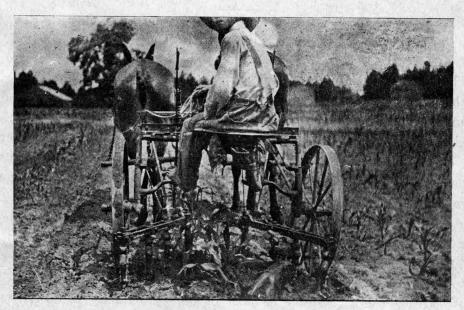
N. C. State College of Agriculture and Engineering
N. C. State Department of Agriculture
N. C. Agricultural Experiment Station, and
U. S. Department of Agriculture, Cooperating

AGRICULTURAL EXTENSION SERVICE
B. W. Kilgore, Director

AGRICULTURAL CLUB CIRCULAR



Wake County Corn Club Member using riding cultivator—the only implement used in cultivating the crop.

The Extension Service Serves the State

Raleigh and West Raleigh, North Carolina

AGRICULTURAL CLUB CIRCULAR

By

OFFICE OF AGRICULTURAL CLUBS

T. E. Browne, State Club Agent.

A. K. Robertson, Assistant State Club Agent.

J. E. Moses, Pig Club Agent.

A. G. Oliver, Poultry Club Agent.

WILLIAM KERR SCOTT, Assistant Emergency Club Agent.

INTRODUCTION.

This bulletin has been prepared by the members of the Agricultural Club Staff for the purpose of giving definite, accurate instructions and information to the thousands of boys and girls of the State who are anxious to do their part in the world's greatest crisis. For a number of years it has been the custom of this office to give these instructions through frequent circular letters, but the scarcity of paper and the large enrollment has caused this plan to become cumbersome and expensive. We shall not stop sending out circular letters altogether, but we hope you will keep this little bulletin in some convenient place for ready reference. We believe it will answer many questions that will arise with reference to your club work.

We are counting on every member of our club family to do his or her best this year. The world is looking to the boys and girls of America in this emergency.

GENERAL INSTRUCTIONS FOR MEMBERSHIP IN BOYS' AND GIRLS' AGRICULTURAL CLUBS.

Application for Membership.

I hereby make application for membership in the Boys' and Girls' Agricultural Club, agree to grow the crops or live stock as indicated below, follow instructions, keep a complete record, and report on same when required.

Name	Age
Name of parent or guardian	, , , ,
Postoffice.	
R. F. D. No County	Date
Name of school	
Note.—Make a cross (X) opposite club	
Corn, 1 acre.	Peanut, 1 acre.
Cotton, 1 acre.	Wheat, 1 acre.
Canning, 1-10 acre.	Pig.
Oat, 1 acre.	Poultry.
Potato (Irish), 1/8 acre.	Calf.
Potato (sweet), ½ acre.	Bee.

· General Rules for Membership in All Clubs.

1. All boys and girls desiring to join any club must be between the ages of 10 and 18 on the first of January of any given year.

2. Members of the clubs must agree to study the instructions received

from the State and county agents.

3. Members of any club will be required to do all their own work, except in cases of very heavy work, which they may have done by others, charging this expense to their account.

4. All members are required to keep a record of the work in whatever club or clubs to which they belong throughout the year and submit same in fall when called upon. A record book will be furnished.

5. Members will be asked to make an exhibit of their products in the fall of the year either at the county fair or county contest, where they will compete for prizes which will be awarded at that time.

Special Regulations.

1. Each member of the Corn, Cotton, Peanut, Wheat and Oats clubs is required to take one measured acre of 4,840 square yards, which should be measured at the beginning by two disinterested witnesses or

