



Tele Fax: 0422-2434276

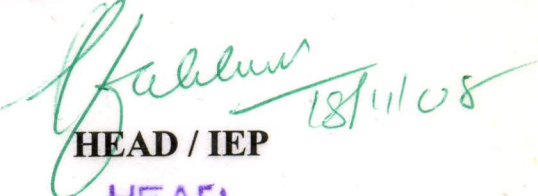
केन्द्रीय कृषि अभियांत्रिकी संस्थान (भा.कृ.अनु.प)  
प्रादेशिक केन्द्र : औद्योगिक प्रसार परियोजना, कोयम्बतूर - ६४१ ००३

Central Institute of Agricultural Engineering  
Regional Centre – Industrial Extension Project  
TNAU Campus, Coimbatore – 641 003

Dated: 18.11.2008

## CERTIFICATE

This is to certify that M/s Magnificent Engineers, SIDCO, Industrial Estate, Coimbatore is one of the collaborative manufacturers of our organization. They are into the manufacture of LPG fired Cardamom Dryer, Manual Rice Transplanter and Manual Cono Weeder. The design technology for manual cono weeder (metallic cone type) has been provided by us to the above mentioned firm for manufacturing of the same and the model fabricated by them is as per approved design.

  
HEAD / IEP

HEAD

Central Instt. of Agri. Engineering (ICAR)  
Regional Centre-Industrial Extn. Projec  
TNAU Campus, Coimbatore-641 003

# COMMERCIAL TEST REPORT

No. : 25 -CW/ 2012

Month : April, 2012



## IMPROVED CONO WEEDER - ME



**AGRICULTURAL MACHINERY RESEARCH CENTRE  
AGRICULTURAL ENGINEERING COLLEGE AND RESEARCH INSTITUTE  
TAMIL NADU AGRICULTURAL UNIVERSITY  
COIMBATORE - 641 003**

Telephone : 0422-2457576 / 6611204

Website : [tnau.ac.in](http://tnau.ac.in)

Fax : 0422 -2457576

E-mail: [zrc@tnau.ac.in](mailto:zrc@tnau.ac.in)/  
[manohar.dmj@gmail.com](mailto:manohar.dmj@gmail.com)

Certificate Issued under F. No. 8-1/ 2004 –My (I&P), Ministry of Agriculture, Department of Agriculture & Cooperation, (Mechanization & Technology Division), Krishi Bhavan, New Delhi – 110001, Dated the 14<sup>th</sup> September, 2010.

**Manufacturer** : Magnificent Engineers,  
TS-36, SIDCO Industrial Estate,  
Kurichi,  
Coimbatore – 641 021.  
Tamil Nadu. South India.

**Subsidiary & Affiliated Office in India** : Magnificent Engineers,  
TS-36, SIDCO Industrial Estate,  
Kurichy,  
Coimbatore - 641 021.  
Tamil Nadu. South India.

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**Website : [tnau.ac.in](http://tnau.ac.in)**

**Fax : 0422 -2457576**  
**E-mail: [zrc@tnau.ac.in](mailto:zrc@tnau.ac.in)/  
[manohar.dmj@gmail.com](mailto:manohar.dmj@gmail.com)**

### Specifications of Machine

S No.	Details	Particulars
01	Over all dimensions, (L x B x H), mm	2140 x 500 x 1070
02	Weight	6 Kg
03	Working width, mm	140 - 160
04	No. of Cones	2 (Metallic )
05	Height of Handle from the ground, mm	1070
06	Number of blades in weeding Cone	Straight blade = 6 / Cone Serrated blade = 6 / Cone
07	Blade thickness, mm	1.6, 2
08	Width of handle, mm	500
09	Size of float (L x B x H), mm	330 x 120 x 70

