

Operationalization of Custom Hiring Centers on Farm Implements in Hundred Villages in India



Ch. Srinivasarao, Sreenath Dixit
I. Srinivas, B. Sanjeeva Reddy,
R.V. Adake and Shailesh Borkar



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National Initiative on Climate Resilient Agriculture (NICRA)

Central Research Institute for Dryland Agriculture

Santoshnagar, Hyderabad-500 059, Andhra Pradesh.

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Foreword

Agriculture demands timeliness as goes the proverbial saying “everything else can wait but not agriculture”. Advantages of timely completion of agricultural operations have shown significant benefits both on research farms and farmers’ fields. In the recent past, due to high degree of weather aberrations, the timeliness of agricultural operations has come into sharp focus. It is often seen that the ideal conditions for an agricultural operation such as sowing or intercultural operation exist for a short period of time. If the farmer fails to complete the operation within the ideal time frame, he or she will have to compromise with the output. This problem can be tackled by employing appropriate agricultural implements to carry out the operations. However, for long, small agricultural farms stayed away from mechanization considering that it is possible to mechanize only big farms.

However, we now have several options to increase the efficiency and timeliness of agricultural operations even on small farms by using agricultural machinery. But the cost of such machinery is not affordable by small holders in many cases. This calls for sharing of the cost of implements by innovative institutional arrangements. In the recent past, custom hiring of agricultural machinery is seen as an appropriate institutional arrangement which can promote mechanization of agricultural operations on small farms. For the first time, an attempt has

been made by the National Initiative on Climate Resilient Agriculture (NICRA) to set up one custom hiring center each at the 100 climatically vulnerable villages across the country, which are actually functioning. I am glad to know that these custom hiring centers are managed by farmers through Village Climate Risk management Committees (VCRMC).

I am also happy to note that three subject matter divisions of ICAR viz., NRM, Extension and engineering are working together in this endeavour.

I congratulate the team at CRIDA, the three subject matter divisions, Zonal Project Directors and the Programme Coordinators of KVKs who have jointly worked to make this publication possible.



(S.Ayyappan)

Preface

Timeliness of agricultural operations is crucial to coping with climatic variability, especially with sowing and intercultural operations. With increasing climatic variability, timely sowing or re-sowing alone can reduce crop losses significantly. However, farmers are often not able to complete critical operations in time for want of labour availability. This calls for promotion of appropriate agricultural machinery for performing critical agricultural operations. Although many efforts have gone in this direction in the past, not much dent has been made in improving the timeliness of agricultural operations. This is mostly because of the un-affordability of many machines by small farmers and difficulties in maintenance and repairs.

CRIDA has been working for promotion of mechanization in small farms for over two decades and has developed several institutional systems to address this issue. One of the most successful strategies is the custom hiring of agricultural implements. This has successfully empowered farmers to tide over the shortage of labour and improve efficiency of agricultural operations. CRIDA has attempted this concept on large scale through 100 Krishi Vigyan Kendras across the nation under the National Initiative on Climate Resilient Agriculture (NICRA). This is an effort, first of its kind that has caught the attention of farmers, state extension functionaries and planners for addressing the growing labour crisis in agriculture and the need for improving timeliness of operations, particularly in the backdrop of climate change.

In this publication, we share the basic information that illustrates the range of machinery deployed across 100 villages and the performance of custom hiring centers in these places. Although, this publication does not detail the impact of custom hiring centers at this stage, it tries to give a glimpse of the prospects in mechanizing small farms in areas faced with climate related challenges. Besides, we also hope that this will pave the way for appropriate policy formulation for promoting small farm mechanization at state and district levels.

Authors

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Chapter-I

Introduction

Indian agriculture is undergoing a gradual shift from dependence on human power and draft animal power (DAP) to mechanical power because maintenance of DAP and manual labor is becoming increasingly costly coupled with scarce availability of fodder and feed to animal. Hence mechanical power has become more economical and indispensable to meet targets of timeliness and efficient utilization of natural resources and input use. Intensive cultivation also require mechanization. Use of high capacity and energy efficient farm implements are more important in changing climate scenario. This includes and limited sowing (window) period available due to delayed monsoon or long dry spells between rainfall events to complete farm operations. It is also relevant after prolonged water logging or for limited period suitable for various intercultural practices such as weeding or harvesting. Farm power availability from human and animal power sources has remained same or even reduced during past 20 years (0.24 Kw/ha in 1951 to 0.20 Kw/ha in 2009). Farm power from tractors mechanical and electrical sources put together increased 20 fold in the same period (0.04 Kw/ha in 1950 to 0.93 Kw/ha in 2009).

Timeliness of operations has significance for increased germination and required plant population, good crop stand and sustained productivity of crops. All these are possible by way of using high capacity energy efficient farm machinery. For example, the sowing of wheat is done up to the first week of November in states like Punjab and Haryana. A delay beyond this period by every each week leads to decrease in crop yields of about 0.37 MT per ha. In rainfed agriculture regions of India, 6 to 8 weeks delay in onset of monsoon in the current year (2012 *kharif*) resulted in some sort of panic among farming community in terms of completing sowing operation by end of July by utilizing first rainfall received at the end of July. Other operations like hoeing, irrigation, intercultural, top dressing of fertilizer inputs, harvesting, threshing and marketing which need to be done at appropriate time otherwise farm productivity and income are adversely affected.

The quality precision of the operations are equally important for higher yields for example, sowing of the required quantity of seed at proper depth and uniform application of given dose of fertilizer can only be possible with the use of proper mechanical devices.

Time taken to perform sequence of operations is a factor determining the cropping intensity.

To sum up, mechanization of agricultural field operations sooner than later is the need of hour in the present Indian Agriculture. Mechanization of agriculture, of course, has same constraints and limitations. Some of them are illustrated below:

1. High initial cost often prohibits individual ownership especially amongst small, small and medium farm holds.
2. Lack of knowledge in the aspects of operation, maintenance and repair of equipment, often, restricts the use of farm machinery.
3. Repair and maintenance under individual ownership coupled with lack of space for shelter also constraints the use.

Custom Hiring Centers (CHCs)

Custom hiring of farm machines was first introduced in Indian agriculture early decades of 19th century. When a 30-inch (diameter) steam thresher was used for custom hiring. The machines were taken to about 10 different places working for 2 or 3 days at each place. Organized custom hiring to promote multi-farm use of agricultural machinery was made in mid-1960 when Agro-Industries Corporation (AIC) was established in the states. AICs in 1970s to 1990s, concentrated mainly on land development and tillage operation aspects and had not spread to other important field operations. Custom hiring of farm implements got further boost when Government of India, in 1971, launched a scheme to set up agro-services centers all over the country. Custom hiring services, in a limited way was started in 1990s under National Schemes spread over India, under NATP and NAIP in a limited way. Accordingly, it had limited success because they were tried in limited spaces with extremely less number of staff i.e. concentrated to small pockets of India.

Now, in 2010, under NICRA, by bringing in 100 KVKs spread over drought/flood/hill area and other difficult situations of agriculture, the man power utilization and technical expertise of KVKs, is harnessed to popularize custom hiring services. Biggest advantage with the present launch of custom hiring services is that:

1. Available extension network and technical expertise of KVKs are utilized, that act as a backstop.
2. By forming Farm machinery Service Centers/Farmers Committee, requirement of individual village/agro-climatic zone is assessed and use of equipment is tailor made as per requirement/demand.
3. Revenue generation is ploughed back to the society.
4. Operation repair, maintenance aspects are taken care of.

The composition of Indian farms changed drastically. India has a large number of marginal (< 1ha) and small (1-2 ha) farm holdings with low poor economic condition. Single farm ownership of any farm implement or machines on the small farm is not economically viable. But through custom hiring of agricultural machines even small farmers have been able to get the benefit of farm mechanization.

Chapter- II

Process of Establishment of Custom Hiring Centres (CHC)

Under NICRA, besides strategic research dissemination of already available climate coping technologies on the farmers' fields in vulnerable districts is another important activity (Figure 1). The technology demonstration (TD) component of NICRA involves identifying climatic vulnerabilities in the selected village in each of the 100 districts based on a scientific analysis of climate related problems, farmers' experiences and implementing, appropriate, adaptation and mitigation strategies. The focus of the programme is not only to demonstrate the climate resilient agriculture technologies but also to institutionalize mechanisms at the village level for continued adoption of such practices in sustainable manner. One representative village or a cluster of villages from each of the 100 identified vulnerable districts was selected for this purpose by the respective Krishi Vigyan Kendra (KVK), in the district.

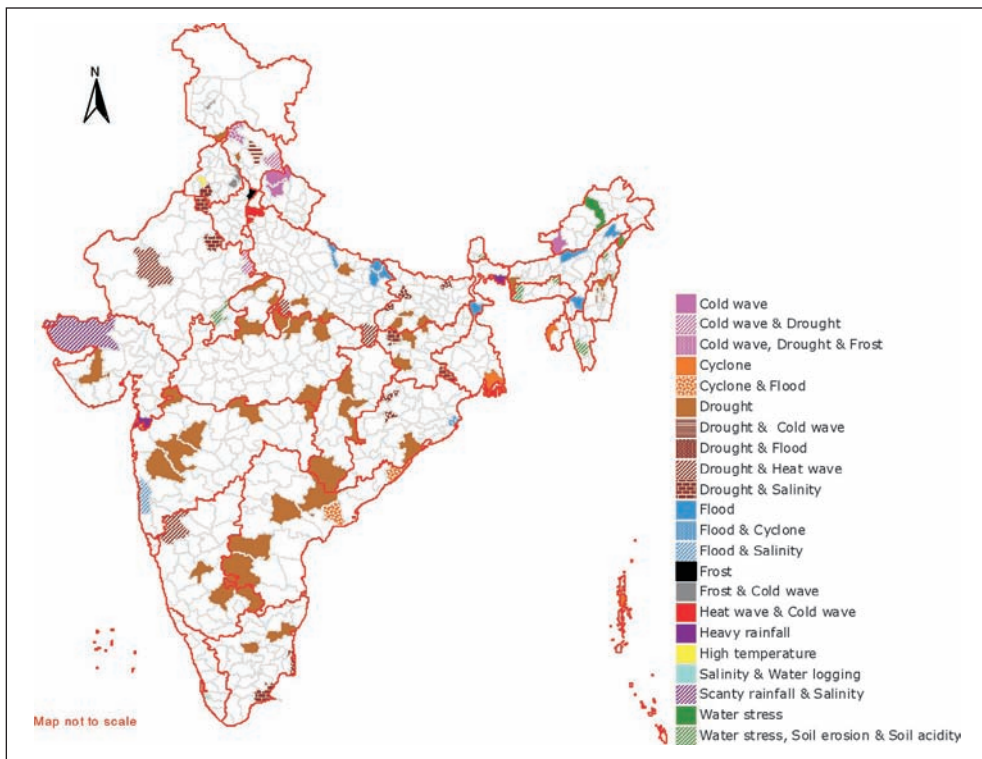


Figure 1 : Selected 100 Districts for Demonstration of Climate Resilient Technologies

Central Research Institute for Dryland Agriculture (CRIDA) took the responsibility of planning, coordination, and monitoring of the programme at national level. Eight Zonal Project Directorates (ZPDs) were involved in coordinating the project in their respective zones. At districts level, the selected KVK are responsible for implementing the project in selected village through farmer's participatory approach. The interventions were focused mainly to address climate related constraints and not general technology transfer.

Need for Custom Hiring Centres (CHCs) in NICRA villages

In order to address the climatic vulnerabilities of the selected villages, different interventions were planned under four modules. However, the specific intervention under each module for a particular village was need based and finalised based on climatic vulnerability and resource situation of that village. The four modules are natural resource management, crop production, livestock and fisheries and institutional interventions. For demonstrating various climate resilient interventions related natural resource management such as in-situ moisture conservation, biomass mulching, residue incorporation instead of burning, brown and green manuring, water harvesting and recycling for supplemental irrigation, improved drainage in flood prone areas, conservation tillage where appropriate, artificial ground water recharge and water saving irrigation



methods. Likewise, farm implements availability is essential for completion of sowing operations in narrow sowing window when monsoon gets delayed. Aberrations of monsoon like insufficient and heavy rain often warrant resowing of crops, which require adequate draft power in the village in such cases custom hiring centres are of great help.

