

NEW STUDY COMPARES

# Environmental & Economic Impact of Propane Lawnmowers



TURFGRASS PRODUCTION IS A GROWING INDUSTRY IN THE UNITED STATES, CONTRIBUTING AN ESTIMATED \$62 BILLION ANNUALLY TO THE ECONOMY, ACCORDING TO THE STANFORD INSTITUTE. IN TENNESSEE ALONE, THE TURFGRASS INDUSTRY CONTRIBUTES AN ESTIMATED \$1 BILLION ANNUALLY TO THE STATE'S ECONOMY.

**T**urfgrass grows continuously and requires almost year-round maintenance, including the use of lawnmowers typically fueled by gasoline. However, according to the U.S. Environmental Protection Agency, a typical gas-powered lawnmower produces six times more emissions per hour than an automobile. With increasing air pollution regulations, the lawn care industry must prepare to meet consumers' demand for environmental responsibility.

Reducing lawn-mowing emissions might be as easy as switching the fuel source. Propane is a popular alternative fuel that has great potential to reduce emissions generated in the production and maintenance of turfgrass. To document the effectiveness of new propane-fueled mowing equipment, the Propane

Education & Research Council (PERC) and the University of Tennessee will launch a two-year study of the benefits of propane-fueled riding mowers. The research will compare the emissions, economics, and performance of both gasoline and propane-fueled mowers.

"Due to the harmful emissions and nearly year-round use of lawnmowers, this industry may need alternative-fueled mowers to meet the demands of numerous lawns, golf courses, campgrounds, and parks," said Dr. John Sorochan, associate professor of Turfgrass Science & Management, University of Tennessee. "Propane is a logical choice because it releases fewer greenhouse gas emissions than other leading fuels and is readily available."

The new comparison study will monitor

the lawnmowers' emissions, as well as performance, efficiency, and operation costs. Evaluation parameters include mower performance at several cutting heights and speeds. Digital image analysis will record turfgrass quality, color, and percentage of green cover to determine mower performance. In addition, an in-field, side-by-side comparison will be done by a professional lawn and landscape contractor. Each mower will operate between five and eight hours per day for at least five days per week during the study.

To aid the university's research, PERC will provide propane-fueled lawnmowers, as well as funding for the purchase of the emissions testing equipment, fuel, and the cost of maintenance.

"PERC is constantly looking for additional uses for propane that benefit the public," said PERC's Director of Agriculture Programs Mark Leitman. "We hope this partnership with the University of Tennessee will show that propane-fueled lawnmowers can reduce greenhouse gas emissions while lowering operating costs and meeting the need of this large industry."

Propane has several unique benefits that make it an efficient and environmentally friendly fuel choice for many existing applications. It is clean-burning and doesn't leave significant deposits on the engine that can cause premature wear. In the event of a fuel spill, propane will not contaminate the soil or groundwater as do other fuels. Propane fuel may also be stored for long periods of time without breakdown or deterioration.

PERC's vision in agriculture is that, by 2010, the agricultural industry will recognize propane as a preferred energy source offering exceptional value. This value is achieved through a unique combination of product benefits, including cost-effectiveness, efficiency and productivity, reliability, portability, and environmental friendliness.

For more information on PERC and its programs to promote the safe and efficient use of propane in agriculture, call (202) 452-8975 or visit [www.agpropane.com](http://www.agpropane.com).