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Mini Review

Review on Equine Farming

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Abstract

Equine farming is popular since when human started domesticating animals. Earlier horses were used for draught purposes and in Royal armies, but now its use has widened up like as a companion animal, sports and also a very wide use in army for supervision of borders. The equine population is declining in the country but its reputation, affection by the horse lovers has not been impacted much. In contrast craze for horses has increased amongst the youth of country. Horses grab spotlight when talking about equines. The horses are considered as luxury in our country so its management costs a lot of money. When management of horse is done in a perfect manner it proves to be multidollar business.

Keywords: Equine Farming; Equine Population; Equine Management; Draught Purposes

Introduction

Equine farming includes rearing of population of horses, donkey, mule, hinny for either draft purpose and in sports as racing, polo, and army. Horse rearing is not a new concept of a modern society, but domestication of equines claimed to be around 3000 BC then extensive use in India was made by Indian rulers in ancient times that serve the purpose of ride of King in battle fields and also by high society people at that time. Donkey, Mule, hinny are usually reared for draft purposes. Horse rearing was and is still considered as luxurious rearing as they need care and management at topmost level. If managed properly equine rearing can be serve to be a million dollar business. In order to achieve that a better rearing strategy with scientific approach should be the topmost priority. Farming not only includes rearing few animals but rearing best animal by investing a little and having maximum output out of that Current 20thLivestock census (Equine population).

The Negative growth in equine population is projected which means rearing of equine has decreased from year 2012 to 2019. The possible reason for this may be that farmers are not getting enough output as they are practicing old management practices which make them to invest even more and with very less output that makes it lesser profitable [1].

Common breeds of horses in India

Marwari, Kathiawari, Nukkar, Zanskari, Spiti, Bhutia, Bhimthadi is amongst the popular horses of India and are mostly reared.

Management of equine farm

Housing

A hygienic, well ventilated, comfortable housing with appropriate dimensions make equines comfortable. As per standards of UK the following proposals were made that can also be followed by Indian farmer

- **Large horses (17hh+):** 3.65m x 4.25m (12ft x 14ft) minimum
- **Horses:** 3.65m x 3.65m (12ft x 12ft) minimum

Category	Population (Million) 2012	Population (Million) 2019	Growth rate (%)
Horses and Ponies	0.63	0.34	-45.58
Mule	0.20	0.08	-57.09
Donkey	0.32	0.12	-61.23

Table 1

- **Large ponies (13.2hh):** 3.05m x 3.65m (10ft x 12ft) minimum
- **Ponies:** 3.05m x 3.05m (10ft x 10ft) minimum
- **Foaling box (horse):** 4.25m x 4.25m (14ft x 14ft) minimum
- **Mules:** 3.65m x 3.65m (12ft x 12ft) minimum
- **Donkeys:** 3.05m x 3.05m (10ft x 10ft) minimum
- **Large donkeys:** 3.05m x 3.65m (10ft x 12ft) minimum.

Nutrient requirements of equine as per Indian standard

Feeding of equines

Feeding of an animal play a vital role in management as half of the income generated can be get invested in their feeding so scientific approach of feeding should be kept in minds. Equines are monogastric with little capacity of fermentation in caecum. Amongst all equines donkeys are opportunistic feeders they can consume variety of grasses, shrubs etc. Other Equines should be given forage at minimum 1.5 to 2% of its BW on DM basis. Roughages feeding should be done to make digestion easy and prevent various diseases such as colic, indigestion etc.

Can silagae or haylage be fed to horses?

A well fermented silage with lesser DM ratio can be fed to equines. if overfed it can lead to various metabolic disorder. Now a days haylage is recommended by the the Nutritionist instead of hay but a very acidic haylage can cause colic [2].

Nutrient requirements of equine NRC Requirements, 2007

Class of Horse	Digestible Energy (Mcal/day)	Crude Protein (lbs)	Calcium (grams)	Phosphorus (grams)
Breeding Stallion	22	1.7	20	14
Broodmare				
Early Pregnancy	17	1.4	20	14
8 months pregnancy	18.5	1.7	28	20
11 months pregnancy	21	2.0	36	26
Lactation (1st month)	32	3.4	59	38
Lactation (3rd month)	31	3.2	56	36
Lactation (5th month)	28	2.9	40	25
Working Horse				
Light exercise	20	1.5	30	18
Moderate exercise	23	1.7	35	21
Heavy exercise	27	1.9	40	29

Table 2

Managemental practices

- **Hoof trimming:** It is a practice of trimming of hoof which is overgrown such that shoe can be fitted on top.
- **Shoeing:** A metal semi oval shaped block of metal is fitted under the hoof which allow protection to hoof of animal and preventing wear and tear of hoof
- **Saddling:** Horses are saddled when riding of horse is to be done saddle is placed over the withers
- **Grooming:** It includes the trimming excessive hair in order to make hair uniform and making horse good in appearance for various occasions.
- **Brushing:** Brushing of hair, skin in done in to make horse comfortable, increase blood circulation
- **Bishoping:** It is a flaw practice of making horse young by manipulating their teeth.

