



Danisco Animal Nutrition

**UNIQUE SOLUTIONS TO 'PROFIT, PERFORMANCE AND PLANET'
ANIMAL PRODUCTION CHALLENGES**

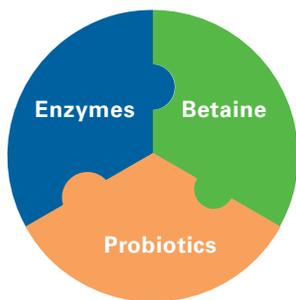
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Unique solutions to 'profit, performance and planet' animal production challenges

About us

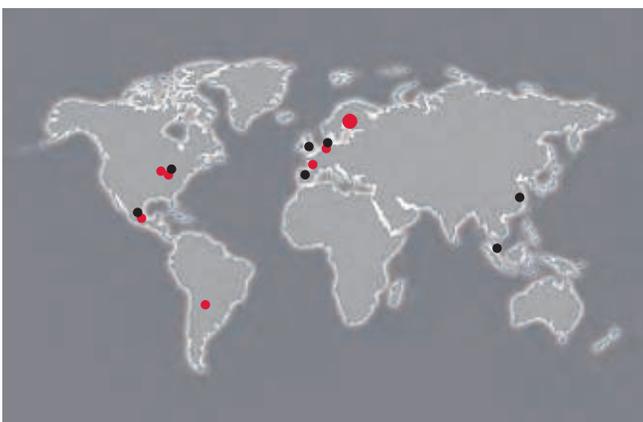
For several decades, we've helped animal producers resolve "profit, performance and planet" challenges and maximize the return on their feed investment through the delivery of optimized feed enzyme, betaine and probiotic technologies. Our uniqueness centres on our ability to deliver value-driven healthy nutrition based on combining these technologies.



These solutions, many of which are industry "firsts", deliver radical cost savings through enhanced animal performance and liveability. They also minimize the impact of nutrition-related environmental and sustainability challenges.

Our ability to shape a profitable future for animal producers is underpinned by the quality and quantity of our worldwide trials, our unparalleled investment in innovative technologies and our collaboration with leading international industry, government and academic partners. We are also part of DuPont (www.dupont.com), which has become one of the most innovative and admired biotechnology companies in the world*.

Danisco Animal Nutrition offices and production centres



RED DOTS - PRODUCTION SITES. BLACK - OFFICES

Global research; local application

Thinking globally but acting locally has never been more important in the animal feed industry. Having joined forces with DuPont, our reach has become truly worldwide with access to innovation and research centres at over 150 locations as well as 19 operations sites, 10 of which manufacture animal nutrition products. Our focus is resolutely on collaborating locally as well as globally so that our technologies deliver the best possible levels of customer value against cultural, governmental and environmental variables.

Profit, performance & planet challenges

The challenge of feeding the world in a sustainable way dates back to the 1960s, when population growth started to escalate, more than doubling by the turn of the century.

Increasing the efficiency by which animals convert feed into protein and shortening the cycle time of production has become increasingly important. Traditional feed costs, already high at around 70% of total production budgets, have escalated in line with a growing demand for meat, fish, egg and dairy products.

We also help animal producers comply with environmental regulations and thereby control waste management costs, ensuring their commercial sustainability.

150,000



The world's population will grow by 150,000 people daily for the next 40 years.

70%



To feed them, we'll need 70% more safe, nutritious food



Feed enzymes

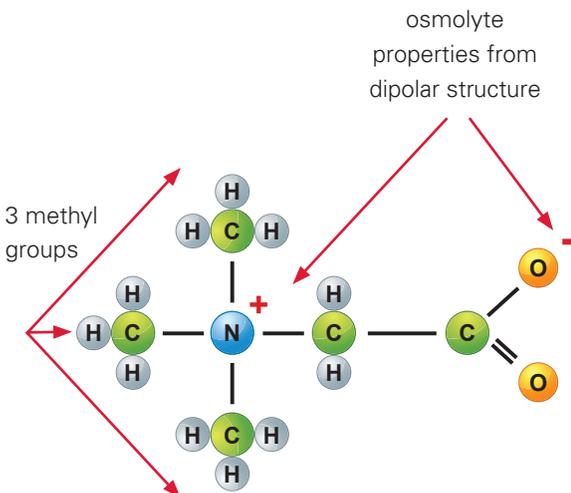
Our position as the industry leader in feed enzymes originated from the successful launch of unique combined carbohydrase and protease products 25 years ago. As research clarifies the negative effects that volatility can have on animal digestion, we have developed unique phytase, carbohydrase and protease enzyme solutions that radically reduce feed and waste management costs, while also supporting gut health and enhanced animal performance.

