THE MOST HEAT RESISTANT XYLANASE GENERATES THE MOST ENERGY
MAXIMISE NSP UTILISATION TO IMPROVE FCR AND REDUCE COSTS

- Energy is the most expensive nutrient in the diet – 100 Kcal/Kg currently costs approximately US$10/tonne and feed costs currently make up 70% of the cost of swine production (Dourmand, 2017).
- Using NSPases creates an opportunity for nutritionists and feed producers to maximise energy utilisation from the diet.

WHY CHOOSE XYLANASE?

- Approximately 45% of the NSP composition of pig finisher diets consists of arabinoxylan, whether based on wheat, barley, corn or sorghum.
- Xylanase is the NSPase that breaks down arabinoxylans into beneficial oligosaccharides, helping to improve animal performance by increasing energy release and improving feed efficiency.

WHEN TO USE XYLANASE?

- Fermented by gut microbiota.
- Growth of lactate and butyrate – producing bacteria.
- Altered microbial profile enhances animal performance.
- Anti-inflammatory.
- Fuels epithelial cells.
- Increases intestinal epithelial integrity.
- Butyrate (a short-chain fatty acid).

ECONASE XT – the xylanase that delivers optimal NSP breakdown for improved energy utilisation

A beta 1-4 endo-xylanase that optimises the breakdown of NSP, reducing its anti-nutritive effects and improving the energy utilisation of monogastric diets.

ECONASE XT INFLUENCES NUTRIENT DIGESTION AND INCREASES NET ENERGY

In swine, Econase XT:

- Reduces digesta viscosity in various cereal-based diets.
- Improves nutrient digestibility.
- Influences intestinal fermentation.

THE PREBIOTIC EFFECT OF OLIGOSACCHARIDES

- Econase XT influences intestinal fermentation by producing favourable prebiotic xylo-oligomers in the lower GI.
- These xylo-oligomers can increase volatile fatty acid production, shift the microbial profile and provide valuable energy for intestinal cells.

Types and estimated levels of NSPs present in key cereal grains

<table>
<thead>
<tr>
<th>Grain</th>
<th>Soluble + insoluble arabinose and xylose residues</th>
<th>Insoluble glucose residues</th>
<th>Soluble + insoluble rhamnose, fucose, mannose, galactose and galacturonic acid residues</th>
<th>Soluble B-glucans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorghum</td>
<td>45%</td>
<td>11%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Corn</td>
<td>58%</td>
<td>10%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Wheat</td>
<td>64%</td>
<td>9%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Barley</td>
<td>48%</td>
<td>4%</td>
<td>23%</td>
<td>23%</td>
</tr>
</tbody>
</table>

1 Soluble + insoluble arabinose and xylose residues; 2 Insoluble glucose residues; 3 Soluble + insoluble rhamnose, fucose, mannose, galactose and galacturonic acid residues; 4 Soluble glucose residues.

Econase XT attacks and breaks down cell walls.

Econase XT helps prime the gut for beneficial bacteria.
XYLANASES DIFFER IN THEIR ABILITY TO PRODUCE DIFFERENT OLIGOSACCHARIDES

- Xylose (X1) can have a negative effect on animal performance and energy utilisation\(^{[1]}\) while X2–X7 can have a positive effect.

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THE ONLY Xylanase THAT IS INTRINSICALLY THERMOSTABLE

- Pelleting conditions vary dramatically between feed mills and within the same feed mill.
- Selecting a xylanase that can withstand the rigours of the feed conditioning process is critical to ensure consistent performance improvements.

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Econase XT has been shown to produce beneficial types of oligosaccharides for optimal performance.
ECONASE XT IS PROVEN TO BOOST SWINE PERFORMANCE

Econase XT is the optimal xylanase for maximising feed utilisation.

**PROVEN RESULTS IN SWINE**

1. **Improves FCRw**

   ![Graph showing the improvement in FCRw](chart1.png)

   - FCR (g/g)
     - Control: 2.42
     - Econase XT: 2.36

   Source: AB Vista

   Note: Results are combined from 5 trials, using corn/soy/DDG-based diets. *weight-corrected FCR based on 0.005 point change for every 454 g change in weight at slaughter.

2. **Shown to deliver 2.2 kg extra gain**

   ![Bar chart showing the extra gain](chart2.png)

   - Control: 113 kg
   - Econase XT: 115.2 kg

   Source: AB Vista

   Note: Results are combined from 5 trials, using corn/soy/DDG-based diets.

3. **Improves livability from 92.9% to 95.5%, equating to a $3.90 saving per pig**

   ![Bar chart showing the improvement in livability](chart3.png)

   Source: AB Vista

   Note: Results are combined from 5 trials, using corn/soy/DDG-based diets.

   *Based on an estimated value of US $1.50 per 1% improvement

ECONASE XT IS SIMPLE TO MEASURE AND DETECT

Analysis of Econase XT is easy and can be measured across a range of feeds. This helps to ensure that the full benefits of using Econase XT are realised.

**QUICKSTIX**

- A qualitative test that detects the presence of Econase XT in feed
- Reliable confirmation in the feed mill within 5 minutes
- No lab expertise required
- Only the active enzyme is detected

**QUANTIPLATE**

- A quantitative test that measures the activity of Econase XT in feed
- Quick and easy to conduct, reliable results within 4 hours
- Lab equipment required
- Only the active enzyme is detected

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The only intrinsically thermostable xylanase up to 95°C

Optimal NSP breakdown to deliver FCR and cost reduction

Effective across a wide range of feed ingredients

Proven results in poultry and swine

Easily detected and measured in feed

MAXIMISE DIETARY ENERGY UTILISATION WITH ECONASE XT

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