



Ranvet NEWS

Issue 5

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Ranvet Pty Ltd • 10-12 Green St, Botany NSW 2019 Australia • Ph: (612) 9666 1744 • Fax: (612) 9666 1755

Science ■ Innovation ■ Excellence

LEADERS IN NUTRITION; INNOVATION & EXPERIENCE



Ranvet

www.ranvet.com.au

Veterinary Supplements & Medications

ARE YOU FEEDING TO YOUR HORSE'S REQUIREMENTS?

IS YOUR HORSE MEETING ITS GENETIC POTENTIAL?

DID YOU KNOW....

- Over **80%** of rations are deficient in at least one nutrient?
- Dietary requirements are influenced by **age, weight, condition, exercise** and **breed**
- Nutritional imbalances and deficiencies affect **performance, health & vitality**

SCIENCE



Ranvet has earned the reputation as the acknowledged leader in equine nutrition and veterinary medications over the last five decades. Ranvet continue to actively participate in research and development while marketing within Australia and over 28 countries throughout the Southern and Northern hemisphere.

The Nutrition and Animal Health Division of Ranvet are pleased to announce the contribution of Ranvet's founder and principal technical advisor **Dr. Percy Sykes AM, M.R.C.V.S., M.A.C.V.Sc** to the Ranvet News. Dr Sykes will be guest editor to the '**Horsing Around**' feature article and will be partaking in an advisory role to Ranvet's Nutrition and Animal Health Division's team of nutritional consultants and technical support staff.

Dr Sykes, a highly respected veterinary surgeon and world authority on the performance horse has worked closely with many legendary trainers such as the late Tommy Smith. In particular, Dr Sykes has a close association with Melbourne Cup King Bart Cummings and leading trainer Gai Waterhouse.

We look forward to bringing you a spectrum of nutritional and veterinary related topics in 2009 and invite you to email your enquiries to priscilla@ranvet.com.au for our '**Tuesdays with Percy**' question and answer segment coming to the next edition.



AM, M.R.C.V.S., M.A.C.V.Sc

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Evolution of Ranvet's World-Class Formulation

Folactin Red[®]

PLUS



Folactin Red PLUS[®]; **For Sound and Healthy Growth of Young Horses**

Developmental Orthopaedic Disease (DOD) is a multi-factorial syndrome, which describes a range of skeletal problems associated with the growth and development of young growing horses, which are common place in the breeding industry.

These abnormal bone developments which arise in young horses may lead to future problems in soundness. To prevent the incidence of DOD in foals, weanlings and yearlings, a well managed and balanced diet fortified with appropriate minerals is required.

Folactin Red[®] or Folactin Red PLUS[®]

For many years **Folactin Red[®]** has been an integral component of stud feeding programs throughout Australia and the world. However, due to recent scientific research the need has arisen for an evolution in formulation. Therefore, **Ranvet** has reformulated **Folactin Red[®]** to produce **Folactin Red PLUS[®]**, with boosted levels of phosphorus, copper and zinc to reflect the most recent information available to aid the prevention of DOD. The higher mineral content of **Folactin Red PLUS[®]** plays an integral role in supporting sound bone and cartilage development, which is vital in preventing the incidence developmental lesions.

Folactin Red PLUS[®] ensures your broodmare, foals, weanlings and yearlings are receiving the optimal levels of nutrients providing reassurance that you are implementing the best possible start to your foal's life, while ensuring the health and fertility of your broodmare. In addition to growing stock nutrition, the dietary provision of the broodmare (particularly during the last four months of pregnancy and early lactation) is equally important. The use of **Folactin Red PLUS[®]** will enable ease of supplementation to all your stud stock, ensuring optimal nutrition for the growing foetus/foal and future breeding efficiency of the broodmare.

A well balanced and managed stud feeding program must include adequate mineral fortification to prevent the incidence of DOD's.

- ✓ Premium fortified mineral supplement formulated for horses at stud
- ✓ Ensures sound growth and development
- ✓ Necessary for the prevention of DOD's
- ✓ Based on the latest scientific research
- ✓ Increased levels of phosphorus, copper, zinc and magnesium



Ranvet

Nutritional Consultation Service
Toll Free 1800 727 217

NUTRITIONAL CONSULTANCY SERVICE

'Minor alterations to feeding programs may result in significant economical benefit as well as significant improvements in performance'

Ranvet's team of professionals are trained to assist you in optimizing rations for your horse, based on least cost formulation and a review of all methods of feeding (both pre-mix and cereal grain based rations).

