

# Protein Utilization

Efficient protein utilization reduces feed costs, incidence of footpad dermatitis and environmental impact



## The effect of protein levels

- Reducing feed costs with an alternative protein source may help your bottom line but the effects on flock performance and the environment may negatively impact your top line.
- Proteases can be added to a diet to speed up the breakdown of proteins, but proteases vary in their stability during feed processing and in their efficacy to digest protein.
- Excess protein in the hindgut could increase the bird's susceptibility to enteric challenges.
- Not meeting the vitamin requirements affects the bird metabolism resulting in suboptimal protein utilization.
- Mycotoxins in the feed compromise protein digestibility in the bird.
- Undigested protein from the gut goes into the environment, increasing welfare concerns and the environmental impact.

## Protein utilization portfolio offering

We can optimize feed costs while reducing environmental impact by decreasing the amount of undigested protein. A **second generation, advanced protease created specifically for feed** with optimal pH and temperature stability and faster proteolytic ability increases protein digestibility. A novel **precision- biotic** redirects protein away from opportunistic pathogens and towards productive microbial protein metabolism. By providing **optimum vitamins** that

have higher bioavailability and by **deactivating mycotoxins** in the feed, efficient utilization of protein can be achieved. Using **blood biomarker modeling** to evaluate the dietary amino acid balance of the birds supports more consistent nutrition and health of your flock. By monitoring ammonia emissions, the **environmental impact** can be calculated. DSM provides comprehensive solutions to improve dietary protein utilization, ensuring a return on your investment.

### RONOZYME® ProAct

RONOZYME® ProAct is DSM best-in-class feed protease which increases protein digestion across a range of feed ingredients, thereby reducing feed costs.

### ProAct 360™

DSM is the first and only supplier to launch its second generation feed protease, ProAct 360™, in order to reduce production costs, while making animal production even more sustainable.

### Symphio™

First of its kind precision-biotic, which harnesses the power of the microbiome to deliver increased protein utilization.

### OVN Optimum Vitamin Nutrition®

Provides birds a fast track to protein metabolism for improved production and better performance.

### Verax™

Harness the power of data to get a deeper understanding of the overall health, productivity and welfare of your birds.

### Sustell™

Sustell™ is an intelligent sustainability service that combines the most advanced environmental footprinting calculation tool with expert sustainability, animal production and nutritional knowledge.

### Mycofix®

Deactivates mycotoxins to help support efficient protein utilization.