

HOUSING DESIGN AND REQUIREMENTS FOR COMMERCIAL GOAT FARM (100 + 5 GOAT UNIT)



ICAR-Central Institute for Research on Goats
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2017



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Housing – why it is required?

Goats require shelter/ housing for protection from inclement weather such as rains, excessive heat during summer and cold during winter in addition to protection from predator attack.

Separate housing arrangements for different categories of animals viz. growers, adult females, breeding males, etc. are required in order to ensure proper care and management as per requirement.

Basic Housing Dimensions

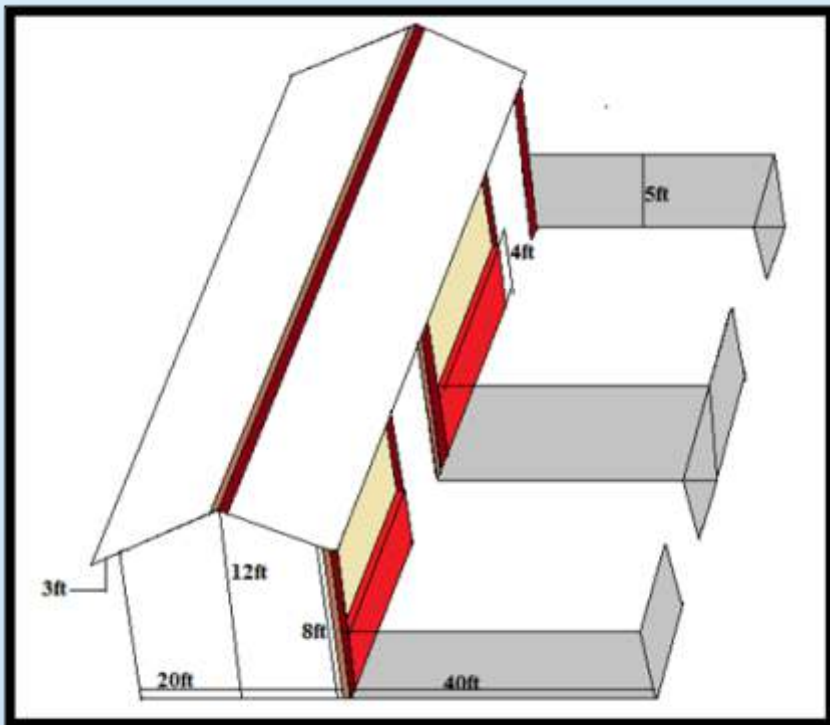
- Goat house should be constructed in well drained elevated plain area with easy access to transport, electricity and water.
- Orientation – For our tropical Indian conditions, long axis of the shed should be in East-West direction.
- Width of the house should not be more than 20 feet (6 meters) for proper cross ventilation.
- There is no restriction in length of shed; however, partitions may be made at every 30 feet (9 meters) so that optimum number of animals of same size, age and sex can be accommodated in one group.
- 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.
- Walls – 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.
- Floor: Under Indian conditions, the soil floor is generally recommended for goats. However, the floor made of bamboo, wooden slats or plastics are being used in elevated goat houses constructed in high rainfall, high humid as well as areas prone for floods.
- Roof: 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.
- Other requirements:
 - ◆ Separate provision of waterers and feeders of fixed or movable type should be provided in each paddock.

- ◆ In order to reduce heat stress, the ground area nearby sheds may be covered with natural vegetations, shrubs etc.

Optimum floor space requirements* for different categories of goats

Age / Category of goats	Covered area (m ² /goat)	Open paddock (m ² /goat)
0 - 3 months	0.2-0.25	0.4 - 0.5
3 - 6 months	0.5 - 0.75	1.0 – 1.5
6 - 12 months	0.75 - 1.0	1.5 – 2.0
Yearling goats (12 months)	1.00	2.00
Adult goats	1.5	3.0
Pregnant and lactating goats	1.5 - 2.0	3.0 - 4.0
Bucks		

* At any given time, 10 percent more animals can be accommodated without compromising the production, health and welfare of the animals.



