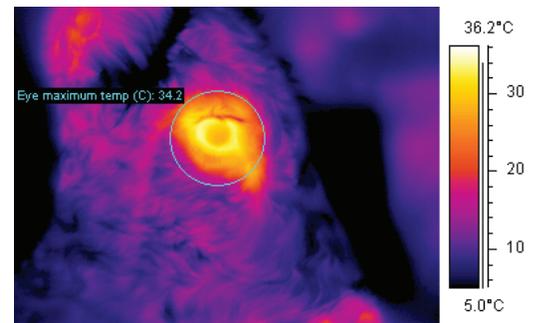


Research & Development

Infrared technology provides an innovative way to help reduce cattle production costs

Feed accounts for a large proportion of input costs required to raise cattle in all phases of beef production, so it is vital that producers get the most value for their feed. There are many genetic factors that dictate how feed affects cattle metabolic efficiencies, but it would be prohibitively expensive for producers to sequence the genome of every animal. Dr. Al Schaefer of the Agriculture and Agri-Food Canada (AAFC) Lacombe Research Centre, along with colleagues from Alberta Agriculture and Rural Development and AgResearch New Zealand, has determined a more rapid and less expensive way to monitor and rank the metabolic efficiencies of cattle.



In a research project funded by the Alberta Livestock and Meat Agency (ALMA), Dr. Schaefer and colleagues conducted trials on ranking the efficiency of weaned calves, replacement heifers, bulls and herd cows using infrared thermography (IRT). An IRT camera measures the amount of heat radiated from any object, be it a building, an electrical circuit or a cow. The amount of infrared energy radiated by the animal is linked to the metabolic efficiency of cattle. A high rate of radiation - essentially a high rate of heat loss - suggests that an animal will gain less weight. This translates into less efficient production of steaks and hamburger.

Ranking animals for metabolic efficiency adds value when cattle producers select breeding animals. If they sorted cattle into low, medium and high metabolic efficiency groups, producers could tailor their feed management to reduce production costs. For example, low efficiency animals could receive lower-cost feeds before finishing and high efficiency animals could be more profitably finished to AAA or AAAA carcasses.

Current methods for determining feed efficiency in cattle often require longer-term and expensive feeding programs or lab assessment of animals. The IRT instrumentation is a cost-effective method that integrates into an automated and non-invasive data acquisition and analysis platform.

Dr. Schaefer commented that results from the proof-of-concept phase are very encouraging. As research efforts expand, he hopes these systems are trialed on more herds and that IRT technology can assist the cattle industry to become more sustainable and competitive.

about ALMA

ALMA provides ideas, information and investment to help Alberta's livestock and meat industry become more profitable, sustainable and internationally respected. Learn more at www.alma.alberta.ca. Contact: Nicole Paradis, ALMA Communications, 780-638-1932 or email: nicole.paradis-clancy@almaltd.ca.