

Pelleting stability:

DigeGrain Pro is found to be heat stable up to 85°C for 45 to 60 seconds

Form: Powder and liquid

Packaging: In 25kg HDPE drums / 30kg Jerry cans

Animal Feed - Our Offerings

Product Name	Enzyme Type
DigeGrain X	Xylanase
DigeGrain M	Mannanase
DigeGrain G	endo beta-1,4 glucanase
DigeGrain C	Cellulase
DigeGrain Pro	Protease (acidic and alkaline)
DigePhos	Phytase 5,000 and 10,000
DigeGrain Max	Amylase, xylanase, mannanase, glucanase, cellulase, pectinase
DigeGrain Delta	Amylase, xylanase, mannanase, protease & phytase
DigeGrain Delta Plus	Amylase, xylanase, mannanase, glucanase, cellulase, pectinase, protease & phytase
DigeGrain Super	Amylase, xylanase, mannanase, pectinase, cellulase, beta-glucanase, alpha galactosidase, protease, lipase, phytase, Bacillus subtilis & Bacillus coagulans
AciGrain (Feed Acidifier)	Blend of organic acids and their salts
Probiotics Products	Bacillus subtilis, Bacillus coagulans, Saccharomyces boulardii, multi microbe probiotics

P.S. Single enzymes and customized blends are available on request

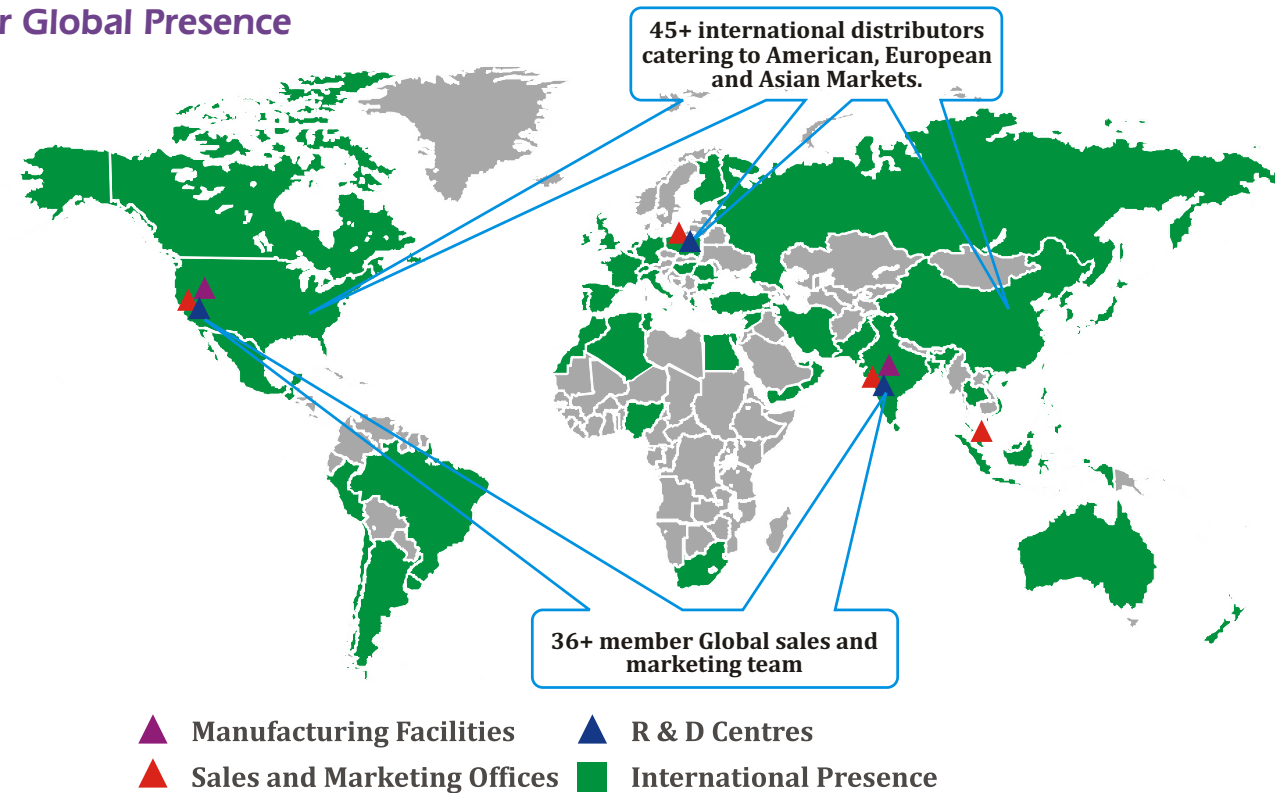
About Us

Advanced Enzymes is a research driven company with global leadership in the manufacturing of enzymes. We are committed to providing eco-safe solutions for a wide variety of industries like Human Healthcare and Nutrition, Animal Nutrition, Food and Industrial Processing.

