



TEST REPORT

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



Flatfan offcenter nozzle Lechler IDKS 80-03 POM
(Plastic, blue)

Approved for double-sided strip spraying (herbicide measures)
in Orchards

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

Approved on
9 January 2020

Assessment

The flatfan offcenter nozzle Lechler IDKS 80-03 POM (Plastic, brown) was tested without accessories. The nozzle is suitable for spraying herbicides in Orchards (double-sided Strip spraying), 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. Spray pressure – measured in front of the nozzle – between 1.0 and 6.0 bar; liquid volume flow per nozzle as stated in table below,
3. Distances between nozzles and target surface and strip widths:
 - a) Vertical nozzle alignment: spray height 20 cm: strip width 30 cm, spray height 30 cm: strip width 40 cm, spray height 40 cm: strip width 50 – 60 cm, spray height 50 cm: strip width 60 – 70 cm.
 - b) Nozzle orientation turned 20° against vertical: spray height 20 cm: strip width 30 – 50 cm, spray height 30 cm: strip width 60 – 80 cm, spray height 40 cm: strip width 70 – 100 cm, spray height 50 cm: strip width 90 – 130 cm.

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 does not comply with standard ISO 10625.

Pressure (bar)	Liquid flow volume without accessories (l/min)	Droplet spectrum (BCPC-Standard)
1.0	0.57	very coarse
2.0	0.83	very coarse
3.0	1.02	coarse
4.0	1.17	coarse
5.0	1.31	coarse
6.0	1.47	coarse

Loss reducing properties

Included in the list „Loss reducing equipment“ (will be stated later)

Drift reducing classification	Type of equipment and drift reducing parts	Regulations for use
90 %	Strip sprayers with nozzle Lechler IDKS 80-03 POM	Double side strip spraying in orchards with the following heights and strip widths, spray pressure max. 3.0 bar: Vertical nozzle alignment: <ul style="list-style-type: none">- spray height 20 cm: strip width 30 cm,- spray height 30 cm: strip width 40 cm,- spray height 40 cm: strip width 50 – 60 cm,- spray height 50 cm: strip width 60 – 70 cm. Nozzle orientation turned 20° against vertical: <ul style="list-style-type: none">- spray height 20 cm: strip width 30 – 50 cm,- spray height 30 cm: strip width 60 – 80 cm,- spray height 40 cm: strip width 70 – 100 cm,- spray height 50 cm: strip width 90 – 130 cm.

Field test

The nozzles were used in the year 2019 on a total of 20 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 (Guideline 2-1.1:2013) and of ISO 5682-1:1999. The requirements of EN 16119-2:2013 and of JKI-Guideline 1-2.1:2013 were fulfilled.

Field testing:

Landwirtschaftliches Technologiezentrum
Augustenberg
Außenstelle Forchheim
Kutschenweg 20
76287 Rheinstetten-Forchheim

Technical testing:

Institut für Anwendungstechnik im
Pflanzenschutz des
Julius Kühn-Instituts,
Messeweg 11-12,
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