



# TEST REPORT

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



**Double - Flatfan nozzle John Deere PSGATCQ2003  
(ceramics, plastic-coated, blue)**

**Approved for spraying field crops**

**Applicant**  
Hypro EU LTD  
Station Road  
Longstanton  
CB24 3DS CAMBRIDGE, UK

**Manufacturer**  
Lechler GmbH  
Präzisionsdüsen – Tropfenabscheider  
Ulmer Strasse 128  
72555 Metzingen

**Approved on**  
**8. April 2021**

## Assessment

The double-flatfan nozzle John Deere PSGATCQ2003 (ceramics, plastic-coated, blue) was tested with filter and bayonet cap. 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 nozzles have a key width of 8 mm. The dimensions of the nozzle tip comply with standard ISO 8169. 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 (BCPC-Standard)
1.5	0.84	2.56%	7.2 / 3.4 / 4.9	very coarse
2.0	0.97	-	-	very coarse
3.0	1.18	-1.37%	5.8 / 2.5 / 4.9	very coarse
4.0	1.37	-	- / 3.7 / -	very coarse
5.0	1.53	-2.48 %	- / 5.5 / -	coarse
6.0	1.68	-1.37 %	2.9 / 3.5 / 6.5	coarse

## Loss reducing properties

Included in the list „Loss reducing equipment“ (as of 15 July 2021)

Drift reducing classification	Type of equipment and drift reducing parts	Regulations for use
50 %	Fieldsprayers with John Deere PSGATCQ2003	First 20 m from field edge spraying with max. 3.0 bar, nozzle height above target 50 cm.
75 %	Fieldsprayers with John Deere PSGATCQ2003	First 20 m from field edge spraying with 1.5 bar, nozzle height above target 50 cm.

## 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:

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## Technical testing:

Institute for Application Technique in  
Plant Protection  
Messeweg 11-12,  
38104 Braunschweig

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