Selection of Target Village

The village was selected based on vulnerability of agriculture to climatic variability. Highly vulnerable village may get priority in selection. Using secondary/ published data, the village which was relatively more vulnerable to climatic variability like prolonged drought, dry-spells, extreme rainfall events, hailstorms, extreme temperatures, cold and heat waves, frost, flood, seawater inundation, etc was to be selected. The village should it represent the dominant cropping system of the district. The proportion of rain fed area in the village should be more than the district average. A higher proportion of small and marginal farmers were another consideration. Majority of the families in the selected village should derive major portion of their family income from agriculture and allied activities. The climatic vulnerability of the village (frequency and intensity of droughts, floods, heat wave, cold wave, etc) should represent that of the district. It was stressed that the selected village must represent the dominant farming system, climatic vulnerabilities and adverse weather situations of the selected district.

The multidisciplinary team of KVK analyzed the constraints related to climatic variability based on secondary weather data, resource situation, farming systems and agricultural yields in the past few years. The major constraints resulting from climatic variability includes; water scarcity, recurrent droughts (early, mid season, terminal), cold wave, heat wave, flood, pest and diseases of crop and livestock, fodder scarcity, poor access to appropriate seeds/planting material and critical inputs and farm machinery (access and cost). Large areas in rain fed regions remain fallow or planted late due to poor access to farm machinery. Hence, improved access to farm machinery for sowing, harvesting etc. would be an important component of adaptation strategy to deal with climatic variability. Therefore community managed custom hiring centre was planned for in every selected village. The type and quantity of implements have been decided based on actual needs. For this purpose, amount of ₹ 6.25 lakhs has been allocated for each village.

By following the bottom up approach and consultation with the community, each of the 100 KVKs prepared list of farm implements required in the village to the project

coordinating unit at CRIDA, Hyderabad. Farm implements list in relation to the crops CHCs in the villages was finalized and approved during the in eight zonal workshops and interventions planned in each village (Table).

Table : Details of Zonal Workshops to Finalized actual Plans include Custom Hiring Implements

| Name of the zone | No. of participating KVKs | Date of the workshop | Venue |
|-------------------------|----------------------------------|--|--------------------------------------|
| Zone – VIII | 9 | 9 th February, 2011 | Zonal Project Directorate, Bangalore |
| Zone - V | 13 | 14 th & 15 th February, 2011 | CRIDA, Hyderabad |
| Zone - VI | 7 | 19 th February, 2011 | MPUAT, Udaipur |
| Zone - II | 15 | 21 st & 22 nd February, 2011 | Zonal Project Directorate, Kolkata |
| Zone - VII | 14 | 3 rd & 4 th March, 2011 | IGKV, Raipur |
| Zone - III | 17 | 7 th & 8 th March, 2011 | AAU, Gowahati |
| Zone - IV | 13 | 10 th & 11 th March, 2011 | Zonal Project Directorate, Kanpur |
| Zone - I | 12 | 14 th and 15 th March, 2011 | Zonal Project Directorate, Ludhiana |

The NICRA-action plans for each of the 100 selected districts developed based on village–PRA were critically reviewed by the group to focus them on addressing the climatic vulnerabilities only rather than as a general extension programme. The major advantage of these workshops was the availability of local wisdom and experience of local SAU / ICAR staff that provided substantial inputs to make the action plan highly relevant to each district. Once the farm implements for custom hiring centers are approved, these are procured by the KVKs through competitive binding or through agro industries corporations. These implements were based in the villages and in most cases, a special committee was constituted to run the centre or in some cases the VCRMC look the responsibility of running CHCs.



Action plan workshop for Zone VIII at ZPD, Bangalore



Action plan workshop for Zone II at ZPD, Kolkata



Action plan workshop for Zone VI at MPUAT, Udaipur



Action plan workshop for Zone IV at ZPD, Kanpur



Action plan workshop for Zone V at ZPD, Hyderabad



Action plan workshop for Zone I at ZPD, Ludhiana



Action plan workshop for Zone III at ZPD, Guwahati



Action plan workshop for Zone VII at ZPD, Jabalpur

NICRA Action Plan Workshops Organized in Different Zones

Village Climate Risk Management Committee (VCRMC)

A VCRMC representing all the categories of farmers in the village is formed with the approval of gram sabha. This committee is involved in the programme, implementations VCRMC participates in all discussions leading to finalizing interventions, selection of target farmers and area, and liaison with gram panchayat and local elected representatives has account which be used for all financial transactions under NICRA including maintaining farmer's contributions for different activities, handling of payments recovered from custom hiring centres. Extensive capacity building of VCRMS was correlant.



VCRMC in North pullnur, West Tripura District



VCRMC in Lagga, Chamba District



VCRMC in Radouri, Yamunanagar District



VCRMC in Siddanuru, Devanagere District

VCRMC members in different districts

Besides VCRMC, committees like user group, group for running custom hiring center, fodder bank, seed bank etc., have also been formed based on the needs of a particular village.

Inauguration of Custom Hiring Centres

Along with launch of the project, all required implements were also made available in each village. Ferti-seed drill, zero-till drill, power weeders, harvesters, threshers, power tillers, sprayers, rotavotors for residue incorporation, sprinklers, chaff cutting machine, weighing machine etc. are some of the important farm implements and machines

which are part of the CHC. The KVKs were advised to include a platform type weighing machinery as a part of custom hiring centre in districts where small ruminants contribute significantly, so that it enables the farmers to weigh their goats and sheep at the time of sale, which gives them better bargaining power to sell the animals on per kg body weight basis. There are some common implements across districts, but there are many district specific items included in every centre depending on the local needs. The inauguration of custom hiring centres was done in the villages with community participation and some of official/officer associated with policy decision or implementation was invited to inaugurate the CHCs. Director-General and Secretary, DARE, DDG-NRM, DDG-Education, Vice-Chancellors, District Collectors, Director-CRIDA and other officers inaugurated some of CHCs as given below



Kushinagar, Uttar Pradesh



Namakkal, Tamilnadu



Villupuram, Tamilnadu



Khammam, Andhra Pradesh



Phek, Nagaland



Buxar, Bihar

Launching of CHCs in NICRA villages



CHC in Katangtola, Gondia District



CHC in Takli, Amravati District



CHC in Nacharam, Khammam District



CHC in Khuntli, Valsad District

CHCs in NICRA villages

A committee of farmers nominated by the gram sabha is managing the custom hiring centre. The rates for hiring the machines/ implements were decided by the committee itself depending upon the socio economic condition and cropping intensity of the village. Every farmer in the village can hire the machines from these centres; the modalities have been decided by the committee members, and amended from time to time as per the local situation and needs. This committee also uses the revenue generated for repair and maintenance of the implements and remaining amount goes into revolving fund. In Chapter III, the composition of each of the 100 custom hiring centres and their performance and revenue generated etc. are described.

ZONE- I

**(Haryana, Himachal Pradesh,
Jammu & Kashmir and Punjab)**

No. of KVKs-12

**(Districts : Bathinda, Chamba, Faridkot,
Fatehgarh Shaib, Hamirpur, Kathua, Kinnaur,
Kullu, Pulwama, Ropar, Sirsa and Yamunanagar)**

CONTRIBUTORS

Zone I

Bathinda

Chamba

Faridkot

Fatehgarh Shaib

Hamirpur

Kathua

Kinnaur

Kullu

Pulwama

Ropar

Sirsa

Yamunanagar

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Dr. Jagdish Grover

Dr. Uday Sharma

Dr. G.S. Aulakh

Dr. Harinder Singh

Dr. Anand Singh

Dr. Amrish Vaid

Dr. Manohar Lal Verma

Dr. Vinod Sharma

Dr. Tabarum Ara

Dr. Satpal Saini

Dr. B.S. Sheokand

Dr. N.K. Goyal

Village: Killi Nihal Singh, District-Bathinda, Punjab

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------------------------|--------|----------------------------|
| 1 | Happy seeder | 1 | 1000 |
| 2 | Direct sowing rice Drill | 1 | |
| 3 | Zero till drill | 1 | |
| 4 | Multi crop thresher | 1 | |
| 5 | Power sprayer including accessories | 1 | |
| 6 | Disc type bund maker | 1 | |
| 7 | Rotavator | 1 | |
| 8 | *Bailer cum knotter | 1 | |

* Not purchased under NICRA



Bailer cum knotter



Zero till drill



Tractor operated power sprayer

**Village: Lagga, Padhruin and Osal,
Distict- Chamba, Himachal Pradesh**

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|------------------------------------|--------|----------------------------|
| 1 | Power weeder | 1 | 3300 |
| 2 | Wheat thresher | 1 | |
| 3 | Ridger | 1 | |
| 4 | Sprinkler set | 3 | |
| 5 | Seed cum fertilizer drill | 1 | |
| 6 | Chaff cutter | 2 | |
| 7 | Power sprayer | 1 | |
| 8 | Maize Cob Sheller (Power Operated) | 3 | |
| 9 | Water lifting pumps with pipes | 3 | |
| 10 | Secateurs& pruning knives saw | 4 | |



Power weeder



Power sprayer

Village: Pindi blochan, District– Faridkot, Punjab

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|----------------|---------------------------------------|---------------|-----------------------------------|
| 1 | Rotavator | 1 | 52985 |
| 2 | Zero till drill | 1 | |
| 3 | Bed planter | 1 | |
| 4 | Multi crop planter | 1 | |
| 5 | Tractor mounted spray pump (Gun Type) | 1 | |
| 6 | Forage harvester cum loader | 1 | |
| 7 | Pre seeder cleaner | 1 | |
| 8 | Spike tooth harrow | 1 | |



Zero till drill



Multi crop planter

Village: Badoshi kalan, District-Fatehgarh Sahib, Punjab

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------------------|--------|----------------------------|
| 1 | Reaper binder | 1 | 17570 |
| 2 | Tractor mounted sprayer | 1 | |
| 3 | Tractor drawn water storage tank | 1 | |
| 4 | Multi crop ridge planter | 1 | |
| 5 | Seed cum ferti drill | 1 | |
| 6 | Water channel maker | 1 | |
| 7 | Ridger | 1 | |
| 8 | Leveler (metallic) | 1 | |
| 9 | Self propelled sprayer | 1 | |



Seed cum ferti drill



Ridger

**Village: Janglu, Kuthera, Tareti, Ghumarda and Man,
District-Hamirpur, Himachal Pradesh**

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--|--------|----------------------------|
| 1 | Power tiller | 1 | 7800 |
| 2 | Power Spray Pumps | 1 | |
| 3 | Power weeder | 1 | |
| 4 | Sprinkler/drip irrigation system with pump set | 1 | |
| 5 | Maize sheller | 1 | |
| 6 | B.D. Seed drill | 6 | |
| 7 | Reaper | 1 | |
| 8 | Manual planter | 2 | |



Manual planter



Power tiller

Village: Said-Sohal, District-Kathua, Jammu & Kashmir

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------------------|--------|----------------------------|
| 1 | Power tiller with attachments | 1 | 1000 |
| 2 | Seed cum fertilizer drill | 1 | |
| 3 | Multi crop seed planter | 1 | |
| 4 | Bund maker | 1 | |
| 5 | Line Marker | 10 | |
| 6 | Cob sheller manual | 100 | |
| 7 | Drip irrigation set | 1 | |
| 8 | Knapsack spray pump | 5 | |
| 9 | Foot sprayer | 3 | |
| 10 | Angle iron rake cum leveler | 50 | |
| 11 | Wheel hoe | 7 | |
| 12 | Plough with pora | 10 | |
| 13 | Maize sheller with 1 Hp motor | 1 | |
| 14 | Rotary dibbler | 2 | |
| 15 | Maize planter | 1 | |
| 16 | Seed drill 3 row | 2 | |



Seed cum ferti drill



Power tiller

Village: Telangi, District-Kinnaur, Himachal Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------|--------|----------------------------|
| 1 | Power sprayer | 2 | 1200 |
| 2 | Foot sprayer | 4 | |
| 3 | Strapping machine | 2 | |
| 4 | Pruning secateur | 10 | |
| 5 | Power weeder | 1 | |
| 6 | Grafting knives | 10 | |
| 7 | Hand tools | 1 set | |
| 8 | Sprinkler set | 2 | |



