Corn sweeteners add challenge to sugar markets

LANCASTER — America's "sweet tooth" has been more demanding than ever in recent years, but this news brings little cheer to beet and cane sugar producers. They're caught in a double-bind, with stiff foreign competition on one side and a home-grown corn product on the other, according to Farmline News Service of the USDA.

Of the two, the bigger challenge probably comes from the corn product, High Fructose Corn Syrup. HFCS has been a major success since it was commercially introduced in the U.S. in 1967.

In 1970, per capita consumption of HFCS was only seven-tenths of a pound per year. It rose steadily to 19.1 pounds in 1980 and an estimated 23 pounds in 1981. Meanwhile, consumption of refined sugar declined from 101.7 pounds per capita to less than 80 pounds today.

For sugar producers, these figures are cause for concern. Sugar wasn't able to hold its own even in a market expanding faster than the population, and that market may not be growing as rapidly in years ahead.

The average American now consumes almost 126 pounds of sugar and sweeteners a year. That's a staggering 35 teaspoons a day—most of it (75 percent) in baked goods, soft drinks, and other processed foods.

These numbers are among the highest in our history (the peak was in 1979 at 127.5 pounds).

Ten years ago, we averaged only about 124 pounds a year. But our use of sweeteners appears to have stabilized, and, by 1985, Americans will probably add only another half-pound of sugar and sweeteners to their diets, according to USDA economist Bob Barry.

"Greater health consciousness, attention to diet, and a small portion of the population in the sugar-craving ages of 10 to 25 years are the reasons," Barry says.

According to Barry, corn sweeteners (including glucose, corn syrup, dextrose, but mostly HFCS) now account for about one-third of total domestic sugar/sweetener use, up from 16.7 percent 10 years ago. And, largely because of the anticipated increase in HFCS use, forecasters say that this figure could rise to about 43 percent of the market by 1985.

This is bad news for sugar producers and processors. "The bottom line will be a reduction in the overall size of the sugar industry," Barry says.

On the other hand, present technology probably can't take corn sweeteners much further than a 50-percent share, leaving half the total market to traditional sugar.

Corn sweeteners have been steadily gaining on sugar's markets for one major reason: cost. It costs only half as much to make HFCS from corn as it takes to make sugar from cane or beets.

Plus, we grow all the corn we need right here in the U.S. Although energy costs in the corn wet-milling process are high, the corn itself is the single most expensive input, and corn prices (adjusted for inflation) have been reasonably stable over the last decade. For the sugar industry, it's another story. Only about half the cane and beets we process into sugar are grown domestically; beets mostly in Florida and cane in Hawaii and Louisiana. The rest are imported mostly from Latin America and the European Community.

Because the government of most exporting countries have lower environmental and safety standards, much lower or no minimum wage laws, and subsidies for their cane and beet growers, prices on the world market are sometimes substantially lower than domestic prices. This is especially true during periods of sugar gluts.

A prime example is the European Community—the most highly protected agriculture in the world—which is currently estimated to have an export surplus for 1981/82 of 4 to 5 millon tons.

This creates a lot of instability in the American industry. While U.S. producers may want to sell as much sugar as possible and reduce imports, most refiners want to buy.

So, producers are looking to the government for protection. Specifically, the growers want a government-guaranteed program of loans with sugar as collateral, which, in effect, would provide a minimum domestic price level for sugar.

But many refiners see it differently. They say the major impact of government loans would be much higher domestic prices to consumers and much smaller domestic sugar consumption in the long run.

Higher world prices would be self-defeating according to refiners because sugar users might switch even more quickly to the alternative: corn sweeteners.

Some sugar refiners aren't taking any chances with the shaky sugar situation and have diversified into other businesses, including some processing of corn syrup.

For processors who are wet-milling corn, the time is right. Through 1980, the industry has expanded its production. But the development of the new HFCS 55-percent-fructose-content product, high sugar prices, and last year's decision by major soft drink companies to replace some of the sugar in their products with HFCS, has changed the industry's outlook. The word is expansion, and the industry can handle it.

There are currently 26 corn wet-milling plants operating, or soon to be operating, in the U.S. Seventeen have been built just since 1960. All of the plants are modern facilities, ready to process corn efficiently. And, according to Barry, HFCS capacity is expected to expand by 75 to 80 percent between 1980 and 1985.

"Wet-milling corn has many benefits," Barry says. "Diversity is the most obvious." Wet-milled corn can be used in five major categories: starches, corn syrups, dextrose, HFCS, and corn byproducts such as corn gluten feed, meal, and corn oil. Some processors are interested in adding a sixth-ethanol.

"It's a complex, multi-faceted industry, selling products to food, beverage, livestock feeding, and many other industries," says Barry. "Even corn byproducts account for about 20 percent of the value of one bushel of wet-milled corn."

Does the country produce enough corn to satisfy the sweetener industry's growing needs without cutting into livestock feed supplies?

"Yes. Right now, we expect the 1981 crop to be a record, and the sweetener market may take about 4 or 5 percent of it. By 1985, usage should be up to 6 percent. Supplies should not be a problem in the foreseeable future," Barry says.

But he adds that corn sweeteners can't do everything sugar can do. While HFCS is as sweet as sugar in many uses, some ice cream manufacturers will stick with sugar because it freezes at a slightly higher temperature than corn sweeteners. Bakers will probably use sugar in cakes and similar products because HFCS turns brown when baked.

Also, HFCS is just too sticky for most candy. "HFCS makes up only about 1 percent of the sweeteners used in the confectionary industry. With present technology, 1 to 5 percent is about as far as it can go," Barry says.