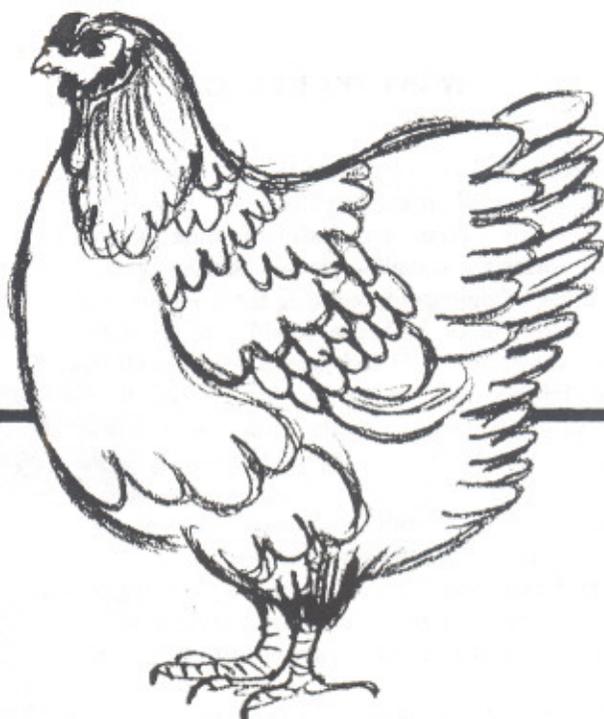


Should I Raise a Small Poultry Flock ?

Louis C. Arrington



With higher food costs, you've probably wondered if you could raise chickens or turkeys to provide your own meat and/or egg supply. Many people who are buying or renting small farms want to produce some of their own foodstuffs. This publication is designed to answer many of the questions on raising small poultry flocks.

SHOULD I?

You should probably not go into raising poultry with the idea of saving much — if any — money, especially if you consider the value of the labor involved. Large commercial operations can take advantage of discounts on volume purchases of the chicks, feed and equipment needed. They can also make more efficient use of their labor through the use of automated equipment.

Your answers to the following questions will help you decide whether you want to raise your own poultry.

1. Do zoning laws permit raising poultry at your location?
2. Do you have "unused labor" available?
3. Is someone willing to care for the birds **daily**?
4. Is someone able and willing to butcher the meat birds at home, or is there a facility nearby where you can have your birds custom processed?
5. Do you presently have the necessary housing and equipment, or will you have additional expenses for these?
6. Money spent for housing and equipment becomes a poor investment unless it is used for several flocks. Do you plan to continue raising home flocks for several years?
7. Can you use your facilities or proposed facilities for some other purpose (such as storage) if you do not continue to raise poultry?
8. Can you reduce the feed costs by using home-grown grains and/or pasture?

9. Are your facilities or proposed facilities designed and located to prevent causing a noise, odor or fly nuisance for your neighbors and for your own family?
10. Do you have a freezer, so you can make best use of the meat birds you grow?
11. Do you have neighbors who would like to buy some "home-produced" eggs or poultry when you have more than you can use?

Your answers to these questions will probably point out some disadvantages of growing your own poultry.

On the other hand, some advantages exist which often cannot be given a monetary value. Whether real or imagined, some people feel the home-produced birds and eggs are better. Certainly, they would be fresher. You can grow the meat birds out to the size or sizes you prefer. For example, with chickens, you may want to slaughter part of the flock at 7 to 9 weeks of age for broiler-fryers and keep the remainder to 12 to 15 weeks for roasters.

If a "dual purpose" breed of chicken is raised, you can slaughter the males as broiler-fryers or roasters and keep the hens for egg production. The hens will provide some baking or stewing chickens when new layers are brought in.

There is also an intrinsic value to having living and growing animals, especially around children. Children can handle many of the day-to-day chores of growing birds. Minimal space and housing are needed for small flocks. The idea of producing something for yourself appeals to many persons.



