poultrymen are not using any type of roost in their laying houses. The birds sleep on the floor. If this practice is used, perfect ventilation is necessary. Nests, feeders, and waterers must be constructed so that birds cannot roost on them.

Automatic float type waterers with concrete drains.



Individual type nest constructed of metal.

Nests

Nests are important equipment in the laying house. Provide one nest for every five hens. The two most common types of nests are community and individual. Your choice of several kinds of nests will depend somewhat upon the size of your flock. The best nests are simple in construction, portable, easy to clean, retaining the nesting material and providing semi-darkness for the hens' comfort. The nests should be of a type that make it easy to gather eggs without unduly disturbing any birds that are on the nest.

Individual nests should be at least 14 inches wide, by 16 inches deep and 12 inches high. Metal nests with swinging perches that can be raised to prevent the birds from entering the nests late in the afternoon for roosting purposes are very satisfactory. Satisfactory nests can also be constructed of wood. One problem that arises from wood nests is that of controlling external parasites. Community nests constructed properly are being used by many Texas poultrymen. The nests should provide at least 1 square foot of floor area in the nest for each 5 hens. The floor as well as the back of the nest should be constructed of poultry wire or hardware cloth to allow ample ventilation.

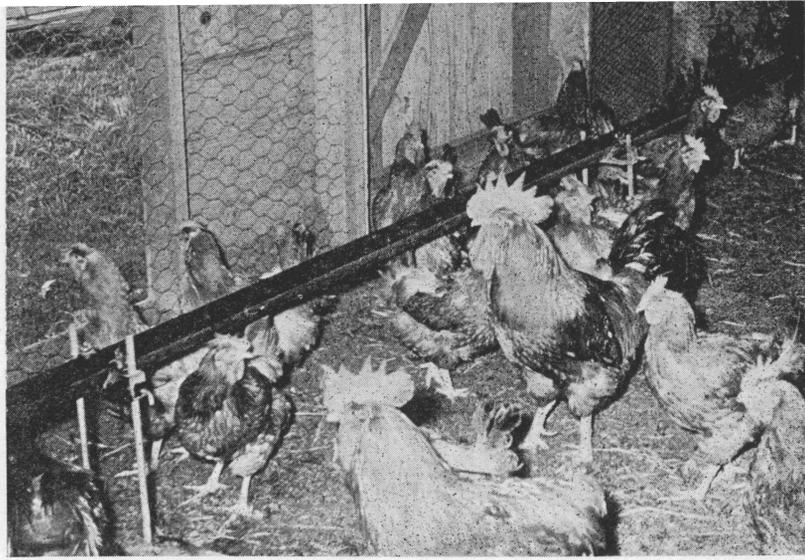
Water

An adequate supply of clean water is essential for maximum egg production. This is evident from the fact that 55% of the body fat of the hen and about 65% of the egg are composed of water. Reduced egg production will occur whenever water is not available in adequate amounts. Many watering devices are satisfactory and should have the following requirements: The container should be substantially constructed for lasting service, light in weight, economical in cost, of a type that can be cheaply and quickly replaced if necessary, easy to build, easy to clean, adapted to be used in any type house, and finally it must have accessible drinking space. One hundred laying hens will drink from 6 to 8 gallons of water each day.

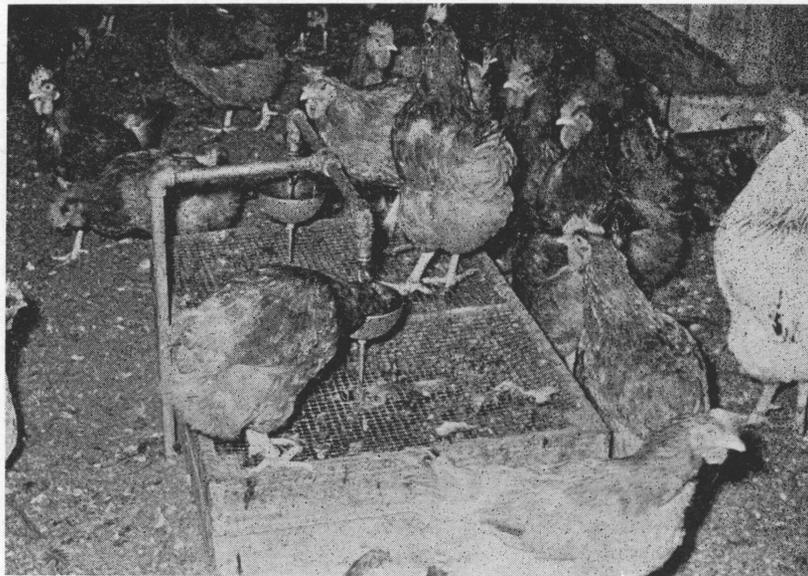
Today even for a small flock, an automatic supply of water may be the best and cheapest. The advantages of automatic or running supply of water are less drinking space needed, a continuous supply so the birds are never without water, less danger of freezing and maybe cooler in the summer time.

