Vibration isolators for power tillers
Tea pruner with vibration isolators

- With vibration isolators and safety gadgets
- Cost of safety feature - Rs. 2000/-
- Cost of pruning - Rs. 0.32/bush as against 0.42/bush in traditional method
Thermal protection head gear for Rajasthan workers

- Use of headgear reduced the effect of heat stress significantly.
- White Pagdi was found better than traditional Pagdi and cotton towel as head gear in reducing the ill effect of heat stress.
- Using a Pagri is old fashion and tying it properly is also difficult.
- The hat with a brim width 90 mm was found better in terms of thermal as well as physiological parameters of the subjects working under environmental heat stress conditions.
TNAU Direct Paddy Seeder

Benefits:

• Saving in seeds, time and labour
• Less cost of cultivation/ha
• Yield at par that of transplanted paddy.
• 70000 units in operation
OUAT Women friendly three row rice transplanter

The row to row distance was 24 cm which can facilitate weeding by Mandwa or Cono weeder easily.

The average field capacity was found to be 170 m²/h with a mean working speed of 1.7 km/h.

Weight : 18 kg
Cost : Rs. 8500/-
Coconut tree climbing device

• TNAU Ergo refined coconut tree climbing device

• Cost – Rs. 3500/-

• Output –

• 56 coconuts/h as against 28 coconuts/h in conventional system
TNAU Areacanut Stripper

- Operated by 3 hp engine
- Cost - Rs. 20,000/-
- Output - 650-950 kg/h
- Cost of stripping – Rs. 0.17/kg as against 0.47/kg in conventional system
- Economic benefit over conventional system – Rs. 20,000/unit/year
Hand, Pedal and power operated arecanut dehuskers

- **Hand operated dehusker**
  Cost - Rs.3000/-, capacity - 5 kg/h

- **Pedal operated dehusker**
  Cost Rs. 15,000/-, capacity 15 kg/h

- **Power operated dehusker**
  Cost Rs. 25,000/-. Capacity 25 kg/h
Scissor type tea plucker

- Weight - 800 g
- Cost - Rs. 750/-
- Output - 8.6 kg of leaves as against 5.2 kg in traditional system
- Dermatitis avoided
Manual fruit harvester for oranges and apples in NEH region

- Output - 278 oranges/h or 614 apples/h
MPUAT Guava fruit harvesting kit

- Output – 46 kg/h
Bamboo ladder for apple harvesting

• Workers climb on the trees and carry out harvesting of apples by plucking the fruits with hands. Injuries do occur.

• An improved fruit harvesting ladder made from bamboo reduces the drudgery of workers involved in this operation.

• Weight of traditional ladder used for harvesting 25 kg. Weight of Improved ladder 12.5 kg. Its height is 240 cm, and it costs Rs. 1050/-.

• A person can harvest 100 kg of apples/h.
Rice Cultivation on Terraces
Traditional Load Carrying
A gravity based ropeway designed and installed at Gangtok was tested.

It would also reduce the drudgery involved to the male as well as female workers.

Cost for carrying one kg load for 150 m works out to be Rs 0.50 and cost of carrying the same load by porter is Rs 2.00.
Farmers especially farm women use traditional harvesting knife. The matured spikes are cut with knife locally known as “Elliachi Chhuri” from the base of its attachment to the main shoot.

Improved knife reduces the force required in operation, minimizes accident chances, and reduces the drudgery involved in the task.

Weight of the improved knife is about 170 g.

The output with improved knife is 8.1 kg/h as against 5.8 kg/h with traditional knife.
Women workers in fish processing industry

Traditional practice

Improved workplace
Ergonomics intervention in Makhana Harvesting

- Improved System involves a floating platform with a 10 litre cylinder having compressed breathing air with regulator, 10 m hose pipe with regulator and a mini diving kit having suit with cap, mask and gauge.

- Output (weight of makhana seeds collected) 11.3 kg/h in T2 system as against 3.8 in T1 system.

- Improved system involves less drudgery in comparison to traditional system with significantly higher work output.
Jaan Hai To Jahaan Hai

Thanks