

ASAE D497.7 MAR2011 (R2015)
Agricultural Machinery Management Data



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ASABE, 2950 Niles Road, St. Joseph, MI 49085-9659, USA, phone 269-429-0300, fax 269-429-3852, hq@asabe.org

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Developed by the Farm Machinery Management Committee; approved by the Power and Machinery Division Standards Committee; adopted by ASAE February 1963 as ASAE D230; revised December 1965, February 1971; revised editorially December 1974; revised December 1977; revised editorially September 1979; Table 1 corrected December 1981; reaffirmed December 1982; revised December 1983; reaffirmed December 1988; revised March 1990 and redesignated ASAE D497; revised editorially December 1990; revised March 1993, March 1994; revised editorially January 1995; revised November 1996, January 1998; revised editorially March 1999, February 2000; reaffirmed February 2003; revised February 2006, June 2009, March 2011; reaffirmed December 2015.

Keywords: Costs, Efficiency, Energy, Fuel, Machinery, Management, Power, Tractor

1 Purpose and Scope

1.1 These data include representative values of farm machinery operation parameters as an aid to managers, planners, and designers in estimating the performance of field machines.

1.2 These data are intended for use with ASAE EP496. Some data are reported in equation form to permit use in computer and calculator mathematical models.

1.3 These data report typical values for tractor performance, implement power requirements, repair and maintenance costs, depreciation, fuel and oil use, reliability for field operation, probable working days, and timeliness coefficients as measured by experiment, modeling, or survey.

1.4 Where possible, variation in sampled data is reported using the range, a standard deviation, SD, or a coefficient of variation, CV, defined as SD/mean. In a normal distribution 68% of the population should be contained in a range of ± 1 SD about the mean, and 95% will be contained in a ± 2 SD.

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this Data. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Data are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Standards organizations maintain registers of currently valid standards.

2.1 ASAE S296.5 DEC03, *General Terminology for Traction of Agricultural Traction and Transport Devices and Vehicles*

2.2 ASAE S313.3 FEB04, *Soil Cone Penetrometer*

2.3 ASAE S495.1 NOV2005, *Uniform Terminology for Agricultural Machinery Management*

2.4 ASAE EP496.3 FEB2006, *Agricultural Machinery Management*