



Automatic Side-Shift Offset Rotavator

NASCENT AGRIMACH



Firm's Details

- Name : M/s Nascent Agrimach
- Firm Status : Partnership Firm
- Registration : Registered under Partnership Act 1932 in May 2017-18
- Head Office : Ludhiana, Punjab

Problems caused by weeds...



Problem is Weeds.....The Un-necessary Plants

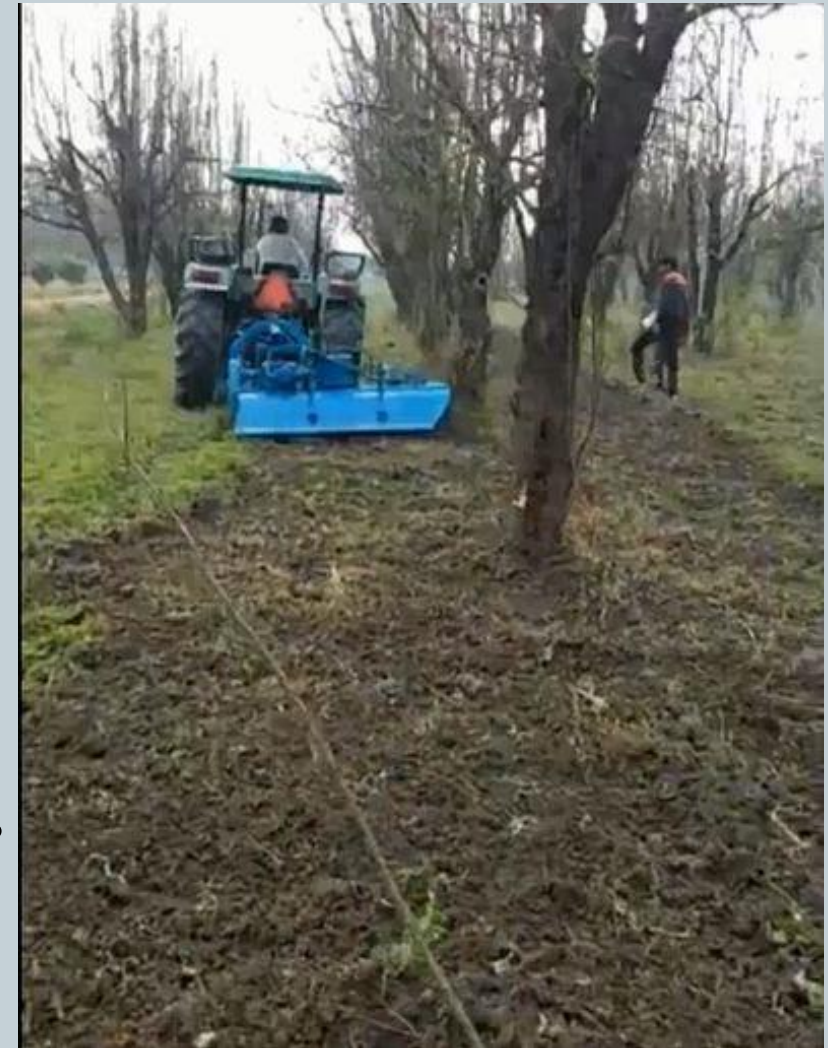
- Currently using Chemicals/herbicides for removing weeds
- Weed competes with crop for water & nutrients
- Weeds reduces the yield of crop
- Increase in cost of cultivation
- Poisonous weeds likes datura may cause the death of cattle



