Weeding and Interculture Equipment
CIAE Power Weeder

Field Capacity ha/h: 0.12
Cost of Operation, Rs/ha: 290
Cost of Machine, Rs: 46000
Tractor Mounted Rotary Weeder (TNAU)

Field Capacity ha/h: 0.3-0.4
Cost of Operation, Rs/ha: 175
Cost of Machine, Rs: 25,000
Plant Protection
PAU Walk Behind Self Propelled Sprayer

Field Capacity ha/h: 0.7-0.8
Cost of Operation, Rs/ha: 140
Cost of Machine, Rs: 45,000
<table>
<thead>
<tr>
<th>Field Capacity ha/h:</th>
<th>0.53-0.93</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Operation, Rs/ha:</td>
<td>128-225</td>
</tr>
<tr>
<td>Cost of Machine, Rs:</td>
<td>30,000</td>
</tr>
</tbody>
</table>

**Power Tiller Mounted Boom Sprayer (MPKV)**
<table>
<thead>
<tr>
<th>Field Capacity ha/h:</th>
<th>1.6-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Operation, Rs/ha:</td>
<td>70</td>
</tr>
<tr>
<td>Cost of Machine, Rs:</td>
<td>220,000</td>
</tr>
</tbody>
</table>

PAU Self Propelled High Clearance Sprayer
Harvesting Equipment
Riding Type V.C. Reaper

Field Capacity ha/h: 0.25-0.3
Cost of Operation, Rs/ha: 800
Cost of Machine, Rs: 100,000
PAU Tractor Mounted Fodder Harvester

Field Capacity ha/h: 0.2
Cost of Machine, Rs: 70,000
## Tractor mounted flail type fodder harvester cum chopper

<table>
<thead>
<tr>
<th>Description</th>
<th>Average value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour saving compared to manual harvesting, %</td>
<td>90</td>
</tr>
<tr>
<td>Cost of operation, Rs/ha</td>
<td>1114</td>
</tr>
<tr>
<td>Height of cut from ground level, cm</td>
<td>13.5</td>
</tr>
<tr>
<td>Time required to harvest trolley load of fodder, min</td>
<td>21.6</td>
</tr>
<tr>
<td>Stalk density, plants/m²</td>
<td>72.2</td>
</tr>
</tbody>
</table>
Self-Propelled Fodder Harvester (PAU)

Field Capacity ha/h: 0.18
Cost of Machine, Rs: 50,000
Capacity min/tree: 25-35
Cost of Operation, Rs/h: 336
Cost of Machine, Rs: 25,000

TNAU Tractor Mounted Telescopic Hoist
PAU Rice Straw Chopper cum Spreader

Field Capacity ha/h: 0.66
Cost of Machine, Rs: 30,000
### Field Performance Results of straw chopper cum spreader

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height of stubbles, mm</td>
<td>400-450</td>
</tr>
<tr>
<td>Moisture Content of Straw, % w.b.</td>
<td>50-70</td>
</tr>
<tr>
<td>Straw Quantity, kg/m²</td>
<td>0.87-1.25</td>
</tr>
<tr>
<td>Speed of operation, km/h</td>
<td>2.5-3.0</td>
</tr>
<tr>
<td>Chopped straw size, mm</td>
<td>70-100</td>
</tr>
<tr>
<td>Labour requirement, man-h/ha</td>
<td>1.25</td>
</tr>
</tbody>
</table>
Field Capacity ha/h: 0.5
Cost of Operation, Rs/ha: 500
Cost of Machine, Rs: 15,000

Tractor Mounted Banana Clump Remover (TNAU)
Advantages of the Banana clump remover

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Banana clump remover</th>
<th>Traditional method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field capacity, ha/h</td>
<td>0.5</td>
<td>0.002</td>
</tr>
<tr>
<td>Cost of operation, Rs/ha</td>
<td>500</td>
<td>2500</td>
</tr>
<tr>
<td>Labour required</td>
<td>2 (1 driver + 1 helper)</td>
<td>60 man days/ha</td>
</tr>
</tbody>
</table>
Threshing Equipment
Threshing Capacity, kg/h: 350-1350
Cost of Operation, Rs/q: 28
Cost of Machine, Rs: 42,000

