

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT



संख्या / No.: Machine-26/256
माह / Month: August, 2016



“NBSU, NBCC06” CHAFF CUTTER (Manually Operated)



सत्यमेव जयते

भारत सरकार

GOVT OF INDIA

कृषि एवं किसान कल्याण मन्त्रालय

MINISTRY OF AGRICULTURE & FARMERS WELFARE

कृषि, सहकारिता एवं किसान कल्याण विभाग

DEPARTMENT OF AGRICULTURE, COOPERATION & FARMERS WELFARE

उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान

NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE

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1. SCOPE OF TEST

The scope of test was to check and assess the following:

1.1 LABORATORY TEST

- 1.1.1 Checking of specification
1.1.2 Conformity to requirements against the relevant Indian Standards

1.2 FIELD TEST

Performance test to find out:

- (a) Quantity of work
(b) Quality of work
(c) Labour requirement
(d) Ease of operation, adjustment & safety provisions
(e) Wear of critical components

2. METHOD OF SELECTION

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

3. TEST CODE AND PROCEDURE

The following codes were referred for testing of Manually Operated Chaff Cutter

- i) IS:7898-2001 : Manually-Operated Chaff Cutter -
(Reaffirmed Feb., 2012) Specification
ii) IS: 1511- 1979 : Specification for blades for Manually Operated
(Reaffirmed Feb., 2012) Chaff-Cutter

4. SPECIFICATIONS**4.1 General:**

Name and address of the manufacturer	: M/S New Bihar Sellar Udyog Vill. Shitalpur, Post - Jokiyari – 845 305, P.S. Raxaul, Distt- East Champaran (Bihar)
Name & Address of Applicant/Importer	: Mr. Saroj Prasad M/S New Bihar Sellar Udyog Vill. Shitalpur, Post - Jokiyari – 845 305, P.S. Raxaul, Distt- East Champaran (Bihar)
Make	: NBSU
Model	: NBCC06
Type	: Flywheel type, let-fall, chute fed, Manually operated type
Year of manufacture	: N.A.
Sl. No.	: 053
Country of origin	: India
Suitability	: Straw cutting (apa)

9. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS**9.1 Performance of the chaff cutter:****9.1.1 Quantity of Cut:**

- (a) The feed rate was observed as 186 to 214kg/h.
- (b) The quantity of cut fodder received was measured as 176 to 198 kg/h.

9.1.2 Quality of cut:

- (a) The average length of cut was recorded as 15.51 to 18.47 mm.
- (b) The variation from the theoretical length of cut was recorded as-27.19 to 6.64%, which is considered on higher side and should be looked into.

9.2 Labour Requirement :

At least three labours were required for continuous operation of the chaff cutter. One labour was required for feeding the fodder crop, one for collecting the stalk and the other for cranking the flywheel. An averagely built operator can crank the flywheel not more than 40 minutes continuously, at a standard speed of 50 revolution per minute and the average calories burnt by the operator was recorded as 536 to 754 kcal/h.

9.3 Wear of critical components :

The wear rate of chaff cutter blade on mass and dimensional basis was measured to be 0.01 & 0.003 to 0.039 % respectively. The wear is considered normal.

9.4 Dimensions, Hardness and chemical composition of chaff cutter blade:

Chemical composition and hardness of rotary blades does not conform to the requirement of IS: 1511-1979. This should be looked into for corrective action.

9.5 Dimension of chaff cutter blade does not meet the requirements of IS 1511-1979. Corrective measures should be taken in this regard.**9.6 A coat of any suitable mineral jelly or any other corrosive preventives may be provided on the blades to meet the requirements of the relevant Indian Standard.****9.7 Marking was not provided on the blades. This is therefore recommended to mark the blades with particulars such as Manufacturer's name and/or recognized trade-mark, size code, thickness, and batch or code number as per the requirement of IS: 1511-1979.****9.8 End-play was observed in the feed rolls. To rectify the same, bush bearings made of brass should be provided inside the hubs of feed rolls as per IS 7898-2001.****9.9 Dimensions of various components such as feeding trough, flywheel, worm, worm gear, feed rolls, springs, back plate and stands does not meet the requirements of IS: 7898-2001. Corrective measures should be undertaken.****9.10 The worm gears should as far as possible, be enclosed and should preferably be run on an oil trough as per the requirement of relevant Indian Standard.****9.11 Maximum height of cranking from ground level was measured as 1303 mm, which is on higher side. This should be looked into.**