INTERNATIONAL STANDARD

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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'asperseurs — Méthode de détermination de l'uniformité de la distribution d'eau

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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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard 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 second edition cancels and replaces the first edition (ISO 11545:1995), which has been technically revised.

Annex A forms a normative part of this International Standard.

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

This International Standard is applicable to 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.

This International Standard 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 International Standard, 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 sprayer or sprinkler nozzles located along the pipeline

2.2
moving lateral irrigation machine
automated irrigation machine consisting of a number of self-propelled towers supporting a pipeline 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 flows for distribution over a basically rectangular area by sprayer or sprinkler nozzles located along the pipeline

2.3
sprinkler package
collection of devices fitted to the outlets of either centre-pivot or moving lateral irrigation machines, potentially consisting of sprayers or sprinklers and potentially including piping, pressure or flow-control devices and supporting plumbing designed for a specific irrigation machine and set of operating parameters

2.4
endgun
set of one or more sprayer or sprinkler nozzles installed on the distal end(s) of a centre-pivot or moving lateral irrigation machine to increase the irrigated area, and usually operating for only a portion of the time to conform to system boundaries

2.5
test pressure
pressure of a centre-pivot or moving lateral irrigation machine measured at the first available outlet downstream from the elbow or the tee at the top of the inlet structure