- Animal Nutrition
- Baking
- Biocatalysis
- Biofuel
- Brewing & Malting
- Dairy & Cheese Processing
- Detergents & Cleaning Aids
- Fruit & Vegetable Processing
- Human Nutrition & Healthcare
- Leather
- Oils & Fats Processing
- Pulp & Paper
- Protein Modification
- Specialty Applications
- Starch & Grain Processing
- Textile
- Wine Processing
- Yeast Processing



Our Global Presence



North America & Latin America

Advanced Enzymes USA
4880 Murrieta Street,
Chino, CA 91710, USA.
Tel: +1-909-613-1660
Fax: +1-909-613-1663
Email: ip@specialtyenzymes.com

Asia

Advanced Enzymes
5th Floor, 'A' wing, Sun Magnetica,
Louiswadi, Thane (W) 400 604, India.
Tel: +91-22-4170-3200
Fax: +91-22-2583-5159
Email: info@advancedenzymes.com



www.advancedenzymes.com



DigeGrain Pro

Maximize Protein Utilisation & Reduce Feed Cost

- Unique protease enzyme
- Improved protein digestibility and availability of amino acids
- Improved energy utilisation
- Reduced dietary crude protein and energy requirement
- Reduced feed cost
- Lesser nitrogen excretion and environmental pollution



DigeGrain Pro

Challenges in Poultry Feeding

- Significant rise in the cost of protein-rich feed ingredients
- Beside second most expensive components of poultry diet, protein in SBM is about 87% digestible, whereas protein in maize is only 81% digestible
- The challenge, therefore, are:
 - To use protein as efficiently as possible so as to reduce feed costs without compromising animal health and performance.
 - To improve feed efficiency in birds fed low protein diets
 - To reduce environmental pollution

There is considerable potential to increase protein digestibility in poultry diet

Ingredients	Protein %	% Protein Digestibility	% Amino acid Digestibility							
			Lys	TSAAs	Thre	Trp	Arg	Val	Ile	Avg
Corn	8	80-82	92	91	86	81	92	91	93	89
SBM	48	85-87	91	85	85	90	93	89	90	89
Wheat	11	80-83	85	90	86	85	86	89	94	88
Corn DDGS	27	73-77	81	82	79	78	81	80	79	80
Sorghum	11	65-70	91	85	84	88	88	85	91	87
Sunflower M	41	81-84	88	86	82	87	93	86	88	87
Canola meal	38	75-80	80	81	75	81	86	78	78	80
Feather meal	85	50-75	56	50	54	45	67	65	72	58
MBM	50	65-80	70	63	60	55	78	72	70	67

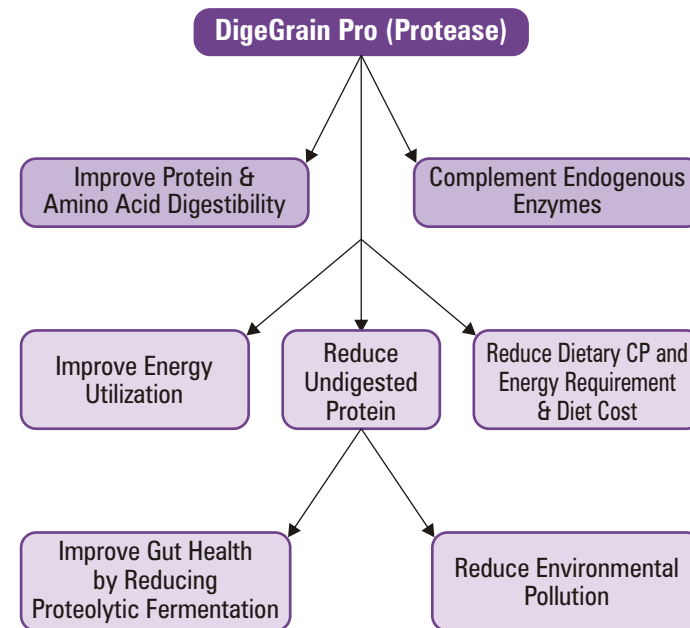
Specifications:

Activities

DigeGrain Pro 6
(Alkaline Protease): 25,000,000 PCU/kg
DigeGrain Pro 3
(Acidic Protease): 25,000,000 HUT/kg

How DigeGrain Pro works?

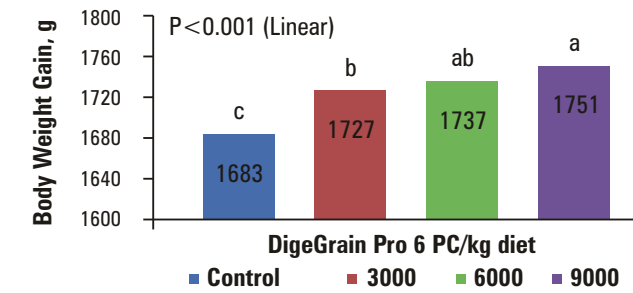
- By improving proteins and amino acids digestibility
- By improving energy utilization
- By complementation of endogenous enzyme activity
- By reducing dietary CP and energy requirements
- By reducing cost of diets
- By reducing nitrogen excretion and environmental pollution



