

Av. initial weight	39.2	42.0	44.0	41.4	43.8
Av. final weight	175.4	184.0	197.0	189.6	195.4
Av. daily gain	1.50	1.56	1.68	1.63	1.67
Feed/100 lbs. gain ..	377	354	364	368	364

(1) Supplied approximately 2.5 mg. bacitracin and .32 mg. penicillin G per pound of feed.

(2) Supplied approximately 5.4 mg. aureomycin HC1 per pound of feed.

Observations

1. About two weeks after the pellets containing bacitracin alone were implanted, the pigs showed evidence of toxicity in that they did not eat as well and did not appear as thrifty as the other pigs; however, these symptoms had disappeared by the end of the fifth week. The bacitracin-penicillin pellet did not cause any adverse symptoms.

2. Even though these results indicate that the combination of bacitracin-penicillin pellet may give similar results as when a combination of bacitracin and penicillin or aureomycin is mixed in the feed, it should be kept in mind that a relatively small number of animals were used. Considerably more work should be done before one should recommend the implantation of antibiotic pellets as a general practice in promoting growth.

3. The efficiency of feed utilization was considered good in all lots. There were slight but not significant differences.

4. These results give further proof of the value of milo grain when properly supplemented for fattening swine.

Project 242: Swine Breeding Investigations

Some Studies on Breeding Market Pigs by Crossing Duroc with Beltsville No. 1

C. E. Aubel

There has been much discussion in Kansas as to the desirability of cross-breeding inbred breeds (so-called hybrids) with other breeds. Consequently, a Beltsville No. 1 (Poland x Landrace origin) was secured and matings planned with the Duroc. The purpose was to study the vigor and size of the litter produced and their ultimate performance in the feedlot as compared with purebred Duroc pigs raised under comparable conditions.

In the winter of 1952, nine purebred Duroc sows were mated to a Duroc boar and five Duroc sows were mated to a Beltsville No. 1 boar. The following table gives a summary of the results of this experiment.

Table 11.—Some Studies on Breeding Market Pigs by Crossing
Durocs with a Beltsville No. 1 Boar
Farrowing Data—Spring, 1952

	Purebred Duroc	Beltsville No. 1 x Duroc
Lot number	1	2
No. sows farrowed	9	5
Av. no. pigs/litter	7.6	10.0
Av. birth wt. of pigs	2.4	2.4
Av. strong pigs/litter	6.6	8.4
Av. weak pigs/litter7	1.0

Av. born dead/litter1	.6
Av. 5-day wt. pigs in litter	3.4	3.8
Av. 56-day wt. pigs in litter	21.9	26.2
Av. pigs weaned/litter	6.4	8.4

From these data, it is seen that the crossbred pigs farrowed with a better record in almost every respect than did the purebred pigs.

From the pigs farrowed, 20 purebred Duroc pigs and 30 crossbred Beltsville No. 1 x Duroc pigs were selected to be fed out for market. They were fed in separate groups, self-fed corn and tankage on Sudan grass pasture. Their initial weight was 37.35 pounds for the purebred Durocs and 44.6 pounds for the crossbred. The following data show the results of this feeding test.

Table 12.—Some Studies on Breeding Market Pigs by Crossing
(June 18, 1952, to September 26, 1952—100 days)

	Purebred Duroc	Shelled corn, tankage (self-fed on Sudan past.) Beltsville No. 1 x Duroc
Lot number	1	2
Number pigs in lot	20	30
Av. birth wt. of pigs	2.4	2.4
Av. 56-day wt. of pigs	21.9	26.2
Av. initial wt. on feed	37.35	44.60
Av. final wt. on feed	161.35	174.41
Av. total gain/pig	124.00	129.81
Av. daily gain/pig	1.24	1.29
Feed/day/pig:		
Shelled corn	3.88	3.38
Tankage40	.60
Feed for 100 lb. gain/pig:		
Shelled corn	313.50	261.02
Tankage	32.25	46.22
Cost of gains	\$10.85	\$ 9.90

Feed prices charged: Corn, \$1.68 per bu., tankage, \$90 per ton.

Observations

From these data, it is seen that the purebred pigs at the end of 100 days feeding gained 124 pounds at the rate of 1.24 pounds daily with a feed consumption of 346.7 pounds of feed for 100 pounds gain, while the crossbred pigs gained 130 pounds in the 100 days at the rate of 1.29 pounds per day and a feed consumption per 100 pounds gain of 307.2 pounds. Thus the crossbred pigs fed out a little better than the purebred.

Project 93: Animal Breeding (Guinea Pigs)

Bacitracin Pellet Experiments with Guinea Pigs

L. A. Holland and M. J. Swenson

Two experiments were conducted to determine if bacitracin pellets implanted subcutaneously back of the right ear would stimulate gain