



DuPont™ Renewably Sourced™ Materials

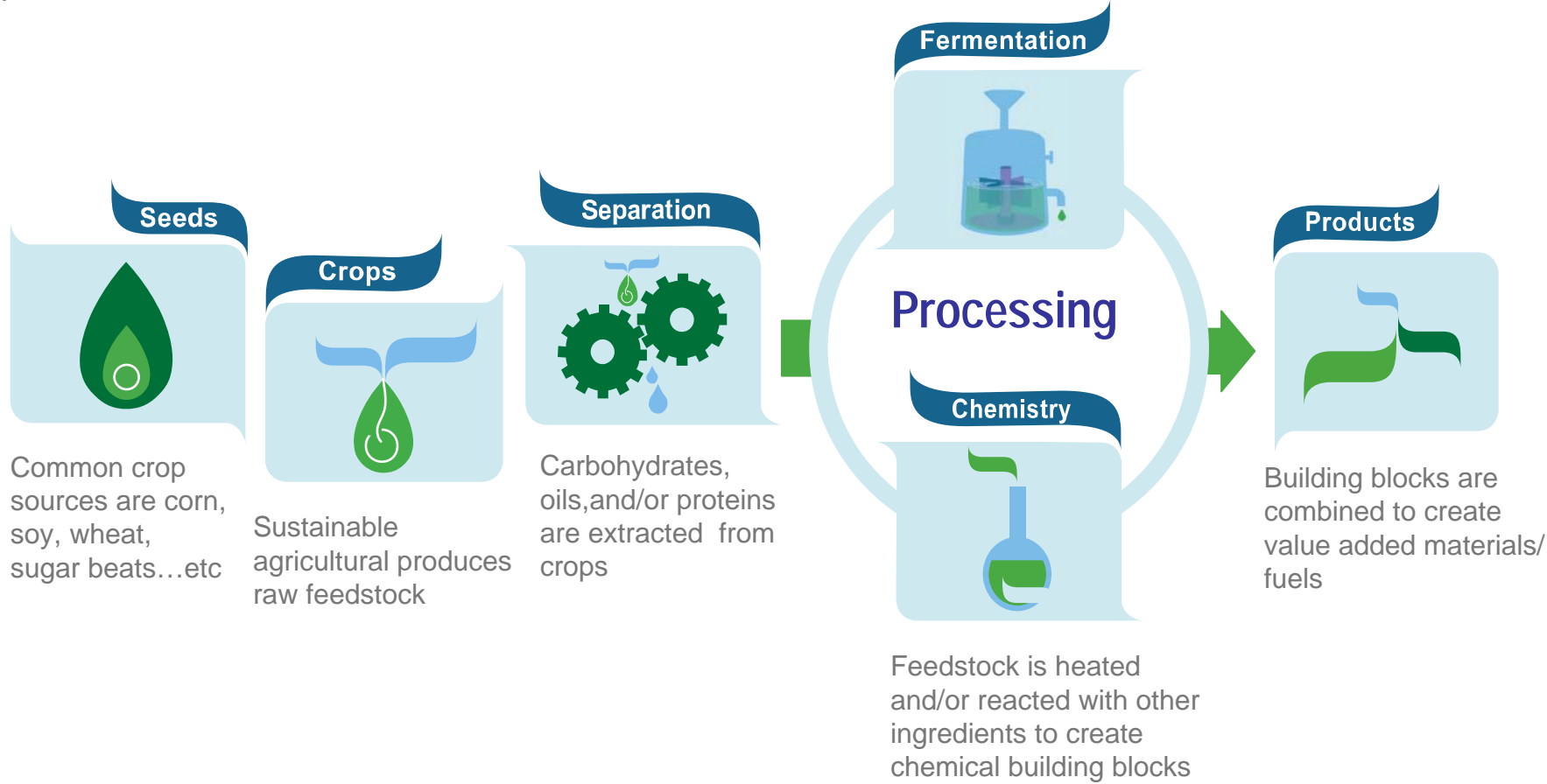


The miracles of science™

The Renewably Sourced Process

