



Raising Pigs without Antibiotics

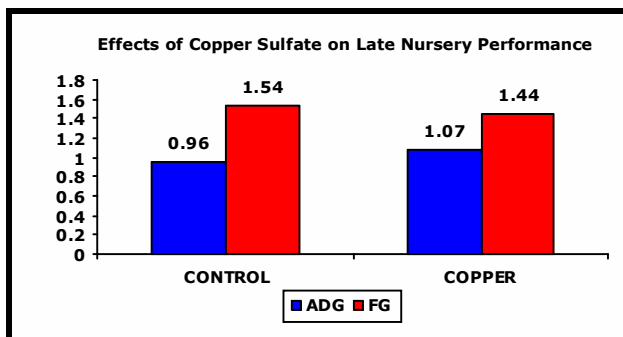
The use of antibiotics for growth promotion in swine has come under scrutiny the last few years because of concern with their potential effects on antibiotic resistance in humans. The number of niche pork marketers who choose to raise pigs without antibiotics or rendered animal proteins has increased dramatically over the last few years. Antibiotic growth promotants have had the largest effect on nursery pigs. Hubbard Feeds has researched a number of alternatives to antibiotics and has developed a line of feeds called Hubbard's Homestead, for the producer who chooses not to feed any antibiotics or rendered animal protein feeds.

Nutrition Alternatives for Non Antibiotic Programs:

Diet composition can play an even larger role in the absence of antibiotic growth promotants. The use of very digestible ingredients, free of antinutritional factors, will minimize gut epithelial damage and promote gut health. They are common place in diets for weanling pigs today, even with the inclusion of antibiotic growth promotants. However, inclusion levels of some of these ingredients may need to be reevaluated in diets that do not contain antibiotics.

Zinc and Copper:

Both zinc and copper have antibacterial properties and have been shown to improve performance of pigs. Hubbard Feeds early starter diets typically contain 3000 ppm of zinc. The following is the results of a research trial conducted by Hubbard Feeds looking at the effects of copper sulfate in nursery pig performance.



Organic acids. Organic acids are often included in diets for swine as mold inhibitors, but they also have antimicrobial properties that can position them as potential replacements for antibiotics. In addition, they may reduce gut pH and stimulate digestibility, which can in turn improve feed efficiency.

Direct-fed microbials. Live bacterial cultures (or direct-fed microbials or probiotics or competitive exclusion cultures) have been proposed to improve the balance of the gut microflora. The bacterial cultures added to the feed will compete with pathogenic bacteria for nutrients and binding sites on the intestinal wall, produce compounds toxic to pathogenic bacteria, and promote an effective immune system.

Other Products:

A number of products in Hubbard's Nutri-Care line can help promote general health.

Vit E –Selen: A liquid-suspension water soluble Vitamin E and Selenium product designed to treat nutrient deficiencies and help enhance the animal's metabolic and immune system during times of stress

Inulite + B: Provides a source of nonstarch polysaccharide that promotes the beneficial bacteria in the intestine and improves feed intake and digestion.

Hubbard's Homestead Feeds:

This line of feeds contain no antibiotics or rendered animal protein feeds. These feeds were formulated to use many of the nutrition technologies that support pig health and gut health when no antibiotics are used. Factors such as disease status and management have a big effect on overall performance, but Homestead feeds are designed to provide optimum performance in the absence of antibiotic growth promotants. Below is a summary of a research trial Hubbard has done on the Homestead nursery feeds. This research shows that we can make an alternative program that performs comparable to conventional nursery feeds.

4-522N: Homestead NAB Nursery Feeding Program Evaluation Day 0-21 Postweaning

Location: PP1

Treatment	Control*	Homestead	CV	P<
Pens	20	20	-	--
No. of Pigs	497	500	-	-
Beginning wt., lb.	14.49	14.71	15.6	.77
Day 0-21				
ADG	.58	.55	10.7	.17
ADFI	.77	.73	8.8	.05
FG	1.33	1.32	3.7	.50
Gain	12.22	11.65	10.7	.17
Deads & Culls	1	3	-	-

* Control program was Hubbard's Fundamental nursery program with antibiotic growth promotants.

Conclusion:

For a number of different reasons, many swine producers are choosing not to use antibiotic growth promotants as part of their nutrition program. The Hubbard Swine Nutrition Team has researched a number of ingredients for these producers to use instead. Hubbard's Homestead line of feeds utilizes many of these ingredients and is formulated to provide optimum performance. Homestead Feeds used in conjunction with Hubbard's Nutri-Care line of products will give pork producers a full program of products to use in place of antibiotic growth promotants.