

GOVERNMENT OF MEGHALAYA



GOATERY FARMING

INDEX/CONTEXT

SL.NO.

CHAPTER

1. INTRODUCTION

2. HOUSING MANAGEMENT

3. CARE AND MANAGEMENT OF GOATS

4. FEEDING MANAGEMENT OF GOAT

5. BREEDING AND CASTRATION

6. COMMON DISEASE IN GOAT

7. VACCINATION SCHEDULE

CHAPER -1 :: INTRODUCTION

Goat is a multifunctional animal and play a significant role in the economy and nutrition of landless, small and marginal farmers in the state. Goat Farming is very popular among to the economically weaker section of society for its high profitability and low or zero input cost. Being a small size animals, goat can easily be managed by women and children and thrive well in variety of leaves, shrubs, bushes, kitchen waste etc. Goat are cheaper to maintain easily available and have a friendly deposition.

1.1. ADVANTAGES OF GOAT REARING

1. Low capital investment and quick return.
2. Simple and small shed is enough.
3. Profitable under stall fed conditions.
4. High prolific rate of goat.
5. Yearround job.
6. Meat is lean and low fat.
7. No religious taboo of it meat.
8. Use as religious ritual in some religion.

1.2. BREED AVAILABLE IN THE STATE

1. **Indigenous/Non descript Breed.** This breed have blood line with Assam Hills goat and Black Bengal. In black, white, tawing or mixture colour. Average body weight of male goat is 25kgs & female 18kgs. The breed is highly adopted to climatic condition and are reared for meat purpose.



2. **Assam Hills Goat:-** The coat colour of the goat are white with silver or grey bearded and long hair. Short leg and long body. Maleweight 27kgs ad Female 23kgs.



3. **SeroshiBreed:-** The breedsare kept by few farmers in Ri Bhoi and West Garo Hills District supplied by ICAR, Umiam and KVK Tura. Male average body weight is 45kgs and Female 30kgs. The breed is not suitable to most part of the state.



1.3. ***Important Physiological in local goat***

- | | |
|-----------------------------------------|------------------------------------------------|
| 1. Age at sexual maturity(for breeding) | - Male 10 -12 month
- Female – 8 – 12 month |
| 2. Estrous period | - 19days |
| 3. Gestation period(pregnancy) | - 145 – 150days |
| 4. Weaning age of kids | - 2 month |
| 5. Re breeding of female | - 45days after normal kidding |
| 6. Breeding year of Buck | - 8 – 10 years |
| 7. Average life span | -12 years |
| 8. Male,Female ratio | - 1:25-30 |
| 9. No of kidding | - 3kidding in 2 years |

1.4. **SYSTEM OF GOAT REARING:**

1. **Tethering:-** The goat are tied by long rope in the field and allow to graze. They are kept in the shed at night. The system is suitable only if the farmer reared 1-2 goat.



2. **Extensive system:** Here the goat are let loose in the field for grazing.



3. **Semi Intensive :-** The goats are allow to graze 8-10hrs a day with limited concentrate. Feed .Most suitable system for our region and state.



4. **Intensive system** – In this system goat are continuously kept under housing in confinement with limited access to land and provided with complete stall feeding on concentrate fodder and concentrate.

Chapter 2 : HOUSING MANAGEMENT OF GOATS:

Due to high rainfall in our state resulting in a wet and cold climatic condition, shed construction of goat play an important role in keeping them healthy for optimum productivity. The shed should get proper sunlight, proper drainage, land for grazing and fodder cultivation. Clean Water also should be abundantly available for drinking & other uses.

2.1.FLOOR SPACE REQUIREMENT:

Category of animals	Floor space requirement
Adult goat	1 sq.m
Lactating and pregnant goat	1.2 to 1.5sq.m
Kids upto 90days	0.5 to 0.6sq.m
Kid 90 days to 12 month	0.7 to 0.9sq.m

2.2. CONSTRUCTION OF SHED:

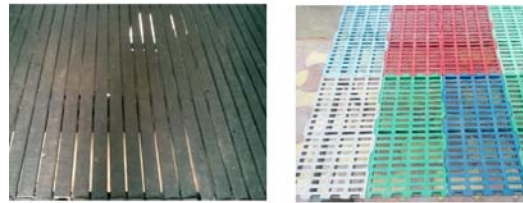
The size and design of the goat shed will depend on the number of goat to be reared.

