



**natural
biologics®**
solutions by nature

PROGLENA® FACTS

- Highly refined, 1,3 linked beta glucan.
- More concentrated and effective than any source of yeast beta glucan.
- Supports innate immune responses.
- Helps animals mount longer-term antibody protection.

▶ Product Description:

Proglena is a 100% natural complex carbohydrate derived from algae. The carbohydrate content consists largely of 1,3 linked beta glucan. Because *Euglena gracilis* algae make and store 1,3 linked beta glucan as an internal energy supply, it is highly concentrated and easier to purify, meaning that it is effective at much lower concentrations.

▶ Modes of Action:

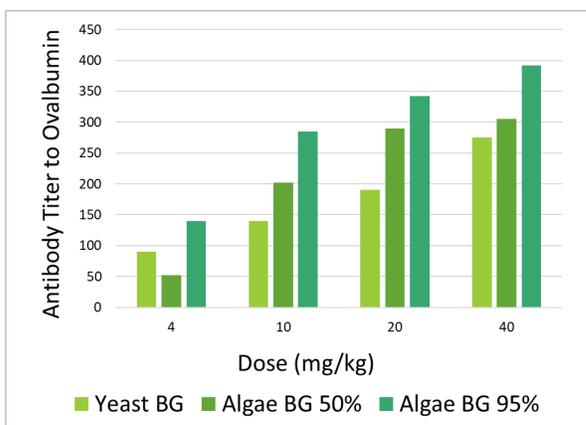
Beta glucan performs several different functions in the animal. The primary function is to support a robust immune system. Due to the approximately 92% abundance of linear 1,3 linked beta glucan, Proglena offers a higher level of adaptive immune modulation than the branched 1,3-1,6 beta glucan found in yeast cell walls.

Through binding with receptors of dendritic cells in the gut, Proglena can prime the innate immune system of the gut to be on alert for enteric pathogens. This leads to rapid detection and removal by phagocytosis and also targeted cell lysis by natural killer cells.

Proglena is also effective at binding with the Dectin-1 and toll-like receptors that elicit the release of specific cytokines leading to T and B cell maturation and higher levels of antibody production (Figure 1). Whether the antibodies produced are in response to a vaccination, or a disease exposure, the end result is improved protection from health challenges.

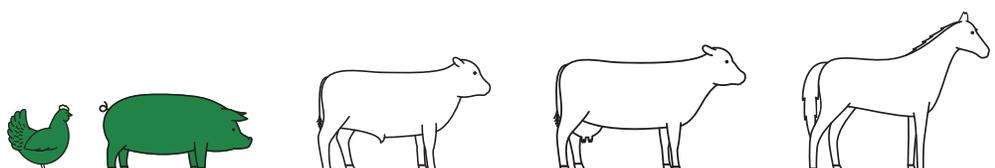
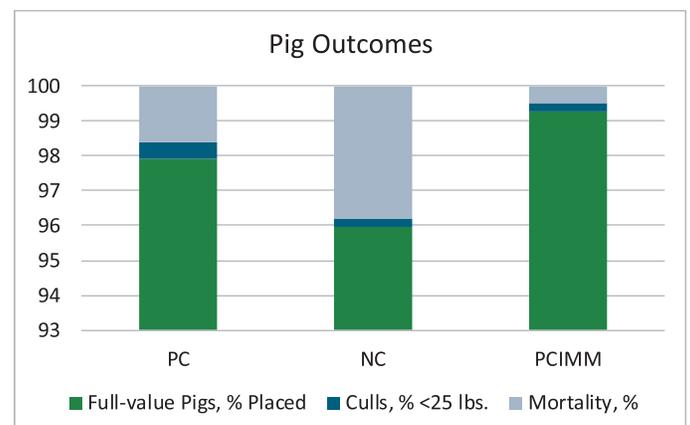
Together, these effects help animals in many ways including reducing mortality and culls in nursery pigs and improving the yield of full-value pigs. (Figure 2).

Figure 1



Data from Algal Scientific, used with permission.

Figure 2



To learn more, visit naturalbiologics.com or 844.NAT.BIOL (628.2465)



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Product Description: Proglena is a 100% natural complex carbohydrate derived from algae. The carbohydrate content consists largely of 1,3 linked beta glucan, which is highly effective at improving immune responses.

► **Ingredients:** Plant protein product

► **Purpose:**

Proglena is to be used as a supplement to complete diets for all phases of poultry and swine diets.

► **Suggested Feeding Directions:**

Follow the directions provided by your nutritional consultant, or:

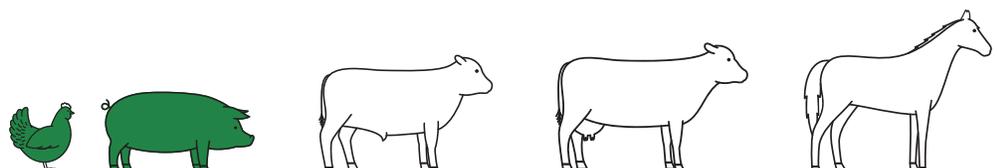
Swine:	
All phases	125-500 g/MT
Phase dependent	
Poultry:	
All phases	125-500 g/MT
Phase dependent	



Guaranteed Analysis:	
Crude protein (Minimum)	20%
Total Carbohydrates (Minimum)	50%
Moisture (Maximum)	10%

Microbiological Analysis:	
Total Plate Count (CFU/g)	<15,000
Total Coliforms (MPN/g)	<10
Fecal Coliforms (MPN/g)	Absent
Yeast (CFU/g)	<100
Mold (CFU/g)	<100
Salmonella (CFU/25g)	Absent
E. coli (CFU/25g)	Absent

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2011-023



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