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Equipment for crop protection — Method for measurement of potential spray drift from horizontal boom sprayers by the use of a test bench

Matériel de protection des cultures — Méthode de mesurage de la dérive potentielle des pulvérisateurs à rampe horizontale au moyen d'un banc d'essai

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 6, *Equipment for crop protection*.

Introduction

In recent years, spray drift control has become more and more relevant and buffer zones to reduce potential impact of spray drift have been widely introduced.

Normally, the determination of buffer zone widths or other regulations take into account the type of spraying equipment used for pesticide application and its spray drift or potential spray drift.

This International Standard is aimed at defining a test procedure to assess potential spray drift from horizontal boom sprayers, using an ad hoc test bench, in order to get a quick and simple assessment of this spraying equipment.

This test procedure can be used as an alternative method for the spray drift assessment obtained with the field measurement of spray drift (ISO 22866), or to the laboratory measurement of spray drift from nozzles (ISO 22856).

The application of this International Standard may support advisory services for farmers, sprayer manufacturers, product development and certification and classification schemes.

Equipment for crop protection — Method for measurement of potential spray drift from horizontal boom sprayers by the use of a test bench

1 Scope

This International Standard provides a test method to measure spray sedimentation from horizontal boom sprayers using a test bench. The sedimentation measure gives a value for potential spray drift. These measurements can be used to compare different sprayer setups on the same sprayer.

This International Standard is applicable to mounted, trailed and self-propelled horizontal boom sprayers used in arable crops; and horizontal boom sprayers used for weed control in orchards/vineyards and spray application on horticultural crops.

This International Standard is intended for booms using a uniform set of spray generators. If intended for spray drift classification of the sprayer, the comparison is limited to nozzle type, spray pressure and boom height.

NOTE Further investigations and tests are on-going to consider other parameters for classification aims (e.g. air assisted system, forward speed, nozzle spacing and orientation).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5681, *Equipment for crop protection — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions in ISO 5681 and the following apply.

3.1
sprayer setup
combination of nozzle and boom parameters and sprayer adjustment on a given sprayer

Note 1 to entry: Examples of setting parameters to be considered are nozzle type and size, nozzle spacing, orientation, boom height, forward speed, spray pressure, and spray deposition assistance (e.g. air assistance or shielding).

3.2
potential spray drift
percentage of initial spray volume that remains suspended in the air after the sprayer passage and which represents the fraction of spray liquid susceptible to drift out of the treated area by the action of air currents during the application process