1. Height of the shed should not be less than 6ft. at the wall.
2. The floor of the shed should be 3ft. from the ground for easy cleaning & ventilation.

3. Flooring can be done with round wood, plank or bamboo providing 1/2 inches gap between them for waste to fall below.
4. Roof can be of C.G.I. shed, asbestos or thatch depending on financial condition of self.
5. Wall can be made of wood or split bamboo. In hot area half wall shed is recommended ,the upper half of the wall can be made of wire mesh to provide smooth ventilation.
6. An open paddock with proper fencing should be constructed adjacent to the shed.



An Open Paddock



Perforation on the Floor (Wooden Flooring and Plastic Flooring material)



A low-cost Goat Shed made of Bamboo and thatch

CHAPTER -3::CARE & MANAGEMENT OF GOAT:

Proper care and management of goat from selection and management at different cycle is important to prevent disease and to enhance productivity.

3.1. SELECTION OF BREED & MANAGEMENT:

1. Animal should be in good health and having good features.
2. Purchase animal which are already to breed and in prime stage of production.
3. Try to know the Pedigree at the time of selecting and purchasing.
4. Vaccinate the newly purchase animal against diseases.
5. Unproductive animals should be culled and replace them with new one.
6. Animals are to breed at interval of 8 – 9 month for maximum productivity.
7. Cull the old animal at the age of 6 years and above.

3.2. CARE AND MANAGEMENT OF PREGNANT GOAT:

1. House the pregnant female in separate pen to avoid accident and injuries.
2. Provide nutritious rations as per requirement.
3. Avoid over feeding and under feeding to prevent metabolic disorder.
4. Water for drinking be made available.
5. Keep clean soft bedding in the pens for pregnant goat in last 15days of gestation.

3.3. CARE AND MANAGEMENT AFTER KIDDING:

1. Clean the place of kidding and disposed off the placenta.
2. Wash the hind quarters of goat with antiseptic solution.
3. Provide plentiful of water for drinking.
4. Give small amount of concentrate and forage to the mother.

5. Placenta should drop within 12 -24 hrs, failure of which it should be consider.

Case of retention of Placenta.

3.4. CARE AND MANAGEMENT OF NEW BORN KIDS:

1. Just after kidding clean the mucus from nostril and body with soft cloth.
2. Cutting of naval cord should be legated with soft sterilized thread about 2.5cm away from the body and then cut with scissor and deep into tinture iodine.
3. Allow the kid to suckle the first milk within one hour after birth.
4. In case of triplets, death of mother and no let down of milk artificial should be given.

(c) Feeding of milk should be 1/4 of body weight.



3.5. CARE AND MANAGEMENT OF IACTATING GOAT :

1. During 1st two weeks of lactation, goat should not be allowed to graze with herd.
Stall feeding or tethering with concentrate should be practiced.
2. Provide good quality and nutritious concentrate.
3. Provide adequate drinking water.
4. Give supplement calcium and vitamin atleast twice a week @ 20-30ml per animal.
5. Groom and brush the lactating goat to eliminate parasites.
6. Lactating goat should be housed separately along with the kids.

3.6. CARE AND MANAGEMENT OF BREEDING BUCK:

1. Buck should be selected with good and productive one.
2. Breeding males should not be tethered or tied with ropes.
3. Bucks should always be housed separately.
4. Two Bucks should not be kept together.
5. Ensure proper nutrition especially during breeding seasons.

3.7. Ectoparasite like lice, ticks, mites etc. are very common in goats which affect its health, productivity and quality of milk. Ectoparasites can be controlled through:

1. **Dipping** :- The animal in this case is dipped in a dipping tank filled with medicine e.g. DDT:0.1 – 0.4% solution in water.
2. **Spraying** : The animals are sprayed with medicinal solution.
3. **Ivermectin inj:** Ectoparasites can also be controlled through injection of Ivermectin.

CHAPTER 4: FEEDING MANAGEMENT OF GOAT:

Goats are browsers, so they prefer tree leaves and plant shoots over grazing. As goats are raised almost entirely on roughages, the cost of production is lower in comparison to other livestock.

4.1. FEEDING AND WATERING DEVICES FOR GOAT:

There is wide variation in feeding and watering of goats. The feeder or waterer can be made from metal or wood. The animal tends to contaminate the feed in most devices by voiding faeces or urine and by standing inside or over these feeders. So a feeder must be raised from the ground and a guard should be provided. Hanging

feeding can be used in goat. Some of feeder are Rectangular feeder or Hexagonal feeder.



