



Syncra[®] AVI

A WINNING COMBINATION THAT FULLY
UNLOCKS FEED POTENTIAL

Syncra® AVI

Unique enzyme and multi-strain probiotic solution delivers new levels of cost and healthy performance benefits

- A 14% net improvement in relative cost per lb liveweight gain* for *Clostridium perfringens* challenged birds
- A three-to-one return on investment, even for low challenge birds, resulting from significantly improved digestibility and gut health support
- A combined mode of action that offers maximum efficacy
- Reduced logistics costs and ease of use within all production environments

*according to feed costs as of November 2013

The challenge

With raw material feed costs taking up ~70% of production budgets, achieving optimum efficiency from feed has never been so important. However, many variable factors have to be taken into account when trying to unlock the full energy and protein building potential of feed including:

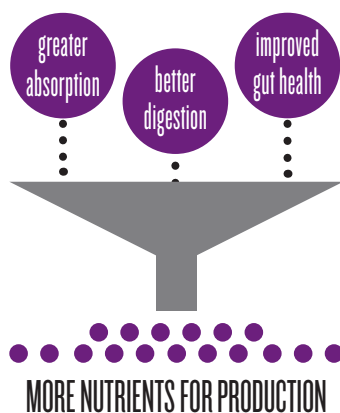
- differing feed substrate levels impacting digestibility and gut health ⁽¹⁾
- changes in diet and environment during the production cycle
- animal age and genetics
- the relatively high cost of routine use of antibiotics and impending legislation around their use

Animal producers need to find new, more cost-effective and reliable ways to address this variability, improving performance and profitability without compromising animal health

Our winning enzyme technologies

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 diet composition can have on digestion, we have developed unique enzyme solutions that significantly reduce production costs by maximizing digestibility and performance. These solutions also minimize anti-nutritional effects in the diet which, in turn, supports gut health and enhanced animal performance. ^(2, 3)



Our winning probiotic technologies

We have drawn on decades of microbial experience and research with the many probiotic strains known to support beneficial populations in the bird's gut ^(4, 5, 6) to develop the best possible multi-strain *Bacillus* combination to:

- support the optimum development of the gut microbiota in the crucial first few days post hatch and through early development
- lower the occurrence of microorganisms that may have a negative impact on animal performance and/or that might spread within the flock throughout the production cycle
- provide a stable gut environment for optimal enzyme activity

THE WINNING COMBINATION

We have combined our enzymes and probiotics expertise to create Syncra® AVI, an optimized enzyme/probiotic solution that radically improves bird performance and supports gut health.



The evidence

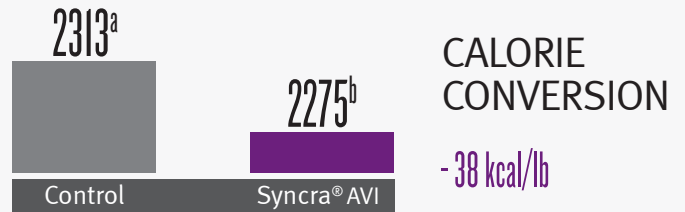
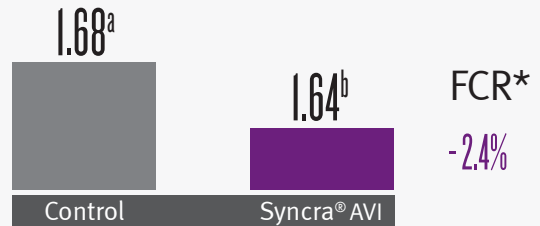
Bringing together powerful xylanase, amylase and protease enzymes with a unique combination of *Bacillus* strains, our new Syncra® AVI solution improves performance from diets and reduces overall production costs, while also supporting gut health.

Multiple trials at independent research organizations have proved that:

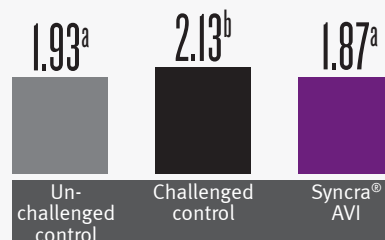
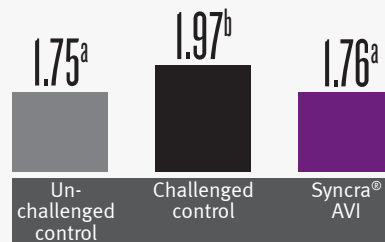
- Xylanase breaks down the non starch polysaccharides (NSPs) such as arabinoxylans in the fiber fraction of the feed, releasing previously trapped nutrients ^(10, 11)
- Amylase increases the hydrolysis of starch ^(12, 13) improving its digestibility and complements the secretion of endogenous amylases
- Protease increases protein digestibility by hydrolysis of storage and structural proteins, and disrupts interactions of proteins with starch and fiber in the diet. Additionally, it targets other anti-nutritional factors in the diet e.g. residual trypsin inhibitors and lectins in soybean meal and some other vegetable proteins ^(14, 15, 16) improving nutrient digestibility
- *Bacillus* probiotics are known to establish and maintain a beneficial microbial population in the gut of the bird. This makes the gut environment less conducive to colonization by microorganisms that may have a negative impact on animal performance ^(6, 17, 18 19)

This, in turn, improves performance, including bodyweight gain, feed intake, feed utilization and carcass quality. ^(7, 8, 9)

Low challenge model [†]



High challenge model ^{††}



[†] Meta-analysis of 6 trials, 1-42 days

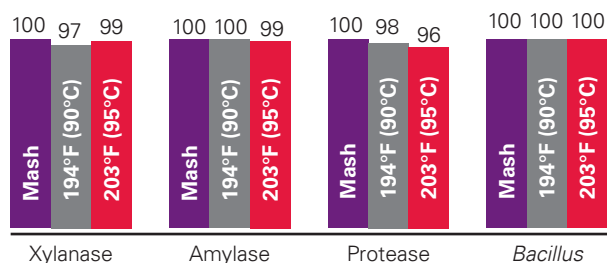
^{††} 2 trials: *Clostridium perfringens* challenge

^{ab} Values without a common superscript are significantly different (P<0.05)

* FCR corrected 3 points for every (0.22 lb) difference in bodyweight versus control
Syncra® AVI is a *Bacillus subtilis* 3 strain probiotic and xylanase, amylase, protease combination

Product form and application

Syncra® AVI is a dry, granular product supplied at the optimum enzyme to probiotic ratio to achieve superior performance, digestibility and healthy bird benefits. It is highly stable, being suitable for diets pelleted up to 203°F (95°C) and is free flowing/dust free making it safe and convenient to handle.



- Product name: Syncra® AVI 101
- Pack size: 55 lb (25 kg) foil lined paper bag
- Inclusion rate: 0.4 lb/ton (200 g/tonne) for broilers
- Guaranteed levels: Xylanase 10,000 U/g, Amylase 1,000 U/g, Protease 20,000 U/g, *Bacillus* 3.75 x 10⁸ cfu/g
- Storage and shipping conditions: room temperature and dry
- Shelf life: 12 months when stored in original packaging at 77°F (25°C)
- Convenience in application - reduces logistic costs and takes up less micro-bin space.

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