WHAT DO I NEED?

Housing need not be new or fancy. You may be able to use or remodel an existing structure. Day-old chicks require a clean, dry, draft-free house that can be heated during the brooding period. Started chicks can sometimes be purchased, reducing the need for heat.

For older birds, the house should keep them dry, protect them from cold and provide ample draft-free ventilation, especially in hot weather. Insulation will be required in the northern states if using the house during the months of November through March. Using some insulation reduces early spring brooding costs and keeps houses drier. Even adult layers may require supplementary heat during the winter months.

The house design should permit easy tending of the flock and allow thorough cleaning between flocks. Screen openings to exclude flies, wild birds and predators.

For small flocks, allow more floor space than that used in commercial units. The following space allowances should prove adequate:

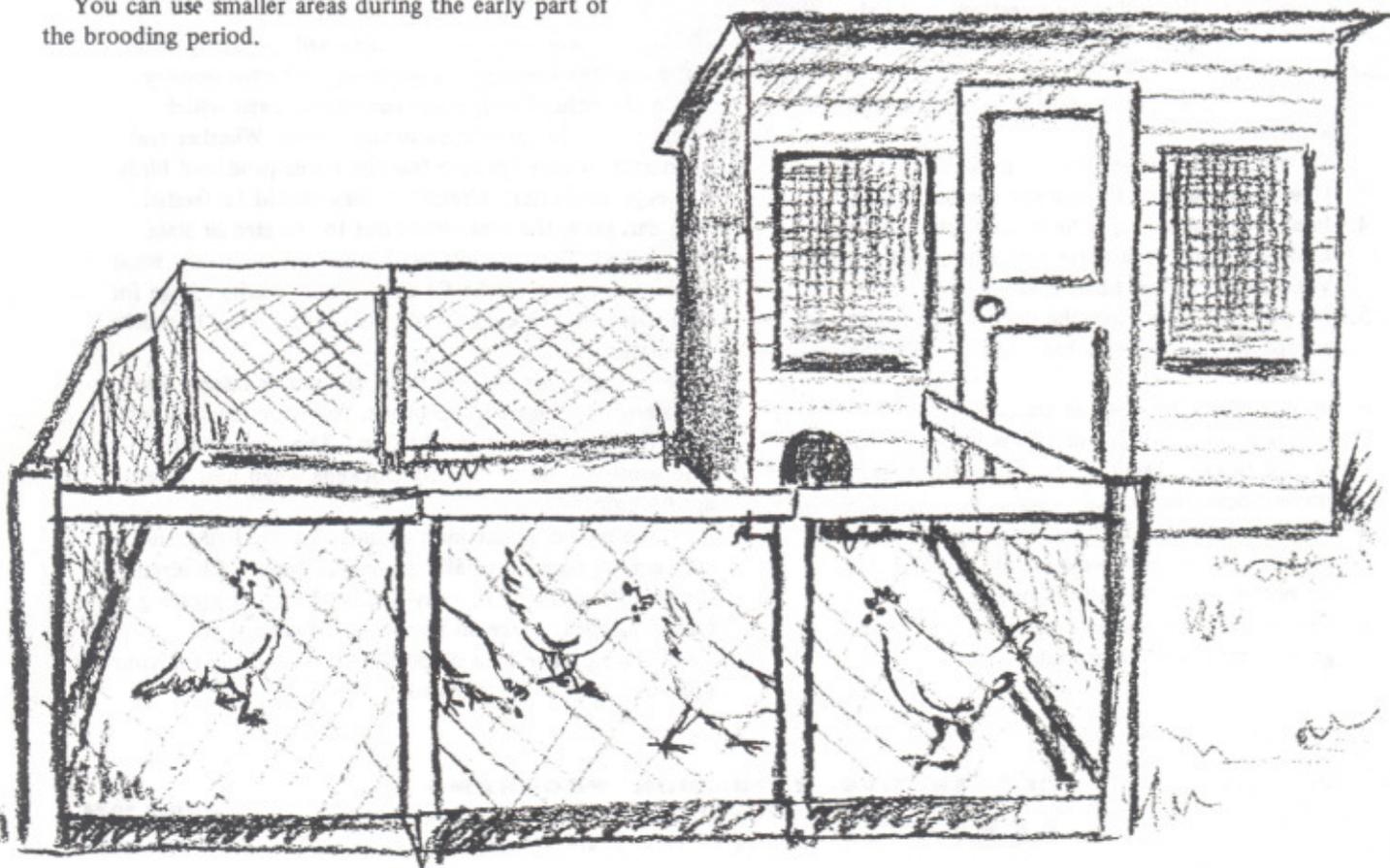
Broiler-Fryers (to 9 weeks age)	- 1½ sq. ft./bird
Roasters (to 16 weeks age)	- 3 sq. ft./bird
Layers (small; Leghorn-type)	- 3 sq. ft./bird
Layers (large; dual-purpose)	- 4 sq. ft./bird
Small turkeys (to 16 weeks age)	- 5 sq. ft./bird
Large turkeys (to 20 weeks age)	- 8 sq. ft./bird