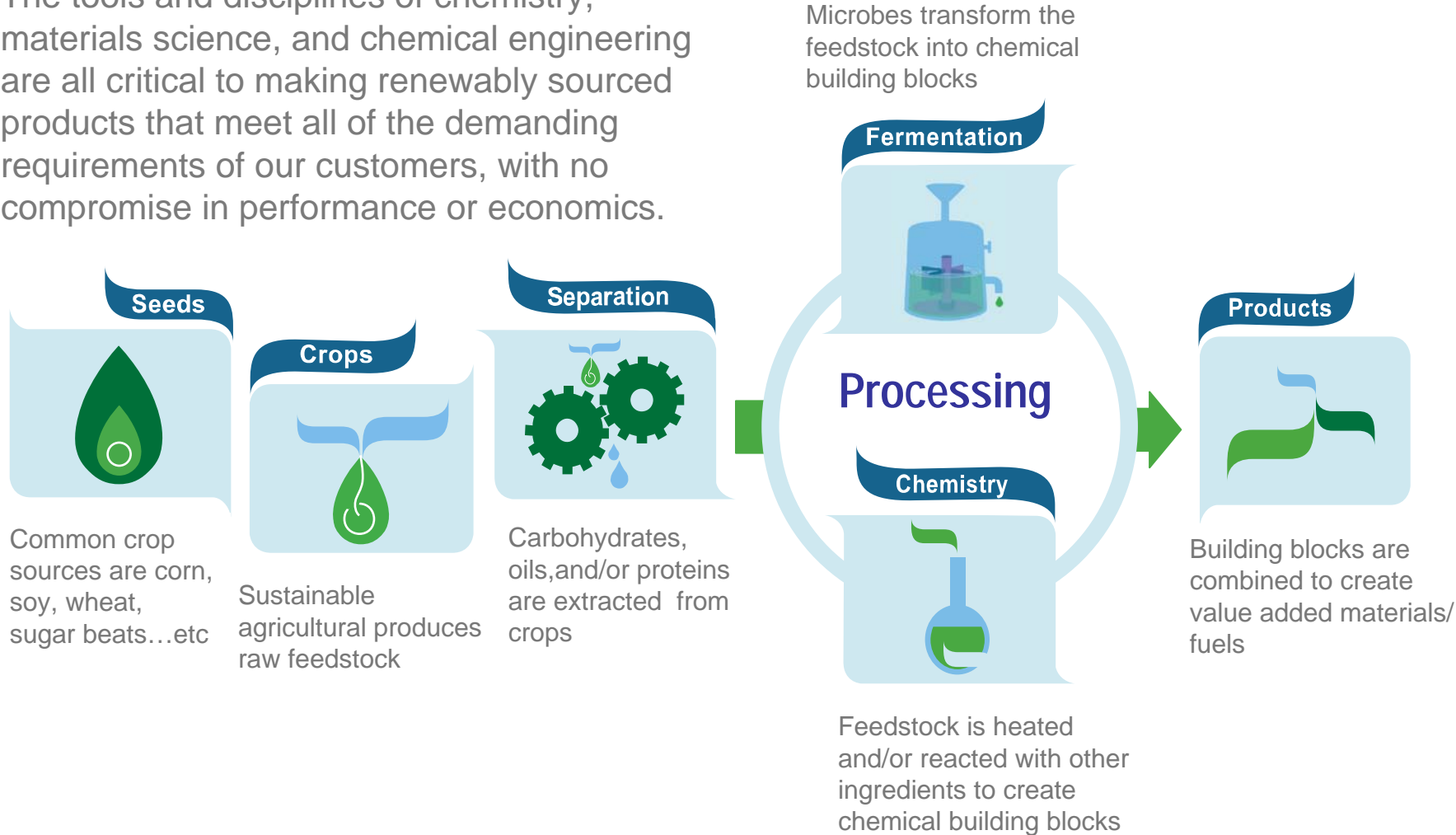
DuPont is bringing nature and science together to convert agricultural crop to high performance materials and fuels.

