



TEST REPORT

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



**Injector - Flatfan nozzle John Deere LDAC 90-02
(ceramics, plastic-coated, yellow)**

**Approved for spraying field crops
with 250 mm nozzle spacing**

Applicant
John Deere
Fabriek Horst B.V.
Energistraat 16
5961 PT Horst

Manufacturer
Lechler GmbH
Präzisionsdüsen - Tropfenabscheider
Ulmer Strasse 128
72555 Metzingen

Approved on
31. January 2022

Assessment

The injector flatfan nozzle John Deere LDAC 90-02 (ceramics, plastic-coated, yellow) is identical to the Lechler IDK 90-02 C nozzle (approval no. G 2052) and 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. 250 mm nozzle spacing,
3. 40 cm between nozzles and spray target (consistency of evenness of cross distribution proved satisfactory at a distance range from 30 cm to 50 cm),
4. Spray pressure – measured in front of the nozzle – between 1.5 and 8.0 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) 30 / 40 / 50 (Vk %)	Droplet spectrum (BCPC-Standard)
1.5	0.55	-1.03 %	8.2 / 5.3 / 7.9	very coarse
2.0	0.63	-	- / - / -	very coarse
3.0	0.78	-3.63 %	- / 6.6 / -	very coarse
4.0	0.90	-	3.9 / 5.1 / 5.2	very coarse
5.0	1.00	-3.85 %	- / 3.7 / -	very coarse
6.0	1.10	-	- / 3.6 / -	very coarse
7.0	1.18	-	- / - / -	coarse
8.0	1.27	-1.92 %	- / 4.2 / -	coarse

Loss reducing properties

Included in the list „Loss reducing equipment“ (as of 11 May 2022)

Drift reducing classification	Type of equipment and drift reducing parts	Regulations for use
90 %	Fieldsprayers with a distance from nozzle to nozzle of 25 cm with John Deere LDAC 90-02	First 20 m from field edge spraying with max. 3.0 bar, nozzle height above target 40 cm.
95 %	Fieldsprayers with a distance from nozzle to nozzle of 25 cm with John Deere LDAC 90-02	First 20 m from field edge spraying with max. 1.6 bar, nozzle height above target 40 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:

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