

COVID-19 Pandemic: Building Back Better through  
Sustainable Agricultural Mechanization  
- Indian Perspective



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# Covid-19 Effect on Agricultural Labourers in India

20 M labourers Migrated to their native places

Caused Labour Shortage (Punjab, Haryana, Gujarat, etc)  
& High Production Costs

And...

Labour Surpluses (Bihar, Orissa, UP, West Bengal, etc)  
& Employment Problems

## Agricultural Labourers Cond.....

### **Where Labour became Scarce**

- Greater Engineering Interventions
- Introduction of high capacity, precision and energy efficient farm implements and machinery.

### **Where Labour became Surplus**

- Engaging returned labourers in gainful employment in
  - ✓ Agriculture and allied sectors
  - ✓ Godowns
  - ✓ Water management &
  - ✓ Food and fodder processing
- Creation & revamping of rural (on & off-farm) infrastructure



# Effect of Covid-19 on Mechanization

Shortage of.....

- Machinery for all farm operations
- Machinery operators
- Manual labours for farm operations
- Repair & maintenance facilities

Machinery transport became difficult

Delays in arrival of machinery for operations



## Suggested Strategy / Solutions / Measures

- Rotavator instead of plough & cultivator - to save time & labour
- Use zero-till drill, happy seeder - availability
- Use of multi-function machinery (till-drills, cultivator cum planter, mulcher-cum-planter etc.)
- Farmer family become machinery operators
- Sharing & pooling of machinery
- Self-propelled walk-behind and riding type rice transplanters
- Direct seeding of rice



- Short duration for longer windows for harvesting and preparing for next crop
- Mechanizing earthing up operations in orchards
- Establishment of hi-tech custom hiring centres with latest machinery



- Use of combo machinery – seed drill with herbicide applicater
- Aero-blast sprayers for fruit trees
- Drones for Plant Protection operations
- Rain guns for irrigation
- Zero till sowing



- Combine harvesters with super SMS
- Tractor operated/mounted combine
- Straw reapers and straw balers - to reduce straw burning
- Threshers with auto-feeding arrangement





- Establishment of “PHM” CHCs with primary processing facilities (cleaning, grading, milling, decortication etc.)
- Establishment of hi-tech custom hiring centres or hubs – Two in each district
- Subsidy to small and marginal farmers for hiring implements and machinery
- Additional financial assistance to custom hiring entrepreneurs



## Agricultural Machinery Industry

- Machinery Manufacturing & Servicing - to be included in essential services
- Manufacturing of multi-function machinery like
- Small-medium manufacturers advised Out-sourcing/sub-contracting of components/parts & Adopting standard parts to replace in-house fabricated parts and components
- Standardization of critical components and their mass production by medium and large scale manufacturers.



# Thank You

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