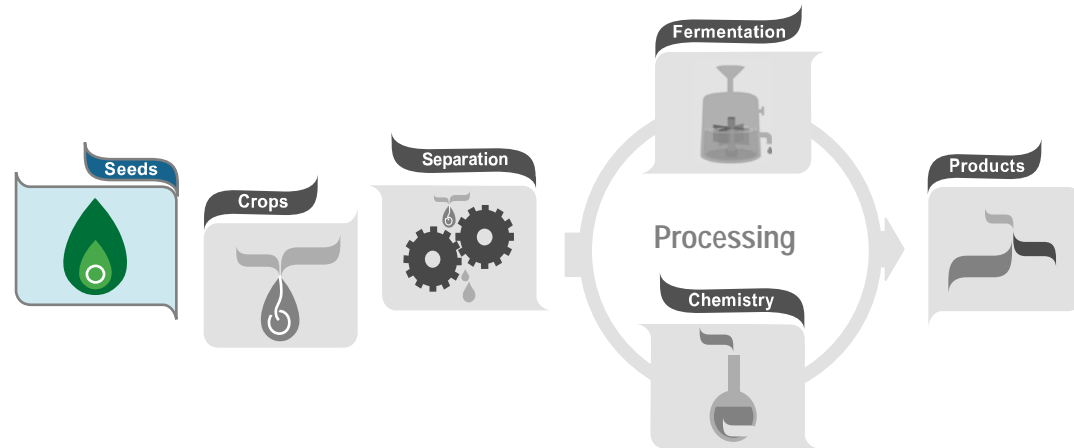
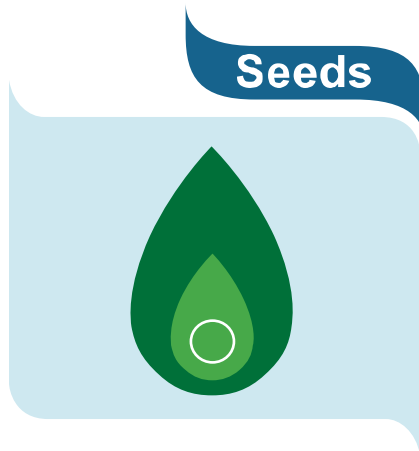
Microbes transform the feedstock into chemical building blocks



The Renewably Sourced Process

The tools and disciplines of chemistry, materials science, and chemical engineering are all critical to making renewably sourced products that meet all of the demanding requirements of our customers, with no compromise in performance or economics.



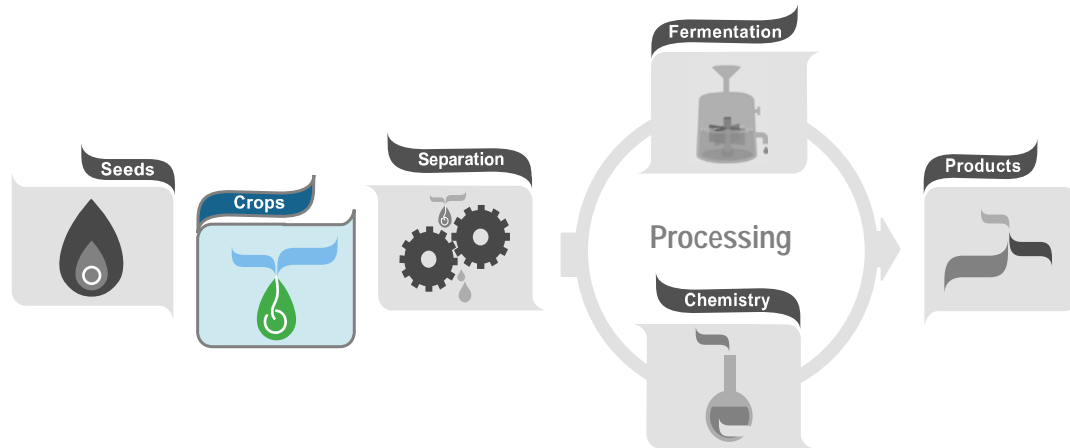
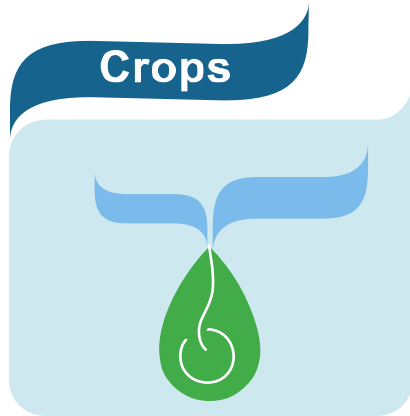