You can use smaller areas during the early part of the brooding period.

Pullets start egg production at 20 to 22 weeks of age. If you grow your own pullets, a separate house is needed to maintain a constant egg supply. Otherwise, you will not have eggs for the 22-week period while the new chicks are developing. Do not keep birds of different ages in the same building, even if the pen is divided. Buying started pullets or spent hens eliminates this need for a second house. You can empty the house, clean up and refill it with new birds, with a relatively short period of non-production.

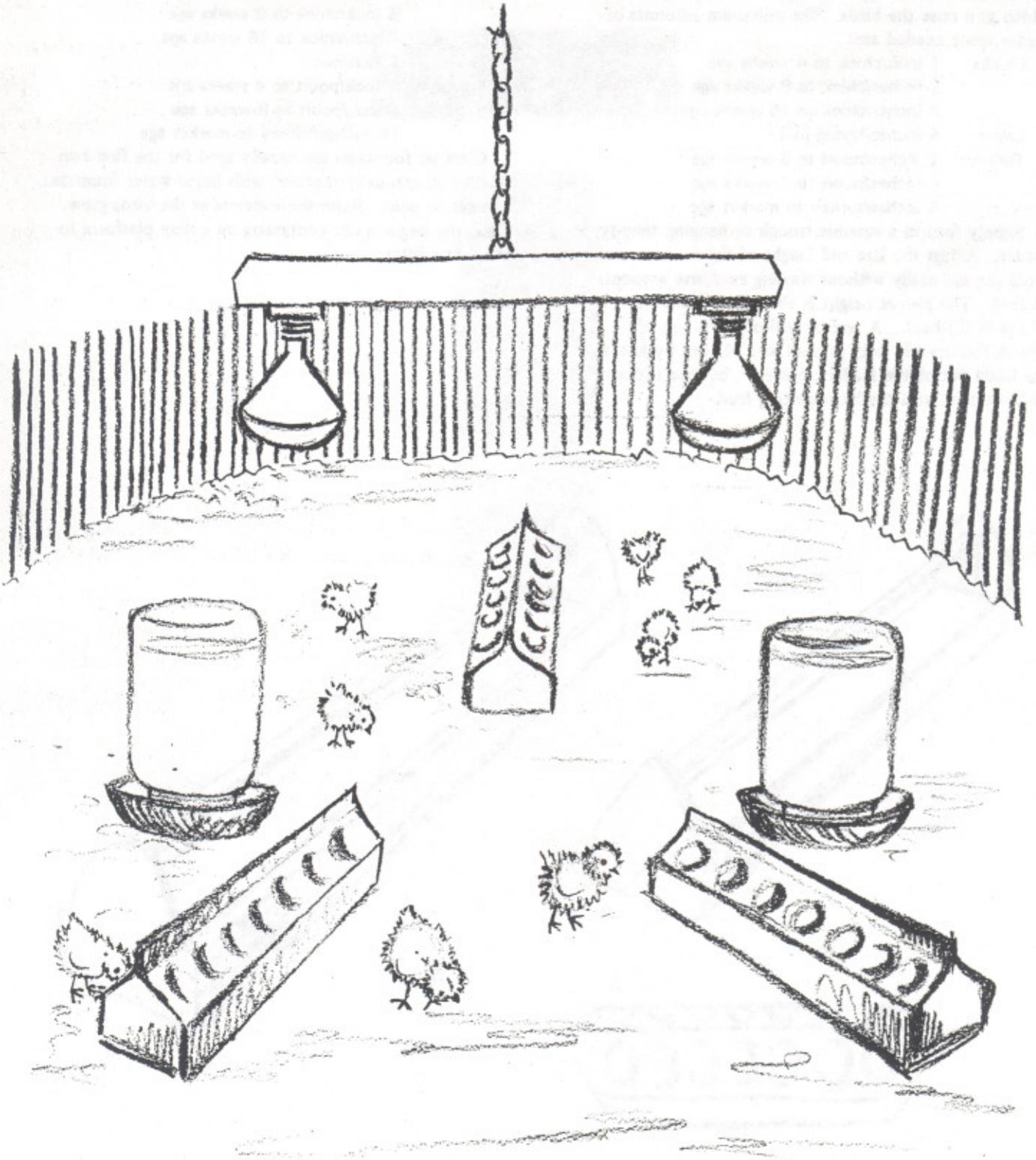
Locate your house on clean, well-drained soil. If electrical brooding or lighting is used, minimize the distance from a suitable electrical hookup. You will save labor if a water source is nearby. Summer ventilation is improved by avoiding low areas where the air tends to stagnate.

