

Appendices

APPENDIX – A

Specification Sheet

1. General

a)	Name	-	Turmeric harvester
b)	Type	-	Mechanical
c)	Make	-	India
d)	Model	-	CIAE - IEP
e)	Year of manufacture	-	2008

B. Field Conditions	
1. Location	Thondamuthur, Coimbatore, India
2. Soil type	Clay loam
3. Length, m	120
4. Width, m	45
5. Area, m ²	5400
6. Soil moisture, (d.b.) per cent	15 - 16.50

2. Overall dimensions

Blade

Shape	-	Straight blade with digging chisel
Angle	-	20 deg to horizontal
Length	-	920 mm
Width	-	200 mm
Thickness	-	10 mm
No. of Blade	-	One

Conveyor

Length of conveyer	-	1060 mm x 1520mm
Body of conveyer	-	13 number 10mm polishes rods.
Belt type	-	Rubber strips of length 820mm; breadth 75mm and Thickness of belt - 15mm
Speed of conveyer	-	4.5kmph

Collection box

Shape	-	Concave shaped
Length	-	1370 mm
Width	-	150 mm
Height	-	500mm
Weld mesh	-	50mm x 50mm.

APPENDIX – B

Field Operation Data Sheet

a) Field parameters

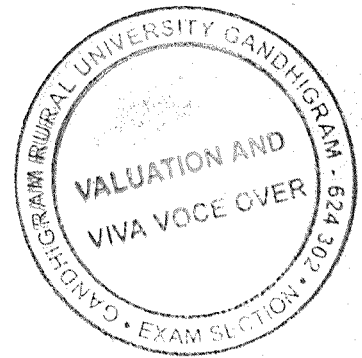
S.No.	Description	Replications				
		1	2	3	4	5
1.	Location					
2.	Soil type					
3.	Length, m					
4.	Width, m					
5.	Area, m ²					
6.	Soil moisture, %					
8.	Row to row spacing, mm					
9.	Hill distance, cm					
10.	Plant population per sq.m					
11.	No. of tillers per plant					
12.	Average Number of rhizomes /sq.m					
13.	Weight of rhizomes per plant, kg					
14.	Average yield / sq.m, kg					
15.	Average yield, kg/ha					

b) Soil parameters

S.No.	Description	Replications				
		1	2	3	4	5
1.	Moisture content, %					
2.	Bulk density, kg/m ³					
3.	Cone Index, kg/cm ²					

c) Crop parameters

S.No.	Description	Replications				
		1	2	3	4	5
1.	Plant population, Numbers					
2.	Rhizome spread, mm					
3.	Rhizome weight, g					
4.	Moisture content, %					
5.	Bulk density, kg/m ³					
6.	Number of fingers per hill					



d) Operational Performance

Conveyor belt length

Tractor rear tyre diameter

No. of revolutions of rear tyre (N)

No. of revolutions of the conveyor (n)

S.No.	Depth of cut	Length of run	Throttle setting	Fuel consumption		Distance traveled for N	Time taken for N	Forward speed km/h	Time for n	Conveyor speed	Conveyor ineded
				Vol.	Time						

e) Conveyor index/conveyor loss

Length of conveyor

Depth of cut

S.No.	Weight of turmeric + soil on conveyor	Wt. of Turmeric	Wt. of soil	Separation index	Wt. of turmeric under conveyor	Conveyor loss %

g) Labour performance

i) Row number

ii) Forward speed of the tractor

S.No.	Sex	Picking rate	Damaged turmeric %	Man-hrs/ha