

## SUMMARY REPORT, 2018-19

1. **Project name with ID** : **Strengthening of Infrastructure for Training and Demonstration of Hi-Tech Agricultural Machines**  
**ID. OR/RKVY-EXTN/2017/796**
2. **Total Project cost** : Rs.576.90 lakhs
3. **Fund released** : Rs.100.00 lakhs
4. **Physical Progress**
  - i) **Training** : Target                      Achievement  
06    06
  - ii) **Demonstration** : Target                      Achievement  
10    12
5. **No. of beneficiary benefitted** : Training: 116  
Demonstration: 841
6. **Growth Impact** : Farmers awareness on Hi-Tech Agricultural machinery created through training and on farm demonstrations

## **Background& Objectives**

The agricultural development in the state of Odisha has seen astounding success in recent past and the agricultural mechanization programme has been extremely supportive in this context. The sale of tractors, power tillers, transplanter, combine harvesters etc has increased in many folds throughout the state following which the production and productivity of all major crops are showing a positive trend. Though many hi-tech agricultural machineries are available in our country, our farmers are ignorant about their availability and use. Also, large no. of tractors (about 45,000), power tillers (90,000) and rice transplanter (2400) are available in our state and trained operators for these machinery are not available. Many tractor and power tillers are operated by inexperienced persons as a result many accidents and casualties are frequently occurring in our state. Also recently advanced 4-wheeled drive transplanter are emerging in our state but no operators are available. Lack of proper knowledge and techniques for raising mat type nursery for the rice transplanter are the main constraints for low population of rice transplanter in the state. Line transplanting results about 15% higher yield of paddy and for this it is highly essential to organize training programmes on use, repair and maintenance of rice transplanter as well as nursery raising methods. Hence, it is high time to create trained operators for tractor, power tiller and rice transplanter in our state.

### **Objectives**

1. To create infrastructure and procure hi-tech agricultural machines for awareness generation at state level through capacity building and field demonstrations.
2. To conduct training programmes for unemployed youths on operation and maintenance of agricultural machines particularly tractor, power tiller and ricetransplanter.
3. To conduct demonstration-cum-training programmes of the hi-tech agricultural machines in farmers field/KVK farms/ RRTTS farms.
4. To assist the farmers for selecting quality hi-tech machines for adoption in their farms leading to augment high end farm mechanization.

## Farmers' Training Programme conducted during 2018-19 (2 weeks duration)

### 1. Operation and Maintenance of Tractor

Sl.No.	Duration	No. of Trainees
1.	18.06.2018 - 30.06.2018	19
2.	10.12.2018 – 22.12.2018	17

Two weeks farmers' training programme on "Operation and Maintenance of Tractor" was organized during 18<sup>th</sup> – 30<sup>th</sup> June, 2018 and 10<sup>th</sup> to 22<sup>nd</sup> December, 2018 in the College of Agricultural Engineering and Technology, OUAT, Bhubaneswar. Thirty six numbers of rural youths from different districts of the state participated in the above two training programmes. Prof. S. Pasupalak,



Hon'ble Vice Chancellor, OUAT inaugurated the 1st training programme and interacted with the trainees. The training programme on operation and maintenance of tractor aimed to enhance the theoretical and practical knowledge of participants on different components and systems of tractor, tractor driving, its maintenance schedule etc. They were taught about different parts of tractor engine, ignition system, fuel supply system, lubrication system, cooling system, power transmission, hydraulic system of tractor along with trouble shooting and repair maintenance schedule



of tractor. They were trained on tractor driving (on road and field condition) with different implements like rotavator, cultivator, seed drill, axial flow thresher and trolley. During two

weeks training programmes, trainees also visited farmers' fields and discussed about the repair and maintenance of tractor with the local progressive farmers having tractors. During the training programmes, free lodging and boarding facilities were provided by the project in Farmers Hostel, OUAT, Bhubaneswar. After completion of the training programme, certificate and odia training manual were provided to the trainees.



## 2. Operation and Maintenance of Rice Transplanter

Sl.No.	Duration	No. of Trainees
1.	30.07.2018 - 11.08.2018	20
2.	21.01.2019 – 02.02.2019	20

Two weeks farmers' training programme on Operation and Maintenance of Rice Transplanter were organised from 30<sup>th</sup> July to 11<sup>th</sup> August, 2018 and 21<sup>st</sup> January to 2<sup>nd</sup> February, 2019 in the College of Agricultural Engineering and Technology, OUAT, Bhubaneswar.



