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Wheat for Swine

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Pigs to Pork

NUTRITION

Cooperative Extension Service PURDUE UNIVERSITY Lafayette, Indiana

Wheat for Swine

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When price fluctuations justify the use of wheat in swine feeds, it may replace all or part of the corn in a ration for swine. Wheat contains (Table 1) 12.7 percent protein, however, this protein is deficient in some of the amino acids, namely, lysine required by the pig. The vitamin and mineral content of wheat is also low; therefore, wheat must be properly supplemented in order to correct these deficiencies when formulating swine rations.

If the relative value of ground yellow corn is 100 percent, the value of ground wheat as a complete substitute is 95 percent in grower, finisher and breeder rations. Or 1.05 pounds of wheat would be equal to one pound of corn. For best utilization, wheat should be coarsely ground and may be pelleted. When changing from a corn ration to a ration high in wheat, a gradual change protects against pigs going off feed. Tables 2 and 4 present rations utilizing wheat. Table 3 lists the ingredients for 2 protein supplements.

Table 1. Composition of corn and wheat

Item	Protein	Fat	Fiber	Calcium	Phosphorus
Corn, yellow	8.8	3.8	2.5	0.01	0.25
Wheat, hard	12.7	1.5	2.0	0.05	0.40

Table 2. Suggested swine rations

Ingredient	Grower	Finisher	Gestation 1/	Gestation 2/
Corn, ground	380.0	424.2	350.0	350.0
Wheat, ground	380.0	424.3	350.0	350.0
Soybean meal (44%)	213.5	130.0	102.5	176.0
Meat & bone scraps (50%)			40.0	
Alfalfa meal (17%)			150.0	100.0
Dicalcium phosphate	10.0	7.0		10.0
Calcium carbonate	9.0	7.0		6.5
Salt, iodized	5.0	5.0	5.0	5.0
Premix	2.5	2.5	2.5	2.5
Total	1,000.0	1,000.0	1,000.0	1,000.0
Protein level, %	17.6	14.8	16.6	17.0

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Table 3. Protein supplements

Ingredient	Fortified Soybean Meal	Modified Supplement 2
Soybean meal (44%)	865.0	635.0
Meat & bone scraps (50%)		200.0
Dehy. alfalfa meal (17%)		100.0
Dicalcium phosphate	80.0	32.0
Calcium carbonate	25.0	3.0
Salt, iodized	25.0	25.0
Vitamin & mineral premix	5.0	5.0
Total	1,000.0	1,000.0
Protein, level, %	38.7	40.0

These supplements can be fed free choice with shelled corn or mixed with ground corn or wheat to make complete rations of 12 to 16 percent protein. When using wheat and supplement in a mixed ration, replace all or part of the corn with wheat and use the same amount of supplement as was used with the all corn ration.

Premix for Grower and Finisher should supply the following per pound of ration: 600 IU Vitamin A: 100 IU Vitamin D: 2 mg. riboflavin; 5 mg. pantothenic acid; 6 mg. niacin; 5 mcg. B_{12}; 5 ppm Copper; 100 ppm Iron; 50 ppm Manganese; 100 ppm Zinc. Antibiotics may be fed at 20 gm. per ton in the Grower and 10 gm. per ton in the Finisher ration or Arsanilic Acid may be used at a level of 90 gm. per ton.

Gestation ration premixes should be similar to that of the Grower or Finisher premixes but generally do not need antibiotics. Vitamin A level should be 2000 IU per pound of ration.

Premixes for supplements should provide a level of added vitamins and minerals which is five times that of the Grower or Finisher ration.

Table 4. All wheat finisher-ration

Ingredient	Pounds
Wheat, hard	920.0
Soybean meal (44%)	26.5
Blood meal (80%)	30.0
Dicalcium phosphate	6.0
Calcium carbonate	10.0
Salt	5.0
Premix a/	2.5
Total	1,000.0
Protein %	15.0

a/ Use same premix as for grower and finisher.

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