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Effects of Cold Weather on Feed Costs in Producing Pork

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EFFECTS OF COLD WEATHER ON FEED COSTS IN PRODUCING PORK

By
Donald L. Peterson, Assistant Professor

As we move into January, the coldest part of the winter is to be expected. As temperatures drop below 50 degrees farenheit, hogs require more feed just to maintain body temperature, leaving fewer nutrients available for growth. This in turn raises the cost of production. Thus, pork producers may wish to watch weather forecasts for clues as to providing shelter and assessing marketing alternatives.

Figure 1 shows the effects of temperature on the amount of feed required per pound of gain when increasing the weight from 220 pounds to 240 pounds.

FIGURE 1

Pounds of feed (87% dry matter) required per pound of gain to raise a hog from 220 to 240 pounds as a function of temperature.

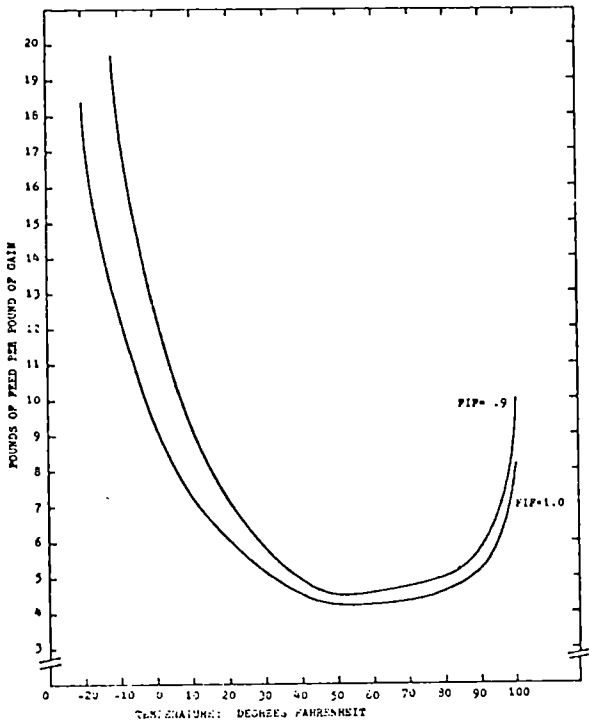
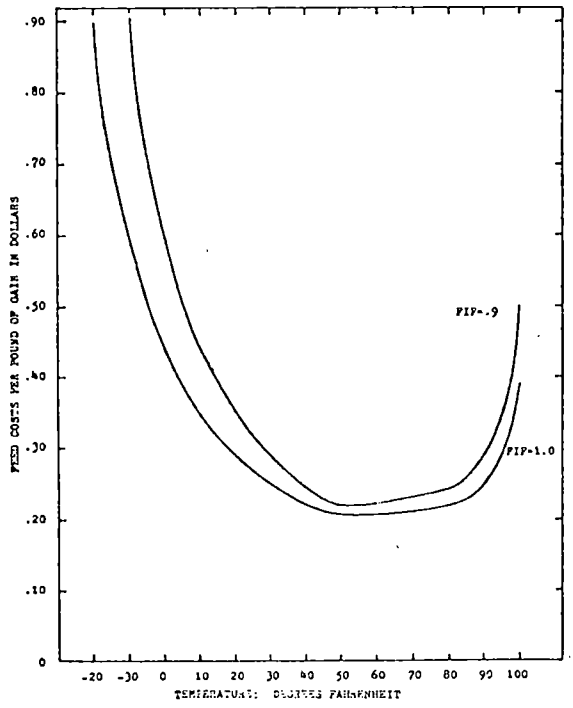


Figure 2 shows the cost per pound of gain, using December prices of $4.83 per hundredweight for unground feed with 12 percent protein ($4.22 per cwt. "as fed", 12.8 percent moisture). The graphs were derived from University of Nebraska reports.

FIGURE 2

Feed cost per pound of gain to raise a hog from 220 to 240 pounds as a function of temperature.



In each of the figures, the lower curve (labled FIF=1.0) illustrates the feed requirements and feed costs when the feed intake factor (FIF) is 1.0 or 100% of maximum. The top curve shows a drop in the FIF to 90 percent of maximum, which may be due to such things as quality of the feed or problems with equipment.

As can readily be seen, a decrease in the feed intake below the maximum increases feed costs per pound of gain,

especially for temperatures below 40 degrees or above 80 degrees. The ideal temperature range for efficient feed conversion is between 45 and 70 degrees fahrenheit.

If the temperature of the hog's environment were held at -20 degrees, the cost per pound of gain would be $.89, assuming a feed intake factor of 1.0. With a feed intake factor of .9, as would likely be the case with very low temperatures, the cost per pound of gain could rise to over $2.60. As the temperature is raised, feed costs drop rapidly, reaching their minimum at about 50 degrees. They then rise very slowly-about ½ cent per pound of gain-as the temperature increases to 70 degrees. In this temperature range, a 220 pound hog should gain about two pounds a day. Above this range, costs rise very rapidly again.

Using these charts and your own feed costs per hundredweight, you can estimate your feed costs at the temperature expected in your hogs' environment. If your operation is such that the temperature will drop sufficiently to raise your costs above the expected selling price, it might be wise to sell at lighter weights.

Remember to reserve Tuesday, April 4, 1978

to attend the Economics Departments' annual

AGRI-BUSINESS DAY at the Staurolite Inn, Brookings

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