



Enriching Lives

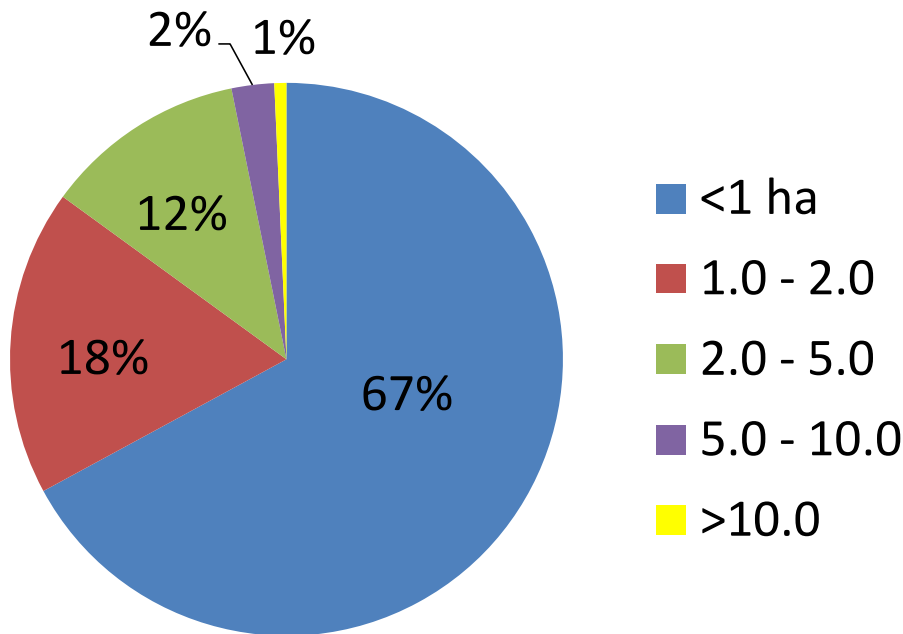
Smart Farm mechanization for India

What's Smart for us?



Landholdings in India

Land holdings



- Number of landholdings – 138.4 million
- Total size – 159.6 million ha
- Gross cropped area – 200 million ha

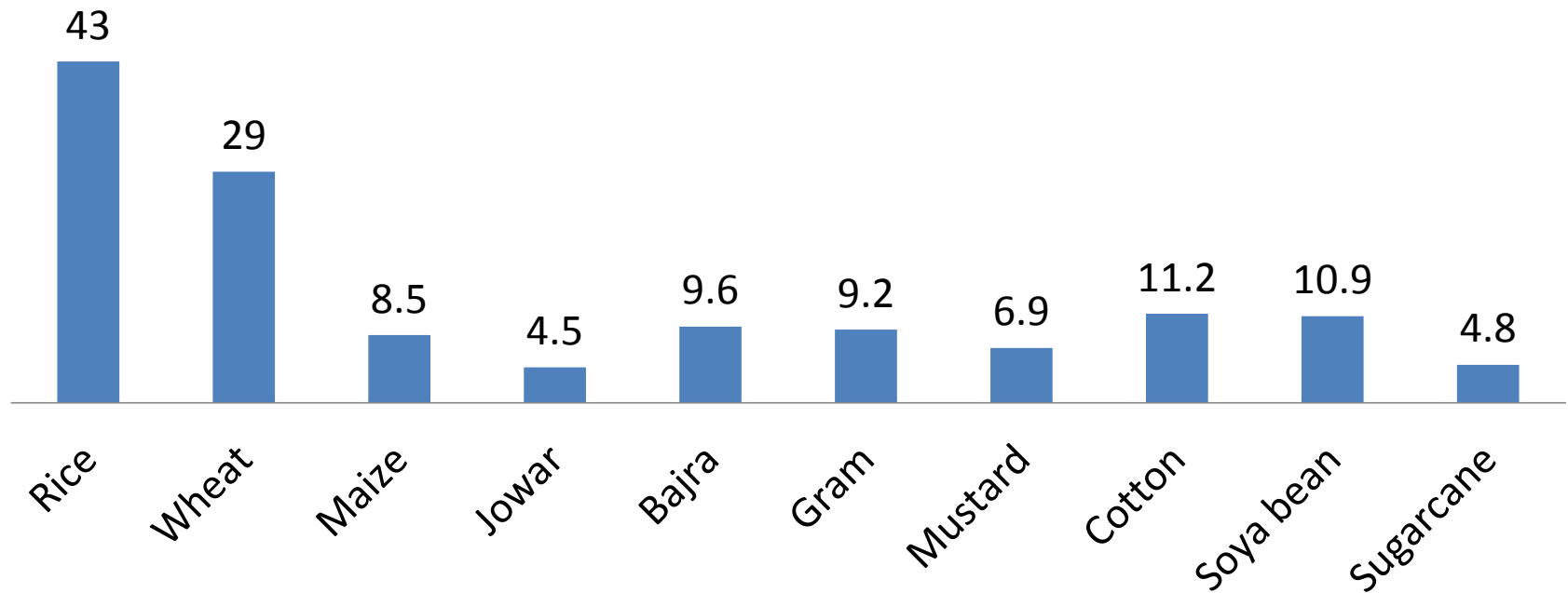
67% of the farmers in India have land less than 1 ha



