

WX

THE MOST VERSATILE AND EFFECTIVE XYLANASE AVAILABLE FOR SWINE DIETS



THE PROBLEM

Arabinoxylan makes up more than 50% of non-starch polysaccharide in corn and is the substrate for xylanase

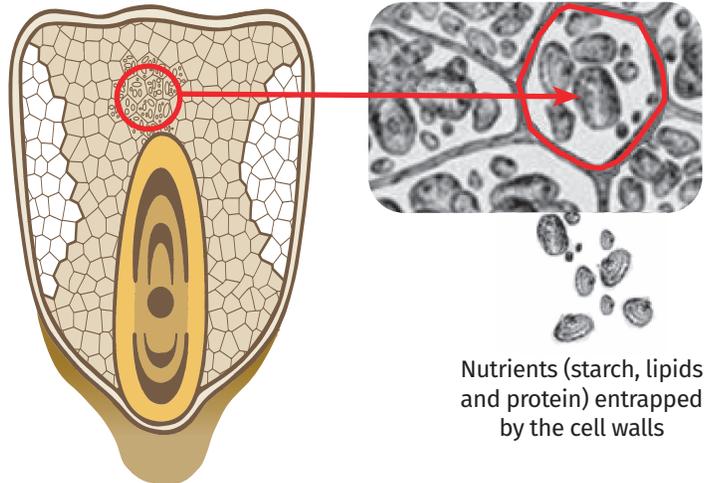
% of DM	Total NSP	Arabinoxylan	% of total
Corn	10	5.2	52
Wheat	12	7.6	63
Barley	18	8.4	50

Total dietary fiber = NSP + lignin



THE CAGE EFFECT: NUTRIENTS GET TRAPPED INSIDE INTACT CELLS

1. NSP enzymes break down the cells walls
2. More starch, lipids and proteins are released to be digested by endogenous enzymes

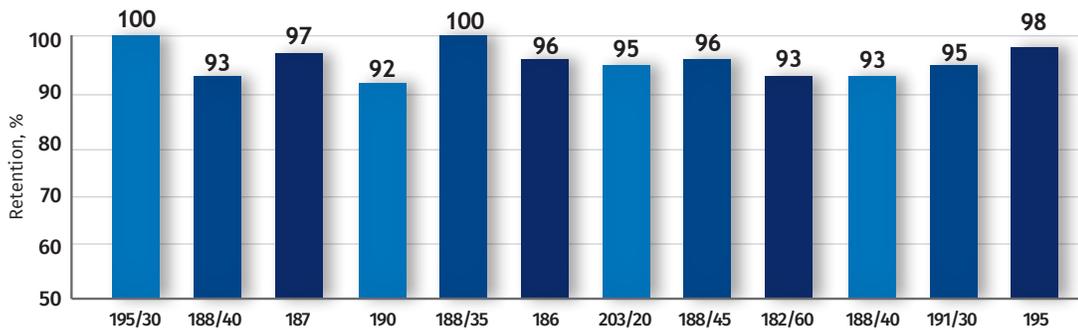


Nutrients (starch, lipids and protein) entrapped by the cell walls

WX – HARVEST THE ENERGY

WX provides consistent stability and activity for feeds pelleted in commercial feed mills

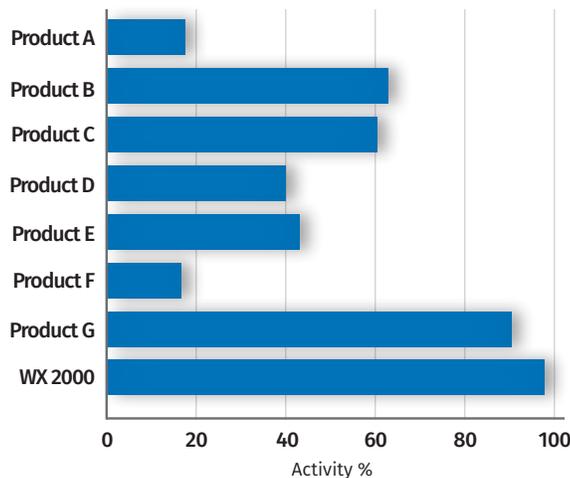
Stability of RONOZYME® WX (CT) Xylanase for Pelleted Feeds in Commercial Feed Mills



WX averaged 95.6% retention over twelve different feed mill stability tests.

Each value represents a different commercial feed mill for xylanase stability

WX Provides Superior Activity Compared to Competitive Xylanases Used in the U.S. Market — Novozymes 2017



WX Improves Energy Uplift¹

Two trials, with a total of 1,858 pigs, show consistent energy uplift with the addition of VP and WX.

Trial	Treatment	ME, kcal/kg uplift
Experiment 1	227g/ton RONOZYME® VP + 150 g/ton WX ²	83 ^a
Experiment 2	227g/ton RONOZYME® VP + 150 g/ton WX ²	120 ^b

¹The Effects of a Combination of a Xylanase and Multi Enzyme Non-Starch Polysaccharide Product on Growth Performance of 12-22 kg Pigs. E. D. Frugé, E. L. Hansen, S. A. Hansen, D. M. Compart, J. R. Bergstrom, Hubbard Feeds Inc., Mankato, MN, Compart's Boar Store, Nicollet, MN, DSM Nutritional Products North America, Parsippany, NJ.
²All diets were mash corn-SBM, 20% DDGS and 1000 FTU/kg phytase. Trial one included 969 pigs, averaging 11.67 kg. Trial two included 889 pigs, averaging 13.33 kg.
^aCompared to the caloric efficiency of the negative control (3354 kcal/kg ME)
^bCompared to the caloric efficiency of the control (5611 kcal/kg gain)

WX

Product Specs

Product form	CT granulate
Usage recommendations	<ul style="list-style-type: none"> • 50 to 100 g/MT (ppm), or 0.10 to 0.20 pounds per ton, of the RONOZYME® WX 2000 • 20 to 40 g/MT (ppm), or 0.04 to 0.08 pounds per ton, of the RONOZYME® WX 5000
Stability	<ul style="list-style-type: none"> • Storage 24 months at RT • 6 months in premix • Recovery at 195°F pelleting temperature >85% • Physical character comparable to other RONOZYME® products