Management of horses of various stages

Management of breeding stallion

- Males are fed rich diet one month prior to breeding in order to gain weight, sexual drive.
- Make the animal to do exercise regularly.
- Grains and mixes can be fed to animal for increase protein and vitamin intake.
- Make sure hoof are well trimmed and shoed otherwise it may harm mare.
- Vaccination and deworming must be done.
- Make sure about the sanitation of genitalia to prevent cross infection.
- Make sure breeding should be done 1to2 weeks.

Management of breeding mare

- Females are fed rich diet one month prior such that they can get into estrus
- deworming should be done.
- Detection of heat: Red vulva, frequent urination, tail rising, abduction of hind legs
- Consult vet with mucus secreted from vulva is not transparent.
- Tie the tail of mare and clean the genitalia.
- Tie the legs of mare during breeding to prevent hitting at back.

Management of pregnant mare

- Avoid vaccination for 90 days of pregnancy.
- Make animal as comfortable as possible add paddock in their stable
- At 7 to 8 month of gestation proper diet care is maintained as it may hamper the proper milking after foaling [2]
- Check for the weight gain in mare.
- Some mare may exhibit abdominal pain analgesics may serve to be effective

Management of Mare before Parturition

- Tie the tail with clean cloth.
- Do not scare animal.
- Let the animal give birth without interference and distraction.
- Let the animal sit in order to push the water bag out.
- Once the water bag is out with in 2 to 3hour foaling should occur
- Front legs, head, abdomen, hindlegs, this should be the order of parturation and if any complication arises, veterinarian should be called.

Management of post-partum mare and foal care

- Regular exercise to mare
- Umbilical cord should be cut and dipped in Iodine solution.
- Check for expulsion of placenta within 6 to 8hours.
- Foal should stand and walk with in 2 to 3hr after parturation and should be fed milk within 2 to 3hour.
- Passing of meconium with in 12hour maximum 24hours, after that anema should be given.
- Mare sometimes do reject their foal so proper care should be done in order to ensure proper mare foal relationship.

Weaning of foal

- Usually at 4 to 7 month foal is weaned
- Train the foal earlier to get to pature diet.
- Train the foal before weaning by increasing the duration of separation from mare
- Avoid foal to get into weaning stress.
- Provide some diversion such that weaning can be easy for weaner.

Feeding of orphan foal

- Orphan foal can be fed goat milk however goat milk has higher fat content than that of mare milk.
- Milk can be either serve in nipple or bucket, to initiate milk drinking dip a finger in milk and then put the finger in foal's mouth and take the finger back to the bucket by showing it to the foal.
- Milk is to be fed every 2 to 3 hours and then can be reduced to 3 times and 2 times.
- Introduce the foal to fodder diet once achieve 4 to 6 week of age so that it can start nibbling of the soft leaves of plant.
- Introducing foal with green diet at early stages initiate faster development [2].

Culling of horse

A non-productive, sterile (can also be used for heat detection), down horse with low immunity is a burden to the farm it can impact the farmer negatively by increasing the medical bills so culling of that horse is a better idea.

Common diseases of equine farm

- **Colic**: It is the one of the most important disease of horse in which undigested food block the moment of intestine and caecum and sometime accumulation of gas cause the twisting of caeca or intestine
- Treatment includes non-steroidal, anti-inflammatory medications such as banamine (flunixine meglumine) to alleviate pain and inflammation.

- **Monday morning sickness**: It include severe muscle cramps affecting hind quarters of horse and back of the horse which result in stiffness and extreme pain to the horse which result in horse reluctant to move.
- Treatment includes laxatives diet,anti inflammatives, muscle relaxers, vasodilators such as acepromazine, VitE as antiocidant.
- **Glanders:** Glanders is an disease which is caused by the bacterium *Burkholderia mallei*. Glanders is a disease affecting horses, donkeys and mules. Animal suffering from this disease shows symptoms such as intermittent fever, cough, weight loss, yellow-green nasal discharge, and a bloody nose. Glanders is treated with antibiotics.
- **Tetnus:** It is also called as lock jaw caused by *Clostridium tetani*. Infection causes painful muscle spasm and can cause death as it affects nerves. A vaccine can easily prevent this disease but is not curable.

Conclusion

Equine farming with proper training and complete knowledge from a professional can serve to be profitable. Proper management practice, scientific feeding practicing by the farmer can serve to be a milestone for success of farmer. Prioritizing animal health over breeding in order to achieve better health helps the animal to maintain its energy loss and thereby better conceiving power or reproductive health.

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