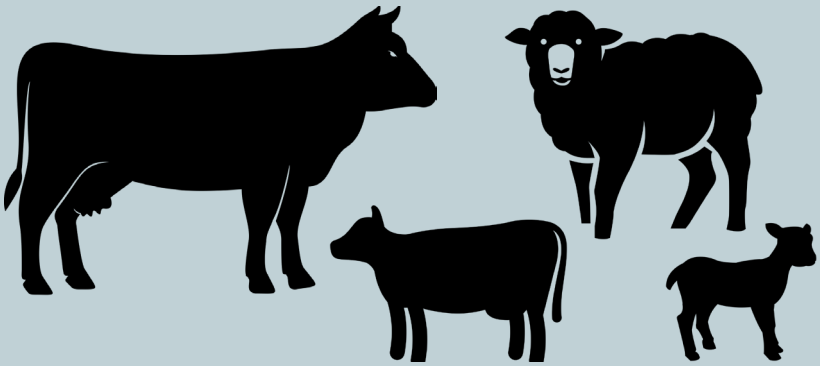
IMPROVING THE REPRODUCTIVE PERFORMANCE OF CATTLE & SHEEP



The cattle and sheep industries contribute an estimated $333 billion to the U.S. economy every year. But infertility, disease, poor nutrition, and other stressors can limit reproductive performance and threaten the sustainability and profitability of livestock production.

Land-grant universities have been working together since 1970 to determine factors that influence the fertility of cattle and sheep and develop methods to improve their reproductive performance.

DETECTING & IMPROVING FERTILITY

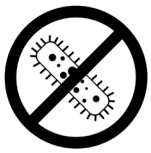
Researchers are testing new screening tools that could help select highly fertile females and males. This could help producers maintain herds with the best chances of high reproductive efficiency.

Researchers found a way to remove defective sperm from samples for artificial insemination, making it possible to achieve higher pregnancy rates.

Scientists are developing tests that use ultrasound and maternal blood markers to detect pregnancy earlier. This could help producers know sooner which animals are not pregnant and can be given fertility or artificial insemination treatments.

REDUCING BARRIERS TO FERTILITY

Beef producers could save $10-15 million each year with a new vaccine that helps prevent epizootic bovine abortion, a disease that causes loss of pregnancy or unhealthy calves.

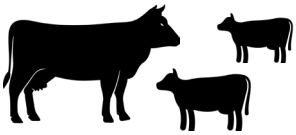


Scientists are trying to find out if blood biomarkers can be used to identify cows carrying fetuses infected with bovine viral diarrhea virus, a disease that costs U.S. beef producers over $400 billion every year.

Researchers created a model to help growers plan optimal nutrition for pregnant cows. U.S. producers could save $1.6 billion on feed using a new method to identify cattle that use feed most efficiently.

INCREASING PREGNANCY RATES

Producer profits could increase by $31 million if a new artificial insemination protocol that increases pregnancy rates by up to 15% is used in just 10% of the U.S. cows.



Researchers found a way to use anti-estrogen compounds to shorten the length of time needed for cows to recover after giving birth. This could increase pregnancy rates.

Producers could save $500 per cow by breeding and managing cows so that they are capable of calving at an earlier age and potentially increasing the number of pregnancies.

This Multistate Research Project (*W-2112: Reproductive Performance in Domestic Ruminants, 2011-2016*) is supported by the Multistate Research Fund through USDA-NIFA and by grants to project members from the following institutions: University of Alaska-Fairbanks, University of Arizona, University of Arkansas, University of California-Davis, Colorado State University, University of Connecticut-Storrs, University of Idaho, University of Illinois, Kansas State University, Louisiana State University, University of Maine, Michigan State University, University of Minnesota, Mississippi State University, University of Missouri, Montana State University, University of Nebraska, University of Nevada, New Mexico State University, North Dakota State University, Ohio State University, Pennsylvania State University, University of Tennessee, Texas AgriLife Research, Utah State University, Virginia Polytechnic Institute and State University, Washington State University, University of Wyoming, and the USDA-ARS. Learn more: *bit.ly/W-2112*