Dampness in the poultry house is a serious problem. Water may be spilled while filling the fountains and the bird may spray or waste water when drinking.

One of many types of community nest used.



"Continuous flow" type waterer provides a constant supply of water.

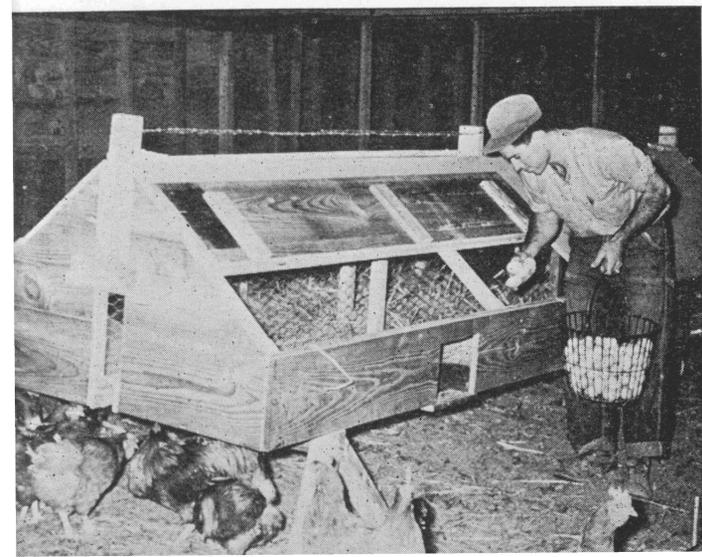


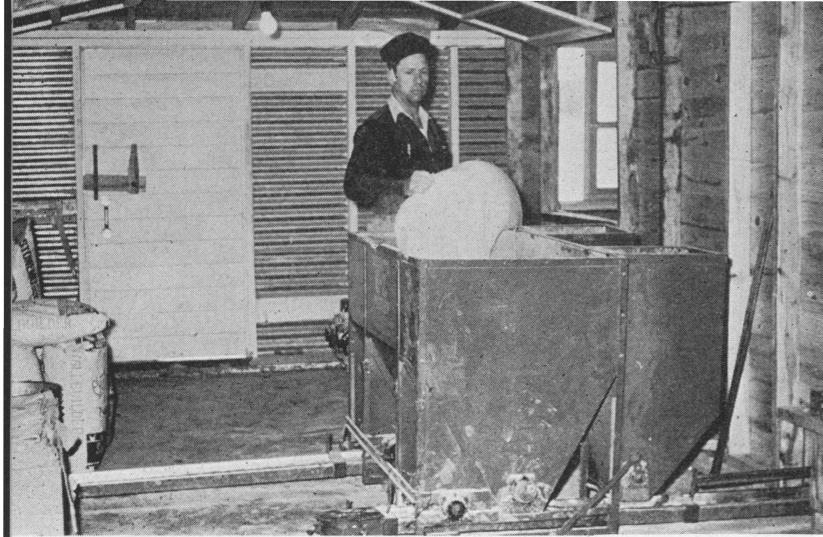
Automatic water fountains with wire covered platform.

This dampness from water falling to the litter spreads farther and farther each day. To prevent this the water fountains may be placed on a wire covered platform or a concrete drainage base. Such waterers as the "V-shaped" continuous flow should be placed "neck high" to prevent water from being spilled as the birds drink.

Feeding

Feed accounts for 50 to 60% of the total cost of keeping hens. Feed is used by the





Automatic feeders save labor.

hen to maintain body fat and produce eggs. About $\frac{3}{4}$ of the feed is for body upkeep and $\frac{1}{4}$ for egg production. However, the need of the body comes first so that it is necessary to feed a maintenance ration plus an additional amount for eggs if the hen is to produce at a profitable level. There are two types of laying rations that are proving profitable. One of those being the "all-mash" ration, which has all the necessary ingredients mixed into one ration. The other type is the regular laying ration, which ordinarily contains from 20 to 22 per cent protein and is designed so that grain can be fed with it. Good results can be obtained by either type ration if a good commercial ration is fed and the feed manufacturer's recommendations followed. Fresh feed is an important factor and is necessary for best results.

