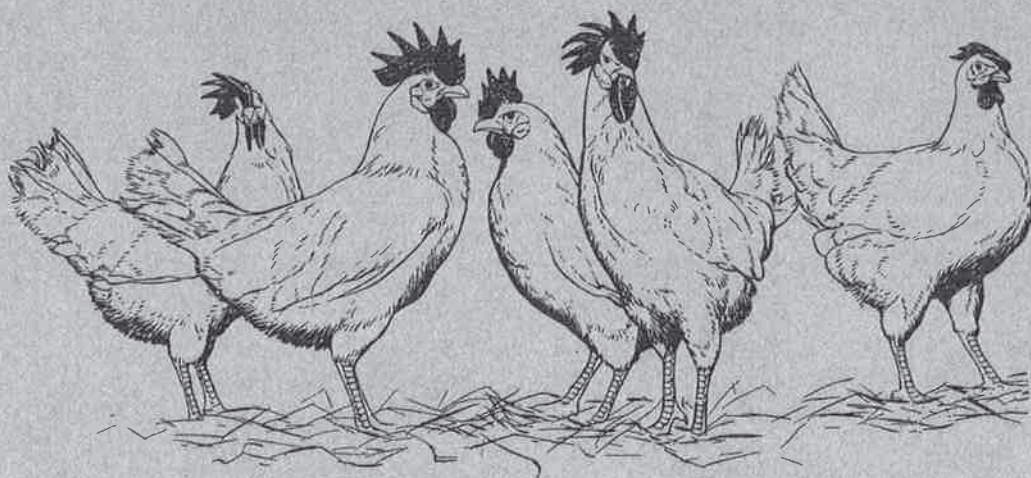


Small Turkey Flock Management



SMALL TURKEY FLOCK MANAGEMENT

Raising a small flock of turkeys can serve two basic purposes. First, you can produce some of your own food and have the freshest turkey possible. Second, you can involve the whole family in a project working with and learning about live animals. Then, too, you may be able to compete economically with commercial turkey growers.

A small number of turkeys can be raised in a relatively small area, but be sure to inquire about local laws and ordinances before starting your flock. Zoning regulations in some towns and suburbs prohibit keeping poultry. While little time is required to care for turkeys, their care must be regular — at least once a day and more often when the birds are young.

Buying Poults

The “breeds” of turkeys often referred to are actually varieties that originated from the wild turkey. The most commonly raised commercial variety is the Large White. Hens commonly reach a live weight of 17.4 pounds at 20 weeks of age and toms weigh about 34.4 pounds at 24 weeks. Smaller fryer-roasters can be produced by slaughtering the Large White turkey at an earlier age. Table 9 shows the expected average weights of Large White turkeys at various ages.

Table 9. Growth Rate and Feed Consumption of Turkeys (Hens and Toms Combined)

Age (weeks)	Large White Hens		Feed Conversion (pounds feed per pound gain)	Large White Tom		
	Average Live Weight (pounds)	Cumulative Feed Intake (pounds)		Average Live Weight (pounds)	Cumulative Feed Intake (pounds)	Feed Conversion (pounds feed per pound gain)
1	0.36	0.51	1.41	0.36	0.51	1.41
2	0.77	1.14	1.48	0.84	1.22	1.45
3	1.44	2.19	1.52	1.61	2.40	1.49
4	2.34	3.66	1.57	2.67	4.09	1.53
5	3.43	5.54	1.61	4.05	6.39	1.58
6	4.69	7.80	1.66	5.74	9.37	1.63
7	6.17	10.59	1.72	7.68	12.99	1.69
8	7.82	13.86	1.77	9.82	17.24	1.76
9	9.55	17.56	1.84	12.12	22.10	1.82
10	11.32	21.63	1.91	14.54	27.53	1.89
11	13.09	26.05	1.99	17.05	33.55	1.97
12	14.84	30.77	2.07	19.61	40.11	2.05
13	16.56	35.84	2.16	22.20	47.24	2.13
14	18.23	41.20	2.26	24.78	54.84	2.21
15	19.85	46.82	2.36	27.34	62.88	2.30
16	21.40	52.74	2.46	29.87	71.30	2.39
17	22.88	58.95	2.58	32.37	80.17	2.48
18	24.27	65.32	2.69	34.83	89.63	2.57
19	25.58	71.78	2.81	37.26	99.88	2.68
20	26.79	78.24	2.92	39.64	110.96	2.80
21				42.00	122.94	2.93
22				44.31	135.68	3.06
23				46.59	149.19	3.20
24				48.84	163.34	3.34

