

Hostazym® X

Hostazym® X outperforms competitor NSP enzymes in weaned piglets

Trial description

1 Set-up

- **Location:** Biotechnicum, Bocholt, Belgium
- **Trial period:** August - September 2016
- **Animals:** Pietrain x Topigs 20 piglets mixed-sex balanced over pens
- **Housing:** 240 piglets (\pm 6.9 kg initial BW) divided over 24 pens
- **Feeds** (Table 1):
 - Weaner (0-14 days post-weaning): wheat/corn/barley/soy (30/25/15/10 %); 16.3 % crude protein, 0.96 % dig. Lys, 2300 kCal/kg NEpigs
 - Starter (15-42 days post-weaning): wheat/corn/barley/soy (34/20/15/15 %); 16.5 % crude protein, 0.90 % dig. Lys, 2200 kCal/kg NEpigs

2 Treatments

- 4 treatments with 6 replicates
- Doses of Hostazym® X and competitors as per supplier recommendations
- Treatments (all feeds containing 250 OTU/kg OptiPhos®):
 - Control
 - Control + Hostazym® X 15000 at 100 g/T (1500 EPU xylanase/kg feed)
 - Control + Axtra® 201 XB TPT at 100 g/T (1220 UX xylanase & 152 UG β -glucanase /kg feed)
 - Control + Rovabio® Excel AP at 50 g/T (1100 VU xylanase & 1500 VU β -glucanase /kg feed)

3 Measured & calculated parameters

- Body weight and daily growth (individual), feed intake and feed conversion (per pen)
- Economic parameters

Results

- Hostazym® X improved end weight significantly ($p < 0.05$) with 1.27 kg versus the control and with +1.03 and +0.72 kg versus Axtra® XB and Rovabio® Excel resp. (Fig. 1)

- Hostazym® X reduced feed conversion with 0.15 versus the control and with 0.06 and 0.05 versus Axtra® XB and Rovabio® Excel resp. (Fig. 2).
- Hostazym® X addition to the feed resulted in more uniform piglet growth with no piglets growing less than 200 g/d, whereas the other treatments had 8% (control), 9% (Axtra® XB) and 5% (Rovabio® Excel) piglets growing less than 200 g/d (Fig. 3).
- Hostazym® X addition resulted in the lowest feed cost per kg of growth, which was 2.1 and 2.8 eurocent lower than for Axtra® XB and Rovabio® Excel resp. (Table 2).

Table 1: feed composition and analysis (%)

	Weaner (0-14 d)	Starter (15-42 d)
Ingredient		
Wheat	29.8	34.1
Barley	25.0	20.0
Corn	15.0	15.0
Soybean meal HiPro	10.5	14.0
Wheat middlings	0.0	5.0
Whey powder (sweet)	7.5	0.0
Sunflower meal (HP)	4.5	6.0
Potato protein	2.0	0.0
Soy oil	1.9	1.6
Others*	3.8	3.9
Nutrient		
Crude protein	16.3	16.5
Crude fat	3.8	3.5
Crude fibre	3.6	4.4
Starch	40.6	41.8
Dig. Lys	0.96	0.90
Dig. Meth + Cyst	0.57	0.54
Dig. Threo	0.57	0.53
Dig. Trypt	0.18	0.17
Dig. Val	0.62	0.60
NE Pigs (kCal/kg)	2300	2200

* including premix, amino acids, salt, NaHCO₃, calciumformiate, MCP, limestone

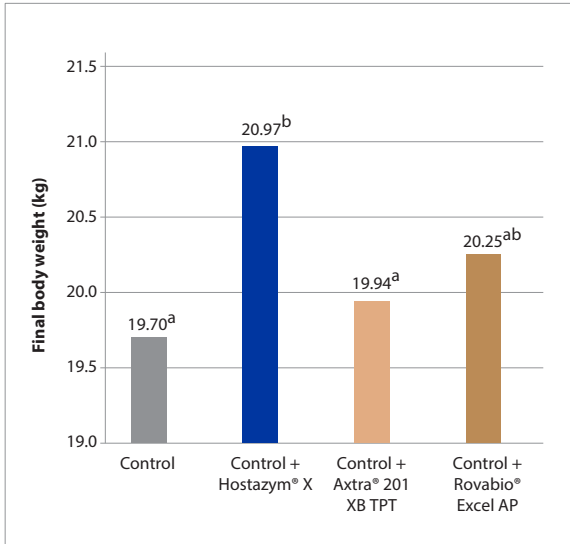


Fig. 1: Average final body weight (values followed by a different letter: $p < 0.05$)

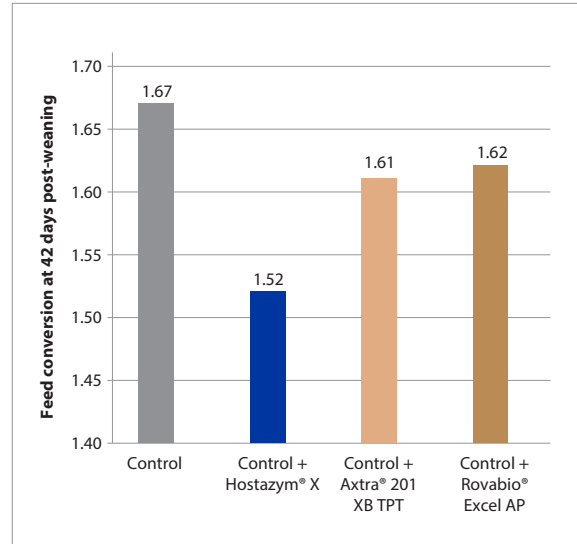


Fig. 2: Feed conversion over the 42 day trial period

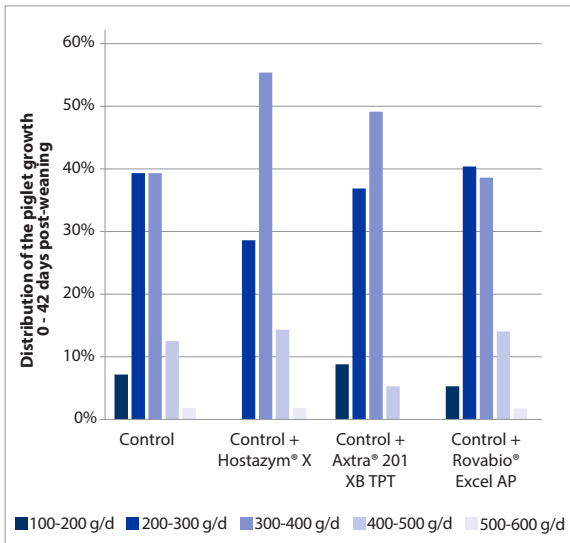


Fig. 3: Growth distribution (0-42 days) per treatment

Table 2. Feeding cost per kg growth

	Total growth (kg/pig)	Feed cost (€) per kg growth	Feed savings(€) per kg growth vs Control
Control	12.78	0.465	
Control + Hostazym® X	14.04	0.422	-0.043
Control + Aextra® 201 XB TPT	13.01	0.443	-0.022
Control + Rovabio® Excel AP	13.33	0.450	-0.015

Conclusion

Hostazym® X addition to piglet feed post-weaning:

- Improved end weight by 1.27 kg ($P < 0.05$) and reduced feed conversion by 0.15 versus the control, outcompeting Aextra® XB and Rovabio® Excel.
- Led to the most uniform piglet growth, with no piglets growing less than 200 g/d.
- Resulted in the lowest feeding cost/kg growth.