

Let's talk about Hostazym® X in pigs



Pigs need efficient ways to extract more nutrients out of the feed and to maintain intestinal health. Hostazym[®] X is an unique digestive enzyme complex, specifically developed to meet these crucial objectives in everyday pig diet formulations. Hostazym[®] X provides a consistent solution for overcoming the antinutritional effects of many NSP fibre fractions (Non-Starch Polysaccharides), present inside conventional and more challenging pig diets.



unique

UNIQUE PRODUCT CHARACTERISTICS

1. SPECIFIC PRODUCTION PROCESS

Hostazym[®] X is produced in an unique way, being the only EU-registered feed enzyme (Nr. 4a1617) from **Surface Fermentation (SF)**. It explains why all of its enzymes have :

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



2. INTRINSIC MATCH WITH FEEDSTUFFS' NATURE

Hostazym[®] X is synthesized on **feed-grade wheat bran**. This highly fibrous substrate (\pm 40 % NSP) makes Hostazym[®] X a valuable enzyme tool with :

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

3. EXCEPTIONAL DOSAGE FORM

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

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

4. BOOSTING ZOOTECHNICAL PERFORMANCE

The enzyme complex inside Hostazym[®] X is produced by the non-GMO *Trichoderma*, enabling an **ideal affinity** for both insoluble & soluble xylans (AX), and giving:

- Less nutrient caging or excessive NSP viscosity
- Improved nutrient utilization & less intestinal disorders
- More efficient NSP breakdown vs. gut fermentation









TECHNICAL PERFORMANCE

WEANED PIGLETS

In past years many efficacy trials in piglets have been performed, to demonstrate the effect of Hostazym[®] X supplementation on **zootechnical results post-weaning**.

SET-UP:

- Comparable design
- Nursery weaned piglets 7 -23 kg (d28 d70 of age)
- Equal initial body weights
- But varying diet compositions, NSP fibre profiles

RESULTS:



CONCLUSIONS:

• Adding Hostazym[®] X at 1500 EPU/kg of feed boosts overall piglet performance, on many different cereal substrates.

All above trials combined, gives the following multi-diet outcome for weaned piglets supplemented on Hostazym[®] X



Daily practice: Hostazym® X in weaned piglets

- Consistent performance on a variety of substrates
- Less negative effects from various NSP fibres
- Higher nutrient utilization (reduced feed costs)
- Up to 5.5% higher growth & 6% better FCR

FATTENING PIGS

Similarly, various efficacy trials have been conducted in growfinish pigs, to proof the clear benefits of Hostazym[®] X supplementation on **zootechnical results during fattening**.

SET-UP:

- Comparable design
- Pigs 25/30 kg 90/110 kg end (full fattening period)
- Equal initial body weights
- But varying diet compositions, NSP fibre profiles

RESULTS:



CONCLUSIONS:

• Adding Hostazym[®] X at 1500 EPU/kg of feed improves pig meat production, on many different cereal substrates.

All above trials combined, gives the following multi-diet outcome for fattening pigs supplemented on Hostazym[®] X



Daily practice: Hostazym® X in fattening pigs

- Consistent performance on a variety of substrates
- Less negative effects from various NSP fibres
- Higher nutrient utilization (reduced feed costs)
- Up to 2% higher growth & 3.5% better FCR



strong benefits WHY HOSTAZYM® X ?

The continuous improvements seen in daily pig practice when applying Hostazym[®] X xylanase complex, can simply be attributed to its 5 core strengths :

- 1. Ideal fibre affinity
- 2. Cereal consistency
- 3. Desirable nutrient release
- 4. Exceptional robustness
- 5. Proven feed efficiency



USE OF HOSTAZYM® X

Nature	Non Genetically Modified (Non-GMO) Trichoderma		
Primary enzyme activity	Endo-1,4 β-xylanase (EC 3.2.1.8)		
Secondary enzyme activities	Cellulase (endo 1,4 β -glucanase), endo-1,3(4) β -glucanase, α -amylase, protease		
Standard concentrations	Hostazym [®] X micro-granulate : Hostazym [®] X 60000 (EPU/g) Hostazym [®] X 30000 (EPU/g) Hostazym [®] X 15000 (EPU/g) Hostazym [®] X 6000 (EPU/g) Hostazym [®] X 3000 (EPU/g)	Hostazym [®] X liquid : Hostazym [®] X 30000 Liquid (EPU/g) Hostazym [®] X 15000 Liquid (EPU/g) Hostazym [®] X 6000 Liquid (EPU/g) Hostazym [®] X water-soluble powder : Hostazym [®] X WSP (1.000.000 EPU/g)	
Recommended dosage for pigs	1500 EPU/kg of compound pig feed		
Package forms	20 or 25 kg bags for micro-granulate ; 1000 lt IBC for liquid ; 10 kg bags for WSP		
Shelf life under normal storage	24 months for micro-granulate product ; 12 months for liquid product and/or WSP		
EU-approval	Registration N° 4a1617		

