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WET VERSUS DRY METHODS OF FEEDING GROWING-FINISHING SWINE RATIONS<sup>1</sup>

R. W. Seerley

Swine are fed many different types of rations and there are many methods of feeding swine throughout the world. Apparently there is no one best way to feed swine. Wet complete mixed rations are limited-fed to some extent in other countries. Reasons for this type of feeding are available labor, limited feed supply, and feeding to produce a particular type of hog for the market. The most widely accepted method in the United States is self-feeding either complete mixed rations or free-choice corn and protein supplement. Wet rations are not generally fed in this country because labor is high priced or not available, equipment is not available to automatically feed wet rations, and there is no particular market price advantage.

Several questions have been asked in regard to wet feeding modern swine rations. The trend is toward automation and feeding hogs in confinement which offers more flexibility in the method of feeding. If automatic equipment were available to feed the wet rations with little or no increase in labor, would more swine producers prefer this method over their present setup? What is the performance of pigs fed the wet rations? If pig performance is satisfactory, can automatic equipment be developed and economically used for this type of feeding? Research information is needed before these questions can be properly answered. This experiment was designed to study the performance of the pigs fed wet or dry rations.

Experimental Procedure

Two experiments have been conducted. The rations and treatments were the same in both experiments. The treatments were:

- Lot 1. Self-fed, dry ration
- Lot 2. Self-fed, wet ration
- Lot 3. Limited-fed, wet ration

In lot 1 feed was provided in a three hole self-feeder. Pigs in lots 2 and 3 were fed three times daily in metal troughs. Pigs self-fed the wet ration (lot 2) were given the amount of thick slurry feed they would consume before the next feeding. Pigs in lot 3 were fed 80% (air dry basis) of the feed given to lot 2. The daily procedure was to weigh the feed and mix with water the next days ration just after the last feeding on the previous day. Thus the rations soaked from 15 hours (to A. M. feeding) to 24 hours (to P. M. feeding). The protein content was decreased 3% after the pigs averaged 110 pounds bodyweight. The composition of the rations are shown in table 1.

<sup>1</sup>Certain ration ingredients were supplied by Merck and Co., Rahway, New Jersey, American Cyanamid Company, Princeton, New Jersey, Eli Lilly and Company, Greenfield, Indiana and Nopco Chemical Company, Newark, New Jersey.

TABLE 1. COMPOSITION OF RATIONS

| Ingredient                         | to 110 lbs. | after 110 lbs. |
|------------------------------------|-------------|----------------|
|                                    | lbs.        | lbs.           |
| Yellow corn, gr.                   | 819         | 895            |
| Soybean meal                       | 125         | 63             |
| Tankage                            | 40          | 25             |
| Dicalcium phosphate                | 5           | 5              |
| Limestone                          | 5           | 5              |
| TM salt, hi zinc                   | 5           | 5              |
| Trace mineral                      | 0.5         | --             |
| B vitamin mix, Merck 92            | 0.5         | 0.5            |
| Vitamin B <sub>12</sub> , Merck 20 | 0.25        | 0.25           |
| Vitamin A and D, Quadrex 10        | 0.2         | .15            |
| Aurofac 10                         | 1.0         | .5             |
| Hygromix 8                         | .75         | --             |

Results and Discussion

Table 2 summarizes the experiments. Pigs self-fed the wet ration were the faster gaining pigs in both experiments. Their average daily gains were 13.2% (1.72 pounds vs. 1.52 pounds) faster than those limited-fed, the same ration and 5.5% (1.72 pounds vs. 1.63 pounds) faster than pigs fed the dry ration.

Daily feed consumption was nearly the same for the self-fed lots in experiment I, but pigs self-fed the wet rations ate more feed than pigs fed the dry ration in experiment II.

The limited-fed pigs required less feed per pound of gain than self-fed pigs. Lots 1 and 2 required 6.9% and 9.9%, respectively, more feed per pound of gain than lot 3 (average of both experiments). Feed efficiency for the self-fed rations was not consistent between the two experiments. Pigs self-fed the dry ration had better feed efficiency in experiment I, while pigs self-fed the wet ration had better feed efficiency in experiment II.

Feed cost per 100 pounds gain was less for the limited-fed pigs. In comparison to lot 3, feed costs for lots 1 and 2 were 55 cents and 90 cents, respectively, more per 100 pounds body weight gain.

Conclusions cannot be made on the basis of the two experiments; however, these results show:

(1) Pigs self-fed a wet ration under the conditions of this experiment gained faster than pigs self-fed a dry ration, however, feed cost per 100 pounds of gain was higher with the wet ration.

(2) Limited feeding of a wet ration (80% of self-fed group) decreased daily gains, improved feed efficiency and lowered feed cost per 100 pounds gain.

TABLE 2. WET VERSUS DRY METHOD OF FEEDING PIGS

|                         | Self-fed<br>dry ration | Full-fed<br>wet ration | 80% full-fed<br>wet ration |
|-------------------------|------------------------|------------------------|----------------------------|
| Lot Number              | 1                      | 2                      | 3                          |
| Number pigs             | 10<br>12               | 10<br>12               | 10<br>12                   |
| Av. initial wt., lb.    | 57.4<br>54.2           | 57.7<br>54.2           | 57.2<br>54.2               |
| Av. final wt. lb.       | 167.8<br>200.8         | 177.4<br>204.7         | 161.3<br>187.4             |
| Av. daily gain, lb.     | 1.71<br>1.58           | 1.84<br>1.65           | 1.60<br>1.46               |
| Average                 | 1.63                   | 1.72                   | 1.52                       |
| Av. daily feed, lb.     | 6.30<br>5.51           | 6.25<br>6.33           | 5.01<br>5.06               |
| Average                 | 5.79                   | 6.30                   | 5.04                       |
| Feed per lb. gain, lb.  | 3.68<br>3.48           | 3.40<br>3.83           | 3.13<br>3.46               |
| Average                 | 3.56                   | 3.66                   | 3.33                       |
| Feed cost per cwt. gain | \$9.04<br>\$8.55       | \$8.35<br>\$9.42       | \$7.69<br>\$8.50           |
| Average                 | \$8.74                 | \$8.99                 | \$8.19                     |