

# LEASE BROTHERS FARM

## A Grain Farm Case Study

### Mathias Ag Program

Sam Lease and his brother Dave have operated Lease Brothers Farm in Union Bridge, Maryland since 1986. They farm 3,100 acres of corn, soybeans, wheat and barley. They also custom-work crops on another 10,000 acres. The brothers plan to farm for many more years and have always recognized the importance of planning for future profitability. This includes making their farm as energy efficient as possible to save on energy costs.

Lease Brothers Farm spends over \$25,000 on propane to dry its grain each year. The brothers were aware that upgrading their grain dryer to a more efficient model would save energy, but a new dryer is a big investment. Fortunately, the Leases were able to use the Kathleen A.P. Mathias Agriculture Energy Efficiency Program to quantify the energy savings from this switch. They also used the program for incentive funds to offset costs. The program's energy analysis indicated a potential 28% reduction in propane costs, a savings of over \$7,000 each year—money that could be invested in other ways to improve the farm and make it more profitable.

**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 Lease Brothers Farm chose will pay for itself in 18 years—a sound investment for equipment that typically lasts about 30 years. The new dryer will also allow the farm to process more grain in less time.

**Table 1: Implemented Efficiency Measures and Associated Savings**

Recommended Measure	Propane Savings (gal)	Estimated Annual Energy Cost Savings	Installed Cost	Estimated Payback in Years
<b>Grain Dryer</b> Replace existing grain dryer with a more efficient grain dryer	3,781	\$7,297	\$131,376	18.0

Both Sam and Dave are glad to have their new dryer installed in time for this year's harvest, and to be doing their part to save fossil fuels and position their farm for long-term sustainability. As a farm that actively participates in local 4-H activities, it is meaningful to have something on the farm to help educate the next generation of farmers. "This new grain dryer helps show the community what we're doing on the farm to be more energy efficient," says Sam. "Farmers are always doing their best to take care of the environment, and this new equipment speaks to that."