TEST REPORT

of the

Julius Kühn-Institut

Federal Research Institute
for Cultivated Plants, Braunschweig

Flatfan nozzle DR 110-04
(stainless steel, plastic coated, red)

Approved for spraying field crops

Applicant and Manufacturer
Wilger Inc.
Seahorse Drive 255
TN 38351 LEXINGTON
USA

Approved on
4 March 2021

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

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Assessment

The flatfan nozzle WILGER DR 110-04 (stainless steel, plastic coated, 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 eveness 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 2.0 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 an integrally formed bayonet cap. They fit onto TeeJet nozzle bodies using an adapter. 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)
2.0	1.30	4.92 %	7.3 / 7.5 / 6.5	very coarse
3.0	1.59	4.84 %	- / 6.6 / -	very coarse
4.0	1.82	3.85 %	7.9 / 4.7 / 6.4	very coarse
5.0	2.05	-	- / 6.1 / -	very coarse
6.0	2.24	4.09 %	- / 5.8 / -	coarse

Field test

The nozzles were used in the year 2020 on a total of 1100 hectares in field crops, 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 Landstraße 9
30453 Hannover

Technical testing:
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