

Agricultural Irrigation Pump Fuel Consumption Tests

These tests were conducted on independent agricultural farms in Nebraska.

The following is a summary of irrigation well demonstrations, 13 in total, using Fuel Magic at 1:3000 treatment ratio.

Eleven operated center pivot systems, one was a flood and one open discharge. Irrigation wells operate on a constant load in a relatively clean environment with routine oil changes averaging 100 hours of operation.

	<u>ENGINE TYPE</u>	<u>FUEL CONSUMED PER HOUR</u>	
John Deere 6414T turbocharged			
Baseline:	124.5 hrs. 463 gal. = 3.72 gal/hr. rate		
With Additive:	84.3 hrs. 315 gal. = 3.73 gal/hr. rate		Result: 0.0% less
Isuzu			
Baseline:	848 hrs. 3020 gal. = 3.52 gal/hr. rate		
With Additive:	189 hrs. 639 gal. = 3.38 gal/hr. rate		Result: 4.0% less
John Deere 466T turbocharged			
Baseline:	76.1 hrs. 517 gal. = 6.79 gal/hr. rate		
With Additive:	88.8 hrs. 572 gal. = 6.44 gal/hr. rate		Result: 5.0% less
Caterpillar 3208			
Baseline:	112.4 hrs. 538 gal. = 4.78 gal/hr. rate		
With Additive:	183.7 hrs. 828 gal. = 4.51 gal/hr. rate		Result: 5.8% less
John Deere 7.6T turbocharged			
Baseline:	102.0 hrs. 590 gal. = 5.78 gal/hr. rate		
With Additive:	94.4 hrs. 507 gal. = 5.37 gal/hr. rate		Result: 7.0% less
John Deere 6404 TR-50 turbocharged			
Baseline:	113.0 hrs. 673.5 gal. = 5.96 gal/hr. rate		
With Additive:	116.4 hrs. 615 gal. = 5.28 gal/hr. rate		Result: 11.0% less
John Deere - turbocharged			
Baseline:	200.0 hrs. 814 gal. = 4.07 gal/hr. rate		
With Additive:	215.0 hrs. 790 gal. = 3.60 gal/hr. rate		Result: 11.5% less
Detroit Diesel 8.2 liter			
Baseline:	147.2 hrs. 561 gal. = 3.80 gal/hr. rate		
With Additive:	113.1 hrs. 378 gal. = 3.34 gal/hr. rate		Result: 12.0% less
John Deere 6404 DR turbocharged			
Baseline:	56.42 hrs. 220.5 gal. = 3.91 gal/hr. rate		
With Additive:	109 hrs. 374 gal. = 3.43 gal/hr. rate		Result: 12.8% less
John Deere 359T turbocharged			
Baseline:	166.45 hrs. 727.0 gal. = 4.37 gal/hr. rate		
With Additive:	163.1 hrs. 612 gal. = 3.75 gal/hr. rate		Result: 14.0% less
Cummins - turbocharged			
Baseline:	25.9 hrs. 163.5 gal. = 6.31 gal/hr. rate		
With Additive:	53.6 hrs. 271 gal. = 5.05 gal/hr. rate		Result: 20.0% less
POWER GENERATORS			
Caterpillar 3406 - turbocharged - (runs 7 pumps @4500 gal. water per minute)			
Baseline:	70.75 hrs. 853 gal. = 12.06 gal/hr. rate		
With Additive:	92.67 hrs. 869 gal. = 9.38 gal/hr. rate		Result: 22.0% less
Detroit Diesel 6-71 Gear Set 50KW			
Baseline:	1353 hrs. 6900.3 gal. = 5.1 gal/hr. rate		
With Additive:	1128 hrs. 5188.8 gal. = 4.6 gal/hr. rate		Result: 10.0% less