



INNOVATIVE    DEPENDABLE    EFFECTIVE



**KENDER®  
BEEF 101**

Effect of botanical  
additive in U.S. Steers  
Feedlot Trial.



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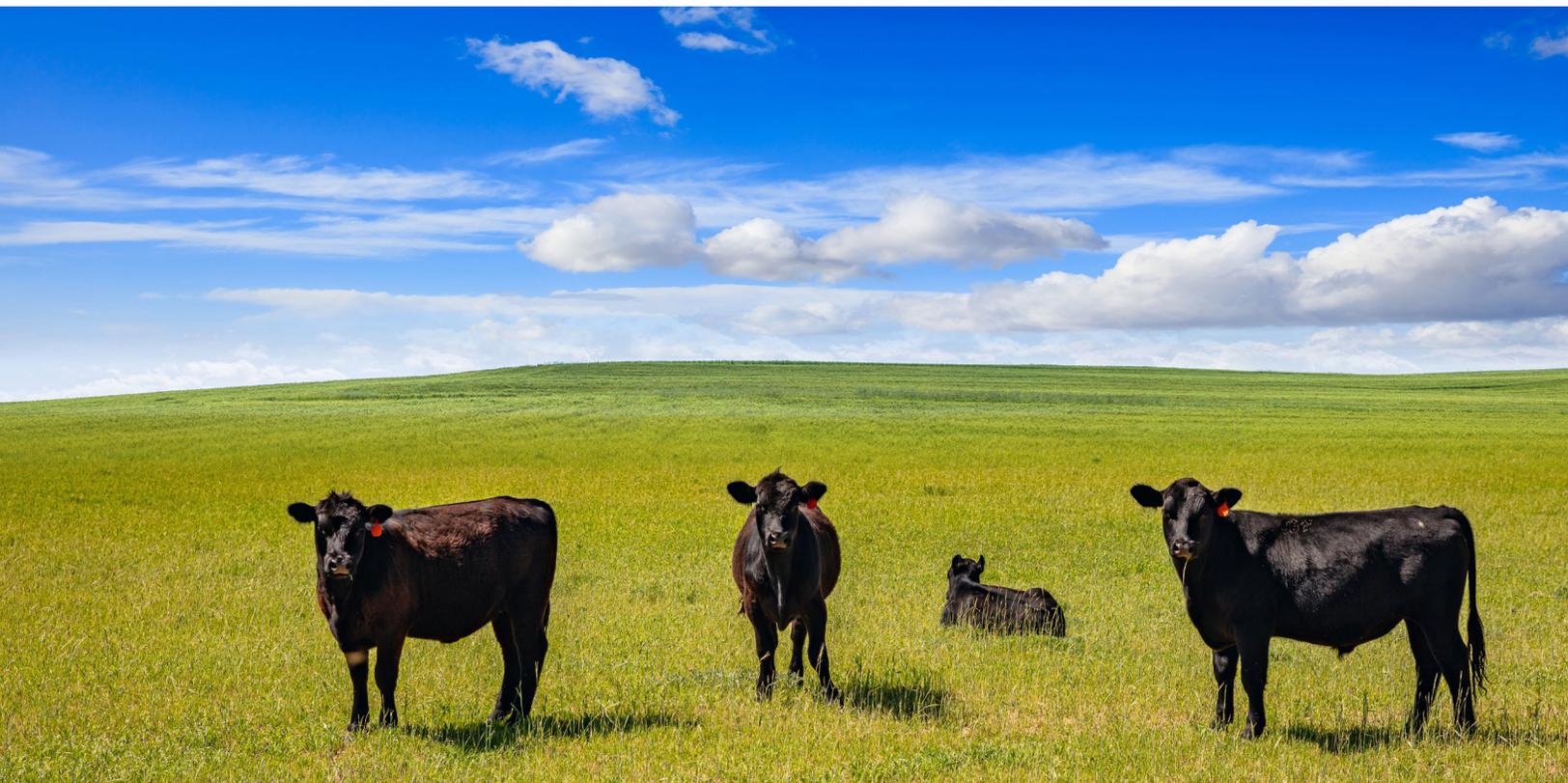
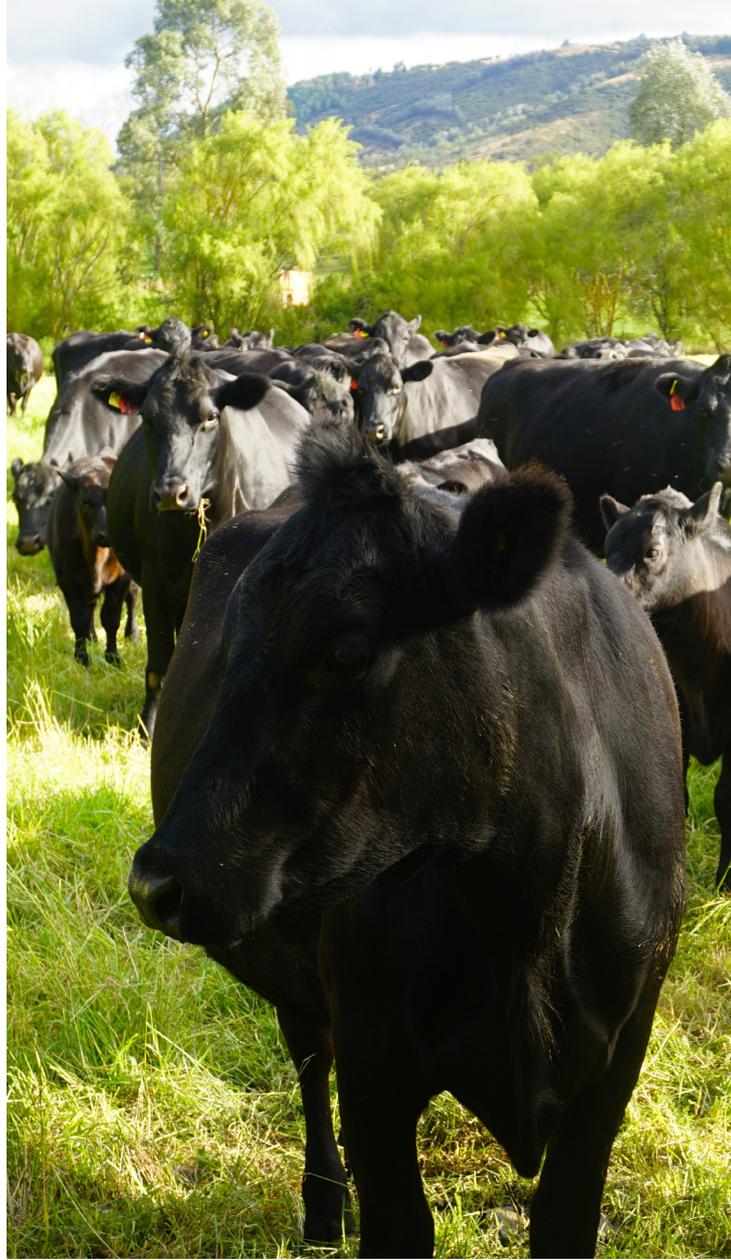
## KENDER® BEEF 101

