

Observations

The pigs receiving the RQ-20 gained a little more slowly than the pigs that did not receive RQ-20. However, they were slightly more efficient in use of feed, consuming 16 pounds less corn per 100 pounds gain, but 7 pounds more protein supplement.

For practical purposes the RQ-20 was of no benefit to the pigs receiving it in this experiment.

PROJECT 110, Test 3

C. E. Aubel

A second experiment was conducted with fall pigs in the dry lot. Two lots of pigs were used. One lot received the RQ-20 in the protein mixture at the rate of 3 pounds to 600 pounds of supplement. The mixture was self-fed with the shelled corn and was composed of 4 parts tankage, 4 parts soybean meal, 1 part alfalfa meal, and 1 part linseed meal in the dry lot.

Table 59 gives the results of this experiment.

Table 59

Value of RQ-20 in the Ration of Fattening Pigs in the Dry Lot.

December 6, 1955, to March 12, 1956—97 days.

Basal ration fed:		
Shelled corn, mixed protein supplement in dry lot	Basal	Basal + RQ-20
Lot number	1	2
Number pigs in lot	9	10
Av. initial wt. per pig, lbs.	50.70	52.10
Av. final wt. per pig, lbs.	221.11	217.30
Av. total gain per pig, lbs.	169.11	165.20
Av. daily gain per pig, lbs.	1.74	1.70
Av. daily ration per pig, lbs.:		
Shelled corn	5.16	5.46
Protein supplement	.82	.81
Lbs. feed per 100 lbs. gain per pig:		
Shelled corn	329.04	320.82
Protein supplement	52.36	47.82

Observations

The pigs receiving the RQ-20 gained a little less per day than those not receiving it. They produced their gains a little more efficiently than those not receiving the RQ-20. The differences were small, about 3.5 percent.

The Maximum Value of Alfalfa Meal in Protein Supplements for Pigs on Pasture.

PROJECT 110, Test 4

C. E. Aubel

Since pastures for swine are often poor, inadequate, or unavailable in Kansas, there is a growing appreciation of the value of alfalfa hay or meal in the rations of all swine brood sows (and pigs being fed for market). This experiment was designed to secure information on the maximum use of alfalfa meal in protein supplemental mixtures as a substitute for pasture, tested with pigs on summer pasture and in dry lot.

In the test two lots of pigs were fed shelled corn and a mixed protein supplement, with varying quantities of alfalfa meal on sudangrass pas-

ture, and one lot was fed in the dry lot, with a large quantity of alfalfa meal in the protein supplement to ascertain whether alfalfa meal thus fed could replace the green pasture. All feeds were self-fed.

Lot 1 on pasture received 4 parts tankage, 4 parts soybean meal, 1 part cottonseed meal, and 1 part alfalfa meal.

Lot 2 on pasture received 4 parts tankage, 4 parts soybean meal, and 2 parts alfalfa meal.

Lot 3 in the dry lot received 4 parts tankage, 4 parts soybean meal, and 3 parts alfalfa meal.

Table 60 gives the results of this experiment.

Table 60

The Maximum Value of Alfalfa Meal in Protein Supplements for Pigs on Pasture.

June 11, 1955, to September 20, 1955—101 days.

Ration fed	Shelled corn, sudangrass pasture, mixed protein supplement		Shelled corn, mixed protein supplement in dry lot
	4 parts tankage, 4 parts S.B.M., 1 part alf. meal, 1 part C.S.M.	4 parts tankage, 4 parts S.B.M., 2 parts alf. meal	4 parts tankage, 4 parts S.B.M., 3 parts alf. meal
Lot number	1	2	3
Number pigs in lot	9	9	10
Av. initial wt. per pig, lbs.	57.40	57.80	58.80
Av. final wt. per pig, lbs.	191.44	197.88	192.20
Av. total gain per pig, lbs.	134.04	140.08	133.40
Av. daily gain per pig, lbs.	1.32	1.38	1.33
Av. daily ration per pig, lbs.:			
Shelled corn	4.20	4.12	4.30
Protein supplement	.67	.69	.77
Lbs. feed per 100 lbs. gain per pig:			
Shelled corn	308.19	289.12	325.71
Protein supplement	50.81	55.52	58.62

Observations

1. Gains made by the pigs in all three lots were about the same, with a little advantage in the lot receiving 2 parts of alfalfa meal on pasture. Daily corn consumption varied little. The dry-lot pigs consumed about .1 pound per day more protein supplement than the pasture-grazing pigs.

The feed consumption per 100 pounds gain was greatest by the dry-lot-fed pigs, as expected. On pasture the requirements were within experimental expectation; a slight advantage was found in Lot 2 that received the most alfalfa meal.

2. These results confirm last year's and indicate a little preference for more alfalfa meal in the ration.

Varying Quantities of Alfalfa Meal in the Rations of Spring Pigs and in the Dry Lot.

PROJECT 110, Test 5

C. E. Aubel

This experiment was conducted the summer of 1955 with spring pigs to obtain information on maximum use of alfalfa meal in protein supplemental mixtures for pigs in the dry lot.