Tailored specifically for each stable or individual horse, dietary assessment, evaluation and rectification can be conducted on the following;

- ▶ **Energetic requirements** dependant on the type and amount of work being performed (breed specific).
- ▶ **Protein requirements** dependant on stage of growth and energetic requirements.
- ▶ **Vitamin and mineral levels** evaluation and correction.
- ▶ Stereotypies addressed.
- ▶ Nutritional management of issues such as **'tying up', bleeding, DOD/OCD, lameness, shin soreness, hoof defects, respiratory ailments, poor performance, premature fatigue.**
- ▶ Rations are analysed via an extensive database system exclusively available to Ranvet clientele by qualified equine nutritionists. Ration analysis is multi-factorial and involves assessment of nutrient levels specific to the particular horse according to *weight, age, level of activity, breed and temperament.*

For further details or technical information, please see Ranvet's web page www.ranvet.com.au and click the link for diet evaluation and technical support. If you have enquiries regarding Ranvet products or stockists, please contact National Sales Manager *Paul Hoffmann* on 0417 580 980.

Alternatively, you can contact the Nutrition and Animal Health Division of Ranvet

Priscilla Spendlove (BScAgr Hons, PhD, MAIAST)
Performance Horse Nutritionist



and

Mitch McBride (BScAgr/AnSc)
Nutritionist



TOLL FREE on 1800 727 217

Combat the Stresses of Racing & Training

Concerned About Optimizing your Performance?

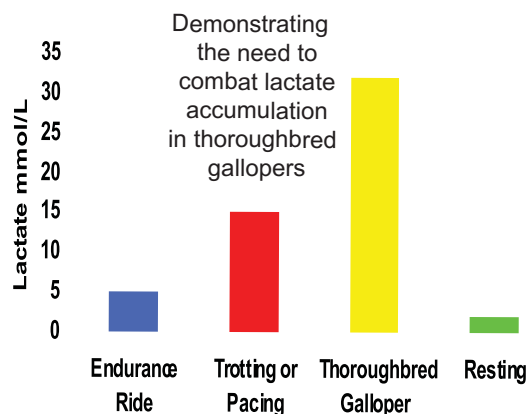
Horses performing short duration, high intensity exercise such as gallopers are prone to the development of ***lactic acidosis***, the result of anaerobic metabolism. This intense (short/sharp) exercise uses an energy production pathway where energy is provided from carbohydrates in the absence of oxygen (anaerobic exercise), the side effect of which is the production of large amounts of lactic acid. Therefore, the result is blood lactate levels increasing dramatically at speeds over 10m/sec and subsequent blood acidosis leading to rapid onset of **muscle fatigue, failure to finish (reduced stamina), muscle soreness** and **extended recovery periods**. Acidosis is worsened if the horse is dehydrated with insufficient water and electrolytes to maintain normal body fluid balance.

'After energy availability, the accumulation of excess lactic acid in muscles and blood is the most limiting factor for muscle activity and the most common cause of muscle fatigue, cramps, tying-up and poor performance'

The best way to neutralize an acid is to use an alkali and the body does this very effectively by using the essential electrolyte (sodium), which forms a salt with excess lactic acid. The use of **Neutrolene[®]/Neutrolene Plus[®]/Neutrolene Plus with choline[®]** provides sufficient sodium (alkali) as sodium acid citrate to neutralize excess lactic acid in tissues and blood and prevent sodium depletion. In doing so, this maintains blood and urine pH within normal limits to maintain optimal performance and recovery while also ensuring activation of the thirst mechanism. The **Neutrolene[®]** range has been **scientifically formulated to aid the prevention of acidosis, dehydration and myopathy (tying-up) by acting to neutralize excess lactic acid in blood and muscle and is rapidly metabolized and absorbed** and may be administered daily in feed or over the tongue at rates of 45mL (once or twice daily).



Lactate Production



- ✓ Restores depleted reserves of the most common body alkali, sodium.
- ✓ Neutralizes acid build-up and excess lactic acid in blood and muscles.
- ✓ Rapidly metabolized and absorbed.
- ✓ Aids in the treatment and prevention of dehydration, acidosis and 'tying-up'.
- ✓ Specifically indicated for heavily sweating horses with high body salt loss.

Always Wanted to Have a Calming Influence? Always Wanted to Have a Calming Influence?

