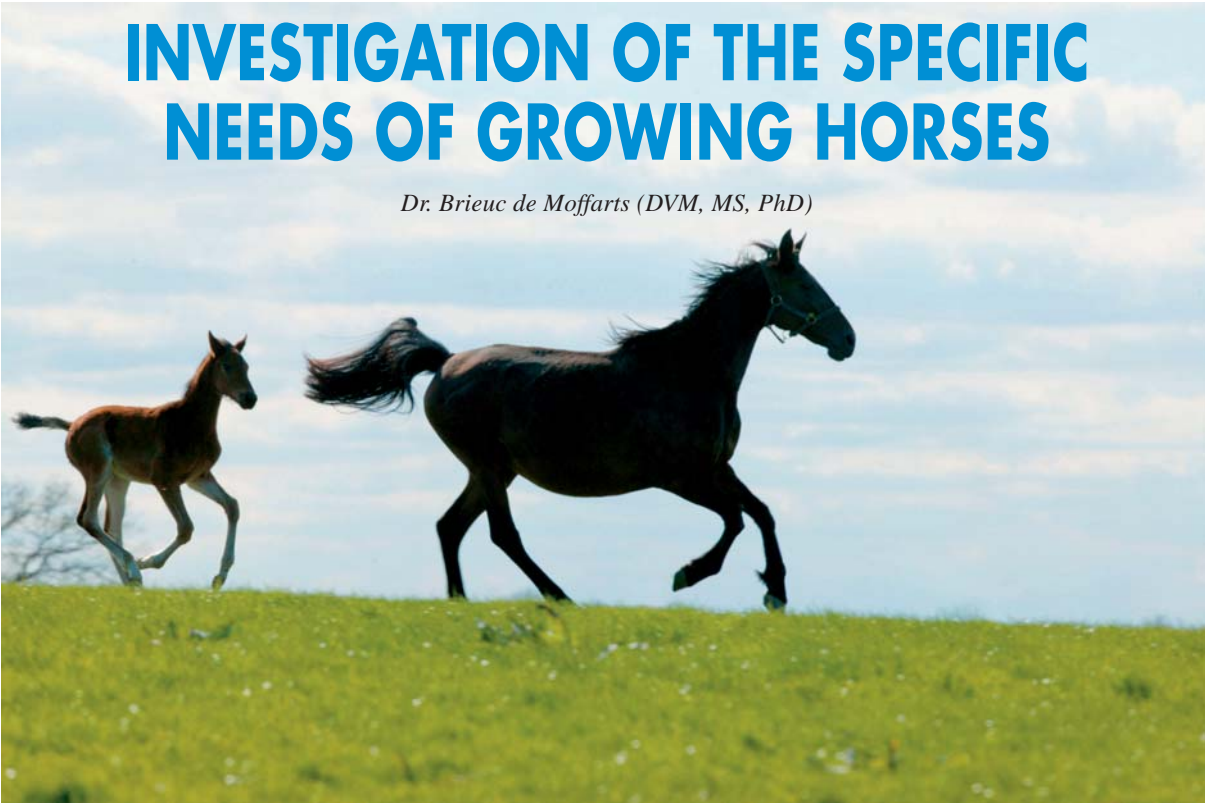


INVESTIGATION OF THE SPECIFIC NEEDS OF GROWING HORSES

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NEW : TWYDIL® GROWING

This article aims at describing the specific needs of foals between weaning and breaking. We shall not therefore consider either the foetal period or suckling which relates more to the nutrition of the mare. Good nutrition of the foal during growth is essential in order to guarantee optimal growth and preparation for its future career by protecting its health and wellbeing.