Power weeder



Sprinkler set

Village: Chhoel-Gaddauri, District-Kullu, Himachal Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Power tiller operated weeder | 1 | 14125 |
| 2 | GK 200/GK 100 Power sprayer with 50 m delivery pipe + standard kit | 1 | |
| 3 | SR 420 mist blower complete with standard tool kit | 1 | |
| 4 | Knap sack farm star 708 complete with standard tool kit | 4 | |
| 5 | Portable mini sprinkler kit with 250 m pipe length | 4 | |
| 6 | Portable sprinkler system with pump set for water lifting with 30 no. pipes | 2 | |
| 7 | Electronic weighing machine | 1 | |
| 8 | Garlic planter | 2 | |
| 9 | Falcon premium with angular long rod pruner | 2 | |
| 10 | Falcon premium fruit catcher | 6 | |
| 11 | Cultivator 3 tyne | 1 | |
| 12 | Potato digger | 1 | |



Power tiller operated weeder



Sprinkler set

Village: Drubgam, District- Pulwama, Jammu & Kashmir

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Combined harvester | 1 | 2350 |
| 2 | Seed cum fertilizer drill | 1 | |
| 3 | Power tiller | 1 | |
| 4 | Rotavator | 1 | |
| 5 | Cage Wheel | 2 | |
| 6 | Land leveler | 1 | |
| 7 | Water Motor (0.5 Hp) | 3 | |
| 8 | Winnower | 3 | |
| 9 | Cono weeder | 7 | |
| 10 | Drip system | 1 | |



Set up drip irrigation system



Rotavator

Village: Rasidpur, District- Ropar, Punjab

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------------------|--------|----------------------------|
| 1 | Turbo seeder | 1 | 4050 |
| 2 | Rotary power weeder | 1 | |
| 3 | Forage chopper cum loader | 1 | |
| 4 | Semi automatic potato planter | 1 | |
| 5 | Direct seeder | 1 | |
| 6 | Zero till drill | 1 | |
| 7 | Rotavator | 1 | |
| 8 | Seed cum fertilizer drill | 1 | |



Turbo seeder



Forage chopper cum loader

Village: Rupana, District- Sirsa, Haryana

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Land laser leveller | 1 | 1000 |
| 2 | Seed cum fertilizer drill | 1 | |
| 3 | Straw reaper | 1 | |
| 4 | Modified deep plough | 1 | |
| 5 | Rotavator | 1 | |
| 6 | Weighing machine | 1 | |



Land laser leveller



Rotavator

Village: Radouri, District-Yamunanagar, Haryana

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Laser land leveller | 1 | 8900 |
| 2 | Turbo seeder | 1 | |
| 3 | Multi crop bed planter/ sugarcane based furrow machine for inter cropping | 1 | |
| 4 | Miscellaneous (sprinkler set) | 20 | |



Land laser leveller



Turbo seeder

ZONE- II

**(Andaman & Nicobar Islands, Bihar,
Jharkhand and West Bengal)**

No. of KVKs-15

**(Districts : Aurangabad, Buxar, Chatra,
Coochbehar, East Singhbhum, Gumla, Jehanabad,
Koderma, Nawadah, Malda, Palamau, Port Blair,
Saran, South 24 Paraganas and Supaul)**

CONTRIBUTORS

Zone II

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Chatra

Coochbehar

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Gumla

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Malda

Palamau

Port Blair

Saran

South 24 Parganas

Supaul

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Village: Harigaon, District-Aurangabad, Bihar

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------|--------|----------------------------|
| 1 | Zero seed drill | 2 | 13000 |
| 2 | Drum seeder | 2 | |
| 3 | Rotavator | 1 | |
| 4 | Power thresher | 1 | |
| 5 | Power sprayer | 2 | |
| 6 | Gator | 1 | |
| 7 | Power tiller | 1 | |
| 8 | Cono weeder | 4 | |
| 9 | M.B plough | 2 | |
| 10 | Disk plough | 1 | |
| 11 | Sub soiler | 1 | |
| 12 | Knapsack sprayer | 3 | |
| 13 | PVC pipe | 20 | |



Zero till seed drill



M.B Plough

Village: Kukurha, District-Buxar, Bihar

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------|--------|----------------------------|
| 1 | M.B plough | 1 | 2350 |
| 2 | Rotavator | 1 | |
| 3 | Zero till seed drill | 1 | |
| 4 | Turbo seeder | 1 | |
| 5 | Duster | 1 | |
| 6 | Power sprayer | 1 | |
| 7 | Pumping Set | 1 | |
| 8 | Raised bed planter | 1 | |
| 9 | Feed grinder | 1 | |
| 10 | Cono weeder | 1 | |
| 11 | LEWA set | 1 | |



Rotavator



Turbo seeder

Village: Urali, District-Chatra, Jharkhand

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-----------------------------------|--------|----------------------------|
| 1 | Diesel pump set (3 hp) | 4 | 5045 |
| 2 | Wheat thresher | 1 | |
| 3 | Power sprayer | 2 | |
| 4 | pump | 2 | |
| 5 | Knapsack sprayer | 3 | |
| 6 | Groundnut stripper | 1 | |
| 7 | Multi crop seed driller | 1 | |
| 8 | Portable rice thresher | 1 | |
| 9 | Manual garlic/ multi crop planter | 2 | |
| 10 | Animal drawn multi crop planter | 2 | |
| 11 | Groundnut planter | 1 | |
| 12 | Cono weeder | 10 | |
| 13 | Burtizo castrator | 1 | |
| 14 | Budding and grafting knife | 5 | |
| 15 | Siketier | 5 | |
| 16 | Drum seeder | 2 | |
| 17 | Maize Sheller | 20 | |
| 18 | Hand rotating duster | 2 | |
| 19 | Winnower | 2 | |
| 20 | Seed Treatment drum | 1 | |
| 21 | Hand ridger | 1 | |
| 22 | CIAE seed drill | 1 | |
| 23 | Four row rice transplanter | 1 | |
| 24 | Rotatory maize sheller | 1 | |
| 25 | Fruit harvester | 1 | |
| 26 | Hanging type grain cleaner | 1 | |



Zero till drill



Power sprayer

Village: Khagribari, District- Coochbehar, West Bengal

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------------|--------|----------------------------|
| 1 | Zero seed drill | 2 | 5172 |
| 2 | Raised bed planter | 2 | |
| 3 | Rotavator | 1 | |
| 4 | Paddy reaper (self propelled) | 1 | |
| 5 | Water pump | 1 | |
| 6 | Motorized knapsack mist blower | 1 | |
| 7 | Multi crop thresher | 1 | |
| 8 | SRI marker | 5 | |
| 9 | Weighing machine(platform type) | 1 | |
| 10 | Cono weeder | 5 | |



Cono weeder



Rotavator

Village: Lowkeshra, District-East Singhbhum, Jharkhand

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------------------|--------|----------------------------|
| 1 | Power tiller | 1 | 6495 |
| 2 | Drum seeder | 10 | |
| 3 | Sprayer | 2 | |
| 4 | Castrator | 3 | |
| 5 | Cono weeder | 10 | |
| 6 | Duster | 2 | |
| 7 | Zero till drill | 2 | |
| 8 | 3 Hp pump set | 1 | |
| 9 | Maize sheller | 1 | |
| 10 | Manual fertilizer broadcaster | 1 | |
| 11 | Knapsack sprayer | 1 | |
| 12 | Paddy thresher | 1 | |



Knapsack sprayer



Cono weeder

Village: Gunia, District-Gumla, Jharkhand

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|------------------------|--------|----------------------------|
| 1 | Diesel pump set (5 hp) | 2 | 9600 |
| 2 | Wheat thresher | 1 | |
| 3 | Power sprayer | 2 | |
| 4 | Pump | 2 | |
| 5 | Knapsack sprayer | 3 | |
| 6 | Groundnut stripper | 1 | |
| 7 | Portable rice thresher | 3 | |
| 8 | Cono weeder | 10 | |
| 9 | Multi crop planter | 1 | |
| 10 | Bed planter | 1 | |
| 11 | Drum seeder | 2 | |
| 12 | Maize sheller | 16 | |
| 13 | Hand rotating duster | 2 | |
| 14 | winnower | 2 | |
| 15 | Seed treatment drum | 1 | |
| 16 | Hand ridger | 5 | |
| 17 | CIAE seed drill | 1 | |
| 18 | Power tiller | 1 | |



Bed planter



Multi crop planter

Village: Sakrorha, District-Jehanabad, Bihar

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-----------------------|--------|----------------------------|
| 1 | Zero seed drill | 1 | 4300 |
| 2 | Power tiller | 1 | |
| 3 | Rotavator | 1 | |
| 4 | M.B plough | 1 | |
| 5 | Self propelled reaper | 1 | |
| 6 | Cono weeder | 5 | |
| 7 | Leveler | 2 | |
| 8 | Sprinkler set | 1 | |
| 9 | Pump set | 1 | |
| 10 | Sprayer and duster | 5 each | |



Power tiller



Reaper

Village: Chopanadih and Raidih, District-Koderma, Jharkhand

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------------|--------|----------------------------|
| 1 | Zero seed drill | 1 | 4645 |
| 2 | Rotovator | 1 | |
| 3 | Foot sprayer | 1 | |
| 4 | Hand rotary duster | 2 | |
| 5 | Knapsack sprayer | 3 | |
| 6 | Diesel pump set | 1 | |
| 7 | Multi crop seed drill | 1 | |
| 8 | Portable rice thresher | 1 | |
| 9 | Power tiller | 1 | |
| 10 | Animal drawn multi crop planter | 2 | |
| 11 | Leveler | 1 | |
| 12 | Cono weeder | 2 | |
| 13 | Grass/paddy straw cutter | 1 | |
| 14 | Reaper | 1 | |
| 15 | Drum seeder | 2 | |
| 16 | Manual fertilizer broad caster | 4 | |
| 17 | Power weeder | 1 | |



Zero till drill



Reaper

Village: Majhila, District-Nawadah, Bihar

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------|--------|----------------------------|
| 1 | Rotavator | 1 | 16309 |
| 2 | Zero till drill | 2 | |
| 3 | Wheel hoe | 20 | |
| 4 | Cono weeder | 10 | |
| 5 | Knapsack sprayer | 4 | |
| 6 | Gator sprayer | 2 | |
| 7 | Duster | 4 | |
| 8 | Power sprayer | 1 | |
| 9 | Multi crop thresher | 1 | |
| 10 | Paddy thresher | 5 | |
| 11 | Sprinkler set | 2 | |
| 12 | Diesel pump set | 1 | |
| 13 | Leveler | 1 | |
| 14 | Winnower | 1 | |
| 15 | Drum seeder | 2 | |



Zero till drill



Rotavator

Village: Dakshin Chandipur, District-Malda, West Bengal

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------|--------|----------------------------|
| 1 | Rotavator | 1 | 23362 |
| 2 | Turbo happy seeder | 1 | |
| 3 | Drum seeder | 4 | |
| 4 | Multi crop thresher | 1 | |
| 5 | Cono weeder | 10 | |
| 6 | Knapsack sprayer | 2 | |
| 7 | SRI marker | 4 | |
| 8 | Raised bed planter | 1 | |
| 9 | Sprayer | 2 | |
| 10 | Wheel hoe | 20 | |
| 11 | Duster | 3 | |
| 12 | Zero till drill | 1 | |



Zero till drill



Drum seeder

Village: Dulsulma, District-Palamau, Jharkhand

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------------------|--------|----------------------------|
| 1 | Maize Sheller(mannual) | 20 | 1318 |
| 2 | Dutch hoe | 30 | |
| 3 | Cono weeder | 25 | |
| 4 | Naveen Sickel | 60 | |
| 5 | Power sprayer / Knapsack sprayer | 6 | |
| 6 | Duster | 6 | |
| 7 | Zero till drill | 1 | |
| 8 | Power tiller | 1 | |
| 9 | Drum seeder | 3 | |
| 10 | Vaccinator | 1 | |



Power sprayers



Power tiller

**Village: Port mout and Badmash Pahad,
District-Port Blair, A & N Islands**

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--|--------|----------------------------|
| 1 | Manual paddy thresher | 1 | 350 |
| 2 | Arecanut dehusker | 1 | |
| 3 | Cono weeder | 1 | |
| 4 | Paddy seeder | 1 | |
| 5 | Electronic platform balance | 1 | |
| 6 | Diesel pump set | 1 | |
| 7 | Motorized knapsack multi blower cum duster | 1 | |
| 8 | Coconut climber | 1 | |
| 9 | Power tiller | 1 | |
| 10 | Chaff cutter | 1 | |
| 11 | Micro sprinkler | 20 | |
| 12 | Paddy transplanter | 1 | |



