

Kemzyme[®] XPF

COUNT THE EXTRA EGGS

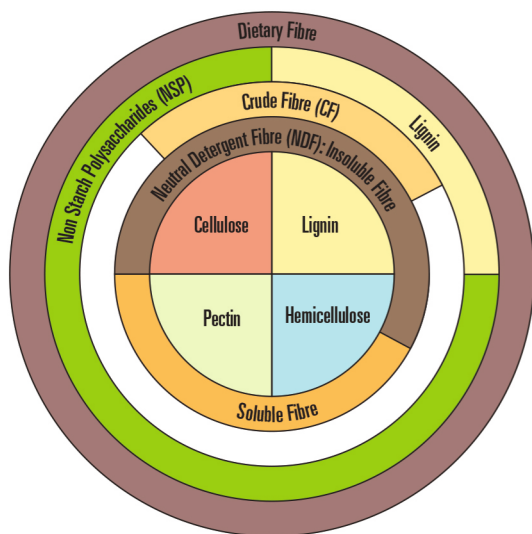


KEMIN[®]

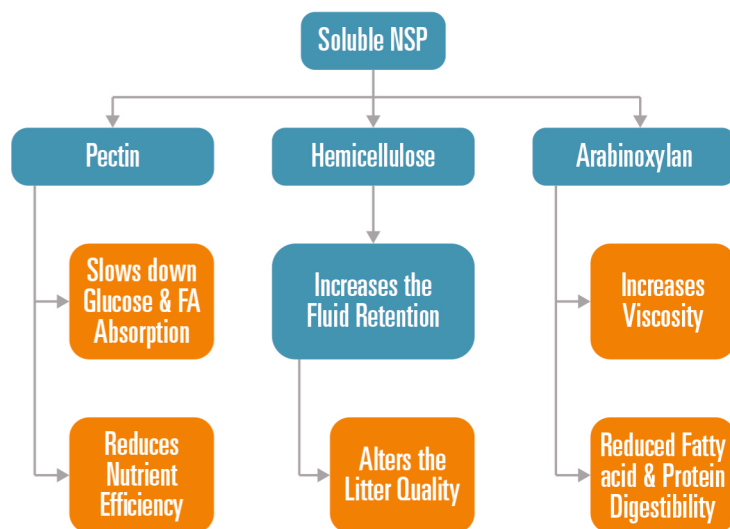
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FIBRE - SCOPE TO UNDERSTAND FURTHER

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

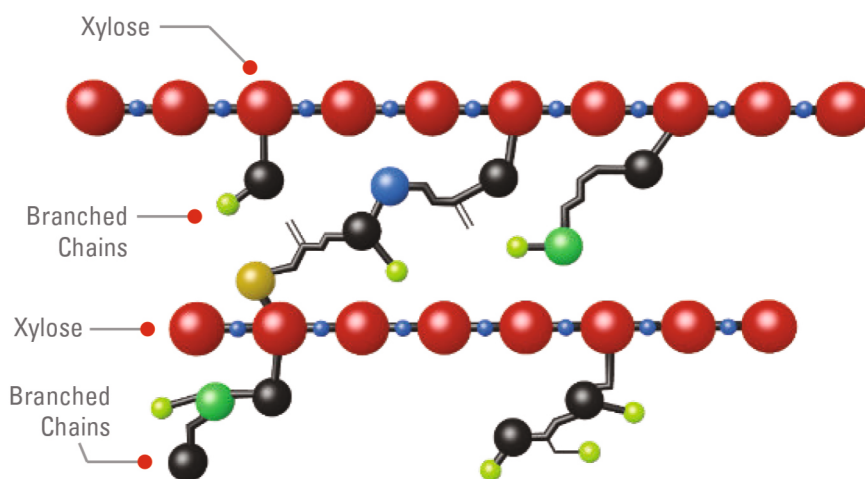


(Source: Asian-Aust. J. Ani. Sci., 2010)

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.