Four lots of pigs were self-fed shelled corn and a mixed protein supplement. Lot 1 pigs were placed on sudangrass pasture and self-fed protein supplement made up of 4 parts tankage, 4 parts soybean meal, 1 part cottonseed meal, and 1 part alfalfa meal.

Lot 2 received the same protein supplement as Lot 1 for 38 days or until they weighed 100 pounds. They were then removed from the

Table 61
Varying Amounts of Alfalfa Meal in the Rations of Spring Pigs in the Dry Lot.
 June 11, 1955, to September 20, 1955—101 days.

Lot number	Shelled corn, sudangrass pasture, mixed protein supplement 4 parts tankage 4 parts tankage 4 parts S.B.M. 4 parts S.B.M. 1 part C.S.M. 1 part C.S.M. 1 part alf. meal 1 part alf. meal		Shelled corn, mixed protein supplement in dry lot— 4 parts tankage 4 parts S.B.M. 3 parts alf. meal 5 parts alf. meal		5 parts tankage 5 parts alf. meal
	1	2	2	3	4
		(June 11-July 19—39 days)	(July 19-Sept. 20—62 days)		
Number pigs in lot	9	10	10	10	10
Av. initial wt. per pig, lbs.	57.40	58.90	100.10	58.80	58.05
Av. final wt. per pig, lbs.	191.44	100.10	177.80	192.20	169.80
Av. total gain per pig, lbs.	134.04	41.20	77.70	133.40	111.30
Total gain—Lot 2—entire period, lbs.		118.90			
Av. daily gain per pig, lbs.	1.32	1.05	1.25	1.33	1.10
Av. daily gain per pig—Lot 2—entire period, lbs.		1.17			
Av. daily ration per pig, lbs.:					
Shelled corn	4.20	4.68	4.14	4.30	3.89
Protein supplement	.67	.25	.58	.77	.55
Lbs. feed per 100 lbs. gain per pig:					
Shelled corn	308.19	442.96	330.63	325.71	353.54
Protein supplement	50.81	24.27	54.82	58.62	52.92
Lbs. feed per 100 lbs. gain per pig: (Lot 2) for entire period—					
Shelled corn			352.73		
Protein supplement			44.23		

pasture and put into a dry lot and fed a protein supplement of equal parts tankage and alfalfa meal until the close of the experiment. When they weighed 178 pounds.

Lot 3 was fed in the dry lot the entire feeding period on a protein mixture of 4 parts tankage, 4 parts soybean meal, and 3 parts alfalfa meal.

Lot 4 was fed in the dry lot the entire feeding period with an increased alfalfa meal allowance, a protein supplement mixture of 5 parts tankage and 5 parts alfalfa meal.

Observations

In this experiment Lot 1 pigs on pasture the entire feeding period and the pigs in Lot 3 in the dry lot the entire period on 3 parts of alfalfa meal made about the same daily gains. They gained 1.32 and 1.33 pounds daily, respectively, for the period. A little less feed (both corn and supplement) per 100 pounds gain was consumed by pigs on pasture. The Lot 2 pigs finished in dry lot after reaching 100 pounds on pasture, and the Lot 4 pigs in the dry lot the entire period made the poorest gains, 1.17 and 1.10 pounds daily, respectively. They also had higher feed requirements per 100 pounds gain.

The results of this experiment indicate that when the allowance of alfalfa meal in a ration is too high, efficiency decreases, but that a ration containing the right quantity of alfalfa meal and fed in dry lot will be as efficient as pasture-fed pigs that receive less alfalfa meal.

This experiment should be repeated to verify these observations.

Free-Choice Feeding of Shelled Corn and a Protein Mixed Supplement Compared with Feeding Pigs Completely Mixed Rations in Pellet Form.

PROJECT 110, Test 6
 C. E. Aubel

What is the best way to feed corn to growing-fattening pigs? Should it be shelled and fed free choice with a good mixed protein supplement, or should the hogs be fed completely mixed rations as meal or in pellet form? For years growing-fattening pigs have been considered capable of balancing their own rations when fed free choice. Recently experiments have shown it better practice to give pigs their feed as completely mixed rations.

This experiment consisted of two lots of nine pigs each. Lot 1 pigs were fed free-choice shelled corn and a mixed protein supplement made up of 4 parts tankage, 4 parts soybean meal, 1 part linseed meal, and 1 part alfalfa meal. The supplement had a crude protein percentage of 49. Lot 2 pigs were fed pellets of corn ground and mixed with the same protein supplement at the ratio of 3½ parts corn to 1 part supplement. This was fed from 50 pounds, their starting weight, to 75 pounds. The 3½-to-1 pellet had a protein percentage of 19.06. At 75 pounds the ratio of corn to protein supplement was changed to 6 to 1 and fed until the pigs reached 125 pounds. This pellet tested 16.9 percent protein. From 125 pounds to finish the pigs received a pellet with corn to supplement ratio of 9 to 1, which had a protein percentage of 14.3. No antibiotic was fed to either lot.

Table 62 gives the results.