If you plan to allow the older birds to range outside, locate the house near an area with a good grass cover (preferably with a grass-legume mixture), and near some shade source if possible. Facing the house south or southwest permits more sunshine to enter the house, which is beneficial during cooler weather.



Equipment needed for poultry is fairly simple. For the small flock an electric brooder using infrared heat lamps is generally the most convenient heat source. One 250-watt heat lamp is adequate for 50 chicks, but using at least two heat lamps is recommended in case a bulb fails. A small catalytic gas heater could serve where electricity is not available. These units use

portable gas cylinders. They also work on the infrared heat principle and do not have an open flame. Any type of brooder unit should have a good thermostat control to maintain the proper heat level.



During the first two or three days, put some feed in shallow box tops to help the young birds find feed. You will also need chick feeders and at least one larger size feeder, depending on the type and final age to which you raise the birds. The minimum amounts of feeder space needed are:

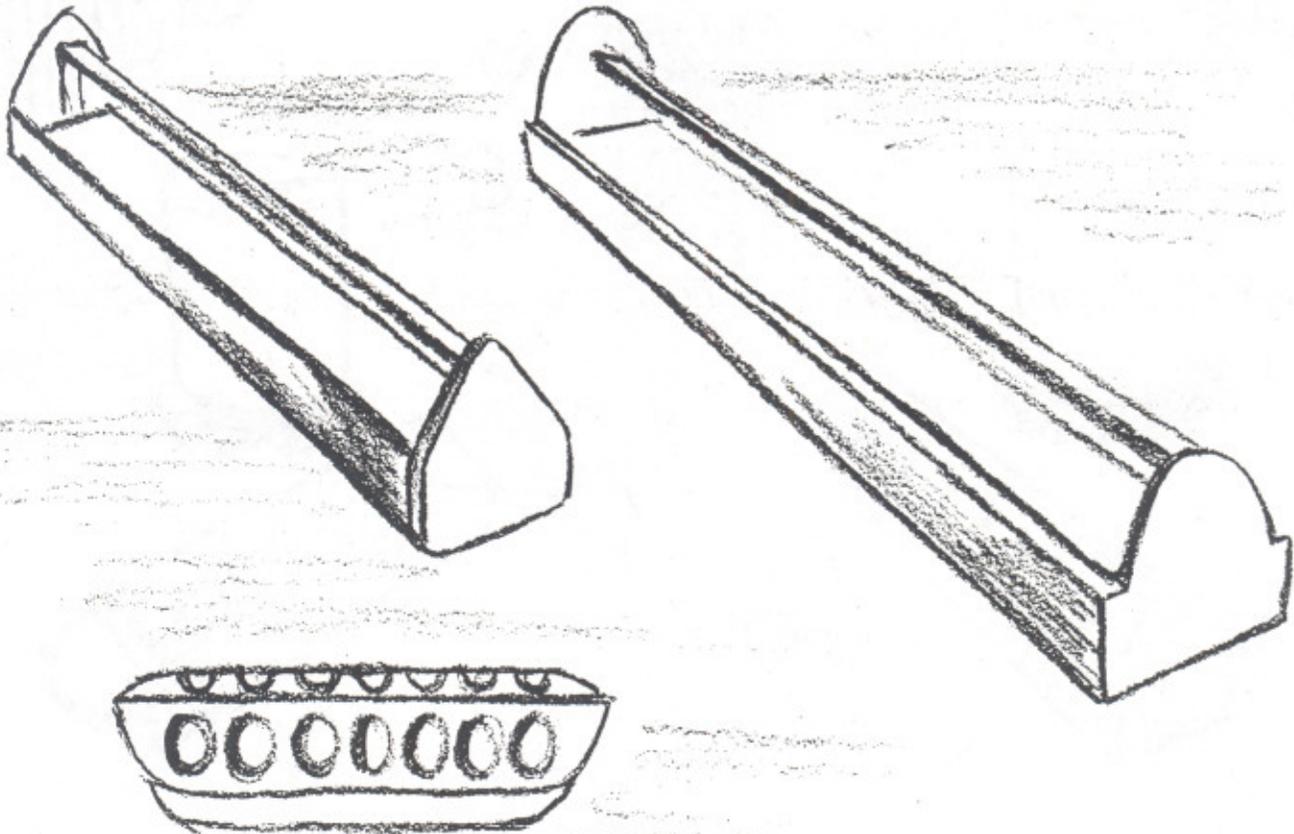
- Chicks: 1 inch/chick to 4 weeks age
- 2 inches/chick to 8 weeks age
- 3 inches/chick to 16 weeks age
- Layers: 4 inches/laying hen
- Turkeys: 2 inches/poult to 3 weeks age
- 4 inches/poult to 6 weeks age
- 6 inches/turkey to market age