Automatic feeder trough can be adjusted to the proper height to eliminate feed waste.



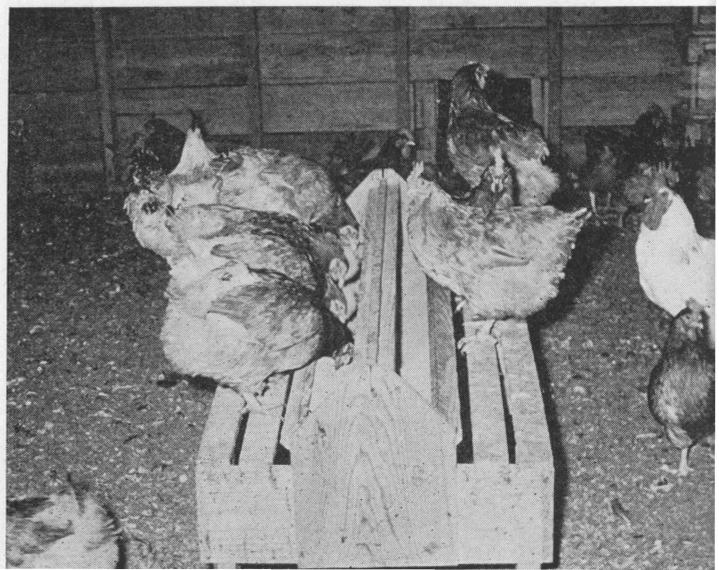
Some type of calcium is necessary for the laying flock. Ordinarily oyster shells are fed either in a shell hopper or by sprinkling it over the mash 2 or 3 times each week. The oyster shell supplies calcium necessary to develop strong egg shells. Feed hoppers should provide 5 linear inches of feeding space for each bird. Wasteproof hoppers should be used. Never fill them so full that the birds can bill out the feed. Feed falling into the litter, especially mash, is a complete loss and may result in your failure to have a profitable flock.

Automatic feeders are giving good results. They are more expensive to install, but are economical to operate with few repairs needed. The automatic feeders save labor and keeps a continuous supply of fresh feed before the birds at all times.

Litter

Many kinds of litter are used in laying houses. All of them are satisfactory if properly handled. Some kinds are preferred because they absorb moisture readily, are low in cost, and are usually available. Those that are most commonly used are cane pulp litter, planing mill shavings, rice hulls, ground corn cobs, and peanut hulls. A liberal amount of litter is placed in the house before the pullets

Wooden feed hopper made on the farm.

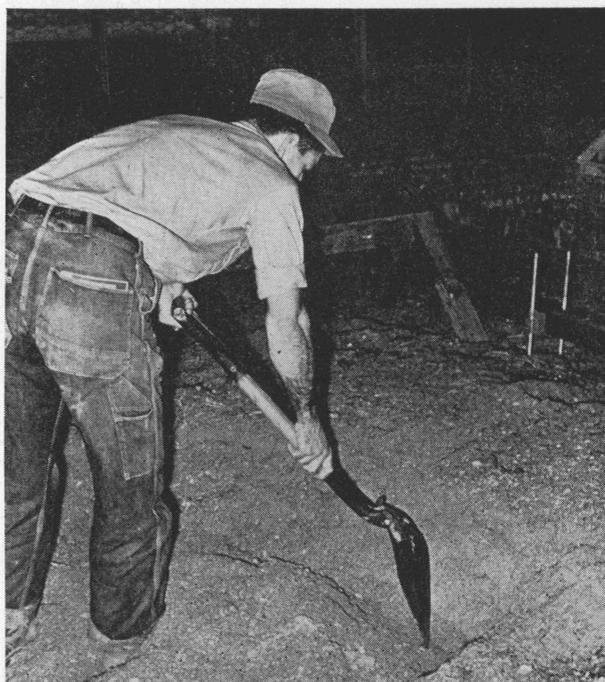
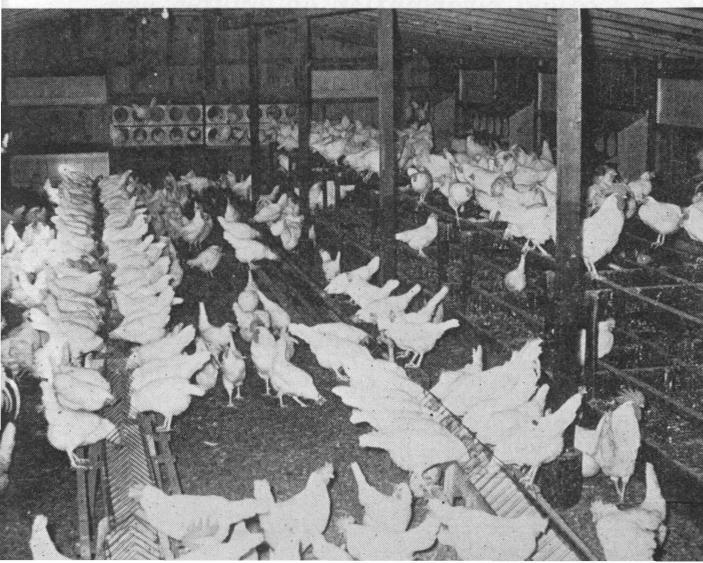


