



Improve health and performance by using a proprietary combination of functional carbohydrates, select polyphenols, and live multi-Bacillus strains.



## PayBac™ NG3

Application	Calves (starter & grower feeds)
Application Rate	5 g per head per day
Min. Probiotic Concentration	4.0x10 <sup>8</sup> total <i>Bacillus</i> cfu per gram
Min. Probiotic Delivered	2 billion cfu/head/day
Key Ingredients	Enzyme-hydrolyzed copra meal metabolites, <i>Bacillus subtilis</i> , <i>Bacillus amyloliquefaciens</i> , and <i>Bacillus coagulans</i> , and <i>Vitis vinifera</i> seed and skin extracts
Q-Biotic® <i>B. Subtilis</i> Strain	Spore-forming, gram-positive, phenotypic, and genetic consistency, high activity and stability, facultative anaerobe, oxygen scavenger, antimicrobial peptide producer
Q-Biotic® <i>B. Coagulans</i> Strain	Characteristics of both <i>Bacillus</i> and <i>Lactobacillus</i> probiotic. Spore-forming, gram-positive, phenotypic and genetic consistency, high activity and stability, facultative anaerobe, lactic acid producer, antimicrobial peptide producer
Q-Biotic® <i>B. Amyloliquefaciens</i> Strain	Spore-forming, gram-positive, phenotypic, and genetic consistency, high activity and stability, facultative anaerobe, oxygen scavenger, antimicrobial peptide producer



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### Why combination of the select ingredients

High post-weaning stress on calves, and high potential for infections and diarrhea require comprehensive intervention. A combination of a multi- and select- component feed additive provides more support through its complementary and synergistic modes of actions to mitigate challenges impacting gut health, immune system response, digestion and absorption, and efficiency of converting nutrients to growth.

### Why combination of select Q-Biotic® *Bacillus* strains

The combination of select strains of Q-Biotic® *B. subtilis*, *B. amyloliquefaciens* and *B. coagulans* delivers a broader and more effective coverage of probiotic activities to boost health and performance, compared to each of the probiotics alone. The combination's complementary and synergistic modes of actions work to increase beneficial intestinal bacteria through competitive exclusion of pathogens, help digestion and absorption by improving gut health and enzyme production, reduce infection and disease by directly inhibiting and blocking epithelial colonization by pathogenic bacteria, such as *Clostridia* and *E. coli*, decrease inflammation and oxidative stress, and enhance immune system response. The three Q-Biotic® *Bacillus* strains are capable of surviving feed processing and gut conditions, and effectively exercise their probiotic function where needed within the gut.

### Why polyphenols

Post weaning from milk replacers, transitioning to dry feed, and developing at a rapid growth rate can be high oxidative stress periods of a calf's life. Characterized and standardized *Vitis vinifera* polyphenols promote diversification of antioxidants' profile and defense against oxidative stress and improve immune function and response during high and growth-limiting demand and stress periods.

CONTACT



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