Solution – Automatic side-shift offset rotavator

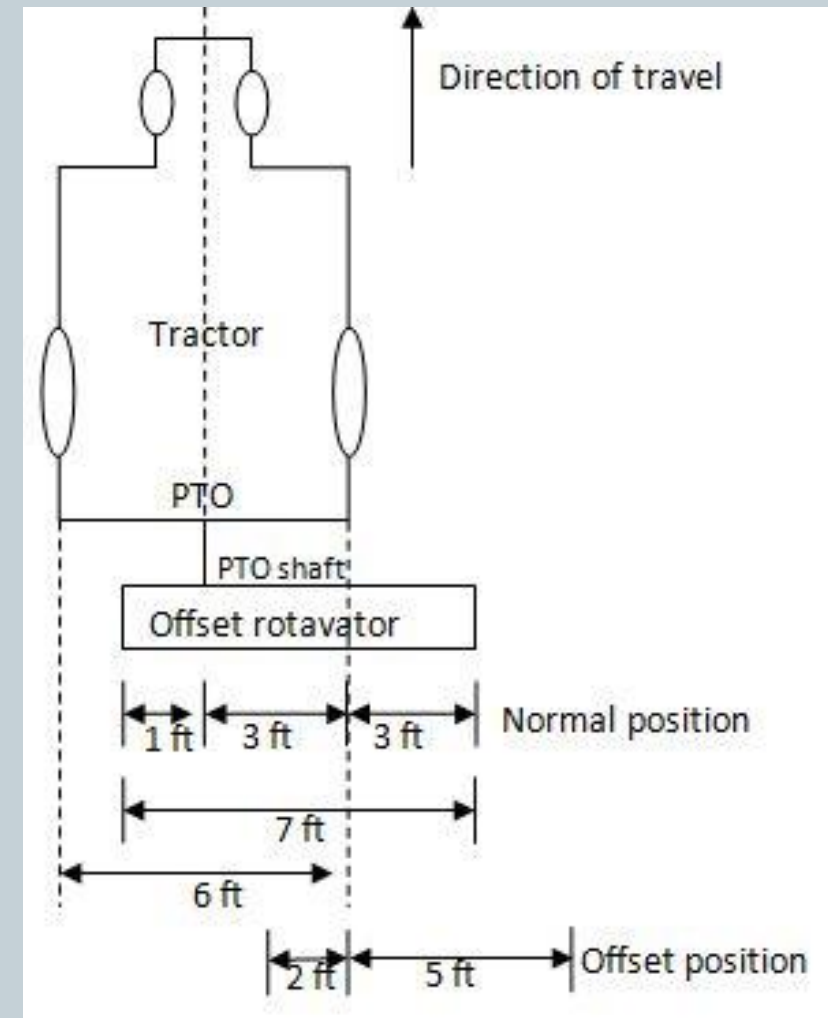


- It removes weeds from orchards in between the trees and plants by rotary action using hydraulic side shifting mechanism
- It can be used as normal rotavator
- Damage to plants is very low
- Promotes organic farming
- Inline with the P.M's vision of reducing use of chemicals by 10-25%
- We have fabricated 2 machines and sold it to our customers



Technical description of offset rotavator

- It is a hydraulically operated, automatic controlled side shift rotavator.
- The offset position of the rotavator is controlled by hydraulic system which is operated by a sensor
- Sensor touches the tree and pushes the hydraulic valve to side shift the machine automatically and make it normal position behind the tractor.
- The shield contours of the rotavator is so curved and shaped that it avoids striking with plant.
- Response time is 1.0 – 1.5 Second
- Total Offset is 5 feet

