



Hostazym® X

Hostazym® X versus Axtra® XB

Trial description

1 Set-up

- **Location:** PIAST research facilities, Poland (2015)
- **Experimental design:** 480 Ross 308 female broilers, randomly allotted to 4 treatments, replicated 10 times (12 birds per replicate). Real production environment with trial pens installed in a 9,000 birds house (Figure 1)



Figure 1. Piast research facilities

2 Treatments

- (1) Positive Control
 - (2) Negative Control (Positive Control reformulated with 100 kcal/kg less)
 - (2) + Hostazym® X (at 1500 EPU/kg)
 - (2) + Axtra® XB (at 1220 UX + 152 UG/kg)
- Phytase, OptiPhos® 5000, was used in all treatments at 250 OTU/kg

3 Diets

Three phases feeding as generally described below:

Diet	Starter (0 - 10d)	Grower (11 - 20d)	Finisher (21 - 41d)
Wheat/Maize/SBM (%)	50/15/30	40/25/30	35/30/30
CP (%)	21,5	19,6	18,5
dig. Lys (%)	1,31	1,08	0,95
AME (kcal/kg)	2900	3050	3100

4 Measured parameters

- Zootechnical performance:
 - Body Weight Gain (BWG, g) – birds were weighed at day 0 and at the end of each feeding phase (days 0, 10, 20 and 41)
 - Feed Intake (FI, g) – feed intake was recorded at the end of each feeding phase (days 10, 20 and 41)
 - Feed Conversion Ratio (FCR)
 - Mortality (%) and health observations
- Nutrient digestibility:
 - From each treatment 10 birds were slaughtered at 28 days and digesta samples were collected. Ileal Crude Protein Digestibility, and Apparent Metabolisable Energy (AME) were determined using the TiO₂ method (Short *et al* 1996)
- Results were analysed using the General Linear Models procedures

Results

The results of the trial are shown in Figure 2 and Table 1.

Key observations:

- Overall performance was very good and significantly above breed specifications
- Birds' performance responded to the tested products. Highest BWG registered for Hostazym® X treatment (+51 g over Negative Control and +33 g over Axtra® XB)
- FCR didn't differ significantly amongst treatments
- Hostazym® X had a significant higher response on Ileal Crude Protein Digestibility when compared with Negative Control and Axtra® XB groups (3,56 % points and 2,04 % points, respectively)

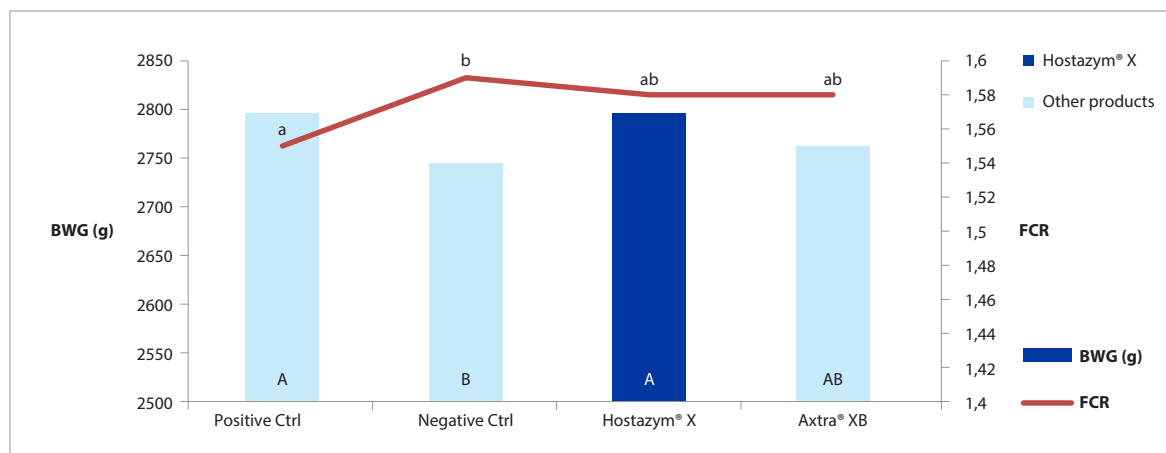


Figure 2. Broilers performance results at 41 days

Table 1. Nutrient digestibility results (digesta samples taken from 28 days old birds)

Treatments	Dose	Dose (U/kg)	Digestibility	
			Ileal CP digestibility [%]	AME [kcal/kg]
Positive Control	-	-	73,01 ^A	2959 ^A
Negative Control	-	-	70,87 ^B	2834 ^B
Axtra® XB	2x minimum EU registered dose	1220 UX/kg 152 UG/kg	72,39 ^B	2904 ^{AB}
Hostazym® X	minimum EU registered dose	1500 EPU/kg	74,43 ^A	2899 ^{AB}

Different scripts in Figures and Tables represent statistical significance: a - b at $p < 0,05$ and A - B at $p < 0,1$

Conclusion

- Hostazym® X proved to be an effective enzymatic complex in a corn/wheat/soya based diet, and able to compensate on technical results for a 100 kcal reduction in AME
- Hostazym® X can save up to €6,50 per tonne of feed when replacing 100 kcal per kg of feed (soya-oil price of €650/ tonne and 10.000 kcal/kg ME)
- Hostazym® X showed better zootechnical results than Axtra® XB in terms of BWG
- Hostazym® X improved protein digestibility in the diet, whereas Axtra® XB did not show a significant response in improving digestibility of this nutrient