



INNOVATIVE    DEPENDABLE    EFFECTIVE

A photograph of a herd of cattle of various colors (white, brown, grey) standing behind a wire fence in a grassy field under a cloudy sky. A large green rectangular overlay is positioned in the lower-left quadrant of the image, containing text.

## BOVAZYME®

Effect of **BOVAZYME®**,  
Feed Enzyme Additive,  
in Bloat Prevention for  
Wheat Pasture Cattle.



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# BOVAZYME®

## EFFECT OF BOVAZYME®, FEED ENZYME ADDITIVE, ON BLOAT PREVENTION FOR WHEAT PASTURE CATTLE.

### Summary

Frothy bloat in cattle grazing hard red winter wheat is the major non-pathogenic cause of death in the southern Great Plains. The study of a sample of heifers was part of a bloat-reduction study in cattle grazing hard red winter wheat at the Texas A&M AgriLife Research Center in Vernon, Texas.

During the 77-day study, 58 of 65 head, or 89% of the cattle, experienced at least one bloat event. The number of head experiencing bloat more than four days was greater in the control set of cattle, more than two extra days, than in the mineral plus BOVAZYME® feed enzyme additive herds.

### Introduction and Results

The Texas A&M AgriLife Research Center studied how to decrease the severity of frothy bloat, the major non-pathogenic cause of death and reduced performance in cattle grazing hard red winter wheat in the southern Great Plains.

Frothy bloat is a costly disease, with an estimated \$40 million negative impact on the beef cattle industry.

The bloat occurs when a polysaccharide biofilm coats the contents of the rumen. When it comes in contact with fluid and rumen contents, the fermentative gases are trapped and the animal is prevented from belching the excess gas.

The Texas A&M AgriLife team chose BOVAZYME feed enzyme additive to determine its mitigation potential for cattle grazing bloat-prone wheat forage. Early studies carried by the team had shown that a multi-enzyme

supplement, like BOVAZYME, could decrease the rate and extent of polysaccharide formation, thereby decreasing bloat severity and duration.

As a part of the group's enzyme research, an in-vitro experiment utilizing rumen fluid from bloated and non-bloated rumen-cannulated steers and four levels of BOVAZYME feed enzyme additive, was conducted. The supplementation of BOVAZYME to rumen fluid reduced foam strength, time of foam collapse, biofilm, and viscosity.

Subsequently, a grazing experiment was conducted with 65 crossbred heifers in three replicated groups using mineral alone as a control and mineral plus BOVAZYME feed enzyme additive in supplemented herds.

Total gain and average daily gain for the grazing period was greater for the mineral plus BOVAZYME supplemented group than for the mineral-only control group at 14.8 lb. per head and 0.15 lb. per head per day.

The percentage of cattle experiencing only minor bloat was greater in the mineral plus BOVAZYME feed enzyme additive set of cattle than in the control herds, 34.7% compared to 19.3% percent, respectively. The study found that BOVAZYME helped decrease the severity and duration of bloat under the grazing conditions of this experiment.

## PACKAGING OPTIONS

BOVAZYME® and BOVAZYME® ORGANIC are available in 25 kg bags that can be used in Total Mixed Rations (TMRs), liquid feeds, loose minerals, and feed tubs.  
Recommended feed rate: 2.5 grams per head per day.

# WHAT IS FROTHY BLOAT?

## BLOAT IS SIMPLY THE BUILD UP OF GAS IN THE RUMEN.

Bloat is an overdistention of the rumenoreticulum with the gases of fermentation, either in the form of a persistent foam mixed with the ruminal contents, called primary or frothy bloat, or in the form of free gas separated from the ingesta, called secondary or free-gas bloat.

It is predominantly a disorder of cattle but may also be seen in sheep. The susceptibility of individual cattle to bloat varies and is genetically determined.

Death rates as high as 20% are recorded in cattle grazing bloat-prone pasture, and in pastoral areas, the annual mortality rate from bloat in dairy cows may approach 1%. There is also economic loss from depressed milk production in nonfatal cases and from suboptimal use of bloat-prone pastures. Bloat can be a significant cause of mortality in feedlot cattle.

In primary ruminal tympany, or frothy bloat, the cause is entrapment of the normal gases of fermentation in a stable foam. Coalescence of the small gas bubbles is inhibited, and intraruminal pressure increases because eructation cannot occur.



## CLINICAL SIGNS

- Distended left abdomen - most obvious sign
- Usually pain, discomfort, and bellowing
- Death can occur within 15 minutes after the development of bloat
- Gaseous bloat is usually seen in one or two animals
- Frothy bloat can affect up to 25% of cases
- In some cases, sudden death may be the first sign seen by the stockman. In such cases, it is likely that there will be other cattle with bloat.

## BOVAZYME®

### WHAT DOES BOVAZYME DO?

- Targets Fiber and Cellulose breakdown
- Makes Protein and Fat Digestion more efficient
- Generates more profitable output with the same input



# BOVAZYME® TESTIMONIALS

*"I run 1000 head of cattle on wheat pasture. Using the grazing mineral with BOVAZYME last year, I can say – we never had to pull one animal for bloat."*

Cattle Company  
Preston, Georgia

*"I've used BOVAZYME on my wheat pasture cattle for the past two winters, and never had to pull one animal for bloat. One thing I always look for is a healthy hair coat. I've never had better looking animals, in addition to no bloat problems."*

Cattle Company  
Mobeetie, Texas

*"I was looking for alternatives to mitigate bloat in my cattle, and they have smoothly adapted to our feeds with BOVAZYME. This helped me minimize digestive problems and keep them well fed."*

Cattle Company  
Riesel, Texas

## WHO WE ARE

York Ag is a dynamic supplier of holistic ingredient solutions focused on supporting animal well-being.

## WHY WE EXIST

York Ag lives to bring innovative, dependable, and effective feed ingredient solutions to feed manufacturers, livestock consultants, and animal producers.

## HOW WE OPERATE

York Ag uses determination, curiosity, and a collaborative approach to recommend and supply functional products that deliver both performance and profitability in an increasingly transparent marketplace.

## OUR HOPE

York Ag seeks to enrich the lives of animals, producers, and consumers.

Everyone Deserves  
a Nutritious Meal®



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York Ag Products, Inc.  
1060 ROOSEVELT AVENUE  
YORK, PA 17404-2833

Phone (717) 843-9937  
(800) 632-1895  
Fax (717) 845-7885  
Email [info@yorkag.com](mailto:info@yorkag.com)  
Web [www.yorkag.com](http://www.yorkag.com)

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