

## FORMULATING WITH *ENDOFEED DC* AND *ENDOFEED 500*

The Non Starch Polysaccharides (**NSP**) are the major part of the fiber in monogastric diets and they are considered as feed components that are either poorly digested or anti-nutritive. This is due to the fact that (1) they increase the viscosity of the digesta, (2) limiting the accessibility of digestive enzymes to main nutrients (crude protein, fat and starch), (3) reducing the intestinal motility and slowing the transit time of the digesta, and (4) enhancing the development of active microflora in the lower parts of the intestinal tract negatively interfering with the digestion and absorption of nutrients. All these negative effects caused by the NSP present in monogastric diets make necessary to use feed enzymes that will cleave the large molecules of NSP into smaller polymers, thereby reducing the thickness of the gut content and increasing the nutritive value of the feed.

**ENDOFEED** is the multi-enzyme complex developed by MyA (Pintaluba Group, Spain) containing high amounts of betaglucanase and xylanase registered in the EU (E1601) for broilers and layers. Due to a unique selection of strains of *Aspergillus niger* and to the **non-GMO** fermentation process the product also contains specific side activities, mainly alpha-galactosidase and betamannanase that help with digestion of RSO (Raffinose Series Oligosaccharides) and betagalactomannans. This makes the product performing not only in the typical wheat-barley-rye diets, but also in corn-soy diets. All these NSP enzymes contained in **ENDOFEED** will release extra energy from the cereals, by-products and protein sources therefore increasing the nutritive value of the diet. The matrix reflecting this digestibility enhancement is shown bellow in Table 1.

**Table 1: Matrix values for ENDOFEED DC and ENDOFEED 500 for broilers and layers in corn-soya based diets\*\*.**

	<b>ENDOFEED DC (125g/Mt)</b>	<b>ENDOFEED 500 (500 g/Mt)</b>
Lysine (%)*	150	37.5
Methionine (%)*	85	21.3
Cysteine (%)*	210	52.5
Methionine + Cysteine (%)*	300	75
Threonine (%)*	190	47.5
Tryptophan (%)*	120	30
Arginine (%)*	100	25
Valine (%)*	140	35
Isoleucine (%)*	144	36
Crude Protein (%)*	2990	747.5
ME (kcal/kg)	440.000	110.000

\* Apparent ileal digestible values.

\*\* We recommend that when using both NSP enzymes and phytase in the same diet, the matrix value is increased by 80% of the sum of the recommended value of crude protein and aminoacids where both enzymes have an effect.