

ENERGY AND PROTEIN NUTRITION OF HORSES

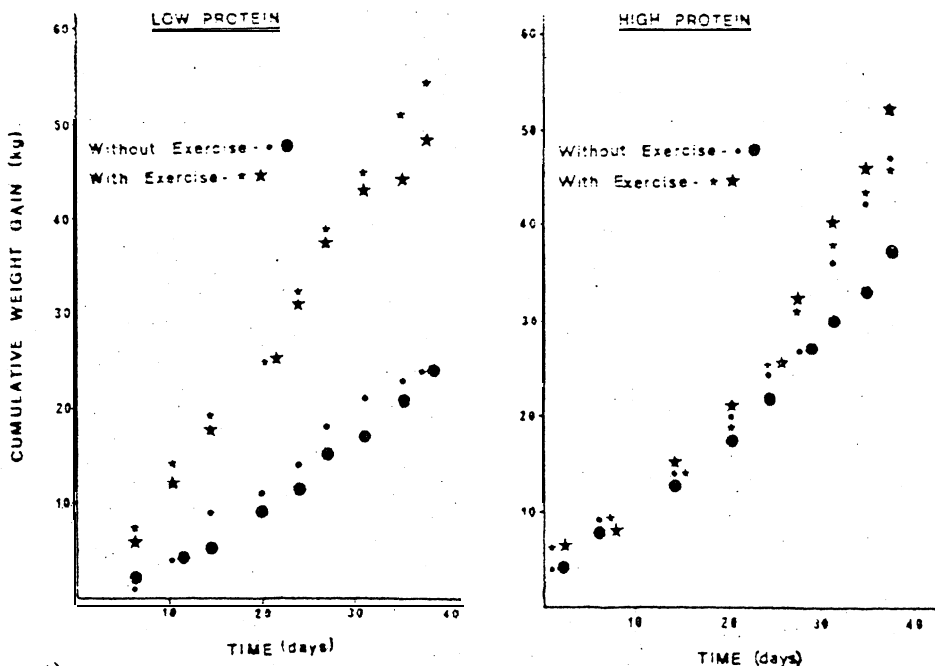
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Information on the energy and protein requirements of horses for growth is both scarce and contradictory. Under grazing conditions, horses experience fluctuating energy and protein levels, and at times experience deficiencies of both. In the grazing monogastric, digesta flow rates often increase as the digestibility of a sward decreases; which is contrary to the digesta flow rates in the grazing ruminant.

In this experiment we examined the effect of exercise in growing horses and attempted to correlate protein intake with growth and feed intake at two levels of protein in the diet.

Eight closely bred 2 year old horses were selected and randomly assigned to the treatments (2 levels of protein, 2 levels of exercise). Standardised exercise was provided to four of the horses by a rotary "horse walker". The animals were trotted approximately 12 kilometres/day. The basal diets were 60% oaten chaff, 5% dehydrated molasses, 1% salt, 1% trace minerals, 1% dicalcium phosphate, with the addition of 30% B3-rice, 3% vegetable oil (Diet A, 6% CP) or 10% B3-rice, 20% extruded soyabean meal and 2% vegetable oil (Diet B, 12% CP). All were isocaloric and were available *ad libitum*; daily intake was measured.

Results are shown below. Exercise increased the feed intake and digestibility of the diet and decreased the percentage requirement for protein in the dry matter.



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