Enriching Lives

Crop cultivation

Crop area (million ha)

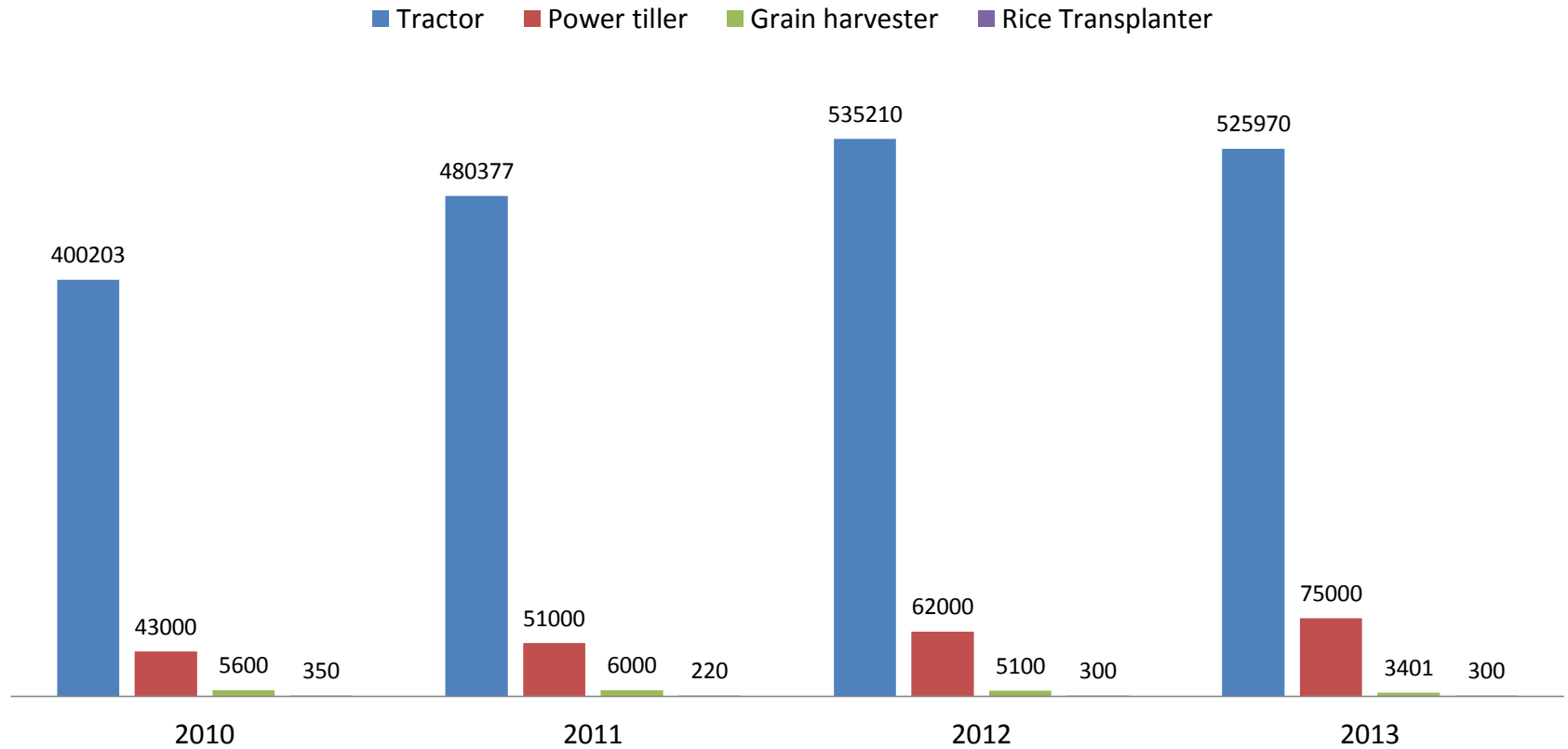


Rice is the most cultivated crop in the country followed by wheat



Enriching Lives

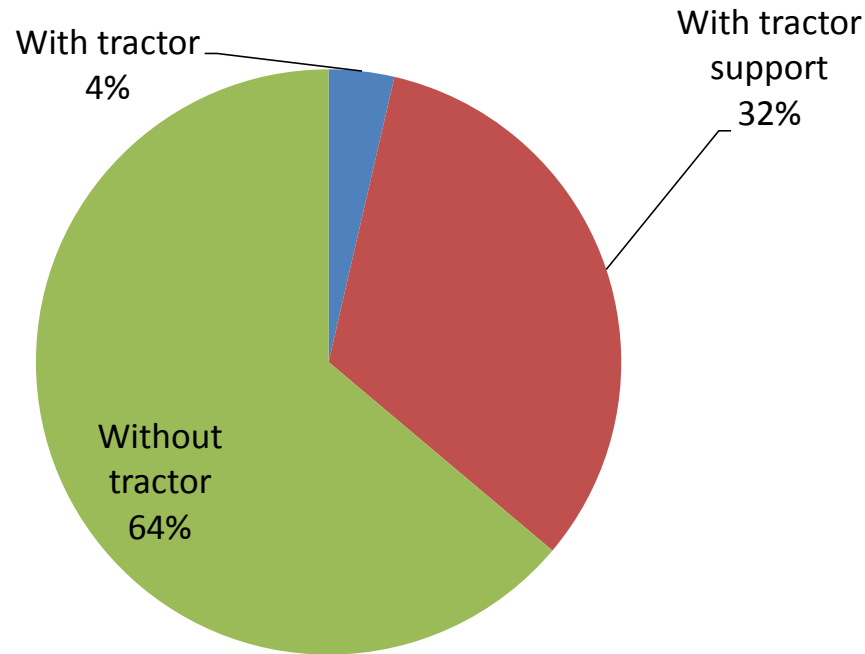
Machinery market



Farm mechanization in the country is dominated by tractors



Tractor penetration



Assumptions

- 5 million tractors in the country
- One tractor supports 10 land holdings

64% land holdings neither have tractor nor any support

Tractor v/s Power Tiller



