

NEW

# RumiStar™

EFFICIENCY STARTS WITH DIGESTIBILITY


## Dairy cows can't use what they can't digest

- Dairy producers are continually searching for ways to get the most out of their feed rations.
- Starch contributes 75 percent of the energy value of grain and 50 percent of corn silage.<sup>1</sup>
- By improving starch utilization, producers may reduce corn in diets, and support optimal milk production.

## RumiStar – the in-feed Alpha-amylase to improve starch efficiency

- One option for improving feed efficiency is utilizing an Alpha-amylase (or  $\alpha$ -Amylase), an enzyme that is essential for conversion of starches into oligosaccharides. Put simply: Alpha-amylase improves the starch utilization of dairy rations.
- RumiStar, a newly-available feed enzyme from DSM, is an Alpha-amylase that can be added to any feed ration.
- RumiStar is stable and highly active under ruminal conditions. RumiStar shifts more starch digestion to the rumen, rather than the large intestines, resulting in more efficient use of energy in the animal.

**STARCH**  
**75%**  
ENERGY VALUE OF  
**GRAIN**



AND **50%**  
OF CORN  
**SILAGE**



Pure Alpha-amylase



Dry and liquid forms



Improves starch digestibility



## RUMISTAR LACTATION STUDIES

Results from the six lactation studies below were compared in terms of starch efficiency, determined as milk\* produced divided by starch intake.

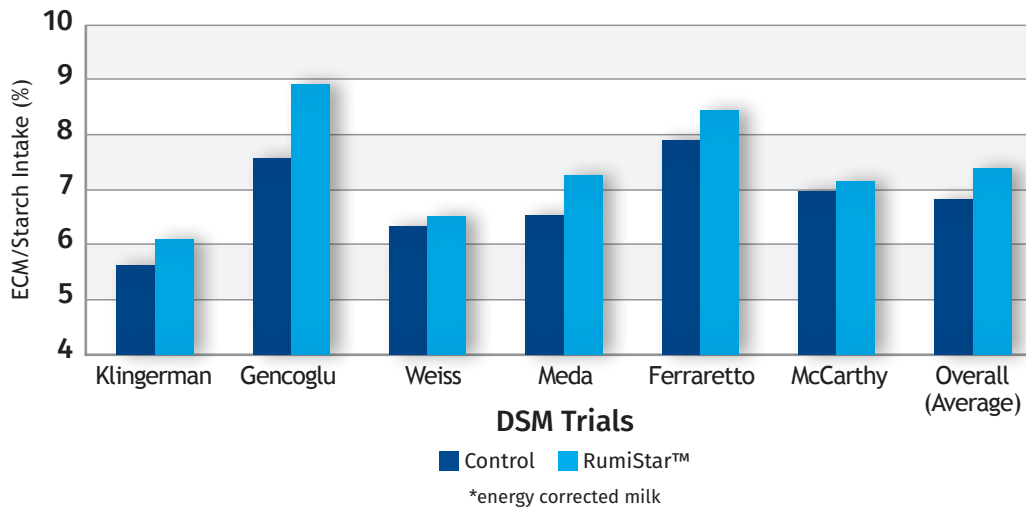
- Through a wide range of starch levels fed (20.7 to 31.6 percent) and neutral detergent fiber sources, efficiency of ECM production was consistently increased in every trial, with an overall average of a 9 percent increase.<sup>2</sup>
- Optimal milk production was observed in trials with the use of RumiStar.

**INCREASED  
STARCH EFFICIENCY**

**9% (OVERALL AVERAGE)**

**SUPPORTS  
OPTIMAL MILK  
PRODUCTION**

Starch Efficiency (Milk\*/Starch Intake) Reported for RumiStar™ Studies



## IDENTIFYING STARCH DIGESTIBILITY ISSUES

Starch only appears in the manure when it has passed through the rumen and the small and large intestine. The presence of corn kernels or chips in the manure is a sure sign that starch efficiency is below optimum.



You may recognize potential starch digestibility issues by identifying corn kernels or chips in manure.



Where manure is washed down on concrete, look for visible corn particles. This may indicate a lower-than-optimum rumen degradability score.

<sup>1</sup>Ferraretto, L. F. (2017). Impact of Starch Content and Digestibility in Dairy Cattle Diets.  
<sup>2</sup>DSM. Data on file.  
RumiStar is a trademark of DSM Animal Nutrition & Health.  
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