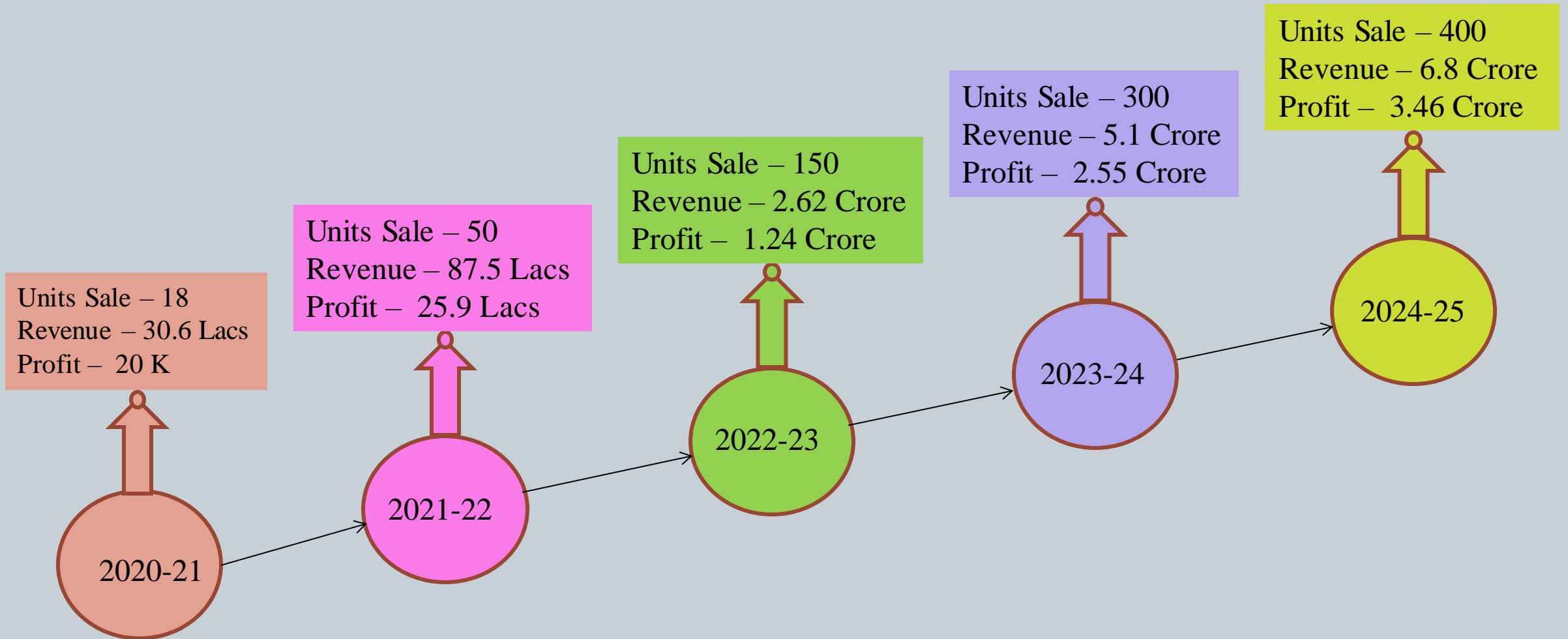


Current Market & Revenue Generated





- We have sold two units in market and both are running satisfactorily
- Currently we have no competitor in Indian market for this machine
- **Revenue Generated:**
 - Total Production Cost – **INR 2,00,000**
 - Total Sales generated from two units **INR 2,25,120**
- The technology of this machine is developed and tested by **C.S.I.R. (Govt. of India)**.
 - They have tested it in GB PANT University
 - We sold two units at very low profit of **INR 12,500/unit** to conduct field trials and market feedback
- We got very good feedback from farmers
- We will generate revenue only by direct selling to farmers initially and in future through dealers and distributors too

Growth Road Map



Team - Nascent Agrimach



Founder's Image	Name	Qualification	Experience
	Pankaj Kumar	<ul style="list-style-type: none">➤ B.Tech in 2010 (Mechanical Engineer)	<ul style="list-style-type: none">➤ One & half year experience as Quality Engineer➤ Five Years experience in design and development of Farm Machinery as JRF in C.S.I.R.
	Paramjeet Singh	<ul style="list-style-type: none">➤ Diploma in 2007 (Production Engineering)➤ B.Tech in 2011 (Mechanical Engineer)	<ul style="list-style-type: none">➤ One year experience as Tool Room Quality Engineer➤ Five Years experience in design and development of Farm Machinery as Project Assistant in C.S.I.R.