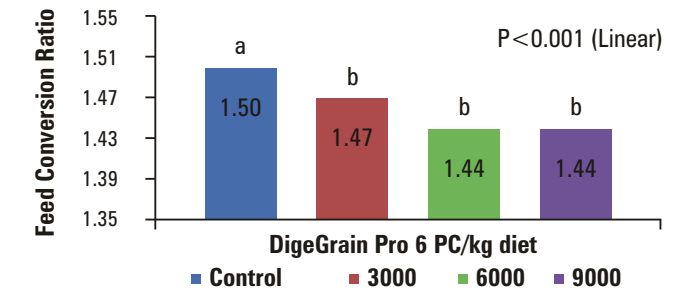
Performance in Broilers

Trial 1: DigeGrain Pro 6 dose study in Broilers (2015: Dankook University, South Korea)

Body Weight Gain (d 7-35)



Feed Conversion Ratio (d 7-35)

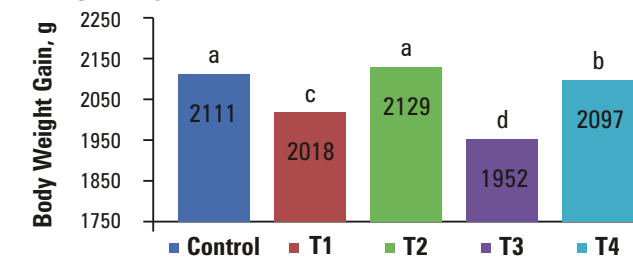


Matrix Value of DigeGrain Pro 6 for Broilers

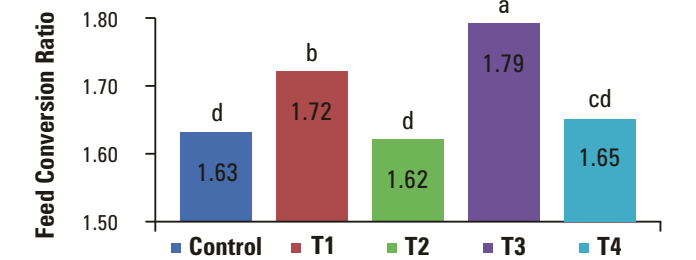
DigeGrain Pro 6, PCU/kg diet	3000	6000	9000
CP Matrix, %	0.44	0.95	1.05
ME Kcal/kg feed	31	47	41
P Matrix, %	0.006	0.008	0.012

Trial 2: DigeGrain Pro 6 matrix study in Broilers (2017: KNU, South Korea)

Body Weight Gain (d 0-35)



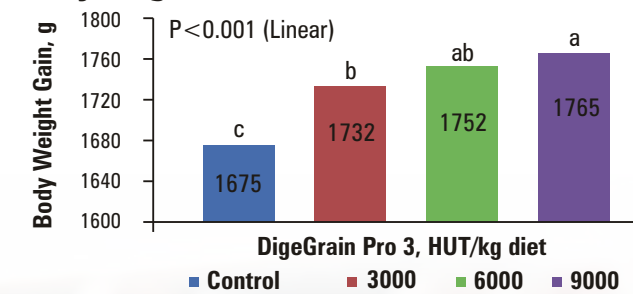
Feed Conversion Ratio (d 0-35)



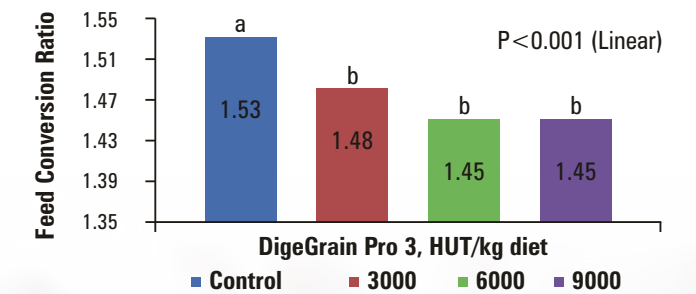
Treatment	DigeGrain Pro 6, HUT/kg diet	CP	Energy
Control	-	Std,	Std
T1	-	-0.75%	-30 Kcal/kg
T2	6000	-0.75%	-30 Kcal/kg
T3	-	-1.00%	-30 Kcal/kg
T4	6000	-1.00%	-30 Kcal/kg

Trial 3: DigeGrain Pro 3 dose study (2015: Dankook University, South Korea)

Body Weight Gain (d 7-35)



Feed Conversion Ratio (d 7-35)



Matrix Value of DigeGrain Pro 3 for Broilers

DigeGrain Pro 3, HUT/kg diet	3000	6000	9000
CP Matrix, %	0.52	0.96	1.12
ME Kcal/kg feed	30	47	55
AV. P	0.01	0.01	0.02
Ca	0.01	0.02	0.02

Recommended Dose:

	Broilers
Through feed, g/ton	250g/MT or 6000 U/kg Feed
Through drinking water, g/1000 litre water	125 g/1000 Lit or 3000 U/Lit
Through water medicators, enzyme (g): water (ml)	1:4000
Post pelleting applications, g/ton pellets	250g/MT or 6000 U/kg

* The economical optimum dose of DigeGrain Pro may very depending upon stage of growth and available feed ingredients