- High cost of machinery
- More space to maneuver
- Not optimum for small land holdings
- Deep puddling
 - More water consumption
 - Higher chances of infection
 - More destruction of soil aggregates
 - Deeper formation of hard pan

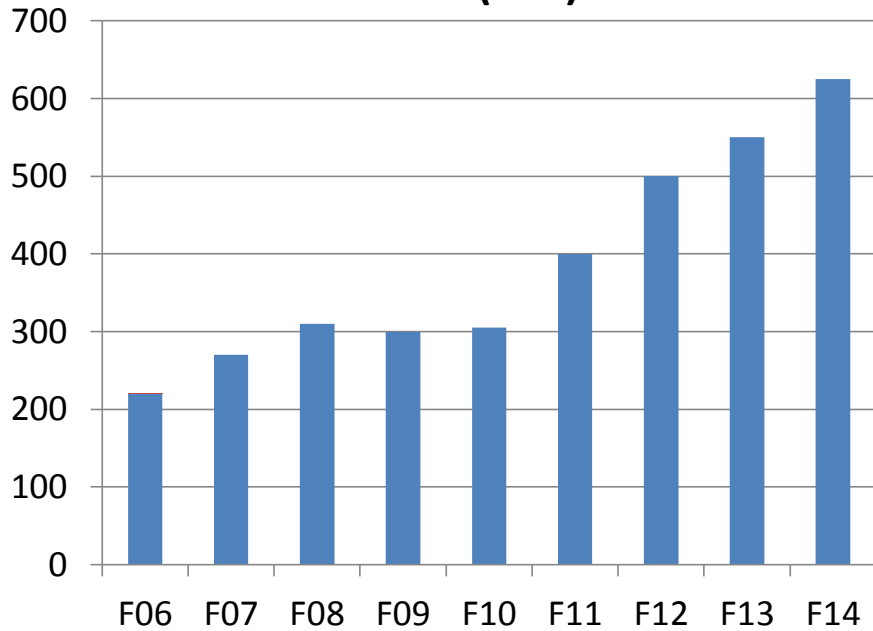
- Lower cost of machinery
- Less space to maneuver
- Optimum for small land holdings
- Shallow puddling
 - Less water consumption
 - Lower chances of infection
 - Less destruction of soil aggregates
 - Higher formation of hard pan