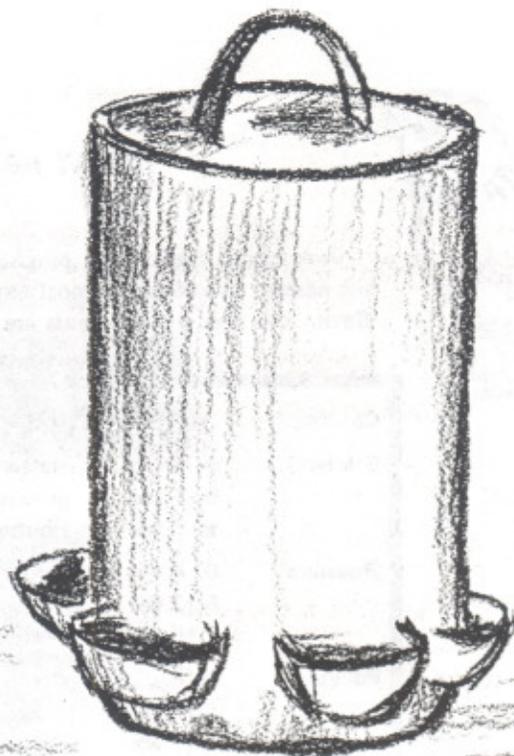
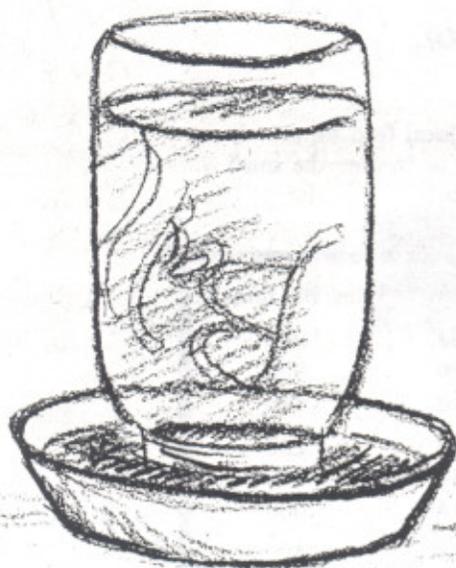
Supply feed in a suitable trough or hanging tube-type feeder. Adjust the size and height of the feeders so all birds can eat easily without wasting excessive amounts of feed. The proper height is about even with the top of the bird's back. A reel or grill over the top of trough feeders will help prevent wasted feed by keeping the birds out of the feeders; however, be sure it does not interfere with the birds getting feed.

Provide at least two separate waterers in each pen of baby chicks or poults. The minimum amounts of linear waterer space should be:

- Chicks: $\frac{1}{4}$ inch/chick to 2 weeks age
- $\frac{1}{2}$ inch/chick to 8 weeks age
- 1 inch/chick to 16 weeks age
- Layers: 1 inch/hen
- Turkeys: $\frac{1}{2}$ inch/poult to 4 weeks age
- 1 inch/poult to 8 weeks age
- $1\frac{1}{2}$ inches/turkey to market age

Glass jar fountains are usually used for the first two weeks and gradually replaced with larger water fountains, troughs or pans. Raise the waterers as the birds grow. Place the larger water containers on a wire platform to avoid wet litter.





A brooder guard should be placed around the brooder during the first few days. This circle of corrugated pasteboard or tin keeps the young birds near the heat source and blocks drafts at the floor level. It should be about 18 inches high and long enough to completely encircle the brooder about two or three feet from the edge of the hover (about three feet from infrared brooders which do not have hovers). You can make a square brooder guard from thin wood, but place additional strips inside to eliminate corners where the birds might pile up.

