

# WHERE ARE WE ON FUEL EFFICIENCY?

Just ask the Nebraska  
Tractor Test Lab.



*Challenger*



# MEET THE MOST FUEL-EFFICIENT ROW CROP TRACTORS IN THE WORLD.

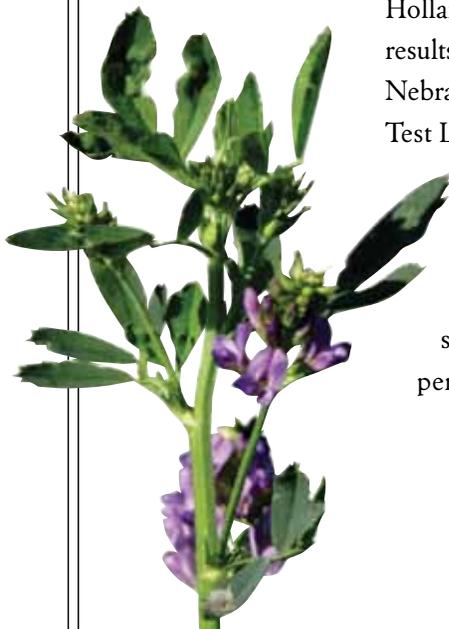
The proof is in. And the word is out. Challenger® MT600C Series tractors, with e3™ SCR clean air technology, are more fuel efficient than any other brand of row crop tractor. Any brand. You name it.

## Measure for measure, we're simply better than the rest.

Challenger row crop tractors proved to be the most fuel efficient\* in head-to-head comparisons when matched against competitors including John Deere®, Case IH® and New

Holland®, based on results published by the Nebraska Tractor

Test Lab—the gold standard when it comes to validating manufacturer specifications and performance data.



MODEL TYPE	MAX PTO HP	HP-HR/GAL	CHALLENGER'S EFFICIENCY OVER COMPETITION
<b>275 PTO HP Class</b>			
Challenger MT675C with CVT	316.60	20.30	
John Deere 8320R with PST	307.31	18.99	6.9%
John Deere 8530 with IVT	312.73	18.78	8.1%
Case IH Magnum 335 with 19 speed	314.96	16.99	19.5%
New Holland T8050 with 19 speed	311.04	17.05	19.1%
<b>250 PTO HP Class</b>			
Challenger MT665C with CVT	290.30	20.16	
John Deere 8430 with PST	289.26	19.39	4.0%
John Deere 8430 with IVT	283.18	18.82	7.1%
Case IH Magnum 305 with 19 speed	299.70	17.61	14.5%
New Holland T8040 with 19 speed	294.37	17.69	14.0%
<b>225 PTO HP Class</b>			
Challenger MT655C with CVT	266.30	20.13	
John Deere 8330 with PST	261.49	18.64	8.0%
Case IH Magnum 275 with 19 speed	271.58	17.92	12.3%
New Holland T8030 with 19 speed	272.95	17.39	15.8%
<b>200 PTO HP Class</b>			
Challenger MT645C with CVT	242.30	19.95	
John Deere 8230 with PST	232.51	18.95	5.3%
Case IH Magnum 245 with 19 speed	242.84	16.52	20.8%
New Holland T8020 with 19 speed	245.61	16.88	18.2%

## e3 clean air technology is keeping its promise. In more ways than one.

Compliance without compromise. That's what we promised when we introduced our row crop tractors with e3 clean air technology last year. And that's just what we're delivering.

Clearly, e3 is proving to be the most farmer-friendly approach towards meeting upcoming EPA Tier IV standards – without trade-offs in power, productivity or operating costs.

Because e3 is an SCR process (Selective Catalytic Reduction),

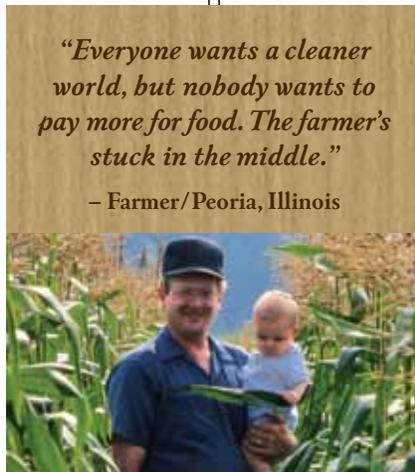
it involves treating

emissions post-

combustion.

It's completely

separate from the main engine functions. So it allows our AGCO SISU POWER™ engines to stay focused on producing efficient power and torque, without having to deal with reducing emissions – thus increasing fuel economy.



## Great minds think alike.

Many of the finest engineering minds in the world agree that SCR technology is the way to go. Which is why it's been adopted by Mercedes-Benz®, Volvo® and Mack Trucks®. And today there are over 50,000 heavy-duty SCR clean diesel trucks throughout Europe and even in the Arctic Circle.

## Real results. Real savings.

The numbers don't lie. Thanks to e3 clean air technology, Challenger offers the most fuel-efficient line of row crop tractors on the market today. And that means real input savings, row after row after row. For more information, go to [www.agcocorp.com/e3](http://www.agcocorp.com/e3) or visit your local Challenger dealer.



