

Fuel monitor study begins

By THERESA SCOTT

Farmers who know when to "shift up and throttle back" can save up to a quarter of their tractor fuel, says a Texas A&M University agricultural engineering professor who plans to help them do it.

"Shifting up and throttling back," or operating a tractor in a higher gear when it is used for light loads (mowing or raking), may reduce fuel consumption as much as 25 percent, said Dr. Bill Stout, program director.

"Tractors and other agriculture vehicles consume about one percent of the nation's energy," Stout said, "and fuel costs to individual farmers are becoming an increasing burden."

The University, its agricultural engineering department and Deere and Co. are working to develop a system that can be attached to the tractor to indicate fuel usage and suggest the most efficient gear ratio.

The system monitors various aspects of the tractor and engine operation such as engine load, speed and fuel consumption.

"Even though 25 percent of one percent doesn't sound like much," Stout said, "it will reduce the fuel cost to farmers as well as save energy."

Engines operate most efficiently within a narrow range of engine loads and speeds, Stout said, and when tractors are operated at part load (a common practice on farms), significant fuel savings can be achieved by shifting up and throttling back.

The idea of "shifting up and throttling back" isn't new, but there has been no reliable way to know when to do it. Several universities and companies are working on the concept, but there is no commercial product available now.

Texas A&M's Tractor Performance Optimization project, which began six months ago, aims at developing such a product.



The study has two basic objectives. First, to determine how tractors are used on Texas farms, especially the load on the tractor. Second, to optimize tractor performance by providing information to the operator so he can use the tractor more efficiently.

Deere and Co. is loaning Texas A&M a John Deere tractor and other equipment needed for the study.

The tractor will be used on Texas A&M experiment station farms early this summer, and researchers hope the tractor will be used on commercial farms by 1983.

Stout's co-workers on the project are Steve Searcy and Wayne LePori, also of the agricultural engineering department.



Help for ag

Reductions key to aid

By CHERYL BURKE

Questions surrounding governmental control of agricultural commodities have risen once again since the Secretary of Agriculture recently announced acreage reduction requirements for major 1982 crops.

"Last year was probably the worst year for agriculture since the depression of the 1930s," said Dr. Clive R. Harston, professor of agricultural economics at Texas A&M University.

The agricultural situation in 1933 was so drastic that Congress passed the Agricultural Adjustment Act as an emergency measure.

The act gave farmers who cut back production a direct support payment and provided for the destruction of surplus products, Harston said, and had a disastrous effect. This effect created a bad image for the program and such a measure has never been repeated.

To be eligible for price support loans and deficiency payments, producers must reduce their 1981 planted acreages of upland cotton by 15 percent, wheat by 15 percent, corn and grain by 10 percent, barley and oats by 10 percent and rice by 15 percent.

The Agriculture Act of 1981 states that reduced acreage, if set aside, must be devoted to conservation. The cost of the four-year act has been estimated at \$12 billion.

Another production control method, tried in 1954, was the Soil Bank Program. Under this program, farmers volunteered to take their entire farms out of production and received support payments for doing so. The phrase "paying not to produce" became associated with this program.

"It had bad publicity, but it was not a bad program because it really makes more economic sense to take out of production the poorest farms and let only the more efficient farms stay in production," Harston pointed out, "but that was not a good political policy."



Other production controls were Public Law 480, which provided for the shipping of surpluses to underdeveloped countries and disaster-stricken areas and the Conservation Reserve Programs, which offered incentives to farmers who set aside land for conservation.

It is highly debatable whether control programs will keep production in line, Harston said, and it is impossible to predict all the factors influencing production, marketing, and prices.

"If there are going to be price supports, then it is absolutely essential that supply is controlled, and if there are no price supports, then the farmers just have to be willing to accept what the market will bring," Harston concluded.

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