Feeding the Pregnant Mare
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There is exciting new research regarding the optimum nutrition of pregnant TB mares. This latest research has shown that during the last trimester (one third) of pregnancy, the diet of the mare can influence levels of immunoglobulins in milk and also placental development. This is now referred to as developmental programming . A reduced nutrient supply to the foetus in the last trimester may have long lasting effects on the newborn foal and throughout its life. These effects are thought to include reduced skeletal muscle growth and development, reduced athletic performance and perhaps most importantly, reduced health of the newborn foal.

It is therefore prudent to pay attention to the diet of the mare throughout pregnancy.

Further research into nutrition of the broodmare and early foal nutrition has shown that diet may possibly affect the development of body systems that control energy metabolism later in the foals' life. In some species research has shown that the diet of the mother has important effects on the metabolism of the offspring. When mares were fed diets rich in starch during pregnancy, researchers hypothesized that resultant foals may be predisposed to metabolic disorders. Their research showed that mares fed a high cereal starch ration during the last trimester produced foals with higher blood glucose from 5 to 80 days of age, even though they were still within normal range and by 160 days there was a tend towards insulin sensitivity in the foals of the mares fed high starch feeds. Feeding a low starch ration balancer such as Opti-Gro is therefore ideal.

Due to the artificial breeding season,TB mares are often heavily pregnant in winter, foaling down when pasture quality is poor and temperatures are low. At the same time, broodmares are getting heavier as they approach foaling and they may become quieter and move around less. Brood mares in pregnancy have specific nutritional requirements that must be met. The amount, choice and nutrient density of feed are all important factors, which help to ensure this is so. More attention is often paid to the last three months of gestation as the foetus starts to grow more rapidly gaining approximately one pound per day. The requirements for specific nutrients such as energy, protein, calcium, phosphorus and vitamin A in particular, increase too, but this is not to say that mares early in pregnancy should not receive equal attention to their diet.

Barren mares in particular will benefit from being fed prior to conception and then through pregnancy on Gain Opti-Gro Pellets, which will provide essential micronutrients and quality amino acids during the early and later developmental stages of pregnancy.

Vitamin E is also vital for broodmares during pregnancy. Broodmares that have little access to green grass or good quality hay/haylage are at risk of a reduced vitamin E intake. Mares should be fed vitamin E to meet NRC (6th revised edition) requirements. This should result in normal blood levels of vitamin E which have been shown to have improved immune responses to vaccination for example and increased immunoglobulin IgG in the milk. Opti-Gro contains high levels of vitamin E and will therefore support the nutritional needs of the pregnant mare and foal.

Body condition or condition score must also be monitored, as condition score is known to affect reproductive performance. Pregnant mares must be kept in good condition all year round as mares with a condition score of less than 5 are more likely to skip a breeding season whereas very overweight mares may have problems foaling. Maintaining mares at condition score 5 is ideal. In the last three months, the growing foal takes up increasing amounts of space within the abdomen and this can lead to " squashing " of the mare's digestive tract leading to some discomfort or mild colic signs. Some mares may also go off their feed a little so it is important to supply top quality, nutrient dense and appetising feed at this time. Mares should be trickle fed i.e. little and often, early cut digestible forage. If mares are holding condition well on ad lib forage and most of them do, a specifically formulated nutrient dense stud balancer such as Opti-Gro Pellets is ideal to feed alongside. This will ensure the mare receives vital nutrients, particularly vitamins, minerals and quality amino acids at this critical time. Opti-Gro Pellets are easy and economical to feed, 1-1.5 kg per day is all that is needed through pregnancy for mares holding condition. The importance of feeding a balanced ration to these mares cannot be overstated. During the tenth month of pregnancy, the foetus stores the largest amount of minerals within its body and good nutrition at this time will help to prevent possible problems such as DOD later on. The tenth month of pregnancy mostly

coincides with winter pasture in the UK and Ireland, which may also be deficient in certain important minerals such as copper and selenium. Relying on forage of unknown nutritional quality and mineral status is not necessarily the best choice when feeding pregnant broodmares. It makes more sense to ensure these mares receive all the vital nutrients they and the foetus requires to produce a healthy foal by feeding a good stud balancer alongside throughout pregnancy and Opti-Gro is an excellent choice.