

Vermont Golden Harvest Bio-fuels



Paul & Mark Boivin on Corn's Energy Properties by Tim Buskey

Heating your home efficiently with an annually renewable fuel and at an affordable cost is a goal many strive for, but few can achieve in today's energy marketplace. Two Addison County Farm Bureau members have done the research and spend most of their time educating others on the value proposition of burning corn.

Mark and Paul Boivin of No-Mon-Ne Farm in Addison have been lifelong farmers, first with their parents and since 1972 in their own partnership on the 289-acre dairy farm. Mark and Paul were born on the same day five years apart to Albert and Jacqueline Boivin and always seemed well suited to their partnership. "My father and mother bought this farm in 1958 and milked sixty cows until we were able to take over in 1972," says Mark.

"Dad ran a machine shop in Maine, and then worked in road construction in Massachusetts," continues Paul without hesitation.

Mark quickly picks up the conversation. "My father had the distinction of having driven the length of Route 128 around Boston without seeing another car." Albert was a construction supervisor with the company that built Route 128 in the 50s.

As youngsters, Mark and Paul learned to experiment with growing crops. "In the 50s and 60s we grew birdsfoot trefoil," says Mark.

The Boivins had six children, four boys and two girls. "But my sisters were off in college when we came to this farm," says Paul.

"We were the two that stayed and worked the farm with my father and mother," says Mark. After taking over the dairy operation, the boys continued to milk cows for more than thirty-five years, all the while reading and researching how to do a better job that could be economically rewarding as well as personally satisfying. The cows were sold in 2008, after their analysis of the market showed tough times ahead,



Left Page: Paul and Mark Boivin set up the beacon for precision guidance research. The Boivins grow corn and soybeans on 430 acres of land in Addison county. Vermont Golden Harvest BioFuels strives to produce a renewable, efficient energy for heat while keeping the landscape open and beautiful in otherwise unused cropland. After years of research, Mark and Paul Boivin have found corn to be the perfect source. Corn ripening on the stalks.

and their reading led them to believe that the market was being manipulated.

Before making the decision to go out of dairy farming, both Mark and Paul did extensive research on bio-fuels. "The price of fuel shot up in 2006," according to Mark. "And we put a corn stove in the house." At the time corn was about sixty percent of the price of heating oil on an energy basis, and the brothers started to work with the figures and continued their experiments with growing corn, using air drying to control moisture levels and keep them between ten and twelve percent. Soon after, Vermont Golden Harvest

BioFuels was born.

"We feel that it is important to keep all our heating dollars in Vermont by using an annually renewable efficient fuel like corn," says Paul.

The new company's model: "You can cull thirteen cows to buy the boiler and use the thirteen acres of corn that would have fed those cows to fuel it each year," says Mark.

The excitement level rises as Mark and Paul talk about their discovery. "According to the EPA, the number of acres in cropland is going down. . . If we were to use that land to produce corn, we could keep land open and beautiful landscape





The banner in front of Paul's home. A storage bin holds 550,000 pounds of corn. Below left: Paul expands on their products. Bags of corn on pallets outside the bagging facility ready for the stove or furnace. A forty-pound bag can be produced every ten seconds. Mark at the bagging area.

healthy in Vermont," says Mark.

"It's a local product that can be renewed every year, and it keeps the land open," adds Paul.

"And keeps you warm in the winter," says Mark.

"Ninety percent of our work is educating people," Paul continues. "I just came back from the Tunbridge Fair where we had an exhibit." According to their brochure, burning shelled corn to heat your home is a lower cost alternative to fuels such as propane, natural gas, coal, and wood. Corn burns clean and efficiently and does not release any dangerous chemicals into the air.

The corn furnace, just back from the fair and eventually destined to be installed in Paul's house, sits on a trailer in his driveway. Their first corn stove is on display and has been heating the house for several years. Paul and his wife,

Marianna, a school nurse, and daughter, Aimee, will get the benefit of the new furnace this year. "We plan on getting it installed before the real cold weather," says Paul.