Paddy transplanter



Cono weeder

Village: Affaur & Darihara, District-Saran, Bihar

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--|---------|----------------------------|
| 1 | Zero till seed drill | 3 | 44405 |
| 2 | Leveler | 2 | |
| 3 | Bund maker | 2 | |
| 4 | Furrow irrigated raised bed planter | 1 | |
| 5 | Tractor drawn weedicide sprayer/ plant protection equipments | 2(each) | |
| 6 | Cono weeder | 20 | |
| 7 | Sub soiler | 2 | |
| 8 | Rotavator | 1 | |
| 9 | Wheat thresher | 1 | |
| 10 | Disc harrow | 1 | |
| 11 | Cultivator | 1 | |
| 12 | Reaper | 1 | |
| 13 | SRI marker | 20 | |
| 14 | Drum seeder | 2 | |



Cono weeder



Zero till drill

Village: Bongheri, District-South 24 Parganas, West Bengal

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------|--------|----------------------------|
| 1 | Power tiller | 2 | 9420 |
| 2 | Diesel pump set | 2 | |
| 3 | Paddy thresher | 5 | |
| 4 | Knapsack sprayer | 4 | |
| 5 | Cono weeder | 4 | |



Cono weeder



Power tiller

Village: Sadanapur, District-Supaul, Bihar

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--|---------|----------------------------|
| 1 | M.B plough | 1 | 3400 |
| 2 | Rotavator | 1 | |
| 3 | Pedal operated paddy thresher | 1 | |
| 4 | Winnower | 2 | |
| 5 | Sprinkler set/rain gun | 1 | |
| 6 | P.P. equipments (Power sprayer-1, Gator-2, Duster-4, Knapsack sprayer-4) | 11 | |
| 7 | Drum seeder | 2 | |
| 8 | Cono weeder, SRI & SWI maker | 12 each | |
| 9 | Cultivator | 1 | |
| 10 | Zero till drill | 1 | |
| 11 | Power tiller | 1 | |



M.B Plough



Rotavator

ZONE- III

(Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura)

No. of KVKs-17

(Districts : Cachar, Dibrugarh, Dimapur, East Sikkim, Lunglei, Phek, Senapati, Dhubri, Tirap, West Garo Hills-Tura, West Kameng, West Siang, West Tripura, Sonitpur, Umain, Mokokchung and Imphal East)

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Dimpur

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Dhubri

Tirap

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West Siang

West Tripura

Sonitpur

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Village: Salchapra, District-Cachar, Assam

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-----------------------|--------|----------------------------|
| 1 | Power tiller | 3 | 35990 |
| 2 | Tarpaulin | 4 | |
| 3 | Duster | 1 | |
| 4 | Hand sprayer | 5 | |
| 5 | Rotary duster | 1 | |
| 6 | Cono weeder | 5 | |
| 7 | Japanese paddy weeder | 5 | |



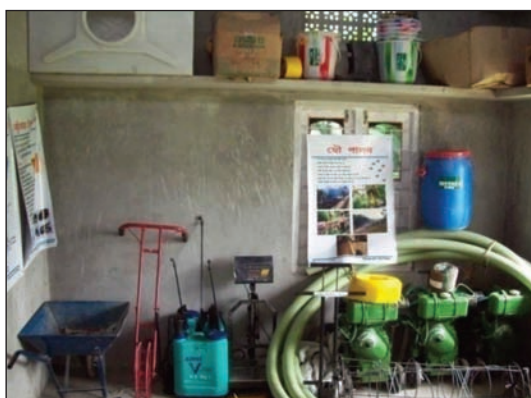
Cono weeder



Power tiller

Village: Phutahula, District-Dibrugarh, Assam

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------|--------|----------------------------|
| 1 | Power sprayer | 1 | 6440 |
| 2 | Pump to run STW | 4 | |
| 3 | Manual weeder | 4 | |
| 4 | Hand sprayer | 10 | |
| 5 | Rotary duster | 2 | |
| 6 | Honey extractor | 5 | |
| 7 | Power tiller | 1 | |



Sprayers and Manual weeder



Power tiller

Village: Dhansiripar, District-Dimapur, Nagaland

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--|--------|----------------------------|
| 1 | Power tiller | 1 | 8472 |
| 2 | Power tiller operated seed cum fertilizer drill | 1 | |
| 3 | Cono weeder | 5 | |
| 4 | Prun Shear | 5 | |
| 5 | Diesel operated centrifugal pump(3.5 hp) with pipe of 1000ft | 1 | |
| 6 | Foot sprayer | 2 | |
| 7 | Power sprayer | 1 | |
| 8 | Duster | 1 | |
| 9 | Paddy thresher | 1 | |
| 10 | Chaff cutter | 1 | |
| 11 | Peg type dry land weeder | 5 | |
| 12 | Maize sheller (manual) | 10 | |
| 13 | Mini oil extraction plant | 1 | |
| 14 | Weighing balance | 1 | |



Power sprayer



Power tiller

Village: Nandok, District-East Sikkim, Sikkim

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Power tiller | 1 | 15000 |
| 2 | Puddler | 5 | |
| 3 | Seed drill manual | 5 | |
| 4 | Metallic tip dibbler | 10 | |
| 5 | Adjustable row maker | 10 | |
| 6 | Cono weeder | 5 | |
| 7 | Knapsack sprayer | 5 | |
| 8 | Foot sprayer | 2 | |
| 9 | Chaff cutter | 2 | |
| 10 | Sickle | 10 | |
| 11 | Winnower | 4 | |
| 12 | Diesel pump | 2 | |
| 13 | Hand weeder | 10 | |
| 14 | Tray for mat type nursery | 20 | |



Power tiller



Cono weeder

Village: Hnahthial, District-Lunglei, Mizoram

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--|--------|----------------------------|
| 1 | Chaff cutter | 1 | --- |
| 2 | Knapsack sprayer | 2 | |
| 3 | Power weeder | 1 | |
| 4 | Hand sprayer | 2 | |
| 5 | Poultry Incubator (hatchery + setter) 1000 capacity | 1 | |
| 6 | Seed cum fertilizer drill | 1 | |
| 7 | Power weeder | 1 | |
| 8 | Grass cutter | 1 | |
| 9 | Cono weeder | 10 | |



Power weeder



Knapsack sprayer

Village: Thipizumi, District-Phek, Nagaland

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--------------------------|--------|----------------------------|
| 1 | Power tiller | 1 | 12150 |
| 2 | M.B.plough | 1 | |
| 3 | Peg type dry land weeder | 5 | |
| 4 | Manual rice transplanter | 1 | |
| 5 | Reaper | 1 | |
| 6 | Thresher (manual) | 2 | |
| 7 | Paddy power thresher | 1 | |
| 8 | Diesel pump 3.5 hp | 2 | |
| 9 | Chaff cutter | 1 | |
| 10 | Maize sheller | 1 | |
| 11 | Weighing machine | 1 | |



Weighing machine



M.B Plough

Village: Hengbung, Distict-Senapati, Manipur

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-----------------------------------|--------|----------------------------|
| 1 | Power tiller | 1 | 13450 |
| 2 | Maize sheller 7 hp | 2 | |
| 3 | Chaff cutter | 2 | |
| 4 | Multipurpose grain mill | 2 | |
| 5 | Solar cabinet drayer | 2 | |
| 6 | Cono weeder | 2 | |
| 7 | Hand compressor/ knapsack sprayer | 3 | |
| 8 | Seed treatment drum | 2 | |
| 9 | Seed cum fertilizer drill | 5 | |
| 10 | Crompton motor 2 hp | 20 | |
| 11 | Power sprayer | 3 | |



Power tiller



Power sprayer

Village: Udmari, District-Dhubri, Assam

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------|--------|----------------------------|
| 1 | Power tiller | 1 | 2839 |
| 2 | Power sprayer | 5 | |
| 3 | Pump sets | 4 | |
| 4 | Reaper | 1 | |
| 5 | Wheel hoe | 10 | |
| 6 | Sickle | 10 | |
| 7 | Tripline | 1 | |
| 8 | Chaff cutter | 2 | |
| 9 | Cono weeder | 5 | |
| 10 | SRI marker | 5 | |
| 11 | Seed drill | 10 | |
| 12 | Hand sprayer | 10 | |



Power tiller



Tripline

Village: Sipini, District-Tirap, Arunachal Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Rotary tiller/ Cultivator (Gx200 5.5HP-4KW) | 1 | 4500 |
| 2 | Water pump set with all accessories | 4 | |
| 3 | Paddy thresher | 2 | |
| 4 | Power sprayer | 1 | |
| 5 | Knapsack sprayer | 8 | |
| 6 | Cono weeder | 6 | |
| 7 | Tubular maize sheller | 10 | |
| 8 | Garden hoe | 15 | |
| 9 | Sickel | 20 | |



Power sprayer



Rotary tiller

**Village: Marapara and Rongbokgre,
District-West Garo Hills, Meghalaya**

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Power sprayer | 1 | 8040 |
| 2 | Seed cum fertilizer drill | 1 | |
| 3 | Knapsack sprayer | 1 | |
| 4 | Diesel engine | 3 | |
| 5 | Weighing machine | 1 | |
| 6 | Chaff cutter | 1 | |
| 7 | Pedal operated thresher | 4 | |
| 8 | Sprinkler set | 1 | |
| 9 | Pipe sets | 1 | |
| 10 | Power tiller | 1 | |
| 11 | SRI marker | 10 | |
| 12 | Cono weeder | 10 | |
| 13 | Manual maize sheller | 30 | |
| 14 | Wheel hoe | 10 | |
| 15 | Garden rake | 20 | |
| 16 | V blade weeder | 10 | |
| 17 | Fruit sprayer | 1 | |
| 18 | Leaf plate making machine | 1 | |



Seed cum ferti drill



Power sprayer

Village: Sangti, District-West Kamang, Arunachal Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------------|--------|----------------------------|
| 1 | Power sprayer | 4 | --- |
| 2 | Chaff cutter | 2 | |
| 3 | Maize Sheller (mannual) | 50 | |
| 4 | Sprinkler set | 1 | |
| 5 | Power tiller | 1 | |
| 6 | Knapsack sprayer | 10 | |
| 7 | Garden hoe | 10 | |
| 8 | Garden rake | 20 | |
| 9 | Motor pump | 2 | |



Power tiller



Power sprayer

Village: Dali, Chisi & Padi, District-West Siang, Arunachal Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|----------------|---------------------------------|---------------|-----------------------------------|
| 1 | Power tiller | 1 | --- |
| 2 | Grass cutter | 1 | |
| 3 | Hedge trimmer | 2 | |
| 4 | Chain saw | 1 | |
| 5 | Power sprayer | 4 | |
| 6 | Knapsack sprayer | 3 | |
| 7 | Chaff cutter | 1 | |
| 8 | Cono weeder | 12 | |
| 9 | Paddy thresher (pedal operated) | 3 | |
| 10 | Foot sprayer | 3 | |
| 11 | Row line marker | 10 | |
| 12 | Baby bardizzo castrator | 3 | |



Cono weeder



Grass cutter

Village: North Pullnpur, District-West Tripura, Tripura

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------|--------|----------------------------|
| 1 | Power tiller | 1 | 48780 |
| 2 | Paddy transplanter | 1 | |
| 3 | Thresher | 1 | |
| 4 | Knapsack sprayer | 10 | |
| 5 | Cono weeder | 8 | |
| 6 | Electrical pump set | 2 | |
| 7 | Digital balance | 1 | |



Paddy transplanter



Knapsack sprayer

Village: Punioni-baghchong, District- Sonitpur, Assam

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--------------------------------|--------|----------------------------|
| 1 | Power tiller | 1 | 6100 |
| 2 | Power sprayer/Knapsack sprayer | 20 | |
| 3 | Electrical pump set | 2 | |
| 4 | Seed drill | 3 | |
| 5 | Cono weeder | 10 | |
| 6 | Duster | 10 | |



