**Horse management**

**Puberty and Gestation**

* **Age at puberty:**
* Stallions: average15 months (range 12-24)
* Mares: average 20 months (range 15-24)
* Breed, genetics and nutrition can affect this greatly
* Gestation (pregnancy) lasts 330 to 342 days, with lighter breeds generally having a longer pregnancy (340 to 342 days) than heavier breeds (330 to 340 days).
* Pregnant mares generally have a single foal; twins are rare. Foals can see and stand to suckle soon after birth.

**Oestrus cycle**

* The estrous cycle controls when a mare is sexually receptive toward a stallion, and helps to physically prepare the mare for conception. It generally occurs during the spring and summer months.
* The estrous cycle lasts about 19–22 days, with the average being 21 days.

**Stages of estrus**

* **This cycle contains 2 phases:**
* **Estrus**, or Follicular, phase: 5–7 days in length, when the mare is sexually receptive to a stallion. Estrogen is secreted by the follicle. Ovulation occurs in the final 24–48 hours of estrus.
* **Diestrus**, or Luteal, phase: 14–15 days in length, the mare is not sexually receptive to the stallion. The corpus luteum secretes progesterone.

**Ovulation**

* Ovulation most frequently occurs 24 to 48 hours prior to the end of estrus. Estrus duration is usually three to seven days.

**Time of service**

Towards the end of the estrus cycle, the mare will ovulate and produce an egg.

**Behavioral signs during oestrus**

1. Frequent urination
2. “Squatting” posture
3. Winking of labia
4. Raising of tail
5. Receptive toward stallion
6. Discharge from vagina

**Foal management**

Colostrum, the mare’s first milk, provides foals the antibodies and nutrients they need to stay healthy. Colostrum is key to a newborn foal’s health and well-being. It provides the following elements:

1. Infection-fighting antibodies
2. Vitamins
3. Minerals
4. Energy
5. Protein
6. Fat
7. Acts as a laxative to help the foal pass their first stool.

* Should spend at least 15 minutes every day with a new foal, touching its hooves, ears, nose, and other body parts, as well as tapping on its feet and generally rubbing it all over. Handling a foal early on will make it much easier to handle as an adult.
* Foals are typically weaned at 4–8 months of age, although in the wild a foal may nurse for a year.

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| **Breeding Life Cycle of the Mare** | | | | | |
| **Sexual Maturity** | **Estrous Cycle** | **Estrus (Heat) Length** | **Diestrus (not fertile) length** | **Gestation Period** | **Postpartum Heat** |
| Appx. 18 months | 22 days | 6 to 8 days | 14 to 16 days | 340 days | 7 days after parturition |

**Feed requirements of horses**

Correct nutrition is important for both health and performance of your horse. The nutritional needs of horses depend on:

* Age
* Growth
* Activity
* Health
* Environment.

Roughage/Forage Roughage, found in hay or grass, is the bulk of the horse's food. Grass or alfalfa hay, or a combination of the two, are good sources of roughage. Grass hay is generally higher in fiber and dry matter than alfalfa, but alfalfa may be higher in protein, energy, vitamins and calcium.

**Amount of Feed**

* Equine usually consume 1-3% of their body weight per day
* Dependent upon age and activity level
* At least 1% of this should be in the form of long-stem roughage
* Any remaining nutrient requirements should be met with a balanced ration

**Types of feeds for horses**

(1) Roughages, (2) Concentrates, and (3) Mixed feeds.

**Roughages** include pasture forages, hays, silages, and byproduct feeds that contain a high percentage of fiber.

**Concentrates** are the energy-rich grains and molasses, the protein- and energy-rich supplements and byproduct feeds, vitamin supplements, and mineral supplements.

**Mixed feeds** may be either high or low in energy, protein, or fiber; or they may provide “complete” balanced rations.

**ROUGHAGES**

* **Roughages** are still important for active horses and may serve as the only feed for idle horses.
* Proper use of good quality roughages reduces the quantity of expensive concentrates needed and provides a plentiful supply of vitamins and minerals.
* There are four main forms of roughages:

(1) Dry roughages

(2) Green roughages

(3) Silages

(4) Pastures

Daily Roughage Intake Horses without access to a good source of grazing should receive roughage in mounts equal to about 1 percent of their body weight daily.

**CONCENTRATES**

**Grains**

**1)** **Oats**:

•Still the most widely used and the most popular grain for horses – Some believe that oats can cause fewer digestive problems than corn, possibly because of its fiber content.

•Heavy (> 32 lb/bu.), bright, or clean oats, which contain a small percentage of hull, are preferred - Best to roll or crush oats for horses with poor teeth or young foals.

•Lower in the energy content than other grains but will cause less trouble with stomach compaction. Dusty oats should be avoided because they may cause colic.

**2) Corn:**

Like oats, widely used for horses - Should be cracked, coarsely ground, or preferably rolled.

Higher in energy vs. oats - Usually mix it with oats, and include less corn than oats in the mixture.

**3) Barley:**

Used some in the States (west), but popular in some other countries.

Higher in energy vs. oats – Usually mix it with oats, and include less corn than oats in the mixture.

Should be coarsely ground or preferably rolled, and usually mix it with oats in about equal parts.

**4) Wheat**

•Not used much because they become rather doughy and tend to ball up with moisture when ground.

•If used, should be rolled and mixed at a low level with bulky feed such as oats or wheat bran. (Milo has a very hard seed coat!).

**Grain by-products:**

**•**Wheat bran - Very valuable for its mild laxative effect and for its bulky nature. Generally used at 5 to 15% of the diet. •Wheat middlings - Used in pelleted feeds and an economical source of energy.

**Methods of feeding**

* Grain mix and forage are fed at the same time or forage is made available to stabled horses all the time.
* Horses have small stomach which is about 8-9% of total intestinal volume as compared to bovines where stomach size is about 60% of total volume of intestine.
* In stables most horses will eat hourly during day and every 2- 3 hourly during night regardless of type of feed available from loose hay to blocks/cubes.

It is, therefore, recommended that, grain mix should be fed at 0.5-0.7kg/100kg body weight for its optimum use in three to four attempts in whole day with round the clock availability of forage.

Horses under intense training/ athletic performance must be offered grains 4-5 time a day that too 4-5 hours prior to exercise and must not be fed at least for one hour after exercise engagements.

**Give horses plenty of exercise**

* Avoid enclosing horses in restrictive yards for long periods, unless regular exercise is given.
* Exercise periods should be planned to coincide with times of minimal food intake.
* Don’t work the horse until at least 2 hours after its last feed. Always have clean fresh water available
* Clean, fresh water, free of organic matter and sediment, should be available to horses at all times.
* A horse can drink up to 70 liters a day.
* After heavy work, water should be limited to between 2 and 4 litres until the horse has fully cooled.