Ranvet's

CALM paste

aids nerve and muscle function and
maintains appetite in horses



The excitable behaviour associated with travelling, competition or new surrounds can cause a horse to lose focus, perform below their optimal level and in some cases cause harm to themselves or others. **Ranvet's Calm paste®** has been specifically formulated to provide a natural calming effect exerted by a blend of **complex B-Group vitamins, Magnesium and Tryptophan.**

The combination and specific concentrations of these ingredients act to provide the necessary co-factors to settle nervous or excitable behaviour associated with;

- Travelling
- Competition
- Co-mingling at events
- New, unfamiliar surrounds
- Education
- Difficult stallions during the breeding season
- Excitability of high grain diets

For horses in training: Excitability is only one sign that may be corrected. Calm paste® may also improve signs of flighty temperament, pulling hard and muscular twitching.

Calm paste® provides a convenient, portable source of all natural ingredients which exert a calming effect on the nervous system by elevating vitamin and mineral blood levels;

Complex B-Group vitamins

B-Group vitamins are intimately involved in energy metabolism - the conversion of food into fuel, appetite stimulation and blood cell formation. Unfortunately most B-Group vitamins are not stored in the body due to their solubility in water and therefore need to be replenished daily.

• Vitamin B1 (Thiamine)

Plays an important role in carbohydrate metabolism and is involved in nerve transmission.

• Vitamin B2 (Riboflavin)

Assists in the production of energy within cells.

• Vitamin B3 (Niacin)

Is crucial for the regulation of energy metabolism.

• Vitamin B6 (Pyridoxine)

Involved in the metabolism of amino acids and the utilization of glycogen for fuel.

Tryptophan

An essential amino acid used within the body to make the neurotransmitter serotonin. Increased levels of serotonin are associated with sedation, reduced aggression and reduced fearfulness.

Magnesium

Plays a vital role in nerve and muscle function, aiding to reduce nervous behaviour. This effect is particularly marked when a magnesium deficiency may be present.

Nervous or unsettled behaviour is often resolved by correcting Thiamine, Riboflavin, Pyridoxine and Magnesium levels in the diet.



HORSING AROUND

FEATURE ARTICLE

FEEDING HORSES IN HOT WEATHER

Feeding to Minimize Heat Waste

Specific feeding adjustments are useful in hot climates, whereby horses are subject to performance stress, dehydration, excessive electrolyte loss, heat stress and premature fatigue. In particular, certain individuals such as hyper-energetic horses or those with a disposition to be nervous or excitable have a propensity to be severely affected by hot and in particular, humid environmental conditions.

In a hard working horse or those horses working over long distance such as endurance types, additional digestive heat increases the 'heat load' which needs to be lost for effective cooling, particularly during hot weather and immediately following exercise. If this heat load is not lost, severe repercussions such as **elevated heart rate, increased respiratory rate** and **poor post-exercise recovery** may be experienced. This becomes more significant by the need for the horse to 'pant' to lose body heat, which in turn leads to an increase in sweat loss coupled with an increased risk of dehydration and general body salt depletion.

As a guide, energy loss as heat produced during fermentation wastes approximately 20% energy from barley, 23% energy from corn, 30% energy from oats and 70% from fibrous roughage such as chaffs and hays as the feed ferments in the large bowel. Conversely, fat and oil supplements have no heat waste during the digestion process as they are digested by enzymes in the small bowel.

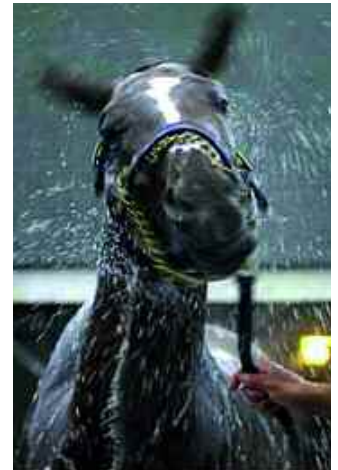
General Feeding Principles in Hot & Humid Climates

Minimize Heat Waste

- ✓ In a horse being heavily exercised, the amount of fibrous feed may be reduced to a MINIMUM SAFE LEVEL in order to ensure maintenance of gastro-intestinal health (0.5%-1% of body weight daily). This will ensure adequate gut health and function whilst simultaneously storing adequate water and electrolyte reserves to prevent dehydration in the absence of unnecessary heat production.
- ✓ Ration alterations in hot weather are of particular significance and benefit to horses performing endurance work or extended periods of exercise, due to the propensity for heavy sweating.