The small flock is generally started after the threat of cold weather is past, anytime from April to June. This reduces the need for insulated housing and saves appreciably on fuel costs for brooding. Brooding is practical if you start at least 20 poults. For smaller flocks, try to purchase 6- or 8-week-old poults from a local commercial grower. At this age they should no longer require brooding if the weather is moderate.

When purchasing day-old poults, buy from a hatchery (locally if possible) that maintains healthy, good-quality stock. Poults should be free from pullorum, sinusitis, and other disease. To further reduce the threat of disease, raise turkeys away from other poultry. Sinusitis and blackhead can be serious problems in turkeys raised among chickens or on ground where chickens have been within the last three years.

Flock Size

When determining the number of turkeys you want to raise, consider the facilities, equipment, and space you have available. Crowding turkeys leads to problems and does not pay. Also consider the number of turkeys you can market live and the number you can slaughter and use or sell. Be sure to check state regulations regarding the use and sale of dressed (or ready-to-cook) turkeys. Some states (Indiana, for example) prohibit the sale of any turkeys unless dressed in an inspected plant, while others provide exemptions for growers of small turkey flocks. Available labor, however, should be only a minor consideration as little additional time is required to care for a greater number of birds.

Housing

Turkeys require a brooder house that can be kept warm, dry, well-ventilated, and free from drafts. Allow at least 1½ square feet of floor space per poult up to 8 weeks of age. From 8 weeks to market age, provide 5 to 8 square feet of housing space per bird depending on the size to which they will be grown. Ventilation becomes increasingly important as the turkeys get larger and as hot weather approaches.

Preparing Brooding Area

Well before the poults are due to arrive, clean the brooder house thoroughly. Brush loose dirt and cobwebs from the ceiling, walls, and floor. Wet down and scrape areas as needed to remove caked materials and then scrub the walls and floor with a good disinfectant, such as quaternary ammonium compounds. High-pressure washers do a good job of cleaning. After rinsing, allow the area to dry thoroughly and air out. Check roof and walls for leaks or cracks and make any necessary repairs. Rodents, wild birds, predators, and pets should be kept out of the turkey pen at all times. They can spread diseases or scare the poults, causing them to pile and smother. Check the electrical system and correct any faults. Clean and make needed repairs on feeders, waterers, brooders, and other equipment.

Cover the brooding area with at least 2 inches of litter. A good litter is clean, dry, absorbent, and relatively free from dust. Commonly used litter materials include wood shavings, chopped straw, peat moss, or other commercial litters. Since litter absorbs moisture and insulates the birds from the cold floor, it is important to remove any areas that become wet and then add more litter as needed. Do not cover litter with slick-surfaced materials (such as newspaper) as these can cause slipping—and serious leg injuries to the poults.

Set up the brooder and test its operation. When used, infrared lamp brooders should be hung at least 18 inches above the litter. Follow manufacturer's directions for other types of brooding units. Keep a spare lamp on hand to replace burned-out lamps.

A brooder guard is a barrier placed around the brooder to keep the poults near the heat source and to prevent drafts from reaching baby poults. The guard should be used for the first 7 to 10 days until the poults become familiar with the source of heat. The guard should be at least 1 foot high and long enough to form a complete circle about 3 to 5 feet from the brooder. Rolls of corrugated cardboard are sold for this purpose but other materials, such as tarred paper, can

be used. In hot weather, fine mesh wire can be used if the house is not drafty. Brace the brooder guard, if necessary, to ensure that it stays in place.