Forty numbers of rural youths from different districts of the state joined these training programmes. The training programme envisaged to enhance the theoretical and practical knowledge of the participating farmers on different types of transplanters, their mechanisms and

maintenance schedule etc. The participants were trained on preparation of mat type nursery in field and by automatic nursery



raising machine, dismantling and assembling of transplanter engine, gear box and finger assembly. Field visits were arranged for exposure of the trainees and interaction with the users of rice transplanters. Field visit to the farmers field at Gop and Balanga were arranged for the two training

programme respectively. Trainees interacted with the transplanter users, visited their fields, cut nursery cakes and transplanted in fields with different models of transplanters. The training programme on rice transplanter were highly appreciated by the participants as the training would be beneficial for rice growers to reduce the cost, time and drudgery involved in conventional manual transplanting method. At the end of the training programme, certificate and training manual in odia languages were provided to the trainees.



### 3. Operation and Maintenance of Power Tiller

Sl.No.	Duration	No. of Trainees
1.	24.09.2018 - 06.10.2018	20
2.	11.02.2019 – 23.02.2019	20

Two weeks farmers' training programme on Operation and Maintenance of Rice Transplanter was organised from 24<sup>th</sup> September to 6<sup>th</sup> October, 2018 and 11<sup>th</sup> February to 23<sup>rd</sup> February, 2019 in the College of Agricultural Engineering and Technology, OUAT, Bhubaneswar. Forty numbers of rural youths from



different districts of the state joined this training programme. The training programme envisaged to enhance the theoretical and practical knowledge of the participating farmers on different types of power tillers, their operation and maintenance schedule etc. The participants were trained on different parts and system of power tiller, dismantling and assembling of engine and gear box of power tiller, dry and wet tillage operation of power tiller, fitting of cage wheels, operation of power tiller with trolley and thresher. During the training programme, one day farmers field exposure programme arranged to visit the village Injana, Barang block (both the training) where

a good numbers of power tillers are available. The trainees interacted with the users, checked their power tillers, met farmers queries and operated the power tillers in their fields to check the conditions of the power tillers. After completion of the training programmes, certificates and training manual in odia were provided to the trainees.





Free lodging and boarding to all the trainees were provided by the project in Farmers Hostel, OUAT, Bhubaneswar. Besides this, their to and fro travel expenses were reimbursed on production of bus/train tickets. During 2018-19, total 116 farmers were trained in operation and maintenance of Tractor, Power tiller and Rice transplanter.

## Demonstration of Hi-Tech Agricultural Machines in farmers field conducted during 2018-19

### 1. Demonstration of OUAT Ragi Thresher cum Pearler

Demonstration of OUAT Ragi Thresher cum Pearler was organized at village P. Govindpur, Mohana block, Gajapatidistrict on 23<sup>rd</sup> May, 2018. Sixty nine numbers of farmers witnessed the demonstration programme. The performance of the machine was highly appreciated by the farmers. Farmers showed their keen interest to purchase the machine.



Address and contact number of the manufacturer was provided to the interested farmers for purchase of themachine.

### 2. Demonstration of Tractor operated Straw Chopper

Demonstration of tractor operated straw chopper was organized at Beroboi, Dealanga, Puri on 4<sup>th</sup> June, 2018. It is a new technology machine used to chop the straw residue left in combine harvested fields and not available in the state. Fifty two farmers attended the demonstration programme. The performance of straw chopper was highly



appreciated by the farmers as it facilitates straw incorporation in paddy fields.



### 3. Demonstration of Tractor operated Groundnut Thresher

Demonstration of tractor operated groundnut thresher was organized at village Andhuti, Dist.-Khurdha on 6<sup>th</sup> June, 2018. This machine can harvest both freshly harvested groundnut as well as dried crops. Forty-nine farmers witnessed the demonstration programme. Some farmers wanted to procure this machine. The address and contact numbers of manufacturers were provided to the interested farmers.



### 4. Demonstration of Power operated Pulse Thresher

Demonstration of power operated pulse thresher was organized at village Kansapala, Dist.-Mayurbhanj on 8<sup>th</sup> June, 2018. Fifty four numbers of farmers attended the demonstration programme. As this is a low cost machine, some farmers were very much interested to purchase this machine after witnessing the performance of the machine.



