Table 20 (Continued).

Av. total gain per pig, lbs.	139.60	42.90	97.38	143.25	122.22
Total gain, Lot 2—entire period			140,28		
Av. daily gain per pig, lbs.	1.56	1.12	1.90	1.60	1.37
Av. daily gain per pig, lbs., Lot 2—entire period			1.57		
Av. daily ration per pig:					
Shelled corn, lbs.	4.19	3.15	4.98	4.50	4.17
Protein supplt., lb.	.72	.39	.75	.77	.74
Feed per 100 lbs. gain per pig:					
Shelled corn, lbs.	267.55	279.72	261.24	280.10	303.64
Protein supplt., lbs.	46.20	34.96	39.43	47.99	51.73
Feed per 100 lbs. gain per pig: (Lot 2) for entire period					
Shelled corn, lbs.			266.89		
Protein supplt., lbs.			38.06		

Observations

In this experiment Lot 1 pigs on pasture the entire feeding period and Lot 2 pigs on pasture only about one-half the feeding period (then placed in the dry lot) made about the same gains. They gained 1.56 and 1.57 pounds daily for the period with almost exactly the same feed per 100 pounds gain, except that the pigs in dry lot one-half the time (on increased alfalfa meal) consumed 8 pounds less protein supplement than the pasture-grazed pigs.

The daily gains of those on dry lot one-half time were about the same as Lot 3 (fed the entire time in dry lot with 3 parts alfalfa meal). Lot 3 pigs used 23 pounds more feed per 100 pounds gain than Lot 2 pigs.

The Lot 4 pigs made the poorest showing of all with a daily gain of 1.37 pounds, and they had a rather high requirement of feed per 100 pounds gain.

Conclusion

Results indicate thus far that when the allowance of alfalfa meal in a ration is too high, efficiency decreases. But a ration of proper quantities of alfalfa meal, fed in the dry lot, will be as efficient as pasture and a smaller quantity of alfalfa meal.

More tests are needed to verify these observations.

The Comparative Value of Corn and Whole and Ground Milo as Swine-Fattening Feeds.

PROJECT 110, Test IV

C. E. Aubel

Sorghum grains are grown extensively in parts of Kansas for hog feed. In previous feeding tests with hogs at this station, some sorghum

grains have given excellent results compared with corn. In 1950 Westland and Midland milos gave 12 percent greater daily gain than corn. The economy in feed per 100 pounds gain was about 5 percent better from sorghum grain than from corn. Because corn has been more difficult to produce in Kansas, while sorghum grains have increased in popularity, it was thought advisable to compare sorghum grain with corn again.

Four lots of pigs were self-fed in dry lot. All lots received a mixed animal and plant protein supplement of 4 parts tankage, 4 parts soybean meal, 1 part linseed meal, and 1 part alfalfa meal. The milo was an unidentified variety, straight elevator run. Lot 1 received shelled corn; Lot 2, whole milo; Lot 3, coarsely ground milo from a burr mill; Lot 4, ground milo. The protein supplement mixture for this lot contained aureomycin supplied as Aurofac at the rate of 27 pounds per ton.

Table 21 gives the results.

Table 21.—Comparative value of corn and milo as swine-fattening feeds.

Ration fed, 91 days	Shelled corn, protein mixed supplt., min. mix.	Whole milo, protein mixed supplt., min. mix.	Burr mill ground milo, protein mixed supplt., min. mix.	Ground milo, protein mixed supplt., 27 lbs. Aurofac per ton min. mix.
Lot number	1	2	3	4
Number pigs in lot	10	10	9	9
Av. initial wt. per pig, lbs.	51.90	51.70	53.11	52.55
Av. final wt. per pig, lbs.	202.90	219.20	223.22	224.32
Av. total gain per pig, lbs.	151.00	162.50	170.11	171.77
Av. daily gain per pig, lbs.	1.65	1.78	1.86	1.88
Av. daily ration per pig:				
Grain, lbs.	5.40	6.26	6.42	6.34
Protein mix, lb.	.89	.90	.91	.92
Lbs. feed per 100 lbs. gain per pig:				
Grain	325.82	350.89	339.64	323.42
Protein mix	54.17	50.76	48.85	48.77
Mineral mix	.08	.07	.06	.06

Observations

1. Whole milo produced about 8 percent greater gains in pigs than was produced by corn.
2. Daily gains of pigs fed ground milo were about 12 percent greater than daily gains of pigs fed corn.
3. Ground milo was more efficient than whole milo.
4. Adding aureomycin to the ration reduced the amount of feed required per 100 pounds gain.
5. Milo was palatable. Each lot fed milo consumed more of it daily than the amount of corn consumed daily by the corn-fed lot.
6. Milo was a satisfactory grain in all respects and was better than corn, in these tests, for fattening pigs.

Some Studies on Breeding Market Pigs by Crossing Duroc with Beltsville No. 1 for Meat-type Hogs.

PROJECT 242

C. E. Aubel

Much discussion in Kansas has concerned the desirability of cross-breeding inbred breeds (so-called hybrids) with other breeds for meat-