Tailored Dietary Requirements

- ✓ Ensure the total amount of roughage as hay and chaff is maintained at a minimum of 25-30% by weight of the ration.
- ✓ Reduce the weight and volume of the ration by substituting lower energy containing feeds such as chaff and oats for higher energy dense grains such as barley (extruded preferably) and corn (cracked or extruded preferably).



- ✓ Aim to achieve a ration containing approximately 3% fat (30% of the ration). Horses are able to utilize up to 30% of the diet substituted as fats however, introduction of oils should be done progressively at 30-40mL increments weekly until the desired level is achieved.
- ✓ Dampen feeds where possible to minimize respiratory burden while also increasing the involuntary daily fluid intake.
- ✓ Provide a balanced electrolyte daily.

Feeding Practices

- ✓ Where possible, it is preferable to divide the total daily feed volume of concentrate (grain, protein meals), hay, chaff and electrolytes into 3 small meals. This prevents excessive overloading of the digestive tract while also minimizing the heat of digestion which may increase core body temperature.
- ✓ Consider that higher energy density feeds provide a smaller volume and reduced heat waste while providing the necessary caloric intake for adequate energy provision. This is of particular importance for endurance and long distance training whereby it is advantageous to substitute 10% by weight of the grain portion of the ration with oil.

General Management Guidelines

- ✓ Remove all tack, particularly that restricting breathing (girth) and impeding heat loss from the lower limbs such as bandaging or padding. This will allow a quicker restoration of recovery and allow the tendons and lower limbs to lose heat rapidly.
- ✓ Hose the horse immediately following exercise and scrape off excess fluid to facilitate the evaporative process, particularly around the pulsatile areas of the gut, limbs and neck. It is not advisable to leave warm water on the body of a horse in humid weather as this will cause the body temperature to decrease slowly rather than rapidly (caused by the insulating effect of water trapped in the coat). Additionally, walking the horse will further aid air flow and encourage evaporation.
- ✓ Allow the horse to adequately cool prior to transporting. Confinement, particularly with other heated horses will increase the trapped heat within a confined space such as a trailer or truck and encourage further sweat and therefore valuable electrolyte losses. Adequate air flow should be ensured whilst travelling.
- ✓ Exercise in the cool part of the day where possible. It must be considered that horses may take up to 4 hours to restore normal body temperature following exercise.
- ✓ Pre-cooling the horse prior to exercise aids in delaying the accumulation of body heat, as the core temperature increases during exercise. The evaporation of water from the coat during work also aids to lower the core temperature and may significantly reduce sweat loss under hot and humid conditions.

SUPPLEMENTS TO INCLUDE IN HOT & HUMID CONDITIONS



Salkavite® provides all essential electrolytes that a horse in work loses including sodium, potassium, calcium, magnesium, chloride, phosphate and sulfate as well as additional B-Group vitamins. It also contains Vitamin E and Rutin due to their acknowledged benefits to a horse subjected to extreme physical stress.



Racing Oil® supplies a palatable supplementary source of energy with Linolenic (Omega 3) and Linoleic (Omega 6) fatty acids in appropriate balance. Additionally, the supplementation of dietary oil has beneficial effects to aerobic performance whereby the use of dietary fats spare muscle glycogen stores, thus extending endurance and minimizing lactic acid build-up. The addition of fat into the diet also assists the absorption of fat soluble vitamins (A, D, E, K) contained in the feed or added to the diet in supplement form while improving the stability and increasing the protection of cell membranes and the health of the skin.



L-Carnitine[®] enhances the ability of skeletal muscle to oxidize fatty acids and ensures optimal carbohydrate metabolism. Additionally, L-Carnitine aids liver synthesis and helps reduce the storage of body fat and the amount of fat in the blood, assisting utilization of body fats for energy production rather than depleting more critical energy reserves of glycogen.

The addition of L-Carnitine to diets high in fat content is advised due to aiding to optimize fat utilization and energy conversion while simultaneously ensuring peak heart and skeletal muscle function. The supplementation of L-Carnitine also aids to delay the accumulation of lactic acid in muscles when working at maximum exertion.



Electropaste[®] provides a concentrated, portable source of B-Group vitamins, electrolytes and anti oxidants including Vitamin E to rapidly replenish body stores depleted by hard exercise or transportation.



Ranvet

Science

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Toll Free Nutritional Consultation Service

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