

# REAPER-WINDROWER



## SALIENT FEATURES

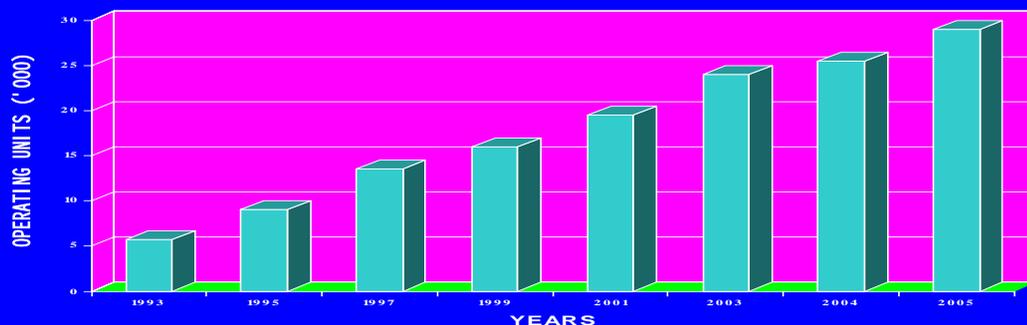
- Cuts and windrows wheat and rice crops
- A tractor front mounted machine
- Saves time and labor
- An intermediate technology between manual and combine harvesting
- Creates one thousand skilled and one Lac un-skilled seasonal jobs
- Operating Cost : Rs. 1800/ha

## SPECIFICATIONS

→ Power Source	37 kW
→ Tractor	
→ Cutting Width	2.3 m
→ PTO Speed	450 rpm
→ Field Capacity	0.5 ha/h
→ Labor Requirement	3 persons
→ Overall Length	2.3 m
→ Overall Width	0.5 m
→ Overall Height	0.7 m
→ Overall Weight	275 Kg

Financial Benefit : Rs. 1500/ha

## REAPER-WINDROWER POPULATION IN PAKISTAN



# ZERO TILLAGE TECHNOLOGY



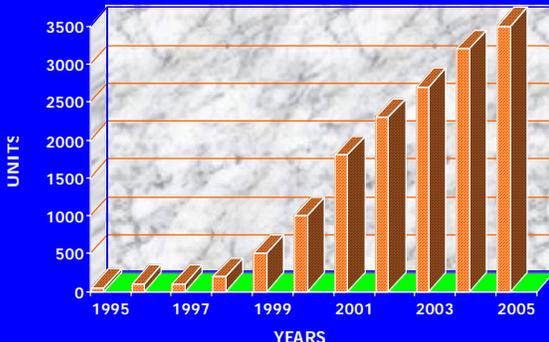
## SALIENT FEATURES

- Ensures timely sowing of wheat
- Reduces cost of production
- Reduces pollution & energy input
- Improves seed germination
- Increases crop yield

## SPECIFICATIONS

Power Source	37 kW Tractor
Number of Rows	12
Row Spacing	20 cm
Field Capacity	0.4 ha/h
Operational Cost	Rs. 900/ha
Financial Benefit	Rs. 1700/ha

ZERO TILL DRILLS AVAILABLE IN PAISTAN



# FMI SEEDER



## SALIENT FEATURES

- ☆ Ensures timely wheat sowing under heavy crop residue
- ☆ Cuts 7.5 cm stubble strips as well as picks up loose straw lying in front of each opener of Zero-Till Drill and chops them into small pieces before spreading it uniformly over seeded rows in a single operation
- ☆ Improves soil fertility due to mulching, saves one irrigation, improves seed germination and reduces environmental pollution

Drill can be easily detached and the chopper can be used for other purposes

## SPECIFICATIONS

- ☆ Type : Mounted
- ☆ Power Source : 37 kW Tractor
- ☆ Row Spacing : 15 cm
- ☆ Field Capacity : 0.4 ha/h
- ☆ Flail Rotor Speed : 2000 rpm
- ☆ Fuel Consumption : 6 L/h
- ☆ Operating Cost : Rs.1050/ha
- ☆ Financial Benefit : Rs. 1950/ha

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# WHEAT STRAW CHOPPER



## SALIENT FEATURES

- ❑ A tractor operated toed-behind machine
- ❑ Harvests stubbles and picks up combine ejected straw, chops and blows it into the trolley
- ❑ Reduces environmental pollution
- ❑ Increases combine harvested area
- ❑ Operating units 250