KENDER® BEEF 101 HELPS IMPROVE FEED EFFICIENCY AND CAPACITY TO MANAGE STRESSORS IN U.S. STEERS FEEDLOT TRIAL

### BACKGROUND

In livestock production, there is one management term called Average Daily Gain (ADG) that can be defined as the average amount of weight a market animal will gain each day during the feeding period. Producers rely on multiple feed strategies to increase ADG while increasing Feed Efficiency (FE), which is the amount of feed consumed to produce a pound of gain.

However, producers must not forget or underestimate the adaptation period of fresh grouped steers as a crucial factor in improved ADG and FE. How can livestock producers increase beef cattle's capacity to face stressful conditions and maximize weight gain?



# THE SOLUTION: KENDER BEEF 101



**KENDER® BEEF 101** is a phytogetic additive based of carefully selected and balanced natural plant extracts from Rutaceae, Poaceae, and Lamiaceae with neuro sensory properties (Herz , 2009; Setzer)

These phytochemicals rich in monoterpene derivative fractions have the potential to modulate the nature and intensity of brain nervous message transfer (Jarvis et al., 2016; De sousa et al., 2015; Khosravi et al., 2014)

Consecutively to this early regulation of chronic stress situations, fattening beefs are allowed to:

- Regulate and support feed intake
- Support reproduction performances
- Decrease occurrences of abnormal behavior periods
- Increase adaptation capacity to manage stressors (high starch / low fiber diets, heat stress, stock density, vaccination programs, mixing, handling and transport)

## KENDER BEEF 101

DESCRIPTION	KENDER BEEF 101 is designed for future manufacturing of livestock feeds as dry flavouring agent, in order to regulate intake during stress periods. It is formulated specifically for inclusion in micro-dosing machines.
COMPOSITION	Natural flavoring substances, silicon dioxide.
PROPERTIES	KENDER BEEF 101 is composed of an orange powder with a citrus flavor.
UTILIZATION	KENDER BEEF 101 is supplemented to beef ration at 90 g/Ton in order to provide 1 g per steer, per day.
PACKAGING	Bags of 44 lbs (20 kg).
STABILITY	KENDER BEEF 101 is stable for 24 months when stored in its original packaging in a cool and dry place.
REGISTRATION	All ingredients meet AAFCO requirements.



# **KENDER® BEEF 101**

A natural phytogetic  
additive for beef  
cattle feeds.

# KENDER BEEF 101 TRIAL

## MATERIAL & METHOD

1,185 Angus breed steers in a 60,000 cap. commercial feedlot, Texas.

- Cattle were randomly allocated into paired pens (2 x 4) according to their initial live weight (LW) and located back to back within one alley.
- NAE production (No AGP, no implant)
- Trial duration: 189 days

## PAIRED-PENS DESIGN

ITEMS	CONTROL		KENDER® BEEF 101		
	Number (#)	LW (lbs)	Number (#)	LW (lbs)	
PAIR #1, L	118	761	116	769	Light Pairs
PAIR #2, L	211	797	220	788	
PAIR #3, H	179	919	220	901	Heavy Pairs
PAIR #4, H	61	938	60	932	
TOTAL	569		616		
Average		855		849	
Adjusted av.		844		838	

Good homogeneity of initial paired-pens characteristics

## CONTROL DIET INGREDIENTS & SPECIFICATIONS

INGREDIENTS*	DM BASIS (%)	NUTRITIONAL CONTENTS	
Wet Distiller Grain (34% DM)	18	Dry Matter, %	57.2
Wheatlage (34% DM)	29	Crude Protein, %	15.2
Flaked Wheat	28.5	NPN, %	2.9
Flaked Corn (78% DM)	20	Total Fiber, %	8.2
Liquid	4.5	Fat, %	3.5
		NEm, Mcal/100 lbs	95.64
		NEg, Mcal/100 lbs	65.14

\*no Na-monensin, no tylosin, no Hormones

KENDER® BEEF 101 supplied at ~1% g/d/beef via a micro-dosing machine into the TMR

