DAIRY GOAT FARM PLANNING

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Introduction

Dairy goat farms need to be well planned to accommodate the accessory structures needed for efficient operation. Commercial dairies generally fit under one of two main categories: production of milk for a wholesale market or on-farm processing of fluid milk or cheese. The wholesale producer needs to plan for the efficient handling of large numbers of animals with provisions for expansion. The on-farm processor often has a smaller herd but needs more auxiliary buildings, has larger waste disposal requirements and may need retail areas for the public. Time needs to be spent developing goals and objectives, financial budgets and a business strategy with the future in mind, in order to adequately plan a dairy goat operation.

Master Plan

The first step in planning a dairy goat farm is to draw up a master plan. This is simply a layout of the farmstead indicating where the present buildings are located and where future facilities will be. This is essential to assure that buildings aren’t constructed in places that will be in the way in the future. It also allows for incremental expansion, whereby small units are built which can be easily expanded to meet future needs.

Master Planning Procedure:

1. Establish a family and business zone.
2. Determine herd size and future expansion goals.
3. Decide on the type of facility desired.
4. Compute sizes of all facilities based on numbers of animals and square footage requirements.
5. Identify possible sites, considering such things as overall building sizes, access from the rest of the farmstead and relationship to existing buildings.
6. Sketch tentative layouts to scale for each possible site using recommendations for orientation, traffic routes, weather exposure, drainage, waste disposal and building sizes selected.

7. Select the combination of site and layout which best fits your needs and recommended space allotments.

8. Check the layout with family members and employees, Extension specialists, USDA agencies, other farmers, builders, town officials and public health authorities.

9. Keep a copy of the Master Plan on file and post one on the office wall so all future building decisions are synchronized with it.

Site Selection

After completing a Master Plan, the next step is to select the specific site for each building identified in the plan as it is needed. Things to consider when siting a building include:

Access

1. Ease of entry from the main road.

2. Provision for large delivery trucks to turn around and unload.

3. Visibility from the road (especially if access by public is important).

4. Area for vehicles to park.

Topography

1. Amounts of fill needed to create a level site on a slope.

2. Slopes or drop-offs can be used to an advantage.

3. Limitations of topography on traffic flow between buildings.

4. Surface and subsurface drainage as they relate to topography.

Orientation

1. Southern exposures can take advantage of winter sun and provide some protection against summer heat.

2. Wind currents and storm patterns can determine placement of buildings.
3. The position of the building can take advantage of beneficial wind currents for natural ventilation.

4. Relationship to neighbors (boundaries, odor control, flies, etc.).

5. Provision for expansion.

Utilities

1. Access to electrical lines with adequate capacity to run commercial equipment. Location of poles and overhead or underground lines.

2. Adequate supply of water with capability of piping it to present and future buildings.

3. Communication lines for telephone and computers.

4. Location of gas tanks.

Ancillary Services

1. Feed and material storage.

2. Waste management.

3. Chemical and fertilizer storage.

4. Equipment storage and repair.

5. Fire protection and security.

Proper planning can’t be overemphasized when setting up a goat farm. Buildings last a long time and are used daily, so they want to be well laid out and efficient. As the herd size increases, mechanizing the chore routine becomes more important. Buildings need to be designed to accommodate tractors and mechanical cleaning. Animal flow is also important to allow efficient handling of goats and to prevent injury to both the animals and the operator. After the site for the building is determined, care must be taken in designing a floor plan to scale so the proper relationships of spaces are apportioned for the various needs. See a list of space requirements in Table 1.
Table 1. General Space Requirements for Goats

<table>
<thead>
<tr>
<th>Item</th>
<th>Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing a mature goat</td>
<td>15 - 20 square feet/animal</td>
</tr>
<tr>
<td>Feeder space</td>
<td>1 foot/animal</td>
</tr>
<tr>
<td>Holding area outside a milking parlor</td>
<td>5 - 7 square feet/animal</td>
</tr>
<tr>
<td>Grain storage</td>
<td>45 lbs./cubic foot</td>
</tr>
<tr>
<td>Baled hay storage</td>
<td>6 - 8 lbs/cubic foot</td>
</tr>
<tr>
<td>Sawdust storage</td>
<td>12 lbs/cubic foot</td>
</tr>
<tr>
<td>Pasture</td>
<td>.2 - .5 acres /animals</td>
</tr>
<tr>
<td>Exercise lot</td>
<td>30 - 50 sq. ft/animal</td>
</tr>
<tr>
<td>Daily production of manure</td>
<td>1/8 - 1/4 cubic feet/day/animal</td>
</tr>
<tr>
<td>Water consumed</td>
<td>1 - 2 gal/animal/day</td>
</tr>
<tr>
<td>Driveway</td>
<td>12-14' wide</td>
</tr>
<tr>
<td>Access doors and gates</td>
<td>10-12' wide</td>
</tr>
<tr>
<td>Height of building side walls</td>
<td>10-12' high</td>
</tr>
<tr>
<td>Maternity pen</td>
<td>30 sq. ft/pen</td>
</tr>
<tr>
<td>Waterers</td>
<td>1 / 25 animals</td>
</tr>
</tbody>
</table>
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