Why Ronozyme ProAct can help?

Producing more meat without damaging the environment
A challenge for the broiler industry

• Demand for poultry meat is increasing
  » population increase
  » improved economic prosperity

• Consumer and regulatory pressure to have a more environmentally friendly animal production is increasing

• Utilizing dietary protein sources more efficiently can help produce more meat whilst meeting the environmental challenges
Strategies to better utilize dietary protein

- Phase feeding
- Ideal protein ratios
- Low protein diets
- Synthetic amino acids
- Protease enzymes
RONOZYME® ProAct improves amino acid digestibility of feed ingredients allowing formulation of lower protein diets without loss of performance.
Agriculture converts inert nitrogen into a range of reactive compounds damaging to the environment.

Without RONOYME® ProAct:
- N input 22.5% CP
- Feed

With RONOYME® ProAct:
- N input

N content of manure:
- N output
- Manure
- N output

[DSM Logo: Bright Science, Brighter Living]
Lower levels of nitrogen in poultry manure reduce the production of reactive nitrogen compounds damaging to the environment.
Reducing release of reactive nitrogen compounds can help protect the environment and meet regulatory requirements.

**Europe**

- 6.357 billion broilers ~ 15.9 mil ton broilers

(FAOSTAT 2010)

**NH3 emission reduction**

- Per ton broilers: -2.19 kg NH3
- Total potential: -35000 ton NH3

**Reduced N-excretion**

- Per ton broilers: -3.64 kg N
- Total potential: -58000 t N

which means:

- **205,000ha** less land is needed for manure application
- **730M** more broilers can be reared without need for extra land

Assumes max. application of 170kg N/ha
RONOZYME® ProAct - meeting the environmental challenge

• RONOZYME® ProAct can improve protein digestibility in a wide range of feed ingredients allowing lower protein broiler diets to be fed without loss in performance

• Lower protein diets = less nitrogen in litter and reduced release of reactive nitrogen compounds to the environment

• Fewer reactive nitrogen compounds in the environment = less eutrophication and acidification

• Lower protein diets formulated with RONOZYME® ProAct can help reduce environmental impact of broiler production whilst maintaining animal performance
BRIGHT SCIENCE. BRIGHTER LIVING™