

Let's Talk About Enzymes...

What makes Hostazym® X a unique nutritional tool?

Production animals need to extract nutrients efficiently out of the feed and maintain a good intestinal health status.

Hostazym® X is a unique digestive enzyme complex, specifically developed for animals to achieve an optimal digestion of feed, independently of the feed composition. Hostazym® X provides a consistent solution to overcome the anti-nutritional effects of many NSP (Non-Starch Polysaccharides) fractions present in regularly used raw materials.

The uniqueness of Hostazym® X relies on four key features:

PRODUCTION PROCESS

Hostazym® X is produced via a unique process. It is the only EU-registered feed enzyme (nr. 4a1617) produced by Surface Fermentation (SF), which explains:

- A high natural heat-tolerance
- No need for a protective coating

PERFECT BY NATURE

The Hostazym® X enzymatic complex is synthesized on feed-grade wheat bran, which makes it an intrinsic match with the feed composition.

Because wheat bran is a highly fibrous substrate ($\pm 40\%$ NSP) it induces the production of a fully adapted enzymatic complex. This makes Hostazym® X a valuable enzyme tool with:

- Unique and broad-spectrum activities
- Consistent effects in everyday's feed formulation

SPECIAL FORMULATION

After the unique enzyme production process, Hostazym® X is formulated via a patented micro-granulation procedure (patent WO/97 42837), delivering a final product with a:

- Prolonged shelf life and 85°C pellet stability
- Homogenous distribution in premix and feed
- Excellent enzyme release in the animal foregut

ZOOTECHNICAL PERFORMANCE BOOSTER

The enzymatic complex of Hostazym® X is produced by a non-GMO *Trichoderma*, enabling a balanced degradation of both insoluble and soluble arabinoxylans (AX). This results in:

- Less nutrient caging & strongly reduced gut viscosity
- Improved nutrient utilization & less intestinal disorders
- Prebiotic oligosaccharides in the lower gut



CONCLUSION

Hostazym® X stands for:

- ✓ Ideal fibre affinity
- ✓ Consistency in corn and wheat based diets
- ✓ High nutrient release
- ✓ Exceptional robustness
- ✓ Proven feed efficiency

It's all about consistency: the added value of Hostazym® X in broiler nutrition

In the past years many efficacy trials have been performed to demonstrate the effect of Hostazym® X on the zootechnical results of broilers.

Remarkably, Hostazym® X always gives a positive response in enhancing performance, independently of the diet type.

Figures 1 and 2 illustrate the response of Hostazym® X in improving the performance of the animals and the extra energy release in a variety of diets.

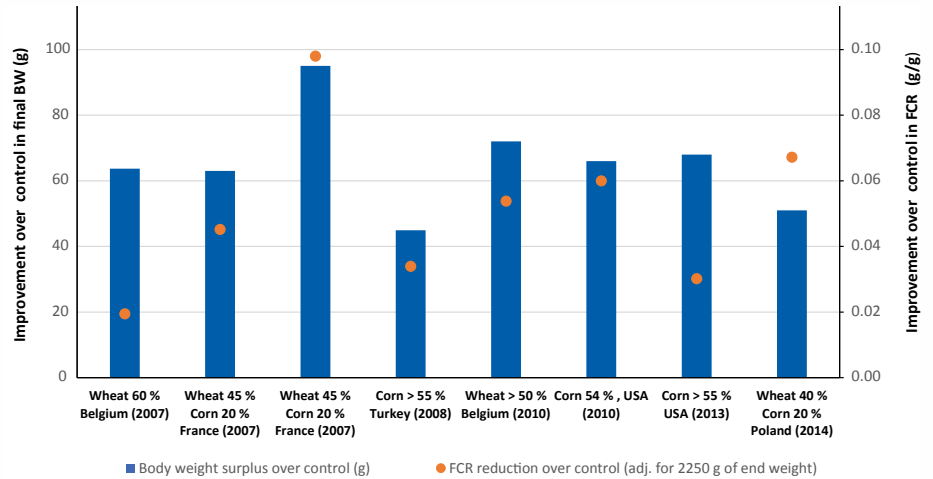


Figure 1. Effect of Hostazym® X supplementation at 1500 EPU/kg on broilers performance in different types of diets

The basic trial set up for the data shown in Figure 1 was:

- Hostazym® X added on top
- Broilers slaughtered at 36 to 49 days (2 – 3.5 kg end weight)
- Diet base: Corn, wheat and corn/wheat diets

The results clearly show that adding Hostazym® X at recommended dosage boosts overall broiler performance, independently of the cereals used in the feed formulation.

