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**Agricultural irrigation equipment —  
Centre-pivot and moving lateral irrigation  
machines with sprayer or sprinkler  
nozzles — Determination of uniformity of  
water distribution**

*Matériel agricole d'irrigation — Pivots et rampes frontales équipés de  
buses d'arrosage ou d'aspenseurs — Détermination de l'uniformité de la  
distribution d'eau*



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## Contents

Page

Foreword .....	iv
<b>1 Scope</b> .....	<b>1</b>
<b>2 Terms and definitions</b> .....	<b>1</b>
<b>3 Test conditions and equipment</b> .....	<b>2</b>
<b>3.1 Collectors</b> .....	<b>2</b>
<b>3.2 Wind</b> .....	<b>3</b>
<b>3.3 Evaporation</b> .....	<b>4</b>
<b>3.4 Elevation</b> .....	<b>4</b>
<b>4 Test procedures</b> .....	<b>4</b>
<b>5 Calculations</b> .....	<b>5</b>
<b>6 Evaluation</b> .....	<b>6</b>
<b>7 Reporting of test results</b> .....	<b>7</b>
<b>Annex A (normative) Sample data sheets and test report forms for required information</b> .....	<b>10</b>
<b>Bibliography</b> .....	<b>16</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 11545 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 18, *Irrigation and drainage equipment and systems*.

This third edition cancels and replaces the second edition (ISO 11545:2001), which has been technically revised.

# Agricultural irrigation equipment — Centre-pivot and moving lateral irrigation machines with sprayer or sprinkler nozzles — Determination of uniformity of water distribution

## 1 Scope

This International Standard specifies an in-field method for determining the uniformity of water distribution in the field from centre-pivot and moving lateral irrigation machines equipped with sprayer or sprinkler nozzles. The calculation of the coefficient of uniformity is also specified.

This International Standard is applicable to agricultural irrigation machines for which the water application device is more than 1,5 m above the soil surface and for which the water distribution from successive devices overlaps.

It is not applicable to the evaluation of centre-pivot irrigation machines equipped with various corner arm application devices.

## 2 Terms and definitions

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

### 2.1

#### **centre-pivot irrigation machine**

automated irrigation machine consisting of a number of self-propelled towers supporting a pipeline rotating around a pivot point and through which water supplied at the pivot point flows radially outward for distribution by sprayers or sprinklers located along the pipeline

### 2.2

#### **moving lateral irrigation machine**

automated irrigation machine consisting of a number of self-propelled towers supporting a pipeline transverse to the direction of travel moving in such a way that the pipeline remains generally in a straight line, traversing the field in a straight path, and through which water supplied to the irrigation machine at any point along the pipeline is distributed over a basically rectangular area by sprayers or sprinklers located along the pipeline

### 2.3

#### **sprinkler**

water-distribution device of a variety of sizes and types

EXAMPLE Impact sprinkler, fixed nozzle sprinkler, irrigation gun.

### 2.4

#### **irrigation sprayer**

device that discharges water in the form of fine jets or in a fan shape without rotational movement of its parts

### 2.5

#### **sprinkler package**

collection of water-distribution devices fitted to the outlets of either centre-pivot or moving lateral irrigation machines, either with or without moving components, piping, pressure or flow-control devices and supporting plumbing designed for a specific irrigation machine and set of operating parameters