# COLLECTED DATA & STATISTICS

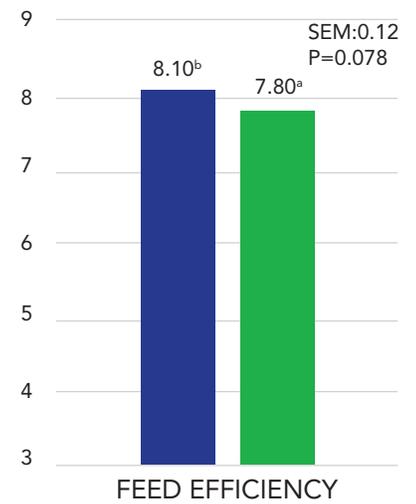
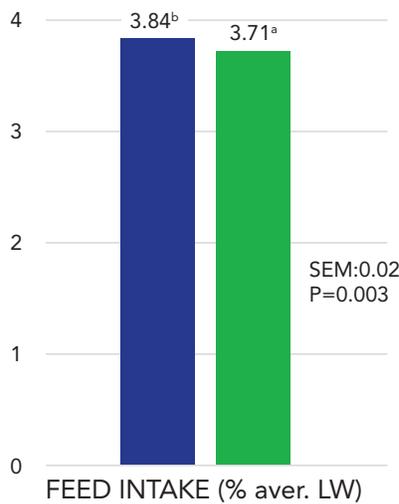
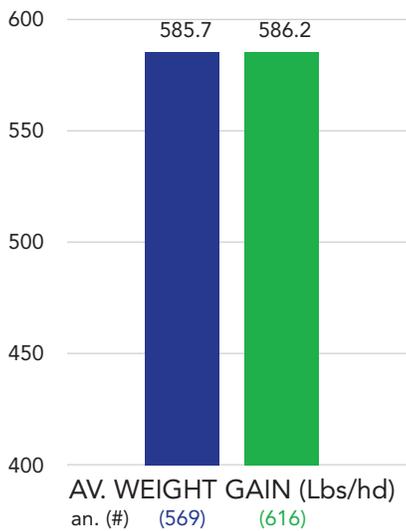
- TMR samples and Feed Intake (FI)
- Live Body Weight (LBW)
- Culled and dead animals
- Veterinary costs
- Calculated Average Daily Gain (ADG)
- Calculated Feed Efficiency (FE)
- Net Profit (USD/head)
- Statistical analysis: Mixed Model Analysis of Variance using Pair as Block, trend and significant thresholds (P<0.10 and P<0.05, respectively)

## RESULTS

## KENDER® BEEF 101

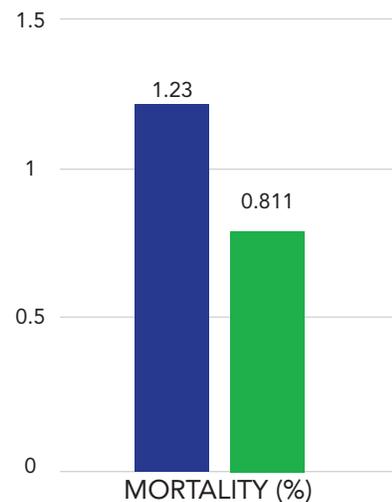
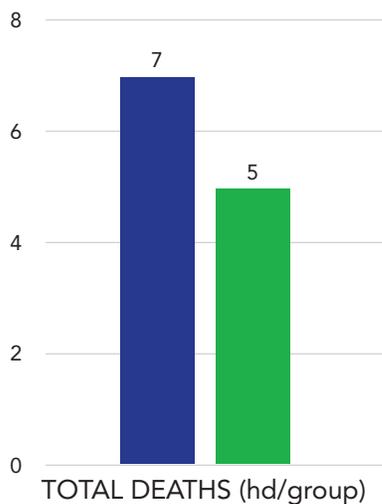
### Feed Lot Performance