The Seed

Pioneer, a wholly owned subsidiary of DuPont, is the world's leading developer and supplier of advanced plant genetics to farmers worldwide

Pioneer has developed high quality hybrid seeds that maximize desired traits, increase yields, and require less chemicals and water to successfully grow

Examples of common crop sources are corn, soy, wheat, sugar beets...etc



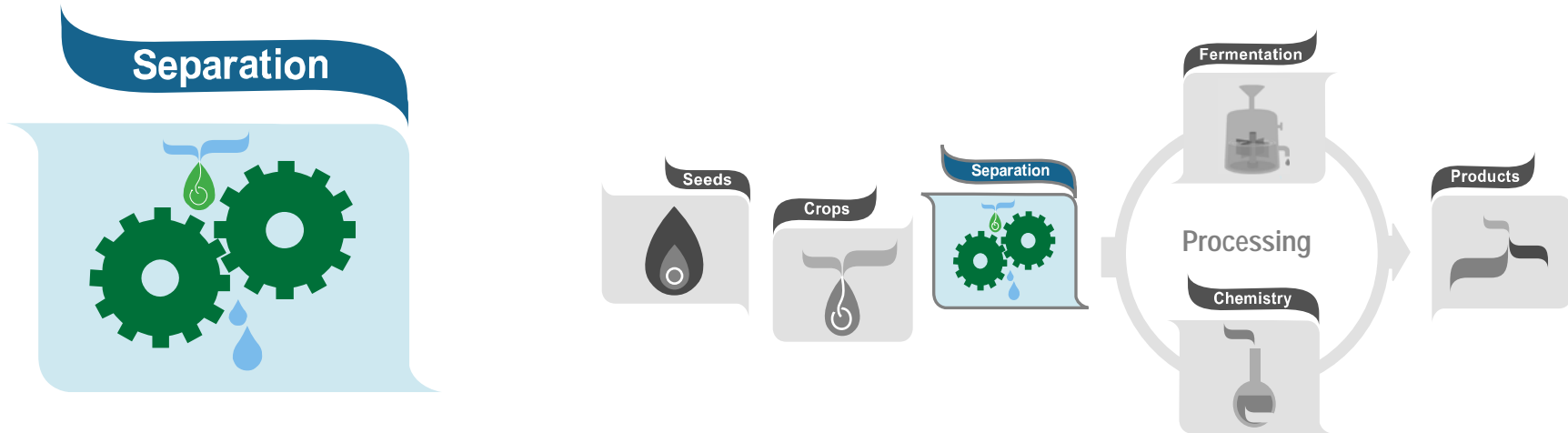
Crops

DuPont utilizes common crops such as corn and soybeans as sustainable agricultural feedstock for its renewably sourced materials processes

Future feedstock could come from:

- Any farm grown crop
- Other non-food agricultural sources such as switchgrass
- Agricultural byproducts like straw and corn stover