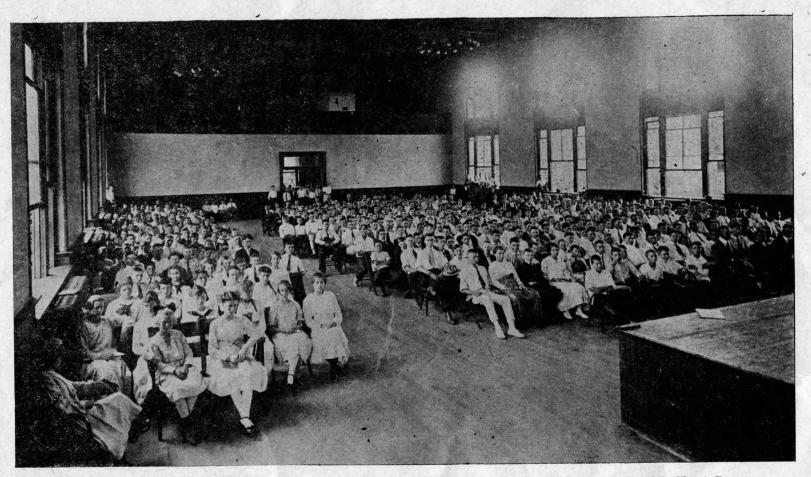


Fig. 1. Agricultural Club Members Attending Lecture in Pullen Hall at College of Agriculture During Short Course.

the county agent. The club acre must be all in one body. The Potato Club acreage is ½ of an acre.

2. Each member must keep an account of the number of hours he works, the number of hours he uses his horse during the year, and his record book must show the cost of production as follows:

	(1) Rent for land per acre (except potato, which is \(\frac{1}{8} \) acre	
	at \$1)	\$5.00
	(2) Per hours worked by each member	.10
	(3) Per hours worked for each horse used	.05
	(4) Per two-horse load stable manure (2,000 pounds)	2.00
	(5) Commercial fertilizers at actual cost	
3.	Prizes will be awarded according to the following rules:	
	(1) Greatest yield per acre	30%
	(2) Best showing of net profit	30%
		20%
	(4) Best written history, "How I Made My Crop" (in	
		20%
		000%

Corn exhibits usually consist of ten ears of corn and three stalks. Cotton exhibits usually consist of three stalks with open bolls.

Peanut exhibits usually consist of one peck of peanuts and three bunches of vines with nuts attached.

Wheat exhibits usually consist of one peck wheat and one sheaf. Oats exhibits usually consist of one peck oats and one sheaf. Potato exhibits usually consist of one peck potatoes.

- 4. The entire crop of corn from the acre, in the husk, should be weighed when it is in a dry condition. Then weigh out 100 pounds separately. Husk and shell this 100 pounds and weigh the shelled corn. Multiply the weight of all the corn in the husk by the weight of this shelled corn. Point off the two right-hand figures and divide by 56. The result will be the yield in bushels of shelled corn.
- 5. In the Cotton Club the weight of the cotton must be witnessed by both the weigher and ginner, who will sign the regular form found in the back of the daily record book.
- 6. In the Peanut Club, in determining the yield per acre, be careful to have the stacks from the club acre set off to themselves, have the machine cleaned out, run the vines through, and weigh all the peanuts picked off. If they are the Spanish variety, divide the total weight by 30 (the weight of a bushel of Spanish nuts), or by 22 if they are of the Virginia bunch or running variety. The result will be the number of bushels of peanuts produced per acre. The basis of award is the same as for the Corn Club.
 - 7. Basis of award in Potato Clubs:

(a)	Greatest yield	40%
· (b)	Best showing of profit on investment	30%
(c)	Best exhibit	15%
(d)	Best history on "How I Made My Crop"	15%

THE CORN CLUB.

Members of the Corn Club are expected to enroll as early as possible, in order to make timely and thorough preparation of the land for the corn. It is generally recognized that fall and early spring preparation pays handsomely. From the records received from club members in the past, it is found that about 50 per cent have winter-growing cover crops to turn under in the spring to supply humus, and that others who do not have a cover crop practice winter breaking of the land. However, so many members are enrolled in the winter and early spring months that they do not have the opportunity to prepare properly, but are advised to do the best they can. Club members are not expected to hastily prepare the club acre, for it always pays to take time for thorough preparation, although the planting may be somewhat delayed. Disc harrows, two-horse plows, and smoothing harrows are generally recommended for this work. Assistance should be obtained if necessary. All vegetation that is on the land should be well cut up and thoroughly mixed with the soil for best results.

