Natural Nutrition for your horse… Getting your pasture involved.

Welcome to my presentation on Natural Horse feeding here at Equitana, I plan to deliver information that will assist you to provide your horse with useable pasture and thus reduce the costs associated with feeding your horse.

As you heard I am Principal of The Australian College of Animal Tactile Therapy, myself and college have a focus on delivery of accurate information to assist horse owners and carers to understand horse needs and thus provide good care for their horse. Our courses include a Diploma in equine tactile therapy, along with certificates in nutrition, massage, rehabilitation and natural horse care, and are aimed at both the horse owner and those who wish to pursue a career in the equine industry.

My discussion today is on how to fully utilize the pasture your horse has available with a view to maintaining good health and also reducing the costs of horse feeding on a weekly basis.

We will cover the following:

1. Horse Nutritional needs
2. The role of pasture
3. Ascertaining nutritional short falls in the pasture
4. Improving your pasture to cover the short falls

Introduction:

Horses have evolved as animals that are strict herbivores – that is they eat only plant material. Their teeth, mouth and digestive system have developed to be specialists at the intake and use of high roughage low nutrient feeds such as found in plants including grass.

However horses do need more plant species than grass alone – Our modern pastures generally include only species of grass and clover, however to remain healthy a horse requires more species that this. So how can we assist our horses, and provide access to pasture that provides the majority of its nutritional needs – if not all.

As with people, nutrition for the horse is the first place to start to maintain and gain a return to good health. Today we see many young horses with health issues such as arthritis, digestive issues, respiratory issues, skin problems, hoof problems and teeth issues – we must ask why. In my belief it is the balance of roughage and nutrients provided, and the lack of access to quality mixed pasture that contains grasses, legumes and herbs.

It is unfortunate that we cannot always believe advertising – as in human nutrition the information out there is usually presented by the companies that sell the feed – and as this is a commercial world and business is designed to make money, the information is not always complete – and as such conclusions are drawn that may not be the best outcome for your horse, nor your pocket!

In our modern day we are bombarded by what are termed "new and improved" equine feeds – I see results from this bombardment including horses being fed less and less roughage, horses having less and less access to pasture, and more fast feeds being fed that may provide nutrients in some form, but do little to enhance digestive health, and thus have an effect on the overall health of a horse. One of the major issues I see is the overfeeding of protein through supplements – not only is this expensive for the horse owner, but it creates health issues related to the kidneys and the liver of the horse. Horses do not require high protein diets – so lets change it – save our money and improve your horses health.

One of the other issues that I see of the push to purchase commercial products is that it has resulted in horse owners coming to the conclusion that horse feeding is a hard and complicated business – and thus they must rely on expensive processed feeds to provide a horse with the nutrient they require. If we look at history we will find that in the past horses lived long and healthy lives on feeds such as pasture supplemented with oats, barley, linseed, chaff and hay, and I hope that after today you can go home and think about changing feed practices to give you more control over the feeds your horse eats and also to reduce the high cost of keeping horses.

I can hear many of you thinking – but I do not have the land, money nor time to alter what I do for my horse – I hope to show you that with a little thought, less money and the same feeding effort you can provide your horse with the best nutrition available without feeding processed feeds.

Ok so starting with what does a horse need.

To provide the majority of you with useable information I will aim this section of the talk to the general horse person, by that I mean those whose horse works for short periods a few days per week, generally these horses fall with the groups called at maintenance or light work

There are many texts and general books out there that inform us of the nutrients required by horse – but many of us are unaware of how to provide these successfully… so if we look at the basics – horses like humans need energy, protein, minerals and vitamins - most people are able to feed themselves successfully – so why not be able to think the same way for your horse. All nutrients are available in pasture plants to one degree or another – and thus if the pasture is adequate we should not be required to provide huge amounts of supplementation…. The question is always – is your pasture adequate – we will look at this later.

For now lets consider some basic equations that can help you understand an equine diet:

According to the National Research Council (NRC 1989) all horses require approx 2 – 2.5% of their bodyweight in dry feed every day, for a 500 kg horse this is 10 – 12.5 kg of feed every day. When we consider that a 2 lt dipper of chaff weighs approx 0.2 -0.3 kg and a biscuit of grass hay weighs approx 1 kg, that is a lot of feed you need to buy to provide your horse with adequate roughage and nutrients!