Power tiller



Seed drill

Village: Kyrdem, District- Ummain, Meghalaya

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|----------------|-------------------------------------|---------------|-----------------------------------|
| 1 | Maize Sheller (octagonal & tubular) | 200 | 7586 |
| 2 | Grass hand slasher | 50 | |
| 3 | Power weeder | 1 | |
| 4 | Diesel pump | 1 | |
| 5 | Knapsack sprayer | 8 | |
| 6 | Cono weeder | 3 | |
| 7 | Pedal paddy thresher | 3 | |
| 8 | Seed drill | 2 | |
| 9 | Wheel hoes | 10 | |
| 10 | cultivator | 1 | |
| 11 | Metallic dibbler | 20 | |
| 12 | Hand fork | 20 | |
| 13 | Garden rake | 20 | |



Cultivator



Power weeder

Village: Aliba, District- Mokokchung, Nagaland

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------|--------|----------------------------|
| 1 | Power tiller | 1 | 24990 |
| 2 | Seed drill | 1 | |
| 3 | Portable pump set | 2 | |
| 4 | Chaff cutter | 5 | |
| 5 | Wheel hoe | 5 | |
| 6 | Cono weeder | 5 | |
| 7 | GI Pipe | 10 | |
| 8 | Knapsack sprayer | 2 | |



Portable pump set



Power tiller

Village: Chingtha, District- Imphal east, Manipur

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|----------------|--------------------------|---------------|-----------------------------------|
| 1 | Planter | 1 | --- |
| 2 | Disc harrow | 1 | |
| 3 | Disc plough | 1 | |
| 4 | Sprinkler sets | 2 | |
| 5 | Zero till drill | 1 | |
| 6 | Power tiller | 1 | |
| 7 | Weighing machine | 1 | |



Zero till drill



Disc plough

ZONE- IV

(Uttar Pradesh and Uttarakhand)

No. of KVKs-13

(Districts : Chitrakoot, Kushinagar, Gonda, Bahraich, Baghat, Uttarkashi , Muzaffarnagar, Jhansi, Gorakhpur, Hamirpur, Maharajganj, Tehri Garhwal and Sonbhadra)

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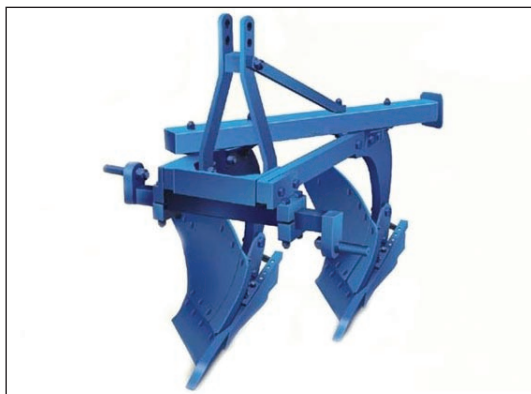
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Village: Titihara, District- Chitrakoot, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Rotavator | 1 | 500 |
| 2 | Seed cum fertilizer drill | 1 | |
| 3 | Land leveler | 1 | |
| 4 | Multi crop thresher | 1 | |
| 5 | Seed grader | 1 | |
| 6 | Paddy reaper | 1 | |
| 7 | Knapsack sprayer | 1 | |
| 8 | M.B.plough | 1 | |
| 9 | Ridge maker | 4 | |
| 10 | Duster | 4 | |
| 11 | CFTRI mini dal mill | 1 | |
| 12 | Soil sampling augar | 1 | |



M.B.plough



Reaper

Village: Amwakash, District- Khushinagar, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Zero till drill | 1 | 12000 |
| 2 | Seed cum fertilizer drill | 1 | |
| 3 | Paddy transplanter | 1 | |
| 4 | Raised bed planter | 1 | |
| 5 | Trench digger (for sowing of sugarcane) | 1 | |
| 6 | Ridge maker | 1 | |
| 7 | Power sprayer | 1 | |
| 8 | Knapsack sprayer | 8 | |
| 9 | Tractor mounted power sprayer | 1 | |
| 10 | Rotavator | 1 | |



Paddy transplanter



Zero till drill

Village: Soauli mahammadpur, District- Gonda, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Diesel Engine | 2 | 3000 |
| 2 | Sprinkler Set | 4 | |
| 3 | Knapsack sprayer | 10 | |
| 4 | Power sprayer | 1 | |
| 5 | Power weeder | 1 | |
| 6 | Thresher (Small) | 1 | |
| 7 | Seed cum fertilizer drill | 2 | |
| 8 | Ridger seeder | 1 | |



Seed cum fertilizer drill



Ridger Seeder

Village: Baundi, District-Bahraich, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Rotavator | 1 | 1200 |
| 2 | Seed cum fertilizer drill | 2 | |
| 3 | Zero till drill | 1 | |
| 4 | Tractor harrow | 1 | |
| 5 | Ridger plough | 1 | |
| 6 | Knapsack sprayer | 1 | |
| 7 | Cono weeder | 1 | |
| 8 | Tractor trolley 2 wheeler | 1 | |
| 9 | Tractor trolley 4 wheeler | 1 | |



Ridger plough



Zero till drill

Village: Shikhera, District- Baghpat, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Rotavator | 1 | 4000 |
| 2 | Land leveler | 2 | |
| 3 | Seed cum fertilizer drill | 2 | |
| 4 | Disc harrow/ Disc plough | 2 | |
| 5 | Multi crop raised bed planter | 2 | |
| 6 | Sugarcane ridge-cum fertilizer applicator | 2 | |
| 7 | SRI marker | 2 | |
| 8 | Cono-weeder | 2 | |



Disc harrow



Seed cum fertilizer drill

Village: Dunda, District-Uttarkashi, Uttarakhand

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--|--------|----------------------------|
| 1 | Wheat Thresher (10 hp) | 1 | 4000 |
| 2 | Grain thresher with 1hp motor | 3 | |
| 3 | Paddy thresher (Manual) | 5 | |
| 4 | Power tiller (12 hp) | 1 | |
| 5 | Water lifting pump (10 hp) | 1 | |
| 6 | Uniblast motor operated knapsack sprayer | 2 | |
| 7 | Knapsack sprayer | 4 | |
| 8 | Chaff cutter (motor operated- 5hp) | 1 | |
| 9 | Seed drill | 2 | |
| 10 | Wheel hoe | 5 | |
| 11 | Maize sheller (manual) | 30 | |
| 12 | Burdizzo castrator | 1 | |
| 13 | Power weeder | 1 | |



Chaff cutter



Grain thresher

Village: Sahdabbar, District-Muzaffarnagar, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Rain gun | 2 | 4465 |
| 2 | Sugarcane ridge cum fertilizer applicator | 1 | |
| 3 | seed cum fertilizer drill | 2 | |
| 4 | Disc plough | 2 | |
| 5 | Multi crop bed planter | 1 | |
| 6 | Rotavator | 1 | |
| 7 | SRI maker & cono weeder | 4 | |
| 8 | Land leveler double side | 1 | |
| 9 | Sugarcane ridge cum fertilizer applicator | 1 | |
| 10 | Multi crop bed planter | 1 | |



Seed cum fertilizer drill



Disc plough

Village: Gandhinagar, District-Jhansi, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------------------|--------|----------------------------|
| 1 | Seed cum fertilizer drill | 2 | --- |
| 2 | Disc plough | 1 | |
| 3 | Foot & hand sprayer | 2 | |
| 4 | Ridger maker | 1 | |
| 5 | Harrow/cultivator | 2 | |
| 6 | Duster | 1 | |
| 7 | Thresher | 1 | |
| 8 | Sprinkler set with pipe and pump | 5 | |
| 9 | Power sprayer | 1 | |
| 10 | Digital weighing machine | 1 | |
| 11 | Mechanical shaker | 1 | |



Disc plough



Cultivator

Village: Jhangha, District-Gorakhpur, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Power tiller | 1 | --- |
| 2 | Rotavator | 1 | |
| 3 | Zero seed drill | 1 | |
| 4 | Seed cum fertilizer drill | 1 | |
| 5 | Diesel pump set | 2 | |
| 6 | Knapsack sprayer | 2 | |
| 7 | Weighing machine | 1 | |
| 8 | Power sprayer | 1 | |
| 9 | Raised bed planter | 1 | |
| 10 | Paddy transplanter | 1 | |



Rotavator



Zero seed drill

Village: Saukhar, District-Hamirpur, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Power tiller | 1 | --- |
| 2 | Power sprayer | 1 | |
| 3 | Power weeder | 1 | |
| 4 | Sprinkler/micro sprinkler irrigation system with pump set | 4 | |
| 5 | Maize sheller | 2 | |
| 6 | Multicrop planter | 2 | |
| 7 | Brush cutter | 1 | |



Brush cutter



Power sprayer

Village: Bishunpura, District-Maharajganj, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--------------------|--------|----------------------------|
| 1 | Zero seed drill | 2 | --- |
| 2 | Paddy transplanter | 1 | |
| 3 | Power sprayer | 2 | |
| 4 | Knapsack sprayer | 5 | |
| 5 | Rotavator | 1 | |
| 6 | Pumping set | 2 | |
| 7 | Raised bed planter | 1 | |
| 8 | Ridge maker | 1 | |
| 9 | PVC pipe | 100 m | |



Power sprayer



Zero seed drill

Village: Dabri & Kalaith, District- Tehri Garhwal, Uttarakhand

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|----------------|--------------------------|---------------|-----------------------------------|
| 1 | Power weeder | 1 | --- |
| 2 | Power tiller | 1 | |
| 3 | Wheat thresher | 2 | |
| 4 | Paddy thresher(manual) | 2 | |
| 5 | Knapsack sprayer | 4 | |
| 6 | Foot sprayer | 4 | |
| 7 | Chaff cutter | 4 | |
| 8 | B.D. seed drill | 5 | |
| 9 | Millet thresher | 2 | |



Power tiller



Animal drawn Seed drill

Village: Bisrekhi, District- Sonbhadra, Uttar Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Seed cum fertilizer drill | 1 | --- |
| 2 | Winnower | 1 | |
| 3 | Land leveler | 1 | |
| 4 | Foot sprayer | 2 | |
| 5 | Hand rotary duster | 2 | |
| 6 | Knapsack sprayer | 3 | |
| 7 | Rotavator | 1 | |
| 8 | Bund maker | 1 | |
| 9 | Cono weeder | 10 | |
| 10 | Diesel pump | 2 | |
| 11 | Multi crop planter | 1 | |
| 12 | Reaper | 1 | |
| 13 | Weighing machine | 1 | |



Knapsack sprayer



Seed drill

ZONE- V

(Maharashtra and Andhra Pradesh)

No. of KVKs-13

**(Districts : Aurangabad, Nandurbar, Ahmednagar,
Amravati, Gondia, Ratnagiri, Pune,
Anantapur, Kurnool, Khammam, Srikakulam,
West Godavari and Nalgonda)**

CONTRIBUTORS

Zone V

**Aurangabad
Nandurbar
Ahmednagar
Amravati
Gondia
Ratnagiri
Pune
Anantapur
Kurnool
Khammam
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Dr. C. Venkata Reddy
Dr. R. Veeraiah**

Village: Shekta, District-Aurangabad, Maharashtra

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--|--------|----------------------------|
| 1. | Sprinkler Set | 7 | 4500 |
| 2. | Pump set | 2 | |
| 3. | Knapsack sprayer | 10 | |
| 4. | Power sprayer | 2 | |
| 5. | Multi crop thresher with diesel engine | 1 | |



Multi crop thresher



Sprinkler set

Village: Umarani, District- Nandurbar, Maharashtra

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|----------------|---|---------------|-----------------------------------|
| 1 | Iron plough | 5 | 8900 |
| 2 | Allan cultivator | 5 | |
| 3 | Two bowl seed drill | 5 | |
| 4 | Bullock drawn multi crop planter | 2 | |
| 5 | Seed treatment drum | 2 | |
| 6 | Winnower | 1 | |
| 7 | Bullock drawn bund former | 2 | |
| 8 | Knapsack sprayer | 5 | |
| 9 | Rocking sprayer | 3 | |
| 10 | Sprinkler irrigation set | 4 | |
| 11 | Multi crop thresher with Diesel engine and bullock cart | 1 | |
| 12 | Bullock drawn groundnut digger | 1 | |
| 13 | Hand operated grain cleaner | 2 | |
| 14 | Charring kiln | 1 | |
| 15 | Anand separator | 1 | |
| 16 | Hand operated oil expeller | 2 | |
| 17 | Hand operated chaff cutter | 2 | |
| 18 | Solar dryer | 2 | |
| 19 | Briquetting machine | 1 | |
| 20 | Hand operated tubular maize Sheller | 10 | |
| 21 | Ground nut decorticator | 1 | |
| 22 | Vaibhav sickle | 10 | |
| 23 | Laxmi sickle | 10 | |
| 24 | Manual seed drill | 2 | |
| 25 | Hand operated stone grinder | 5 | |
| 26 | Platform type weighing machine | 1 | |
| 27 | Open well Motor pump set along with accessories. | 1 | |

