

Lot 1. Whole sorghum grain.
 Lot 2. Dry rolled sorghum grain.
 Lot 3. Steam rolled sorghum grain.
 Lot 4. Steamed sorghum grain with rolling or crimping delayed four hours.
 Lot 5. Shelled corn.
 The sorghum grain was steamed at 90 pounds pressure and at 180° F. Results are presented in Table 2.

Observations

Pigs receiving the steam rolled sorghum grain gained just .02 pound less per day than those receiving shelled corn. Gains in lot 2 were .02 pound per day less than those getting the steam rolled grain. Delaying the crimping four hours (lot 4) seemed not to improve gains. Poorest gains were from unprocessed sorghum grain. All factors considered, the sorghum grains proved satisfactory—confirming earlier experiments at this station. The lot fed corn made good gains with low corn consumption of grain. The corn quality was very good.

Table 2

The comparative value of shelled corn and sorghum grain prepared by different milling processes for finishing fall pigs in drylot.¹

December 5, 1959, to March 3, 1960—89 days.

Items	RATION FED				
	Sorghum grain				
	Whole	Dry rolled	Steam rolled	Steam rolled, delayed crimp	Shelled corn
Lot number	1	2	3	4	5
Number pigs per lot ..	10	10	10	10	10
Av. initial wt. per pig, lbs.	58.50	58.50	58.40	58.30	58.90
Av. final wt. per pig, lbs.	177.60	184.60	185.70	179.00	188.60
Av. total gain per pig, lbs.	119.10	126.10	127.30	120.70	129.70
Av. daily gain per pig, lbs.	1.33	1.41	1.43	1.35	1.45
Av. daily ration per pig, lbs.:					
Shelled corn					4.37
Sorghum grain	4.85	5.05	5.33	5.46	
Protein supplement70	.69	.74	.64	.67
Lbs. feed per cwt. gain per pig:					
Shelled corn					300.30
Sorghum grain	362.80	356.85	373.21	383.30	
Protein supplement	52.30	48.85	52.00	47.47	46.49

1. All lots received the same protein mix supplement.

The Value of Soaking Whole Sorghum Grain for Finishing Fall Pigs in Drylot (Project 110-4).

C. E. Aubel

Two lots of pigs were self-fed, free choice, whole sorghum grain and a mixed protein supplement. Each lot contained 10 pigs. In one lot, the whole sorghum grain was fed dry; in the other, it was automatically fed into water warmed enough to prevent freezing.

The protein supplement fed both lots consisted of 4 parts tankage, 4 parts soybean meal, 1 part cottonseed meal, and 1 part alfalfa meal. To each ton of supplement was added 27 pounds of antibiotic Aureofac¹ (Aureomycin) and one half pound of zinc oxide.

1. Registered trademark American Cyanamid Company for Aureomycin.

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The results are listed in Table 3.

Observations

The lot of pigs receiving soaked whole sorghum grain made faster daily gains but consumed about 19 pounds more grain per 100 pounds gain than the lot fed dry whole sorghum grain. They ate about the same quantity of protein supplement. The soaked grain apparently was more palatable than the dry, for the pigs ate one pound more per head daily.

Table 3

The value of soaking whole sorghum grain for finishing fall pigs in drylot.¹

December 5, 1959, to March 3, 1960—89 days.

Item	Whole dry sorghum grain	Soaked whole sorghum grain
Lot number	1	2
Number pigs in lot	10	10
Av. initial wt. per pig, lbs.	58.50	59.40
Av. final wt. per pig, lbs.	177.60	196.00
Av. total gain per pig, lbs.	119.10	136.60
Av. daily gain per pig, lbs.	1.33	1.53
Av. daily ration per pig, lbs.:		
Sorghum grain	4.85	5.84
Protein supplement70	.77
Lbs. feed per cwt. gain per pig:		
Sorghum grain	362.80	381.03
Protein supplement	52.30	50.51

1. Both lots received the same protein supplement.

The Value of Yeast Culture and L-Lysine (Amino Acid) in a Sorghum Grain Ration for Finishing Fall Pigs in Drylot¹ (Project 110-5).

C. E. Aubel

Sorghum grain is deficient in the amino acid, lysine. This test was to determine the value of a lysine feeding supplement recently on the market. Cultured yeast also is a source of lysine.

Three lots of 10 pigs each were fed, free choice, whole sorghum grain with a mixed protein supplement. One lot received the whole sorghum grain and a mixed protein supplement of 4 parts tankage, 4 parts soybean meal, 1 part cottonseed meal, and 1 part alfalfa meal. To each ton of the supplement 27 pounds Aureofac² and one half pound zinc oxide were added. A second lot was fed the same except that 100 pounds of yeast culture was added to each 500 pounds of protein mix. A third lot was fed as lot 1 except that 10 pounds I-Lysine feeding supplement was added to each ton of protein supplement.

The results are presented in Table 4.

Observations

Adding yeast culture or I-Lysine feeding supplement to a protein supplement fed with whole sorghum grain increased the rate of gain and decreased the quantity of sorghum grain required to produce 100 pounds of gain.

The protein supplement consumed was about the same in all lots; palatability was slightly better when yeast culture or I-Lysine was fed.

1. Chas. Pfizer & Co., Inc., Terre Haute, Ind., supplied the L-Lysine feeding supplement, and Diamond V Mills, Cedar Rapids, Iowa, the yeast culture used in this experiment.

2. Registered trademark American Cyanamid Company for Aureomycin.

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