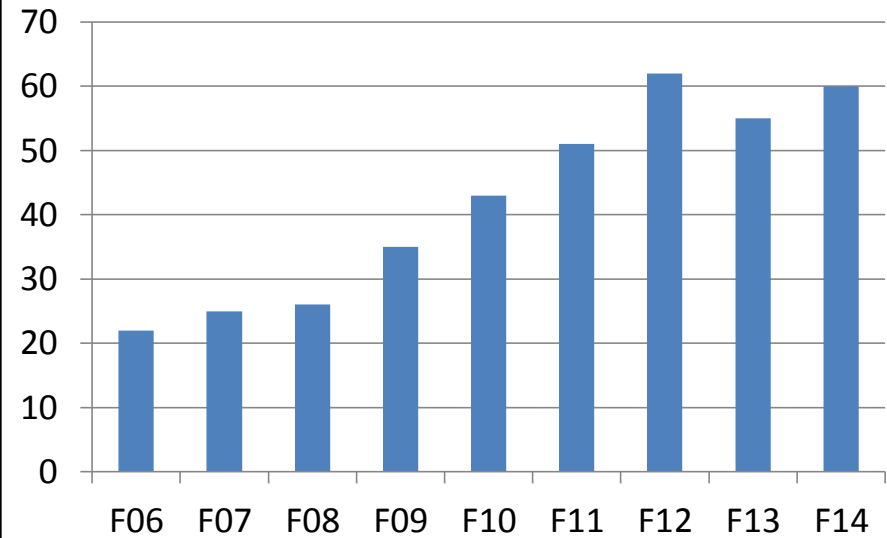
Enriching Lives

Background – Tractor sales V/s Power Tiller Sales

Volume (000)



Volume (000)



- There is a huge scope for mechanisation considering 64% have no options
- This needs to be smart for more farmers to adapt the same