The average of all trials for broilers supplemented with Hostazym® X at 1500 EPU/kg of feed resulted in: **66 grams extra final body weight and 0.053 points lower FCR.**

The data presented in Figure 2 were calculated considering the energy levels fed and the technical performance in multiple efficacy trials (either with Hostazym® X added on top or reformulated in the diet). The calculated metabolisable energy (ME) equivalence of Hostazym® X is shown for each trial.

The results show that the addition of Hostazym® X at recommended dosage of 1500 EPU/kg (on top or reformulated) corresponds to a **Metabolised Energy (ME) equivalence of more than 100 kcal.**

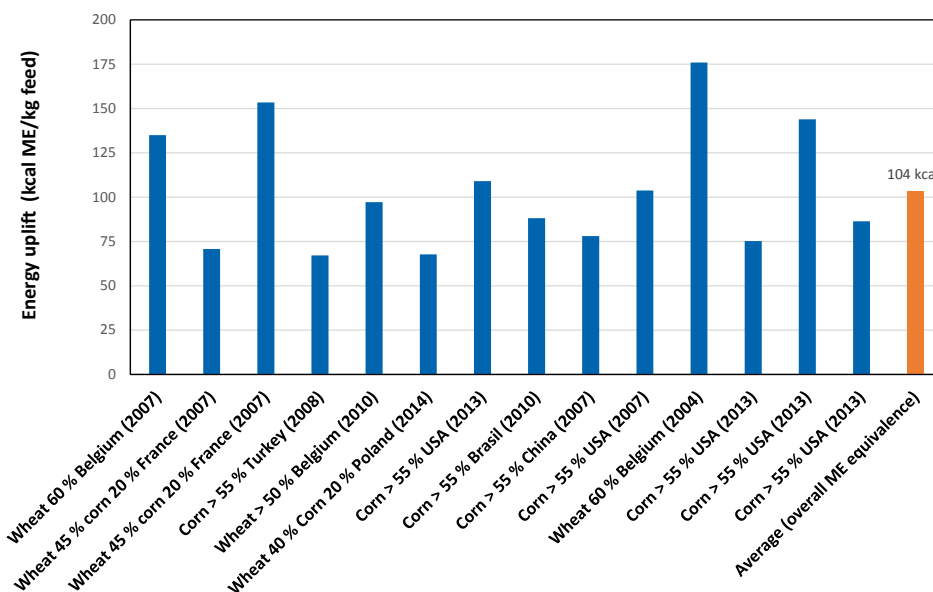


Figure 2. Energy uplift by Hostazym® X at 1500 EPU/kg over various types of broiler diets (on top and reformulated)

CONCLUSION

Hostazym® X applied in broiler feed gives:

- ✓ + 66 grams higher end Body Weight
- ✓ 0.053 lower Feed Conversion Ratio
- ✓ above 100 kcal ME uplift per kg of feed

It's all about consistency: the added value of Hostazym® X in turkey nutrition

Alongside the work done with broilers, several efficacy trials were conducted with turkeys to demonstrate the effect and added value of Hostazym® X supplementation on zootechnical performance.

Also with turkeys Hostazym® X gives a consistent positive response in enhancing performance, independently of the diet type.

Figure 1 summarizes the response of Hostazym® X in improving animal performance over different diets.

The basic trial set up for the data shown in Figure 1 was:

- Hostazym® X added on top
- Turkey hens slaughtered at 12 to 18 weeks (8 – 12 kg end weight)

- Turkey toms slaughtered at 12 to 18 weeks (10 – 20 kg end weight)
- Diet base: Corn, wheat and corn/wheat diets

The results clearly show that adding Hostazym® X at recommended low dosage of 1050 EPU/kg of feed boosts overall turkey performance, independently of the cereals used in the feed formulation.