Set the feeders and waterers in place near the edge of the hover or form an open wheel pattern around the infrared brooder (see Figure 9). The number and size of feeders and waterers used depends on the number of poults in your flock and will be discussed later. It is advisable to have at least two of each in a pen to help the poults find feed and water. In addition to the regular feeders, place small piles of feed in shallow boxtops or paper plates for the first few days.

Brooding

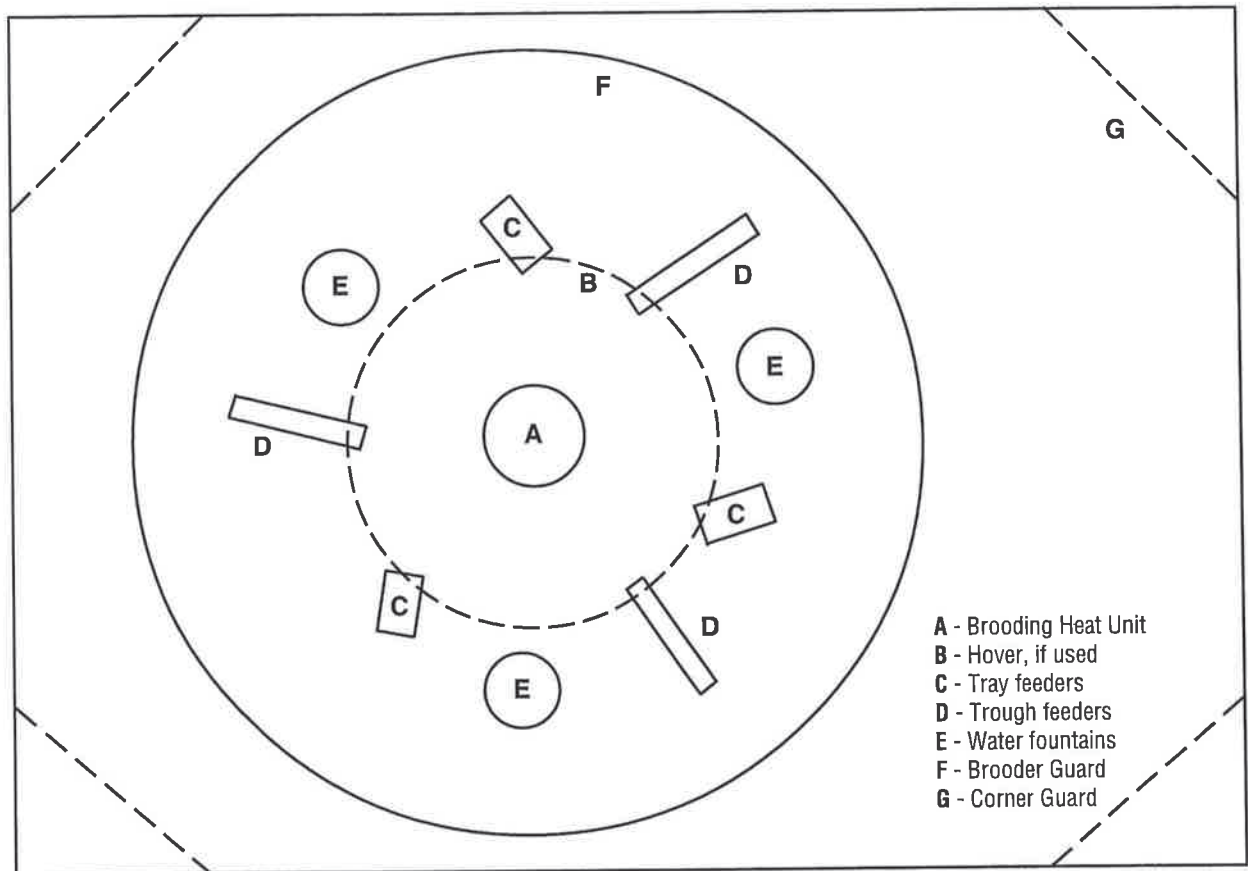


Figure 9. Brooding Arrangement

A dependable source of artificial heat is required to brood poults. Provide a uniform 90 to 95 °F temperature at the poults' level during the first week. Thereafter, lower the temperature by 5 degrees each week until it reaches 70 °F. Maintain this level until supplementary heat is no longer needed. The length of time supplementary heat should be provided will vary with weather conditions. After the poults are 6 to 8 weeks of age, heat is generally needed only during abnormally cold spells.