Roosts are not necessary for meat birds and may contribute to crooked breasts if used. Some growers do consider them useful in decreasing piling of older birds. Some producers prefer to have roosts for laying hens, especially for the Leghorn-type strains. If used, hens should have six to eight inches of roost space per bird.

Electric lights are not necessary, but do have some advantages. The use of dim morning and/or evening lights gives the birds more feeding time and produces faster growth. They may also help prevent crowding or piling of young birds by eliminating shadows from outside light sources. Lights in the laying house will help maintain fall and winter egg production.

Nests will be needed for laying flocks. You will need one individual nest or one square foot of community nest space for each four to five hens.

Fencing in the range area (if used) will help confine the older birds, while protecting them from predators. A fairly small mesh poultry netting or hinge joint poultry fencing offers more protection.

Electric fans can be used for summer ventilation. Natural ventilation will usually meet your needs, however, if the house has plenty of openable windows and if the house is located properly. Use air outlets near the peak of the house or ridge ventilators to prevent the build-up of hot air under the roof.

Litter serves to absorb moisture and insulate the birds from cold floors. Start chicks or poults on four inches or more of litter. The litter material should be clean, absorbent and dry, but relatively dustfree. The materials commonly used include wood shavings, chopped straw, crushed corncobs, peat moss and commercial litters. Your birds are in almost constant contact with the litter. It is important to remove and replace areas that become damp, as a disease control measure. Additional litter may have to be added as the flock grows.



