

# Swine

## Swine Feeding Investigations

Chemical Analysis of Feeds Used in Swine Feeding Trials, 1955-56.

	Protein, %	Ether extract, %	Crude fiber, %	Moisture, %	Ash, %	N-Free extract, %	Carbo- hydrates, %
Protein supplement, 4-4-1-1 ..	49.06	3.40	6.98	5.71	11.73	23.12	30.11
Whole milo grain	13.75	3.10	1.97	8.71	1.95	70.52	72.49
Ground dry milo ..	14.00	3.40	2.54	8.19	2.21	69.66	72.20
Wet rolled milo ..	14.19	4.09	2.50	8.45	3.25	67.52	70.02
Molasses-milo mix	13.38	2.78	1.79	8.77	1.98	71.30	73.09
Whole corn (yellow) .....	10.50	3.94	1.98	10.35	1.33	71.90	73.88
Hog pellets, 3½ to 5 .....	19.06	3.83	2.90	11.31	3.76	59.14	62.04
Hog pellets, 6 to 1	16.94	4.08	3.33	8.08	3.30	64.27	67.60
Hog pellets, 9 to 1	14.31	3.59	2.81	9.26	2.52	67.51	70.32

### The Comparative Value of Greenleaf Sudangrass and Common Sudangrass as Pasture for Fattening Spring Pigs.

PROJECT 110, Test 1

C. E. Aubel

This experiment was conducted in the summer of 1955 with spring pigs on pasture. Its object was to compare the quality of the two varieties of sudangrass.

Two lots were fed shelled corn and a mixed animal and plant protein supplement made of 4 parts tankage, 4 parts soybean meal, 1 part cottonseed meal, and 1 part alfalfa meal. Both were self-fed, free choice. Lot 1 was pastured on Greenleaf sudangrass; Lot 2 on Common sudangrass.

The pastures were the same quality and stand. Both furnished ample green forage throughout the test. It was necessary to clip the pastures during the summer to get rid of headed-out stalks and provide good, leafy forage. Both stood the dry weather equally well and were relished equally by the pigs, as well as could be determined by observations.

Table 57 gives the results of this experiment.

Table 57

### Comparative Value of Greenleaf Sudangrass and Common Sudangrass as Forage for Fattening Spring Pigs.

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

Ration fed .....	Shelled corn and protein mixed suppl.	
	Greenleaf sudangrass pasture	Common sudangrass pasture
Lot number .....	1	2
Number pigs in lot .....	9	9
Av. initial wt. per pig .....	56.70	57.40
Av. final wt. per pig .....	183.80	191.44
Av. total gain per pig .....	127.10	134.04
Av. daily gain per pig .....	1.26	1.32

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Table 57 (Continued).

Av. daily ration per pig:		
Shelled corn, lbs. ....	3.98	4.20
Protein supplement, lbs. ....	.67	.67
Feed per 100 lbs. gain per pig:		
Shelled corn, lbs. ....	316.46	308.19
Protein supplement, lbs. ....	53.93	50.81

### Observations

1. The pigs foraging on the Greenleaf sudangrass made smaller daily gain than those running on the Common sudangrass.

2. The pigs on the Common sudangrass required 8 pounds of corn less per 100 pounds gain than those receiving the Greenleaf sudangrass. They likewise consumed 3 pounds less protein supplement per 100 pounds gain than the pigs pasturing on Greenleaf sudangrass.

3. This experiment indicates that either variety of sudangrass is a satisfactory forage for fattening spring pigs.

### The Value of Trimethylalkylammonium Stearate RQ-20 in the Rations of Fattening Pigs on Sudangrass Pasture.

PROJECT 110, Test 2

C. E. Aubel

A new chemical made from beef tallow, RQ-20, recently has come on the market and has been claimed to be beneficial for young pigs being fed for market. Its benefit arises from its anti-scouring action and it is said to be effective as a growth promoter. The substance is a white powder with a special trimethylalkylammonium stearate as the active ingredient to control scours. Steamed bonemeal is the carrier and supplies minerals in proper ratio. The two are mixed at the rate of 1 part RQ-20 to 4 parts steamed bonemeal.

Two lots of pigs were fed in this experiment on sudangrass pasture in the summer of 1955 to test the effectiveness of this compound.

The RQ-20 was mixed in the protein supplement at the rate of 3 pounds to 600 pounds and self-fed. The protein supplement was made of 4 parts tankage, 4 parts soybean meal, 1 part cottonseed meal, and 1 part alfalfa meal. The supplement was fed free choice with shelled corn.

Table 58 gives the results of this experiment.

Table 58

### Value of RQ-20 in the Ration of Fattening Pigs on Sudangrass Pasture.

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

Basal ration fed:	Basal + RQ-20	
	Basal	Basal + RQ-20
Shelled corn, mixed protein supplement, sudangrass pasture		
Lot number .....	1	2
Number pigs in lot .....	9	10
Av. initial wt. per pig, lbs. ....	57.40	57.10
Av. final wt. per pig, lbs. ....	191.44	187.00
Av. total gain per pig, lbs. ....	134.04	128.90
Av. daily gain per pig, lbs. ....	1.32	1.27
Av. daily ration per pig, lbs.:		
Shelled corn .....	4.20	3.73
Protein supplement .....	.67	.73
Lbs. feed per 100 lbs. gain per pig:		
Shelled corn .....	308.19	292.70
Protein supplement .....	50.81	57.64

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### 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