



TEST REPORT

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



Flatfan nozzle Syngenta 130-05 (plastic, brown)

Approved for spraying field crops in pre-emergence system

Applicant and Manufacturer
Lechler GmbH
Präzisionsdüsen – Tropfenabscheider
Ulmer Strasse 128
72555 Metzingen

Approved on
3 June 2013

Assessment

The flatfan nozzle Syngenta 130-05 (plastic, brown) 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 8.0 bar; liquid volume flow per nozzle as stated in table below.
5. In the field edge region close the last two nozzles in the spray boom to prevent overspraying.

Suitable precautions should be taken to assure that the nozzles do not get blocked up or drip when in use. The nozzles use a standard bajonet cab (MULTIJET). 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	1.41	3,19 %	7.7 / 6.9 / 6.4	very coarse
2.0	1.63	-	- / 5.8 / -	very coarse
3.0	1.99	3.40 %	- / 4.9 / -	very coarse
4.0	2.30	-	6.3 / 5.8 / 5.3	very coarse
5.0	2.57	-	- / 5.9 / -	very coarse
6.0	2.82	4.78 %	- / 4.6 / -	very coarse
7.0	3.04	-	- / - / -	very coarse
8.0	3.25	4.48 %	- / 3.4 / -	very coarse

Loss reducing properties

Included in the list „Loss reducing equipment“ (as of 23 March 2015)

Drift reducing classification	Type of equipment and drift reducing parts	Regulations for use
75 %	Fieldsprayers with Syngenta 130-05	With a target surface distance of 50 cm to the maximum pressure (8.0 bar). An overspraying of the field edge should be avoided. The last two nozzles at the end of the spray boom must be closed while spraying the field edge. Only for pre-emergence systems.
90 %	Fieldsprayers with Syngenta 130-05	First 20 m from field edge spraying with max. 6.0 bar, nozzle height above target 50 cm. An overspraying of the field edge should be avoided. The last two nozzles at the end of the spray boom must be closed while spraying the field edge. Only for pre-emergence systems.
95 %	Fieldsprayers with Syngenta 130-05	First 20 m from field edge spraying with max. 5.0 bar, nozzle height above target 50 cm. An overspraying of the field edge should be avoided. The last two nozzles at the end of the spray boom must be closed while spraying the field edge. Only for pre-emergence systems.

Field test

The nozzles were used in the year 2013 on a total of 794 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:

Landesanstalt für Landwirtschaft, Forsten und
Gartenbau
Strenzfelder Allee 22, 06406 Bernburg

Landesamt für Landwirtschaft, Lebensmittelsicherheit
Und Fischerei Mecklenburg Vorpommern
Tollenseheim Nr. 6 a, 17094 Groß Nemerow

Technical testing:

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

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