Brooders using infrared heat bulbs can be made or purchased for a small flock. Using two-bulb brooders is recommended as they offer a safety factor in case one bulb burns out. A single-bulb unit, however, will normally be adequate for late spring and early summer brooding. Single-bulb units do not have thermostats. This makes uniform heat maintenance more difficult when the weather changes. Multiple-bulb units, on the other hand, often have a thermostat which allows one bulb to be on constantly and turns on additional bulbs as needed. Common types of brooders are illustrated in Figure 10.

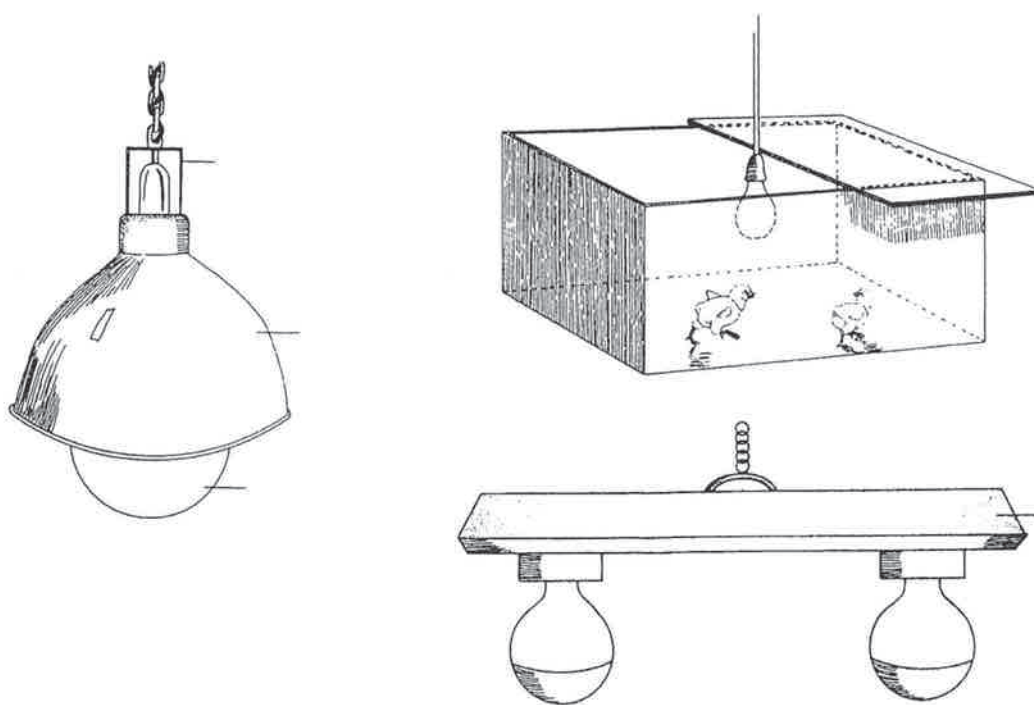


Figure 10. Brooders Commonly Used for Small Flocks.

A commercial-type electric or gas brooder can be used for brooding 100 or more poults. These usually include automatic controls and a hover that directs the heat down on the poults. Gas brooders with an open flame must be carefully maintained to eliminate fire hazards. Several types of gas catalytic brooders, which work on an infrared principle instead of having an open flame, are also available.

Start the brooder the day before the poults are to arrive as a final check on its operation and to prewarm and dry the brooding area for the poults. Use a thermometer to check the brooder and see that it steadily maintains the desired starting temperature of 90 to 95 °F. After some experience observing poults, you will be able to tell whether they are comfortable. If, for example, more heat is needed, poults will tend to huddle together under the center of the brooder. If they move away from the heat source, the temperature is too high. If they consistently occupy one side of the brooding area, they are trying to escape a drafty area. Comfortable poults, on the other hand, will spread uniformly under and around the edge of the brooder.