Milestones & Timelines



Sr. No.	Milestones	Action Plan	Timeline
1	<ul style="list-style-type: none">• Manufacturing setup• Manufacturing of machines	<ul style="list-style-type: none">• Purchase of raw Material• Fixture & Die development• Purchase of Hydraulic Bending Machine• Manufacturing of 5 machines	1 st Quarter
2	<ul style="list-style-type: none">• Commercial Testing• Production & Sale of machines• Online Promotion	<ul style="list-style-type: none">• Apply & submit machine for commercial testing• Purchase of V.M.C. Machine• Purchase of raw for mass Production• Complete the fabrication of 10 machines	2 nd Quarter
3	<ul style="list-style-type: none">• Popularization of technology• Feedback & improvements	<ul style="list-style-type: none">• Provide live demonstration to farmers and co-op. societies• Fabricate 3 Machines• Participate in Exhibitions• Contact the customers and ask for any modifications if needed	3 rd Quarter

Fund Utilization



- Funding Recommended or allocated– INR 21,00,000/
- Funding Requirement – INR 30,40,000/-
- Quarterly Fund Requirements (All figures are in **INR Lakhs**)

Head	Description	Q1 40%	Q2 40%	Q3 20%	Total	Breakup %	Owner's Contribution
Manpower	Human Resource Salary & wages	1.2	1.2	1.1	3.5	16.7%	1.7
Capital (Machinery)	V.M.C, Hyd. Bending Machine	1.75	1.75	0	3.5	16.7%	0.5
Working Capital	Raw material, Rent, Electricity, Vehicle	4.0	4.0	2.3	10.3	49%	5.9
Testing, R&D	Commercial Testing, Development & Marketing	1.2	1.2	0.6	3.0	14.3%	1.0
Contingency	Unforeseen Expenses	0.25	0.25	0.2	0.7	3.3%	0.3
Total Cost		8.4	8.4	4.2	21	100%	9.4

Video of Testing



Financial Projections



Expenditure/Income	2020-21	2021-22	2022-23	2023-24	2024-25
Wages	300000	480000	600000	7,20,000	8,40,000
Salary	220000	600000	750000	10,00,000	11,00,000
Rent + Electricity	145000	300000	400000	5,00,000	6,50,000
Petrol + Accounts	35000	70000	90,000	1,20,000	1,30,000
New Machinery Cost	400000	400000	400000	3,00,000	3,00,000
Marketing + Promotion	100000	150000	200000	1,75,000	1,75,000
R&D, Testing etc	300000	80000	50000	50,000	50,000
Unforeseen Expenses	100000	80000	80000	80000	80,000
Units to be sold	18	50	150	300	400
Unit Cost	80000	80000	75000	75000	75,000
Expenditure	30,40,000	61,60,000	1,38,20,000	2,54,40,000	3,33,25,000
Sale Price	1,70,000	1,75,000	1,75,000	1,70,000	1,70,000
Total Sale	30,60,000	87,50,000	2,62,50,000	5,10,00,000	6,80,00,000
Profit	20,000	25,90,000	1,24,30,000	2,55,55,000	3,46,75,000

Turnover of 5 Years – 15,70,60,000; Net Profit – 7,52,70,000

Revenue Model



Sr. No.	Recurring Expenditure	Figures in INR
1	Salaries to Partners	300000
2	Labor Wages	220000
3	Rent & Electricity	145000
4	Petrol	20000
5	Accounting & C.A.	15000
		Total – 7,00,000