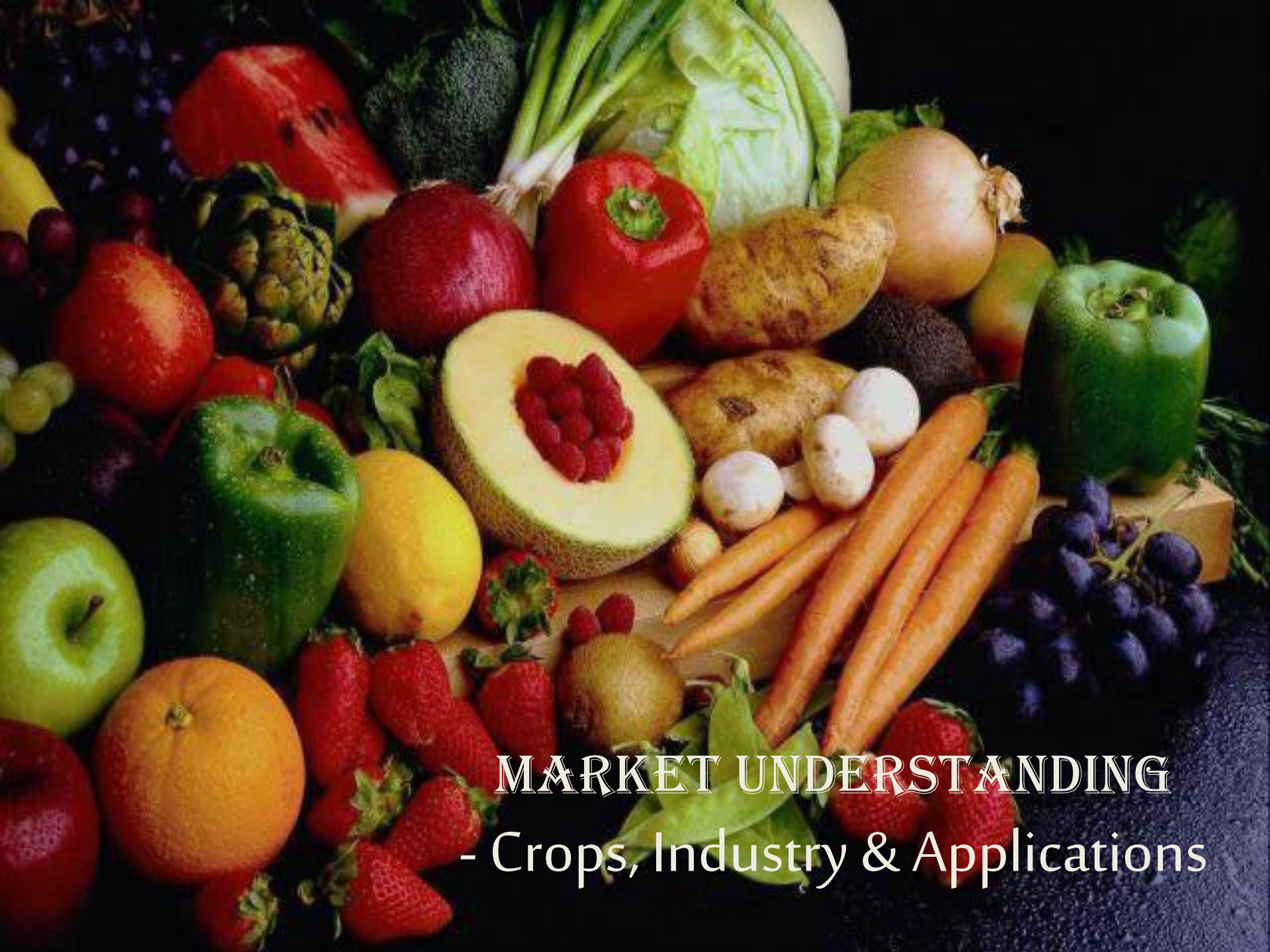


Enriching Lives

Background

Reasons for Slow growth in Power Tiller Industry:

- Age old Products
- 35 % of the industry is Chinese products
- Complete dependence on Subsidy for growth
- High effort, low safety , Poor Ergonomics
- Perception is **“Power Tiller = Poor Man’s Machine”**

