LIPPY BROTHERS FARMS

A Grain Farm Case Study

Mathias Ag Program

Maryland Energy ADMINISTRATION
Powering Maryland's Future

Farming has long been in the blood of the Lippy family. Brothers Ed and Donald Lippy grew up on a dairy farm and studied agriculture at the University of Maryland. After graduation in the early 1950s, Ed, Donald and their two other brothers began farming and in 1965 incorporated Lippy Brothers Farms. They grow hay, snap beans, soybeans, corn, wheat and barley on their 2,000 acre farm in Hampstead, Maryland, and lease an additional 8,000 acres for these crops. The Lippys also operate a poultry farm, which features energy efficiency measures and a new solar energy system.

This interest in energy efficiency extends to the crop farm, and the Lippys knew they could improve upon their aging grain dryer. The farm spends over $32,000 each year for electricity and $42,000 each year for natural gas to dry the grain. Upgrading their 1982-vintage grain dryer to a modern model would reduce the farm's energy costs, and the brothers were interested in making the investment. With the help of the Kathleen A.P. Mathias Agriculture Energy Efficiency Program, Ed and Donald were able to determine exactly how much energy they would save, and received incentive funds to offset the initial cost of the new dryer. The program's energy analysis indicated a potential 34% reduction in energy costs—a savings of over $27,000 each year.

Grain dryers use a lot of energy, typically propane or natural gas, to dry harvested grain. The energy used depends on the variety of crop, the original moisture level and the final moisture level. Many farms have old grain dryers and newer models are considerably more energy efficient, typically saving between 15-40% of the energy used.

As shown in Table 1, the model the Lippy Brothers Farm chose will pay for itself in 8.3 years, and provide the farm many years of savings in the years to come.

Table 1: Implemented Efficiency Measures and Associated Savings

Recommended Measure	Natural Gas (therms)	Electricity Savings (kWh)	Estimated Annual Energy Cost Savings	Installed Cost	Estimated Payback in Years
Grain Dryer Replace 1982 Storemor grain dryer with a tower-style grain dryer. The new dryer will have a Btu/lb of water removed rating of approximately 1,665 Btu/lb or less. Both the existing and proposed grain dryer use electricity and natural gas."	13,578	120,066	$27,175	$225,140	8.3
Totals	**13,578**	**120,066**	**$27,175**	**$225,140**	**8.3**

As a farm that has always taken the lead through the brothers' service on Maryland agricultural boards, the Lippys are looking forward to showing others the savings they will generate from their new dryer. "We've always done what we can to manage our farm the best way possible—through nutrient management plans and sound environmental management," says Ed. "Our new grain dryer is saving us a lot of money but also helps reduce the impact of fuel use on the environment, which is important to us."