## SPECIFICATIONS

- ❖ Power Requirement : 37 kW Tractor
- ❖ Width of Cut : 2 m
- ❖ Field Capacity : 0.30 ha/h
- ❖ Field Efficiency : 60 %
- ❖ Field Straw Recovery : 50-60 %
- ❖ Operating Cost : Rs. 1300/ha
- ❖ Financial Benefit : Rs. 1800/ha

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# PADDY THRESHER



## SALIENT FEATURES

- A tractor operated stationary thresher
- Employs throw-in type crop feeding mechanism
- Built-in mechanism for re-threshing of un-threshed crop
- Reduces field grain losses
- Improves grain quality
- Timely threshing ensures better rates
- Reduces the threshing season
- Operating cost Rs. 400/t
- Financial benefit Rs. 225/t

## SPECIFICATIONS

❑ Threshing System	Axial-flow
❑ Threshing Drum	Peg Tooth
❑ Power Source	50 kW tractor
❑ Labour Requirement	4 persons
❑ Grain Output	1.5-2.0 t/h
❑ Cleaning Efficiency	99 %
❑ Grain Breakage	Negligible
❑ Fuel Consumptions	7 L/h

# MOBILE SEED PROCESSING UNIT



## SALIENT FEATURES

- Removes inert material, weeds and broken grains from healthy ones
- Grades seed into three categories:
  - Healthy seed
  - Light seed
  - Broken and immature seed
- Movable from one place to another
- Suitable for Wheat, Paddy, Pulses, Maize, Canola, Sunflower, Peas and Okra

## SPECIFICATIONS

- Cleaning Capacity : 2 t/h (Wheat)  
1 t/h (Paddy)
- Cleaning Efficiency : 98 %
- Labour Requirement : 3 men
- Operating Cost : Rs. 250/t (wheat)
- Seasonal Capacity : 2000 tons
- Power Requirement : 7.5 kW
- Components : Aspirator, 3 deck grader, Elevator
- Overall Length : 3.25 m
- Overall Width : 1.6 m
- Overall Height : 4 m

# FARM MACHINERY INSTITUTE



## FINANCIAL IMPACT OF FMI TECHNOLOGIES

(Million Rs.)

Year	Reaper	Groundnut Digger	Groundnut Thresher	Planter	Zero-Till Drill	Sunflower Thresher	Paddy Thresher	Straw Chopper	Total	Budget
1985	12.86	0.92	-						13.87	3.382
1986	27.48	1.29	-						28.77	3.500
1987	62.00	2.48	-						64.68	2.810
1988	117.01	4.13	0.87						122.01	2.862
1989	146.26	4.88	1.53						152.67	3.050
1990	197.94	9.14	2.45						209.53	3.243
1991	212.47	11.86	3.14						227.47	2.850
1992	234.98	11.82	6.21						252.92	2.890
1993	281.38	18.48	15.29						315.15	3.300
1994	327.01	21.45	17.90						366.36	3.356
1995	542.51	25.74	24.32	1.84	6.88	3.15			604.43	3.490
1996	613.56	37.89	35.89	1.98	7.55	9.45			706.62	5.393
1997	708.38	49.23	64.29	2.38	16.00	9.20			849.48	4.809
1998	959.23	47.43	62.63	2.33	93.71	8.87			1174.20	5.292
1999	985.28	59.29	75.15	3.73	149.94	8.87			1282.26	5.452
2000	1196.2	71.02	87.68	4.40	196.60	8.87			1564.68	5.988
2001	1298.26	81.50	98.74	5.46	240.60	8.71			1733.28	5.713
2002	1431.71	80.45	110.41	6.50	287.01	8.62	3.60	1.12	1924.69	5.738
2003	1633.86	94.69	111.76	8.86	315.34	8.80	36.00	2.72	2178.41	8.682
2004	2483.40	139.43	175.31	13.74	512.01	9.60	180.00	3.87	3517.36	8.889
<b>Total</b>	<b>13472.21</b>	<b>633.72</b>	<b>718.25</b>	<b>37.48</b>	<b>1313.02</b>	<b>74.52</b>	<b>219.60</b>	<b>7.71</b>	<b>17326.60</b>	<b>90.689</b>