Although the real needs of the foal are not completely understood, the major principles of feed supply remain valid for these young horses, namely:

- 1) An optimal energy supply based on the foal's growth curve. Knowing that the locomotor system of the young horse depends on specific strength lines related to its morphology and its movement, it is essential to ensure that it is fit rather than fat. If allowed to become fat the foal's development will be less favourable. The theoretical growth pattern is shown in Table No. 1.
- 2) An optimal supply of fibre generally in the form of good quality hay. After weaning, alfalfa associated with a good grass hay and access to a meadow are essential. The nutritional requirements are shown in the Table No. 1. Varying the type of fibres can be an advantage for the foal's development. Cellulose is the main type of fibre; it regulates the intestinal flow by its structure, as well as the fermentation in the large intestine. However, other "fibres" are also important for the health of the young horse since they help to strengthen the stability of the gastro-intestinal flora and help to control the pH of the digestive tract, mainly through the production of volatile fatty acids. These other fibres include, for example, the oligo-fructo-saccharides, well known pre-biotics, which are able to reduce the risk of diarrhoea.
- 3) The regulation of the amount of protein supplied by the ration is also important (see table No. 1). From 6 to 18 months, it is also essential to ensure the quality of protein and the available amino acids and, in particular, the concentration of lysine. Certain data suggest that varying the sources of amino acids can improve muscular growth.
- 4) The basic ration generally contains sufficient macro-minerals. Nevertheless, it is important to keep a check on the calcium: phosphorus ratio (it should be between 1.5 and 2.2) as well as supplies of magnesium. The growth of the foal requires a regular supply of micro-nutrients (see table No. 2).

TWYDIL® GROWING provides a "new" balancer adapted to the needs of young growing horses by supplying all the vitamins and the essential trace elements for their growth. It also offers an optimal range of amino acids to supplement the protein supply. The formula, which is enriched with pre- and pro-biotics, allows the young horse to diversify its intestinal flora and helps to resist against digestive disorders.

TWYDIL® has prepared a supplementation programme for growing horses taking all these important factors into account.

The association of TWYDIL® PMC and the new TWYDIL® GROWING allows the foal to develop normally with good muscles, tendons, bones, ligaments and cartilage. This programme also aims to ensure the digestive well-being of the foal by giving better protection against certain digestive disorders.

The combination of TWYDIL® PMC and TWYDIL® RACING, when it is introduced during the growing phase, can help to ensure that the young horse arrives at the training centre ready to begin its work in perfect physiological condition and is able to continue growing in an optimal way.

Table No. 1

Indicative values associated to a growing horse.



Age (in months)	Ratios forage concentrate (%)	% protein	Theoretical weight (kg) (adult horse weighing 500 kg)
6	30/70	16	230
12	40/60	14	325
18	55/45	12-14	350
24	65/35	< 12	450

Table No. 2

Average daily needs of the foal in growth from weaning to breaking.

Fat-soluble Vitamins			Water-soluble Vitamins		
Vitamin A	IU	30000	Thiamine	mg	20
Vitamin D3	IU	2000	Riboflavin	mg	7.5
Vitamin E	IU	500	Pyridoxine	mg	7
Vitamin K	mg	2.5	B ₁₂	mg	0.07
			Niacin	mg	30
			Pantothenic acid	mg	12
			Biotin (vitamin H)	mg	0.5
			Folic acid	mg	18
			Choline	mg	280
			Ascorbic acid	mg	-
Trace Elements			Macro-minerals		
Copper	mg	25	Salt (NaCl)	g	10 to 20
Iron	mg	375	Magnesium	g	12
Manganese	mg	150	Potassium	g	50
Zinc	mg	300			
Cobalt	mg	3.75			
Iodine	mg	1.5			
Selenium	mg	1.25			



	YOUNG FOAL	WEANED FOAL	YEARLING UNTIL BREAKING	2 YEARS OR MORE NOT YET BROKEN	AFTER BREAKING
TWYDIL® GROWING 	 A few grams asap (max. 20 g)	 40 g	 60 g	 80 g	 -----
TWYDIL® PMC 	A few grams asap (max. 20 g)	20 g	40 g	40 g	50 g
TWYDIL® RACING 	-----	-----	-----	-----	75 g

TWYDIL® programme during growth:

- 1) Progressive adaptation of the young foal to ingest the supplement of TWYDIL® GROWING and TWYDIL® PMC.
- 2) By weaning it should be receiving daily supplies of 40g TWYDIL® GROWING and 20g TWYDIL® PMC.
- 3) The supply of TWYDIL® GROWING should be increased

gradually to 60g and TWYDIL® PMC to 40g during the period up to the age of 12 months.

- 4) This daily supply should be increased to 80g for horses not yet broken at 2 years.
- 5) TWYDIL® GROWING should then be gradually replaced by TWYDIL® RACING during breaking.

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