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------------------------|--------|----------------------------|
| 28 | Mogi-improved wheel hoe | 5 | |
| 29 | Anemometer | 1 | |
| 30 | Mango harvester and other | 5 | |
| | Laranthus cutter | 5 | |
| 31 | Manual rider cum bund former | 1 | |
| 32 | Rain guage | 1 | |
| 33 | Stevenson screen single | 1 | |
| 34 | Thermometer with clip | 1 | |
| 35 | Wind vane as per is 5799 with stand | 1 | |



Bullock drawn planter



Seed treatment drum

Village: Nirmalpimpri, District-Ahmednagar, Maharashtra

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Sprinkler sets | 5 | 33060 |
| 2 | Seed cum fertilizer drill | 1 | |
| 3 | Rotavator | 1 | |
| 4 | Power tiller | 1 | |
| 5 | Balance machine | 1 | |
| 6 | Tractor operated cultivator | 1 | |
| 7 | Motorized sprayer (Mist blower) | 3. | |
| 8 | Diesel engine with alternator and trolley | 1 | |
| 9 | V blade cultivator | 1 | |
| 10 | Single wheel hoe | 6 | |



Rotavator



V blade cultivator

Village: Takli, District-Amravati, Maharashtra

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|------------------------------|--------|----------------------------|
| 1 | Reaper | 1 | 67995 |
| 2 | Seed cum fertilizer drill | 1 | |
| 3 | Dal mill unit | 1 | |
| 4 | Rotavator | 1 | |
| 5 | Brush cutter | 1 | |
| 6 | Knapsack sprayer | 1 | |
| 7 | Ridger with cultivator | 1 | |
| 8 | Sub soiler | 1 | |
| 9 | 3 Furrow plough & M.B plough | 1 | |
| 10 | Sprinkler sets | 1 | |
| 11 | Ridger (Bullock Drawn) | 1 | |
| 12 | Danlaxmi sickles | 100 | |
| 13 | Seed treatment drum | 1 | |
| 14 | Power sprayer | 1 | |
| 15 | PKV dal mill | 1 | |



Paddy reaper



M.B Plough etc

Village: Katangtola and Chandnitola, District-Gondia, Maharashtra

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-----------------------------|--------|----------------------------|
| 1 | Multi crop thresher | 1 | 10256 |
| 2 | Weighing balance | 2 | |
| 3 | Seed treatment drum | 1 | |
| 4 | Power operated chaff cutter | 1 | |
| 5 | Cono weeder | 5 | |
| 6 | HTP Sprayer | 1 | |
| 7 | 4 row paddy sprayer | 1 | |
| 8 | PVC PIPES | 17 | |
| 9 | Rotavator | 1 | |
| 10 | Peg type weeder | 3 | |
| 11 | Winnower | 3 | |
| 12 | Reaper | 1 | |
| 13 | 3hp diesel engine | 3 | |



Rotavator



Diesel engine pumping set

Village: Haral, District-Ratnagiri, Maharashtra

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------------------|--------|----------------------------|
| 1 | Power tiller | 1 | 17950 |
| 2 | Power sprayer (HTP) | 1 | |
| 3 | Power saw | 1 | |
| 4 | Reaper | 1 | |
| 5 | Fogger | 1 | |
| 6 | Paddy thresher | 1 | |
| 7 | Rotavator | 1 | |
| 8 | Weighing machine (platform type) | 1 | |



Power saw



Power sprayer (HTP)

Village: Jalgaon (KP), District- Pune, Maharashtra

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Seed cum fertilizer drill | 2 | 3130 |
| 2 | Honda HTP pump sprayer with 3.1 hp (Petrol start Kerosene engine) | 1 | |
| 3 | Fodder cum wheat cutting Machine | 2 | |
| 4 | Multi crop thresher 7.5 HP | 1 | |
| 5 | Pedal cum power operated grain cleaner | 1 | |
| 6 | Peg type dryland weeder (3 Tynes) | 5 | |
| 7 | Power tiller | 1 | |
| 8 | Mole plough CIAE | 1 | |



Multi crop thresher



Power tiller

Village: Chamaluru, District- Anantapur, Maharashtra

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | 5-Row bottom plough | 1 | 20500 |
| 2 | Guntaka blade | 1 | |
| 3 | Groundnut thresher | 2 | |
| 4 | seed cum fertilizer drill | 4 | |
| 5 | Taiwan sprayer | 1 | |
| 6 | Boom sprayer | 1 | |
| 7 | Groundnut decorticator | 1 | |
| 8 | Automatic planter | 4 | |
| 9 | 3-tine cultivator | 2 | |
| 10 | 9 tine cultivator | 1 | |
| 11 | Ground nut planter | 2 | |



Automatic planter



Groundnut thresher

Village: Yagantipalli, District-Kurnool, Andhra Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Seed cum fertilizer drill | 1 | 12000 |
| 2 | Rotavator | 1 | |
| 3 | Taiwan sprayers | 2 | |
| 4 | Sprinkler set | 5 | |
| 5 | Weighing machine | 1 | |
| 6 | Power weeder | 1 | |
| 7 | Drum seeder | 2 | |



Seed cum ferti drill



Rotavator



Drum seeder

Village: Nacharam, District-Khammam, Andhra Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | 8 Row paddy seeder | 1 | 8255 |
| 2 | Paddy reaper | 1 | |
| 3 | Multi crop thresher | 1 | |
| 5 | Taiwan sprayer | 1 | |
| 6 | Seed cum fertilizer drill | 1 | |
| 7 | M B plough | 1 | |



Drum seeder



Multi crop thresher

Village: Sirusuwada, District-Srikakulam, Andhra Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------------------------|--------|----------------------------|
| 1 | Drum Seeder | 2 | 11006 |
| 2 | Power tiller | 1 | |
| 3 | Paddy reaper (power operated) | 1 | |
| 4 | 5 hp oil engine | 1 | |
| 5 | 5 hp Mono block with electric motor | 1 | |
| 6 | 6" chain saw | 1 | |
| 7 | Brush cutter | 1 | |
| 8 | Power operated winnowing fan (2 hp) | 1 | |
| 9 | Taiwan sprayer | 1 | |
| 10 | M.B. plough | 1 | |
| 11 | Offset disc harrow | 1 | |



Power tiller



Winnowing fan (2 hp)



Reaper

Village: Matsypuri, District- West Godavari, Andhra Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------|--------|----------------------------|
| 1 | Multi crop thresher | 1 | 7100 |
| 2 | Paddy reaper | 1 | |
| 3 | Taiwan sprayer | 1 | |
| 4 | 8 row paddy seeder | 2 | |



Drum seeder



Multi crop thresher



Reaper

**Village: Nandyalagudem, Boring Thanda & Atmakuru,
District-Nalgonda, Andhra Pradesh**

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------|--------|----------------------------|
| 1 | Rotavator | 2 | 23270 |
| 2 | Drum seeder | 2 | |
| 3 | Leveler | 1 | |
| 4 | Bund farmer | 1 | |
| 5 | Wheel hoe | 10 | |
| 6 | Dal mill | 1 | |
| 7 | GN Decorticator | 2 | |
| 8 | 3 row planter | 1 | |
| 9 | Power weeder | 1 | |
| 10 | Seed drill | 1 | |
| 11 | Chaff cutter | 1 | |
| 12 | Maize Sheller | 1 | |



Rotavator



Power weeder

ZONE- VI

(Gujarat and Rajasthan)

No. of KVKs-7

**(Districts : Bharatpur, Kutch, Kota, Rajkot,
Jhunjhunu, Jodhpur and Valsad)**

CONTRIBUTORS

Zone VI

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Kutch
Kota
Rajkot
Jhunjhunu
Jodhpur
Valsad**

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Dr. S.L. Suwalka
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Dr. S.M. Mehta
Dr. A.K. Mishra
Dr. R.F. Thakor**

Village: Sitara, District-Bharatpur, Rajasthan

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--|--------|----------------------------|
| 1 | Rotavator | 1 | 8700 |
| 2 | Leveler | 1 | |
| 3 | Seed dresser | 2 | |
| 4 | Bund former | 2 | |
| 5 | Tractor mounted reaper | 1 | |
| 6 | Sprinkler system | 1 | |
| 7 | Chiseler | 1 | |
| 8 | Weighing balance | 2 | |
| 9 | Tractor mounted spray machine | 1 | |
| 10 | Metrological instruments | 1 | |
| 11 | Power weeder | 10 | |
| 12 | M.B plough | 1 | |
| 13 | Tractor Mounted spray machine PS-16 | 1 | |
| 14 | Metrological instruments (Air,Temp, Solar, RH, Wind speed) | 1 | |
| 15 | Knapsack sprayer | 9 | |
| 16 | Disc plough | 1 | |
| 17 | Disc harrow | 1 | |
| 18 | Seed planter | 1 | |



Seed Planter



Disc plough

Village: Bhalot, District-Kutch, Gujarat

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------------|--------|----------------------------|
| 1 | B.D seed drill | 5 | 2450 |
| 2 | Multi crop thresher | 1 | |
| 3 | Reaper | 1 | |
| 4 | Power weeder | 1 | |
| 5 | Brush cutter | 1 | |
| 6 | Multipurpose rotary tiller | 2 | |
| 7 | Rotavator | 1 | |
| 8 | Seed cum fertilizer drill | 2 | |
| 9 | Chaff cutter | 1 | |
| 10 | Drip system | 1 | |



Seed cum fertilizer drill



Drip system

Village: Chouma kot, District- Kota, Rajasthan

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------------------|--------|----------------------------|
| 1 | Bed planter | 2 | 64795 |
| 2 | Seed cum fertilizer drill | 1 | |
| 3 | Garlic planter | 1 | |
| 4 | Ridge maker | 1 | |
| 5 | Kulpa (intercultural implement) | 4 | |
| 6 | Rotavator | 1 | |
| 7 | Power Sprayer(tractor mounted) | 1 | |
| 8 | Sprayer | 3 | |
| 9 | Disc harrow | 1 | |
| 10 | MB plough | 1 | |
| 11 | Cultivator | 1 | |
| 12 | Planking (wooden) | 2 | |
| 13 | Chaff cutter with electric motor | 3 | |
| 14 | Weighing machine for input kit | 1 | |



Tractor operated sprayer



Rotavator

Village: Magharvada, District-Rajkot, Gujarat

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Chaff cutter | 1 | Nil |
| 2 | Mobile chopper (rotary shredder) | 1 | |
| 3 | Cotton stalk shredder with electric motor | 1 | |
| 4 | Battery operated sprayer | 5 | |
| 5 | Travis | 1 | |
| 6 | Rain gun sprinkler set | 1 | |
| 7 | Automatic seed drill | 2 | |



Tractor operated rotary shredder



Automatic seed drill

Village: Bharu, District-Jhunjhunu, Rajasthan

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------|--------|----------------------------|
| 1 | Reaper binder | 1 | 22200 |
| 2 | Power sprayer | 1 | |
| 3 | Hole digger | 1 | |
| 4 | Weighing machine | 1 | |



Reaper



Tractor operated power sprayer

Village: Chicharli, District-Jodhpur, Rajasthan

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Seed cum fertilizer drill | 2 | 2450 |
| 2 | Disc plough | 1 | |
| 3 | Duster and sprayer | 10 | |
| 4 | Multi crop thresher | 1 | |
| 5 | Weighing machine | 1 | |
| 6 | Reaper binder | 1 | |
| 7 | Power weeder | 1 | |



Reaper



Multi crop thresher

Village: Khuntil, District-Valsad, Gujarat

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-------------------|--------|----------------------------|
| 1 | Diesel engine | 1 | 102588 |
| 2 | Power tiller | 1 | |
| 3 | Reaper | 1 | |
| 4 | Brush cutter | 2 | |
| 5 | Weighing machine | 1 | |
| 6 | Winnower | 27 | |



Winnower



Reaper

ZONE- VII

(Chhattisgarh, Madhya Pradesh and Orissa)