■ Control    ■ KENDER BEEF 101

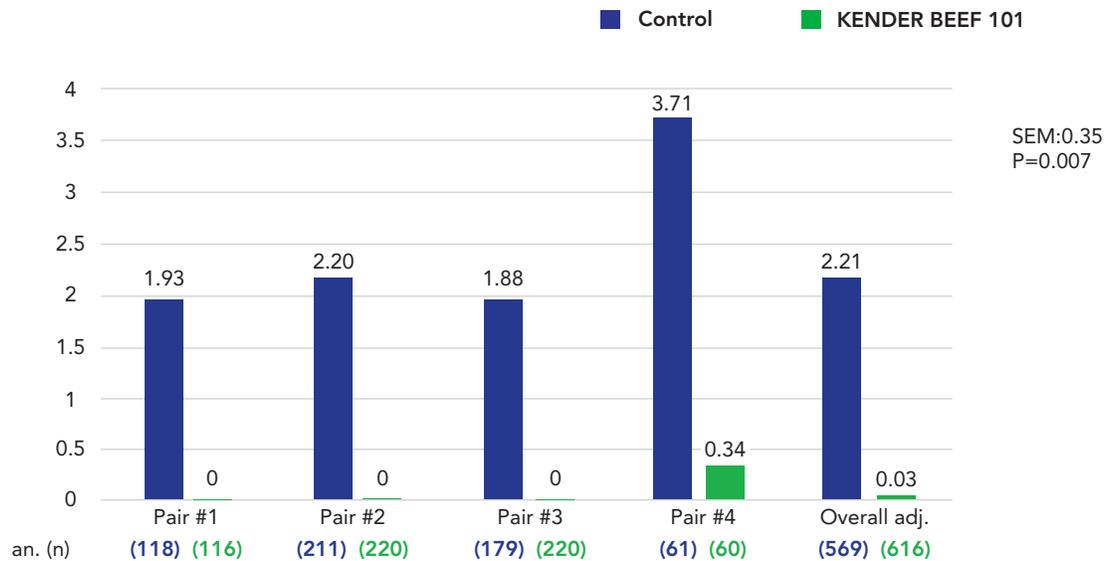


### Liveability Performance

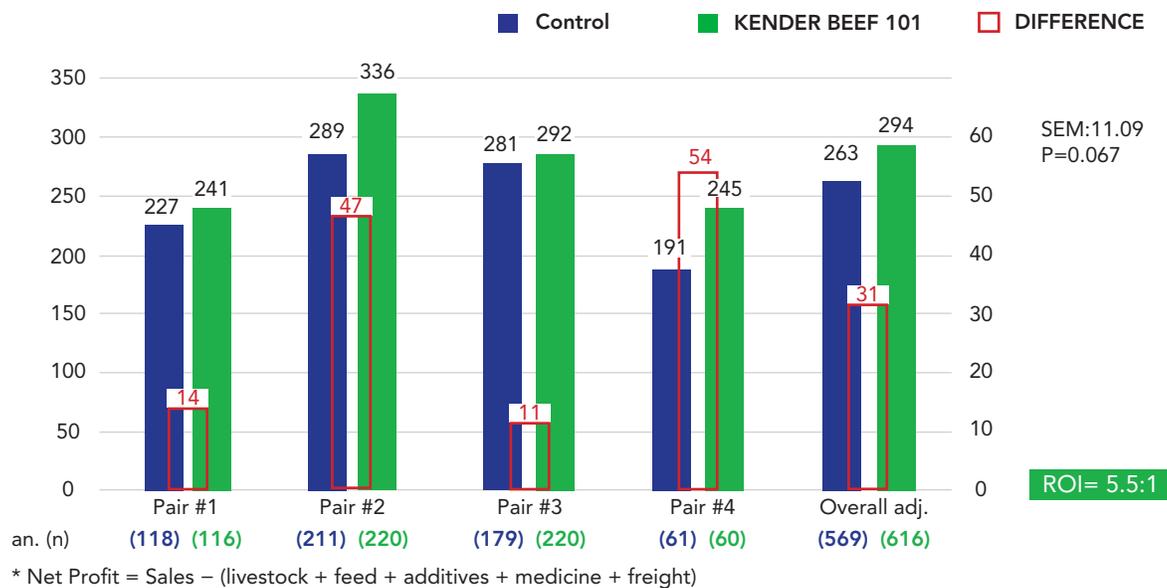
■ Control    ■ KENDER BEEF 101



## Veterinary Expenses (medicine costs, USD/hd)



## Economic balance [Net Profit\* (USD/hd)]



## SUMMARY & CONCLUSION

- 1,185 Angus breed steers - NAE production - 189 days of trial
- With KENDER® BEEF 101 (1 g/hd/d, via micro dosing machine):
- Optimization (P=0.078) of Feed Efficiency by 3.73% (3.84 vs 3.71)
- Less Death loss (7 vs 5)
- Significant reduction (P<0.05) medicine costs by 2.18 USD/hd
- Improvement (P=0.067) of Net Profit by 11.78% (+ 31 USD/hd)
- ROI > 5.5:1

# YORK AG & KENDER BIO TECH

York Ag is an authorized U.S. distributor of Kender Bio Tech products. Kender Bio Tech is a U.S. company based out of Colorado, whose founders have over 30 years of experience in Ruminant and Monogastric Feed Additives and Formulation. As the world is changing, consumers want to know how their food is produced and question