

## SWINE FEEDING EXPERIMENTS

Experiment I -- Summer 1947

C. E. Aubel

Mustard Seed Oil Meal\* As A Protein Supplement  
For  
Fattening Pigs On Alfalfa Pasture

Last year at the Livestock Feeders' Day, results of experiments were given on the use of mustard seed oil meal as a protein supplement for fattening pigs in the dry lot. The results showed that mustard seed oil meal was an excellent protein feed when mixed with tankage and other protein supplements and self fed free choice. Generally the gains were somewhat cheaper than where tankage alone was fed, but the gains were not quite so rapid.

In the tests reported last year the mustard seed meal made up as much as 50 percent of the protein mixtures in some of the lots.

With mustard seed meal proving to be so satisfactory for dry lot feeding, it was thought desirable to obtain data on its efficiency in the pasture feeding of spring pigs.

Experimental Procedure:

In the experiment reported herewith, five lots of pigs were self fed shelled corn, on a good stand of alfalfa pasture. The protein supplement mixtures aside from tankage in the control lot, Lot 1, were as follows, all self-fed. Lot 2 received a protein mixture of tankage 90 percent, and mustard seed meal, 10 percent. Lot 3 received tankage 75 percent, and mustard seed meal 25 percent and Lot 4 received tankage 50 percent, and mustard seed meal 50 percent. Lot 5 received a more complex protein supplement mixture of tankage, 40 percent; mustard seed meal, 40 percent; cottonseed meal, 10 percent, and linseed meal, 10 percent.

The following table gives a summary of the feeding record of this experiment.

---

\* The mustard seed oil meal used in this experiment was furnished through the courtesy of the Kansas Soybean Mills, Inc., Emporia, Kansas.

## EXPERIMENT I -- SUMMER 1947

The Value of Mustard Seed Oil Meal in Protein Feed Mixtures  
As a Supplement to Shelled Corn for Fattening Spring Pigs  
on Alfalfa Pasture.

C. E. Aubel

(July 1, 1947 to October 28, 1947 — 120 Days)

Ration	Shelled Corn (self-fed) Alfalfa Pasture				
	Tankage (self- fed)	Tankage 90% Mustard seed meal 10%  (self- fed)	Tankage 75% Mustard seed meal 25%  (self- fed)	Tankage 50% Mustard seed meal 50%  (self- fed)	Tankage 40% Mustard seed meal 40% Cottonseed meal 10% Linseed meal 10% (self-fed)
Lot number	1	2	3	4	5
Number pigs in lot	10	10	9	10	10
Av. initial weight per pig	Pounds 67.26	Pounds 67.63	Pounds 67.36	Pounds 68.50	Pounds 68.70
Av. final weight per pig	256.53	260.10	258.66	263.23	260.66
Av. total gain per pig	188.27	192.47	191.30	194.73	191.96
Av. daily gain per pig	1.56	1.60	1.59	1.62	1.59
Av. daily ration per pig:					
Shelled corn	5.53	5.45	5.25	5.13	5.17
Tankage	.33	.33	.36	.27	—
Protein supplement	—	—	—	—	.56
Mustard seed meal	—	.03	.12	.27	—
Feed consumed per 100 pounds gain:					
Shelled corn	352.52	340.31	339.79	316.59	313.82
Tankage	21.24	26.42	22.91	17.07	—
Protein supplement	—	—	—	—	41.31
Mustard seed meal	—	2.93	7.64	17.07	—
Feed cost per 100 pounds gain:	\$16.68	\$16.68	\$16.64	\$15.68	\$15.90

FEED PRICES CHARGED: Shelled corn, \$2.40 per bushel; Tankage, \$150.00 per ton; Mustard seed meal, \$100.00 per ton; Protein supplement, \$6.00 per hundred pounds, (used in Lot 5)

METHODS OF FEEDING: All lots were self-fed shelled corn. The protein supplements were mixed in the proportions indicated and self-fed in a separate compartment.

## OBSERVATIONS AND CONCLUSIONS

1. Mustard seed oil meal when mixed with tankage and other protein supplements and self-fed free choice proved to be an excellent protein feed for fattening pigs.
2. In all lots where the mustard seed meal was fed, the cost of gains was the same or somewhat cheaper than where tankage alone was fed; and the daily gains were somewhat more rapid, with a lower feed consumption.
3. The mustard seed meal mixtures seemed equally palatable to the pigs at all times. No mixture seemed to be in any way neglected nor did any seem to be especially preferred by the pigs throughout the experiment.
4. Lot 4 receiving the mixture of tankage, 50 percent and mustard seed meal, 50 percent made the most economical and rapid gains of all.
5. Lot 6, which received the more complex protein mixture with mustard seed meal, made the second most economical gain. The daily gains were somewhat faster than those of the lot receiving tankage alone as the supplement.