Enzyme	Substrate
Xylanase	arabinoxylans in plant fibre
Amylase	starch in feed
Protease	proteins in feed
Beta-glucanase	mixed linked beta-glucans in plant fibre
Phytase	phytate in plant material

Betaine

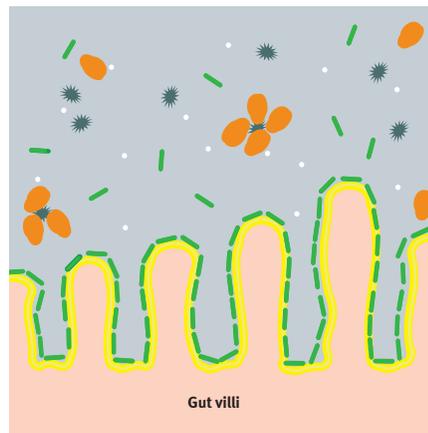
Derived from non-genetically modified sugar beet, our natural betaine increases lean meat yield and reduces production costs through the reduction of choline chloride and methionine in feed formulations. Natural betaine also alleviates the negative effects of osmotic stress and helps maintain gut integrity, which in turn positively impacts animal performance.

Betafin® natural betaine structure



Probiotics

Our probiotic products build on the sound foundations of our enzyme-based solutions, offering healthy nutrition benefits. We have drawn on decades of human and animal microbial experience and research within the broader DuPont group to develop unique, multi-strain probiotic solutions that decrease mortality and reduce antibiotic dependence throughout the production cycle.



Lactobacilli — Non-beneficial bacteria — Nutrients
Mucus — Probiotic

Probiotics are live organisms which when administered in adequate amounts confer a health benefit on the host (FAO/WHO, 2002).

Essential oils

Our essential oil compounds are optimized blends of thymol and cinnamaldehyde. They stimulate feed intake, improve bodyweight gain and support gut health by inhibiting a number of non-beneficial bacteria.

Combined solutions

Our unique ability to combine enzyme, probiotic and betaine feed additive solutions enables us to deliver new levels of profitability to customers, by optimizing feed conversion and supporting healthy performance.

Value-added services

We offer a range of services designed to help our customers gain even more value from use of our products, including:

- FASTKit™ assay – this ensures that the optimum level of enzyme product has been applied to achieve maximum economic benefits, detecting its presence in less than an hour.
- Liquid systems and engineering support.
- Optimize Feed™ Service – an online tool that uses accurate and well-researched matrix values to calculate the optimum dose of enzyme needed to achieve the strongest performance benefits and cost savings. We also offer software tools that deliver similar customized diet and species based recommendations for carbohydrase enzyme application.

Source	Total	Dig. Poultry	Dig. Swine	Avail.	Phytate	NPP	BioAv
<input checked="" type="radio"/> DAN	18.20	14.20	12.74	17.29	N/A	18.20	N/A
<input type="radio"/> NRC 1994	18.70	N/A	N/A	N/A	N/A	18.70	N/A

Ingredient	Source	Inclusion %	Available P %	Phytate P %	Non Phytate P %	Total P %	
Corn	DAN	55	0.04	0.10	0.05	0.15	REMOVE
Corn DDGS	DAN	5	0.02	0.10	0.05	0.15	REMOVE
DCP	DAN	2	0.35	N/A	0.36	0.36	REMOVE
SBM (44% CP)	DAN	29	0.06	0.12	0.06	0.18	REMOVE
Fill	DAN	9	N/A	N/A	N/A	N/A	REMOVE
Total		100.00	0.48	0.23	0.51	0.74	

Our people

Great products and services are nothing without great people. Our innovative range of solutions and services is masterminded by trained nutritionists and animal health experts who really understand the challenges facing animal producers. DuPont has extensive worldwide R&D capabilities and partnerships with leading research and academic bodies to ensure that we not only deliver the best solutions today but that we continue to innovate, add value for our customers and help them shape the future of feed.

*DuPont has recently been voted one of the most admired companies in the world by FORTUNE Magazine and one of the most innovative by Thomson Reuters.

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To find your nearest local office or distributor visit www.animalnutrition.dupont.com

Danisco Animal Nutrition (Head office)
PO Box 777, Marlborough, Wilts, SN8 1XN, UK
Tel +44 (0) 1672 517777
info.animalnutrition@dupont.com
www.animalnutrition.dupont.com

