

**MORE ENERGY FOR THEM,  
MORE PROFIT FOR YOU**



**Right use of energy  
- add Hemicell**

**β-MANNANS IN VEGETABLE MEAL  
ARE A HOT TOPIC.**

**WHAT ARE  
BETA-  
MANNANS?**

**β-mannans are strong anti-nutritive fibers.<sup>4</sup>**

- Polysaccharide fibers typically with mannose backbone & galactose sidechains<sup>1</sup>
- Found in most vegetable feed ingredients<sup>5</sup> such as soybean, sunflower and guar meals
- Highly soluble
- Not digestible by non-ruminant animals
- More harmful in challenge periods<sup>6</sup>
- Amount in typical broiler diets varies from 0.2% - 0.4%\*  
*\* Depending on feed ingredients*

**WHAT DO  
BETA-  
MANNANS  
DO?**

**β-mannans are immunogenic compounds that hurt your flock and your bottom line.**

- 1 Increase gut viscosity<sup>7</sup>
- 2 Cause intestinal inflammation<sup>8</sup>

**WASTES UP TO  
10 EURO/T FEED**  
Cause 3% loss of feed energy<sup>2,3,10</sup>

- 3 Trigger innate immune system<sup>9</sup>
- 4 Viewed by body as pathogens (PAMP response)<sup>2,3,10</sup>

**WHAT  
WILL  
HEMICELL  
DO?**

**Negative effects from β-mannan can be reversed.**

Hemicell™ (β-mannanase) is a health-focused, nutrient-sparing enzyme that breaks down β-mannans in various feedstuffs

- Reduces cost of feeding by using an energy matrix value of up to 90 kcal/kg<sup>12-13</sup>
- Improves Intestinal Integrity (I2) Index by 1%<sup>14</sup>
- Reduces severe foot pad lesions by 5%<sup>14</sup>

# HEMICELL™ HT

A patented feed enzyme specially formulated for pelleted diets that withstands the pelleting process and intestinal conditions



- 1 Pelleting process adds heat & moisture
- 2 Pelleting interferes with enzymes
- 3 At 88°C, Hemicell HT retains 95% activity<sup>11</sup> (Fig. A)

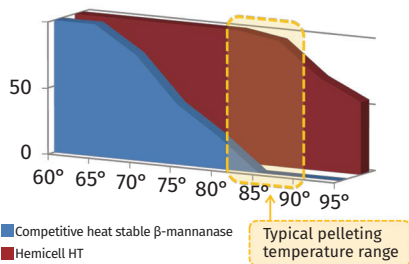


Fig. A



- 1 Enzymes need time at optimal pH to work.
- 2 Hemicell HT matches intestinal pH (Fig. B)

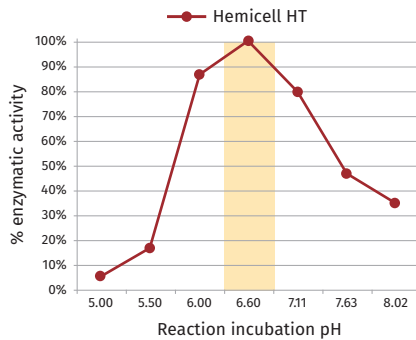


Fig. B



Hemicell HT demonstrated up to **91% residual activity** after one hour in conditions simulating the stomach/gizzard<sup>11</sup> (Fig. C)

In 3 out of 4 treatments, the Hemicell HT that survived the upper tract **retained all of its activity in the lower tract<sup>11</sup>**

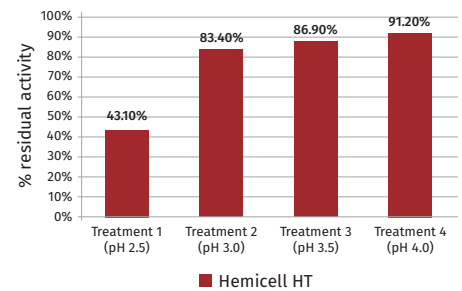


Fig. C



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## Hemicell Use Recommendations

Hemicell HT is a patented enzyme produced by fermentation of *Paenibacillus lentus* bacteria. The active ingredient is endo-1,4-β-mannanase.

Use Hemicell HT in diets containing at least 0.2% soluble β-mannan.

**Species:** Broilers, turkeys and swine.

**Energy Reduction:** Formulate Hemicell HT to spare up to 90 kcal ME (63 kcal NE) per kg of complete feed.<sup>12,13</sup>

## Recommended Inclusion:

PRODUCT	RECOMMENDED INCLUSION PER TONNE OF COMPLETE FEED			
	Broilers	Turkeys	Weaned Pigs	Pigs for Fattening
Hemicell HT	330 g	330 g	300 g	300 g

The label contains complete use information, including cautions and warnings. Always read, follow and understand the label and use directions.

