



TEST REPORT

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



Pic. 1: Hypro VP 110-03



Pic. 2: John Deere PSERQ1003

Flatfan nozzle Hypro VP 110-03 (Plastic, blue) identical in construction with JOHN Deere PSERQ1003

Approved for spraying field crops

Applicant and Manufacturer

Hypro EU Limited
Station Road, Longstanton
UK – Cambridge CB24 5 DS

Approved on

19 January 2010
Extension of Approval
19 October 2015

Assessment

The flatfan nozzle Hypro VP 110-03 (Plastic, blue) is identical in construction with John Deere PSERQ1003 and was tested without accessories. The nozzle is suitable for spraying field crops, proved 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 2.0 and 5.0 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 dimensions of the nozzle tip comply with standard ISO 10626. The colour coding of the nozzle comply with standard ISO 10625. In the field edge region the last nozzle of the spray line must be closed to prevent an overspraying.

| 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) |
|----------------|--|---|--|----------------------------------|
| 2.0 | 0.99 | + 3.22 % | 8.2 / 3.8 / - | medium |
| 3.0 | 1.22 | + 2.19 % | 3.5 / 3.1 / 3.5 | fine |
| 4.0 | 1.40 | - | - / 3.1 / - | fine |
| 5.0 | 1.57 | - 2.00 % | - / 3.1 / - | fine |

Field test

The nozzles were used in the year 2009 on a total of 180 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:

Landwirtschaftskammer Nordrhein-Westfalen
Pflanzenschutzdienst
Nevinghoff 40
48147 Münster

Technical testing:

Institut für Anwendungstechnik im
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