

XTRACT® 6930 enables similar performance to a shuttle program of bacitracin and virginiamycin in broilers

INTRODUCTION AND OBJECTIVES

Meta analytical tools demonstrated that XTRACT® 6930 improved performance of broilers at the same level as antibiotic used as growth promoters (**AGP**). This was then confirmed in a trial in which XTRACT® 6930 supplementation enabled performance at least similar to the AGP zinc bacitracin, (see Pancosma Technical Bulletin 709). However, little information is available regarding a comparison of XTRACT® and a program involving more than one AGP. Therefore the objective of this trial is to evaluate the effect of XTRACT® 6930 compared to a shuttle program of bacitracin and virginiamycin in a typical American context.

MATERIAL AND METHODS

The trial was set up at the facilities of Virginia Diversified Research Corp., VA, USA

- 900 Cobb broilers aged of 1 day at start,
- Housed for 42 days in 30 floor pens of 30 birds each,
- Treatments and feeding program
 - Diet based on corn and soybean meal
 - Salinomycin added at 50 g/t in starter and grower diets

	Starter (20.5% CP, 3041 kcal/kg ME)	Grower (17.7% CP, 3107 kcal/kg ME)	Finisher (15.1% CP, 3151 kcal/kg ME)
Negative Control	No supplementation		
Positive Control	50 g/t BMD (Zinc bacitracin)		20 g/t Virginiamycin
XTRACT®	125 g/t XTRACT® 6930	100 g/t XTRACT® 6930	

- Measurements:
 - Performance: feed intake, body weight, feed conversion ratio (**FCR**), survival rate, mortality-adjusted FCR calculated as follow:

$$\text{Mortality adj. FCR} = \frac{\text{Total pen feed intake}}{\text{Total pen live weight} - \text{Mortality weight}}$$
 - Economical figures:
 - Feed cost : 333 \$/t ; whole bird price (75% carcass yield): 1.53\$/kg ; XTRACT® supplementation 2x cheaper than AGP supplementation
 - Feed cost, Gross income, Net Income calculated as the difference between gross income and feed costs, Return on Investment calculated as follow:

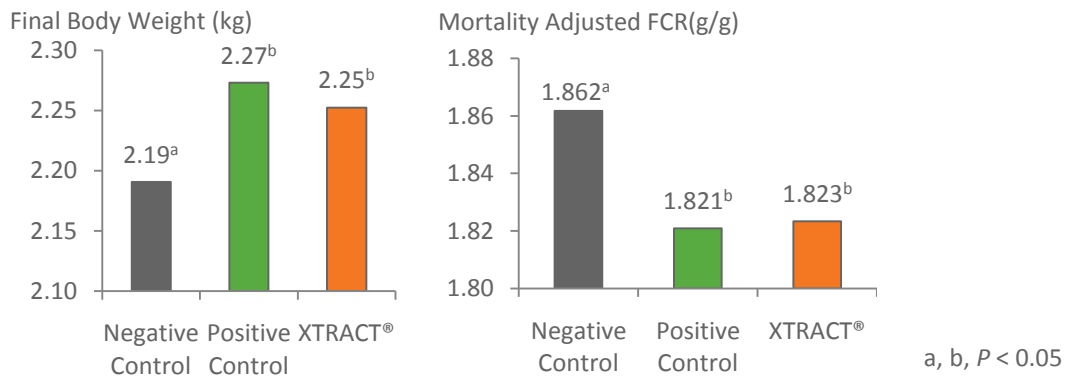
$$ROI = \frac{\text{Net Income of Supplemented group} - \text{Net Income of Negative control group}}{\text{Feed Cost of Supplemented group} - \text{Feed Cost of Negative control group}}$$
- Statistical analysis by ANOVA and paired treatments means analyzed by use of a 2-tailed distribution basic T-test model with equal variances assumed.

TECHNICAL BULLETIN

RESULTS AND CONCLUSION

Effect of XTRACT® on broiler performance

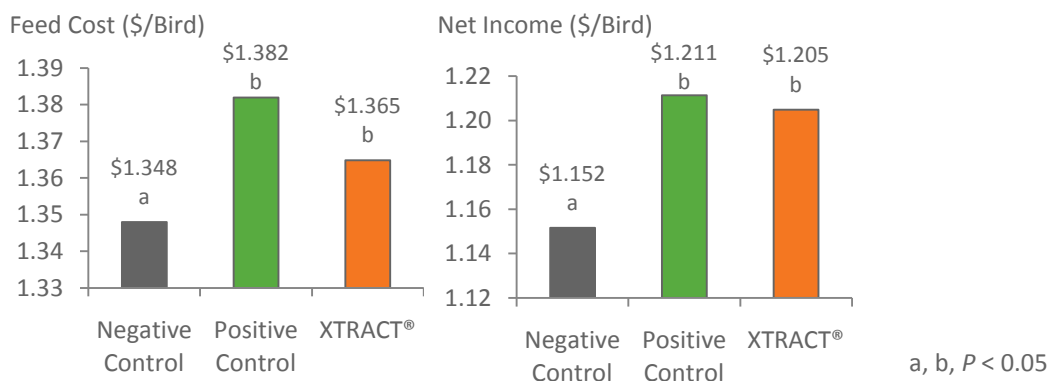
Feed intake was not affected by the treatments (mean: 4.11 kg/hd, $P > 0.20$). Birds supplemented with the AGP or with XTRACT® exhibited significantly higher body weight and final body weight, and reduced mortality-adjusted FCR compared to animals fed the negative control (respectively -2.2% and -2.1%, $P < 0.05$; see figure).



In addition, XTRACT® enabled a level of performance similar to the Positive Control in terms of body weight gain, final body weight and feed conversion ratio.

Effect of XTRACT® on economical parameters

Birds supplemented with the AGP or with XTRACT® exhibited significantly higher body feed costs, but also gross income compared to animals fed the negative control ($P < 0.05$; see figure). In addition, net incomes of the Positive Control and XTRACT® were significantly greater than the Negative Control group ($P < 0.05$).



However, XTRACT® and the AGP supplementation permitted similar economical benefits (Gross Income and Net Income; $P > 0.20$). Calculated ROI of XTRACT® supplementation reached 3.1:1, while it was of 1.7:1 for the Positive Control.

XTRACT® 6930 can be a good alternative to an aggressive AGP treatment, both in terms of performance and return on investment