the use of antibiotics. Kender offers natural solutions to the animal industry helping producers gain better performance while using less antibiotics. These natural solutions ensure safe and wholesome beef, swine, and dairy products to the end consumer.

Kender Bio Tech carries research at several Universities in Canada, Europe, and South Africa. Kender Bio Tech currently collaborates with nutritionists and vets in the United States, Canada, and South Africa. To learn more about the Kender Bio Tech ingredients portfolio, contact York Ag today.



## 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.

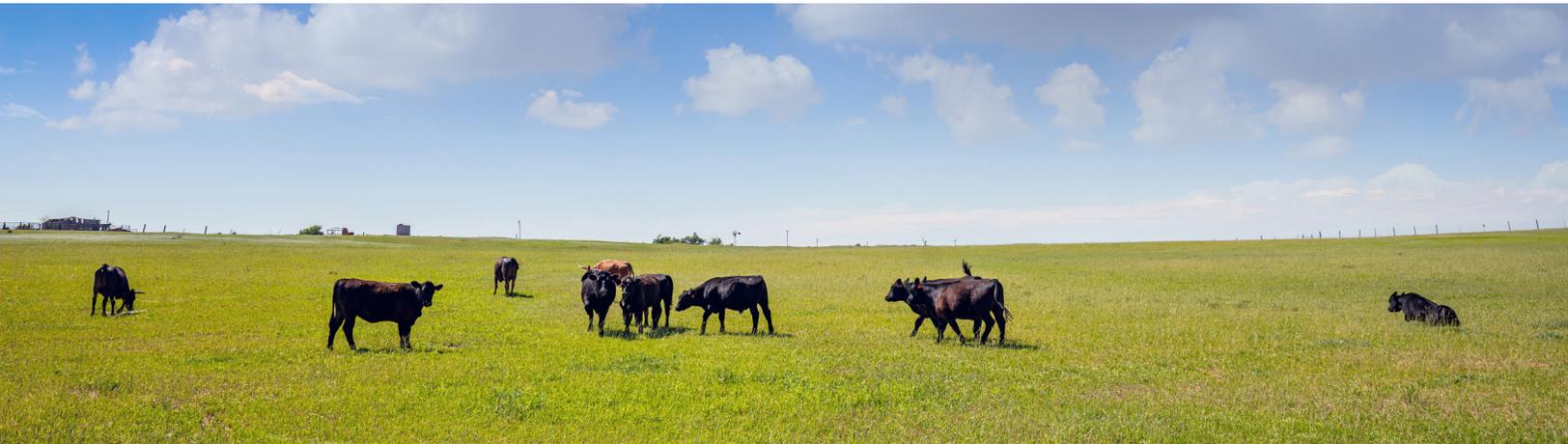
## HOW WE OPERATE

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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[www.yorkag.com](http://www.yorkag.com)

York Ag creates holistic ingredient solutions that optimize animal well-being. KENDER® BEEF 101 is a registered trademark of KENDER BIO TECH.

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