

# Evaluation of new drift-reducing equipment

**Classification criteria and procedure in Belgium**



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## DOCUMENT INFORMATION

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# 1 Introduction

The Federal Public Service Health, Food Chain Safety and Environment has drawn up a list of drift-reducing equipment, which is included as an annex to the Ministerial Decree establishing drift-reducing means or measures of 1 April 2021. This Decree was officially published on 23 April 2021 in the Belgian Official Gazette. The attached list is also available via Phytoweb (see brochure "[Bescherming van het oppervlaktewater bij het gebruik van gewasbeschermingsmiddelen](#)"). The aim is an annual update.

The present document is mainly intended for companies producing spraying material and for third parties. It explains the classification criteria and the procedure to 'register' drift-reducing nozzles and techniques.

The Plant protection and Fertilising Products Service is responsible for the approval of plant protection products and for publication of the list of registered drift-reducing equipment. Drift-reducing equipment classification is dealt with by the Technical Committee "Drift Reduction" (hereafter referred to as 'committee'). The members of this committee are listed under point 4.

Drift-reducing equipments include not only sprayers themselves, equipped with specific features to reduce drift, but also surrounding elements, for instance, hedges in orchards.

In field crops, there are three drift-reduction categories for drift-reducing equipment or techniques : 50%, 75% and 90%. For orchard crops, there is a fourth category (99%). No drift reduction is allocated for drift reduction potential beneath 50%.

## 2 Classification criteria

The Belgian classification is generally based on the classification work that has been made in adjoining countries (Germany, the Netherlands, the United Kingdom and France); these classifications are taken into account as long as the used test conditions are compatible with the Belgian reference conditions (as defined below). In a second approach, the committee uses tests carried out in accordance with international ISO reference norms. When simplified test protocols will be recognized internationally, they will be taken into account for equipment classification.

## 2.1 Drift-reducing nozzles classification

The Belgian classification of spraying nozzles is firstly based on the classification work that has been done in Germany, in the Netherlands and in the United Kingdom. The classification of France could also be taken into account. However, it is important to note that France uses a different reference than Belgium. Hence, a conversion to the Belgian reference is necessary. In principle, the Technical Committee follows the most stringent of the available foreign classifications.

### 2.1.1 Nozzles made for field crop application (field crops, vegetables, strawberries, meadows...)

As far as equipment for field crops is concerned, nozzles are classified according to their drift-reducing potential compared to a reference nozzle used under given reference conditions. The Belgian reference nozzle is a standard ISO 03 nozzle and its work pressure is 3 Bar. After a comparison with that reference nozzle, nozzles are allocated to three different drift-reduction classes (50, 75 et 90%) when used in the representative conditions for Belgium (boom height = 50 cm and work pressure = 3 bar). The Belgian classification system only specifies the drift reduction class of nozzles with spraying-angles of 110/120°. The drift reduction class of the 110/120° nozzles also applies to nozzles with smaller spraying angles of 80°/90° (but not vice versa).

### 2.1.2 Nozzles used for orchard crops

As far as orchard spraying is concerned, there is no consensus at international level concerning nozzle, pressure and reference spraying equipment. Currently, a working pressure of 6 bar is considered the Belgian reference condition.

The Belgian classification system does not take nozzles spraying-angles into account. We consider that the spray of 110/120° nozzles should not hit parts of the sprayer frame. We also consider that the spraying jet should not go above the maximal height of the trees to be treated. For that purpose, users are invited to place an off-centre spray nozzle or an 80/90° angle nozzle at the highest spray point.

## 2.2 Classification of techniques and environment factors reducing drift

Beside the use of drift-reducing nozzles, there are also other techniques to reduce drift (for field crops: using an air-assisted sprayer, in-line spraying, protecting cover, etc; for orchard

crops: using a tunnel, etc.). The Technical Committee has specified drift classes for those different techniques. The committee has planned to combine those different techniques with drift-reducing nozzles.

Beside drift-reducing nozzles and techniques, surrounding elements can also reduce drift. The use of hail nets or the presence of hedges in orchards contributes towards limiting drift. Similarly, a drift-reduction class is assigned for these techniques.

For the time being, we take the presence of hedges into account to calculate the drift classes only for air-assisted, horizontal airflow or tunnel orchard sprayers.

## 3 Classification procedure

There are two different ways to update the list with registered drift-reducing equipment: (1) direct application by manufacturer/third party or (2) at the initiative of the committee.

### 3.1 Direct application by manufacturer/third parties (nozzles and techniques)

Manufacturers/third parties are invited to submit reports on the tests carried out according to the international ISO reference norms or to the guidelines applying in the Netherlands, Germany, the United Kingdom and/or France if they want to see their material appear in the tables. It is important that the used test conditions in these reports are compatible with the Belgian reference conditions: working pressure of 3 bar and a boom height of 50 cm (for orchards, a working pressure of 6 bar applies). The applicant should submit a complete application in electronic format, containing the following elements:

- test reports showing the drift-reducing character of the equipment concerned using the normative reference system (a detailed description of the test protocol and a clear presentation of measure results are essential). Tests must be carried out by reference test centres;
- existing classification in all relevant adjoining countries where the material is already authorized (NL and/or DE and/or UK, and/or FR); apart from a reference to competent authorities' websites, a clear overview of the classification should be provided (e.g. by highlighting the concerned equipment in the lists of the adjoining countries)
- technical and commercial information on the equipment in question;

- a classification proposal allowing to include that new equipment in the Belgian classification: applicants are asked to insert their proposal in the existing Belgian classification table (template at the end of this document).

Only complete applications will be considered. The committee recommends applicants to wait until their material is classified in the adjoining countries before applying in Belgium. The submitted application will be evaluated by the committee and the applicant will be informed as soon as a decision is made (the committee will meet once or twice a year). On average once a year, all approved applications will be implemented by publishing the updated list in the Belgian Official Gazette (and on Phytoweb). Approval of the new equipment is only valid after official publication.

Third parties may also apply for classification if they have Belgian or foreign tests allowing classification of new equipment that does not yet appear in the Belgian classification.

## **3.2 Applications at the initiative of the technical committee “Drift reduction” (nozzles and techniques)**

If appropriate or needed, the committee can expand the list by adding nozzles/techniques based on 'mutual recognition' or evaluating and supporting proposals supported by the agricultural sector.

Similar rules as described for the manufacturers/third parties apply when the committee wishes to add nozzles/techniques based on 'mutual recognition'.

The committee may also take scientific literature into account to classify equipments. Scientific literature provides other information than the information given by the determinist approach of ISO tests.

## **4 Contact point and members of the Technical Committee “Drift Reduction”**

The applications have to be submitted to:

[www.fytoweb.be](http://www.fytoweb.be)

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