

व्यावसायिक परीक्षण रिपोर्ट  
COMMERCIAL TEST REPORT

संख्या / No. : Imp. 85/125  
माह / Month : March, 2011



**Om Seed-Cum-Fertilizer Drill (Bullock Drawn)**



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**

विश्वनाथ चारिआलि, जिला-शोणितपुर (असम)

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**1. SCOPE OF TEST**

The scope of test was to check and assess the following

**1.1 Laboratory Test**

- i) Checking of specifications.
- ii) Metering mechanism to meter seed and fertilizer at desired rate.
- iii) Variation in dropping of seed and fertilizer in different opener (Inter opener variation).
- iv) Variation of seed & fertilizer rate due to quantity of seed and fertilizer in the seed box and fertilizer box.
- v) Even-ness of seed distribution.
- vi) Hardness and chemical composition of the soil engaging parts.
- vii) Visible damage to the seeds caused by metering mechanism.

**1.2 Field Test**

- i) Rate of work
- ii) Quality of work
- iii) Power requirement
- iv) Ease of operation and adjustment
- v) Field efficiency and Labour requirement
- vi) Breakdowns & repairs

**2. METHOD OF SELECTION**

The seed cum fertilizer drill was directly submitted for test by applicant at this institute. Therefore, the method of selection is not known.

**3. TEST CODE / PROCEDURE**

The implement was tested in accordance with the relevant clauses of Indian Standards

- i) IS: 6316: 1993 (Sowing equipment – seed-cum-fertilizer drill- Test code)
- ii) IS: 6813: 2000 (Sowing equipment – seed-cum-fertilizer Drill -Specification)

**4. SPECIFICATIONS****4.1 General**

Manufacturer

: M/s Shri Vyankateshwara Industries,  
Plot No. 94, Chikhli Industrial Area, Near  
Mahesh Way Bridge, Nagpur (MS) - 440 008

Name of Machine

: Seed Cum Fertilizer Drill

Type of implement

: Bullock drawn

Make

: OM

Model

: Not provided

Serial No

: Not provided

Year of Manufacturer

: Not provided

Size of drill (mm)

: 3 X 350 (adjustable)

Power source

: A pair of bullock

Type of seed to which the drill  
is designed to sow

: Green gram, Gram, Soyabean, Wheat, Red gram.  
(apa)

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### 11. COMMENTS & RECOMMENDATIONS

- 11.1 The hardness of shoe was recorded as 251 to 252 HB against the requirement of 350 to 450 HB, which is on lower side. Hence it is recommended that the shoe should be provided of sufficient hardness.
- 11.2 The seed cum fertilizer drill is provided with shoe type furrow openers, which do not conform to the requirement as per IS 6813-2000. This should be looked into for corrective action.
- 11.3 The seed metering mechanism does not conform to IS 6813-2000. The same should be provided as per relevant Indian Standard.
- 11.4 Self-locking mechanism is not provided on the seed cum fertilizer box. This should be provided on production level.
- 11.5 Provision for tensioning the secondary drive chain should be provided.
- 11.6 Suitable clutches are not provided to stop the movement of metering mechanisms when the wheels are turned in reverse direction and transport positions. This should be looked into.
- 11.7 The fertilizer rate is not adjustable up to 1000 kg/ha. It should be looked into.
- 11.8 A calibration chart is not provided on the drill. Hence it is recommended that the permanent type metallic calibration plate indicating the metering position and quantity of seed and fertilizer should be riveted on the non wearing part of the drill.
- 11.9 Suitable row marker should be provided to maintain equal row spacing.
- 11.10 Necessary tools should be supplied with the drill to attend the adjustments and repairs.


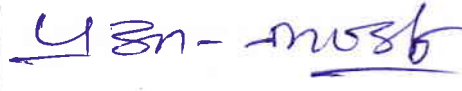

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11.11 It is recommended that the drill should be provided with an identification plate having details like name of manufacturer or trade name, model, serial number of machine, year of manufacture, type, size, mass and type of seed suitable to sow. The plate should be riveted on the machine on non wearing part.

### 12. Adequacy of literature

The manufacturer has not developed operators manual, part's catalogue and service manual etc. as per IS: 8132-2004. Hence the same should be provided containing performance, special features, drawing and dimensions of the implement in English, Hindi and other regional languages as per IS: 8132-2004.

### TESTING AUTHORITY

H.L.YADAV AGRICULTURAL ENGINEER	
P. K. PANDEY SENIOR TEST ENGINEER	
M. K. VISHWAKARMA DIRECTOR	

NORTH EASTERN REGION FARM MACHINERY TRAINING AND TESTING  
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### 13. Applicant's Comments

We will give effect to the comments and recommendations made by the Institute during production.