### Weeder Performance Test Report

#### A. Test condition

a) Condition of field and soil	14.02.2012	15.02.2012	16.02.2012	17.02.2012
1. Location	Wetland, TNAU, Coimbatore			
2. Length (m)	35	33	25	25
3. Width (m)	25	23	22	21
4. Area (m <sup>2</sup> )	875	759	550	525
5. Type and character of soil	Clay	Clay	Clay	Clay
6. Depth of standing water (cm)	1.5 - 2.0	1.5 - 2.0	1.0 - 2.0	2.0 - 2.5
7. Period after land preparation (days)	55	55	55	55
<b>b) Condition of weed</b>				
1. Name of weed	1. Cyperus rotundus 2. Chenrus ciliaris	1. Cyperus rotundus 2. Ammania baccifera	1. Cynodon Dactylon 2. Cyperus rotandus	1. Cyperus rotundus 2. Tridax procumpens

2. Height of weed (cm)	6.0 - 10	5.0 - 10	4.0 - 8.0	6.0 - 10
<b>c) condition of crop</b>				
1. Name of crop	Paddy	Paddy	Paddy	Paddy
2. Variety	ADT - 45	ADT - 45	ADT - 45	ADT - 45
3. Age in days after Transplanting	40	40	40	40
4. Planting method	Square	Square	Square	Square
5. Row spacing (cm)	24	24	24	24
6. No. of plants in a hill	3 - 6	3 - 7	3 - 6	3 - 7
7. Height of plants (cm)	20 - 25	25 - 35	20 - 30	20 - 28
<b>d) Condition of operator</b>				
1. Skill of operator	Skilled	Skilled	Skilled	Skilled
2. Wage of operator/day (Rs)	150	150	150	150

### Test Performance

a.	Date of test	14.02.2012	15.02.2012	16.02.2012	17.02.2012
b.	Actual operation hour	4.30	6.0	5.30	4.0
c.	<b>Time lost owing to</b>				
	i. Turning at head land (min)	20	25	20	15
	ii. Adjustment of machine (min)	-	-	-	-
	iii. Troubles and others (min)	5	8	10	5
d.	Total operation hour	4.55	6.35	6.0	4.20
e.	Actual area covered (m <sup>2</sup> )	291.6	294.0	282.0	290.0
f.	Rated width of implement (mm)	150-160	150-160	150-160	150-160
g.	Effective working width of tilling (mm)	156	155	156	157
h.	Effective working depth of tilling (mm)	60 - 70	50 - 60	55 - 65	50 - 60


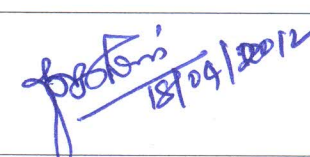
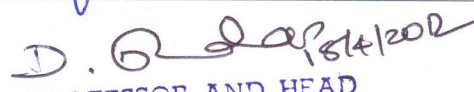
i.	Actual traveling speed (Km/hr)	1.94	1.96	1.84	1.89
j.	Effective field capacity (ha/hr)	0.02916	0.0294	0.0282	0.0290
k.	Field efficiency (%)	96.3	96.7	98.2	97.7
l.	Weeding efficiency (%) * (W1 - W2 / W1)* 100	90	88	92	86
m.	Crop damage (%)	-	-	-	-
n.	Subject sinkage (68 Kg) (cm)	35	30	40	30
o.	Machine movement pattern on field	Front and back	Front and back	Front and back	Front and back

\* Considering Weeded area only

**Remarks:**

1. There is no appreciable wear and tear during twenty hours of use.
2. There is no mechanical failure of components.
3. The functionality of the weeder is satisfactory.
4. Instruction for use should be provided in local language.

**TESTING AUTHORITY:**

Er. K. BALAJI (JUNIOR RESEARCH FELLOW) TEST ENGINEER	
Dr. T.SENTHIL KUMAR ASSISTANT PROFESSOR	
Dr. D. MANOHAR JESUDAS PROFESSOR AND HEAD	 PROFESSOR AND HEAD Agrl. Machinery Research Centre, Agrl. Engg. College & Res. Inst., Tamil Nadu Agricultural University Coimbatore - 641 003.