Figure 2 shows the zootechnical improvement that can be achieved by taking the average of all trials performed with supplementation of 1050 EPU Hostazym® X per kg of feed:

302 grams extra final body weight (+2.4%) and 0.088 points lower FCR (- 3.5%)

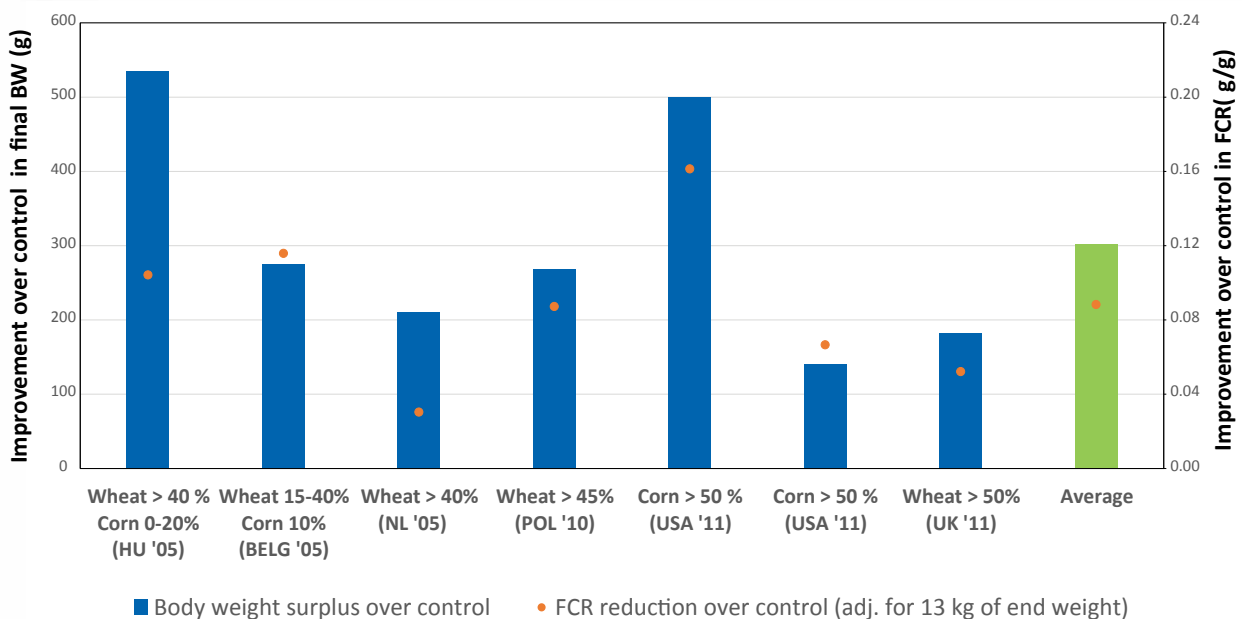


Figure 1. Effect of Hostazym® X supplementation at 1050 EPU/kg on turkey performance in different types of diets

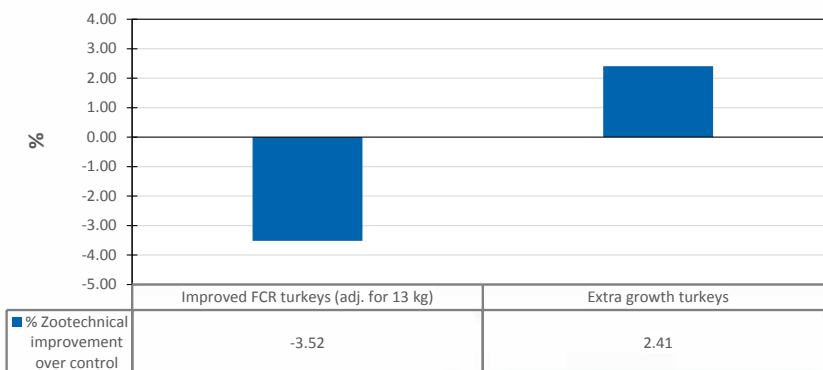


Figure 2. Average improvement of zootechnical performance of turkeys with diets supplemented with Hostazym® X at 1050 EPU/kg

CONCLUSION

Hostazym® X applied in turkey feed gives:

- ✓ + 302 grams higher end Body Weight (+2.4%)
- ✓ - 0.088 lower Feed Conversion Ratio (- 3.5%)

It's all about consistency: the added value of Hostazym® X in pig nutrition

The growth and feed conversion of weaned piglets fed with Hostazym® X in the diet has been evaluated by analyzing trials run in the past years. As already demonstrated for poultry species, Hostazym® X is a highly effective tool to boost the performance of piglets as well.

Figure 1 summarizes the results of different piglet trials performed with comparable design but varying in diet composition to get different NSP profiles.

Trials were conducted with weaned piglets 7 - 23 kg (d28 - d70 of age) with equal initial body weights.

Results show that adding Hostazym® X at 1500 EPU/kg of feed boosts overall piglet performance, independently of the cereals used in the feed formulation.