Fill the feeders and waterers before the poults arrive so they can be placed under the brooder immediately upon arrival. Lukewarm water should be provided for the first several days. Turkey poults are subject to dehydration. To help them learn to drink, dip their beaks into the water fountains when placing them under the brooder. Repeat this process with several poults later in the day if there is any doubt about their having found the water. Keep a frequent check, too, on the brooder temperature and the poults during the first week.

Range Rearing

Turkeys can be raised to maturity in confinement, but most small flock owners will range turkeys during the summer and fall months. Turkeys should not be allowed to run with chickens, or on a range used for chickens in the past three years. These precautions, once

again, help control diseases. Chickens can appear normal while carrying and shedding organisms that cause blackhead disease. These disease organisms can survive for long periods of time in the soil.

Allow at least 30 square feet of good grass or clover range per turkey. Select a well-drained area with adequate shade from trees or with shelters that allow birds protection from the midday sun without crowding. Heavy turkeys, especially as they near maturity, do not tolerate high temperatures well. Range shelters also provide needed protection from rain. Move range feeders and waterers weekly to prevent complete trampling of grass immediately surrounding the equipment.

Enclose the range area with a 4-foot fence having sufficiently small mesh to keep out potential predatory animals. Roosts are not necessary for the turkeys but can be provided if desired by laying 2 by 4-inch boards flat, 24 inches apart and 15 inches above the ground. Allow 10 to 12 inches of roost space per turkey.

In mild weather, turkeys can be put on range at 8 weeks of age if they have access to the house or a range shelter. During cooler weather, wait until they are 12 weeks of age or allow the birds outside only during warm periods. Schedule your flock placement so the birds will be marketed before the threat of cold weather. If this is not possible, be sure to provide adequate housing in the late fall or early winter.

Feeding

Turkeys are fast-growing and efficient converters of feedstuffs to high-quality meat. The feeding of properly balanced rations will result in the best performance. Poults should be given a 28-percent protein turkey-starting mash for 6 to 8 weeks. This gets the birds off to a good start while their feed intake is relatively low. From that point a turkey-growing ration (mash, crumbles, or pellets) containing 22 percent protein is recommended. Do not change abruptly from mash to pelleted feeds.

Feed containing less protein can be fed after 12 weeks of age. Complete growing rations with lower protein levels may be purchased, or whole or cracked grains (about 10 percent protein), such as corn and oats, can be fed along with the growing ration to increase the energy and reduce the protein intake. For example, one part grain to three parts of the 22-percent protein growing ration will provide a 19-percent protein mixture which is satisfactory for turkeys from 12 to 16 weeks. From 16 weeks of age to market, mix equal parts of grain and the growing ration to provide 16 percent protein. Grit should be available if whole or cracked grains are used.

Check the protein level of the finishing ration to determine whether mixing grains with the ration should be continued. The protein level should not drop below 14 percent. The amount of each type of feed needed can be estimated from Table 9, depending on the type of turkeys (large or small) raised and the market age and size you choose. Check the feed manufacturer's directions and follow them. Some growing feeds contain drugs to control disease. The feeding of these drugs must be discontinued for a specified length of time before the turkeys are slaughtered. This information should be given on the feed tag. Feed manufacturers can provide finishing rations without drugs.

Feed should be available to the growing turkeys at all times. Observe the poults during the first 2 days to be sure they are eating. Some flocks seem to have trouble finding the feed early, resulting in death loss from "starve outs." If necessary, set some of the poults in the shallow boxtops or plates containing feed to help them start. Others will usually soon follow their example.

Adequate feeder space ensures that all birds in the flock have an opportunity to eat. See Table 10 for feeder size recommendations. To determine the feeder length needed, total the length of both sides of trough-type feeders; a 2-foot feeder provides 48 inches of trough length.

Table 10. Recommended Minimum Feeder Space for Turkeys for Trough-type Feeders*

<u>Age of Poults</u>	<u>Feeder Length</u>	<u>Feeder Depth</u>
0 to 4 weeks	2" per poult	2 to 3"
4 to 8 weeks	4" per poult*	5" with lip
Over 8 weeks	6" per poult*	8" with lip

*Feeders space requirements may be reduced by about 25 percent when using tube-type or other round feeders.

