

# Lasting Effects

**Extreme cold, winter conditions could mean infertility in the bull pen and even higher beef costs in the meatcase.**

by *Tracy Turner, Ohio State University*



PHOTO BY EVA HIRICHSEN FROM 2011 ANGUS JOURNAL/NIAA PHOTO CONTEST

**T**he record-breaking arctic cold experienced throughout the region this winter could mean less-productive breeding among beef cattle this spring.

The subzero temperatures and persistent winds that pushed wind chills into the minus 30° F to minus 50° F range, affecting a large swath of the country this winter, also raised the potential for scrotal frostbite in bulls, according to a beef cattle expert from the Ohio State University (OSU) College of Food, Agricultural, and Environmental Sciences.

While normal winter conditions typically don't result in scrotal frostbite in breeding bulls, the extremely cold, harsh and prolonged weather experienced this year increases its likelihood, and that could result in the animals' infertility for the upcoming breeding season, said Steve Boyles, an OSU Extension beef cattle specialist.

The issue could have a significant financial impact for producers if the bulls aren't able to impregnate cows to produce calves, Boyles said.

"It's a huge economic issue for producers," he said. "Some may not realize the potential impact this harsh winter weather has on reproduction now because we tend to think about it during the summer when the bull is supposed to be out there working.

"But we need to be thinking about it now because reproduction is really one of the most important aspects for cow-calf producers."

## Ripple effects

While bull infertility is of significant concern for producers during any time period, the issue takes on even more seriousness now, thanks to record cattle prices. Those are due to the shrinking U.S. herd, which is now at a 63-year low, according to the USDA. The nation's cattle herd declined to 87.7 million head as of January, USDA said.

In fact, beef output nationwide is forecast

to fall 5.3% this year to 24.35 billion pounds (lb.), the government agency said, making it the lowest output since 1994. That translates into higher costs for consumers who can now expect to pay upward of 3% more for beef this year, USDA said in its February red-meat production forecast.

The shrinking U.S. cattle herd is the result of ongoing consequences of the 2012 drought and the current drought in many states that has resulted in higher feed costs, leading to a significant financial drag for producers.

This means that herd expansion will be slow on a national level for the next several years, Boyles said.

"Cattle prices will remain high because of the low cattle numbers across the country," he said. "So if cows aren't getting pregnant and producing calves, that is much more of an economic impact for producers now than in previous years when cattle prices weren't as high."

## Protecting bulls from the cold

"Producers need to ensure they take care of their herds from an animal-welfare standpoint because they need to ensure that their herds can achieve or maintain high reproduction rates," Boyles said.

Producers can help prevent bull infertility by making sure they protect the animals from the wind, Boyles said, including ensuring the bulls have access to windbreaks and good bedding during bad weather, which can help prevent freezing of testicles.

"Make sure all the animals can get out of the wind if you maintain multiple bulls," he said. "A windbreak fence might be considered

if some bulls tend to kick other bulls out of the main wind-protection area or barn.

"Bulls being trucked in cold weather should also be protected, as traveling in an open truck creates wind chill."

Wind protection is key in keeping bulls from scrotal frostbite, particularly for older bulls, Boyles said.

"Older bulls with lower-hanging scrotums are more frequently adversely affected because they are not as able to pull their testicles up close to the body to keep them warm," he said. "Defects in sperm are proportional to the severity of the frostbite lesions, testicle adhesions and swelling of the testes."

Producers whose herds experience scrotal frostbite may observe blisters and scabs about three weeks after the frostbite occurs, Boyles said. He said the best way to determine if defects are present in the animal's sperm is to have a veterinarian perform a breeding soundness examination 45-60 days after the injury occurred.

"An evaluation performed earlier than that will most likely indicate poor semen quality and could result in unnecessarily culling a bull that may produce satisfactory semen after healing has occurred," Boyles said.



**Editor's Note:** *The OSU College of Food, Agricultural, and Environmental Sciences provided this article.*