are brought in, and small quantities of new litter may be added as needed. No litter, as long as it is dry, need be removed until the end of the laying year. Therefore, the laying house is cleaned only once a year. If there are wet spots, no matter for what reason, only the part of the litter which is wet is removed from the house. The use of deep litter saves labor and lowers litter cost.

Lights

Hens in good laying condition are sure to be in good health. Following the law of nature, hens would lay all of their eggs in the Spring months. Through breeding and methods of feeding, however, man has been able to stimulate the chicken to lay more eggs than ever before. With the use of artificial lights, layers have been made to produce a great portion of their eggs during the fall and winter months. The use of lights in the laying house does not lower the hens vitality. They will not necessarily lay more eggs throughout the year than they would if not given light, but they will lay more eggs from October 1 to the end of March and April. Under lights both good hens and poor hens respond with more eggs, but in accordance with their inheritance for rate of egg production. Hens must receive more feed as they lay more eggs. For high egg production, they should have

Metal perch type feeders with grilled type cover.



Deep litter saves labor and lowers litter costs.

about 13 hours of light in every 24. Therefore, add to the hours of natural daylight enough hours of artificial light to make 13 hours of light. It makes no difference to the hen when you use artificial light. You may turn the lights on at 3 or 4 o'clock in the morning, and let them run until daylight or you may turn the lights on at 5 o'clock in the afternoon and let them run until you have had 13 hours. Electric lights are ideal because they require little labor, there is little fire hazard, and are easily controlled by automatic switches. A good guide is a 40 watt

Automatic time switch controls the laying house lights.





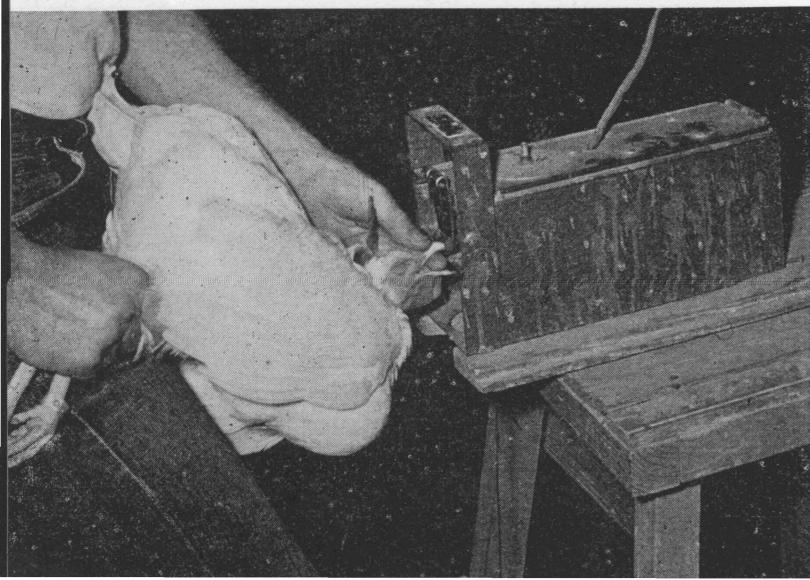
A convenient cull and broody coop provides feed and water to keep the birds comfortable.

lamp to each 200 square feet of floor space. A greater amount of light increases operating costs without increasing production. Less light may interfere with the birds' activity and correspondingly low production. The bulb should always be located to give good light for the feed hopper and the water supply.

Confine the Laying Flock

Laying hens that have the general run of the homestead are seldom well fed and do not lay as many eggs as they should. Better health and higher production can be maintained by confining the birds to the laying house at all times. Balanced rations must be provided to assure an adequate diet for the confined birds. Total confinement of flocks of 300 or more layers is proving to be a good manage-

A mechanical debeaker makes the cut and cauterizes the beak at the same time.