DuPont helps growers nurture crops by providing advanced crop protection solutions for weed, pest and disease control, as well as facilitating crop health

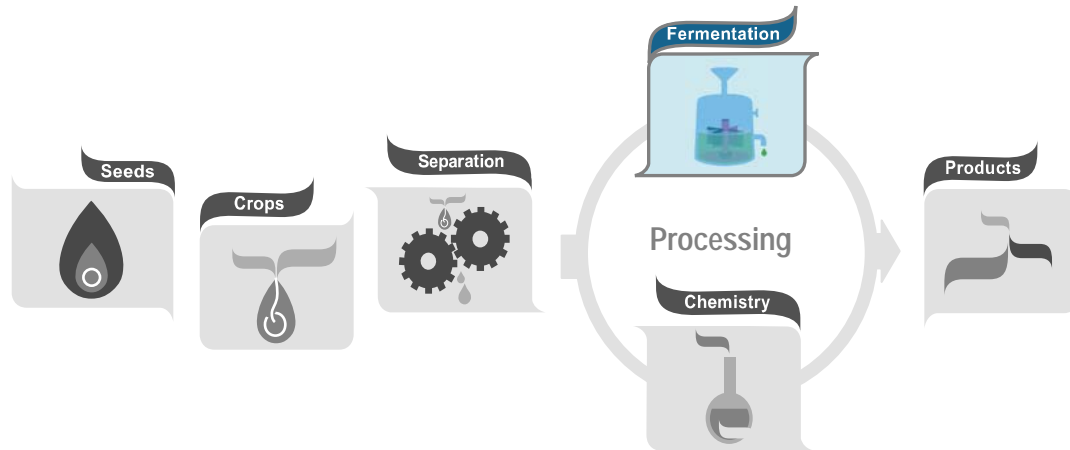


Processing - Separating

The crop goes through a milling and separation process to extract the feedstock

Carbohydrates (sugars), oils, and proteins are the most common agricultural feedstock

Fermentation

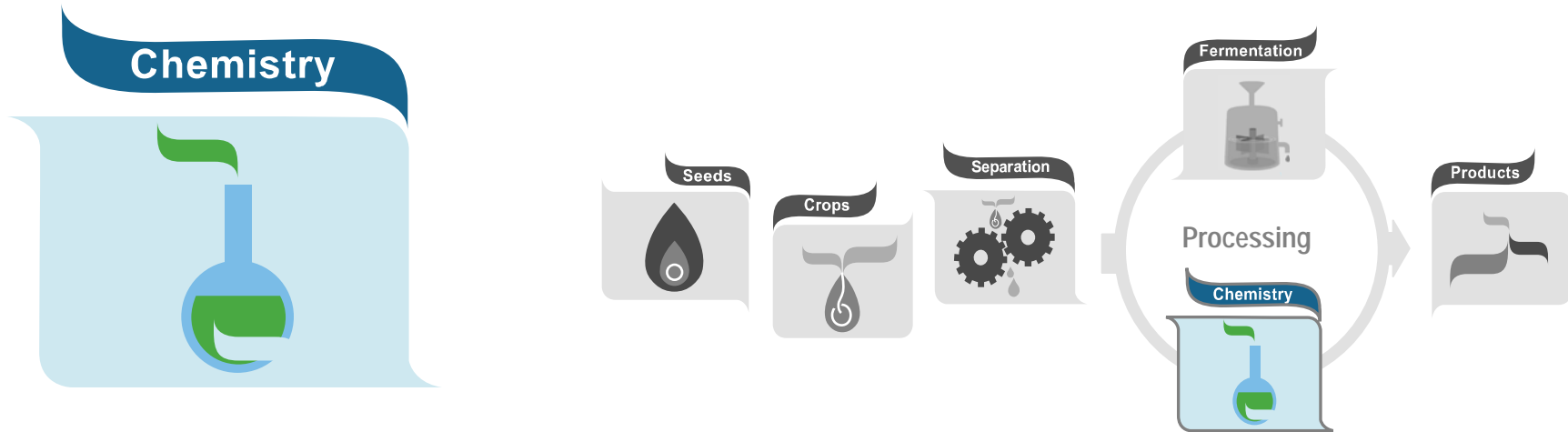


Processing – Fermentation

Fermentation uses microbes that transform the feedstock to form building blocks, similar to the centuries old technology that uses yeast to transform sugar into alcohol

