

Energy Saving Tip

High Efficiency Refrigeration



A variety of large and small refrigeration upgrades can help farms reduce energy. From left to right, high efficiency fan motors, outside air economizer, and an example of updated insulation and lighting.

Orchards and vegetable farms with high demand for refrigerated storage can save money by making a variety of energy efficiency improvements. Consider the examples above, taken from farms in Western MA. On the left, efficient evaporator fan motors turn off a portion of the evaporator fan while the compressor is not working - saving energy. And while energy savings totals depend on run time, size, and other factors, ECM fan motors typically save the most electricity per square foot of storage space.

In the middle, an industrial Freeaire system consisting of the controller, vent and circulation fan. The system works by drawing in cool air when outdoor temperatures are low, reducing need for mechanical cooling. The Freeaire system is one example of a commercially available outside air economizer.

Finally, the photo on the right shows an example of spray foam insulation, a popular insulation choice for refrigerated storage. Other measures that can be taken to improve insulation are thick wall and ceiling insulation, adding gaskets to doors and openings, and adding strip curtains to spaces with high traffic.