WHAT ABOUT FEED?

A complete mash ration purchased from a local feed supplier is the easiest, but probably most expensive way of feeding the small flock. The feed requirements are listed below:

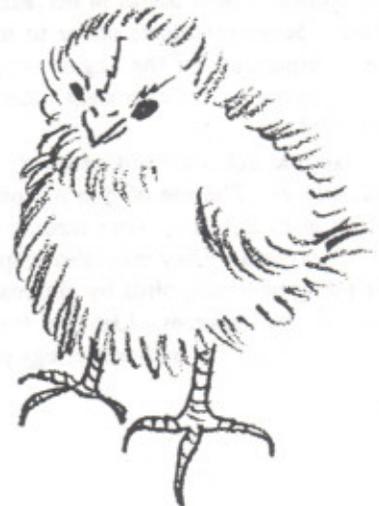
Chickens:	Age	Type feed	% Protein	lbs/100 birds*
Broiler-	0- 4 wk	starter	22	200
Fryers	5- 7 wk	grower	20	500
	to 8 wk	finisher	18	100
Roasters	0- 4 wk	starter	22	200
	4-12 wk	grower	16	1200
	to 15 wk	finisher	14	1000
Pullets	0- 8 wk	starter	20	400
	8-12 wk	grower	17	400
	12-21 wk	developer	14	1000
Layers	21 + wk	layer	17	25/day
Turkeys:				
Small	0- 7 wk	starter	28	600
	7-18 wk	grower	20	3000
Large	0- 8 wk	starter	28	1000
	8-16 wk	grower	20	3000
	16-22 wk	finisher	14	2800

* Total pounds of feed consumed by 100 birds for the period indicated, except for layers (as noted).



Actual protein levels of purchased feeds vary somewhat between suppliers. Consumption rates can vary markedly, depending on the feed used, climatic conditions, general management, and age at slaughter or production levels.

The complete ration is designed to fulfill all of the nutritional needs of the bird. However, the home flock-owner is usually not highly concerned with getting the best possible performance. In such cases, some savings in feed costs can be obtained by feeding other available materials such as home grown grains, green plants and some table scraps.



WHERE DO I GET IT?

Most of the needed equipment is available from farm supply stores or catalogs. You can make roosts, nests and feeders from wood. A popular roost consists of 2 by 2 inch material spaced 14 to 16 inches apart. Round off the upper edges of the roost boards to reduce denting of the birds' breasts. Mount the roosts at least a foot above the floor, near the back wall of the pen. Slope roosts with several rows of perch poles with the back perches higher to encourage some of the birds to use the back rows. Make individual nest compartments approximately one foot square and one foot high. If making simple feed troughs, fit the parts carefully to prevent feed wastage. You will find wooden troughs more difficult to thoroughly clean and disinfect.

You may be able to save money by buying used equipment at a farm auction or from a farmer who no longer raises poultry. Check used equipment for broken parts, freedom from rust or corrosion, and cleanliness before purchasing. Also check electrical equipment carefully for damage to the wiring. If it does not appear to be safe or easily repairable, you had better look elsewhere. Recheck used equipment thoroughly at home to make sure everything is in good working order well before the chicks arrive. It is a good idea to have a spare bulb on hand for brooder units using infrared heat lamps.



WHEN DO I START?

The cold winter months would require extra heat and well-insulated houses. Most small flocks would do better if brooded during the months of April through October, depending on your climatic conditions. The growing periods and the expected live weights for the common meat birds are:

- Broiler-Fryers 7 to 9 weeks = 3 to 4½ pounds
- Roasters 12 to 16 weeks = 6 to 8 pounds
- Small turkeys 16 to 18 weeks = 9 to 15 pounds
- Large turkeys 20 to 22 weeks = 14 to 24 pounds

The weights listed indicate the range for an unsexed flock under good management. The dressed weights will be about 70 to 75 percent of the live weights.