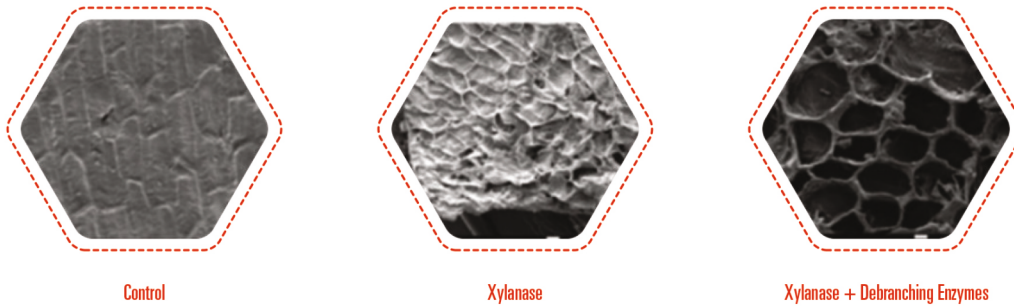
Schematic representation of arabinoxylan structure.
(Ref: MK-15-1)

What is Kemzyme® XPF

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

XYLANASE POTENTIATING FACTOR (XPF)

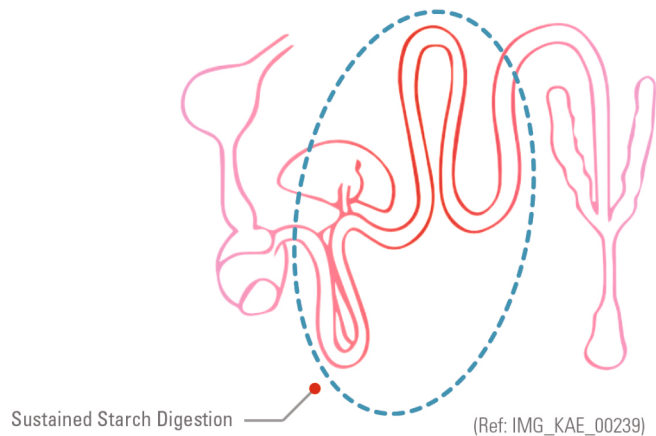
XPF cleaves the branching structure of AX and enhances the access to xylanase and other NSPases. Breakdown of arabinoxylan side chains enhances prebiotic potential of xylo-oligosaccharides (XOS), reduces viscosity, supports gut integrity thus enhances the nutrient utilization and animal performance.



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

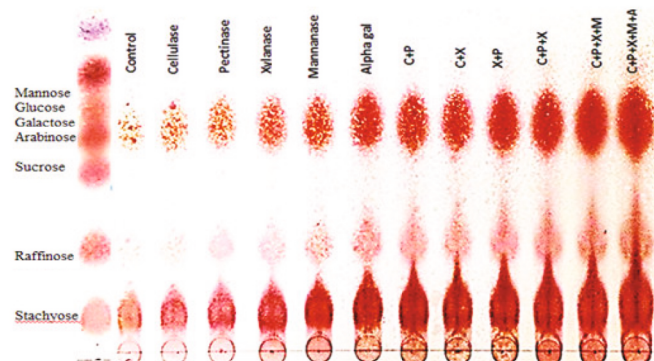
SUSTAINED RELEASE AMYLASE (SRA):

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.



(Ref: IMG_KAE_00239)

COMPREHENSIVE APPROACH:



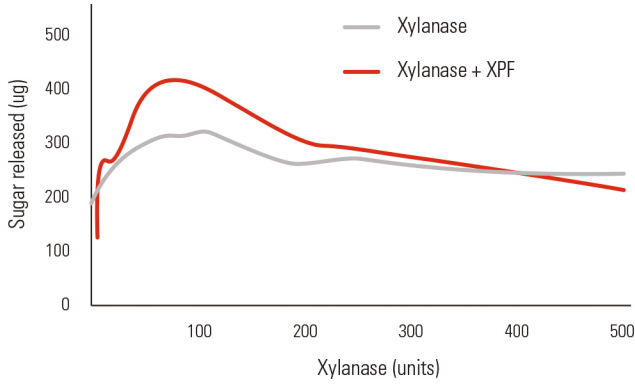
WP-16-00148

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

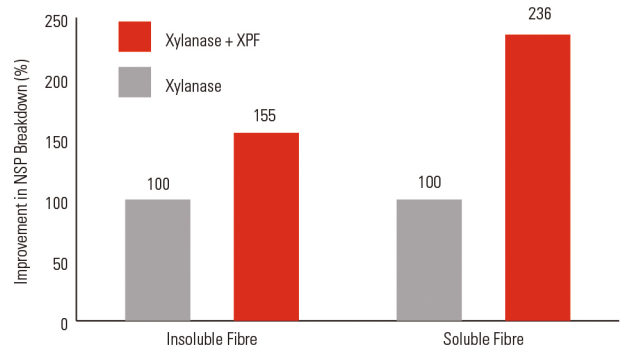
THE ADVANTAGE

SYNERGY OF XPF AND XYLANASE



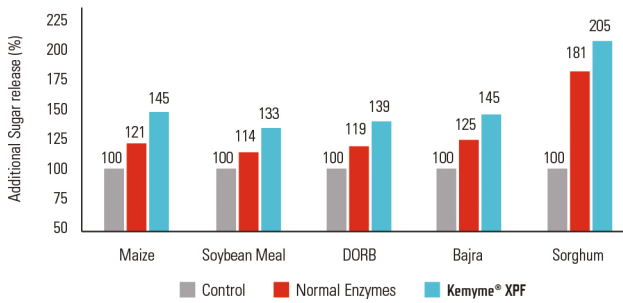
XPF and Xylanase synergy releases 28% more sugar than mono-xylanase (Ref: WP-12-00147)

SUPERIOR FIBRE UTILIZATION



Improvement in the breakdown of soluble and insoluble NSP components through XPF synergy (Ref: WP_15_00165)

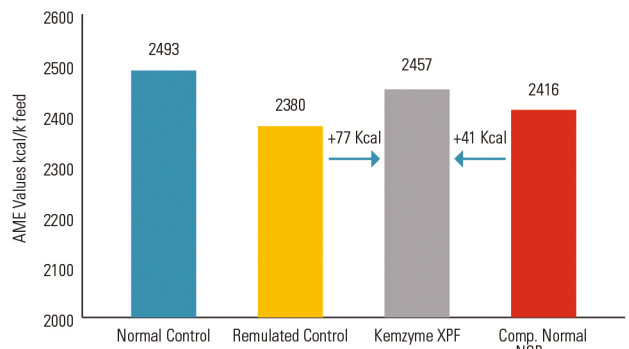
BROAD SPECTRUM EFFICIENCY



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

Ref: WP_15_00169

IMPROVED AME AVAILABILITY



AME Increase by Kemzyme XPF over reformulated diet and normal NSPases (Ref: WP-14-00173)

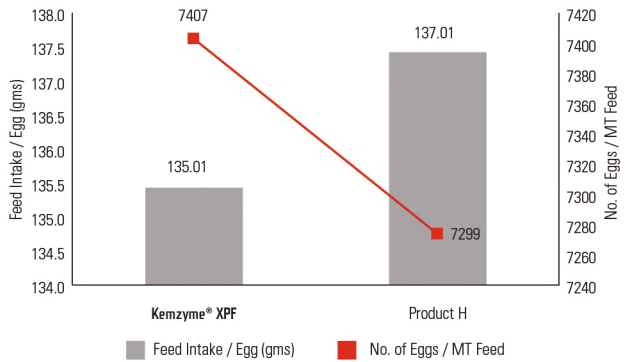
IMPROVED ANIMAL PERFORMANCE:



Kemzyme XPF

Control

Yolk pigmentation in corn-wheat-soy based diets supplemented with Kemzyme XPF (Ref: IMG_KAI_00006)



Kemzyme XPF delivers about 100 eggs more per tonne of feed over normal carbohydrases. (Ref: TD-17-00845)

APPLICATION

Nutrient: Kemzyme XPF spares an AME of 75-100 Kcal per kg of feed and 0.2-0.3% of crude protein.
Inclusion Level: 250-500 gm / mt feed. (The dose may vary based on the type of feed material, nutrient replacement etc)



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