Grazing horses with access to adequate pasture consume approximately 2 – 3% of their body weight in pasture every day (Avery 1996), and if we substitute pasture for expensive concentrated feeds, the pasture utilization is reduced by somewhere between 0.3 & 0.7 kg per day dependant on the volume of concentrate fed.

One must ask why replace something that is economical with something that is uneconomical and waste the valuable pasture plants, a resource that will save money and time.

Given that horses are herbivores their digestive system is designed to intake large amounts of forage to gain the nutrients required – this tells us that horses need roughage, roughage, and more roughage… the needs of a horse at maintenance and light work can in most cases be provide by pasture – that is a good mixed pasture – that includes valuable herbs as well as grasses and legumes. If required we can supplement with various hays to cover their needs and account for any lack in volume or nutrients in the pasture.

How easy is that!

So knowing what a horse needs we can look at our pasture:

Some of us are lucky enough to have large amounts of land for our horses to roam, however as the pleasure horse industry grows it is found that more and more people living in suburbia are entering the equestrian world and are required to keep their horses on agistment. To choose an effective agistment place it is important to consider the pasture available along with supervision, facilities etc… all the facilities and supervision in the world will not help your horses health if the pasture is poor, if we think long term good pasture management will reduce your veterinary costs over time.

In the perfect world our horses would have approx 2 – 3 acres each to graze – of course this is dependant on the area and its growing pattern, in some places in Australia a horse will require far more area than this to give them access to adequate plant material.

Some pointers to assist in selecting an agistment park include:

1. How big are the paddocks? ¼ acre paddocks are not big enough to provide the feed required by your horse, you are best to look for agistment parks that provide at least 1 acre per horse.
2. Are you able to utilize more than one paddock throughout the year? Alternately an agistment park that offers 2 paddocks per horse allowing you to rest the pasture as required
3. What are the views of the owners on fertilizing and removal of weeds in the area your horse is to live?
4. If your horse has access to one area how open are they to you splitting your paddock to allow pasture to rest and recover from grazing?

Unfortuantley it is rare to find an agistment park that provides 2 – 3 acres per horse – so look carefully and choose wisely – reject any place where you horse lives in a ¼ acre paddock for 12 months of the year – such paddocks will very quickly become what is called “horse sick”, ie the pasture is affected by manure and urine and and have a predominance of plants that the horse would prefer not to eat – hence further compromising the nutrients available for the horse to ingest.

Length and concentration of pasture:

In addition to the area required we also need to look at the density and length of pasture.

Bare areas on the ground will often lead to infiltration of unwanted weeds – thus good ground cover is a necessity. The length of the pasture is also important – a length of 8 – 10 cm is perfect as it assists the horse in grasping the feed and thus take in the required volume of feed, this is especially important in our aging horses whose teeth may not be the best to bite at the grass. Longer pasture also reduces the risk of worm infestation by reducing the need to eat very close to the ground.

I can again hear your thoughts of I have never seen my horses pasture this long… with good pasture management you can begin to approach this even in an area as small as an acre. The key is in rotation and resting of pasture before it becomes horse sick

Pasture Management:

Pasture management includes manure removal or spreading, removal of or discouragement of unwanted plants (otherwise called weeds), rotation to maintain concentration of plants and encouragement of the plants you wish to remain viable.

Manure Management:

If your horse is in an area that is small it is important to remove the faeces daily – the longer the faeces remain on the ground the less the horse will wish to forage around it. Some of you may find that your hroses are not concerned about eating around manure – this is a sure sign that they have had no choice due to being in a small area. If you leave the faeces in the paddock you may also see that the pasture near the faeces is longer – this is a result of 2 factors – one being the fact that horses prefer not to eat near faeces, the other is a result of the nutrient that is put into the soil by the manure, and the attraction of bacteria and nematodes to braked the manure down.

So that brings us to the utilization of manure in helping keep our pastures healthy. Manure is a fertilizer – so why not use it – if you can rest your pasture,t he day you move the horse in to the new area go around and spread the manure that is lying in the paddock – this will expose any parasites to the elements and assist in their demise and also spread valuable nutrients to your ground to assist your pasture to grow.

Rotation

Rotating your horse from one area to another is beneficial to both the horse and the pasture – it reduces the risk of bare patches occurring in the paddock and gives your horse access to freshly growing non contaminated pasture on a regular basis.

