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Pork CRC Research Summary

Project Number & Title: 2A 105- Efficacy Of Ractopamine And pST Combinations On Finisher Pig Performance

Principle Investigator: Dr Rob van Barneveld and Mr Robert Hewitt

Background: The performance and in particular the feed efficiency of growing pigs declines with time and weight and feed usage in the last 4-5 weeks of growth can approach 40% of the total feed consumed between birth and sale at 100-110 kg. The project was conducted to investigate the effects of adding Ractopamine at 5 ppm to the diet offered female pigs for the final weeks of growth and to compare the strategy with another which included the Ractopamine treatment plus the daily or twice weekly administration of pST (Reporcin) during the last 14 days of growth.

Methodology:

The study was conducted in a 1200 head commercial grower-finisher facility fitted with a Feedlogics automatic feeding system. The pigs started the study at 75 kg and were housed in groups of 40 with four pens of pigs allocated to each of five treatments. The study was conducted over the last 28 days of growth.

The treatments were:

Treatment	Description
1	Control diet (13.4 MJ DE/kg and 0.74 % available lysine)
2	High Specification Diet (HSD -14.0 MJ DE/kg and 9.8% available lysine)
3	HSD plus 5 ppm Ractopamine
4	HSD plus 5 ppm ractopamine plus 5 mg Reporcin administered daily for the last 14 days
5	HSD plus 5 ppm ractopamine plus 20 mg Reporcin administered in an oil emulsion twice weekly for the last 14 days

Key Findings/Conclusions: The results are shown in the table. Increasing the energy and amino acid level of the diet significantly improved feed efficiency. Pigs offered the diet with Paylean only grew significantly faster than the control animals and had a significantly better feed efficiency than pigs on the first two treatments.

Administering pST in the last 14 days further improved feed efficiency regardless if the product was delivered daily or every for days (oil emulsion). Pigs on the two pST treatments also had significantly lower P2 fat measurements than pigs on all other treatments.

The bottom line is that Paylean increased weight gain by 3.8 kg and improved feed efficiency by 16 %. The combination of Paylean and pST increased weight gain by 4.8-5.0 kg and feed efficiency by 30-34% and reduced carcass P2 fat thickness.

The improvement in feed: gain achieved under commercial conditions by the combination of Paylean and pST would reduce HFC by almost 8%, and demonstrates the importance of understanding what is happening in late finishing and having means of improving performance in this period.





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Effects of diet and Paylean (5ppm) and Paylean and pST administered daily or twice weekly for the last 14 days on the performance of female pig over 28 days

Trait	Control	Hi-Spec diet	Paylean	PL and pST (daily)	PL and pST (twice weekly)	Sig
Entry weight kg	75.7	75.5	75.5	75.2	75.4	1.00
Final weight kg	96.3	97.4	99.7	100.8	100.8	.504
Weight gain kg	20.6	21.9	24.2	25.6	25.4	.001
Daily gain (g)	735	783	865	915	906	.001
Feed intake (kg/d)	2.57	2.56	2.58	2.39	2.42	.001
Feed: gain	3.50	3.31	2.99	2.61	2.68	.001
P2 (mm)	9.7	10.4	9.8	9.1	9.4	.001

Potential Users of Information (including value assessment):

Nutritionists, Consultants and producers.

Auspig analysis of the results predicted the combination of Paylean and pST would improve profitability by as much as \$7.00/pig