Picture: Rectangular Feeder & Hexagonal Feeder for Adult Goats.

4.2.FEEDING OF GOATS:

Grasses and vegetation in our state are mostly non leguminous and this low in protein content. Supplementation of concentrate feed especially to pregnant and lactating animals is very important. Grazing of goat for 8 -9 hrs a day will fulfill the energy requirement of the goat.

In addition to grazing, especially in rainy or lean season goat farm should also have fodder tree plantation to feed the goat .

4.3 .GREEN FODDER PREFERRED BY GOAT:

In addition to grazing, especially in rainy or lean season supplementation of green fodder and tree leaves is advisable. Grasses or fodder tree that can be planted for feeding to goat in our climatic condition are :

Grass: Maize, oats,Napier, Guinea grass etc.

Fodder tree/Shrub: Mulberry, Jackfruit, subabul, Neem, Moringa etc.



FEEDING GUIDE FOR GOAT

AGE AND STAGE OF PRODUCTION	FEED	DAILY AMOUNT
1 to 3 days	Cholestrun	As required
3day - 4 weeks	Sucking/whole milk	As required
4 week – 4 month	Suckling & green Fodder	Control the requirement
4 month – Breeding	Grazing Cone.Mix	8- 9 hrs 200gm
Day pregnant Female	Grazing Cone.Mix	8- 9 hrs 200gm
Milking/Lactating goat	Grazing Cone.Mix	8 – 9hrs 250gm
Buck(Male)	Only pasture Cone Mix	Non breeding season 200gm daily during the breeding season.

CHAPTER 5: BREEDING AND CASTRATIONS:

5.1. Breeding of goat:- Goat are seasonal breeders. They usually breed twice in a year(April – June) and Autumn (Sept – Nov). In semi intensive system usually followed in our state 1(one) male can serve 25 to 30 females.

Male and Female used for breeding . Should not be related to prevent inbreeding.

5.2. CASTRATION OF GOAT:

The importance of castration of male goat:

1. To prevent inbreeding in the herd. Inbreeding lead to poor growth rate and other genetic defects.
2. Castrated males are after less aggressive and can be handled with ease.
3. It reduces the tainted smell or goaty smell in the meat of male goat.
4. It improve weight development.
5. Male goat can be castrated at the age of 2 – 3 month and above.
6. Most preferable age for castration of male goat is 6 months.

CHAPTER 6: COMMON DISEASE MEASURE:

Another important aspect of goat is the control of commonly prevalent diseases and abnormalities so as to prevent mortality in goat which leads to loss of income. Most of the diseases in goat can be prevented by early diagnosis, proper management and vaccination of animals.

6.1. EXAMINATION OF ANIMALS:

1. Farmers should have generalize familiarity with the look and condition of health as well as sick animal.



A Healthy Goat

In case of any diseases or abnormalise in goatthe farmer must visit and informin the nearest veterinary Hospital, Dispensary or Aid Centre for advice and treatment.

6.2. COMMON DISEASES IN GOAT:

Diseases may be described as devication from physical,physiological and mental state affair . Disease may be as follow:

1. Viral diseases:

(a) Foot and mouth disease(FMD): The disease is seen in cloven footed animal. The affected animal show sign of lameness.Symptoms seen are vesicles on the tongue lips, cheeks, gum, dental pad and skin betweenclaws, occasionally blisters on teat and udder.



Picture: Mouth, Leg and Tongue lesion of FMD in Goats

(b) Contagious ecthyma: The animal show sign of crusty scarbs, affecting the mucucotenousjunction of nose and mouth. There may also be proliferative lesion affecting the oral mucus.



Pictures: Lesion of Contagious Ecthyma

(c) Goat Pox : It show sign of fever and variable degree of systematic disturbances . Eye lids become swollen and mucus discharge crust from nostril. Wide spread of Pox lesions develop and are mostly seen in muzzle, ears and area free of long hair. These vesicles may turned to red colour to sore.

to sore.



