

Kemzyme[®] XPF Advance

ADVANCING ENERGY UTILIZATION

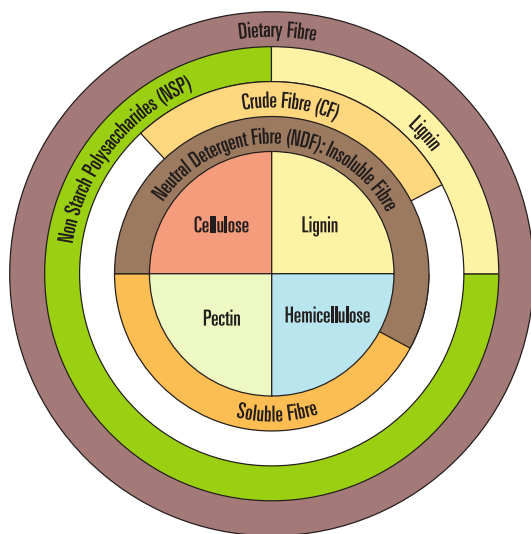


KEMIN[®]

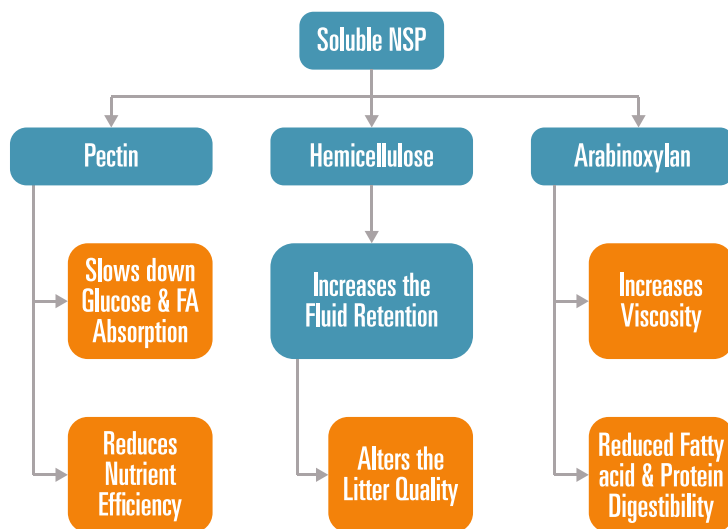
© Kemin Industries, Inc. and its group of companies 2019 All rights reserved. [®] [™] Trademarks of Kemin Industries, Inc., U.S.A.

FIBRE - SCOPE TO UNDERSTAND FURTHER

Understanding on the fibre is limited to crude fibre which vary from $6\pm 3\%$ depending on the feed ingredients and the diet. Crude fibre is the commonly used term which comprises of insoluble cellulose and lignin, often misrepresented as total fibre present in the diet. Whereas, the total fibre or dietary fibre varies about $14\pm 2\%$ irrespective of type of ingredients in the feed formulation.



(Image Ref: Avicultura 2015)
Schematic representation of
Crude Fibre Vs Dietary Fibre Vs Non-Starch Polysaccharides

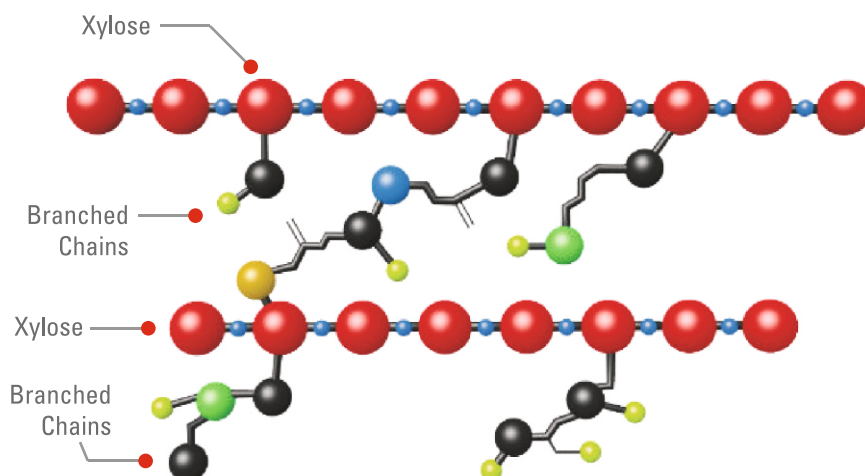


(Source: Asian-Aust. J. Ani. Sci., 2010)

COMPLEXITY OF ARABINOXYLAN

The branching structure of arabinoxylan throws challenge on the efficacy of xylanase. Among the commonly used grains corn has relatively complex branched chains followed by bajra and wheat.