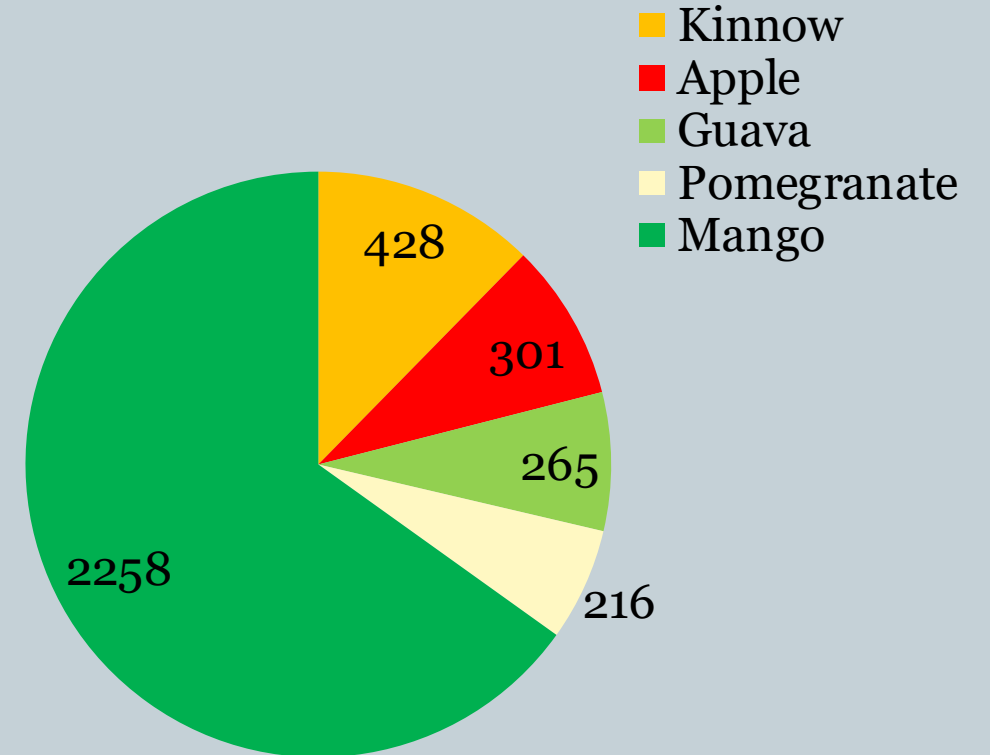
Sr. No.	Non-Recurring Expenditures	Figures in INR
1	Commercial testing	200000
2	Machinery (Bending, V.M.C)	400000
3	Marketing & Promotion	100000
4	R & D	100000
		Total 8,00,000

Expected unit Sales in 1 Year	18
Production Cost INR – 80000x18	1440000
Unforeseen Expenses	100000
Total expenditure 1st Year	3040000
Unit Sale Price	170000
Total Sales	170000 x 18 = 3060000
Profit in 1st Year in INR	20,000

Target Market we are focusing

Market size and segment:

