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POULTRY NO. 44 **MELVIN L. HAMRE**

Geese are raised in practically all parts of the United States, although they total some 0.2 percent of the poultry population. The Emden and Toulouse are the two most popular breeds; many African and White Chinese are also raised. There are considerable differences in breeds and strains of geese so their characteristics should be fully evaluated to best meet the producer's requirements. If birds are to be kept for breeding, then egg production and reproductive efficiency are important factors. If goslings are raised only for a market flock, the market's meat production and carcass requirements are of prime importance.

BROODING GOSLINGS

A special building is not required for brooding small numbers of geese. Any small building or a corner of a garage or barn can be used as a brooding area for a small flock if it is dry, reasonably well-lighted and ventilated, and free from drafts. Cover the floor with 4 inches of absorbent litter material, such as wood shavings, chopped straw, or peat moss. Maintaining good litter requires frequent stirring, removal of wet spots, and periodic addition of clean, dry litter. Be sure litter is free from mold.

Heat lamps are a convenient source of radiant heat for brooding small flocks. Use one 250-watt lamp for each 25 goslings.

When using hover-type brooders, brood only about onethird as many goslings as the rated chick capacity of the hover. Because goslings are larger in size, with some brooders it may be necessary to raise the hover 3-4 inches higher than for baby chicks. Have the temperature at the edge of the hover 85° to 90° F. when the goslings arrive. Reduce the temperature 5° to 10° per week until 70° F. is reached.

Confine the birds to the heated area for the first 3 or 4 days with a corrugated paper or wire mesh fence. The behavior of the birds is an indication of their comfort: they will move away from the heat source if they are too warm, or may crowd together at corners or under the brooder if too cold. If there is no light at the heat source, a dim light on the birds at night tends to discourage crowding.

High temperatures may result in slower feathering and growth. Heat is usually not needed after the fifth or sixth week, and in good weather, the young geese can be placed on pasture. In warm weather, goslings can be let outdoors even at 2 weeks, but must be sheltered from rain. They must be kept dry to prevent losses from crowding and chilling while in the "down" stage.

Allow at least 1/2 square foot of floor space per bird at the start of the brooding period. Increase this to 1 square foot by 2 weeks. If birds are to remain confined due to inclement weather, be sure additional floor space is provided as they increase in size.

FEEDING GEESE

Goslings should have feed and drinking water when they are started under the brooder or hen. Use waterers the birds can't get into to prevent losses from chilling. Waterers should be wide and deep enough for the bird to dip both bill and head. Pans or troughs with wire guards are satisfactory. They should

Raising Geese



be placed over screened platforms to aid in keeping litter dry. Change waterers or adjust size as birds grow.

Feeds formulated for goose feeding programs are not normally available from commercial suppliers. Growers who wish to mix their own feeds should contact their extension poultry specialist for formulas.

Goslings can be started on a crumblized or pelleted chick starter. Place feed the first few days on egg case flats or other rough paper. Use the same type of feeders as used for chicks, changing type or adjusting size as the birds grow. Keep feed before the birds at all times and provide insoluble grit. After the first 2-3 weeks, a pelleted chick grower ration can be fed, supplemented with a cracked grain.

Geese are quite hardy and not susceptible to many of the common poultry diseases so medicated feed is not generally necessary. Certain coccidiostats used in starting and growing mashes may cause lameness or even death in goslings.

Geese are excellent foragers. Good succulent pasture or lawn clippings can be provided as early as the first week. By the time the birds are 5-6 weeks old, a good share of their feed can be from forage. Geese can be very selective and tend to pick out the palatable forages. They will reject alfalfa and narrow-leaved tough grasses and select more succulent clovers, bluegrass, orchard grass, timothy, and bromegrass. Geese can't be grown satisfactorily on dried-out, mature pasture. Corn or pea silage can be fed if available.

An acre of pasture will support 20-40 birds, depending on the size of the geese and pasture quality. A 3-foot woven wire fence will ordinarily confine the geese to the grazing area. Be sure that the pasture areas and green feed have not had any chemical treatment that may be harmful to the birds. The birds should be provided shade in hot weather. Although supplemental grain feeding of goslings if often continued after they have been established on good pasture, many flocks are raised on green feed alone during the pasture period. Geese to be marketed should be fed a turkey finishing or similar ration for 3-4 weeks before processing. Any birds saved for breeding stock should not be fattened.

