

Flue-Cured Tobacco...

SCOOP

...A newsletter from
Flue-Cured Tobacco Cooperative
Stabilization Corporation
www.ustobaccofarmer.com

FUEL CONSERVATION STRATEGIES FOR THE FARM

Flue Cured Tobacco Cooperative Stabilization Corporation is well aware of your rising input costs on the farm. We will look at fuel, one of your input costs and introduce fuel conservation strategies which should benefit you on your farm.

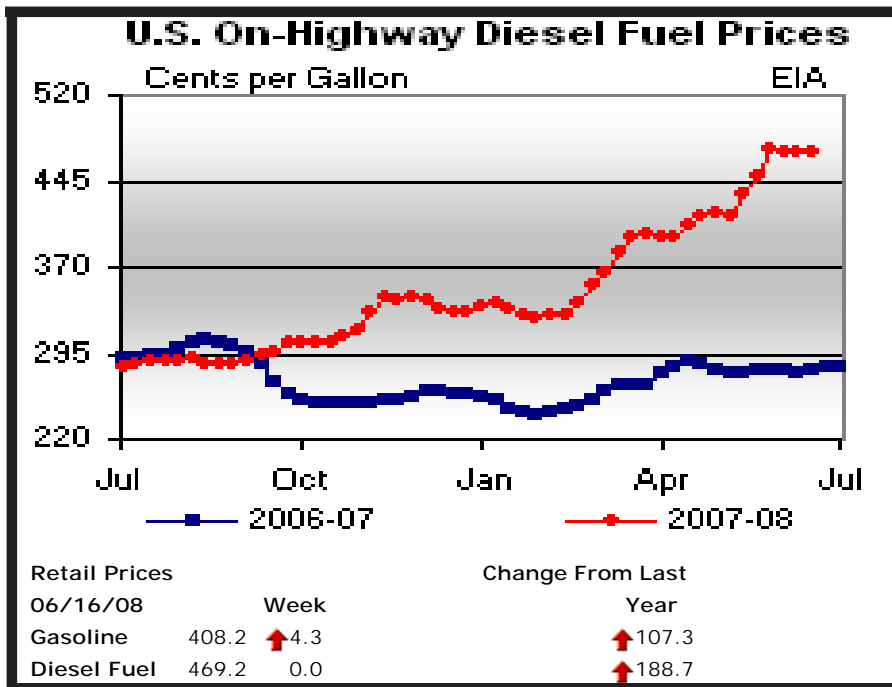
of 15 parts per million of sulfur. This accounts for approximately 70 per cent of all distilled fuel oil (diesel and heating oil). More than 8 billion dollars in capital investments for the new equipment required to produce this clean diesel has added to production and distillation costs. Further, in 2007, off highway diesel came under stringent specifications. (Source: www.eia.doe.gov)

Our members can consider several management strategies or ideas for conserving fuel on the farm. The suggestions presented could reduce fuel use leading to an increase in on-farm savings. The management

- *Minimize idling times* for modern, electronically controlled diesel engines. Ten minutes is usually sufficient time to warm up and cool down tractors and other equipment. Excessive idling during break periods can lead to unnecessary fuel use.
- *Reduce excess weight on equipment.* Keep trucks and other hauling equipment cleaned out. Lighter loads require less energy to move.
- *Inflate tires to appropriate pressure.* Keep tires properly inflated. Inflation pressure is an important variable for tractor efficiency, tire life, and ride comfort especially for radial tires. Check your owner's manual or the tire distributor for suggestions on inflation pressure. Improperly inflated tires can reduce fuel mileage and tire life expectancy.
- *Perform routine maintenance.* Routinely replace fuel, oil, and air filters and use the proper grade of motor oil in all vehicles, tractors, and other equipment to keep them operating at peak efficiency. Consult your owner's manual for the proper timing and list of maintenance operations.
- *Communicate using cellular phones and radios rather than driving to talk with someone.*

Tractors and Large Equipment:

