

# THE USE OF ALTERNATIVE PROTEIN FEED IN ANIMAL NUTRITION

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In light of the constantly rising prices of soy meal, it is worth looking at other sources of protein in compound feed. Post-extraction soy meal is today the basic high-protein feed used in feeding pigs and poultry.

The aim of the presentation is to present alternative fodder and protein crops that we can use in animal nutrition in order to be able to partially become independent of post-extraction soy meal.

A chance for partial replacement of post-extraction soy meal is also legume seeds. In the climate of our country, the cultivation of pea, horse bean and lupins should be taken into account. Of the listed plants, peas may potentially be of greatest importance. It is characterized by a relatively low protein content, but it is a protein with a favorable amino acid composition. Bean seed is characterized by a higher content of protein (28-30%), its composition is slightly worse than peas. They contain, however, certain amounts of pyrimidine glycosides, worsening increments, feed intake, and laying hens, egg size. Therefore, its participation in the mixture should be limited. Of the listed legumes, the richest in protein are yellow (43%) and white (40%) lupine seeds. Narrow-leaved lupine contains about 32% of protein. However, this is a protein deficient in essential amino acids, especially lysine and tryptophan. The basic limiting factor in the use of lupine in compound feed is the presence of toxic alkaloids. In addition, carbohydrates contained in lupine seeds are not digested by poultry. Soy protein can be partially replaced by means of dried distillers (DDGS), a by-product in the process of obtaining spirit. The most common are corn and rye decoctions. The protein content in DDGS is quite high, and is about 34% for rye decoction and 29% for maize decoction. Pigs of animal origin are an excellent but expensive source of protein. Most often, raw materials such as fish meal, blood meal and dried blood plasma are used. These are high protein feeds with excellent amino acid composition. In addition, blood meal and dried blood plasma contains immunoglobulins, stimulating the immunity of young animals.

In conclusion, it should be noted that the alternative protein sources on the domestic market are able to partially replace the extracted soy meal. However, we are not able to completely eliminate it from the nutritional doses used in animal nutrition.