Mark lives down the road in the big, white farmhouse where the barns are rented to a nearby farmer. Both Mark and Paul participate in the growing and harvesting of all the crops on the farm. Mark concentrates on the soybeans and a non-gmo (genetically modified organism) variety of canola grown for seed, while Paul likes to service the boilers, grow and harvest corn, and volunteer with the Vergennes Rescue.

During their research phase, the Boivins heard about the Vermont Farm Viability Enhancement Program, initiated by the VT Housing and Conservation Board in 2003. Through the program, they worked with Alan Curler, a farm business advisor with UVM Extension, on a business plan for the





Dried corn kernels to be used as heating fuel.

endeavor. To put the plan into action, the two applied for an implementation grant through the program and received grant funds to help purchase a beacon for precision guidance in planting. The new system allows them to calculate their planting areas and yields using satellite technology that can be moved from field to field for complete efficiency. During their business planning, they determined the best crop to grow, the most efficient moisture level for their corn, the different methods of drying the crop, and the most efficient stoves available on the marketplace. "We also got a REAP grant for our project to use a corn-burning appliance to dry the corn," says Mark. "We were really pleased with the assistance we got from the Vermont Farm Viability Program during the transition," he continues proudly.

The milking parlor on the farm has been converted to a bagging operation where corn gets cleaned and bagged into forty-pound bags that sell for \$5. "We still sell corn for \$250 a ton," says Mark, "and it will stay that way for a while." In the operation, dust and small particles get screened out of



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With an Implementation Grant from the Farm Viability program, the Boivins were able to help purchase a beacon for precision guidance in planting. The new system allows them to calculate their planting areas and yields using satellite technology that can be moved from field to field for complete efficiency.

the final product and are saved as tailings, the leftover used for animal feed. As the machines whirred and bags traveled by on a conveyor belt, Mark said, "We can produce a forty-pound bag every ten seconds." Several pallets of corn, ready for the stove or furnace, were stacked nearby. Two huge corn storage units, each able to hold 11,000 bushels of corn were in the field.

Mark and Paul Boivin have made the transition, a big one for the two life-long dairymen, and they are happy to be finished milking cows and excited to be involved in such an innovative project.



Mark, Paul and his wife Marianna, with biscuit in arms, and their daughter, Aimee.

Vermont Farm Viability Program

The Vermont Farm Viability Program provides in-depth, one-on-one business planning and technical assistance to farmers through partner organizations (primarily the Intervale Center, UVM Extension or NOFA-VT) and private consultants. Farmers utilize the program to help improve business management, to plan for expansion or diversification, to develop new products, start value-added processing on the farm, or prepare for ownership transition. More than 300 farm businesses in Vermont have utilized the program to date. The program also provides competitive grants and technical assistance to help farmers implement their business plans.

After a \$75 enrollment fee, program services are free of charge. Eligible farmers are full-time Vermont residents, are actively farming and can demonstrate at least \$10,000 gross income from farming in the prior year. The program is administered by the Vermont Housing & Conservation Board (VHCB) in collaboration with the Agency of Agriculture, Food & Markets. Funding is provided by VHCB, USDA Natural Resources Conservation Service, USDA Rural Development, and private foundations. For more information or to enroll, see our website, www.vhcb.org/viability.html or contact Ela Chapin, Program Director (828-2117 or by email to ela@vhcb.org). Upcoming enrollment deadlines are November 30 and February 28.

VTFB CALENDAR

December 4, 2010

Stowe Festival of Trees and Light, Stowe, VT

January 9-12, 2011

AFBF Annual Meeting, Atlanta Georgia

January 25-27, 2011

Barre Civic Center, Barre Vermont

February 3-5, 2011

National Leadership Conference

In Orlando, Florida at Disney's Coronado Springs Resort in conjunction with the Young Farmers and Ranchers Leadership Conference.

March 19-20 2011

Vermont Open House Weekend

The Tenth Annual Vermont Maple Open House Weekend will be held at sugarhouses throughout Vermont.

March 26, 2011

Junior Chef Competition