## 5. Demonstration of Tractor operated Seed-cum-Fertilizer Drill

Demonstration of tractor operated seed-cum-fertilizer drill was organized at village Gudadani of Phulbanidistrict on 5<sup>th</sup> July, 2018. Fifty one numbers of farmers attended the demonstration programme. As it is a multi crop planter, farmers wanted to know the type of seeds that can be used in this machine, its availability, cost and subsidy available for this machine. Their queries were met and the address of the suppliers of the machine were provided to the farmers.



## 6. Demonstration of self propelled 4-row rice transplanter

Demonstration of a self propelled 4-row walk behind type rice transplanter was organized at village Birudihiof Mayurbhanj district on 28<sup>th</sup> August, 2018. Fifty one farmers attended the demonstration programme. They were explained about the methods of mat type nursery preparation and its benefit and cost economics.



## 7. Demonstration of Power weeder for low land line transplanted Paddy

Demonstration of Power weeder for low land line transplanted Paddy was organized at village Badjod, Mayurbhanj district on 1<sup>st</sup> October, 2018. One hundred twenty three numbers of farmers attended the demonstration programme. The scientists of KVK, Mayurbhanj-I and officials of the line department of



Govt. of Odisha witnessed the demonstration programme. They were explained about the use and maintenance of different makes and models of power weeders available in the state, their cost, availability and Govt. incentives available to purchase the machine. Some farmers operated the power weeders and expressed their satisfaction about the performance of the machine.

## 8. Demonstration of self propelled power reaper

Demonstration of self propelled power reaper was organized at village Muktapur, Tangi block of Cuttack district on 5<sup>th</sup> November, 2018. Sixty numbers of farmers attended the demonstration programme. The farmers themselves operated the machine and expressed their happiness and wanted to know the availability of the reaper. The cost economics of the machine was explained to the farmers.



### 9. Demonstration of Mini Combine Harvester

Demonstration of a Mini Combine Harvester was organized at village Bilahata, Sadar block, Cuttack on 7<sup>th</sup> December, 2018. Twenty four farmers attended the demonstration programme. As it is a light weight and low cost machine, farmers were interested to know its economics and constraints. Their queries were met satisfactorily and the address of the supplier was given to the interested farmers.



### 10. Demonstration of Tractor operated Happy seeder

Demonstration of tractor operated happy seeder for line sowing of green gram was organized at village Jasuapur, Khurda district on 14<sup>th</sup> December, 2018. Twenty five numbers of farmers witnessed the demonstration programme.



## 11. Demonstration of Tractor operated Zero Till Drill

Demonstration of tractor operated zero till drill for line sowing of green gram was organized at village Sarpokhari, Nayagarh district on 10<sup>th</sup> January, 2019. Two hundred forty seven numbers of farmers witnessed the demonstration. It is a new machine for their area and as no tillage operation is required for line sowing of green gram/black gram, farmers



appreciated this machine and requested to organize such demonstration programmes in different location of the district. The cost economics of the machine and its availability, incentives to purchase the machine and field conditions required for its use were explained to the farmers.

## 12. Demonstration of tractor operated whole straw thresher

Demonstration of a tractor operated whole straw thresher was organized at village Beroboi, Puridistrict on 19<sup>th</sup> February, 2019. This is a new technology machine and farmers can get the whole straw after threshing operation and hence the farmers income will be increased. Thirty six numbers of farmers witnessed the demonstration programme. They



highly appreciated the machine as the commercially available axial flow thresher discharge the chopped straw which is of no use to them but this machine discharge the whole straw which can be used for mushroom cultivation in their area. The farmers expressed that by using this machine, they can get additional income of Rs 3500/- 4000/- per acre by selling straw bundles.

They wanted to know its availability, cost, spare parts and after sales service of the machine. Their queries were met in details and the dealers address with contact numbers were provided.

