

Feeding Lactating Mares and their New Born Foals

The nutritional requirements of lactating mares and their new born foals can seem like a mine-field. So many vitamins, minerals and trace elements to take into consideration – so much scientific data (and in some cases old wives tales) about what you should or shouldn't feed.

At Horsepower, our years of practical, hands on experience, working with some of the country's most renowned studs and veterinarians, has enabled us to offer this common sense guide.

Once born, **a foal will usually double in weight in the first 30 days**. Obviously, the primary source of nutrition at this time is the mare's milk, and therefore the most dramatic increase in nutrient requirements for broodmares occurs during early lactation. With mares producing between 1-4% of their own bodyweight per day in milk, it is easy to understand why their nutrient requirement rises so dramatically.

Having provided the mare with **adequate Vitamin E and Selenium prior to birth** becomes an important factor in the first 36 hours after the foal is born. During this time, these nutrients in the mares milk increase the immune transfer in colostrum and therefore immunity in the foal.

With a strong, healthy foal now on the ground, we need a feeding and management program to achieve optimum growth and development, whilst avoiding nasty complications such as **Osteo Chondrosis Dissecans (OCD), deformed limbs, Epiphysitis and other problems associated with under and particularly OVER nutrition**.

For the inexperienced (or indeed, even for those with years of experience) the task of raising young horses today, can seem a daunting, highly technical and scientific affair, that almost requires some form of bio-chemistry training. In the thoroughbred industry monthly weighing of foals to track ADG (average daily gain) in conjunction with regular X-rays, pasture analysis and periosteal stripping operations (to straighten bent legs), are all commonplace.

Interestingly however, **well-balanced nutrition**, coupled with, (dare we say it), "Old fashioned" management practices (i.e common sense), still produces sound, strong young horses.

In an ideal world, foals would be raised in 1000 acre paddocks, that weren't too flat, with adequate pasture, and be allowed to grow and develop naturally, until they reached maturity (4 year old), at which time they would begin their working life. Of course, we don't live in such a world, and so we have to adapt situations to suit our needs and requirements. 1000 acre paddocks with a good cover of pasture are VERY hard to come by (with or without hills), and having horses that do nothing until they are 4 years old, means there would be a lot a prize money in various futurity events that would go begging.

So, we improvise. We raise foals in smaller paddocks; we hard feed mares and foals to make up for a lack of pasture; we want them to develop quicker, so we can use them earlier – procedures that are not necessarily ideal, but if taken into account, can be managed.

For example, in normal circumstances, **a foal will source nutrition from its mothers milk**, and pasture (for many of you in NSW and Qld, pasture is perhaps a distant memory!). If the mare is being hard fed, then it is possible the foal will then have a third

source of nutrition, by helping himself to some of the feed. This can lead to over-nutrition, with one of the most obvious results being **excessive weight gain**. If this does occur, simply move the mare's feedbin out of reach of the foal (creep feeding). Hard feeding of mares is often essential when due to the mare milking so well, the foal grows and develops, whilst the mare starts drawing on her own reserves. For mares that are to be joined again, it is particularly important to maintain their condition, as conception and carrying of the foetus can **be greatly jeopardised due to malnutrition**.

It should always be remembered that with growing horses, there is a major difference between "Maximising" growth rates and "Optimising" them. Maximising growth rates means having a foal that is as big (height and weight) as is possible at any given time. The problem with this is that it is far easier to increase the muscular growth rate, than it is to increase the skeletal development, and therefore, to put things into very basic terms, you end up with a foal with a skeletal frame that is too light to carry his soft tissue bulk.

By optimising growth rates, **the aim is to develop the muscular and skeletal frame of the young horse at a compatible rate**. And whilst monthly weighing measured against projected growth charts is one way of achieving this, a simple rule of thumb when assessing weanlings through to yearlings, is you want to be able to see one rib, whilst maintaining a good top - line cover.

To achieve this, essential amino acids such as Lysine and Methionine play an extremely important role, whether they be sourced from the mares diet (and passed on through her milk), or through the foals diet.

Pointers to assist in monitoring foal growth rate include a careful assessment of the knee and fetlock joints especially. The profile of these joints, viewed from in front should maintain a smooth rounded appearance, with gentle curvatures. Square or rectangular profiles or obvious ridging of the front surface of the knee joints in particular, can be a sign of too rapid growth rate and epiphysitis (An inflammation of the cartilage growth plates in the bones). The very best way to learn how to assess your own foals is to look at other peoples and compare. Watch particularly for big knees, and a 'Broken' hoof / pastern angle (The front wall of the hoof should follow the line of the front of the pastern). Look at legs from all angles, front, sides and back.

One technique the professionals use is to drop an imaginary line from the bony protruberance on the side of the centre of the elbow joint, straight down to the ground. This line should bisect the knee joint, and finish up level with the back of the heel, or just behind it. This means that the body weight is being carried correctly down through the front leg and onto the foot, without posing undue strain on any of the joints. Young foals under 6 months age, are often a bit 'Saggy' in the fetlocks, but with exercise and correct growth, they will usually straighten up. By 9 months old the above conformation should ideally be evident.

Developing an eye for conformation takes years of practice and a lot of looking at horses. If you are in doubt, seek advice from others who have had more experience. A quick once over by someone who has done it before can either set your mind at rest, or point out the need for professional intervention.

As always, if you have any queries regarding information provided in this article, or any equine nutrition questions, please feel free to contact me on our toll free number 1800 681 117 or email horsepower@horsepower.com.au