

SUMMER PIG FEEDING WORK - 1955

B-Vitamin concentrate added to pelleted ration on pasture.

A vitamin concentrate manufactured by Lederle Laboratories has given mixed results when added to fattening rations for pigs in preliminary tests. An experiment was set up to test this supplement, 2-49c Fortafeed when added to swine rations at 2 lbs. per ton and 4 lbs. per ton.

Six lots of 6 pigs each were lotted on May 27 on similar one acre winter wheat pastures. All pigs were self-fed pelleted rations. Water in fountains was available to all lots and a straw house for shade and wind protection was constructed in each lot. The basal ration consisted of barley and oats 2:1, with about 4% soybean oilmeal, 2% meat and bone scraps, and 1.3% minerals. To this ration was added 2 lbs. per ton of Lederle's Fortafeed 2-49c; the entire ration was mixed and pelleted. A second ration was like the first except the Fortafeed was added at the rate of 4 lbs. per ton. The third ration consisted of basal only with no Fortafeed. Each ration was fed to 2 lots of pigs, one lot averaged 67 lbs. initially, and the other lot averaged 35 lbs. initially. The three lots of heavy pigs were sold after 88 days, and the three lighter lots were sold after 111 days.

Table IX presents average gains and cost for the 6 lots.

Table IX - B-Vitamin Concentrate added to a Pelleted Ration for Pigs.						
Lot no. Ration	I	I-A	II	II-A	III	III-A
	Basal & 2 lbs. Fortafeed per ton		Basal & 4 lb. Fortafeed per ton		Basal only	
No. of pigs per lot	6	6	5*	6	6	6

Initial wt.	67	35	69	36	67	35
Final wt.	214	177	219	200	209	180
No. days on feed	88	111	88	111	88	111
Avg daily gain	1.67	1.28	1.71	1.48	1.61	1.30
Feed per 100 lbs. gain	451	426	501	427	460	415
Feed cost per 100 lbs. gain	\$8.66	\$8.18	\$9.62	\$8.20	\$8.83	\$7.97
<p>Feed prices used in computing costs: barley .72 bu., oats .48 bu., soybean oilmeal \$4.50 cwt., meat scraps \$5.50 cwt., minerals** \$3.00 cwt., the pelleting cost of .20 cwt. was included in feed costs.</p> <p>*1 pig removed after 30 days not due to ration.</p> <p>**Mineral mixture was equal parts steamed bonemeal, trace mineralized salt and limestone.</p>						

The B-Vitamin concentrate used appeared to stimulate gains when used at the rate of 4 lbs. per ton. This was more noticeable in the smaller pigs than in the larger ones. There was no consistent difference in efficiency of gains between vitamin fortified rations and the basal rations. The 3 lots of smaller pigs appeared to be more efficient than the larger pigs, but this may be partially due to the fact that the smaller pigs were sold at lighter weights than were the larger pigs. Pigs placed on feed at the heavier weights made much faster gains throughout the experiment than did pigs which went on feed at light weights. It is possible that the ration was not entirely adequate for small pigs.

Rape & Oats Pasture vs Dry Lot for Fattening Pigs - 1955

For several years, we have fed dry lot pigs a ration somewhat higher in protein and or vitamins than we provided for pigs on good summer pasture. As a result, pigs fed in dry lot have always cost more to produce than pigs on pasture. Rate of gain has sometimes favored pasture fed pigs, but when enough extra protein and vitamins were added to the dry lot ration, the dry lot pigs outgained pigs on pasture. In the spring of 1955, 40 pigs were divided into 4 lots, 2 lots of heavy pigs and 2 lots of light pigs, to test rate and efficiency of gains of dry lot vs pasture fed pigs when we all were fed the same pelleted ration. Results are tabulated below:

Table X - Dry lot vs Rape and oats pasture for fattening pigs				
	Dry Lot		Pasture	
	1	2	3	4
No. pigs per lot	10	9*	10	10
Initial wt.	67	35	67	35
Final wt.	212	172	189	185
Days on feed	88	111	88	111
Avg. daily gain	1.65	1.24	1.38	1.35
Feed per 100 lb. gain	467	470	436	429
Feed cost per 100 lb. gain	\$9.48	\$9.54	\$8.85	\$8.71
*1 removed not due to ration. Feed prices used: barley .72 bu., oats .48 bu., swine supplement \$8 cwt., pelleting .20 cwt.				

The ration fed in all lots consisted of barley and oats, 2 to 1, with 5 lbs. per hundred of a special swine supplement formulated by NDAC nutritionists. The ration was ground and pelleted.

The pigs finished in dry lot required about 8 to 10% more feed to make 100 lbs. gain than the pigs on pasture. Both the light and heavy pigs on pasture gained at about the same rate, 1.35 lbs. and 1.38 lbs. per day respectively. The heavy pigs in dry lot, however, far outgained the pasture fed pigs with 1.65 lbs. average daily gain. The light pigs in dry lot lagged at 1.24 lbs. average daily gain.

