



Ranvet

HORSING AROUND

SOUNDNESS; Balancing Exercise, Energy & Protein

Exercise, energy and protein are intimately associated. The level of exercise, provision of high quality protein intake and the avoidance of growth surges or deficits all contribute to the overall soundness of the young horse. **When feeding the growing horse, the aim is to achieve a steady growth rate from birth to maturity, avoiding depressions in growth or spurts in growth by ensuring that all nutrients are consumed in the correct amounts and ratios.**

Mature size and weight is genetically predetermined and will be reached at a given age depending on breed and nutrition.

Exercise & Energy

Energy provision is essential for growth however, excess energy provision and subsequently quickened weight gain and rapid growth rate may result in an increased incidence of Developmental Orthopaedic Disease (DOD) in the growing horse. The term DOD is a multi-factorial syndrome referring to and encompassing a variety of skeletal problems associated with the growth and development of young, growing horses.

Energy from Pasture

In addition to energy rich cereal grains, pasture grasses are also sources of energy however, **the quantity and quality of protein is highly variable and dependent on seasonal conditions, pasture types, stage of maturity and even the time of day.** Therefore when pasture is plentiful it is advisable to reduce grain provision, as horses will be obtaining additional energy from pasture consumption. However, **consistent provision of a high quality protein supplement should be maintained at recommended levels.**

Exercise is vital for sound growth, as it acts to increase bone strength and density while simultaneously improving muscle development. For optimum bone strength/density and muscle development to be achieved a regular exercise program must be introduced. Particularly in cases where young horses are confined and given forced exercise, they must develop and increase bone mass necessary for skeletal remodeling resulting from both growth and exercise load whereby an inadequate nutrient supply can produce weak/fibrous bone rather than strong/dense bone.



When pasture comprises a large portion of daily feed consumption, it is recommended to submit samples for analysis in order to prevent dietary deficiencies.

SCIENCE



INNOVATION



EXCELLENCE

Protein Quality

A high quality protein intake combined with adequate mineral and vitamin intake is essential for bone strength and muscle development. While common 'energy dense' grains such as oats, corn and barley provide a level of protein it is generally considered to be of a poor quality and inadequate to meet the requirements of the growing horse. **Superior quality protein, determined by the amounts of amino acids** is provided by feeding protein sources such as;

- **Ranvet 500 PLUS®** high quality protein concentrate.
- Soyabean meal.
- Cottonseed meal.
- Lupins.
- Tickbeans.
- Lucerne hay/chaff.

A deficiency of protein will do more to reduce growth rate and soundness than the lack of any other nutrient.

Protein Requirements

In conditions where pasture is of moderate to high quality and young horses are growing rapidly, there is a tendency to remove the protein component of the ration in an attempt to slow or 'steady' growth rate. This can have detrimental effects on the young horse in terms of growth and soundness, as the **withdrawal of protein results in not only slowed growth rate but over-fat horses**. This additional weight places stress on the legs, which are weakened by the withdrawal of protein from the diet resulting in an un-sound horse and an increased risk of DOD.

The Keys to Development of a Sound Horse

- ✓ High quality protein intake to ensure optimal bone growth and muscle development.
- ✓ Provision of optimal levels of lysine and methionine (2 essential amino acids contained in **Ranvet 500 PLUS®**).
- ✓ Regular exercise.
- ✓ Energy provision from grain or pasture in amounts sufficient for growth but not fat deposition.
- ✓ Adequate mineral and vitamin intake.

It must be considered that while the provision of a balanced diet will significantly reduce the incidence of DOD's, there are other contributing factors which may cause the development of skeletal abnormalities such as;

- Excessive exercise level/biomechanical trauma which may result in disruption of normal blood supply to cartilage resulting in failure of ossification.
- Rapid growth rate, resulting in excessive weight bearing stress on developing joints and bones.
- Genetic influence and heritability are thought to contribute to the load of risk factors.

Ranvet 500 PLUS® has a unique amino acid profile which provides the building blocks to lay down bone and muscle in growing horses and helps hold muscle condition on mature horses. Additionally, **Ranvet 500 PLUS®** allows you to vary the grain/energy content of the diet, while maintaining required protein intake.

**NEXT
MONTH
Feeding
Horses in
Hot
Weather**

Ranvet's Nutritional Consultation Service for your horse's every need;

- Customised diets
- Energetic demands
- Vitamin & electrolyte requirement
- Growth & development needs
- Correcting metabolic disturbance

SCIENCE

■ INNOVATION

■ EXCELLENCE