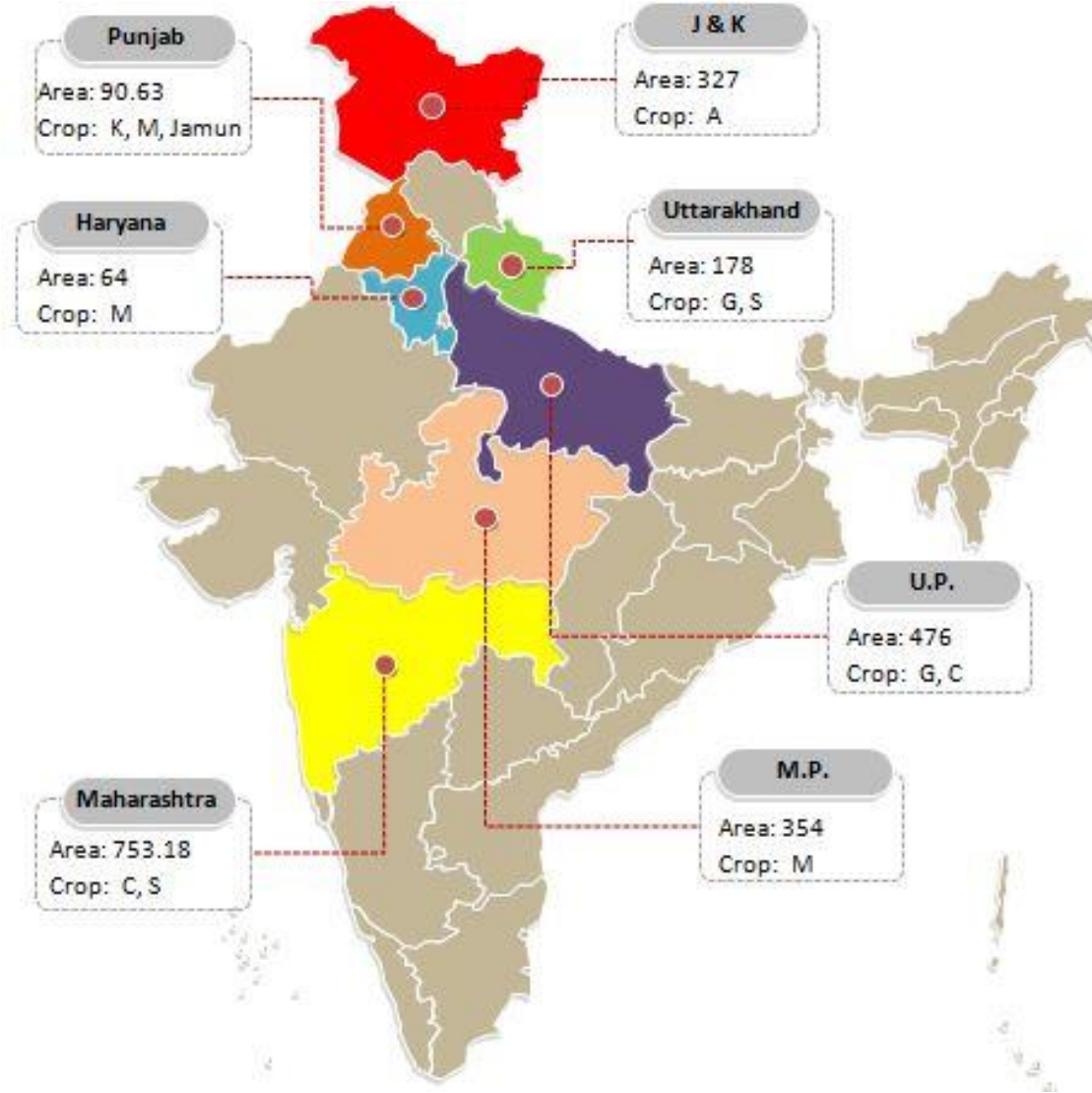
- Currently we are focusing on crop viz. Guava, Apple, Mango, Papaya, Kinnow, Pomegranate, Strawberry
- As per data collected, initially our main focus will be on Punjab, Uttarakhand, Haryana, Madhya Pradesh, Maharashtra, U.P., J&K



Area of Production in Thousand Hectare

Source: National Horticulture Board

Fruit Production in India (2017-18)



A – Apple
M - Mango
G – Guava
C – Citrus Fruit
S – Strawberry

Area in Thousand hectare

Source: National Horticulture Board

Opportunity for us



- We are the only manufacturer of this machine in India
- Applied for Patent vide application number 201711043692
- Already commercialized the other technology entitled “Inter-row rotary cultivator” developed by C.S.I.R. for intercultural operation
- We are already in contacts with farmers, Sugar Mills, and Farmers Co-Operative Societies



Participation in Kisan Melas

- We are participating in exhibitions/ Kisan Melas
- We have demonstrated the machine in farmer's field & Co-op. Societies
- We are also promoting our machine through social networking



P.A.U. Campus 2017



K.V.K. Gurdaspur



Mentors /Advisors



➤ **Dr. Pradeep Rajan**

Principal Scientist, CSIR-CMERI-CoEFM

➤ **Mr. Jagdish Manik Rao**

Sr. Scientist, CSIR-CMERI-CoEFM

➤ **Dr. Manjeet Singh**

Head of Farm Machinery Department P.A.U.

➤ **Dr. Naresh K. Chhuneja**

Sr. Research Engineer (Department of Farm Machinery) P.A.U.

