

RIPE WITH ENERGY SAVINGS

Energy savings was just one of the many benefits realized when The Apple Farm replaced its large and unreliable pasteurizing machine with a sleek, compact unit that uses ultraviolet light to purify the cider.

Many customers began demanding that apple farms, large and small, pasteurize their cider, following a death linked to E-coli in 1996. The Apple Farm in Fairfield, Maine purchased a pasteurizing machine, a unit designed to process milk, which was the only option available at the time. While effective as a pasteurizer, the machine caused owners Marilyn and Steve Meyerhans a lot of problems. Marilyn said, "Apple juice contains apple fibers and the machine, designed for milk, always had trouble processing the cider. It was becoming less and less efficient, and we were constantly calling a mechanic to get it operating again."

Last summer, with the help of an incentive from Efficiency Maine, the Meyerhans bought the CiderSure 3500, which is designed for cider and uses ultraviolet light to eliminate dangerous contaminants. "We had been following the development of the ultraviolet technology,

which has been used for years to clean water. Because cider is not clear, the trick was to design a machine that would allow a thin enough stream so that the ultraviolet light could work with the cider. This unit was approved by the FDA in 2000, and we have been considering it since then."

The Meyerhans purchased the CiderSure just as they were heading into their busiest time of year — the fall. Concerned about the complexity of setting up a new system, the CiderSure sat in the corner of their apple processing room.

Steve Meyerhans said, "We thought putting the new machine into operation would be a big deal, so we put it off and continued to call our mechanic for repairs to the old machine. One day, instead of repairing our old machine, our mechanic surprised us by announcing that the new machine was installed and ready to go! Since we started using the CiderSure, we have not had a single breakdown."

The Meyerhans say the new system offers them energy savings, a superior product, and ease of operation.





THE JUICY DETAILS

Energy Savings

The Meyerhans compared their electric bills and were pleased to learn that the new equipment has resulted in a consistent 25-30% reduction in their kWh usage. In addition, the CiderSure is reducing their demand (measured in kilowatts or kW) by 18 kW. Central Maine Power has informed the Meyerhans that The Apple Farm is being moved to a rate class that takes into account the reduced kW. The new, lower rates should result in further savings.

Better Product



One of the reasons that cider producers had resisted pasteurization is that it requires that the cider be heated – and heat changes the flavor. The new unit depends on the ultraviolet light, not temperature, and light does not alter the flavor of the cider.



Marilyn said, "The ultraviolet light ensures purity without sacrificing freshness. We take comfort in knowing that our cider is safe to drink and our customers still get to enjoy the juice's taste and nutrients."



Ease of Operation

The old machine was large, bulky and unreliable. Steve Meyerhans commented, "That unit would have a problem the second you turned your back. If it ran dry, it would burn. The new unit is very user-friendly. We have not had one breakdown. We can do other things while it pasteurizes the cider. If there is a problem or it runs out of cider, a sensor light comes on and it shuts itself down until an attendant is available. Now the machine works for us instead of us working for it!"

The Meyerhans also like the CiderSure's small, compact size and the fact that it can be moved around easily on its wheels. The machine plugs into a regular 120V wall outlet and does not require special wiring, as the old unit did. It also calculates the number of gallons processed and provides a printout so the output no longer needs to be tracked manually. And, it cleans itself with the touch of a button!



Estimated Energy Benefits

21,783 in kWh annually

18 kW reduction

Estimated annual energy dollar savings of almost \$3,200

Moved to a more favorable rate

Improved product

No breakdowns interrupting product flow

No repair expenses

Operates without constant supervision

Smaller and mobile

Easy to clean

HOW EM CAN HELP YOUR FARM

Efficiency Maine offers free advice and cash incentives to help your business become more energy efficient. Call us at 866-376-2463 to find out how you can get started or how we can help you take the next step.

Cash Incentives

For all Maine businesses, the Efficiency Maine Business Program has cash incentives for:

- Qualified lighting
- NEMA Premium® motors
- Qualified HVAC equipment
- Adjustable speed drives for HVAC equipment
- Qualified commercial refrigeration equipment

In most cases, but not all, you must have your application pre-approved before you purchase equipment to be eligible for an incentive. Pre-approval is not required for purchases of motors or agricultural projects where the incentive is less than \$1,000.

Custom Incentives

Other electric efficiency projects may also be eligible for "custom incentives." Custom incentives are calculated on a case-by-case basis and always require pre-approval. Call us at 866-376-2463 to discuss your ideas.

Support & More Information

The Efficiency Maine Business Program staff will assist you in applying for Efficiency Maine incentives, as well as other incentives and opportunities, such as the State Energy Program's small business low interest loans for energy efficiency projects. Call us at 866-376-2463 for guidance on eligibility and resources. Or visit the Web site, efficiencymaine.com.

Referrals

Talk to your supplier or vendor about how you can improve the energy efficiency of your business. If you need to locate a contractor who will assist you in determining the energy savings potential in your facility, or who can install or maintain energy efficient electric equipment, we have a network of Efficiency Maine Program Allies throughout the state who can offer guidance on how best to work with the program. You'll find the list at efficiencymaine.com or call us toll-free at 866-376-2463.



Efficiency Maine is a statewide effort to promote the more efficient use of electricity, help Maine residents and businesses reduce electricity costs, and improve Maine's environment. Efficiency Maine is funded by electricity consumers and administered by the Maine Public Utilities Commission.