Threshing Capacity, kg/h: 200-1635
Cost of Operation, Rs/q: 25
Cost of Machine, Rs: 25,000
Pigeon Pea Thresher (CIAE)

PAU Sunflower Thresher

Threshing Capacity, kg/h: 430
Cost of Machine, Rs: 50,000

Threshing Capacity, kg/h: 600-900
Cost of Operation, Rs/q: 25
Cost of Machine, Rs: 20,000
Maize Dehusker cum Sheller (PAU)

Threshing Capacity, kg/h: 1500-2500
Cost of Machine, Rs: 20,000
“Hadamasha” High Capacity Multicrop Thresher

- Threshing Capacity, kg/h: 800-1000
- Cost of Machine, Rs: 50,000
Threshing Capacity, kg/h: 530-2890
Cost of Machine, Rs: 55,000

CIAE High Capacity Multicrop Thresher
Other Specialised Equipment
Field Capacity ha/h: 0.83
Cost of Operation, Rs/ha: 370
Cost of Machine, Rs: 470,000

Tractor Operated Straw Baler
Field Capacity ha/h: 0.5
Cost of Machine, Rs: 70,000
Field Capacity ha/h: 0.2
Cost of Operation, Rs/ha: 1450
Cost of Machine, Rs: 45,000

Sugarcane Sett Cutter Planter
Tractor Mounted Multi-purpose Equipment in Sugarcane Planting and interculture mode

Field Capacity ha/h: 0.3
Cost of Machine, Rs: 55,000

Field Capacity ha/h: 0.72
Field Capacity ha/h: 0.35
Cost of Machine, Rs: 55,000

Tractor Mounted Multi-purpose Equipment in Puddler Mode (IISR)
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Planting</th>
<th>Interculture</th>
<th>Earthing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MPE</td>
<td>Manual</td>
<td>AD Plough</td>
</tr>
<tr>
<td>Row spacing, cm</td>
<td>75</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Forward speed, km/h</td>
<td>2.30</td>
<td>-</td>
<td>4.20</td>
</tr>
<tr>
<td>Field capacity, ha/h</td>
<td>0.30</td>
<td>-</td>
<td>0.72</td>
</tr>
<tr>
<td>Labour reqt., man-h/ha</td>
<td>16.7</td>
<td>474</td>
<td>-</td>
</tr>
<tr>
<td>Cost of operation, Rs/ha</td>
<td>708</td>
<td>3570</td>
<td>214</td>
</tr>
</tbody>
</table>
Engine Operated Sugarcane Leaf Stripper (ANGRAU)

Capacity kg/h: 1300
Cost of Machine, Rs: 30,000
Sugarcane Trash Shredder

Field Capacity ha/h: 0.23
Cost of Operation, Rs/ha: 945
Cost of Machine, Rs: 35,000
Self Propelled Riding Type Combine Harvester

- Field Capacity ha/h: 0.25
- Cost of Machine, Rs: 250,000
Priorities in Agriculture Mechanisation

• Small Farm Mechanisation

• Farm Machinery Management for Efficient Utilization and Higher Efficiency.

• Modernization of Manufacturing Facilities using CAD and CAM

• Research in Bio fuel as a substitute to diesel

• Application of IT in Research and Research Management

• Data Base Management
Thrust Areas

- Precision Agriculture
- Conservation Tillage-Zero Tillage-2 million ha
- Hill Mechanization
- Horticulture Mechanization
- Dry Land Mechanization
- Cotton and sugarcane Mechanization
- Women friendly equipment
- Ergonomics and Safety in Agriculture
- Renewable Energy Sources
Contd…..

• Post Harvest Management of Crops

• Determination of Post Harvest Losses and value addition

• Surface covered cultivation

• Jute, Cotton and Lac Processing
Thank You