Barnyard manures may be applied when most convenient, but the members are urged to make these applications as early as they can so the crop will get the most benefit therefrom.

Lime is not considered as a fertilizer when used on the land before one of the club crops. The use of commercial fertilizers is advised, according to results of experiments by the North Carolina Experiment Station, in determining their suitability for different soils and for different sections of the State to the needs of various crops.

Seed Corn.

For several years past the Experiment Station has conducted variety tests to find the best varieties of corn for different sections of the State. The results of these tests can be relied upon. Club members have been using these for some time with success. Each club member is expected to secure, if he does not already have on his farm, a recognized type and variety of corn. Information will be gladly furnished to any club member as to the list referred to and the careful breeders of the varieties which are recommended.

For the Mountain section the following varieties have yielded best:

First Generation Cross, No. 182. Southern Beauty. Weekley's Improved. Parker's Prolific.

Latham's Double. Jarvis' Golden Prolific. Goodman's Prolific.

For the Piedmont section:

Southern Beauty.
Biggs' Seven-Ear.
First Generation Cross, No. 182.
Jarvis' Golden Prolific.

Weekley's Improved. Latham's Double. Goodman's Prolific. Cocke's Prolific. For the Coastal Plain section:

Biggs' Seven-Ear. Latham's Double. Gerrick's Prolific. Jarvis' Golden Prolific. Coker's Williamson. Goodman's Prolific. Weekley's Improved. Marlboro Prolific.

Many club members have small quantities of these varieties which have been field selected, and Mrs. Noah Biggs of Scotland Neck, at whose farm it was originated, usually has a supply of the Biggs' Prolific seed.

The importance of good seed, carefully selected, cannot be overestimated. In fact, with a soil which is properly fertilized and given good preparation, the use of such seed, in the majority of cases, insures a crop very much above the average. It is also well to make a germination test of the seed before planting, as this will insure a good stand. It should be remembered that a good stand is necessary in order to produce a crop above the average.

Fertilization and Planting.

As a rule, it pays to apply such commercial fertilizer as acid phosphate, cottonseed meal, and the like, in the drill before planting, or broadcast in case of large applications, particularly on soils that are filled with humus. Where the humus supply is abundant, an application of acid phosphate before planting is best, and it may be all that is necessary if the humus comes from a leguminous cover crop. An application of readily available fertilizer, such as nitrate of soda, should be withheld until the crop is at least knee high.

The fertilizer formula recommended for corn for the Coastal Plain soils should contain about 6 per cent phosphoric acid and 4 per cent ammonia, and, when obtainable, from 2 to 4 per cent potash, using from

three to six hundred pounds per acre.

On Coastal Plain soils it is not advisable to use large applications of fertilizer under the corn at time of planting. Best results are obtained by using most of the fertilizer as a side application.

For the Piedmont and Mountain soils, about 10 per cent phosphoric

acid and 3 to 4 per cent ammonia.

A circular, or bulletin, is available upon application to the Club Office or Station Office giving more detailed information as to fertilizing corn.

If available, a planter should be used in order to save time and to insure the proper depth of planting and a regular stand. However, where a planter is not available the corn may be dropped by hand. There is no certain distance required, but the corn should be planted according to the fertility of soil. Four to four and a half feet is a desirable distance between the rows.

The corn should be planted a little below the level, and level cultivation should be practiced, except in extreme eastern North Carolina,

where the water level is very near the soil surface.

Cultivation.

Frequent and shallow cultivation has been practiced for such a length of time in this State by the club members and practical farmers that this method is now recognized as the best method of cultivation. The first cultivation may be before or just about the time the corn is coming up. An implement such as a weeder or smoothing harrow, according to the season and the soil, will do what is desired. If deep cultivation is given, it should be done while the corn is quite small. As the corn grows, the shallower should be the cultivation.

Club members do not have any "laying by" time, but they cultivate as long as it gives good results—that is, conserves the moisture.

In a large portion of the State the general practice is to have a row of cowpeas or soybeans between the corn rows. This practice does not usually decrease the corn yield to any great extent, and it also provides a fine meat-producing crop. Such crops are recommended to club members, but are not required.

