OUR SERVICE

Strains Choice & Fomula Design

Instrument Control

Instrument Data Sheet

Control Scheme or Control Plan

On-Site Project Services

Installation Guidance Commissioning

Technical Support

Quality Control and **Operating Procedures** (QC & OP)

Analysis and Testing Procedures Analysis and Testing Projects

Material Balance

Process Description

Diagram (PID)

Process Technology

Piping and Instrumentation

Process Flow Diagram (PFD)

Equipment Description Equipment Data Sheet

Equipment Selection & Production

Equipment Manufacturing

(1) COFCO ENGINEERING

Integrated turnkey solutions for agriculture, grain, food, and cold chain industries.



GRAIN-BASED BIOCHEMICAL SOLUTIONS



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GRAIN-BASED BIOCHEMICAL SOLUTIONS

Industry-Leading: Our operations are powered by cutting-edge strains, innovative processes, and advanced production technologies, solidifying our position at the forefront of the industry and ensuring the highest quality and innovation in our products.

Quality and Variety in Raw Materials: Our commitment to quality is evident in our use of a diverse selection of high-quality raw materials, including corn, wheat, rice, soybeans, peas, and potatoes.

Extensive Product Portfolio: Our portfolio is not only comprehensive but also diverse, encompassing a wide range of products, including sugar, modified starch, amino acids, organic acids, alcohol, biodiesel, and vegetable protein.

Global Reach: With a proven track record, we have completed numerous turnkey projects in design and electromechanical equipment across diverse regions, including Eastern Europe, the Middle East, Southeast Asia, and the Commonwealth of Independent States (CIS).



Soy Protein Pea Protein Wheat Protein



Phytosterols



Fructose Syrup, Glucose

Maltose Syrup, Maltodextrin

Erythritol, Allulose



Lactic Acid Citric Acid Malic Acid



Glutamic Acid, Lysine Threonine, Tryptophan Lsoleucine, Valine



Starch **Modified Starch**



Xanthan Gum

GRAIN-BASED CHEMICALS PRODUCTION PROJECTS



Raw Material: Corn

- Product: Starch. Modified Starch
- Production Capacity: 80,000 Tons per Year
- Project Site: Middle East
- Corn starch is widely used in various industries, including starch and sugar production, food processing, papermaking, pharmaceuticals, fermentation, and chemical engineering.



Lysine

- Raw Material: Corn. Wheat. Cassava
- Product: Amino Acid (Lysine, Threonine, Tryptophan)
- Production Capacity: 80,000 Tons of Lysine / 8,000 Tons of Threonine / 1,600 Tons of Tryptophan per Year
- Project Site: CIS region
- Amino acids can be produced from corn, wheat, and other grains through microbial fermentation. It is primarily used in feed and as an additive for amino acids.



Fructose Syrup

- Raw Material: Corn
- Product: F55 Fructose
- Production Capacity: 100,000 Tons per Year
- Project Site: CIS region
- Fructose syrup is a sweetener made from plant starch. It is suitable for refreshing beverages and other sweet food products, such as cold drinks, baked goods, canned products, dairy products, and confectionery.



Phytosterols

- Raw Material: Deodorized Distillate Product: VE and Phytosterol
- Production Capacity: 24 Tons per Day
- Project Site: South America
- Vitamin E and Phytosterol can be produced from the by-products of the vegetable oil refining section, and are widely used in medicine, food, cosmetics, feed, and chemical industries.



Pea Protein

- Raw Material: Pea
- Product: Pea Protein
- Production Capacity: 70,000 Tons per Year
- Project Site: CIS region
- Pea protein is a protein ingredient derived from peas. Benefiting from its excellent functional properties, such as solubility, water absorption, emulsification, foaming, and gel formation, pea protein is used as a food additive in meat product processing, snack foods, feed, and more, to improve the quality and nutritional structure of these products.



Citric Acid

- Raw Material: Corn, Wheat, Cassava, Rice
- Product: Citric Acid (monohydrate and anhydrous)
- Production Capacity: 120,000 Tons per Year
- Project Site: China
- Citric acid serves as a natural preservative and food additive. It is one of the most essential organic acids, extensively utilized across various sectors, including food, pharmaceuticals, daily chemicals, and other industries.





