

Project 242: Swine Breeding Investigations

EXPERIMENT VI - Summers 1948 and 1949

Some studies on breeding market pigs by crossing Duroc and Poland with Minnesota No. 1.

C. E. Aubel

There has been much discussion in Kansas as to the desirability of using the Minnesota No. 1 breed of swine for crossing on other breeds. Consequently a few years ago one of these boars was secured for this purpose. In order to get as true a value of crossing as possible, it was planned in this experiment to double mate the sows. That is, to breed them to a boar of their own breed first and immediately after to breed them again to the Minnesota No. 1 boar. In this way it was theoretically possible to get in the same litter cross bred pigs and pure bred pigs. The plan involved further the separating of these pure bred and cross bred pigs and feeding them out for market in separate groups.

Two tests were carried on with this, one in the spring of 1948 and one in 1949. In each experiment 4 sows of the Poland China breed and 4 of the Duroc breed were bred in the manner described.

In the first test in 1948, no purebred pigs could be identified in the litters of the Poland China. The Duroc crosses were successful however and were separated at weaning and fed out as the figures in the following table show. The plan of the experiment included a study of the carcasses at slaughter time but due to a mix-up at the packing plant this was not done.

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TABLE 1. SOME STUDIES ON BREEDING MARKET PIGS BY CROSSING DUROCS WITH MINNESOTA NO. 1

1st Test—Summer, 1948
(July 8, 1948 to October 25, 1948—104 Days)

Ration Fed	Shelled Corn and Tankage (Self-Fed) on Sudan Grass Pasture	
	Purebred Durocs	Minnesota No. 1 + Duroc Cross
Lot Number	1	2
No. Pigs in Lot	15	15
Av. Birth Weight per Pig	2.68	2.27
Av. 56 Day Weight per Pig	23.74	17.28
Av. Initial Weight per Pig	54.00	47.30
Av. Final Weight per Pig	250.50	230.00
Av. Total Gain per Pig	196.50	182.70
Av. Daily Gain per Pig	1.80	1.67
Av. Daily Feed Consumed per Pig:		
Corn	8.31	7.56
Tankage64	.61
Feed Consumed per 100 lbs. Gain:		
Shelled Corn	488.54	451.55
Tankage	35.62	36.12
Feed Cost per 100 lbs. Gain	\$ 14.16	\$ 13.26

Feed Prices Charged: Shelled corn, \$1.40 per bu.; Tankage, \$110.00 per ton.

Method of Feeding: The shelled corn and tankage were self-fed free choice on alfalfa pasture.

The second test in the summer of 1949 was a repetition of the first test in breeding except that only 3 sows of each breed were mated. This year however the purebred and the crossbred pigs of the Durocs could not be identified at weaning time, so had to be discarded.

The Poland purebreds and crossbreds were separated, placed in the feed lots in separate groups to be compared with the crossbred Duroc and Poland pigs.

The results of this feeding trial as well as some hog carcass data follow:

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TABLE 2. SOME STUDIES ON BREEDING MARKET PIGS BY CROSSING

2nd Test—Summer, 1949

C. E. Aubel D. L. Mackintosh
(June 23, 1949 to September 16, 1949—85 Days)

Ration Fed	Shelled Corn and Tankage (Self-Fed) on Alfalfa Pasture		
	Purebred Polands	Minnesota No. 1 Cross on Poland China	Duroc and Poland China Cross
Lot Number	1	2	3
No. of Pigs in Lot	4	15	10
Birth Weight	3.0	3.1	
56 Day Weight	27.0	29.8	
Av. Initial Weight per Pig	49.10	54.44	59.50
Av. Final Weight per Pig	190.50	207.00	195.50
Av. Total Gain per Pig	141.40	152.56	136.00
Av. Daily Gain per Pig	1.66	1.79	1.60
Feed per Day per Pig:			
Shelled Corn	5.67	6.14	5.78
Tankage43	.47	.40
Feed for 100 lbs. Gain per Pig:			
Shelled Corn	341.23	342.59	361.39
Tankage	25.84	26.65	25.00
Feed Cost per 100 lbs. Gain	\$ 9.95	\$ 10.01	\$ 10.40

Feed Prices Charged: Shelled corn, \$1.40 per bu.; Tankage, \$110.00 per ton.

Method of Feeding: The shelled corn and tankage were self-fed free choice on alfalfa pasture.

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TABLE 3. HOG CARCASS DATA—FALL, 1949

Breeding	No. of Hogs	Av. Live Wt.	Length (CM)			Fat Back (CM)		
			Av.	Max.	Min.	Av.	Max.	Min.
Poland	4	195	73.0	77.5	69.5	4.47	5.4	3.8
Poland - Minn. Cross	15	215	74.13	78.5	69.0	4.63	5.3	3.8
Poland - Duroc Cross	10	206	70.6	74.0	68.0	4.64	5.6	3.3

Live Weight—Packing Weight.

Length of Carcass—From anterior point of aitch bone to anterior edge of first rib.

Fat Back—Average of 3 measurements on each hog.

OBSERVATIONS AND CONCLUSIONS

From these data it is seen that varying results were achieved. In the first experiment the greatest daily gains were made by the purebred pigs but they consumed more feed per 100 pounds gain. In the second experiment the best daily gains were made by the crossbred Minnesota No. 1 and Poland pigs but the feed required per 100 pounds gain was about the same as that of the purebreds. It would seem that no definite advantage for cross breeding has been shown by these tests.

Project 111 GC: Lamb Feeding Investigations

Dept. of Animal Husbandry and
Garden City Branch Agricultural Experiment Station Cooperating
1949-1950

WHEAT PASTURE WITH VARIOUS SUPPLEMENTS FOR FATTENING LAMBS

R. F. Cox and A. B. Erhart

Many uncertainties and notions are current concerning the use of wheat pasture for fattening lambs. In an effort to find definite information on some of these, experiments on pasturing wheat have been conducted during seasons when wheat growth furnished sufficient pasture.

Comparisons were made this year of fattening lambs in the lot and on wheat pasture. One lot of lambs on wheat pasture received nothing else. Additional lots were pastured on wheat and received in addition either dry roughage, bicarbonate of soda, a mineral mixture or vaccination against enterotoxemia.

Lambs:

The lambs fed in these tests were of straight fine-wool type and were good quality feeder lambs. They were received at Cuervo, New Mexico, in late October. They weighed about 71 pounds per head into the experiment.

Feed Prices:

Westland Milo	\$ 2.00	per cwt.
Alfalfa	\$ 22.50	per ton
Cottonseed Cake	\$ 75.00	per ton
Salt	\$.90	per cwt.
Ground Limestone	\$ 1.00	per cwt.
Steamed Bone Meal	\$ 5.00	per cwt.
Bicarbonate of Soda	\$ 4.85	per cwt.
Vaccination	\$.12 1/2	per head
Wheat Pasture	\$.30	per head per month

Death Loss:

Five of the 549 lambs in the experiment died, a loss of .9 of one percent. One lamb was lost from each of lots 2, 3, 5 and 6 from enterotoxemia or "over-eating disease". One lamb in lot 3 was killed by dogs.

Note:

It should be pointed out that lot 3 was ravaged seriously by dogs. Twelve of the lambs were injured and one killed. They did not recover fully from this attack and indications are that their lower gain may be attributed to this.