### Summary of demonstration programmes

Sl No	Date	Machine demonstrated	Location of demonstration	No. of participants
1	23.05.2018	OUAT Ragi thresher cum pearler	P.Govindpur, Mohana, Gajapati	69
2	04.06.2018	Tractor operated straw chopper	Beroboi, Dlang, Puri	52
3	06.06.2018	Tractor operated groundnut thresher	Andhuti, Khurda	49
4	08.06.2018	Power operated pulse thresher	Kansapal, Mayurbhanj	54
5	05.07.2018	Tractor operated seed cum fertilizer drill	Gudadani, Phulbani	51
6	28.08.2018	Self propelled 4-row walk behind type rice transplanter	Birudihi, Mayurbhan	51
7	01.10.2018	Power weeder for lowland line transplanted paddy	Badjod, mayurbhanj	123
8	05.11.2018	Self propelled power reaper	Muktapur, Tangi, Cuttack	60
9	07.12.2018	Mini combine harvester	Bilahata, Salipur, Cuttack	24
10	14.12.2018	Tractor operated happy seeder	Jasuapur, Khurda	25
11	10.01.2019	Tractor operated zero till drill	Sarpokhari, Nayagarh	247
12	19.02.2019	Whole straw paddy thresher	Beroboi, Dlang, Puri	36
<b>Total</b>				841

## SUCCESS STORIES

1. Sri MirjaBeshra, a rural youth from Village-Rangamatia, Bhimkhanda, Dist.- Mayurbhanj joined the two weeks training programme on “Operation and Maintenance of Tractor” during 18<sup>th</sup>- 30<sup>th</sup> June,2018. After being trained, he is now working as a tractor driver in their area. He is now earning Rs.15,000/- per month



2. Sri Sagar Mallick who hails from a village named Mohana, Dist.- Gajapati joined the two weeks training programme on “Operation and Maintenance of Power Tiller” from 24<sup>th</sup> September to 6<sup>th</sup> October, 2018. After learning about the different components and systems of power tiller, dismantling and assembling of engine and gear box of power tiller, he has startedhis own workshop at Mohana (block) and involved in repairing of power tillers. He is earning aboutRs.10,000/- per month and marked his first step as an entrepreneur.



3. Sri Brajamohan Hembram, a rural youth from village Badasahi, Dist.- Mayurbhanj attended two weeks training programme on “Operation and Maintenance of tractor” from 10<sup>th</sup>- 22<sup>nd</sup> December, 2018. After completing the training programme, he purchased a new tractor and he himself operates it for different tillage and transportation of farm produce for his own farm and earning by giving his tractor on custom hiring in their nearby areas.



4. Sri Purushotam Pradhan who hails from a village named Majhipali of Bargarh district was trained in two weeks training programme on “Operation and Maintenance of Power Tiller” during 11-23 February, 2019. After successful completion of training, he is now engaged as a power tiller operator in his village and earning about Rs 6000/- per month. He is also involved in repairing of power tiller and earns about Rs.5000/- per month from repairing works thereby total monthly income of about Rs 11,000/-.





## Print & Electronic media coverage

### A. Doordarshan Programme

1. Telecast of demonstration programme of Power Pulse thresher in Krushi Darshan of Doordarshan Kendra, Bhubaneswar on 21.06.2018



2. Telecast of demonstration programme of Power weeder in Krushi Darshan of Doordarshan Kendra, Bhubaneswar on 22.02.2019



3. Telecast of Inaugural function, Training programme on Tractor in Krushi Darshan of Doordarshan Kendra, Bhubaneswar on 21.06.2018



5. Telecast of Inaugural function, Training programme on Power Tiller in Krushi Khabar, KrushiDarshan of Doordarshan Kendra, Bhubaneswar on 12.02.2019



6. **Telecast of a discussion on RKVY Training & Demonstration programme in Pallishreeof Doordarshan Kendra, Bhubaneswar on 18.02.2019**



7. **Telecast of demonstration programme of zero till drill in Krushi Darshan of Doordarshan Kendra, Bhubaneswar on 04.02.2019**



8. Telecast of demonstration programme of SCFD in Krushikhabar, Krushi Darshan of Doordarshan Kendra, Bhubaneswar on 08.02.2019



9. Telecast of Training programme on Automatic nursery raising machine in Krushi Darshan of Doordarshan Kendra, Bhubaneswar on 12.02.2019



10. Telecast of Training programme on Rice Transplanter in Krushi Darshan of Doordarshan Kendra, Bhubaneswar on 21.02.2019



11. Telecast of demonstration programme of whole straw thresher in Krushikhabar, KrushiDarshan of Doordarshan on 06.03.2019



**12. Telecast of training programme on operation and maintenance of power tiller  
in Krushi Darshan of Doordarshan on 06.03.2019**





