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**NBSU WINNOWING FAN, MODEL: WF07 (MANUALLY OPERATED)**



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 AND FARMERS WELFARE

उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान

NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE

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19.4.16

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### 1. SCOPE OF TEST

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

#### 1.1 Laboratory Test:

- Checking of specifications

#### 1.2 Field Test :

- Rate of work
- Quality of work
- Labour requirement
- Ease of operation, maintenance and adjustments
- Defects, Breakdowns & Repairs

### 2. METHOD OF SELECTION

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

### 3. TEST CODE AND PROCEDURE

As agreed between applicant and testing authority.

### 4. SPECIFICATIONS

#### 4.1 General:

Manufactured by	: M/s. New Bihar Sellar Udyog, Village-Shitalpur, Post-.Jokiyari, P.S.-Raxaul, Dist-East Champaran-845305, Bihar
Name & Address of Applicant	: Mr.Saroj Prasad M/s. New Bihar Sellar Udyog, Village-Shitalpur, Post-.Jokiyari, P.S.-Raxaul, Dist-East Champaran-845305, Bihar
Name of machine	: Winnowing fan
Make	: NBSU (apa)
Model	: WF07 (apa)
Type	: Manually Operated
Serial Number of machine	: 0035 (apa)
Year of manufacture	: 2014 (apa)
Country of origin	: India

**7. EASE OF OPERATION & ADJUSTMENTS**

Operation and adjustments of the machine was found satisfactory.

**8. DEFECTS, BREAKDOWNS AND REPAIRS**

No breakdown was occurred during the operation of the winnowing fan.

**9. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS**

**9.1 Performance of winnowing fan :**

**9.1.1 Rate of work :**

a) The output of the machine was observed from 211-248 kg/hr.

**9.1.2 Quality of work :**

a) The cleaning efficiency of the fan was observed from 84-93.2%.

b) The loss of grain with the blown sample was recorded as 8-12 %

**9.2** Fan guard is required to be provided for fan blade to avoid accidents/ injuries during operation.

**9.3** It was observed that knocking sound from gear during operation it should be proper adjustment of drive and driven gear.

**9.4** A provision should be provided to lock the movement of the fan when machine is not in use.

**9.5 Labeling:**

Labeling plate was not provided on the winnowing fan. It is therefore, recommended that the winnowing fan should be marked with details like manufacturer's name and Trade mark, year of manufacture, Serial no/Code, Size, etc.

**9.6 Adequacy of Literature:**

Operator's Manual, Service Manual & Parts Catalogue were provided in Hindi along with the implement during the course of testing and found satisfactory.

**TESTING AUTHORITY**

**S. G. PAWAR**  
**AGRICULTURAL ENGINEER**

**J. J. R. NARWARE**  
**DIRECTOR**

Test conducted and report compiled by -

Sh. K. Bora, Technical Assistant

**10. APPLICANT'S COMMENTS**

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

**ANNEXURE-I****FIELD PERFORMANCE RESULTS**

S.No.	Parameters	Test Trials				
		I	II	III	IV	V
1.	Date of test	28.12.15	28.12.15	29.12.15	29.12.15	29.12.15
2.	Net test duration (h)	0.72	0.83	0.78	0.86	0.83
3.	Name & variety of grain	Paddy & Keteki Joha				
4.	Fan speed (rpm)	360	340	330	320	340
5.	Distance from fan (m)	0.95	0.80	0.85	1.0	0.97
6.	Height of winnowing (m)	1.4	1.4	1.4	1.5	1.4
7.	Wind velocity (m/s)	1.56	1.42	1.42	1.39	1.47
8.	Air flow (m <sup>3</sup> /s)	9.7	8.8	8.8	8.7	9.2
9.	Dropping rate (kg/hr)	279	240	255	231	240
10.	Output (kg/hr)	248	225	237	220	211
11.	Cleaning efficiency (%)	84	93.2	88.3	90.33	93
12.	Loss of grain with blown sample (%)	8	9	10	12	11

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