Housing Requirements for 100 Females + 5 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

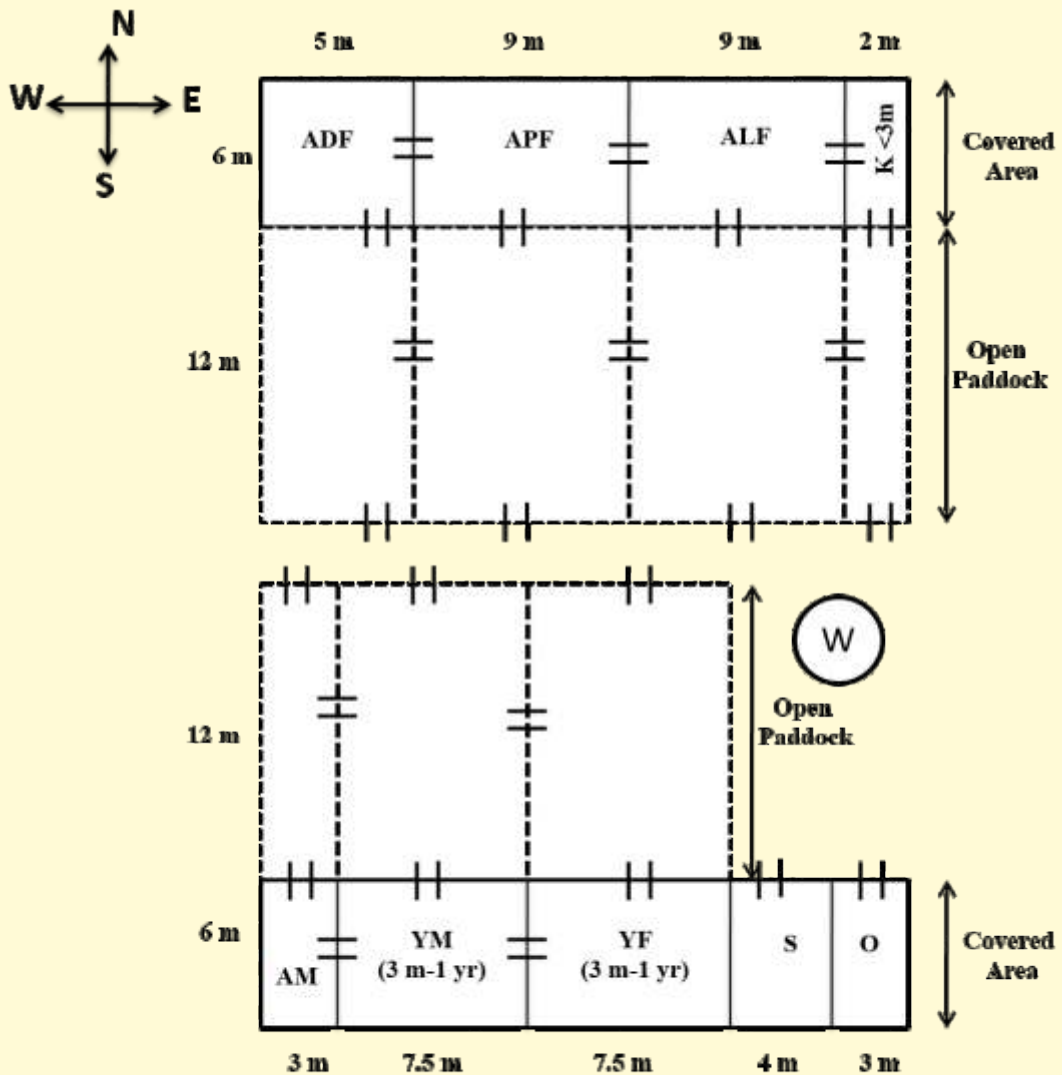
Assumptions

- For starting 100 female goat unit, at least five adult males are required for breeding purpose (20 females : 1 male). However, due to unforeseen reasons like poor reproductive performance of male, it is better to rear seven adult males.
- In organized farm, usually 80 % of females give birth to young ones every year, so out of 100 adult female goats, we can expect 80 females giving birth every year.
- Twinning rate is 1.5 per year, 120 kids will be born every year of which 60 will be male and another sixty 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 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 (100 nos)	1.5	150
2. Adult males (7 nos)	2.0	14 (about 18)
3. Young females (60 nos)	0.75	45
4. Young males (60 nos)	0.75	45
5. Office + Store room	42	42
Total space required		296 (about 300)

* 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.



ADF - Adult Dry Females (20 Nos.); APL - Adult Pregnant Females (40 Nos.)
 ALF - Adult Lactating Females (40 Nos.); K < 3m - 0 to 3 months kids (30 Nos.)
 AM - Adult Males (7 Nos.); YM - Young Males (45 Nos.); YF - Young Females (45 Nos.);
 S - Store Room ; O - Office and Record room; W - Water Tank

Floor Plan for 100 + 5 Goat Unit

While establishing commercial goat farm, initially shelters may be constructed with minimum investment following the given lay out plan and housing requirements. Once, the business is established in two to three years, the construction of elaborate permanent structures may be made for further expanding the flock strength of the farm.

Different Flooring Material for Elevated Goat Shed



Bamboo Floor



Wooden Floor



Plastic Floor

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