A better blend

By **LON TONNESON**

GAS stations in Britton, Watertown and Webster may hold the key to your corn profits and ethanol investment dividends in the future.

These South Dakota fuel retailers are using blender pumps to dispense ethanol blends higher than E10. Station managers, government officials and ethanol producers nationwide are watching to see how the experiment turns out.

"Blender pumps are critically important to the future of ethanol," says Ron Lamberty, vice president of market development for the American Coalition for Ethanol, an industry trade organization headquartered in Sioux Falls, S.D. "They are the key to selling more ethanol."

Up against a 'blending wall'

Finding a way to increase sales is important to biorefiners because ethanol will soon run into a "blending wall," Lamberty says.

The U.S. uses approximately 140 billion gallons of gasoline annually. If every gallon contained 10% ethanol, there would be a market for approximately 14 billion gallons of ethanol.

The 134 ethanol plants operating in the U.S. today produce about 7 billion gallons of ethanol. Seventy-seven more plants are under construction. They will be capable of producing another 6 billion gallons of ethanol.

In just a few years, the ethanol industry could saturate the E10 market.

"We need to figure out how to sell more ethanol," Lamberty says.

E85 no savior

E85 pumps were supposed to break through the E10 blending wall. But E85 has been slow to catch on. It costs less per gallon than gasoline, but it's less efficient. Most vehicles get fewer miles per gallon with E85 than E10 or unleaded gasoline because E85 has fewer British thermal units, or Btus.

E85 isn't easy to find either. Of the estimated 160,000 gasoline stations in the U.S., only 1,500 sell E85. Just 3% of the 200 million cars and trucks on the road today in the U.S. can use E85.

Key Points

- Biorefineries may soon saturate the E10 market for ethanol.
- Motorists have found many vehicles run better on E20 or E30.
- Blender pumps offer higher blends at the push of a button.

Grassroots blending

When E85 pumps were installed in northeast South Dakota, something unexpected happened. Motorists began blending E85 and E10 on their own and using it in standard vehicles. They would pull into a gas station, fill half their tank with E85 and half with E10 to produce a blend that was higher than E10.

"I found E30 was best. It costs less than unleaded or E10 and didn't reduce my mileage," says Al Kasperson. He is a former instructor at the Lake Area Technical Institute in Watertown. He also farms and owns stock in Glacial Lakes Ethanol, which is also located in Watertown. Kasperson has become something of a local expert on ethanol's effect on engines (none that he can see). His work for ACE and the South Dakota Corn Growers Association has led to national mileage studies.

It's not surprising that motorists find that higher blends of ethanol are generally more efficient than E10, says Lisa Richardson, SDCGA executive director. No scientific study was done to determine the best ratio of ethanol to gasoline. Ten percent was just a number negotiated with the oil industry.

Gary French, general manager of Sioux Valley Cooperative in Watertown, saw what his convenience store customers were doing and installed his co-op's first blender pump in 2006.

A blender pump enables a motorist to select higher blends at the touch of a button. The pump draws fuel from the station's E85 tank and its E10 tank and blends it automatically at the selected ratio before dispensing it.

Sioux Valley Cooperative now has 12 blender pumps and sells approximately 50,000 gallons of E30 each month.

The beauty of blender pumps is that everybody wins, French says.

Motorists save money.

Ethanol plants sell more ethanol locally, which reduces their costs while increasing their sales volume.

Corn growers share in ethanol profits through dividends on their investment in the plants and through continued strong demand for corn.

The South Dakota Farmers Union would like to see all 1,000 gas stations in South Dakota equipped with pumps to dispense higher blends.

"If everybody used E30, we'd keep 30% of our fuel dollars at home rather than sending them to the Mideast," says Orrie Swayze, a Wilmot, S.D., farmer, ethanol plant stockholder and blender pump promoter.

He calculates that the blending wall's impact on the price of ethanol is already costing South Dakota $1 billion annually. "Without a rapidly expanding blender pump infrastructure, we can expect more of the same into the foreseeable future."

MORE ETHANOL: Blender pumps offer higher blends of ethanol at the push of a button. They could help biorefineries sell more ethanol.

Roadblocks may hamper blenders

WIDESPREAD adoption of blender pumps faces several significant obstacles, including:

■ **Cost.** A new blender pump costs approximately $15,000, not including installation.

■ **Certification.** Underwriter Laboratories, the world's leading product safety testing organization, hasn't certified blender pumps yet. The sticking point seems to be whether or not higher levels of ethanol will corrode pump parts. UL has hinted it may require nickel plating, which would add $7,000 to $8,000 to the cost of a blender pump. South Dakota regulators have allowed the use of the pumps without the special E85 UL certification, but most other states haven't followed suit.

■ **Use restrictions.** Higher blends of ethanol are supposed to be used only in flex-fuel vehicles. Regulators and manufacturers worry that burning higher blends will damage engines and increase emissions. Blender pumps must carry a warning that E10-plus blends are only to be used in flex-fuel vehicles. But in South Dakota, most blender pump users are putting the fuel into standard vehicles. Few problems have been reported. Preliminary tests on emissions are also favorable.

Blender pumps handle biodiesel, too

THERE are blender pumps for biodiesel, too. Seaport Biofuels, Seattle, Wash., installed the first biodiesel blender pump. The company offers the choice of B20, B50 or B99. Average customers are more willing to use lower blends of biodiesel such as B20. B50 is a good wintertime fuel when B99 would become too thick to run in vehicles. B99 is for customers who want a pure biodiesel. Seaport has run its 12 trucks on B99 for the past four years.

Source: Biodiesel Magazine