ASABE S565 OCT2005 (R2015)
Agricultural Ventilation Constant Speed Fan Test Standard

American Society of Agricultural and Biological Engineers

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Proposed by the ASABE Electrical Utilization & Energy Applications Committee and developed by the ASABE Fan Testing Subcommittee. Adopted by ASABE October 2005; reaffirmed January 2011, reaffirmed October 2015.

Keywords: Energy efficient, Fan test, Ventilation

1 Purpose and scope

1.1 This standard covers the testing procedure and performance presentation of wall mounted greenhouse, poultry and livestock ventilation fans, including manure storage pit fans.

1.2 This standard applies to constant speed, un-ducted wall mounted fans used for air exchange purposes.

1.3 Air circulating fans are not covered by this standard.

1.4 Airflow rate (m^3/hr, cfm) and the Ventilation Efficiency Rating (m^3/hr/W, cfm/W) are the two main performance parameters.

1.5 This standard is a complimentary standard to ANSI/AMCA 210-99 ANSI/ASHRAE 51-1999 but focused on constant speed agricultural ventilation fans.

2 Normative references

2.1 At the time of publication the standards referenced were up to date and valid. All standards are subject to revision, and parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below.

2.1.1 ANSI/ASHRAE 51-1999 (ANSI/AMCA 210-99) *Laboratory Methods of Testing Fans for Aerodynamic Performance Rating*

2.1.2 ANSI/ASAE S493.1 JUL03, *Guarding For Agricultural Equipment*

2.1.3 ASAE EP566, *Guidelines for Selection of Energy Efficiency Agricultural Ventilation Fans*

3 Definitions

3.1 Agricultural ventilation fan: An axial flow fan system consisting of a propeller, housing, electric motor, shutter or back-draft damper, guard and all other components regularly supplied. These un-ducted fans are used for air exchange purposes.

3.2 Air density: The mass per unit volume of air (kg/m^3 or lb/ft^3).

3.3 Airflow: The volume of air moved by the fan (m^3/hr or cfm).

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