Harvesting and Seed Selection.

A large per cent of farmers who do not cut and shock their corn practice the method of "pulling fodder." It has been demonstrated that this practice ordinarily causes about 16 per cent of the crop to be lost. It is not uncommon for the fodder to be badly damaged and sometimes entirely lost if the season immediately following is rainy. It also makes the seed less liable to germinate. Cutting and shocking corn too early also tends to interfere with the maturing of the grain, although not to as great an extent as does fodder pulling. Club members are urged not to pull fodder.

All Corn Club members are expected to select seed corn in the field in order to have a supply for planting the following year. By selecting good ears on healthy stalks that are well matured, one may expect good results from the planting. Field-selected seed corn also brings, when sold, considerable more than seed corn selected otherwise. The corn in which the selection is made should be as far removed as possible from other varieties, as it will cross even when several hundred yards distant.

The ten ears required for exhibit purposes may be easily picked from the seed selected in the field.

Where the yield of corn promises to be very much above 50 bushels, the member should consult his county agent before harvesting, as it is important to secure two disinterested witnesses to assist when measuring the land and weighing the corn. Instructions are given for this in the back of the daily record book. Corn should be stored so that it will not take a heat or be destroyed by insects or rodents. Information relative to avoiding these pests and getting rid of them will be gladly furnished upon application to the Club Office.

THE PEANUT CLUB.

Because of the shortage of food and feed crops and because of the outstanding value of the peanut as a human and stock food, a large enrollment in the Peanut Club is very desirable. Not only does this club offer an opportunity to help furnish food during this crisis, but it also promotes the growth of one of the best money crops grown in the South.

Suitable Soil.

A mellow, sandy loam or Norfolk fine sandy loam is the best soil for peanuts. The soil should be broken moderately deep and harrowed several times before planting. The rows should be from two and one-half feet to three and one-half feet apart. The running varieties should be planted on wider rows than the bunch. They should also be given more space in the row.

Fertilization.

The peanut is a legume, therefore requires very little nitrogen. It requires no stable manure. On land that has grown a leguminous crop or which has been well fertilized for the previous crop, only phosphoric acid (acid phosphate) and potash, together with a liberal application of lime, should be used.

Ordinarily, from 300 to 600 pounds per acre of a fertilizer analyzing 6 per to 8 per cent phosphoric acid and 2 per cent to 4 per cent potash gives best results with this crop. From 1,000 pounds to 2,000 pounds of ground oyster shell or rock lime should be used on the land previous to planting. The lime should be applied as long before planting as possible.

Cultivation.

Rapid shallow cultivation during the early growth of the crop is essential. The weeders and light harrows should be started even before the young plants come up if the soil begins to crust. The cultivation of the peanut may be done almost entirely with machinery where a start is made in time. After the pegs begin to attach themselves to the soil all cultivation should cease.

Harvesting.

When the nuts first begin to shed—that is, when the stems which attach the nuts to the vines begin to rot off—digging should begin. A plow with a special point, or an ordinary turning plow with the wing removed, should be run under the vines to cut the tap root and loosen the plants. The vines are then stacked around poles about six feet high which are set at a convenient distance along the rows. When dry enough for the kernels to shake in the hull, they are ready to pick. This may be done either by a machine or by hand.

OTHER CLUBS.

In addition to the Corn, Pig, Poultry, Peanut, and Cotton clubs, the office of Club Work conducts Potato, Soybean, and Small Grain clubs. It is anxious to increase the enrollment in these food-producing clubs and will be glad to furnish further information and instructions to those interested.

The Small Grain clubs were only started last fall, but quite a number of boys are growing an acre of wheat. Every boy in a wheat section who can possibly secure the land should sow an acre of wheat this fall. The world demand for wheat was never so great as now.

THE PIG CLUB.

The Pig Club work may be divided into three phases or projects. The first phase is designated as the Breeding Project. In this the member grows one or more pure-bred pigs, either sex, to be used for breeding purposes.

The second phase is called the Feeding or Pork Production Project. In this the member grows one or more pigs to be butchered for meat.

These may be either pure-bred or grade.

