At present, one of the most important research topics scientists are involved with is the search for alternative sources of food for animal production. Some of the reasons for using excreta as part of diets for swine are:

1. Economical.
2. As an alternative protein source.
3. Reduction of pollution.
4. Possible immunological effect.

1. Economical advantages.
A hog weighing 100 kg, excretes 1 kg. of feces dry - basis (Muteling, 1989). Piglets excreta contain considerable amounts of indigested feed due to feed wastage and poor digestibility.

2. The use of piglet excreta as a source of feed reduces soybean meal intake. Therefore more soybeans are available for human consumption.

3. The large amounts of excreta contribute to pollution of cities or towns located far away from hog farms lacking good waste management and reprocessing.

4. Feeding sow's manure will produce a certain amount of antibodies which will be transferred to the offspring through colostrum, therefore piglets will have a greater resistance to disease.

Throughout history, manure has been used as a fertilizer, as an alternative source of feed or as fuel for heating. Many processing and recycling techniques have been tested:

a). mixing fresh manure with feed,
b). manure silage,
c). dehydration or fermentation.

Animals consuming processed excreta have not developed any disease (Bucholtz, et al., 1971; Harmon, 1974). Weight gain was not significantly affected when pigs were fed with fresh manure (Diggs et al., 1965).

Materials and methods.

Data were collected from 36 crossbred sows in a study involving 4 treatments consisting of:

1. Control diet, 2 kg/sow/day.
2. 75% control diet + 25% fresh piglet excreta (dry basis - D.B.)
3. 50% control diet + 50% fresh piglet excreta (D.B.)
4. 50% control diet + 50% fresh piglet manure + 150 g. of sugar cane molasses per sow per day (8% intake in D.B.)

Results.

From the results obtained in this trial, we can assume that it is possible to feed sows up to 50% fresh piglet manure without affecting number of pigs born per litter, birthweight, weight at weaning, number of pigs weaned and weight gain of the pregnant sow. The economy obtained in feed was $ 20.10 U.S. c. per sow per year.

Data was subjected to statistical analysis as outlined by Steel and Torrie, 1960.

Conclusions:

1. It is possible to substitute 50% of the sow's diet for fresh piglet's manure in D.M. B. without affecting offspring's performance.
2. The objectives of this study were not to improve performance, but to use alternative sources available to the hog producer more efficiently without affecting existing performance.
3. A practical method of recycling fresh manure is proposed for commercial hog producers.

Selected references:


