



syngenta®

HELP INCREASE FEED EFFICIENCY WITH A RATION THAT DELIVERS **MORE AVAILABLE ENERGY**

Enogen® Feed hybrids: Better corn hybrids for beef producers.

If you grow corn to feed cattle, **a simple switch in your corn hybrid¹** can help increase the feed value of the corn in your ration.

Enogen Feed hybrids contain not only **elite genetics and industry-leading traits**, they also have the **added value of Enogen in-seed amylase technology**.

The opportunity to help increase feed efficiency² – without sacrificing yields³ – makes Enogen Feed hybrids better corn hybrids for beef producers.

It's effective.

Corn is about 75 percent starch — **a complex carbohydrate** that provides energy to cattle to grow and finish.

Because of the in-seed amylase technology in Enogen Feed corn, **starch is easier for cattle to digest**. Improved starch utilization can result in more available energy for your herd. **Enogen Feed corn can help increase the feed value of the corn in your ration.**

It's efficient: Enogen Feed hybrids can help deliver an increase in feed efficiency of about five percent.

In feeding trials at the University of Nebraska-Lincoln (UNL) and Kansas State University (KSU), Enogen Feed corn increased feed efficiency by an average of about five percent in stocker and finishing cattle.²

Research shows **Enogen Feed corn can increase the potential value of corn in your ration**, whether you feed corn as:

- Whole-grain;
- Dry-rolled;
- Steam-flaked; or
- Silage.





It increases profit potential.

Increased feed efficiency means fewer days on feed or lower feed costs. Higher value in the corn you feed means you're getting more out of your ration, and increasing the potential for profit in your operation.

Digestibility matters. UNL research shows Enogen Feed, fed as dry-rolled corn, offers a step-change in starch digestibility and sugar availability.

24.6%
INCREASE IN
POST-RUMINAL
DIGESTIBILITY



Post-ruminal digestibility is a measure of the level of digestibility that occurs in the small intestine. **Available energy supply is greater when starch is digested in the small intestine.**

As shown in research conducted at the University of Nebraska-Lincoln, **Enogen Feed corn increases the potential for greater post-ruminal digestibility**, compared to conventional corn, while not statistically affecting starch digestibility in the rumen itself.⁴

4.1%
INCREASED
TOTAL TRACT
DIGESTIBILITY



Total tract digestibility is the digestion of starch both in the rumen and post-ruminally (in the small intestine). **Enogen Feed corn can increase total tract digestibility of starch.**⁵

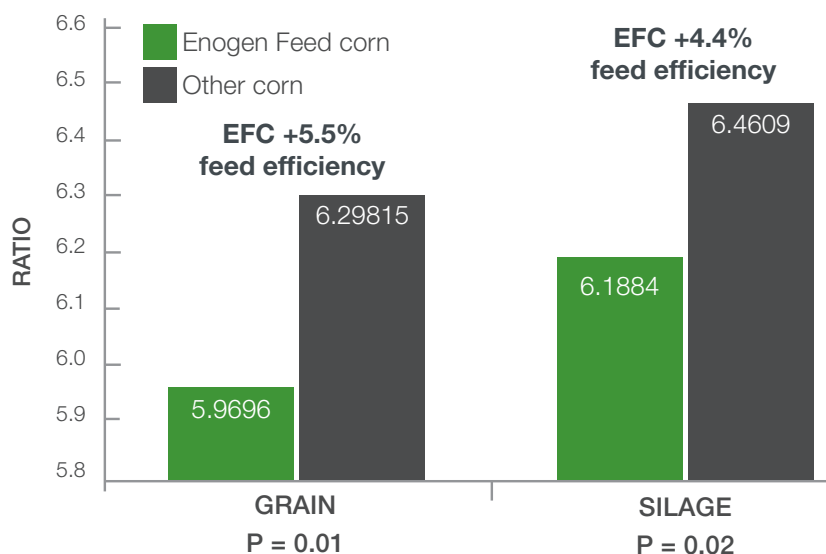
38%
DECREASED
FECAL STARCH
OUTPUT



Enogen Feed corn also results in decreased fecal starch output, which means more of the consumed starch may be converted to energy.⁶



KSU stocker cattle studies show consistent increase in feed efficiency.



In two separate studies at Kansas State University, and consistent with research conducted with finishing cattle at the University of Nebraska-Lincoln, **feed efficiency was improved in stocker cattle fed Enogen Feed corn versus conventional corn**, fed either as grain or silage.²

In the chart to the left, lower numbers indicate less feed required and increased feed efficiency.

Silage quality matters: Improved digestibility = More available energy.

Starch Availability and Sugar Content^{7,8}

14%
INCREASE
IN STARCH
DIGESTION

2X
INCREASE
IN SUGAR
CONTENT



Enogen Feed silage may provide **greater starch availability**, due to higher levels of small particle starch. This may result in **higher levels of available sugar**.

Neutral Detergent Fiber Digestibility (NDFD)⁷

6.2%
INCREASE
(240 HOUR)

12.6%
INCREASE
(120 HOUR)

8.2%
INCREASE
(30 HOUR)



Enogen Feed silage offers **the potential for consistent, significant NDFD increases** which enables you to feed more forage.

Kansas State University research also showed that **Enogen Feed silage is less prone to spoilage**. This means your high quality Enogen Feed silage may last longer than other silage.²



Our commitment to stewardship.

As a high-value output product, Enogen Feed corn must be grown as an identity preserved crop and fed on-farm only. Growers must adhere to all applicable stewardship requirements, and sign and comply with an Enogen contract with Syngenta.



Learn more.

To learn more about research on the enhanced digestibility of Enogen Feed corn at the **University of Nebraska-Lincoln**, refer to the finishing section of the 2016 *Nebraska Beef Cattle Report* at www.beef.unl.edu and look for studies on Syngenta Enhanced Feed Corn, or contact **Professor Galen Erickson** at gerickson4@unl.edu.

To learn more about stocker cattle research on Enogen Feed corn at **Kansas State University**, contact **Professor Dale Blasi** at dblasi@k-state.edu. To learn more about KSU silage research, contact **Professor Jim Drouillard** at jdrouill@k-state.edu.

For more information about Enogen Feed hybrids, **contact a Golden Harvest® Seed Advisor or NK® retailer**, or visit www.EnogenFeed.com.

¹ Growers must comply with specific yet simple stewardship requirements.

² University of Nebraska-Lincoln Research Studies, 2013-2017; Kansas State University Research Study, 2017.

³ Syngenta production data, 2012-2017.

⁴⁻⁶ University of Nebraska-Lincoln Research Study, 2014.

⁷ Syngenta contract research, 2016.

⁸ Wet chemistry data, isSD7 - *in situ* starch digestion after 7 hours. Higher levels of *in situ* starch digestion after 7 hours (isSD7) indicated better digestibility of available starch with Enogen Feed silage.