The third phase is known as the Sow and Litter Project. In this the member cares for a sow and raises one or two litters from her during the year.

Records Must be Kept.

In each project the member is required to keep a record of his or her work. Record books are furnished by the Bureau of Animal Industry of the U. S. Department of Agriculture through the Office of Pig Clubs, West Raleigh, N. C.

The same kind of record book will be used in both the Breeding and Feeding projects, but a special form of record is furnished for the Sow

and Litter Project.

Pure-Bred Animals Recommended.

Pig Club members may use any kind of pig and as many as they wish in their work. It is advisable, however, that they use pure-bred, registered pigs of whatever breed is preferred, where they can be obtained. It will be more profitable to the member to use a pig not more than two or three months old in the beginning of the contest, as a pig at this age is just beginning its most profitable period of growth.

Rules Governing Pig Club Contests.

In order that the members may get the greatest amount of benefit out of the club work, both educationally and financially, the following rules are prescribed:

- 1. Weigh the pig as soon as the records are begun, and if possible weigh it each month throughout the contest.
- 2. See that a good comfortable bed is provided. This should be free from both mud and dust. It should be in as cool a place as possible.
- 3. See that arrangements are made for plenty of fresh, clean water at all times.
- 4. Make war at once on lice and worms. Use crude oil on pigs for lice. If crude oil is not obtainable, use some of the coal-tar dips. To

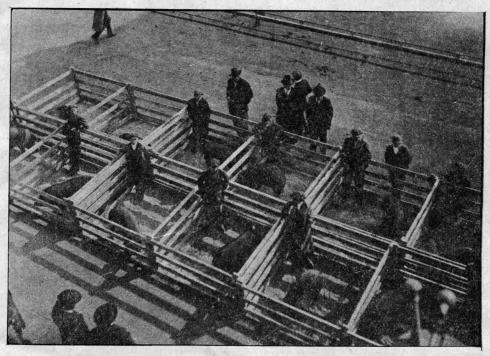


Fig. 2. Pig Club Exhibit at Iredell County Round-up, Statesville, N. C.

prevent worms, and to keep pigs healthy, keep a supply of the following mixture where they can get to it at will:

Charcoal	1 bushel	Air-slaked lime Sulphur Pulverized copperas	4 pounds
(See page 9 of Pig			

- 5. Provide grazing crops for the pig. Plant sorghum, cowpeas, soybeans, peanuts. (Rape, rye, clover, vetch, oats, etc., for fall and winter grazing.) See bulletins 411 and 205.
- 6. Feed a balanced ration of concentrate feeds. (When pigs are on grazing crops, one-half ration.) A concentrate ration for a hog is approximately 4 per cent of live weight—that is, 4 pounds of feed for

each 100 pounds live weight of hog. The following are some suggested combinations of feeds that make fairly well-balanced rations for growing pigs:

	CornShorts	. 1 part . 1 part	3.	Corn Tankage	9	parts part
2.	CornSkim milk or butter-	1 part	4.	CornSoybean meal	5	parts part
	milk					

7. Determine at the beginning of the contest to keep a complete and accurate record of all the feed given, all pasture, grazing crops, and time spent in caring for the pig. This is the educational feature of the work.

8. Members should begin keeping records as soon as the pigs are obtained. In order to compete for prizes in State-wide contests, records must be begun by or before July 1st.

9. Members will keep their records until November 1st, then complete their record books and send to the County Farm Demonstration Agent of their respective counties. Record books will be forwarded by county agents to Office of Pig Clubs, West Raleigh, N. C.

10. Members growing litters of pigs will keep a record of the cost of feeding and caring for sow from time she is bred until the litter is weaned and charge this to the expense of producing the litter. Records will be kept on pigs until they are sold; or if pigs are not to be sold, records will stop November 1st.

11. Sows should be bred for two litters per year. To do this the pigs should be weaned at eight weeks old and sow rebred within next five to ten days.

12. Members should show their pigs at their local fairs, both community and county. If a prize winner or worthy of a prize, they should send them to the district and State fairs. If you do good work let other people know about it.

