



TEST REPORT

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



**Flatfan nozzle Hypro Guardian Air 03
(plastic, blue) identical with John Deere PSLDAQ1003**

Approved for spraying field crops

Applicant and Manufacturer
HYPRO EU LTD
Station Road
Longstanton
CAMBRIDGE CB4 5DS - GB

Approved on
21 Januar 2009

Assessment

The flatfan nozzle Hypro Guardian Air 03, identical with John Deere PSLDAQ1003 (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 1.5 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)
1.5	0.84	- 4.89 %	3.6 / 5.8 / 5.3	very coarse
2.0	0.97	-	3.4 / 3.4 / -	very coarse
3.0	1.19	- 3.81 %	4.0 / 3.2 / 2.5	coarse
4.0	1.37	-	4.6 / 2.8 / -	coarse
5.0	1.53	-	- / 2.6 / -	coarse
6.0	1.68	- 1.18 %	- / 2.3 / -	coarse

Field test

The nozzles were used in the year 2008 on a total of 600 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:

Dienstleistungszentrum Ländlicher Raum
Rheinhessen-Nahe-Hunsrück
Rüdesheimer Str. 60-68
55545 Bad Kreuznach

Technical testing:

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