

Visit Farm Energy at field days

IT'S that time again of long days and high humidity. Must be the season for field days in Iowa!

Look for Iowa State University Extension ag engineer Mark Hanna and yours truly at the following field days this summer. We have partnered with Iowa Learning Farms and the Field Extension Education Lab to share tips for conserving fuel and energy around the farm, especially



Farm Energy

By DANA PETERSEN

for tractors and tillage equipment.
■ July 13, Clayton County. This mid-day event at Craig Embretson's farm near

Elkader will include a complimentary lunch and discussion of no-till practices, fall-seeded cover crops and energy costs.

■ July 13-14, Story County. Join us starting at 8 a.m. for the Crop Management Clinic at the Field Extension Education Laboratory, or FEEL, near Ames. This two-day in-field program will explore the latest research and crop management practices.

■ July 20, Webster County. This eve-

ning event at the Ann Smeltzer Charitable Trust Farm near Otto will include a complimentary supper and discussion with strip-till producers Gary and Dave Nelson.

■ Aug. 25, Boone County. Beginning at 8:30 a.m., join us at the ISU Extension agronomy farm near Ames for demonstrations on strip tillage and precision agriculture, as well as "Ask the expert" regarding your crop concerns.

■ Aug. 30, Taylor County. This evening event at Kelly Tobin's farm near New Market will include a complimentary supper and discussion of no-till practices and cover crops for southwest Iowa.

Are you buying a tractor?

Speaking of tillage, if you're thinking of making an addition to your fleet of farm equipment, a larger tractor may be a true asset, especially if hydraulic power or weight is your primary concern. However, ISU's Mark Hanna cautions that at least 7% of the tractor's power is typically required to overcome the rolling resistance created by the tractor's weight, so don't forget to consider fuel consumption.

The latest ISU Farm Energy publication addresses some fuel efficiency considerations when you're shopping around for a new or used tractor. "Fuel Efficiency Factors for Tractor Selection" (PM 20890) is at farmenergy.exnet.iastate.edu. As illustrated in the publication, data from tractor tests can be used to estimate fuel consumption during the process of selecting a tractor.

New tractors are generally tested in the country where they are made. Tractors produced in the U.S. are tested at the Nebraska Tractor Test Laboratory, or NTTL, at the University of Nebraska-Lincoln. Test measurements include drawbar load tests, lift capacity, hydraulic power, and power and fuel use during PTO operations.

According to Hanna, although your instincts may tell you otherwise, average use for many row crop tractors is about 50% load. This is partly due to matching tillage and planting equipment to row spacing, as well as lighter loads such as mowing or spraying. Even heavy-tillage operations may only use 80% to 90% of power, thereby allowing excess power for tough spots.

In the NTTL reports, "Hp - hr/gal" is horsepower hours per gallon. It is the measurement for fuel use (gallons/hour) listed in PTO tests as well as under fuel consumption in drawbar tests. Hp - hr/gal is a fuel efficiency measurement; greater numbers indicate higher fuel efficiency.

For example, under the "Drawbar Performance" heading, skim down to find "50% pull at reduced engine speed." Assuming use of a reduced throttle setting and a higher gear for reduced loads, the "Hp - hr/gal" value offers a good comparison of fuel efficiency among different tractors. Again, larger numbers indicate better fuel efficiency. For more information, see the full publication from ISU Farm Energy.

Test data for U.S. tractors is available from NTTL. Beginning with models from 1999 and continuing to present day, data is available online in PDF format at tractor.testlab.unl.edu. To order hard copies of individual tractor reports for modern (and older) tractors or to subscribe and receive an annual summary book, visit the website.

Petersen is program coordinator for the ISU Farm Energy Initiative.



Grain Vac - PTO Model



Grain Vac - Diesel Model



On-Farm Grain Storage



Backsaver Auger 10/13/16



Backsaver Auger - Feterl Original 12/14



Backsaver Auger - Feterl Original 12



Conventional Auger



Conventional Auger - Feterl Original



Drive-over Hopper



Utility Auger / Unloading Auger



Rollermill / Hammermill



Grain Cleaner

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