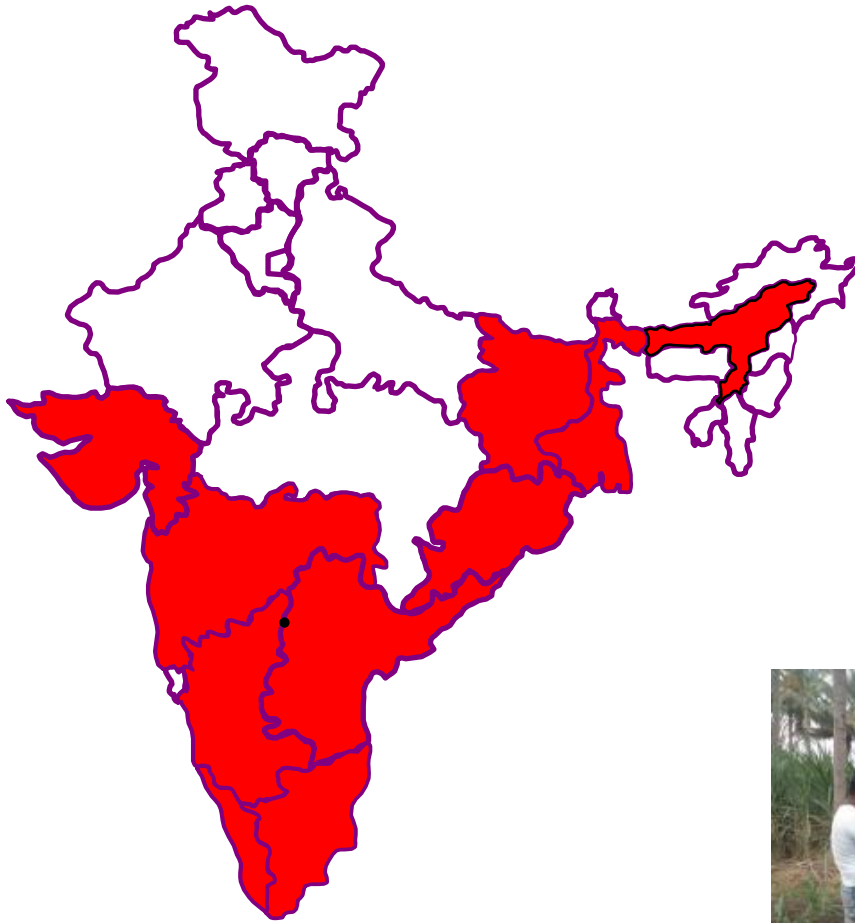


MARKET UNDERSTANDING
- Crops, Industry & Applications



Enriching Lives

Insight Exercise with Customers



- No. of Places : 40
- No. of Customers : 150



Insight Findings- Comfort, Safety, Utility

PRIDE....*missing*

- Wants a Simple Machine
- More Power (>13 HP)
- Easy Handling
- Good Headlamp for Working
- Lesser Noise Level



- Comfortable Seating Arrangement

- Improved Ergonomics (Operator Should not bend)

- Better Clutch life (>1 yr)
- Good Head lamp
- Options:
 - Hydraulics for depth control
 - Remote Controls

- Safety
- Should be capable to do more applications
- Adjustable Track 2.5'~4'
- Effective Brakes
- Crop Guard arrangement
- Adjustable rotor width
- Effective controls while going down hill
- Simple Gear Shifting

Customer Profile 1 (TN/MH/AP/OR) :

1. Land Holding 2-4 Acres
2. Self Use + Rental
3. <10th Class Education
4. Subsidy Dependency

Customer Profile 2 :

1. >15 Acres
2. Self Use (Labour NA) for non tractor applications
3. Wants Trained Drivers
4. >10th Education
5. Non dependency on Subsidy

More Utility :

- Primary Applications
- Rotavator (Dry & Wet Land)
- Plough
- Reverse Rotary tillage
- More speed on haulage
- Chakki Operation
- Stone Cutting Attachment
- Ridger Application



First Thought on the Product

Associated with
PRIDE

Engine :

- 15 HP Engine
- Key Components Localized
- TREM III Compliant



Easier Controls & Operation :

- Brakes on Transmission
- Options of Hydraulic actuation on clutch & brakes
- Phase II : Remote controls for field operation

Styling /Comfort :

- Stylish Contemporary Looks
- Steering Arms at ergonomically designed position
- Spring loaded soft operator seat

Application Suitability :

- Capable of doing Primary Tillage : Powered Plough
- Adjustable wheel Track
- Side PTO with 3Forward & 1 Rev Speed
- Front bracket for direct engine drive

Addressed comfort, utility and safety

FIRST LOOK..