No. of KVKs-14

**(Districts : Morena, Datia, Guna, Satna,
Sonapur, Ganjam, Kendrapara, Bilaspur,
Dantewada, Balaghat, Chhatarpur, Raipur,
Jharsuguda and Tikamgarh)**

CONTRIBUTORS

Zone VII

Morena

Datia

Guna

Satna

Sonapur

Ganjam

Kendrapara

Bilaspur

Dantewada

Balaghat

Chatarpur

Raipur

Jharsuguda

Tikamgarh

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Dr. Vijay Jain

Dr. Sanjukta Mohapatra

Dr. S.S. Gautam

Village: Nidhan & Jeghani, District-Morena, Madhya Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-----------------------------|--------|----------------------------|
| 1 | Multi crop seed drill | 1 | 8800 |
| 2 | Seed cum fertilizer drill | 1 | |
| 3 | Zero till drill | 1 | |
| 4 | Multi crop turbo seeder | 1 | |
| 5 | Tractor drawn land leveler | 1 | |
| 6 | T.D. Reversible M.B. Plough | 1 | |
| 7 | Disc harrow | 1 | |
| 8 | Power sprayer | 1 | |
| 9 | Hand sprayer | 1 | |
| 10 | Seed treated dram | 1 | |
| 11 | Power sprayer | 1 | |
| 12 | Pipeline & sprinkler set | 1 | |



Multi crop seed drill



Zero till drill

Village: Sanora& Baroudi, District-Datia, Madhya Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | M.B. plough | 1 | 4800 |
| 2 | Land leveler | 1 | |
| 3 | Disc harrow | 1 | |
| 4 | Rotavator | 1 | |
| 5 | Seed cum fertilizer drill | 1 | |
| 6 | Power sprayer | 1 | |
| 7 | Sprinkler set | 2 | |
| 8 | Rain gun | 1 | |
| 9 | Multi crop thresher | 1 | |
| 12 | Diesel pump | 1 | |
| 13 | B.D seed drill | 1 | |
| 14 | GN decorticator | 2 | |
| 15 | Maize sheller | 6 | |
| 16 | Planting marker | 2 | |
| 17 | Cono weeder | 2 | |



Rotavator



Disc harrow

Village: Sarkho, District- Guna, Madhya Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------------------|--------|----------------------------|
| 1 | Sprinkler sets | 4 | 15500 |
| 2 | M.B. plough | 1 | |
| 3 | Tractor mounted hydraulic reaper | 1 | |
| 4 | Zero till drill | 1 | |
| 5 | Post hole digger | 1 | |
| 6 | 4 HP diesel engine | 1 | |
| 7 | Hand wheel hoe | 21 | |
| 8 | Rotavator | 1 | |
| 9 | Power sprayer | 1 | |



Zero till drill



Hydraulic reaper

Village: Bhargawan, District-Satna, Madhya Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Cultivator | 1 | 3500 |
| 2 | Reversible plough | 1 | |
| 3 | Multi crop thresher | 1 | |
| 4 | Disc harrow | 1 | |
| 5 | Seed cum fertilizer drill | 1 | |
| 6 | M.B.plough | 1 | |
| 7 | Rotavator | 1 | |
| 8 | Cono weeder | 10 | |
| 9 | Sprinkler set | 1 | |



M.B plough



Seed cum ferti drill

Village: Badamal, District-Sonepur, Orissa

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---|--------|----------------------------|
| 1 | Tractor drawn Land leveler, (leveller Blade Terracer) | 1 | 7080 |
| 2 | Tractor drawn M.B. plough, (2 bottom) | 1 | |
| 3 | Rotavator | 1 | |
| 4 | Seed cum fertilizer drill | 1 | |
| 5 | Self propelled type reaper | 1 | |
| 6 | High capacity multicrop thresher | 1 | |
| 7 | Power weeder | 1 | |
| 8 | Diesel pump set (4.5 hp) with accessories | 1 | |
| 9 | Sprinkler set | 1 | |
| 10 | Disc harrow | 1 | |
| 12 | Knapsack sprayer | 3 | |
| 13 | Power sprayer | 3 | |



Power weeder



Seed cum ferti drill

Village: Chopara, District-Ganjam, Orissa

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|----------------|--------------------------------------|---------------|-----------------------------------|
| 1 | HPDE sprinkler pipe with accessories | 1 | 11400 |
| 2 | High pressure sprayer | 1 | |
| 3 | Mini weeder | 1 | |
| 4 | Power tiller | 1 | |
| 5 | Power weeder | 1 | |
| 6 | HSMF pump set (Diesel) | 1 | |
| 7 | MB plough | 1 | |
| 8 | Multi crop thresher | 1 | |
| 9 | 4 hp pump set (Diesel) | 1 | |
| 10 | Seed cum fertilizer drill | 1 | |



Power tiller



Self propelled power tiller

Village: Krushnadaspur, District-Kendrapara, Orissa

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-----------------------------|--------|----------------------------|
| 1 | Sprinkler set | 4 | 23200 |
| 2 | Power tiller | 1 | |
| 3 | Power sprayer | 2 | |
| 4 | Seed drill | 1 | |
| 5 | Diesel engine | 3 | |
| 6 | Paddy thresher cum winnower | 1 | |
| 7 | M.B.plough | 1 | |
| 8 | Knapsack sprayer | 2 | |



Power tiller



Knapsack Sprayer

Village: Khargana, District-Bilaspur, Chhattisgarh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------------|--------|----------------------------|
| 1 | Rotavator | 1 | 37000 |
| 2 | Tractor drawn land leveler | 1 | |
| 3 | Zero till drill | 1 | |
| 4 | Sprinkler set | 3 | |
| 5 | Pump set | 2 | |
| 6 | Cono weeder | 1 | |
| 7 | Chaff cutter | 1 | |
| 8 | Reaper | 1 | |
| 9 | Multi crop thresher | 1 | |
| 10 | Power sprayer | 1 | |
| 11 | M.B Plough | 1 | |



Zero till drill



Reaper

Village: Heeranar, District-Dantewada, Chhatisgarh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------------|--------|----------------------------|
| 1 | Rotavator | 1 | 13100 |
| 2 | Tractor drawn land leveler | 1 | |
| 3 | Seed cum fertilizer drill | 1 | |
| 4 | Sprinkler set | 2 | |
| 5 | Pump set | 1 | |
| 6 | Wheel hoe | 3 | |
| 7 | Cono weeder | 2 | |
| 8 | Chaff cutter | 1 | |
| 9 | Reaper | 1 | |
| 10 | Multi crop thresher | 1 | |
| 11 | Power sprayer | 1 | |
| 12 | Knapsack sprayer | 1 | |
| 13 | B.D. seed drill | 2 | |



Paddy reaper



Rotavator

Village: Koste, District-Balaghat, Madhya Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|------------------------|--------|----------------------------|
| 1 | Land leveler | 1 | 4000 |
| 2 | Reversible M.B. plough | 1 | |
| 3 | Rotavator | 1 | |
| 4 | Zero till drill | 1 | |
| 5 | Sprinkler set | 2 | |
| 6 | Reaper | 1 | |



Rotavator



Reversible M.B. plough

Village: Chokhada, District-Chhatarpur, Madhya Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|----------------------|--------|----------------------------|
| 1 | M.B plough | 1 | 14000 |
| 2 | Rotavator | 1 | |
| 3 | Zero till drill | 1 | |
| 4 | Sprinkler set | 2 | |
| 5 | Reaper | 1 | |
| 6 | Wheel hoe | 10 | |
| 7 | Chaff cutter | 1 | |
| 8 | Knapsack sprayer | 1 | |
| 9 | Ground nut harvester | 1 | |
| 10 | Cultivator | 1 | |



M.B. plough



Rotavator

Village: Bakulahi, District- Raipur, Chhattisgarh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--------------------------------|--------|----------------------------|
| 1 | Wheel hoe | 10 | 2100 |
| 2 | Power sprayer/Knapsack sprayer | 1 | |
| 3 | Power tiller | 1 | |
| 4 | Land leveler | 1 | |
| 5 | Zero till drill | 1 | |
| 6 | Chaff cutter | 1 | |
| 7 | M.B plough | 1 | |
| 8 | Cono weeder | 6 | |
| 9 | Rotavator | 1 | |
| 10 | Diesel engine | 2 | |



Zero till drill



Power sprayer

Village: Bhoimunda, District-Jharsuguda, Orissa

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------------|--------|----------------------------|
| 1 | Power tiller | 1 | 20750 |
| 2 | Reaper | 2 | |
| 3 | Paddy thresher (pedal operated) | 4 | |
| 4 | Winnower | 2 | |
| 5 | Knapsack sprayer | 10 | |
| 6 | KB Pump | 5 | |
| 7 | Power weeder | 1 | |
| 8 | Cono weeder | 3 | |
| 9 | Garden Rake | 5 | |



Power tiller



Paddy reaper

Village: Kanti, District-Tikamgarh, Madhya Pradesh

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--------------------------|--------|----------------------------|
| 1 | Sprinkler set with Pumps | 1 | 1250 |
| 2 | Power weeder | 1 | |
| 3 | Power tiller | 1 | |
| 4 | Reaper | 1 | |
| 5 | Multi crop thresher | 1 | |
| 6 | Winnower | 1 | |
| 7 | M.B. plough | 1 | |
| 8 | Knapsack sprayer | 1 | |
| 9 | Rotavator | 1 | |
| 10 | Wheel hoe | 10 | |
| 11 | Seed drill | 1 | |



M.B. plough



Multi crop thresher

ZONE-VIII

(Karnataka, Kerala and Tamil Nadu)

No. of KVKs-9

**(Districts : Alleppey, Belgaum, Devanagere, Kolar,
Nagapattinam, Namakkal, Ramanathapuram,
Villupuram and Tumkur)**

CONTRIBUTORS

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Devangere

Kolar

Nagapattinam

Namakkal

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Villupuram

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Dr. V. Ganesaraja

Dr. N. Sathiah

Dr. L.B. Naik

Village: Muttar, District-Alleppey, Kerala

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|---------------------------|--------|----------------------------|
| 1 | Drum seeder | 4 | 26900 |
| 2 | Power weeder | 1 | |
| 3 | Paddy transplanter | 1 | |
| 4 | Thresher | 1 | |
| 5 | Pump set | 1 | |
| 6 | Brush cutter | 1 | |
| 7 | Power sprayer | 2 | |
| 8 | Pulverizer | 1 | |
| 9 | Automatic Sealing machine | 1 | |



Power sprayer



Drum seeder

Village: Bilakundi, District-Belgaum, Karnataka

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|-----------------------------------|--------|----------------------------|
| 1 | Seed cum fertilizer drill | 1 | 17323 |
| 2 | Power weeder | 1 | |
| 3 | Brush cutter | 1 | |
| 4 | Rotavator | 1 | |
| 5 | Sugarcane sett cutter and planter | 1 | |
| 6 | Power sprayer | 2 | |
| 7 | Mobile sprinkler unit | 1 | |
| 8 | Pit opener Heavy duty auger | 1 | |
| 9 | Power operated conveyer reaper | 1 | |
| 10 | Ridger/cultivator | 2 | |
| 11 | M.B.plough | 1 | |
| 12 | Diesel engine pump set | 2 | |



Diesel pump set



M.B. plough

Village: Siddanuru, District-Davanagere, Karnataka

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|------------------------------------|--------|----------------------------|
| 1 | Seed cum fertilizer drill | 1 | 27995 |
| 2 | Power sprayer | 2 | |
| 3 | Post hole digger (banana trencher) | 1 | |
| 4 | Sprinkler set | 1 set | |
| 5 | Rain gun and accessories | 1 set | |
| 6 | AM high tech sprayer | 1 | |
| 7 | Battery sprayer | 1 | |
| 8 | Chain pulley and accessories | 1 | |
| 9 | Chandrike (plastic) | 1 | |
| 10 | Crow bar | 1 | |
| 11 | Diesel pump set | 1 | |
| 12 | HTP sprayer with accessories | 3 | |
| 13 | Mono filament rope | 1 | |
| 14 | Pickaxe | 1 | |
| 15 | Plastic handle butti | 1 | |
| 16 | Power tiller with accessories | 1 | |
| 17 | Spade handle | 2 | |
| 18 | Weed cutter | 1 | |



