



Farm Management Team Q & A's

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(B) Author's Note: These fact sheets are a result of questions posed to me and answered in a national publication over the years.

What energy-savers really pay?

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I'd like our farm to be as energy self-sufficient as possible. Next month at several field days, we'll see all kinds of equipment touted as energy-savers, everything from light bulbs to variable speed motors to solar collectors to windmills. Any advice on how to size them up? What energy-saving technologies do you see as having the most potential for farms?

The easiest and quickest energy saving technology for dairy farmers is to turn off any electrical item not being used, clean up around any motor, clean all fans and baffles, change oils on time, lubricate all bearings and try to decrease all resistance to motion. Before buying anything, do an inventory of the things that need doing and look at all conservation measures first. It's amazing how much we can save by turning down thermostats 2 degrees, cleaning fan blades, washing windows, closing doors, cleaning coils, using curtains, shutting off engines, changing oils, checking tire air pressure, slowing down, not overloading engines, cleaning on a regular basis, insulate walls and ceilings and the list goes on. Cutting energy costs by 10-20% just by conservation is achievable, and a lot cheaper than buying something. Once you've cut all costs, do an energy audit and have an inventory of where you're spending money. Then it's time to start looking at alternatives such as heat exchangers, pre-coolers, florescent light bulbs, and replacing old in-efficient motors with variable speed motors, looking at old refrigerators, and other items. Get your energy company involved. Do an energy audit and follow the recommendations.

The size of the farm, the energy audit and inventory or energy use will have a huge impact on what technology you invest in. Every farm should have florescent bulbs, clean fans, a heat exchanger and more. I also recommend looking at gravity to help. To cut fuel costs, look at rotational grazing as an alternative—at least for heifers. You don't have to spread near the amount of manure, don't have to cut and haul near the crops, less field compaction, great healthy animals, and yields are nearly the same. Finally, milk yield can be significant. Pastures must be managed.

Energy of all types cost money and there are grants available to cut those costs. Research grants for cost share on energy savings. Many of these grants will cover 50% of the cost of the material, and installation can be partially offset by your work on the farm. At the same time, research the savings, the costs, and finally your net cost/unit when its installed. When investing in wind, go slow and talk with the experts. We've found that it's important to measure the wind velocity, direction, and consistency for a while prior to investing. We have data on wind and solar for most places in the northeast but do the research prior to buying. Stay on top of this as electricity prices will go up substantially in a few years and, state and federal government programs will be critical and the technology is changing rapidly.

On the maple side reverse osmosis units on nearly all sugaring operations are a must. Combining that with steam-away type units on sugaring units really rack up the long term savings.