In my studies I was taught that the time to move a hors eonto a new pasture is when the paddock shows adequate growth to support the horse. I have found though, that especially when you first being

pasture rotation by waiting for the pasture to become "ready" the area your horse is currently grazing willb e eaten out and thus take longer to recover, and over time you will have two or three areas that have not had full opportunity to regrow post grazing. Thus over the years I have found that the best way to gain good pasture and reduce the risk of overgrazing is to have a strict pattern of rotation on a 4 – 7 daily basis. This will encourage ongoing growth without the removal of plants the horse prefers and over time you will produce a paddock that offers good variety and depth of grass to assist in reducing your feed bills.

If you only have one paddock try to divide it into 3, on a 7 day rotation this allows each area to rest for 2 weeks prior to the horses returning. This also allows adequate time for your spread manure to be broken down and utilized as fertilizer.

Plant Encouragement

By allowing only short grazing times you will encourage further growth of the pasture species the horses prefer – thus reducing the risk of serious weed infestation.

Certain weeds should be removed from your paddock for poisoning and smothering reasons, such plants include Capeweed, as it smothers other plants and thus reduces the area your horse has to graze, ragwort – it is highly toxic plant that produces a huge number of seeds from every flower head, Dock as it also reduces the availability of desired pasture species. Patersons Curse is another plant that can block the growth of other plants, it is also toxic to the horse and as such I would strongly advise it removal.
Every grazing area in Australia has its own weed problems, thus it is important for you to ascertain which weeds may have a negative impact on your horses health and remove them. Manual removal of weeds is the best policy and it is feasible in an acre or so.

Can pasture provide all?
You have taken on rotation and weed removal – but will your pasture now provide your horse with optimum nutrition?

In the optimum world yes… however we must also consider the state of the land our pasture grows on – it is known that certain areas lack certain minerals – for example the Yarra Valley here in Victoria is known to be lacking a number of minerals in the soil including selenium, cooper and iodine.

We have a couple of options to over come these deficiencies. We can supplement with natural sources such as seaweed, brewers yeast, wheat bran, etc by providing a small feed, thus ensuring these minerals are ingested – or better yet we can fertilize our paddocks to ensure the nutrients are available in the plants. For those that own their own land it is valuable to have a soil test done, or better yet a foliage test, to assess the nutrients available to the plants and also to assess the plants uptake of nutrients. In this way we can ascertain what natural fertilizers to use to improve soil quality and hence pasture quality.

For those that agist it is often not practical, nor accepted to test the soil and foliage – in this case I suggest you contact the department of Agriculture to ascertain what general short falls there are in the area – and you can then fertilize your horses area to assist in reducing the short falls.

My horse does not maintain his weight on pasture what can I do?
Many horses have trouble maintaining weight on pasture – often this is due to the pasture being inadequate, or their digestive system is in poor condition due to overfeeding concentrates and underfeeding roughage over a period of time. For these horses provide a supplemental feeding of mixed hay such as Rye and Clover, as this will be a basically balanced feed that provides a high level of roughage to enhance the digestive system of your horse. If you still find that there is a deficit in the nutrients required such as energy or minerals you could include some chaff and grain until such time as your pasture improves than you can reduce the amount you provide as supplemental feeding. In my experience it takes 1 – 2 years for a horse that has been maintained on pelleted feeds to fully be able to utilize pasture as the main portion of the diet. Be patient and persistent with your pasture and you will get there.

When providing supplemental feeding the following guidelines will assist:

> Provide a balance of feeds – as a general guide white feeds such as oaten chaff and grain should be twice the weight of any green feed such as Lucerne or clover
> Eg in a horse that needs grain to give it energy for work you could feed the following: 1 kg grain, 0.5 kg oaten chaff, 750g Lucerne chaff, provide this with a mixture of hay if your pasture will not supply adequate volume of feed. By feeding as we stated you will reduce the stress on the pasture and thus assit it to grow and better provide for your horses needs, As pasture grows you can slowly reduce the concentrated feed and allow you horse to eat as nature intended.

Conclusion:

In rounding up lets go over the main points:

1. Horses need to ingest large amounts of roughage
2. Horses at rest or in light work can be maintained on good pasture alone
3. Good pasture means adequate area, plants, length, and ground cover
4. Arrange paddocks into 2 – 3 sections and rotate the horses every 4 – 7 days
5. Remove or spread manure
6. Remove all offending weeds and leave the rest
7. Soil or foliage test to ascertain nutrient levels
8. Fertilise as required to ensure adequate nutrients available for plants
9. Supplement with mixed hay such as clover and rye if required until your pasture is able to sustain your horse.
10. Have fun and enjoy watching your horse bloom

Until next time take care of yourselves and your equine friends. Christine