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COMMERCIAL TEST REPORT

संख्या / No. : Imp. 93/137
माह / Month : August, 2011



KRISHI USHA HHP-1 WEEDER

1264 (7)
19/9/11



भारत सरकार
GOVT OF INDIA

कृषि मन्त्रालय
MINISTRY OF AGRICULTURE

कृषि एवं सहकारिता विभाग
DEPARTMENT OF AGRICULTURE AND COOPERATION

उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान
NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE

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Imp. 93/137	KRISHI USHA HHP-1 WEEDER [Commercial Test]	1
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1 SCOPE OF TEST

1.1 Laboratory Test

- Checking of specifications
- Hardness of critical components
- Wear analysis of critical components

1.2 Field Test

- Quality of work
- Rate of work
- Labour requirement
- Ease of operation and adjustment
- Breakdowns and repairs

2 METHOD OF SELECTION

The machine was directly submitted by the applicant for test at this Institute. Hence, the method of selection is not known.

3 TEST PROCEDURE

There is no Test Code, published by Bureau of Indian Standards, available for testing of Hand Hoes/Dry Land Weeders as such. The guidelines, however, has been taken from IS: 14540 – 1998 (Intercultivation Equipment – Hand Hoes – Specification).

4 SPECIFICATIONS

4.1 GENERAL:

- Name of machine : Weeder
- Applicant : Krishi Gram Vikash Kendra
C/o – Usha Martin Ltd.
Tatisilwai
Ranchi, Jharkhand 835 103

Imp. 93/137	KRISHI USHA HHP-1 WEEDER [Commercial Test]	2
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Manufacturer : Usha Martin Ltd.
 Tatisilwai
 Ranchi, Jharkhand 835 103

Type of implement : Manually-operated

Make : Usha Martin Ltd.

Model : HHP-1

Year of manufacturer : N. A.

Serial number : N. A.

Suitability : Suitable for inter-culturing in row crops like wheat, maize, cotton, groundnut, green gram and seasonal vegetables (apa).

4.2 CONSTRUCTIONAL DETAILS (Refer Fig. 1)

4.2.1 Frame:

Constructional details : It is fabricated from two MS flats of size 285 x 25.5 x 4.9 mm which are bent outward from the middle. One end of each MS flat is welded to a Mild Steel tube through which the axle passes. The other end of the flat is welded with a MS square pipe to which the tyne is clamped.

Dimensions of frame : 320 x 59
 (mm)

Imp. 93/137	KRISHI USHA HHP-1 WEEDER [Commercial Test]	14
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11 SUMMARY OF OSERVATIONS, COMMENTS AND RECOMMENDATIONS

- 11.1 The weeding efficiency was recorded as 50.7 to 64.6%, which is considered on lower side. Necessary improvement in design and fabrication is called for.
- 11.2 The hand wheel hoe should be provided with identification plate giving the particulars as manufacturer's name, size, batch or code number and year of manufacturer, etc.
- 11.3 Frequent loosening of tyne fixing bolt was observed during entire field testing. Therefore needs to be undertaken.
- 11.4 The wheel hub should be provided with cast iron bush bearing fitted on either side of wheel axle and also be coated with rust proof grease prior to assembly as per IS: 14540-1998.
- 11.5 It is recommended that technical literatures such as operator's manual and spare parts list should be brought out as per IS: 8132-1999.

TESTING AUTHORITY

P. K. PANDEY SENIOR TEST ENGINEER	
M. K. VISHWAKARMA DIRECTOR	

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Imp. 93/137	KRISHI USHA HHP-1 WEEDER [Commercial Test]	15
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93/137
, 2011

12. APPLICANT'S COMMENT

One copy of the draft test report was made available to the applicant. No comments, however, was received in this office.

14 (7)
111

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