- *Perform multiple field operations within the same pass.* Consider modifying equipment so that you can perform multiple operations in one pass. Examples include strip tilling and planting in the same pass. Some manufacturers sell tractors with hitches located on the front and back, providing implement attachment points at both ends of the tractor.
- *Avoid compacting soil by staying out of wet fields.* Extra tillage and extra power (and therefore more fuel) are needed to break up compacted soil.
- *Practice conservation tillage to improve soil structure, reduce soil erosion, and increase organic matter while conserving fuel.* Tillage uses more (continued on page 2)



As the above chart clearly illustrates, unleaded and diesel fuel prices are up significantly over 2007 fuel prices. Increased world demand and the weak U.S. dollar are contributing factors for fuel's escalating prices. Another factor, ultra-low sulfur diesel, also known as ULSD or "clean diesel" was introduced for highway use in 2006. This fuel was mandated by government specifications

strategies are presented in three sections. The first section provides suggestions for all equipment and vehicles. The second focuses on tractors and other large equipment. The third section provides suggestions for other on-farm vehicles, primarily light and heavy-duty trucks.

All Equipment and Vehicles:

Flue-Cured Tobacco Cooperative Stabilization Corporation is the grower owned and supported cooperative that serves flue-cured tobacco growers in Virginia, North Carolina, South Carolina, Georgia, Alabama and Florida.

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fuel per acre than most other operations, especially sub soiling. Under conservation tillage or no-till management, farmers minimize the tillage performed and the number of trips across a field. Evaluate your total cropping system to determine the appropriate level and frequency of tillage.

- *Use site-specific tillage.* In this approach, only compacted areas receive tillage. Additionally, the tillage depth can varied according to the depth of detected compacted layers. This strategy can minimize or greatly reduce the power used during tillage. Equipment manufacturers now provide variable depth control for tillage implements.

- *Attempt to match the tractor horsepower to the equipment loads.*

Properly matching machinery can minimize excessive power usage, which results in unnecessary fuel consumption. For example, avoid pulling a light load with a high powered tractor.

- *Gear up and throttle down when using a high horsepower tractor to pull light- loads.* Run an under loaded tractor in a high gear at a lower engine speed to save fuel. However, be careful to not overload the engine. If the engine RPM does not change quickly when throttling down, you should probably shift down a gear.

- *Minimize tractive efficiency by properly ballasting tractors for the operation at hand.* Tractive efficiency is a measure of the effectiveness of the tractor to transfer available power to the ground and is directly affected by weight distribution and tire slip. Maximum tractive efficiency is typically attained with drive tire slip between 8 and 15 percent. Add the appropriate amount of weight to properly distribute the draft load uniformly to all drive tires, which helps to control slip. Many tractor manufacturers are providing performance monitors that provide real-time slip estimations. These can be used to visually assess slip during operations. High slip levels cause excessive tire wear and poor fuel efficiency, which indicates an under-ballast condition requiring additional ballast or the use of a larger tractor.

Conversely, low slip levels indicate that the tractor is carrying too much ballast causing higher fuel usage while placing extra load on the axles and drive train. Ideally, weights should be

added or removed to match the load when tractors are used for different field operations and conditions.

- *Layout fields to minimize turning time at headlands and point rows, if you can do so without causing excessive soil erosion.* Using a global positioning system (GPS) to map field boundaries can help optimize field layout for various operations and can help minimize in-field time. Attempt to maximize row length and minimize the number of turns.

- *Minimize the amount of time spent driving tractors and other field equipment on the road.* Keep tractors and other equipment in the fields as much as possible. Use faster and more efficient vehicles to service equipment in the field and to haul harvest crops to curing barns.

- *Consider using differential global positioning system (DGPS) based guidance systems.* These systems whether a simple light bar or an auto guidance system, can help reduce overlap during field operations.

- *Consider using variable-rate application (VRA) strategies, primarily for fertilizer, lime, herbicide, and insecticides.* This type of site-specific management approach indicates which areas of a field do not require particular inputs and, therefore, do not require coverage during application.