Farm geese are usually sold in time for the holiday market in late fall when they are 5-6 months old. They will weigh from 11-15 pounds depending on the strain and breed. Some young geese (also called green geese or junior geese) full-fed for rapid growth are also marketed at 10-12 pounds when they are 10-13 weeks old. For several weeks after this age geese have many pinfeathers which are difficult to remove during processing. Growth of geese after 10-13 weeks is very slow compared with the rapid growth of the young gosling.

Considerable attention has been given to the use of geese to control weeds in cotton, strawberries, and some truck crops. Development of more selective herbicides is reducing this practice. The problems in coordination of bird supply and management with weed and crop growth make goose weeding rather impractical for most producers.

BREEDER FLOCK MANAGEMENT

Select geese that are vigorous and well developed, have shown rapid growth, and have compact meaty bodies. Matings should be made at least 1 month prior to the breeding season (around the first of the year). The larger breeds of geese usually mate best in pairs and trios. Ganders of some lighter breeds will mate satisfactorily with four or five females. Males will usually mate with the same females year after year.

It is difficult to distinguish sex in geese except by examination of the reproductive organs. The process, described by the late T. H. Canfield, follows: Lift the goose by the neck and lay it on its back, either on a table or over your bended knee, with the tail pointed away from you. Move the tail end of the bird out over the edge so it can be readily bent downwards. Then insert your pointer finger (sometimes it helps to have a little vaseline on it) into the cloaca about half an inch and move it around in a circular manner several times to enlarge and relax the sphincter muscle which closes the opening. Next, apply some pressure directly below and on the sides of the vent to evert or expose the sex organs (figures 1, 2, 3).





Figure I. Exposed reproductive organ of an immature male. Figure 2. Reproductive organ of sexually mature male.

Figure 3. Genital eminence of mature female. In some birds the male organ is somewhat difficult to unsheath. An inexperienced sexer may easily call a bird a female if, after slight pressure, the cork-screw-like male organ is not exposed. However, only the presence of a female genital eminence will positively identify a female.

Geese do not do well if enclosed in a house. They should be confined to a yard with a house for shelter protection during winter storms. When green pasture is not available, breeders can be maintained on roughage such as leafy clover or alfalfa hay, corn or pea silage, with a small amount of grain. If breeding stock becomes overly fat, poor fertility and hatchability may result.

Start feeding a pelleted breeder ration at least a month before egg production is desired. Provide water at all times, as well as a supply of oyster shell and grit. Lights in the breeder house can be used to stimulate earlier egg production if desired. Geese start laying in February or March and often lay until early summer. Nest boxes should be provided to aid in obtaining a maximum number of eggs and reduce the amount of cleaning required. Boxes should be at least 2 feet square and built with partitions or spread some distance apart to reduce fighting. Large boxes or barrels are frequently used for range nests. The heavier geese lay from 20-50 eggs per season, depending on the amount of selection for egg production in the strain being raised.

Eggs should be gathered twice daily, especially during cold weather. They should be stored at 55° F. and a relative humidity of 75 percent until set for hatching. Eggs should not be held for more than 7-10 days, and should be turned daily if kept more than a few days.

The incubation period for eggs of most breeds of farm flock geese varies from 29-31 days. Four to six eggs can be incubated under a setting hen and 10-12 under a goose. Mark the eggs so that they can be turned by hand twice daily if the setting hen does not turn them. Better hatchability is reported by some growers if the eggs are lightly sprinkled or dipped in lukewarm water for half a minute daily during the last half of the incubation period. Remove goslings from the nest as they hatch, and keep them in a warm place until the youngest are several hours old. Since it takes some time to complete the hatch, if the goslings aren't removed as hatched, the hen may desert the nest leaving with the hatched goslings before the hatch is completed.

Goose eggs can be hatched in either still-air or forceddraft incubators. Follow the instructions from the machine's manufacturer. You may increase the success of your hatching operation if you can talk with a person who has had success with machine incubation of goose eggs.

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