

ANSWERS for Worksheet for Module 3: Heat lamps vs. Heat pads

1. When Puratone researchers were conducting their trial, what wattage were the heat lamps they used? What wattage were the heat pads?

Heat lamps were 175 W and heat pads were 130 W

2. Room temperature and humidity were two of the five variables the researchers measured during the trial. What were the other three variables?

Energy consumption, piglet mortality, piglet weight gain

3. What was the average daily weight gain of the piglets on the heat pad trial? What was the average daily gain of the piglets on the heat lamp trial? Was this significantly different?

Heat pad gained 0.25 kg/day. Heat lamp gained 0.23 kg/day. NOT significantly different

4. Was piglet mortality statistically significant between the heat lamp trial piglets and the heat pad trial piglets?

NOT significantly different.

5. By what percent did heat pads reduce energy consumption compared to heat lamps? So, how much did it cost per crate per year to use a heat pad?

70% savings. It cost \$43 per crate per year using a heat pad.

6. Compared with heat pads, how much **additional** money do heat lamps cost per crate per year than heat pads? So, in total, how much per year did it cost to use a heat lamp per crate per year?

\$58 in additional cost. Cost a total of \$101 per crate per year using a heat lamp.

7. During the Glenlea study and Agriculture Canada Research Centre study comparing heat lamps to heat pads, did these studies find any significant differences in piglet weight gain and mortality?

No significant differences.

8. What is one benefit besides energy and money savings to using heat pads over heat lamps?

Piglets tend to pile on each other under a heat lamp leading to crushing, whereas piglets can spread out over a heat pad. Heat pads are easier to clean and producers don't have to worry about breaking bulbs. Heat pads create a cooler environment for the sow.