

SHELTER LAYOUT PLANS AND REQUIREMENTS FOR SMALL AND MEDIUM SCALE GOAT FARMS (10 ÷ 1, 25 ÷ 2, 50 ÷ 3 Goat Units)



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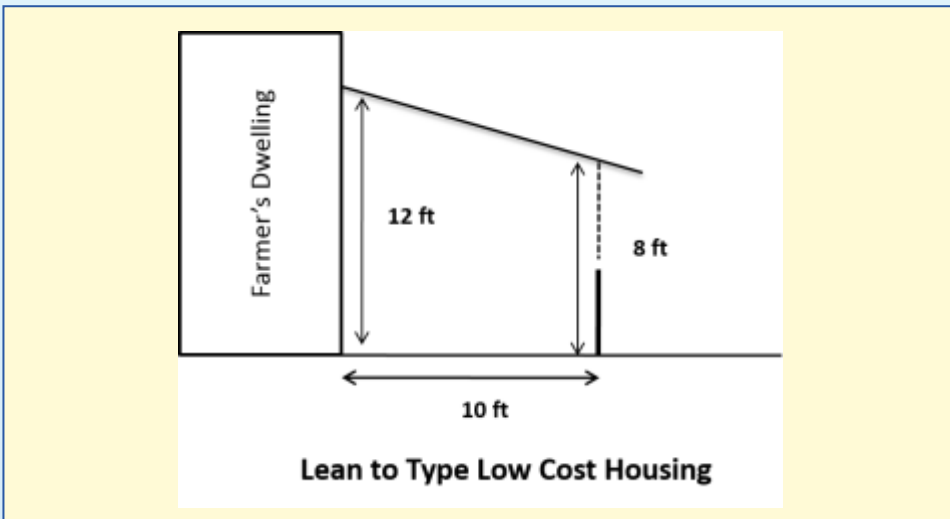
Shelter Layout Plans and Requirements for Small and Medium Scale Goat Farms (10 + 1, 25 + 2, 50 + 3 Goat Units)

Recent times, farmers are shifting from traditional extensive system of rearing to medium input semi intensive system in which goats are sent for grazing during day time and kept under minimal shelter facilities at night hours. However, these shelters given by farmers lack proper ventilation, floor space and hygiene resulting in high disease incidence and mortality. There is ample scope for improving productivity of goats by constructing low cost goat houses following scientifically recommended shelter norms.

Goat Housing Requirements – Key Points

While constructing goat sheds, following points needs to be kept in mind;

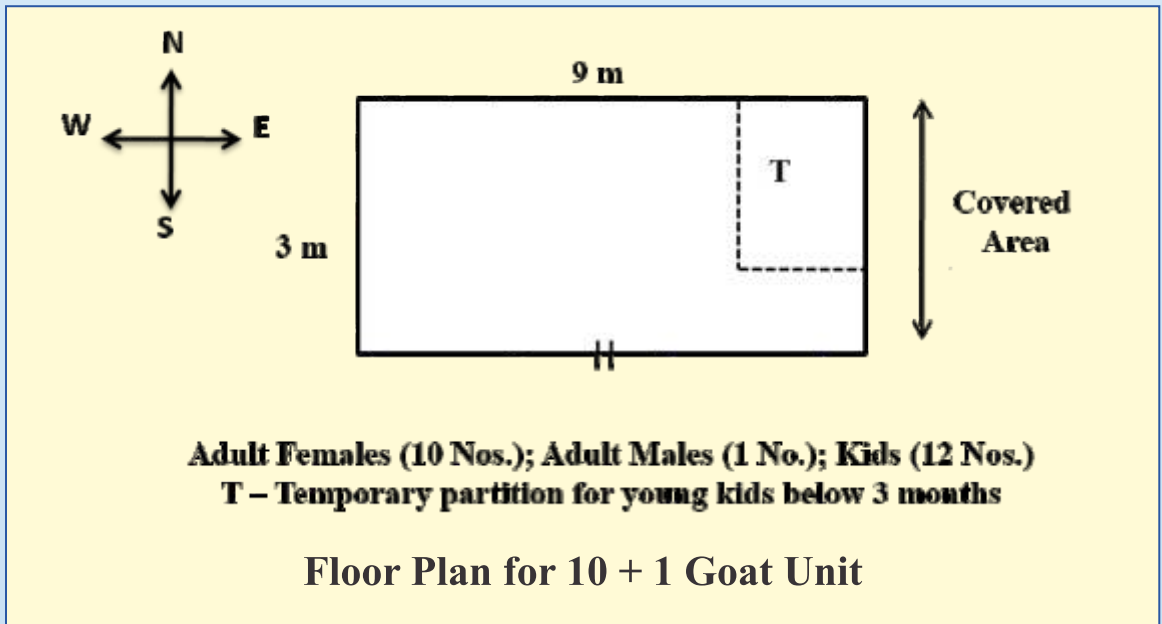
- Goat house should be constructed in well drained elevated plain area.
- The long axis of the shed should be in East-West direction.
- Floor Space for one adult goat is generally recommended in goat shed is 1-1.5 m² inside shed. However for 0-3, 3-6, 6-9 and 9-12 months old kids, the floor space of 0.25, 0.5, 0.75 and 1.0 m² per kid, respectively is recommended. The lactating females and adult males require 1.5-2.0 and 2.0 m² floor space. The floor space in open paddocks should be double that of area inside the shed.
- Under Indian conditions, the soil floor is generally recommended for goats. Width of the house should not be more than 20 feet (6 meters) and there is no restriction in length of shed; however, partitions may be made preferably at every 30 feet (9 meters) or as per requirement of the flock.
- Height of the shed should be at least 12 feet at centre and 8-9 feet at sides for double sloped (Gable) roof. Overhang of 3 feet should be given on both sides.
- Side walls along the length of the shed should be 4 feet with remaining height kept open for fixing iron mesh for free air circulation. The walls across the width of the house on both sides need to be closed up to roof height.
- Roof of the goat house may be made of thatch, tiles, corrugated cemented sheets, thermal insulated GI sheets depending upon availability as well as durability required.
- Separate provision of waterers and feeders of fixed or movable type should be provided in each paddock. In order to reduce cost of housing, lean to type shelter can be constructed if flock size is low i.e., 10+1 goat unit.