13. Members growing pigs for meat are urged to enter the Meat-Curing Contest in the winter. By so doing they make more money out of their pig and at the same time learn how to cure meat according to the best method. Attractive prizes will be given to the members curing the best hams and sides of bacon.

This contest is not limited to members growing meat pigs. Members may buy a hog for this purpose, or they may simply cure the hams and sides of one of their father's meat hogs.

There are many details of the work that are probably not covered by these instructions.

Inquiries pertaining to Pig Club work should be addressed to the County Farm Demonstration Agent or to the Office of Pig Clubs, West Raleigh, N. C.

THE POULTRY CLUB.

The North Carolina farmer is splendidly situated for the production of fowls and eggs, having an ideal location and climate with mild winter and early spring seasons, making production an easy matter when prices are high. On many farms, the money derived from the sale of poultry and eggs buys the groceries and clothes for the entire family. However, to attain these good results, certain essentials, as given, should be followed by Poultry Club members.

Rules for Poultry Club.

- 1. Each member will be required to set one or more sittings of eggs of some pure-bred breed of fowls. The member can choose the breed desired.
- 2. The club member will be required to care for and feed the chickens according to instructions sent out from the Office of Poultry Clubs.
- 3. A record book will be furnished each member, in which are to be kept accurate records of date hens are set, number of eggs set, number of chicks hatched, amount of feed purchased, number of chickens sold, number kept for own use, and value of product at end of season. This record book is to be sent in at the end of the season to the county agent or to the Office of Poultry Clubs, West Raleigh, N. C.
- 4. Each member should try to show some of the birds raised at community and county fairs, and when extra good birds are produced, at the State and district fairs.

Selection of a Breed.

Poultry Club members are only interested in breeds best adapted for general farm purposes; therefore Plymouth Rocks, Wyandottes, Rhode Island Reds, and Orpingtons are needed as dual purpose fowls, and Leghorns as egg producers.

Pure-Bred Flocks on Every Farm.

Pure-bred poultry means uniformity of products. Uniformity of products means increased profits if properly marketed. Given the same care and feed, pure-bred fowls will make a greater profit than mongrels.

Care and Feeding of Young Chicks.

Provide good brood coops with portable floors so the little chicks will not have to sleep on the cold, wet ground. Provide good water dishes; these can be made by using a saucer and a tin can. Do not feed the chicks until they are at least forty-eight hours old. This is very essential. Before giving them any food of a digestible nature see that the floors of brood coops are covered with sharp sand. Then allow them to pick around on this for several hours. Give them sweet milk or butter

milk for their first drink whenever possible. Then feed hard-boiled egg mixed with oatmeal or corn bread, thoroughly baked; but never wet corn meal or dough. Then give them next the commercial chick grains or cracked corn and wheat screenings.

Keep careful watch for lice on heads and under wings of chicks. Dust them with sodium floride powder. Confine hens in brood coops for first few days after chicks have hatched as this will allow the chicks to run around and get strong. Then turn the hens out with their broods on all good clear days.

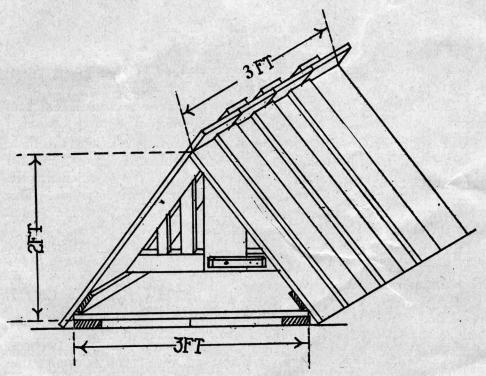


Fig. 3.—Home-made Brood Coop. Dimensions: Floor 3 ft. by 3 ft. Boards nailed to two pieces of studding to raise floor from ground. Short side of roof is 2 ft. 8 inches by 3 ft. Long side of roof is 3 ft. by 3 ft. Sides of roof are nailed at top, making an A-shaped coop. Boards are nailed crosswise. Coop is made to fit down closely over floor. Front is slatted up and down. Floor is portable, thus being easily cleaned.

