

Mechanization of Groundnut Crop



Groundnut Digger



Groundnut Thresher

Contributors:

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Collaboration:

BARD Project and BARI Chakwal

Challenges

- Groundnut is an important cash crop of rain-fed areas, particularly Potohar Region. In mid 1980s, harvesting and threshing were done manually as no proper machinery was available.
- Manual harvesting is labour intensive and time consuming. This was one of the main bottlenecks for increasing acreage and productivity.
- Challenge was to develop a proper groundnut digger and thresher.

Interventions

- During 1982-1984, PARC developed a prototype of groundnut digger and successfully tested it at farmers' fields in Punjab, Sindh and Khyber Pakhtunkhwa Provinces.
- The technology was extensively field demonstrated in groundnut growing areas of Potohar and other parts of the country in collaboration with BARI Chakwal and BARD Operational Research Sites in Punjab & Khyber Pakhtunkhwa.
- Presently, operating cost of groundnut digger is Rs. 1,680 per acre.
- In 1985, advancing the mechanization of groundnut crop, PARC developed a prototype diesel-engine-driven stationary thresher based on an axial flow principle.
- During 1986-1990, the machine was tested at farmer's field in Potohar and Khyber Pakhtunkhwa.
- Later on, it was converted to tractor PTO driven machine.
- Again, the modified thresher was extensively demonstrated in groundnut growing areas of Potohar and other parts of the country in collaboration with BARD Operational Research Sites and BARI Chakwal.

Outcomes

- PARC commercialized the machines in partnership with several manufacturers.
- Presently, >6 manufacturers are producing and marketing groundnut digger and thresher.
- In 2012, more than 2,050 diggers and 2,000 threshers were in operation.
- Presently, around 90% farmers use PARC designed groundnut digger and thresher.
- The machines are benefitting the country worth 2.0 billion rupees annually.

Way forward

- Refinement in the machine for pod collection
- Improvement in design to reduce shattering losses.