In case of protein meals, along with arabinoxylans other components like pectin, mannans, oligosaccharides demand comprehensive enzyme approach for improving the nutrient utilization.



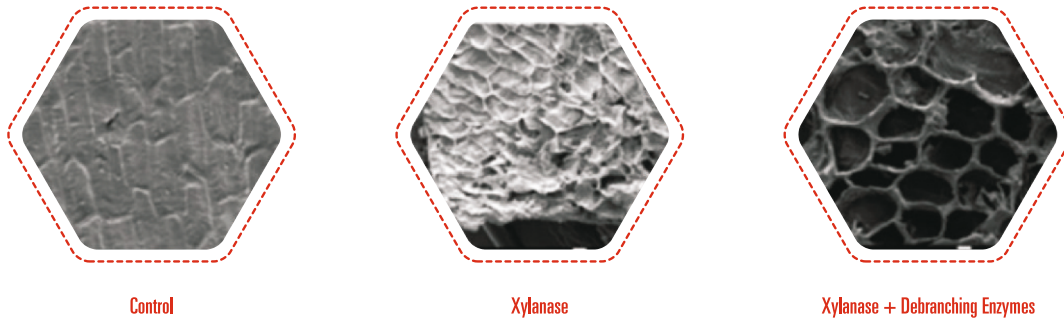
Schematic representation of arabino-xylan structure.
(Ref: MK-15-1)

What is Kemzyme® XPF Advance

Kemzyme XPF Advance is the unique combination of patented xylanase potentiating factor (XPF), sustained release amylase (SRA) with cellulase, mannanase, xylanase, beta glucanase, pentinase and amylase.

XYLANASE POTENTIATING FACTOR (XPF)

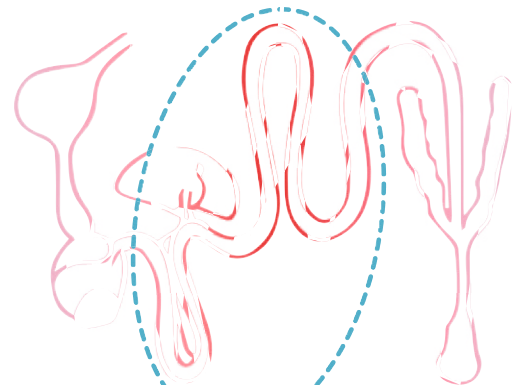
XPF cleaves the branching structure of AX and enhances the access to xylanase and other NSPases. Breakdown of arabinoxylan side chains enhances prebiotic potential of xylo-oligosaccharides (XOS), reduces viscosity, supports gut integrity thus enhances the nutrient utilization and animal performance.



Breakdown of Arabinoxylan with Xylanase and Xylanase in combination with Debranching Enzymes
Ref: J. Agric. Food Chem. 2016

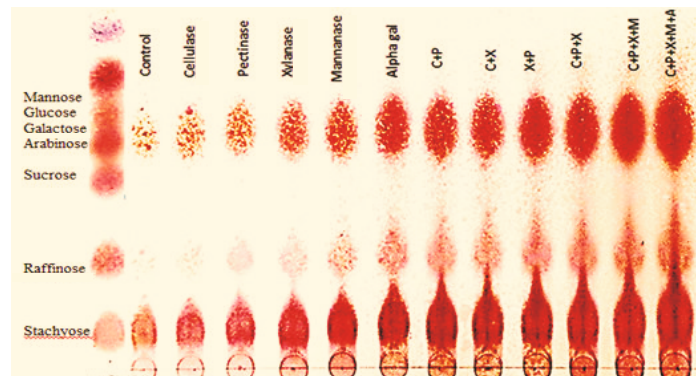
SUSTAINED RELEASE AMYLASE (SRA):

Improving the starch digestion beyond duodenum enhances the energy utilization of carbohydrates. Thus, minimizes the energy loss, gluconeogenesis and enhances the nutrient uptake and productive performance.