The shelter layout plans and requirements for different flock sizes are calculated and given hereunder;

Housing Requirements for 10 Females + 1 Male with followers

Assuming out of 10 goats, eight is kidding every year with twinning rate of 1.5, a total of 12 kids will be born in each year. So housing needs to be given to 10 adult females, 12 kids of different ages and one adult male. The possible layout plan is given as below for this unit.

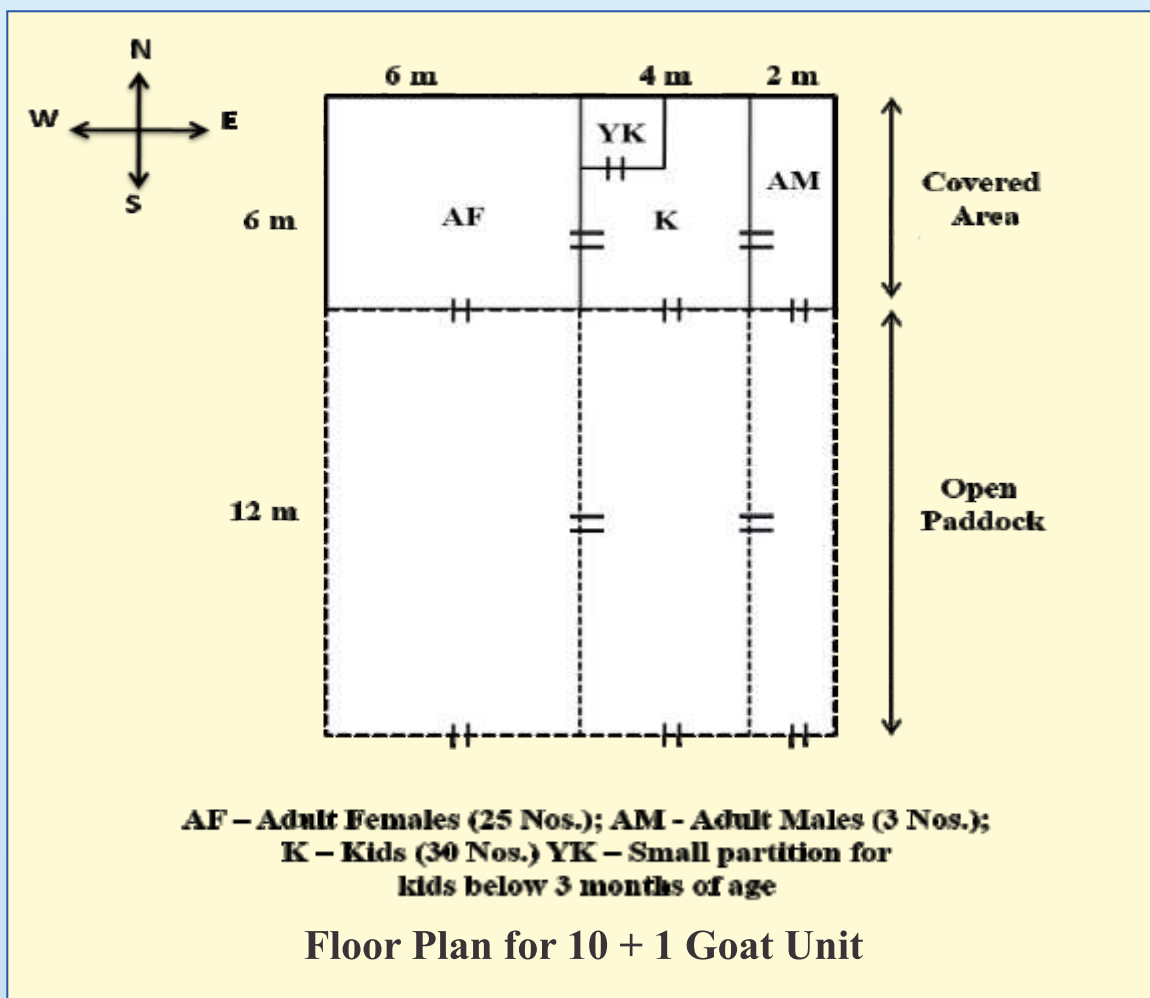


Housing Requirements for 25 Females + 2 Males with followers

By taking into assumptions of the following points and space requirement of different categories of goats, the housing requirements for goat house is calculated for this goat unit.