HOSTAZYM® X, THE PREFERRED NSP ENZYME FOR PIGS

Hostazym[®] X unique characteristics of heat tolerance, high stability, perfect dosing and homogenization combined with its feed-matching complex, has proven in any fibre type of pig diet to give:

- Improved growth PERFORMANCE and FCR
- FLEXIBLE feed formulation (savings up to 5 €/mT)
- Higher intestinal HEALTH status







Iet's talk about Hostazym® in poultry

RIALS IN LAYERS TECHNICAL PERFORMANCE

SUPPLEMENTAL USE OF HOSTAZYM® X (ON TOP)

Many trials in laying hens have been performed to demonstrate the effect of Hostazym[®] X supplementation of improving **zootechnical results**.

SET-UP:

- First-cycle (from wk 20 of age) and second-cycle (from wk 45 of age) of laying hens. Trial duration 24 to 26 wks.
- Practical layer diets supplemented with Hostazym[®] X, in the range of 1050 to 1500 EPU/kg feed.
- Wheat, corn and wheat/corn diets (varying NSP fibre profiles).

RESULTS:





CONCLUSIONS:

Hostazym[®] X at recommended dosage boosts laying hen performance in a variety of cereal-based feeds.

Combining all the above trials shows a strong improvement of the **zootechnical performance of layers** supplemented with Hostazym[®]X in the range of 1050 to 1500 EPU/kg feed.



Hostazym[®] X addition to the diet of layers also shows a clear effect on **egg weight**. Compilation of the above trial results, revealed an increase of +1.13 g or 2% in mean egg weight.



Hostazym® X applied in layer feed in the range of 1050 to 1500 EPU/kg yields up to

- + 1.61 grams/hen/day of extra egg mass production (+ 3%)
- 0.061 lower Feed Conversion Rate (- 3%)
- + 1.13 grams of higher egg weight (+ 2%)



TRIALS IN BROILERS



SUPPLEMENTAL USE OF HOSTAZYM® X (ON TOP)

In past years, many efficacy trials in broilers have been performed to demonstrate the effect of Hostazym[®] X supplementation on **zootechnical results**.

SET-UP:

- Hostazym[®] X xylanase complex added on top
- Broilers slaughtered at 36 to 49 days (2 3.5 kg end weight)
- Corn, wheat and corn/wheat diets (varying NSP profiles)

RESULTS:



CONCLUSIONS:

• Adding Hostazym[®] X at recommended dosage boosts overall broiler performance, on many different cereal substrates.

Combining all the above trials yields the following multi-diet outcome in **zootechnical performance for broilers** supplemented with Hostazym[®] X at 1500 EPU/kg of feed.



ENERGY EQUIVALENCE OF HOSTAZYM® X

Considering the energy levels fed and the technical performance in multiple efficacy trials (on top or reform.), the metabolisable **energy (ME) equivalence of Hostazym® X** can be calculated.

SET-UP:

- Supplemented and energy-reduced (reformulated) feed
- Broilers slaughtered at 36 to 49 days (2 3.5 kg end weight)
- Corn, wheat and corn/wheat diets (varying NSP profiles)

RESULTS:



CONCLUSIONS:

 Addition of Hostazym[®] X at recommended dosage (on top or reformulated) corresponds to a ME equivalence above 100 kcal.

Compilation of all conducted trials gives the following **energy upgrade of broiler diets** provided with Hostazym[®] X (either on top or formulated into the ration) at 1500 EPU/kg.



Hostazym[®] X applied in broiler feed at the dosage of 1500 EPU/kg results in

- + 66 grams higher end Body Weight (+ 3%)
- 0.053 lower Feed Conversion Rate (- 3%)
- more than 100 kcal ME uplift per kg of feed (+ 3.5%)

TRIALS IN TURKEYS TECHNICAL PERFORMANCE

SUPPLEMENTAL USE OF HOSTAZYM® X (ON TOP)

Multiple efficacy trials have been conducted during recent years to demonstrate the effect of Hostazym[®] X supplementation on **zootechnical results**.