A seine is used to catch birds to be debeaked.

ment practice. This reduces labor costs, keeps the litter clean, helps produce clean eggs, and helps increase the consumption of feed.

Continuous Culling

The successful poultryman culls continuously. He removes the non-producers, broody, and unhealthy birds from his flock every day. The wise poultryman observes closely the conditions of his birds each day. If they are not producing, remove them immediately. They can be placed in a cull coop with a wire bottom that is placed in the laying house. These wire bottom coops should have plenty of feed and water. The bird can be placed in the coop throughout the day as the poultryman gathers eggs. In the afternoon he can gather them up and take them out of the house to be sold as soon as possible or practical.

(For detailed information on culling, ask your County or Home Demonstration Agent for Texas Extension Bulletin, "Culling Hens for Profit", C-274).

Cannibalism

To lose hens for any reason is discouraging. The loss of laying birds because of sickness may be beyond the poultryman's



Eggs are gathered in wire baskets and cooled as soon as possible.

control, but to lose birds because of careless management is fully the poultryman's responsibility. The loss of birds because of cannibalism may cause a serious drain on the profit from your flock. Usually the bird that is picked to death is one of the most healthy and best laying birds in the flock. The attack by her mates is frequently started at the time she has just laid her egg and the soft high colored membrane of the cloaca has not been drawn back into the body. There are many ways to control cannibalism in the laying flock and some are simple and affective. On the whole the one safe way to protect your flock is to debeak the layers when you place them in the laying house. Debeaking means to cut the upper beak of the bird back to the place of drawing blood. Cutting is best done with a mechanical debeaker that operates a heated knife blade. It makes a clean straight cut and cauterizes the beak at the same time. Birds with one-third or one-half of their beak cut off can readily eat grain and mash and the operation seems to bother the birds in no way.

The more familiar you become with the stages of cannibalism and feather picking, the more effective you will be in stopping and preventing this vice. It is essential to keep close watch over the flock and to always be on the lookout to



These pullets have been debeaked. This condition prevents feather picking and cannibalism.

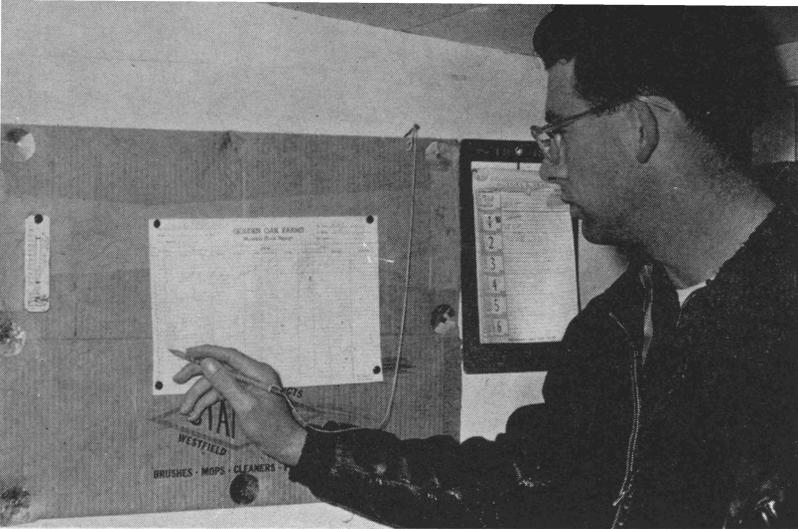
find ways to stop them in the very beginning.

Produce Quality Eggs

When produced under satisfactory conditions, the eggs are clean and of high quality when laid. This quality must be maintained in the handling of the poultry enterprise for the producer to receive the greatest returns and the consumer to receive a satisfactory product. To maintain their fresh quality, eggs must be cooled soon after they are laid. They should be gathered in wire baskets at least 3 times a day and put in a cool place immediately. Eggs may be cooled in warm weather in a basement, mechanical egg cooler or egg room where a 50 to 60° temperature is maintained. Many Texas flock owners are constructing an egg room with facilities for cooling eggs as a part of their poultry house. Good management practices mean good products.

Records

It is not necessary to keep complicated records on your poultry flock, but it is most important that you keep a daily record of egg production. Keep an egg record card in each pen where you have laying hens. In addition to the number



Keep your egg record in a convenient place.

of eggs laid each day, record the number of pullets that are first placed in the pen and the number if any that die or are culled. The record of daily egg production of your flock clearly tells the story about the quality of your flock. Well kept records give you so much information as a guide in management of your flock, that to keep hens without keeping an egg production record would be like two teams playing a game without keeping score.