The average of all trials gives the following outcome: for weaned piglets fed with Hostazym® X **up to 5.5% higher growth and 6% better FCR.**

Similarly to the work done with piglets, various efficacy trials have been conducted in grow-finish pigs, to prove the clear benefits of Hostazym® X supplementation on zootechnical results during fattening.

Figure 2 summarizes the results of different trials performed under comparable design but varying the diet composition to get different NSP profiles.

Trials were conducted with fattening pigs from 25-30 kg initial weight to 90-110 kg final weight (full fattening period) with similar initial body weights.

Results show that adding Hostazym® X at 1500 EPU/kg of feed improves pig meat production independently of the diet type.

The average results of all trials gives the following multi-diet outcome for fattening pigs fed with Hostazym® X: **up to 2% higher growth and 3.5% better FCR.**

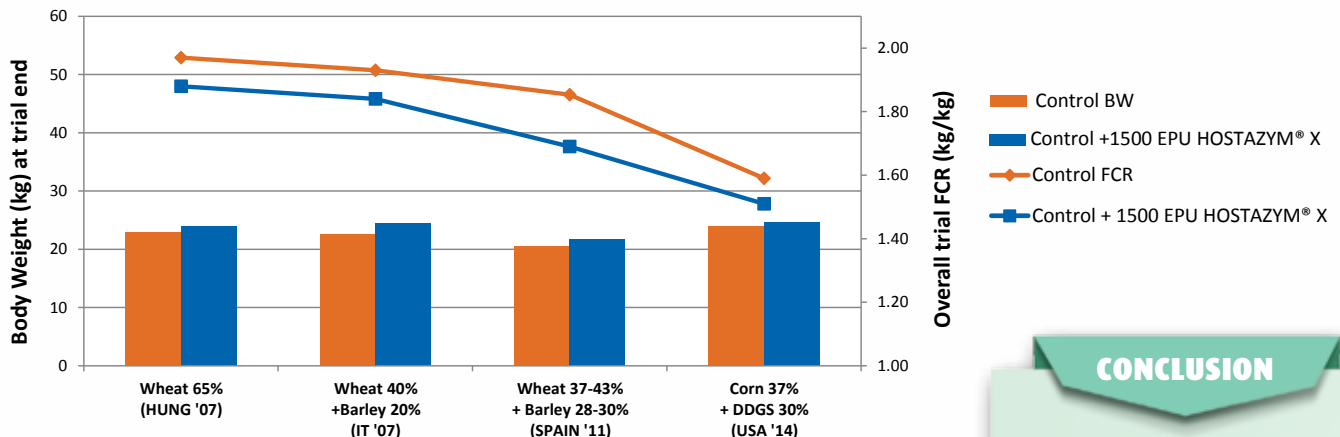


Figure 1. Effect of Hostazym® X supplementation on weaned piglets performance in different types of diets

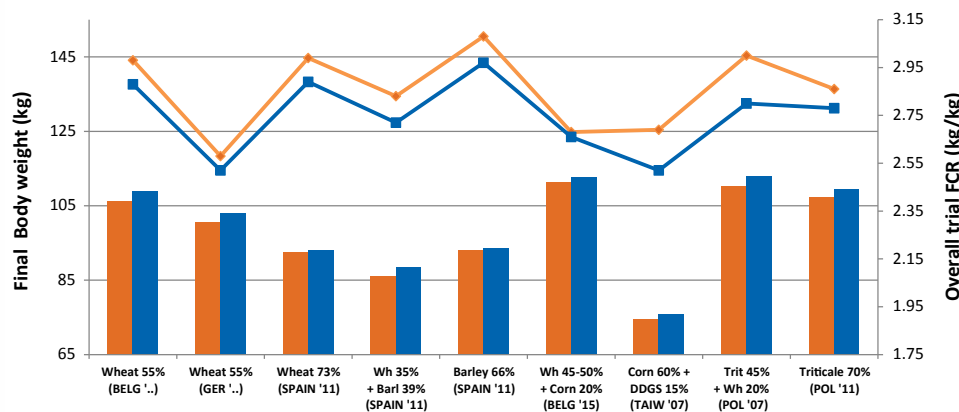


Figure 2. Effect of Hostazym® X supplementation on fattening pigs performance in different types of diets

CONCLUSION

Hostazym® X use results in:

- ✓ a consistent performance on a variety of substrates
- ✓ the break down of antinutritional effects of various NSP fractions
- ✓ higher nutrient utilization (= reduced feed costs)
- ✓ In weaned piglets up to 5.5% higher growth and 6% better FCR
- ✓ In fattening pigs up to 2% higher growth and 3.5% better FCR