



is a leader in providing food ingredient products and solutions.

Soy Beginnings® is Thumb Oilseed's innovative brand of extruder processed -- expeller pressed low-fat soy protein products. These low-fat soy protein products are naturally processed without using solvents. Soy Beginnings® Grits 8-18, Grits 18+ and Flour are very bland in flavor and possess high levels of soy protein and dietary fiber and the natural level of isoflavones. These soy protein ingredients can easily be incorporated into your present and/or new food products. Of course, they can also be consumed directly by incorporating them into homemade breads, cookies, muffins, meat patties, etc., or mixing the Grits 8-18 with your favorite cereal or granola, yogurt, or ice cream. Thumb Oilseed Producers' Cooperative (TOPC) is a leader in providing this exciting new generation of innovative soy protein products to an expanding health oriented market.

## TYPES OF PRODUCTS

NON-GMO OR ORGANIC	PACKAGING
Soy Beginnings® Grits 8-18	40 lb bags, 1,500 lb Totes
Soy Beginnings® Grits 18+	40 lb bags, 1,500 lb Totes
Soy Beginnings® Flour	40 lb bags, 1,500 lb Totes

## SOY BEGINNINGS® TYPICAL ANALYSIS

Protein	> 48%
Fat	< 8%
Moisture	< 8%
Ash	< 6%
Dietary Fiber	~ 21%

## SOY PROTEIN QUALITY

Soy protein is a complete protein and the only plant protein that is equivalent to animal protein. The USDA evaluates protein quality using the Protein Digestibility Corrected Amino Acids Score (PDCAAS). PDCAAS measures the amino acid pattern of proteins and factors in digestibility. Soy protein has a PDCAAS score of 1.0, equivalent to animal proteins such as milk and eggs. The PDCAAS system of determining protein quality was initiated as an international standard by the Food

and Agriculture Organization/World Health Organization (FAO/WHO) of the United Nations.

## APPLICATIONS

There are many reasons to incorporate these unique low-fat soy protein ingredients into your food products. They can be added as a convenient source of valuable soy protein, as a way to reduce carbohydrates and increase dietary fiber and as a way of meeting the US Food and Drug Administration's soy protein label requirements of containing 6.25 grams of soy protein per serving. Of course, the grits can also be added to obtain a nice texture or crunch to the finished food product.

## SOY GRITS 8-18 AND SOY GRITS 18+

Soy Beginnings® low-fat Grits 8-18 are sized to pass through a US #8 screen and to be held on a US #18 screen. The fines that pass through the US #18 screen are labeled as Grits 18+. These grit products are manufactured by passing the expeller cake through a hammer mill and then through a sizer. The grit products have many applications in food manufacturer. Soy Beginnings® Grits 8-18 and Grits 18+ are available in 40 lb. bags or 1,500 lb. totes.

## SOY FLOUR

Soy Beginnings® low-fat Flour is produced by grinding the stream from the extruder/expeller system. This soy flour is ground to pass through a US #100 screen.

Flour serves as a valuable source of high-quality protein, is gluten-free and an excellent source of dietary fiber.

Cooking with soy products is relatively easy. Based on TOPC's American Institute of Baking tests, Soy Beginnings® Flour can be used to replace 10% to 20% of the wheat flour in recipes for muffins, cakes, cookies, pancakes, quick breads and doughnuts. Products made with low-fat soy flour tend to be moister and slightly denser than similar products without soy flour. In fried foods like doughnuts, the soy flour reduces the amount of frying fat that is absorbed. Baked goods tend to brown more quickly so it may be necessary to shorten the baking time or lower the temperature slightly. Soy Beginnings® Flour is available in 40 lb. bags or 1,500 lb. totes.