Other Farm Vehicles:

- *Use all-terrain vehicles (ATVs) or motorcycles to run errands and perform light tasks around the farm.* They are more fuel efficient than heavy-duty pickup trucks.

- *Use more fuel efficient vehicles for making trips to fields or to town when you are not hauling heavy loads.* Although heavy-duty pickups and other trucks play an important role on farms, they are often used for trips that do not require their power and hauling capacity.

- *Run a heavy-duty diesel truck at an RPM 40 percent below the peak torque.* Diesel-powered truck research has indicated that this is the point at which maximum fuel economy is achieved.

- *Consider diesel engines instead of gasoline engines when planning to purchase a new heavy-duty truck.* Diesel engines produce more torque at the same engine speed as gas and can be more efficient when hauling heavy loads. For general usage, however, (continued on page 3)

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consider what the truck will be doing most of the time and remember that fuel is only one component of the ownership cost.

- *Combine errands into one trip rather than making multiple trips.*
- *Accelerate gradually and drive smoothly rather than driving aggressively.*

The Environmental Protection Agency has reported a 20 percent advantage in fuel economy for drivers displaying these driving characteristics. (Source: Alabama Cooperative Extension Agency; ANR-1303 New August 2008. John Fulton, Asst Professor, Biosystems Engineering, Auburn University, Randy Raper, USDA-ARS, National Soils Dynamics Laboratory, Auburn, Timothy McDonald, Associate Professor, and Ted Tyson, extension Specialist and Professor, both in Biosystems Engineering, Auburn University)

Flue Cured Tobacco Cooperative Stabilization Corporation hopes you will find some or many of the suggestions to conserve fuel helpful and useful in your everyday farm operations.

2008 FARM BILL CONGRESS OVERRIDES PRESIDENTIAL VETO

On May 22, 2008, Congress enacted a \$307 billion farm five year bill over President Bush's veto. In a statement by the President on the Farm Bill released on May 13, 2008, President Bush said:

"In January 2007, I was hopeful that leaders in Washington could come together on a good farm bill. At that time, my administration had completed more than fifty listening sessions across the country and developed a reform-minded farm bill based on the thousands of comments received. Our proposal would make wise use of the people's money by reforming farm programs, funding emerging priorities and providing a safety-net that better targets benefits for farmers.

I am deeply disappointed in the conference report filed today as it falls

short of the proposal my Administration put forward. If this bill makes it to my desk, I will veto it.

Today's farm economy is very strong and that is something to celebrate. It is also appropriate to better target subsidies and put forth real reform. Farm income is expected to exceed the 10-year average by fifty percent this year, yet Congress' bill asks American taxpayers to subsidize the incomes of married farmers who earn \$1.5 million per year. I believe doing so, at a time of record farm income is irresponsible and jeopardizes America's support for necessary farm programs.

Congress claims that this bill increases spending by \$10 billion, but the real cost is nearly \$20 billion when you include actual government spending that will occur if this bill becomes law. Instead of fully offsetting the increased spending, the bill resorts to a variety of gimmicks, such as pushing commodity prices outside the budget window. Adding nearly \$20 billion in additional costs to the ten-year spending level of approximately \$600 billion is excessive, especially when net farm income is at a record high and food prices are on the rise. My Administration clearly identified numerous reforms as essential to justify even \$10 billion increase in spending, yet this bill includes none of those reforms.

Crop prices have averaged a twenty percent increase since just last year. Still, Congress wants to raise payment rates for most crops and create new subsidies which can be triggered even at very high prices. The bill fails to stop the practice of collecting subsidies even when crops are sold later at a higher price; it restricts our ability to redirect food aid dollars for emergency use in the event of a global food crisis; and it falls short of the Administration's conservation proposals. By increasing trade-distorting subsidies, the bill undermines our ability to open foreign markets to American agricultural goods. The bill creates an egregious new sugar subsidy program that will keep sugar prices high for domestic consumers, while making taxpayers subsidize a handful of sugar growers. These are just a few of the reasons why I cannot support this bill. In the absence of a good farm bill, I call on Congress to extend current law

for at least one year. The Administration's reform-minded proposal would be preferable to current law, but in light of the bill produced by conferees an extension is now the better policy for American agriculture and American taxpayers. It is a far superior option than supporting a bill that increases farm subsidy rates, spends too much and fails to reform farm programs for the future." (Source: www.whitehouse.gov)

