



MSU Agriculture Innovation Day

Focus on Forages and the Future



College of Agriculture
and Natural Resources
MICHIGAN STATE UNIVERSITY

Investment Analysis of Heat Detection Precision Technologies

Kathy Lee, Extension Dairy Educator, Michigan State University; and Barb Wadsworth Jones, Director, Southwest Regional Dairy Center, Tarleton State University

Precision dairy monitoring technologies can be a significant, yet potentially beneficial, investment for dairy farms. Dairy farmers should evaluate the costs and benefits of the precision technologies before making a purchase.

“Investment Analysis of Heat Detection Technologies”, a decision support tool developed by University of Kentucky researchers, can be used to evaluate the net present value of investment in various heat detection technologies. Dairy producers provide herd specific information about current and proposed reproduction parameters to estimate economic outcomes for the technology being considered.

Factors incorporated into the economic analysis are:

- Costs associated with the purchase, replacement and maintenance of the precision technology. Initial costs include individual cow monitoring units, antennas that transmit data to the computer, and computer software that summarizes data and generates reports.
- Labor requirements for the heat detection systems being compared. Labor needs will depend on the herd’s current system and the precision technology being considered.
- Changes in the herd’s reproductive performance. Reduction in days open, increased conception rates and fewer cows culled for reproductive failure represent significant economic improvements.

The expected outcome of purchasing the new technology includes estimates for days open, reproductive culls, years to break even, and net present value.

This decision support tool uses data from your herd as a starting point. In addition to the equipment costs, you can ask your local sales representative for estimated heat detection rates of the technology being considered. Research results from independent studies also may be available. Although this tool provides valuable investment information specific to your dairy, it is important to remember that the tool only provides estimated investment values.

This decision support tool can be accessed at:

<http://www.uky.edu/Ag/AnimalSciences/dairy/decisiontools/HeatDetection/HeatDetection.html>

For more information or assistance in using this decision support tool, contact Kathy Lee, MSU Extension Dairy Educator, at 231-839-5850 or leeka@msu.edu.