

# Associations of weather conditions on bovine respiratory disease risk in stocker cattle

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## Introduction

Bovine respiratory disease remains a significant issue facing both beef and dairy cattle production systems. Among the risk factors that impact this multifactorial disease, the influence of weather in the early receiving period remains unclear. The objective of this project was to explore the relationship between weather conditions near arrival at a stocker facility on the subsequent bovine respiratory disease risk in medium- to high-risk stocker calves over the first 30 days post-arrival.

## Materials and methods

Detailed records from a large stocker operation in the Great Plains (n = 1,235 lots over 6 years [2014-2019]) were analyzed to evaluate the influence of 3- and 6-day average weather conditions including temperature, humidity, wind speed and precipitation on lot level BRD-specific morbidity and mortality via generalized linear mixed effect models with year included as a random effect.

## Results

This analysis is ongoing and will be completed by August 2024.

## Significance

This data will improve our understanding of the relationship between weather and BRD risk which may allow for preemptive changes in management to reduce risk when certain weather patterns are expected.