**"I need technology that meets EPA standards.**

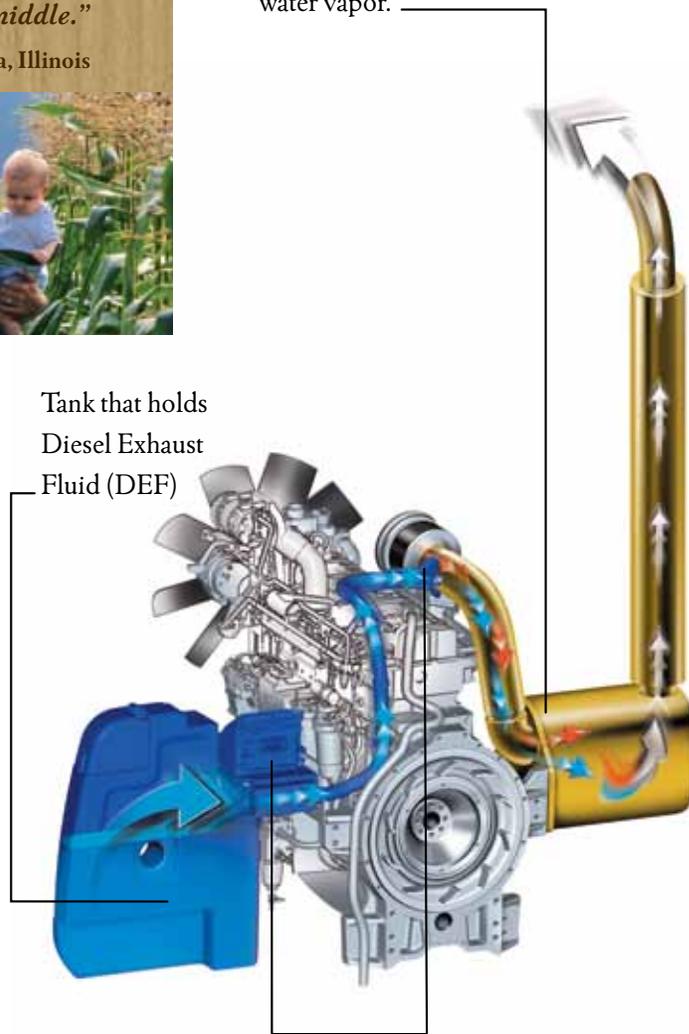
**But first it has to meet mine."**

Farmer / Nebraska

## e3 technology at-a-glance

Our AGCO SISU POWER diesel engines are optimized for high performance, low particulate emissions and low fuel consumption.

In the catalyst chamber, nitrogen oxides (NOx) are transformed into harmless nitrogen gas and water vapor.



The pump and injection system unit reacts to the emissions output of the engine by continuously varying the amount of DEF added to the exhaust stream—effectively maintaining control of emissions released into the environment.

# KNOWLEDGE IS POWER. AND NOW YOU KNOW.

**Q:** In your chart, you compare fuel economy based on horsepower-hours/gallon at Max PTO power. Why do you use that measure?

**A:** This measurement provides the best indication of the fuel efficiency of an engine and best approximates the typical loads on an engine working in the field.

**Q:** Why not compare based on gallons per hour or some simpler method?

**A:** A simple gallons per hour measurement doesn't take into account the amount of power produced by an engine. A lower horsepower engine will often burn less fuel per hour, but simply can't do as much work in a given amount of time. Ultimately, the best way to compare the fuel efficiency of one tractor to another is in the field, comparing the amount of fuel each tractor uses in a day relative to the amount of work they each accomplish.

**Q:** How do these savings translate to real dollars?

**A:** To estimate the savings you can achieve, multiply your annual fuel usage (hourly consumption x annual hour usage) times the cost/gallon of diesel fuel times the percentage gain in fuel efficiency (from chart). For example, tests prove our Challenger MT675C 275 PTO HP tractors to be 19.5% more efficient than the Case IH Magnum 335. Based on this, a farmer who currently uses 6,000 gallons of fuel per year and pays \$2.75/gal. would realize \$3,217 per year in fuel savings.

**Q:** Were other tests done? How did AGCO engines perform on other tests?

**A:** All four AGCO models completed a variety of standard tests including specific fuel consumption at both rated PTO horsepower and at max PTO power. All were proven to be more fuel efficient than competitive tractors in their respective classes from Deere, Case IH and New Holland.

**Q:** How will the results I see in the field compare to the results reported here?

**A:** They'll only get better. Nebraska Tractor Test Lab results are an excellent means of determining the relative efficiency of engines. But with respect to the performance of the total vehicle, the results you can expect in the field from Challenger MT600C Series row crop tractors are significantly enhanced, due to the efficiency of our CVT transmission – the most proven variable transmission on the market today.

**Q:** AGCO's results were based on tractors equipped with CVT transmissions. How do your CVT transmissions compare to other transmissions?

**A:** The AGCO CVT efficiently transfers power to the ground by eliminating the parasitic losses associated with shifting and clutching, combined with the benefit of being able to precisely match the ground speed the application requires. Conventional powershift transmissions employ multiple clutch packs for shifting and have gaps between gears that limit ground speed choices. And unlike other variable transmissions, AGCO's CVT transmissions have no clutches to rob power.

**Q:** Where can I get more information?

**A:** You can access the Nebraska Tests online at <http://tractortestlab.unl.edu/>. Or visit our e3 website at [www.agcocorp.com/e3](http://www.agcocorp.com/e3) for test results and to use our e3 cost calculator.

*\* Based on Nebraska OECD Tractor Tests of fuel consumption at Max PTO Power (HP-Hr/Gal) and Rated PTO HP (HP-Hr/Gal). Comparisons were between four model categories of row crop tractors 200 to 300 PTO HP.*



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[www.agcocorp.com/e3](http://www.agcocorp.com/e3)