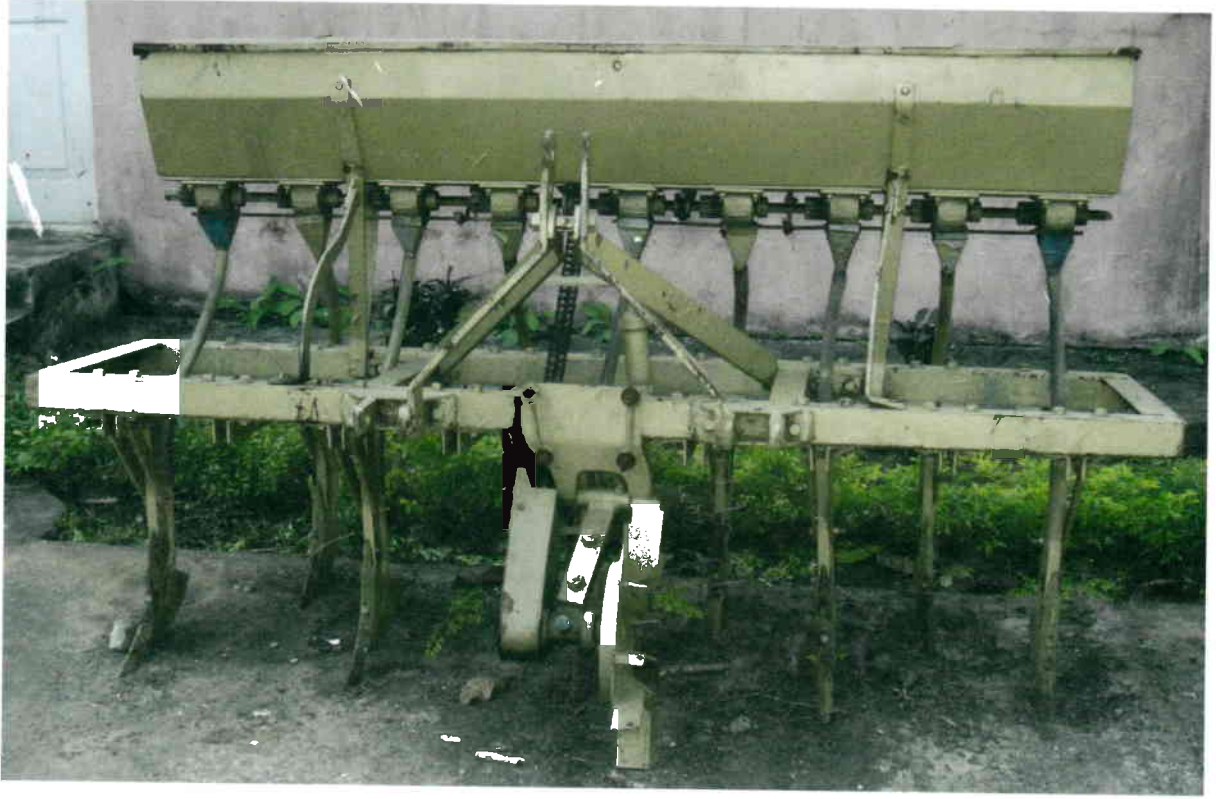


व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

NO-27

संख्या / No. : Imp. 99/143
माह / Month : October, 2011



OM SEED DRILL (TRACTOR-MOUNTED)



सत्यमेव जयते

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

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4. SPECIFICATIONS

4.1 General

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

 Name of Machine : Seed drill
 Type of implement : Tractor-mounted
 Make : OM
 Model : N.A.
 Serial No : N.A.
 Year of Manufacturer : N.A.
 Size of drill : 9 x 225 (adjustable)
 Power source as recommended : Not recommended, however Mahindra 575
 DI tractor was used.
 Type of seed to which the drill is designed to sow : Wheat, Red gram, Green gram, Black gram etc. (apa)
 Seed on which test trials were conducted : Green gram and Black gram

4.2 Constructional details (Refer Fig.1)

4.2.1 Main Frame Details:

Size of MS flats for supporting seed box : 685 (curved) x 37.3 x 8.6 – 4 Nos.
 570 (curved) x 35.6 x 9.8 – 2 Nos.
 (mm)

Dimensions of frame (mm)

Length : 2185

Width : 575

4.2.2 Tyne

Constructional details : Each tyne is bolted to crossbars at the upper end, and reversible shovels are bolted at the bottom. Two MS flats of size 265 x 35.4 x 8.9 mm are bolted with each tyne for support.

 No. of tynes : Nine
 Type : Curved, rigid
 Material : MS flat

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CI 12.3	The components should be free from pits, burrs and other defects that may be detrimental for their use.	The components are free from pits, burrs and other defects.	Conforms
CI 14	MARKING & PACKING:		
CI 14.1	Each drill shall be marked with the following particulars: a) Indication of the source of Manufacture b) Model, code and serial number; c) Type d) Size d) Type of seeds(suitability) and e) Mass	Not Provided	Does not conform

11.COMMENTS & RECOMMENDATIONS

- (i) The specifications and material for construction of reversible type furrow openers do not conform to IS: 6813 –2000. This should be looked into for corrective action.
- (ii) The dimensions of seed metering mechanism do not conform to the requirement of IS: 6813-2000. Suitable improvement should be done.
- (iii) The three point linkage system of the seed drill does not conform to IS. This should be looked into.
- (iv) Provision should be made for easy lowering or raising of the ground drive wheel.
- (v) Axles should be so provided that they can be removed easily for cleaning when desired.
- (vi) The seed box should be provided with self-locking mechanism on being opened.

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- (vii) Furrow openers should be provided with depth adjusting arrangement to meet the requirements of IS 6813:2000.
- (viii) Accessories like foot board, covering device, row marker, press wheel and area recorder may also be provided.
- (ix) Suitable clutches are not provided to stop the movement of metering mechanisms when the wheels are turned in reverse direction. This should be looked into.
- (x) It is recommended that a permanent metallic calibration plate indicating the metering position and quantity of seed and fertilizer should be attached under the top cover of the seed box.
- (xi) Seed agitator has not been provided. It should be looked into for corrective action.
- (xii) Provisions should be made for adjustment of chain.
- (xiii) 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.
- (xiv) The variation in dropping of seed among different furrow openers was observed to be too high and therefore needs to be looked into for improvement in design.
- (xv) The variation in dropping due to box filling at $3/4^{\text{th}}$, $1/2$ and $1/4^{\text{th}}$ of rated capacity was excessive and calls for improvement in the design.
- (xvi) The variation in dropping of seed due to change in speed was measured on higher side. It should be looked into corrective action.
- (xvii) The percentage of visible damage to seed in seed drill was recorded on higher side. This deserves to be examined for improvement in the design of seed drill.

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(xviii) **Technical Literature:**

The manufacturer has not developed operator's manual, part's catalogue and service manual, etc. 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:8132-1999.

TESTING AUTHORITY

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

12. APPLICANT'S COMMENTS

Para No.	Our reference	Applicant's comments
12.1	11(i) to 11(xviii)	We do not have any comment on the draft test report but the comments and recommendation that have been given in page no. 25,26 and 27, clause nos. 11(i) to 11(xviii) will be strictly followed when we will put the Seed Drill in the production line.