

# Hog producers must 'fine-tune' operations

NEWARK, Del. — Recently the cost of producing hogs has been below the prices received. Such situations seem to be a part of the hog cycle. The prolonged period of depressed prices made this recent "down" phase a difficult one for those with long-term commitments to hog production.

"The present state of our economy may mean the profits for hog producers won't approach those experienced in the 1970s," predicts University of Delaware Extension livestock specialist Richard Fowler. "The situation is a challenge to those who want to operate profitably in the years ahead. It calls for some fine tuning of production systems."

Least cost performance is one way of improving feed efficiency. This program doesn't produce the best gains of maximize feed efficiency, but it does produce the cheapest gains. Little research has been done on this type of feeding program for hogs, though it is a standard practice in broiler production.

"Obviously, swine producers can't afford to own a finishing pig for a year when facilities and equipment are part of the overhead costs," says Fowler. "On the other hand, too much emphasis may now be given to the number of days to market or feed efficiency when we measure nutritional adequacy of a diet."

Nutrients such as protein and energy must have greater digestibility, he says. The percentage of protein lost in the feces of a pig ranges up to one-fourth of

the amount fed. Energy losses are usually 15 percent of the amount taken in.

Research being done at Texas A & M on protein digestibility — particularly amino acids — shows that which is digested in the large intestine is useless to the pig. The nitrogen from protein absorbed in the hind gut or large intestine is excreted in the urine.

Five grains and eleven high protein feedstuffs are being tested to find out how much protein is digested in the small intestine, where it is of value to the pig. The three most limiting amino acids for pigs — lysine, tryptophan, and threonine — are the lowest in digestibility at the end of the small intestine.

The source of protein also affects amino acid digestibility. Lysine from soybean meal was found to be

88 percent digestible in this study, while that from meat and bone meal was 60 percent digestible. More research is needed, but there may be an opportunity here for using lower quality protein feedstuffs in practical swine diets, says Fowler. So watch for further developments in this area of nutrition.

Protein taken in by the pig must be more efficiently. Research being done in England shows that a pig consuming approximately one pound of protein daily deposits about one-fourth of it in body tissue. Of the protein which is lost, one-third is due to a poor balance of amino acids.

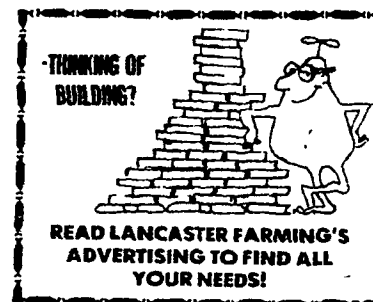
This is a difficult problem to overcome and probably involves the use of something other than natural feedstuffs. The question is, can such changes in ration for-

mulation be made economically? Lysine and corn are already substituted for soybean meal when costs justify it. In most swine rations the last 100 pounds of soybean meal is added to meet the lysine requirement of the pig.

Increase the mature size of breeding stock and you can also improve feed efficiency. "This doesn't mean we should be feeding elephants," says the specialist. But body weight, muscle, fat and metabolic rate increase from conception to maturity.

This process can be shown by a curved line that gradually flattens as the animal matures. The pig is most efficient at utilizing energy when it weighs about one-fourth of its mature size. So, if a hog is mature at 60 pounds, energy efficiency is greatest at 150 pounds.

What does this mean? If maturity affects efficiency of growth, pigs that are still growing when they reach 230 pound market weights are more efficient than those that have stopped growing at 200 pounds and are putting on fat instead. In other words, the large-framed, large mature-size pigs are likely to be more efficient converters of feed to pork.



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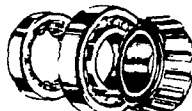
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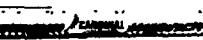
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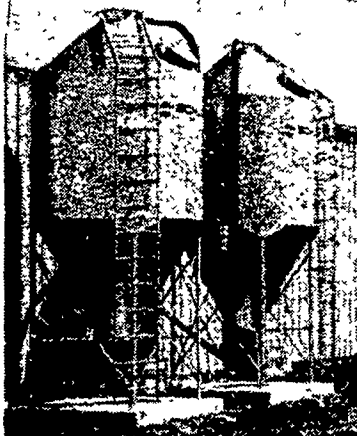


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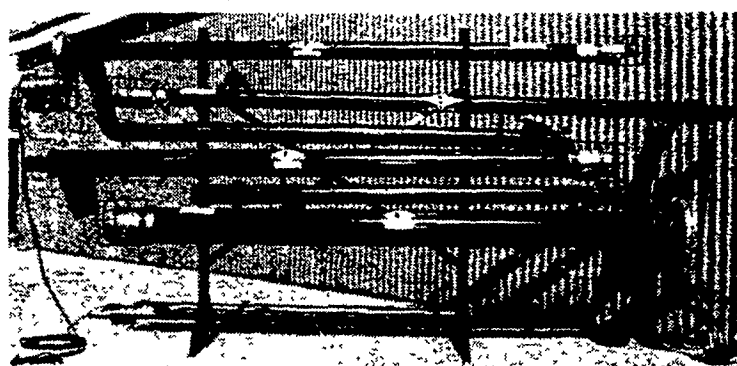
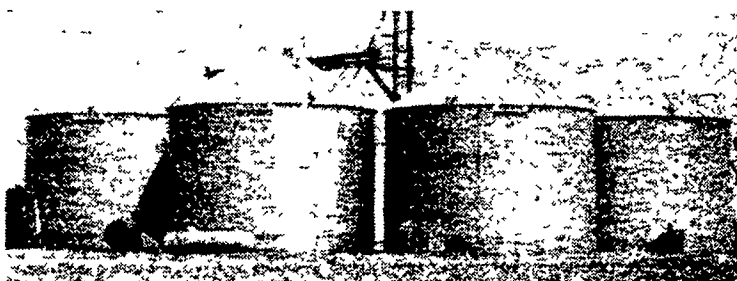
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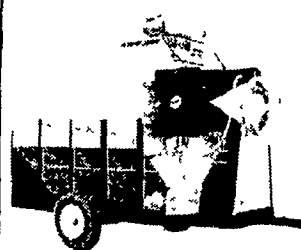


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