

Chapter 4

Housing

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While goats are very adaptable and originally were wild animals, they have become domesticated by man and have been introduced to weather conditions and other factors different from those where the species were developed. Goats require protection from three stress factors:

1. Rain
2. Wind
3. Cold

An animal stressed by any of these conditions can quickly become seriously ill. Therefore, whether raising goats for brush control, meat production, dairy purposes, or as show animals, shelter is necessary.

Housing Options

Various options for housing exist dependent on factors such as herd size, available land, and type of operation.

Open Housing

When building a new structure for housing goats, the least expensive and easiest-to-build option is what is commonly referred to as a three-sided shed. This type of building, such as the examples in Figures 4-1 and 4-2, should have the open side facing away from prevailing winter winds. The open side may even be enclosed except for door openings if desired.



Figure 4-1. Open housing example.



Figure 4-2. Open housing shed with corrals.

The roof should be sloped to drain runoff to the rear of the structure, and should be situated where drainage is not a problem. Such sheds designed specifically for goats commonly measure 5 to 6 feet tall at the front, with the rear measuring 3 to 4 feet tall. This low height helps hold the body heat lower down to the ground, at the goat's level. The length and depth of the structure can vary, depending on the number of animals it is designed to shelter. Mature goats in open housing systems need 10 to 15 square feet of bedding space per animal.

While the floor is often only the natural soil, 3 to 4 inches of wheat straw or poor quality hay can be added for bedding. Some sources recommend allowing a manure pack to accumulate in the winter, providing a heat source as the lower layers decompose.

Such structures are frequently built of treated wood posts, lumber, and corrugated sheet iron, although welded pipe frames, heavy sheet metal, plywood, or almost any other material can be used. Over time, untreated wood will decay, and goats will gnaw at certain types of wood, slowly destroying the structure. Painting will preserve lumber and plywood, but some paints contain chemicals that are harmful to goats.

Confinement Housing

If the producers' intention is to completely enclose the goats in a structure, such as the one shown in Figure 4-3, other factors must be considered. As the complexity increases, so will the maintenance



Figure 4-3. Confinement housing example.

and building expenses. Construction and materials may vary, ranging from using or modifying an existing structure to building a simple barn or an elaborate facility. Floors may be of dirt, wood, or concrete. Regardless of the type of construction or the materials involved, several necessities must be included in the structure.

- **Windows or artificial lighting.** Lighting must be provided. Most sources recommend 1- to 2-square feet of window space per animal to prevent health problems.
- **Fresh Air.** A healthy goat needs fresh air, but a draft can create respiratory problems. Ventilation fans should be designed to circulate air from the floor in the winter and from the ceiling in the summer. They should also be capable of moving 15 to 200 cubic feet of air per minute in the summer and 20 cubic feet per minute in the winter.
- **Space.** The structure should provide each animal with sufficient space. In complete confinement, a mature goat needs 20 square feet of floor space. An additional 25 square feet of space should be available in a separate exercise yard. Be sure to allow for the space taken up by feed and water troughs.

Additional heating is not normally required if dry bedding is available and there are no drafts. Dirt floors need 3- to 4-inches of wheat straw, poor quality hay, or a similar material. Concrete floors should contain 5- to 6-inches of bedding. Drainage of urine and removal of manure must also be provided on concrete floors. Insulation can be added to prevent warm air inside the barn from condensing on cold walls. Such condensation can increase the frequency of colds and other respiratory problems. If insulation is used, however, it should be covered with plywood or a similar product to prevent consumption by the goats.

Kidding Pens

Many goat producers prefer to have their does give birth in kidding pens, both for protection from predators and to provide easier monitoring for kidding problems. This confinement also allows for monitoring the post-natal health of does and newborn kids. Pens may be easily constructed in either open or confinement housing, from a wide variety of materials.

Kidding pens of pipe and wire panels, which can be joined together are available from several sources. Pens can also be made from wire panels cut to the desired dimensions, lumber, chain link, or any other material commonly used for goat corrals (Figure 4-4). Panels can be joined together by wire, hog rings, or, if frequently taken apart and moved, duct tape (which is much the same color as wire panels and may be cut with a knife for removal) (Figure 4-5).

Heavily pregnant does are usually less likely to attempt to jump or climb out of pens, but producers should not rely on this when considering dimensions. Kidding pens should be a minimum of 48 inches high. Premanufactured panels are available, which vary from 5 feet to as much as 10 feet long. Kidding pens should be a minimum of 5 feet long and 5 wide or 6 feet long and 4 feet wide. Does with single births may be kept for a short time in the smaller pens, but those with multiple kids should be placed in pens up to as much as 40 or 50 square feet. A bedding of hay, straw, or wood shavings is recommended.



Figure 4-4. Kidding pen.



Figure 4-5. Kidding pens inside confinement housing.

On dirt floors, permanent or semi-permanent pens may be added at any time by inserting wood posts or steel T-posts. T-posts have the advantage of removal using a tractor front-end loader, a three-point lift, or an automotive jack.

Ideally, in barns with concrete floors, the location and size of the kidding pens should be considered prior to construction. If this is not an option, pens may be added by securing one or more sides to the wood or metal supports for the barn (posts, studs, pipe, etc.).

Alternative Housing

As goats do not require fancy facilities, other materials and products have been used for hous-

ing. Old chicken houses, hog barns, concrete blocks, and calf hutches, such as those often seen at dairies and the one shown in Figure 4-6, and even railroad boxcars and enclosed semi-trailers (with the undercarriage removed) have been used in designing housing for goats. As long as the shelter provides protection from wind, rain, and cold, the goats will probably not complain.

References

- McKinney, T., (2001). *Housing Your Goat*. Langston University.
- Pinkerton, F., Scarf, D., Pinkerton, B. (1991). *Meat Goat Production and Marketing*.
- Shurley, M. *Goat Facilities*. American Meat Goat Association.



Figure 4-6. Alternative housing example.