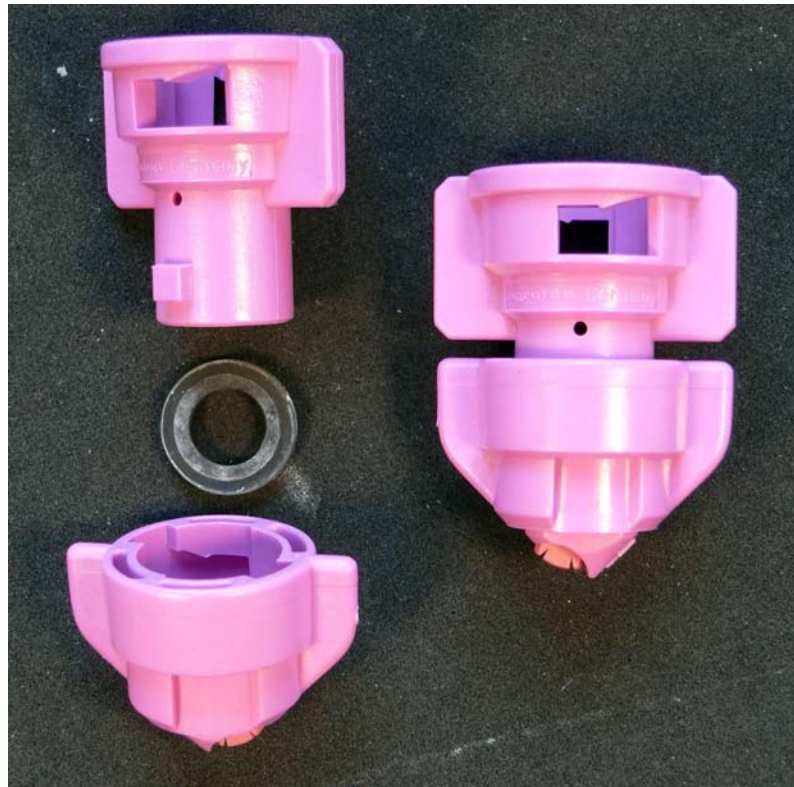




TEST REPORT

of the
Julius Kühn-Institut
Federal Research Institute
for Cultivated Plants, Braunschweig
(former Federal Biological Research Centre for
Agriculture and Forestry - BBA)



**Double - Flatfan nozzle Turbo Drop HiSpeed 110-025
(Ceramics, plastic-coated, lilac)**

Approved for spraying field crops

Applicant and Manufacturer
Agrotop GmbH
Köferinger Strasse 5
93083 Obertraubling-Gebelkofen

Approved on
6 January 2011

Assessment

The double-flatfan nozzle Turbo Drop HiSpeed 110-025 (ceramics, plastic-coated, lilac) 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 2.5 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 nozzle tip is fitted out with a moulded bajonett cap (system "TeeJet").

| 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) |
|----------------|--|---|--|----------------------------------|
| 2.5 | 0.91 | 3.28 % | 6.5 / 7.3 / 4.9 | very coarse |
| 3.0 | 0.99 | - | - / 4.8 / - | very coarse |
| 4.0 | 1.15 | - | 3.5 / 5.0 / 5.6 | very coarse |
| 5.0 | 1.28 | -4.81 % | - / 5.0 / - | very coarse |
| 6.0 | 1.40 | - | - / 4.7 / - | very coarse |
| 7.0 | 1.51 | - | - / - / - | coarse |
| 8.0 | 1.62 | -3.19 % | - / 4.1 / - | coarse |

Loss reducing properties

Included in the list „Loss reducing equipment“ (as for 22 March 2011)

| Drift reducing classification | Type of equipment and drift reducing parts | Regulations for use |
|-------------------------------|--|--|
| 50 % | Fieldsprayers with nozzle Agrotop Turbo Drop HiSpeed 110-025 | First 20 m from field edge spraying with max. 6.0 bar, nozzle height above target 50 cm. |
| 75 % | Fieldsprayers with nozzle Agrotop Turbo Drop HiSpeed 110-025 | First 20 m from field edge spraying with max. 3.5 bar, nozzle height above target 50 cm. |
| 90 % | Fieldsprayers with nozzle Agrotop Turbo Drop HiSpeed 110-025 | First 20 m from field edge spraying with 2.5 bar, nozzle height above target 50 cm. |

Field test

The nozzles were used in the year 2010 on a total of 1460 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 1-2.3.1:2008) and of ISO 5682-1:1999. The requirements of EN 12761-2:2002 and of JKI-Guideline 1-2.1:2010 were fulfilled.

Field testing:

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

Technical testing:

Institut für Anwendungstechnik im Pflanzenschutz des Julius Kühn-Instituts,
Messeweg 11-12,
38104 Braunschweig © JKI, July 2011