The House voted 316 to 108 and the Senate voted 82 to 13 to override the President's veto. Two thirds of the \$307 billion in spending for the farm bill will go for nutritional programs such as food stamps. Another \$40 billion go towards farm subsidies, and \$30 billion is allocated for payments to farms to keep land idle and other environmental programs.

This marks Congress' second override of President Bush's veto of a bill. The other override occurred for a \$23 billion water-project legislation that the president vetoed in 2007.

PRESEASON CHECK LIST FOR FLUE CURED BARNs

Top-quality tobacco is the ultimate goal for each of our members. Prior to the curing season, it is important you check your burner efficiency, curing controls, and potential multiple sources of air leaks in your curing barns. If you have a problem in any of these areas, it could affect your leaf quality plus cost significantly more to cure if the equipment, barn, or both are poorly maintained.

Burner Efficiency: The single greatest reason for burner inefficiency is too little or too much air. The proper air-fuel ratio can best be achieved with a combustion analyzer. When too little air is present, the burner will produce partially unburned fuel or smoke. Smoke not only wastes fuel but can deposit soot inside the heat exchanger reducing the heat exchanger's efficiency and increasing fuel consumption by as much as 8 percent. When too much air is present, the excess air cools the combustion gases (continued on page 4)

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and carries heat out before it can be captured by the heat exchanger. Most fuel dealers have some type of combustion analyzer and the experience to assist with adjusting the heat exchanger burner.

Curing Efficiency: 1.) Load the racks or boxes uniformly with quality tobacco. 2.) Maintain an adequate airflow through the tobacco. 3.) Maintain proper control of the curing conditions. 4.) Make sure that your equipment and barns are energy efficient and well maintained. Growers should target an average curing efficiency of at least 10 pounds of cured leaf per gallon of LP gas, especially if using box barns. Curing efficiencies will be less with lower-stalk leaf and increase with middle- and upper-stalk positions. Not being able to obtain the targeted curing efficiency indicates that some aspect of the system, heat exchanger, curing management, or barn is not operating efficiently. Installation of a gas meter on a single barn can provide accurate fuel consumption and curing efficiency over the entire season.

Energy Efficient Barn: Growers should remember a bulk curing barn is not so much a structure as it is a piece of equipment. Leaky and poorly maintained barns without insulation may waste as much as 60 percent of the fuel. The natural daily cycle of heating and cooling will loosen screws, nails, and staples that secure

**FLUE CURED
TOBACCO
COOPERATIVE
STABILIZATION
CORPORATION
ANNOUNCES
ANNUAL MEETING**

The Board of Directors of Flue Cured Tobacco Cooperative Stabilization Corporation has announced the 2008 Annual Meeting date. The 2008 Annual Meeting is scheduled on Friday, November 14, 2008 at the Holshouser Building on the N.C. State Fair Grounds, 1025 Blue Ridge Road, Raleigh, N.C.

The meeting date is being moved to November in order to be more convenient for tobacco farmers to attend.

Program information will be posted as available.

the roofing and siding. A few minutes spent with a screwdriver and a hammer will be time well spent. Hinges and gaskets on the barn doors should be checked and periodically replaced. It is also a good idea to reseal the foundation joint with a good grade of butyl caulk. A 15 foot-long, ¼ inch gap between the foundation channel and the pad can increase costs by 10 percent. Insulate your barns with ½ to ¾-inch of spray-on polyurethane. Also, the spray-on insulation will seal cracks and openings in the barn. Be careful to keep the insulation off the rails of rack-type barns and other places where it could be rubbed off and mixed with tobacco.

(Source: Grant Ellington, Extension Associate-Biological and Agriculture Engineering, NC State University)