SET-UP:

- Hostazym[®] X added on top
- Turkey hens slaughtered at 12 18 wks (8-12 kg end weight)
- Turkey toms slaughtered at 12 18 wks (10-20 kg end weight)
- · Corn, wheat and corn/wheat diets (varying NSP fibre profiles)

RESULTS:



CONCLUSIONS:

Hostazym[®] X at recommended dosage boosts turkey performance and health on various cereal-based feeds.

Combining all the above trials gives the following multi-diet outcome in **zootechnical performance of turkeys** supplemented with Hostazym[®] X at 1050 EPU/kg of feed (meals and pellets).



Hostazym[®] X also improved health status and reduced the **mortality rate of turkey** hens and toms already at the cost-effective dosage of 1050 EPU/kg of feed.



Hostazym® X applied in turkey feed at already the low dosage of 1050 EPU/kg gives

- + 302 grams higher end Body Weight (+ 2.5%)
- 0.088 lower Feed Conversion Rate (- 3.5%)
- a relative reduction in overall mortality up to 15%





Poultry need efficient ways to extract more nutrients out of the feed and to maintain intestinal health. Hostazym[®] X is a unique digestive enzyme complex, specifically developed to meet these crucial objectives in everyday poultry diet formulations. Hostazym[®] X provides a consistent solution for overcoming the antinutritional effects of many NSP fibre fractions (Non-Starch Polysaccharides), present in conventional and more challenging poultry diets.



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- Prolonged shelf life & 85°C pellet stability
- Homogenous distribution in premix & feed
- Excellent enzyme release in the poultry gut

4. BOOSTING ZOOTECHNICAL PERFORMANCE

The enzyme complex inside Hostazym[®] X is produced by the non-GMO *Trichoderma*, enabling a **balanced degradation** of both insoluble and soluble xylans (AX), therefore resulting in:

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





strong benefits WHY HOSTAZYM® X?

- 1. Ideal fibre affinity
- 2. Cereal consistency
- 3. Desirable nutrient release
- 4. Exceptional robustness
- 5. Proven feed efficiency



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Secondary enzyme activities	Cellulase (endo 1,4 β -glucanase), endo-1,3(4) β -glucanase, α -amylase, protease		
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Recommended dosage (according to local registration)	BROILERS :Minimum 1500 EPU/kg of compound broiler feedLAYING HENS :Minimum 1050 to 1500 EPU/kg of compound layer feedTURKEYS :Minimum 1050 EPU/kg of compound turkey feed		
Package forms	20 or 25 kg bags for micro-granulate ; 1000 lt IBC for liquid ; 10 kg bags for WSP		
Shelf life under normal storage	24 months for micro-granulate product ; 12 months for liquid product and/or WSP		
EU-approval	Registration N° 4a1617		



conclusion

Hostazym® X results in

- Improved growth PERFORMANCE and FCR
- Improved daily EGG MASS PRODUCTION
- Higher EGG WEIGHTS
- Higher intestinal HEALTH status
- FLEXIBLE feed formulation (savings up to 8 €/mT)



The



STEST PHYTASE

Selecting the fastest phytase



OptiPhos[®], an E. coli derived 6-phytase produced by the yeast Pichia/Komagataella pastoris, is fast and effective in animal diets because it works optimal at a broad pH range between pH 1 and 5 and is resistant to degradation by pepsin. That is why OptiPhos[®] outcompetes any competitor enzymes on speed of phytate degradation.

THE ADVANTAGES OF A FAST PHYTASE:

The highest phosphorous matrix values per unit of phytase

- Highest savings of inorganic phosphate sources
- Bigger reduction in feed costs than any other phytase
- Minimizing environmental impact by reducing the excretion of phosphorous

The fastest degradation of phytate

- A faster elimination of the anti-nutritional factor phytate
- Bigger effects on improvement of technical performance
- Superdosing effects even at double dose yielding a return on investement up to 10

OptiPhos® is available in 4 different forms, each suitable for a specific application:

- 🎆 granular form, used in mash feeds
- coated form, used for pelleted feeds
- liquid form used for post pelleting liquid application processes
- water soluble form (WSP), for on site production of liquid enzymes (Huvematic concept)







Please contact your local Huvepharma representative and distributor for assistance

Huvepharma EOOD • 3a Nikolay Haytov Str, 1113 Sofia, Bulgaria • tel. +359 2 862 5331 • fax +359 2 862 5334 • e-mail sales@huvepharma.com Huvepharma NV • Uitbreidingstraat 80, 2600 Antwerp, Belgium • tel. +32 3 288 18 49 • fax +32 3 289 78 45 • e-mail customerservice@huvepharma.com