

Swine Research Synopsis

Morinda Agriculture has been investigating the use of *Morinda citrifolia* as a nutritional support for baby pigs since 2005. In addition to field trials, ten (10) controlled research trials have been completed at major U.S. Land Grant universities in the mid-west and southeast. These ten trials involved a total of 915 weaned pigs. In each case these piglets were kept in the nursery for 28 days and then comingled on the finishing floor. In two of these trials piglets were re-weighed after leaving the nursery (7 days after in one study and 21 days after in the other). Intake of *M. citrifolia* in these ten trials ranged from 0.75% to 5.0 % of the total feed ration.

The diets in these trials were typical industry Phase I, Phase II and Phase III diets. The use of *M. citrifolia* in simple and complex diets was also examined. It seems to have a greater effect when combined with the complex diet.

To determine if storage presented problem, a trial was conducted to compare fresh made and held product in the nursery diet. There were no differences in intake or performance between the treatments in this study, suggesting that there are no storage issues with adding *M. citrifolia* to the diet. Pellet quality was also examined in one trial. Interestingly enough, the addition of *M. citrifolia* improved pellet quality.

Results from the intake and time of feeding studies suggest that the greatest performance response may be expected from feeding 3.0% (of total ration) in the first seven (7) days and 1.0% in the final seven (7) days in the nursery. A carry-over effect—after the piglets left the nursery and were comingled (days 28-49)—was observed, especially with the group fed *M. citrifolia* during weeks one (1) and four (4) in the nursery.

Improvement in average daily gain in the treated pigs ranged from 4.5% to 42%, with most of the trials demonstrating a 6%-10% improvement. Average daily feed intake was up an average of about 8.0% treatment vs. control groups, while gain-to-feed improved an averaged about 3.0%. There were no negative health reports related to feeding *M. citrifolia* to the baby pigs in any of the trials.

In general, results from these trials indicate using *M. citrifolia* as a nutritional support can increase average daily gain, average daily feed intake, and gain:feed in nursery pigs. Results also suggest adding *M. citrifolia* to the feed ration at the rate of 3.0% during the first seven (7) days, and at the rate 1.0% during the last seven (7) days in the nursery will yield the best results.