

SWINE FEEDING TRIAL - WINTER, 1974-75

Research conducted in Montana and Oregon indicates that the hull and fiber content of barley contribute partially to the lowered performance of pigs as compared to pigs fed grains with lower fiber content. Hulless barley is reported to be superior when compared to hulled varieties, and equal to corn in feeding value fed to growing-finishing pigs.

This trial was designed to test hulless barley when fed with, and without, protein supplementation, as compared to hulled barley that was supplemented in swine growing-finishing rations. In the experiment, rations of hulled barley, oats and soybean oil meal (SBOM); hulless barley and oats; and hulless barley, oats and SBOM were compared. The rations as shown in table 1, balanced according to the National Research Council's requirements, were processed in a portable mixer grinder.

These were four Yorkshire X Duroc crossbred barrows and three straightbred Yorkshire barrows in each experimental lot. The average starting weight of the barrows was 48 pounds. Before the trial was begun all of the pigs were wormed with dichlorvos. Weights, gains and feed costs have been summarized in table 2, and the performance of the crossbred vs. straightbred barrows is shown in table 3. In addition, gains, feed efficiency and cost per hundred pounds gain were compared when a basal ration supplemented with SBOM was fed to straightbred Yorkshire and crossbred Yorkshire Duroc gilts. A summary of their performance is shown in table 4.

Summary: Pigs that were fed either supplemented hulless barley or hulled barley gained significantly better than those fed hulless barley without supplementation. There was no significant difference between hulless barley and hulled barley with respect to gain, however, the pigs fed hulless barley were more efficient as they required 38 pounds less feed per hundred pounds gain. This increase in efficiency reflected a \$2.65 savings in feed costs per hundred pounds gain.

The crossbred barrows in this trial, summarized in table 3, did not gain significantly better than their straightbred

counterparts.

Gains and feed efficiency of crossbred and straightbred gilts were compared when a basal ration supplemented with SBOM was fed. As indicated in table 4, the crossbred gilts showed a slight advantage for gain per day of age and feed efficiency, however, the advantage was not large enough to be statistically significant.

Table 1 - Rations as fed - swine feeding trials - winter, 1974-75			
Ingredients	Ration 1 Hulled Bly, 50% oats + SBOM	Ration 2 Hulless bly. + 50% oats	Ration 3 Hulless bly, 50% oats + SBOM
Hulled barley, lbs.	447.5	---	---
Hulless barley, lbs	---	487.0	485.5
Oats, lbs.	447.0	486.0	448.0
SBOM, lbs.	80.0	---	80.0
Dicalcium phosphate, lbs.	8.0	7.5	6.0
Limestone, lbs.	11.0	13.0	11.0
Minerals & vitamins ¹	6.5	6.5	6.5
Crude protein %	15.9	16.5	18.7
Cost/100# feed, \$	5.65	5.21	5.52

¹Includes: 5 lbs. trace mineral salt, 1 lb. fortafeed, 45 grams vitamin B₁₂, 30 grams vitamin A, 6 grams vitamin D₃ and 180 grams zinc sulfate per 1000 lbs. complete feed.

Table 2 - Weights, gains and costs - swine feeding trials, winter 1974-75

	Hulled bly. + oats + SBOM	Hulless Bly. + oats	Hulless bly. + oats + SBOM
Initial wt., lbs.	48	48	47
Final wt., lbs.	195	176	202
Gain, lbs.	147	128	155
Days fed	101	101	101
Avg. daily gain, lbs.	1.45	1.27	1.54
Feed/head/day, lbs.	6.37	5.94	6.20
Feed/lb. gain, lbs.	4.39	4.67	4.01
Cost/100# gain, \$	24.78	24.34	22.13

Table 3 - Comparison of crossbred vs. purebred barrows on three rations

Ration	Hulled barley, oats + SBOM		Hulless barley, oats		Hulless barley, oats + SBOM	
	X-bred	Str. bred	X-bred	Str. bred	X-bred	Str. bred
Initial wt., lbs.	48	49	49	48	47	47
Final wt., lbs.	194	197	179	173	205	199
Gain, lbs.	146	148	130	125	158	152
Days on feed	101	101	101	101	101	101

Avg. daily gain, lbs.	1.44	1.47	1.29	1.24	1.57	1.52
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Table 4 - Comparison of crossbred vs. purebred gilts fed 14.7 percent barley + SBOM ration		
	Yorkshire	Duroc X Yorkshire
Initial wt., lbs.	49	50
Final wt., lbs.	210	215
Gain, lbs.	155	161
Days fed	120	120
Avg. daily gain, lbs.	1.29	1.35
Feed/head/day, lbs.	6.24	6.31
Feed/lb. gain, lbs.	4.84	4.67
Cost/100 lbs. gain, \$	27.32	26.36

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