Assumptions

- For starting 25 + 2 goat unit, 25 females and at least two adult males are required for breeding purpose (10 females : 2 males). However, due to unforeseen reasons like poor reproductive performance of male, it is better to rear three adult males.
- In organized farm, usually 80 % of females give birth to young ones every year, so out of 25 adult female goats, we can expect 20 females giving birth every year.



- Twinning rate is 1.5 per year, 30 kids will be born every year. The kids are reared up to 9 to 12 months of age and sold by farmers for breeding and/or meat purposes.

The total space requirement for this unit is 72 m² and partitions are; Adult females (25 nos.) – 37.5 m²; Adult males (3 nos) - 6 m² (12 m²) and Young animals (30 nos) - 22.5 m² If the goats are sent for grazing during day hours, there is no need of open paddock and the animals can be housed in covered area in night hours.

Housing Requirements for 50 Females + 3 Males with followers

By taking into assumptions of the following points and space requirement of different categories of goats, the housing requirements for goat house is calculated for this goat unit.

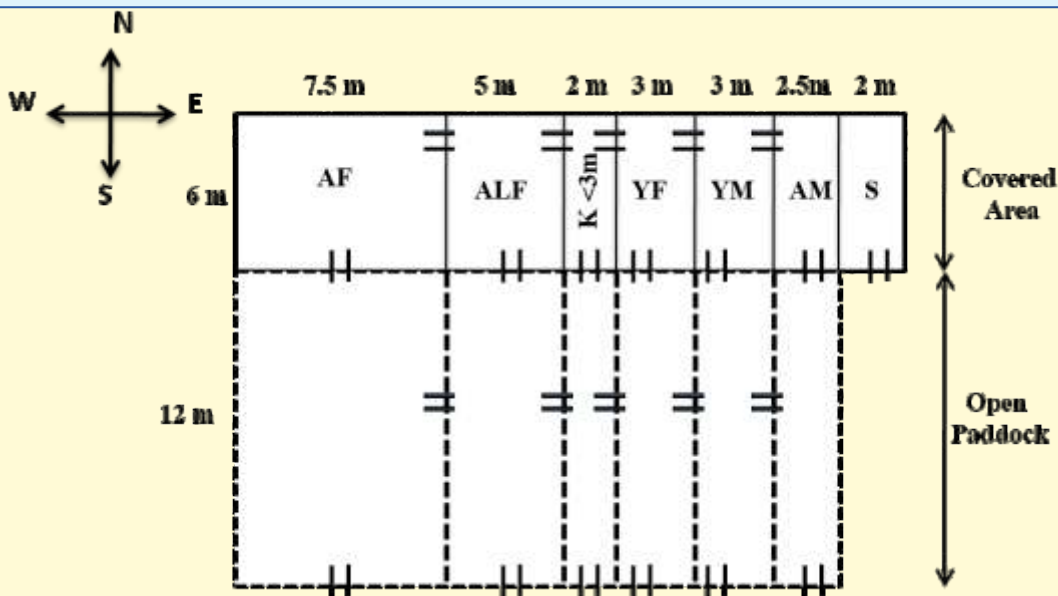
Assumptions

- For starting 50 + 3 goat unit, 50 females and at least three adult males are required for breeding purpose (50 females : 3 males). However, due to unforeseen reasons like poor reproductive performance of males, it is better to rear five adult males.
- In organized farm, usually 80 % of females give birth to young ones every year, so out of 50 adult female goats, we can expect 40 females giving birth every year.
- Twinning rate is 1.5 per year, 60 kids will be born every year of which 30 will be male and another thirty will be female kids.
- Replacement rate of adult animals is expected at 10-20 percent in organized farm.
- The kids are reared up to 9 to 12 months of age and sold by farmers for breeding and/or meat purposes.

The housing requirements for this unit will be based on the following flock strength which will be present in the farm at any given point of time after first year of starting the farm.

Categories of animals	Space per animal (m ²)	Total space required* (m ²)
1. Adult females (50 nos)	1.5	75
2. Adult males (5 nos)	2.0	10 (about 15)
3. Young females (30 nos)	0.75	22.5
4. Young males (30 nos)	0.75	22.5
5. Store room	12	12
Total space required		142 (about 150)

* If the goats are sent for grazing during day hours, there is no need of open paddock and the animals can be housed in covered area in night hours.



AF - Adult Dry Females (10 Nos.) & Adult Pregnant Females (20 Nos.);
 ALF - Adult Lactating Females (20 Nos.); AM - Adult Males (5 Nos.);
 K < 3m - 0 to 3 months kids (20 Nos.); YM - Young Males (23 Nos.);
 YF - Young Females (23 Nos.); S - Store Room.

Floor Plan for 50 + 3 Goat Unit

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