Sustained Starch Digestion (Ref: IMG_KAE_00239)

COMPREHENSIVE APPROACH:



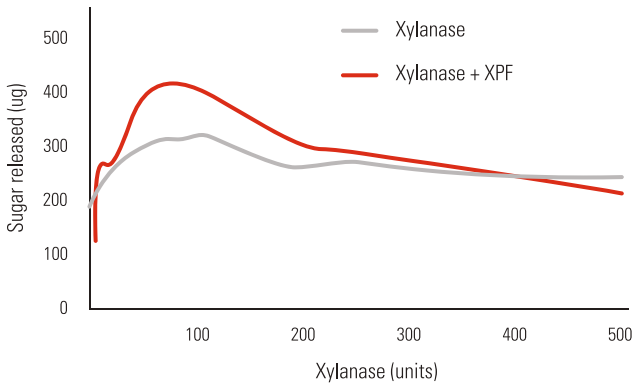
WP-16-00148

TLC degradation pattern of different types of carbohydrates with the sequential addition of enzymes to soybean meal.

NSP- non starch polysaccharides, C-cellulase, X- xylanase, P- pectinase, A- alpha galactosidase

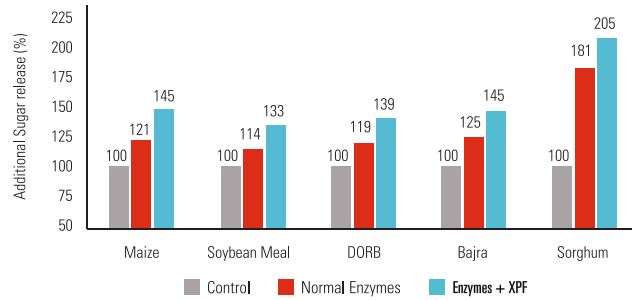
THE ADVANTAGE

SYNERGY OF XPF AND XYLANASE



XPF and Xylanase synergy releases 28% more sugar than mono-xylanase (Ref: WP-12-00147)

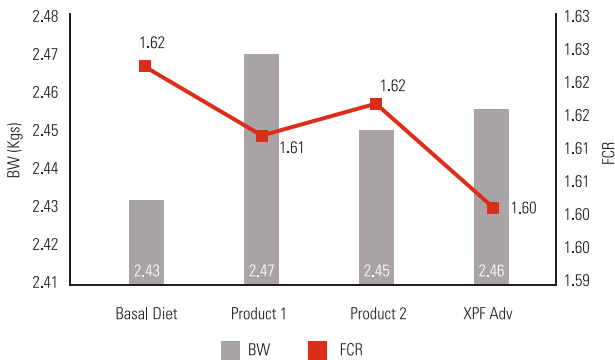
BROAD SPECTRUM EFFICIENCY



Incremental reducing sugar release with the incorporation of XPF over normal NSP degrading enzymes

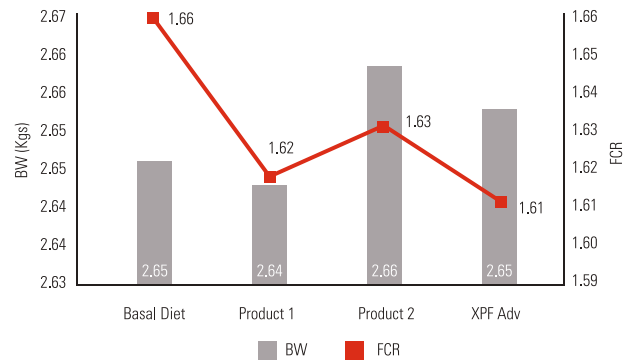
Ref: WP_15_00169

IMPROVED ANIMAL PERFORMANCE:



Zoo-Technical Performance-1

Ref: PRE-17-00286



Zoo-Technical Performance-2

Ref: TD-17-01678

APPLICATION

100 gm per metric tonne of feed. Suitable for pellet diets for on-top application or reformulation with 100 Kcal ME and up to 2% digestible amino acids.



Kemin Industries South Asia Private Limited
 #C-3, First Street, Ambattur Industrial Estate,
 Chennai - 600 058, INDIA. 044 4220 2800
 mail.india@kemin.com | www.kemin.com