Start poults with at least two well-filled small trough feeders and with several shallow boxtops or paper plates with a small handful of feed. Once the poults are eating well, reduce the level of feed in the trough for the second week to about three-quarters full and not more than half-full thereafter. Poults will waste feed if the trough is overfilled.

Adjust the feeders so all birds can eat easily. The proper height is about even with the top of the birds' backs. A reel or grill on trough feeders will help prevent feed wastage by keeping the poults out of the feeder. Make sure, however, that it does not interfere with the birds' ability to get to the feed. Running a finger along the inner edges of the trough feeder will attract the poults to the feed, and ridging the feed along the center of the trough will make it more visible. Tube-type feeders, often used for turkeys after 4 weeks of age, have a reservoir of feed which requires less-frequent filling.

Water

Adequate water of good quality is essential for all kinds of poultry. Start your poults with at least two water fountains and at least one 1-gallon fountain for each 50 poults. Glass or plastic fountains are usually used for the first 2 weeks and gradually replaced with larger metal fountains, pans, or troughs. If water is available in or near the pen or range area, an automatic waterer that connects to a heavy garden hose can be used. The minimum amounts of linear waterer space should be one-half an inch per poult to 4 weeks of age; 1 inch per poult to 8 weeks of age; and 1½ inches per turkey to market age.

Raise the waterers as the turkeys grow and place the larger waterers on a wire platform to contain spilled water and keep litter out of the water. As new waterers are introduced, leave some of the smaller units in place until the flock becomes used to the new system. Depending on the type of waterers used, it may be necessary to anchor waterers in place to keep them from being upset by turkeys as they grow larger.

Choose waterers that are easily cleaned and designed so that turkeys will not get their feet into the water. Waterers should be cleaned and refilled with fresh water daily.

Lighting

Young poults appear to have poor vision, so adequate lighting will help them find feed and water more readily. Infrared brooder lamps will provide adequate light for poults brooded under this system. If other brooding systems are used, artificial lights should be used to provide a minimum of 15 foot-candles of light at the feeders and waterers for the first 3 weeks. Thereafter, dim lights providing about one foot-candle of light will help reduce restlessness, nervousness, and flightiness in the flock. (Note: To judge light levels, 15 foot-candles is approximately the amount of light you would have in a well-lit room in your home. With one foot-candle of light, you would just be able, with some difficulty, to read newsprint.) Range turkeys should do well with only natural daylight.

Disease Prevention

Management is the key to maintaining the health of your flock. Good sanitation and elimination of other birds and animals that may carry disease organisms are important factors in maintaining a healthy flock. Keeping the pen and range areas dry will also help. Vaccines, available for several turkey diseases, may not be necessary for a small flock unless previous disease problems existed on your premises or on nearby farms. Other disease problems can be controlled through the use of medicated feeds, if necessary. However, clean stock, clean premises, and good management are the best lines of defense.

If your flock does become sick, an accurate diagnosis and recommended treatment should be obtained. State diagnostic laboratories usually offer low-cost or free diagnostic services. Take typically sick or fresh, dead birds to the laboratory for evaluation. Along with the birds, take a complete flock history including age, feeding program, vaccinations, or drugs used and a description of the course of the current problems.

Some death loss is normal and should be expected, especially during the first 2 weeks. However, it is important to get an early diagnosis of disease problems in order to stop the spread of disease throughout the flock. A good feed or hatchery serviceperson can give you helpful advice on many day-to-day problems.

Marketing and Processing

If you have more turkeys than you will need, you may be able to sell some, either alive or dressed. State and federal laws regulate the sale of processed birds but limited processing for direct sale to consumers is exempt in some cases. For details on regulations, contact your Extension Service or State Department of Agriculture personnel.

Processing turkeys at home is not really difficult but you may find it more convenient to have them custom processed. For information on home processing and other aspects of turkey flock management, contact your county or State Extension Service office.

Acknowledgments: Louis C. Arrington, University of Wisconsin, Cooperative Extension Service

