

Ingredient Sector: [Sweeteners](#)

The U.S. Corn Wet Milling Industry

Without question, getting a handle on the U.S. and global sugar markets is challenging: Complex government programs here and abroad, competing sweetener markets, and volatile supply and demand fundamentals demand constant attention. Now we must add the strengthening debate over biotech crops to the list as consumers push for labeling laws to identify products containing genetically modified organisms (GMOs), affecting both beet sugar and corn sweeteners.

What is driving consumer interest in labeling laws? If demand for non-genetically modified (GM) sugar continues to grow, how might the sugar industry evolve in response? Our new report explores these questions and more arising from expanding use of non-GM sugar.

Executive Summary

Part 1: Corn Wet Milling in North America

- Archer Daniels Midland (ADM)
- Cargill
- Tate & Lyle
- Ingredion
- Penford Corporation
- Grain Processing Corporation
- Roquette
- Table: Summary of Corn Wet Miller Starch and Sweetener Capacities

Part 2: Wet Milling Product Application and Demand

- Major North American Economies
- Wet Milled Products
 - Grind and Capacity Utilization
 - Table 2.1: Corn Grind by Product Line
 - Swing Factors
 - Future Avenues for Grind Diversification.
- High Fructose Corn Syrup Outlook
 - The Decline in HFCS Demand through 2014
 - Sugar's Resurgence
 - Table 2.2: Major Products Switching from HFCS to Sugar

Other Sweeteners

- Table 2.3: Sweetener Alternatives
- High Fructose Corn Syrup Capacity Utilization

Starch Outlook

- Unmodified Starch
- Modified Starch
- Future Growth Categories

Corn Syrup Outlook

- Corn Syrup Capacity Utilization
- Corn Syrup Demand by Category

Dextrose Outlook

- Dry Dextrose Capacity Utilization
- Dry Dextrose Demand by Category

Maltodextrin Outlook

- U.S. Ethanol Industry Outlook
- Ethanol Capacity Utilization

Fermentation Products: Polyols

- Table 2.4: Sweetener Caloric Count
- U.S. Polyol Consumption
- Table 2.5: Breakdown of Total Estimated U.S. Domestic Polyol Consumption in 2014
- Capacity Utilization Rates

(continued)

Part 3: Costing in the Wet Milling Industry

Front-End Feedstock Costs

Corn Use by Category

Corn Pricing

Net Corn Cost (NCC)

Impact of Net Corn Cost on Corn Wet Milling

Effect of NCC Changes on Starch Producers

Effect of NCC Changes on Glucose Producers

Effect of NCC Changes on Liquid Dextrose Producers

Effect of NCC Changes on Dry Dextrose Producers

Effect of NCC Changes on HFCS-42 Producers

Effect of NCC Changes on HFCS-55 Producers

Starch Variable Production Costs

Labor

Energy

Maintenance and Wastewater Treatment

Variable Cost of Production: Starch Plant Specifics

Cost of Production Study

Part 4: Profitability Comparison of Wet Milled Products

HFCS and Ethanol Profitability

Table: 2012 Wet Mill Profitability: HFCS-42 vs. Ethanol

Table: 2013 Wet Mill Profitability: HFCS-42 vs. Ethanol

Table: 2014 Wet Mill Profitability: HFCS-42 vs. Ethanol

Pearl Starch and Glucose Corn Syrup Profitability

Table: 2012 Wet Mill Profitability: Pearl Starch vs. Corn Syrup

Table: 2013 Wet Mill Profitability: Pearl Starch vs. Corn Syrup

Table: 2014 Wet Mill Profitability: Pearl Starch vs. Corn Syrup

List of Charts:

Figure 2.1: H.S. HFCS Demand

Figure 2.2: Per Capita Consumption of CSD vs. Bottled Water

Figure 2.3: Consumption Growth in Noncarbonated Beverage Segments

Figure 2.4: Sweetness Onset and Duration

Figure 2.5: U.S. Sugar Refining Capacity

Figure 2.6: North American HFCS Capacity and Demand vs. U.S. HFCS Capacity and Demand

Figure 2.7: North American HFCS-42 Capacity vs. Demand

Figure 2.8: U.S. HFCS-42 Use by Top Categories by Year

Figure 2.9: Growth in U.S. HFCS-42 Shipments

Figure 2.10: North American HFCS-55 Capacity vs. Demand

Figure 2.11: U.S. HFCS-55 Use by Top Categories by Year

Figure 2.12: Growth in U.S. HFCS-55 Shipments

Figure 2.13: U.S. Pearl Starch Use by Top Categories by Year

Figure 2.14: U.S. Modified Starch Use by Top Categories by Year

Figure 2.15: Growth in U.S. Pearl Starch Shipments

Figure 2.16: Growth in U.S. Modified Starch Shipments

Figure 2.17: Growth in U.S. Glucose Shipments

Figure 2.18: U.S. Glucose Use by Top Categories by Year

Figure 2.19: North American Corn Syrup Capacity vs. Demand

Figure 2.20: Growth in U.S. Dry Dextrose Shipments

Figure 2.21: U.S. Dry Dextrose Use by Top Categories by Year

Figure 2.22: U.S. Ethanol Capacity vs. Demand

Figure 3.1: World Corn Production

Figure 3.2: U.S. Corn Use by Category

Figure 3.3: Regional Basis Levels

Figure 3.4: Decatur Basis vs. Corn Futures

Figure 3.5: Historical Cash Corn and Coproduct Values