Seed cum fertilizer drill



Raingun

**Village: S.Raghuttahalli & Munganahalli Hobli,
District-Kolar, Karnataka**

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--------------------------|--------|----------------------------|
| 1 | Post hole digger | 1 | 7410 |
| 2 | Power weeder | 2 | |
| 3 | Cycle weeder | 8 | |
| 5 | Brush cutter | 1 | |
| 6 | Power sprayer | 1 | |
| 7 | Diesel engine (5 hp) | 1 | |
| 8 | Chaff cutter cum grinder | 2 | |
| 9 | Disc harrow | 1 | |
| 10 | Groundnut decorticator | 5 | |
| 11 | Chaff cutter | 1 | |
| 12 | Grinder | 1 | |
| 13 | Groundnut seed drill | 2 | |
| 14 | Groundnut grader | 1 | |



Power sprayer



Power weeder

Village: Anaimangalam, District-Nagapattinam, Tamilnadu

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--------------------------------|--------|----------------------------|
| 1 | Three row weeder (SRI) | 1 | 5600 |
| 2 | Tractor drawn seed drill | 1 | |
| 3 | Drum seeder | 2 | |
| 4 | Rocker sprayer | 1 | |
| 5 | Power tiller with accessories | 1 | |
| 6 | Oil engine with accessories | 1 | |
| 7 | Multicrop thresher with engine | 1 | |
| 8 | Chaff cutter | 1 | |
| 9 | Feed grinder | 1 | |



Power tiller



Drum seeder

Village: Vadavathur, District-Namakkal, Tamilnadu

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|----------------|--------------------------|---------------|-----------------------------------|
| 1 | M.B plough | 1 | 145860 |
| 2 | power sprayer | 1 | |
| 3 | Seed drill | 1 | |
| 4 | Spring cultivator | 1 | |
| 5 | Mobile sprinkler | 1 | |
| 6 | Rotavator | 1 | |
| 7 | Bund former | 1 | |
| 8 | Power weeder | 1 | |
| 9 | Sorghum harvester | 1 | |
| 10 | Feed grinder | 1 | |
| 11 | Milking machine | 1 | |
| 12 | Chisel plough | 1 | |



Rotavator



Chisel plough

Village: Kalari, District-Ramanathapuram, Tamilnadu

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|--|--------|----------------------------|
| 1 | Improved broad bed former cum seeder | 1 | 2400 |
| 2 | Paddy daincha seeder | 2 | |
| 3 | Seed cum fertilizer drill | 2 | |
| 4 | Zero seed drill | 2 | |
| 5 | Ridger seeder | 1 | |
| 6 | Rotary tiller | 1 | |
| 7 | Battery operated low volume knapsack sprayer | 2 | |
| 8 | Hand operated sprayer /duster | 3 | |
| 9 | Seed Extractor | 1 | |
| 10 | Chaff cutter | 1 | |
| 11 | Mini Portable Sprinkler | 4 | |
| 12 | Paddy Power Weder | 1 | |



Zero seed drill



Rotary tiller

Village: Kattusiviri, District-Villupuram, Tamilnadu

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|----------------|---|---------------|-----------------------------------|
| 1 | Tractor drawn cultivator | 1 | 3200 |
| 2 | Paddy cum daincha seeder (Manual) | 1 | |
| 3 | Cono weeder | 5 | |
| 4 | Groundnut decorticator (Manual) | 1 | |
| 5 | Power weeder | 1 | |
| 6 | Tractor drawn channel former | 1 | |
| 7 | Leveller (Power tiller drawn) | 1 | |
| 8 | Chaff cutter cum dhal grinder | 1 | |
| 9 | Multipurpose mini tiller with accessories | 1 | |
| 10 | Ground nut harvester | 1 | |
| 11 | Mobile sprinkler | 2 | |
| 12 | Seed cum fertilizer drill | 1 | |
| 13 | Brush cutter | 1 | |
| 14 | Engine operated pump | 1 | |



Drum seeder



Seed cum fertilizer drill

Village: D.Nagenahalli, District-Tumkur, Karnataka

| Sl. No. | Name of Implement | Number | Revenue generated (₹/year) |
|---------|------------------------------|--------|----------------------------|
| 1 | Weed cutter with accessories | 1 | 14590 |
| 2 | Trencher | 1 | |
| 3 | Land leveler | 1 | |
| 4 | Disc harrow | 1 | |
| 5 | Chaff cutter | 1 | |
| 6 | Diesel engine | 1 | |
| 7 | Disc plough | 1 | |
| 8 | Cono weeder | 1 | |
| 9 | Ridger plough | 1 | |
| 10 | Chain saw | 1 | |
| 11 | Weighing machine | 1 | |
| 12 | Power weeder | 1 | |



Power weeder and sprayers



Ridger plough



Weed cutter

Chapter -III

Custom Hiring Centres, Composition their Performance

For implementing climate resilient technology interventions proposed in various villages in 100 vulnerable districts, the suitable farm implements were made available in the Custom Hiring Centres depending upon the need of the farmers for various farm operations. The main objective in selecting particular farm implement in CHCs is to enable any farm operation timely without losing a favourable window of rainfall or soil moisture available. In mono cropping villages, to cover large area, more number of same kind machine were purchased. Hundred CHCs were successfully established and all are functioning well. The number of farm implements varied among 100 CHCs from 4 to 31. The VCRMC has decided the price of hiring of each farm implement consensus basis, it was displayed at the CHC shed below in figure. Registers are maintained for each farm implement for recording number of hours, farmers benefitted, amount paid towards hiring. The income generated out of



International Initiative on Climate Resilient Agriculture
राष्ट्रीय प्रारंभिक कृषि हवामान पलटाव प्रकल्प
कस्टम हायरींग सेंटर
कृषि औजारों व्यवस्थापन समिती निम्न प्रकल्प,
कृषि विज्ञान केंद्र, गोंदिया, गोंदिया

औजारों भाडे दर यादी (RATE BOARD)

| क्र.सं. | औजारोंचे नाव | दर रु. |
|---------|--|-------------------|
| १ | भळणी यंत्र (Multi crop thresher) | ५००/- प्रति दिन |
| २ | बज्जन काटा (Weighing balance) | १/- प्रति क्विंटल |
| ३ | कोनोविडर (Cono weeder) | १०/- प्रति दिन |
| ४ | कट्टी यंत्र (Power operated chaff cutter) | ५०/- प्रति दिन |
| ५ | फवारणी यंत्र (HTP-Sprayer) | ५०/- प्रति दिन |
| ६ | रोवणी यंत्र (4 Row paddy transplanter) | २५/- प्रति दिन |
| ७ | पि.व्ही.सी. पाईप (PVC pipes) | १/- प्रति दिन |
| ८ | रोटाविटर (Rotavator) | १००/- प्रति दिन |
| ९ | धान काटणी यंत्र (Reaper) | ३००/- प्रति दिन |
| १० | संग टाईप तथा काटणी यंत्र (Peg type weeder) | १०/- प्रति दिन |
| ११ | इंजिन ३ एच.पी (Pump 3 HP (Engine)) | ३००/- प्रति दिन |
| १२ | बिज प्रक्रिया यंत्र (Seed treatment drum) | १०/- प्रति तास |
| १३ | धान आडवणी यंत्र (Winnow) | २०/- प्रति दिन |

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CHCs goes to common account. Out of 100 CHCs, most of the centres performed well. However, the income generated by the CHCs varied from nil to ₹ 1.45 lakhs. Though income generation among CHCs is not only the indicator for their performance, selection of farm implements of high priority, management, socio economic conditions of the farmers etc made the variations in revenue generation. Proper maintenance and keeping in working condition with immediate repair also resulted in higher revenue by individual CHC. It is not that all the CHCs of particular zone performed well and others are not. Such wide variations in efficient utilization and revenue were found in all the zones. Among 100 CHCs, in Vadavathur in Namakkal district obtained the highest revenue of ₹ 1.45 lakhs. In North East Hill regions, CHC in North Pullnpur, district West Tripura earned revenue as high as 25 thousands within a year of establishment. The zone wise details of CHCs, number and name of farm implements along with revenue generated during first year of establishment are presented in following pages.

Chapter- IV

Media Coverage

Lunching of CHCs , list of farm implements, benefits of these farm implements for different crops, land use situation and weather aberrations was covered widely in the form of news papers, TV-shows, radio talks, video recording. Some of the media reports on CHCs are given under. Several trainings organized in the village by KVK staff on use of farm implements and precision and efficiency of inputs were explained.



Chapter –V

Early Lessons

- Hundred Custom Hiring Centres (CHCs) were successfully established at 100 NICRA KVK villages in 100 districts.
- CHCs are functioning well and are managed through Village Climate Risk Management Committee (VCRMC)/Custom hiring committee.
- The number and kind of farm implements varied among villages depending upon crops grown, rainfall, soil type and agro ecosystem.
- CHCs met the needs of farming community in completion of timely sowing operation in short available sowing window under delayed onset of monsoon condition particularly during current year (2012 *Kharif*).
- Crop residue burning was reduced in many rain fed crops with the introduction of rotavators, chipper shredder etc and some part of crop residue was recycled back into the soil for improving soil organic carbon and soil health.
- Fodder problem in villages was addressed by chipper shredder coupled with fodder bank establishment.
- Geographic Positioning system (GPS) provided under CHCs enabled to collect GPS based soil sampling in farmers fields for developing SSNM/INM strategies and to revisit the same fields for assenting soil organic carbon changes with various NICRA interventions.
- Zero tillage machines of CHCs impacted in of several crops like maize, wheat etc under zero tillage in several districts, which resulted in the energy and water saving.
- Soil and water conservation measures such as ridge and furrow method, BBF, conservation furrow, paired row, bed planting etc promoted with farm implements of CHCs in the villages.
- Rainwater harvesting through farm ponds and effective use of harvested rainwater through sprinkler system of CHCs addressed the water shortage, improved the use efficiency, water productivity particularly during intermittent droughts in rainy season and also helped in presowing irrigation for establishment of post rainy season crops grown on residual moisture.

- Hand/Power operated sprayers in CHCs enabled timely spraying operation such as foliar sprays for drought mitigation and controlling emerging pests and diseases in a different climate conditions.
- Water saving in horticulture crops was addressed with drip irrigation.
- FTRB system of wheat sowing, seed drill resulted in seed saving and improved plant stand.
- Seed cum fertilizer drill helped in introduction or expanding the intercropping area in the villages for a proved climate resilient intervention for efficient utilization of natural resources.
- Placement of fertilizer particularly urea, DAP with seed cum fertilizer drills resulted in the improved use efficiency of added fertilizers is directly reduces the N₂O emission a potential green house gas (GHG).
- Timely weed control in the farmer's fields with CHCs weeders improved the water and nutrient use efficiency, crop productivity and profitability of farms.
- Different kind of crop threshers of CHCs enabled the farmers in timely harvesting operations with less cost. This could also helped in avoiding crop damage in any weather abbreviation such as cyclone, frost etc in several villages in hundred districts by avoiding the coincidence of weather abbreviation with crop harvesting.
- Grain cleaners of CHCs enable the post harvest management of grain quality resulting in improved price of farm produce.
- Weighing machines introduced helped in proper weight measurement of chicks and other poultry birds fetched the better income.
- Focussed interaction and discussion are essential with farmers groups in villages in finalizing farm implements.
- Shed is essential for smooth functioning of Custom Hiring Implements.
- CHC depending upon need of farm operation of farming type of farm implements may be limited but go for more numbers.
- Maintenance of implements and repair immediately need to be planned particularly during crop season.
- Pruning of CHC implements need to be rational depending upon social economic condition of the village in difficult parts of the country.
- Successful models of CHCs in NICRA village can be the grinding forces for establishment in new districts.

Chapter –VI

Way Forward

Acceptability of farm implements to farmers in the village at Custom Hiring Centre (CHCs) is an important strategy successfully implementation of adoption and mitigations to deal climate change. Timely sowing, weeding, inter-cultural, threshing and harvesting operation were established components in dealing with weather abbreviations like late on-set of monsoon, drought, intermittent drought, floods, cyclone, water logging and frost etc. Custom hiring centres established in 100 villages/districts have provided many opportunities in dealing various weather duration during 2011 and 2012. The institutional set up also thrown up some difficulties, which need to be addressed for expanding CHCs in other districts in 12th plan under this project. In depth, analysis of these constraints will be essential for strengthening Custom hiring centre (CHCs) in 12th plan.

Chapter - VII

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Technology Demonstration Component

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