



# 10 More Reasons to Use Horse Supplement 35 (HS-35)

## IS YOUR HORSE GETTING ALL THE ESSENTIAL AMINO ACIDS THAT IT NEEDS?

There are 22 amino acids that comprise all of the proteins the body makes and uses. The liver can synthesize 12 of these; the other 10 cannot be synthesized and must be supplied in the diet. These 10 are called essential amino acids.

### THE 10 ESSENTIAL AMINO ACIDS:

- |                        |                     |
|------------------------|---------------------|
| 1. Arginine (Arg)      | 6. Histidine (His)  |
| 2. Isoleucine (Iso)    | 7. Leucine (Leu)    |
| 3. Lysine (Lys)        | 8. Methionine (Met) |
| 4. Phenylalanine (Phe) | 9. Threonine (Tre)  |
| 5. Tryptophane (Trp)   | 10. Valine (Val)    |

## WHAT HAPPENS IF MY HORSE IS MISSING ANY ONE OF THE ESSENTIAL AMINO ACIDS?

Protein production ceases until the needed amino acid arrives. It doesn't matter how much of the other amino acids are available; if the required one is missing, the production of that protein is halted. Therefore, without **ALL** of the essential amino acids, the protein present is not bio-available and will be excreted in the urine.

### PROTEIN QUALITY.

Horses are only able to digest 45 to 85 percent of the protein in most commonly fed feeds, depending on quality and source (cereal grains on the high end and mature grass forage on the low end). If digestibility is lower, greater amounts are needed in the diet. Protein digestibility differs with the source, quality and amount of protein and fiber in the diet. It is also affected by improper processing and inadequate drying prior to storage. When supplementing your horse's diet with additional protein, the percentage refers to the total amount of protein in the food. Remember, however, that the quality of the protein is just as important, if not more, than the percentage. In other words, some proteins are better than others. Some are of such low quality, they are totally useless and you might as well not feed them at all. From a horse's point of view, and according to Melyni Worth, PhD. P.A.S., one of the world's leading equine nutritionists, the quality of a protein is measured by HOW MANY of the essential amino acids is supplied by a particular protein source, and how well the range of amino acids matches the requirements of the animal.

## DOES ALFALFA SUPPLY THE MAJORITY OF PROTEIN THAT A HORSE NEEDS?

According to Worth, **alfalfa is a low-quality protein source** because it does NOT contain ALL of the essential amino acids that a horse needs.

## HAVE YOU EVER BEEN IN A HORSE BARN WHERE THE URINE SMELL PRACTICALLY TOOK YOUR BREATH AWAY, AND YOU THOUGHT THE BARN ONLY NEEDED BETTER VENTILATION?

According to Worth, *if the **essential** amino acids are not present, it is not bio-available and will be excreted in the urine. This effect can be seen when a low-quality protein source like alfalfa is fed—the horse's urine output increases, and the high levels of nitrogen in urine make it smell very strong, which is a reliable indicator of a diet that is **low in essential amino acids.***

## HS-35 has ALL 10 of the essential amino acids

Feeding one cup\* of HS-35 daily gives your horse ALL of the essential amino acids, ALL the required BALANCE of vitamins and minerals with added biotin and probiotics for optimal health. HS-35 is very palatable, economical and easy to use.