Industrial Biotechnology uses genetic engineering to enhance the capabilities of natural microbes to metabolize feedstock

DuPont has been investing in industrial biotechnology for more than fifteen years. This technology is critical to make renewably sourced materials commercially viable and an environmentally smart process

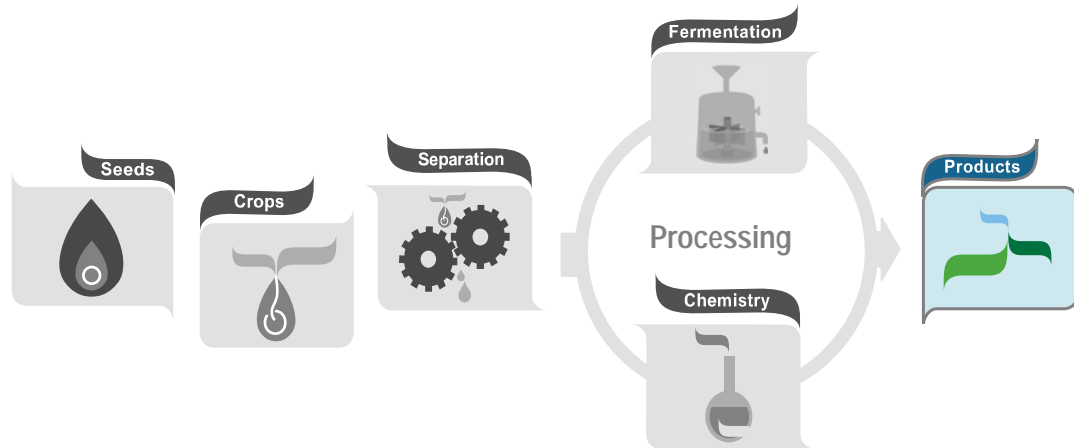
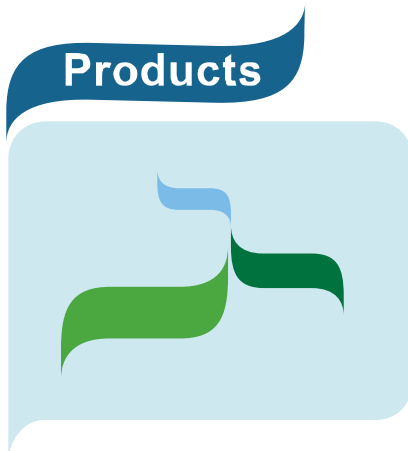


Processing – Chemistry

To create the desired building blocks, agriculturally derived feedstock are heated and/or reacted with other chemicals using traditional thermo-chemical processes

In many cases, fermentation processes are combined with thermo-chemical processes to create a useful building block

DuPont has over 100 years of experience developing and applying a wide variety of chemistry and materials science to make high performance products



Products

Some building block chemicals can be used directly after purification steps in certain applications

In most cases further transformations are required to turn the building blocks into value-added materials

DuPont has over 100 years experience in developing, manufacturing, and marketing a wide variety of innovative and value-added products



An Icon of Added Value

Placement of the DuPont Renewably Sourced Materials icon on product literature and packaging informs DuPont customers and others that a product contains a minimum of 20% renewable content by weight; a number of the products that DuPont has introduced are 100% renewably sourced. The renewable content is verified by using carbon dating, a well-accepted analytical technique used by the ASTM and the standard used by the U.S. Department of Agriculture (USDA) for determining the renewable content of products for its preferential procurement program.

