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# The Effect of Sarsaponin on Performance of Finishing Pigs Housed in Crowded Conditions

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# THE EFFECT OF SARSAPONIN ON PERFORMANCE OF FINISHING PIGS HOUSED IN CROWDED CONDITIONS

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Sarsaponin, a naturally occurring plant steroid derived from the yucca plant is available as a feed additive. Claims are made of increased pig performance during the finishing period of growth, particularly when the pigs are in crowded, stressed conditions.

The study reported herein was designed to evaluate Micro-Aid, a commercial sarsaponin product, as a feed additive under these conditions.

## Experimental Procedures

One hundred forty crossbred pigs were allotted to seven replications of two treatments based upon weight and sex. Starting weights were 100, 112, 119, 127, 132, 140 and 152 lb for replications 1 through 7. The pigs were housed in the environment-modified confinement building at the Southeast Experiment Farm. There were 10 pigs/pen providing 6 sq ft of pen space per pig. Duration of the trial was eight weeks. Composition of the experimental diets is shown in Table 1.

The experimental treatments were:

1. Control diet
2. Control diet + 2 oz. of sarsaponin (4 lb of Micro-Aid per ton

## Result

Results of the eight week trial are summarized in Table 2. Equal gains were obtained by pigs consuming the two diets and no significant differences in feed consumption or feed conversion were observed. It might be noted that pig performance was good and feed efficiency was much better than normally would be expected for pigs in this stage of growth. No advantage for including sarsaponin in the diet was found.

Table 1. Composition of Experimental Diets

| Ingredient | % |
|---|---|
| Ground yellow corn | 81.5 |
| Soybean meal (44%) | 15.0 |
| Dicalcium phosphate | 2.0 |
| Limestone | .8 |
| Salt, white | .3 |
| Premix[a] | .4 |

[a] Provided the following in ppm; zinc 100; iron, 75; copper, 7.5; manganese, 25; iodine, 175 and selenium, 1. Provided the following per lb of diet: vitamin A, 2000 IU; vitamin D, 200 IU; riboflavin, 2.25 mg; pantothenic acid, 9 mg; niacin, 12 mg; vitamin $B_{12}$, 9 mcg; vitamin E, 7.5 IU and vitamin K, 1.5 mg.

Table 2. Effect of Micro-Aid as a Feed Additive in Swine Finishing Diets[a]

| | Control | Micro-Aid[b] |
|---|---|---|
| Avg daily gain, lb | 1.66 | 1.66 |
| Avg daily feed, lb | 4.33 | 4.57 |
| Feed/gain | 2.61 | 2.76 |

[a] Seven replications with 10 pigs/pen provided 6 sq ft of pen space/pig. Average starting weight-126 lb. Average final 57 day weight-221 lb.

[b] Four lb supplying 2 oz sarsaponin/ton.

## Summary

One hundred forty pigs were utilized to study the effects of sarsaponin included in the finishing diet of pigs in crowded conditions. Pigs averaged from 100 to 152 lb at the beginning of the eight week study and were allowed 6 sq ft of pen space per pig. No advantage in gain, feed consumption or feed efficiency was seen due to the addition of 2 oz of sarsaponin (4 lb of Micro-Aid/ton) to the diet.