

Pigs on concrete had approximately 15 square feet of floor space each while those on slats had approximately 8 square feet of floor space each. Both groups of pigs were self-fed complete meal ration number S-35. The ration formulation is listed in Table 23. Both groups drank from automatic water fountains and there was one mist-type fogging nozzle over each pen. Each pen was partially under roof.

Observations

Table 27 summarizes the average performance of pigs in each pen. Pigs on the slotted floor were always clean. All manure went through the floor and no cleaning was ever necessary. Pigs on the concrete floor were always dirty, even though the pen was scraped each day. The whole area was sprayed regularly to control flies.

During hot weather pigs on the slotted floor suffered noticeably from the heat and/or humidity. One pig became overheated and died August 6. Maximum temperature that day was 98° F. with high relative humidity. In contrast pigs on the wet, dirty floor showed little evidence of discomfort from heat even on the warmest days. Apparently the concrete floor helped cool the pigs.

Since feed efficiency figures are similar for the two groups, it is suggested that differences in weight gain were due to differences in feed intake due to temperature effect. It would be possible to overcome this effect in a properly designed slotted floor unit.

Table 27
Performance of pigs on a concrete floor vs. those on an elevated wooden, slotted floor.

June 7, 1962, to September 15, 1962—99 days.

| | Concrete floor | Slotted floor |
|-------------------------------|----------------|-----------------|
| No. pigs | 12 | 12 ¹ |
| Ration no. | S-35 | S-35 |
| Av. initial wt., lbs. | 54 | 55 |
| Av. final wt., lbs. | 214 | 178 |
| Av. daily gain, lbs. | 1.61 | 1.28 |
| Standard error | ±0.04 | ±0.03 |
| Av. feed eff., lbs. | 3.30 | 3.35 |
| Feed cost per cwt. gain | \$10.06 | \$10.22 |

1. One pig died August 6. Post-mortem examination indicated heat prostration.

Corn vs. Sorghum and Pellets vs. Meal for Growing-finishing Swine (Project 110).

B. A. Koch

This is a continuation of feeding trials comparing the feeding value of corn and sorghum grain under Kansas conditions.

Experimental Procedure

Forty feeder pigs, 12 Poland Chinas and 28 Durocs averaging 55 pounds each, were randomly divided by breed and sex into four groups. All pigs had been previously vaccinated for cholera and erysipelas and wormed with piperazine.

The pigs were fed and housed on concrete where each pig had 18 square feet of space. There was an electrically heated, automatic waterer in each pen. Each group of 10 pigs had access to a three-hole fence line self-feeder.

Ration formulations are listed in Table 23. Rations 34 and 34A contained corn while 35 and 35A contained sorghum grain. Sorghum grain replaced corn on a pound-for-pound basis with no other changes in formu-

lation. In each case one ration was fed as meal and one as pellets. Individual pigs were removed from test as they reached market weight. Carcasses were examined on the rail after slaughter.

Observations

Table 28 summarizes performance and cost data for the study. There was no significant difference between average daily gain figures for the various lots. In a previous study, pigs eating pelleted rations gained somewhat faster than those eating meal rations. The pigs eating the pelleted rations were more efficient than those eating meal. This was also true in a previous study.

Pigs performed as well on sorghum grain as on corn whether the ration was pelleted or in meal form. The corn and sorghum used in this study had similar protein levels, thus the change in grain did not change the crude protein level of the rations.

Under prices at the time of the study the sorghum grain rations produced cheaper gains than the corn rations. Pelleted rations produced gain more efficiently than meal rations in both comparisons even though the cost per ton of the pelleted rations was higher.

Carcasses from the various lots did not differ significantly in USDA grade.

Table 28
Corn vs. sorghum grain.
(Feeding period began December 16, 1961.)

| Ration no. ¹ | 35 | 34 | 34A | 35A |
|----------------------------------|---------|---------|---------|---------|
| Av. % crude protein | 16 | 16 | 16 | 16 |
| Grain | Sorghum | Corn | Corn | Sorghum |
| Preparation | Meal | Meal | Pellet | Pellet |
| No. of pigs | 10 | 10 | 10 | 10 |
| Av. on-test wt., lbs. | 52 | 54 | 56 | 56 |
| Av. off-test wt., lbs. | 215 | 206 | 222 | 220 |
| Av. daily gain, lbs. | 1.60 | 1.51 | 1.61 | 1.60 |
| Standard error | ±0.07 | ±0.07 | ±0.08 | ±0.07 |
| Av. feed efficiency, lbs. | 372 | 365 | 349 | 346 |
| Av. feed cost per cwt. gain | \$ 9.93 | \$10.73 | \$10.61 | \$ 9.58 |
| Feed cost per ton | \$53.40 | \$58.80 | \$60.80 | \$55.40 |

1. See Table 23 for ration formulation.

Swine Breeding Investigations (Project 242) (Progress Report), B. A. Koch

A crossbred barrow sired by a Duroc boar (University Charm 16753), and out of a Poland China sow (Prince's Maiden 20-521492), was first place crossbred barrow at the 1962 Kansas State Fair. The barrow produced the champion carcass when slaughtered.

Carcass data follow:

Carcass length, 29.9 inches; backfat, 1.06 inches; loin eye area, 5.80 square inches; lean cuts, 53.67% of carcass weight and 39.1% of live weight.

Vitamin A Levels for Growing-finishing Pigs (Project 311).

B. A. Koch

Vitamin A supplementation recommendations vary considerably from station to station. Most research indicates that supplementation recommendations are generally much higher than actually necessary. This