Enriching Lives



16-Sep-15

KIRLOSKAR OIL ENGINES LIMITED



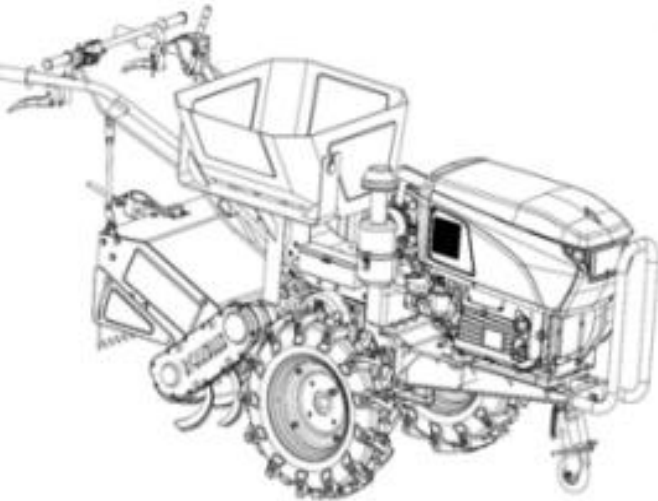
Enriching Lives

Product Brief

Innovating for customer requirements : Filing patents



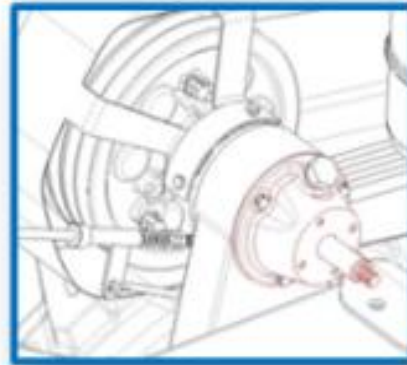
Enriching Lives



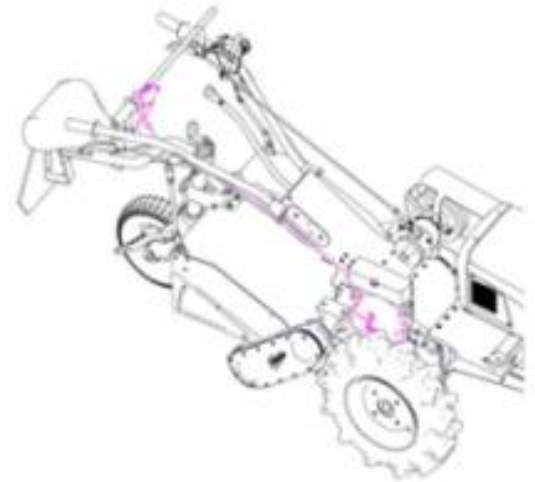
Mounted Material Carriage



Side Power Takoff



Transmission braking systems



Integrated operator comfort features





Enriching Lives

APPLICATIONS: 1ST TIME MULTI APPLICATION SUITABILITY

Seeder



Sprayer

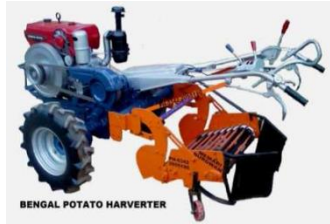


Non –Tipping trailer



Tipping trailer

Potato Digger



BENGAL POTATO HARVERTER



Puddling

Ridger



Potato Planter

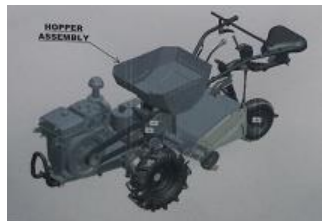


BENGAL POTATO PLANTER

Stone Cutter



Hopper



HOPPER ASSEMBLY



Power Tiller vs MegaT



Enriching Lives





Enriching Lives

KMW
BY KIRLOSKAR

It looks like a tiller but
works like a tractor.

Introducing

MEGA T

Yehi kaafi hai.



15 HP
10.76 kW
@ 1500 rpm



Multi Use
100+ applications
and 100+ farming
applications



Safer
Safety Features
like 120mm



Fuel efficient
Low fuel and
maintenance
costs



Comfort
of a car

MEGA T

Revolutionary Farm Machine

Precision Farming



- Reduce input cost
- Improve Decision Making
- Increase Profitability
- Time Saving
- Better monitoring & controls



Enriching Lives



- Land Preparation
- SMS /Alert based systems

- Seed Command
- Auto Steer
- GPS based System (Guidance)

- Direct command
 - Optimum overlapping
- Auto Steer
- GPS based System (Guidance)

- Direct command
- Auto Steer
- GPS based System (Guidance)
- GPS based Trackers & Field activity Monitors

Remotely Controlled Tillage Equipment for Wet land Preparation



Enriching Lives

- Complete freedom from drudgery (to the farmer / user.)
- Precise control of the Pudding equipment with in +/- 1" of intended location.
- Can be controlled from bunds outside the plot
- No need to walk behind in deep mud, protection from Snakes, stones etc.
- Lesser Sinking Tendencies
- Less compaction because of light weight
- Possibility to extend the use to other applications : Transplanting, Dry land preparation





Enriching Lives

Thank You