



Nutrition for brood mares, part 1 "Energy and protein"

Building up strength

The plan is fixed to have a mare covered — wonderful! To ensure that the mating, the pregnancy, the lactation as well as the birth and the development of the foal proceed optimally, the nutrition of the mare should be adapted to her special needs. First and foremost that means: more energy and high-quality protein.

A living creature is going to be born! As for human beings, pregnancy and giving birth is a highly complex, strength-sapping process for horses. The body needs more nutrients, sometimes in an altered composition. An optimized supply of all the required nutrients and messenger substances can effectively support the health of the brood mare and the development of the foal.

Nutrition prior to mating

Once the decision has been taken to have a mare covered, the mare's diet should be adjusted accordingly in order to secure an ideal uptake, as the body weight and the supply with beta-carotene and amino acids influence the function of the ovaries and the oestrus behavior of the mare. For under- or overweight mares, long-term planning is advisable — normal weight should be reached well before the planned date of having her covered! About two weeks prior to the scheduled date, the feeding should be changed, because the mare now needs about 20 percent more energy than before. For a better beta-carotene and amino acid

supply, it is also recommended to administer special breeding feed prior to the scheduled mating date up until the eighth week of pregnancy. Afterwards, the diet may be slowly changed back to the usual feed ration, because in the first weeks of pregnancy no special feeding is required.

Feeding from the 8th month of pregnancy onwards

In the last third of pregnancy, the foal puts on about 70 percent of its later birth weight. Additionally, the mare's body is preparing for the upcoming lactation, i.e. for suckling the foal. At this stage, both the mare and the foal need more energy and high-quality protein.

When a mare is heavily pregnant, her **energy requirement** increases by approximately 30 percent. The required supply of additional nutrients cannot be achieved by simply administering more food: Since the foal's growth leaves little space in the mare's abdomen, the mare is not able to take up more food! Special breed food is therefore more energetic, it contains more nutrients per kilogram of dry matter.

At this stage, the mare also has an increased need for **protein**, especially for raw protein that can be absorbed in the small intestine. Until the end of the pregnancy this need increases to around 1.8 times the usual amount. In the last month of pregnancy, the ratio of digestible protein to digestible energy is about 6.5: 1. Good to know: One protein is not like another — it is the composition of the amino acids that counts. Pregnant and lactating mares require, for instance, a significantly higher amount of the amino acid lysine. They now need the fourfold amount!

Peak lactation four weeks after birth

Many breeders still believe that the time of highest milk production, or peak lactation, is when the foal is about three months old. However, recent studies show that peak lactation already takes place at the end of the foal's first month of life. At this stage, the mare requires the highest intake of energy and protein. There is another reason why this makes sense: At this stage of life, the foal is hardly able to absorb any other food than the mare's milk. Therefore, the energy content of the milk is absolutely decisive for the foal to grow up healthy and strong.

Classic ration with lack of protein supply

Feed	Amount	Amount of pcvXP* contained
Hay	10,0 kg	350 g
Oat	4,5 kg	360 g
Force	120 g	2 g
	Total	712 g

Breeding ration with demand-covering protein supply

Feed	Amount	Amount of pcvXP* contained
Hay	10,0 kg	350 g
Zuchtmüsli	4,5 kg	513 g
	Total	860 g

Feed	pcvXP* per kg uS
Hay (late 1st cut at the end of the flowering stage)	35 g
Oat	80 g
marstall Force (mineral and vitamin concentratet)	17 g
marstall Zuchtmüsli	114 g

*pcvXP = absorbed in the small intestine

Comarison of rations needed to cover the increased protein requirement during high pregnancy and lactation.

The requirement for a 550 kg mare is 865 g pcvXP *. Quantity per mare and day.

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Our recommendation

marstall Zuchtmüsli – for brood mares and stallions!



- For brood mares from the 8th month of pregnancy and stallions
- With optimised levels of essential amino acids
- High levels of β -carotene and lysine
- Rich in copper to fill the foetal liver depot
- Contains organic selenium, for vital foals and increasing the contents in the mare's milk