Picture: Goat Pox

2. BACTERIAL DISEASE IN GOAT:

- (a) Hemorrhagic Septicemia (H.S.): High fever, difficulty in breathing, coughing, swelling of neck region and sudden death may occur.
- (b) TETANUS: Organism gains entrance through deep puncture wound. The animal develops muscle stiffness, unsteady gait, drooping eyelids and changes voice with erect ears and tail and unable to eat or drink.
- (c) BRUCELLOSIS: There is abortion in late pregnancy. In male goats, infertility, orchitis and swollen joints.

3. NON SPECIFIC DISEASES:

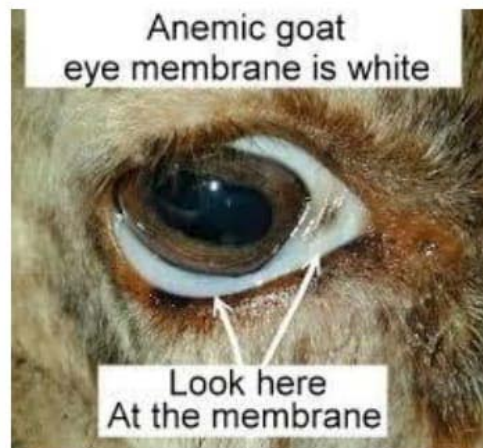
- (a) PNEUMONIA : The signs and symptoms are Anorexia, dullness, depression, nasal discharge, coughing, shivering, lacrimal discharge, high mortality especially in kids. Isolation of sick animals and keeping them warm and avoiding grazing in the rainy season should be taken care of.
- (b) DIARRHEA / DYSENTERY (SCOUR): There is frequent defecation, soft and watery feces, soiling of tail. Watery and sometimes bloody feces, dryness of hair due to dehydration.

(c) **BLOAT/TYMPANITIS:** The rumen distended /swollen, drum like sound on pating, difficult breathing, kicking and grindingof teeth.

:: Bloat/ Tympanitis in Goat



(d) **ANEAMIA :** the animal show pale mucus membrane, rough and dry hair coat, poor feed taken, weakness, red coloururine,swelling of face & head.



DYSTOKIA : This is difficulty ingiving birth of young one.

(e) **RETENTION OF PLACENTA:** Here the Placenta fail todrop even 48hrs after birthwithfowl smell.

Picture: Retention of Placenta



OF UTERUS

- (f) **PROLAPSE OF UTERUS:** There is eversion of vagina/uterus after parturition organs protrude from vulva as shining mass.

Picture: Prolapse of Uterus



- (g) **ECTOPARASITE :** This is caused by internal parasites (eg Nematod, Cestode or trematodes) which lead to Diarrhea, soiling of hind quarter, pale color of membrane, loss of feed weight, poor growth, weakness and stunted growth.
- (h) **MANGE :** There is presence of small red papules, itching, loss of hair, thick dry scab on the skin surface.

Picture: Mange in goat



CHAPTER 7 :VACCINATION SCHEDULE:

MONTH	VACCINE	ADULT GOAT	KID(ABOVE MONTHS)	6
JANUARY	Contagious PleunoPnuemonia	0.2ml I/dermal	0.2ml I/dermal	
MARCH	HeamorrhogicSepticiamia(HS)	5ml s/c	2.5ml s/c	
APRIL	Goat Pox	Scratch method	Scratch method	
MAY	1.Entero Loxeanmia 2. FMD	5ml s/c 5ml s/c	2.5ml s/c 5ml s/c	
JULY	Black Quarter(BQ)	5ml s/c	2.5ml s/c	
AUGUST	FMD	5ml s/c	0.5ml s/c	
SEPTEMBER	Enterotoxeamia	5ml s/c	2.5ml s/c	

8. RECORD KEEPING

Farm records are essential for ascertaining the pedigree, implementing the breeding programme

--	--	--	--	--	--	--	--	--

6. RAM RECORD:-

RAM NO	SIRE NO	DAM NO	DATE OF BIRTH	BIRTH WT.	TYPE OF BIRTH	TYPE OF REARING	AGE AND WT. OF WAINING	PROGENY PROGRAMME	REMARK

7. LAMB CROP REGISTER:-

Year	Season	Date of lambing	Name of dam	WE of lamb	Date of lambing	Name of lamb	Sex	Birth type	Type of rearing	Name of ewe	Date of weaning	Weight of lamb	Age of lamb	Name of sire	Date of mating	Name of dam	Progeny	Remarks	

6. HEALTH REGISTER:-

DATE	ANIMAL NO	COMPLAIN	TREATMENT	REMARK