



TEST REPORT

of the
Julius Kühn-Institut
Federal Research Institute
for Cultivated Plants, Braunschweig



Flatfan nozzle Hardi NanoDrift ND 03
(Plastic, blue)

Approved for spraying field crops

Applicant and Manufacturer

Hardi GmbH
Schaumburger Strasse 17
30900 Wedemark

Approved on
8 January 2020

Assessment

The flatfan nozzle Hardi NanoDrift ND 03 (Plastic, blue) was tested without accessories. The nozzle is suitable for spraying field crops, provided that the following technical requirements are fulfilled:

1. Installation in a spray boom with a sufficient and a steady amount of liquid flow,
2. 500 mm nozzle spacing,
3. 50 cm between nozzles and spray target (consistency of evenness of cross distribution proved satisfactory at a distance range from 40 cm to 60 cm),
4. Spray pressure – measured in front of the nozzle – between 1.0 and 6.0 bar; liquid volume flow per nozzle as stated in table below.

Suitable precautions should be taken to assure that the nozzles do not get blocked up or drip when in use. The nozzles have a key width of 8 mm. The colour coding of the nozzle comply with standard ISO 10625.

Pressure (bar)	Liquid flow volume without accessories (l/min)	Max. deviation of single nozzle flow from the dosage tables	Evenness of cross distribution at (cm) 40 / 50 / 60 (Vk %)	Droplet spectrum (ISO 25358)
1.0	0.70	2.51 %	4.6 / 8.6 / 6.6	ultra coarse
1.5	0.86	-	3.6 / 2.0 / 4.1	-
2.0	0.99	-	- / 4.4 / -	extreme coarse
3.0	1.21	3.00 %	6.0 / 6.0 / 4.5	very coarse
4.0	1.40	3.03 %	- / 5.4 / -	very coarse
5.0	1.57	-	- / - / -	very coarse
6.0	1.72	-2.97 %	- / 4.0 / -	very coarse

Loss reducing properties

Included in the list „Loss reducing equipment“ (9 April 2020)

Drift reducing classification	Type of equipment and drift reducing parts	Regulations for use
50 %	Fieldsprayers with nozzle Hardi NanoDrift ND 03	First 20 m from field edge spraying with max. 6.0 bar, Nozzle height above target 50 cm.
75 %	Fieldsprayers with nozzle Hardi NanoDrift ND 03	First 20 m from field edge spraying with max. 2.0 bar, nozzle height above target 50 cm.
90 %	Fieldsprayers with nozzle Hardi NanoDrift ND 03	First 20 m from field edge spraying with 1.0 bar, nozzle height above target 50 cm.

Field test

The nozzles were used in the year 2019 on a total of 138 hectares, a sufficient effect of the plant protective measures was confirmed.

Basics for testing

The tests were carried out on basis of the Regulations for Testing Plant Protection Equipment (Guideline 2-1.1:2013) and of ISO 5682-1:1999. The requirements of EN 16119-2:2013 and of JKI-Guideline 1-2.1:2013 were fulfilled.

Field testing:

Landwirtschaftskammer Niedersachsen
Pflanzenschutzamt
Wunstorfer Landstraße 9
30453 Hannover

Technical testing:

Institut für Anwendungstechnik im
Pflanzenschutz des
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