Keep the brood coops clean and use kerosene freely in all cracks. The chicks must be kept growing from the time they are hatched, being allowed to have no back-set of any kind, for this is likely to stunt or otherwise injure them.

Housing the Flock.

Select a location with natural drainage from the building. In most localities the building should face the south, as this insures the greatest amount of sunlight during the winter. Allow at least two square feet

of floor space per bird. Proper ventilation and sunlight mean a dry house and healthy birds. The partial open front house is the best type for this State.

The essentials to success in housing are fresh air, sunshine, a dry floor, and a building free from drafts. The house must be free from drafts or the birds will catch cold. Colds are the forerunners of roup and other diseases. On almost any farm there can be fitted up a poultry house suitable to attain the best results with very little, if any, cost for new material.

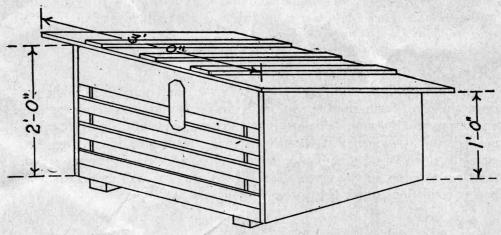


Fig. 4.—Home-made Brood Coop. Dimensions: Made from large box, floor space to be about 3 ft. by 3 ft. Knock bottom out of box and saw boards so they will fit inside; then nail two pieces of studding crosswise on floor to raise same from ground. Knock off top of box and saw through box to give proper slope for roof. Knock out front of box and make slat door.

The house should be about the following dimensions: 5 feet high in back, 7 feet high in front (this boarded up 3 feet from bottom, the remaining 4 feet open and covered with wire), 12 feet deep or wide, and not less than 15 feet in length. Roosts should be level and portable, 2 feet 6 inches from the floor, with a dropping-board about 8 inches below the roosts. Good ones may be made of 2-inch by 2-inch material with upper edges rounded. Nests may be placed on the side walls or under the dropping-boards. Hens prefer somewhat secluded or dark places in which to lay.

Feeding the Flock.

It takes a healthy, well-fed flock to produce eggs. The busy hen is the heavy layer. Therefore, what grains are fed should be thrown in deep litter so the hens will have to work to get it. An excellent food for laying hens is equal parts cracked corn, oats, and wheat screenings, which should be scattered in deep litter.

With free range on farms, nature provides worms, bugs, seeds, green forage, and grit in most places.

A mash mixture of 2 pounds wheat bran, 2 pounds wheat middlings, 2 pounds corn meal, and 3/4 pound cottonseed meal should be kept in receptacles to which the fowls have access at all times.

Egg Production.

Produce the infertile egg by shutting up or killing all male birds after hatching time. Removal of the male bird has no influence on the number of eggs laid by the hens. Keep no hens after they are two years old as their greatest producing period is during the first and second years. Keep all the early hatched pullets, as it takes a fully matured pullet to lay. These pullets are the fall and winter layers of high-priced eggs and are also early brood hens.

Marketing.

Uniform products command the best prices, and pure-bred fowls produce these uniform products. Begin marketing the cockerels as soon as they weigh 1½ pounds or attain a marketable weight. Market white-shelled and brown-shelled eggs in separate packages. Small or dirty eggs should be used at home and not put in with the marketable eggs, for they will reduce the price of all. Infertile eggs will withstand marketing conditions much better than fertile eggs.

Lice and Mites.

Use freely some good lice powder and furnish a good dust bath, as this is the only way fowls have of cleaning themselves of lice. Sodium floride, which can be had at any drug store, is perhaps the best powder to use.

To apply insect powder, hold the bird by the legs, head down, and work the powder well down to the skin. Free use of kerosene on roosts and in the cracks will exterminate mites. Whitewash also is very effective.

Good Rules to Follow.

All farmers and poultry men should adhere to the following rules in handling their poultry and eggs:

- 1. Keep the nests clean; provide one nest for every four hens.
- 2. Gather the eggs twice daily.
- 3. Keep the eggs in a cool, dry room or cellar.
- 4. Market the eggs at least twice a week.
- 5. Sell, kill or confine all male birds as soon as the hatching season is over.