These results seem to be support our earlier observations; that when the ration is adequate in all critical nutrients , dry lot pigs gain faster but at slightly higher cost than pasture fed pigs. The ration fed in this case may have been inadequate for small pigs in dry lot whereas the same age pigs on pasture were able to balance the ration with

forage.

Winter Pig Feeding Work - 1954 - 1955

On November 17, 1954, 40 fall pigs were divided into 4 groups to determine if our standard barley and oats ration could be improved with the addition of a B-Vitamin concentrate, Lederle's 2-49c Fortafeed, an aureomycin concentrate, Lederle's Aurofac, or both together. The basal mixture in all lots was composed of barley 67%, Oats 22%, soybean oilmeal 6%, meat scraps 3%, and minerals 2%. Fortafeed was added at 2 lbs. per ton. Aurofac was added at 6 lbs. per ton. The table below summarizes the experiment:

Table XI - Winter fattening of pigs with Vitamins and Aureomycin Supplements				
	Lot I	Lot II	Lot III	Lot IV
	Basal	Basal & Fortafeed	Basal & Aurofac	Basal, Fortafeed & Aurofac
No. pigs per lot	10	10	10	10
Initial wt.	51	51	51	51
Final wt.	202	208	206	203
Days on feed	118	118	118	118
Avg. daily gain	1.28	1.33	1.31	1.29
Feed per 100 lbs. gain	444	453	499	511
Feed cost per 100 lb. gain	\$10.26	\$10.46	\$11.53	\$11.80

Feed prices used: barley .96 bu., oats .64 bu., soybean oilmeal \$5.00 cwt, meat scraps \$5.60 cwt., minerals \$3.00 cwt. Fortafeed and Aurofac furnished by Lederle Laboratories Inc.

Town Grind vs Home Grind for Fattening Pigs Two trials 1954-1955

All grinding done at the Experiment Station for hogs has been done on a 9" hammer mill which produces what might be termed a medium course grind. When feed is ground in town on the custom mill, a bur mill is used to grind to a medium fine grade. Since it is sometimes convenient to have some grinding done on the custom mill, it seemed desirable to know if there is any difference in results obtained from feeding the two grades of ground feed. Two lots of late pigs were used to check these two grinds in the winter of 1954-55, then the experiment was repeated in the summer of 1955. Results of both trials are tabulated below:

Table XII - Medium fine (town) grind vs medium coarse (home) grind for fattening pigs - 1954-1955				
	Winter lots		Summer lots	
	1 (town)	2 (home)	3 (town)	4 (home)
No. pigs per lot	10	10	9	9
Initial wt.	34	34	28	28
Final wt.	164	173	205	186
Days on feed	118	118	132	132
Avg. daily gain	1.10	1.18	1.34	1.19
Feed per 100 lbs gain	450	498	427	466
Ration:				
barley	63%		62%	
oats	21%		31%	
soybean oilmeal	6%		4%	

Meat scraps	3%	2%
Minerals	2%	1%
alfalfa meal	5%	0

The two trials on fineness of grind produced mixed results. No conclusion can be drawn from the results concerning the rate of gain. All lots made slow gains except the summer lot on the town grind which made average gains. It is noted that the town grind consistently produced more pork per pound of feed than the home grind produced. Summer gains also were produced at less feed cost than winter gains.

Table XIII - 1955 Chicks at Dickinson Experiment Station	
Breed	White Plymouth Rock
Hatching Date	April 1, 1955
Starter ration	High-energy, 20% protein, pelleted
Pullets removed to summer range	7 wks of age
Wt. of cockerels marketed	4.15 lbs. average
Age at marketing	13 to 14 weeks
Feed consumed per cockerel marketed	16.5 lbs.
feed cost per cockerel marketed	\$.58
Average selling price per head	\$1.00
Mortality (vitamin D deficiency was largest factor)	18%

The baby chicks received a set back when rickets developed in them at two weeks of age. The fish oil used in initial corrective effort was also lacking in Vitamin D, so much harm was done before the trouble was stopped. Most of the flock recovered and the 180 good pullets saved were laying at a 60% rate before November. They were housed August 28.

The New Hampshire Red hens kept from the 1954 hatch did not lay as well as expected, although the red cockerels had grown faster than any of the White Rock chicks we have raised. We conclude that the New Hampshire strain we had was better adapted to meat production than to egg production.

Tabulated below is the mean percentage egg production from 3 successive flocks of White Rock hens, 1951-1952-1953, and the mean percentage production from the 1954 flock of New Hampshire Reds.

	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
3-yr. mean %	29	54	60	56	47	51	48	45	44	43	40	38
1954 mean %	30	45	40	40	27	27	20	33	38	42	40	29

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