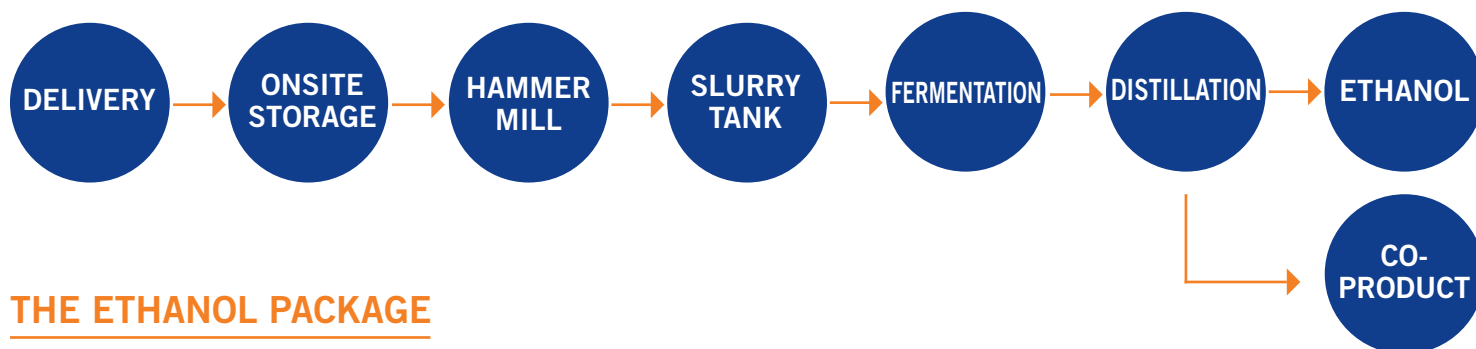




ETHANOL

THE ETHANOL PROCESS



THE ETHANOL PACKAGE

1. DELIVERY

STARCH, PROTEIN, OIL, MOISTURE

2. HAMMER MILL

STARCH, PROTEIN, OIL, MOISTURE

3. SLURRY TANK

GLUCOSE, DP2, DP3, DP4+, ETHANOL, GLYCEROL, LACTIC ACID, TOTAL SOLIDS

4. FERMENTATION TANK

TOTAL SUGAR, BRUX, GLUCOSE, DP2, DP3, DP4+, ETHANOL, GLYCEROL, LACTIC ACID, PH

5. ETHANOL

STARCH, PROTEIN, OIL, MOISTURE

6. CO-PRODUCT

FAT, PROTEIN, MOISTURE, STARCH, SUGAR LACTIC ACID, TOTAL SOLIDS

THE VALUE OF THE QTA SYSTEM

• Reduced costs versus equipping and operating wet chemistry lab

Capital costs
Supplies: reagents, disposables
Manpower

• Material Sourcing

Increase yield
Reduce variability

• Process optimization

Increase yield
Operate with greater efficiency
Corrective action

• Co-Product and product marketing

Differentiation
Maximize yield