You could easily raise two flocks of broiler-fryers during the April to October period. Roasters or turkeys might be limited to one flock. Laying hens are normally kept year around. They will require a well-insulated house and some supplementary heat during the colder months.

In making your plans, consider the variations in your available labor, especially your family vacation schedule. Poultry requires daily care. Plan to start your flock so that you will not be away from home for an extended period while they are growing. The biggest labor requirements for your flock will come during the brooding period (the first four to six weeks) and when you butcher your birds.

You might also want to avoid the hottest summer months, especially for starting birds. Extremely hot weather creates problems of providing adequate ventilation while avoiding drafts on young birds. A well-ventilated house or the use of a partially shaded range will reduce the summer heat problem for birds over four weeks old.

Also consider your meat needs. An early flock will provide broilers for the summer barbeque season. You might keep part of the flock longer to provide some roasters or start a second flock in the early summer. A late summer flock can fill the freezer for winter.

WHAT KIND OF BIRDS?

First decide what class or classes of poultry you want to produce — broilers - fryers, roasters, layers, small turkeys or large turkeys. Then buy the kind of stock designed for that purpose.

Crossbreeds using combinations of Cornish, Plymouth Rock and New Hampshire blood lines are most often used for broiler-fryer and roasting chicken production. These crosses will reach three to four pounds in weight at about eight weeks of age under good conditions and provide excellent meaty carcasses. Leghorn-type males are often available at an attractive price, but they grow slowly and fail to provide a meaty carcass.

Commercial Leghorn-type strains are widely available and are the best egg producers. Many hatcheries sell started pullets (at about 20 weeks of age) to commercial producers. You may be able to purchase a small flock from their extra birds. Spent hens are commercial layers that have been in production for 12 to 16 months. These are often available at very reasonable prices, although you cannot expect them to produce as many eggs as pullets. Buying either started pullets or spent hens will simplify your operation since the brooding period is already completed.

Dual purpose breeds or strain crosses provide both eggs and meat. They generally lay brown eggs at a rate somewhat lower than the Leghorn-type hens. The males make fairly good fryers or roasters. White or Barred Plymouth Rocks, Rhode Island Reds, New Hampshire Reds, Wyandottes and some of the heavier strain-crosses fit this dual-purpose category.

The various meat strains of turkeys are classified as small, medium or large types according to their size when mature. A desirable "finish" on turkeys consists of full fleshing and a moderate fat covering under the skin. Each strain is bred to produce this "finish" at a specific size and age. Under good growing conditions, the expected liveweight for the various strains would be:

Type	Hen Weight (age)	Tom Weight (age)
Small	9 lb (16 wks)	15 lb (18 wks)
Medium	11 lb (18 wks)	18 lb (20 wks)
Large	14 lb (20 wks)	24 lb (22 wks)

Actual weights may vary considerably, depending on the feeding and management programs used. Decide on the final liveweight you hope to obtain and choose your strain accordingly. Most commercial turkeys are now white feathered.

In starting any poultry project, day-old chicks or poults are the most economical choice. You can purchase them from local hatcheries or other poultry supply businesses. Place your order at least a month ahead to insure having birds available when wanted. The supplier may or may not have birds available for last-minute orders. Chicks are usually available straight-run or may be available sexed — all females or males. Buying sexed birds has little advantage for the small flockowner, except they will probably be more even in size when grown to market age.

WHERE CAN I GET MORE INFORMATION?

If you have decided to raise poultry, you may have further questions or want additional publications. Contact your county Extension office or the Department of Poultry Science, University of Wisconsin, Madison, WI 53706. Local feed and supply dealers and hatcherymen will also help.

References:

US.D.A. Farmer's Bulletin No. 2224, Raising Livestock on Small Farms

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