



TEST REPORT

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



Flatfan nozzle Hypro Guardian Air 05
(Plastic, brown) identical with John Deere PSLDAQ1005

Approved for spraying field crops

Applicant and Manufacturer
Hypro EU Limited
Station Road, Longstanton
UK – Cambridge CB24 5 DS

Approved on
11 January 2010

Assessment

The flatfan nozzle Hypro Guardian Air 05, identical with John Deere PSLDAQ1005 (Plastic, brown) was tested without accessories. The nozzle is suitable for spraying field crops, proved 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 dimensions of the nozzle tip comply with standard ISO 10626. The offset angle for mounting the nozzles to the spray boom is 10°.

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 (BCPC-Standard)
1.0	1.15	- 1.07 %	2.1 / 2.0 / 4.0	very coarse
2.0	1.62	-	- / 1.6 / -	very coarse
3.0	1.99	-1.96 %	1.7 / 2.0 / 2.0	coarse
4.0	2.30	-	- / 2.2 / -	coarse
5.0	2.57	-	- / 2.1 / -	coarse
6.0	2.81	-2.16 %	- / 1.8 / -	coarse

Loss reducing properties

Included in the list „Loss reducing equipment“ (15 April 2016)

Drift reducing classification	Type of equipment and drift reducing parts	Regulations for use
50 %	Fieldsprayers with nozzle HYPRO Guardian Air 04 or John Deere PSLDAQ1005	First 20 m from field edge spraying with max. 2.5 bar, nozzle height above target 50 cm
75 %	Fieldsprayers with nozzle HYPRO Guardian Air 04 or John Deere PSLDAQ1005	First 20 m from field edge spraying with max. 1.5 bar, nozzle height above target 50 cm

Field test

The nozzles were used in the year 2009 on a total of 91 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 (JKI-Guideline 2-1.1:2013) and of ISO 5682-1:1999. The requirements of ISO 16119-2:2013 and of JKI-Guideline 1-2.1:2013 were fulfilled.

Field testing:

Landwirtschaftskammer Niedersachsen
- Pflanzenschutzamt –
Wunstorfer Landstr. 9
30453 Hannover

Technical testing:

Institut für Anwendungstechnik im
Pflanzenschutz des
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