

# ANNUAL REPORT

## 2017-18



**REVIVING GREEN REVOLUTION CELL**

(Associate Organization of TATA TRUSTS)

An Initiative of TATA TRUSTS

## GOVERNING BODY

<b>Chairperson</b>	:	<b>Dr. B. S. Dhillon</b> Vice Chancellor, Punjab Agricultural University, Ludhiana
<b>Member</b>	:	<b>Dr. N. S. Malhi</b> Ex. Vice Chancellor, Guru Kashi University, Talwandi Sabo, Punjab
<b>Member</b>	:	<b>Dr. K. Ramasamy</b> Vice Chancellor, Tamil Nadu Agricultural University, Coimbatore
<b>Member</b>	:	<b>Dr. Jasbir Singh Bains</b> Director of Agriculture, Punjab
<b>Member</b>	:	<b>Dr. Jaskarn Singh Mahal</b> Director of Extension Education, Punjab Agricultural University, Ludhiana
<b>Member</b>	:	<b>Mr. Burzis S. Taraporevala</b> Senior Advisor, Tata Trusts, Mumbai
<b>Member</b>	:	<b>Mr. Arun Pandhi</b> Director - Program Implementation, Tata Trusts, Mumbai
<b>Treasurer</b>	:	<b>Dr. A.S. Dhatt</b> Senior Advisor- Agriculture, Tata Trusts, Mumbai
<b>Member</b>	:	<b>Dr. D. S. Brar</b> Honorary Adjunct Professor, School of Agricultural Biotechnology, Punjab Agricultural University, Ludhiana
<b>Member</b>	:	<b>S. Avtar Singh Dhindsa</b> Progressive Farmer
<b>Secretary</b>	:	<b>Dr. G. S. Chahal</b> Executive Director, Reviving Green Revolution Cell

## PREFACE

The phenomenon of Green revolution through the adoption of high yielding varieties of wheat and rice resulted in phenomenal increase in food production in India. It, however, led to a large scale adoption of Rice -Wheat Cropping System that has created a serious problem of fast deteriorating soil health and depletion of water resources. It thus became inevitable to divert substantial area under these crops to other less water requiring crops like cotton, maize, pulses, oilseeds etc. for sustaining the production potential of Punjab soils. But all efforts to diversify agriculture failed to reverse this status of agriculture in Punjab. It was at this stage that Tata Trusts, Mumbai started the initiative on "Reviving the Green Revolution" through financial support to Punjab Agricultural University during 2002-2005 and then through Department of Agriculture, Punjab in Phase-II from 2005-2008. The Trusts established a centralized body in the form of Reviving Green Revolution Cell in 2008 for an active participation of Trusts for the betterment of agriculture and farming community. The operation of projects especially on IPM in Cotton and Basmati has been so successfully that a Regional Center of the RGR Cell has been established at TNAU Campus, Coimbatore to replicate the success stories of Punjab to other states of Southern and Central India. Agencies like WWF-India have also joined hands with RGR Cell for further supporting cultivation of Better Cotton with reduced input use and optimum resources utilization.

The RGR Cell directly operates all of the projects like Integrated Productivity Management on Cotton and Basmati based Cropping Systems, Nutrition gardening and linkage of farmers with market in Punjab. The RGR Cell has now undertaken a new initiative

on mobile based agro-advisory for long term sustainability and impact of Trusts' supported initiative. During the current phase under report, the RGR Cell laid main emphasis on finalization of workable model of mKRISHI for large scale adoption for transfer of technology in agriculture. All other Trusts' supported projects in other agricultural institutes and organization in Punjab and Tamil Nadu are also executed through RGR Cell with a responsibility of regular field visits and review of ongoing projects. In addition, the RGR Cell provides technical support to other agriculture based interventions under other associated organizations of the Trusts. This Annual Report of the RGR Cell is compilation of all such activities undertaken by the RGR Cell (Punjab) during 2017-18. The technical support provided by Mr. Baljinder Singh Saini, Area Manager (Punjab, Dairy, DHANII) and Ms. Khorshed Talati, Team Leader (Tamil Nadu) in preparation of this report is highly appreciated. I owe my personal gratitude to Dr. A.S. Dhatt, Senior Advisor-Agriculture, Tata Trusts; Dr. A. S. Sohi, Advisor Agriculture; all Consultants; Agriculture Development Officers; Field Officers and Grant Manager for gainful utilization of the grants and for providing the technical input for the preparation of this report. A special mention needs to be made of generous cooperation and support of Director of Agriculture, Government of Punjab, for all the financial and operation support in the implementation of the projects. The financial support of Tata Trusts for functioning of the RGR Cell is acknowledged with great sense of gratitude.



G.S. Chahal  
Executive Director

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## Reviving the Green Revolution (RGR) Initiative

The advent of Green Revolution during 1970s resulted in phenomenal increase in agricultural production that made India food sufficient. Punjab alone witnessed an eight-fold increase in food production from 30 lakh tons in 1961 to 2.53 crore tons by 2000. The technologies that accompanied the Green Revolution, however, led to excessive use of agrochemicals and overexploitation of subsurface water, especially for cultivation of rice, which made agricultural production of Punjab unsustainable and grossly uneconomical. The State Government constituted the Johl Committee in 1985, under the Chairmanship of noted economist Dr. S. S. Johl to provide solutions. The report suggested the replacement of at least 150,000 hectares under paddy to lesser water intensive crops such as Basmati, Cotton, Maize, Vegetables, etc. However, due to lack of political will, these were never implemented on a scale which could fulfill the purpose of setting up the Committee. This notwithstanding, some alternative crops could be adopted with assurance of their economic viability, provided it was well demonstrated to farmers. The most viable alternative for diversification in agriculture was to divert area under paddy cultivation to Cotton. However, the scourge of pests raised its ugly head and recurrent attacks resulted in heavy crop loss, low yields and even failure of Cotton crop. The farmers countered this through a two to threefold increase in number of pesticide sprays that not only resulted in increase in pesticide residue and environmental damage, but also increased cost of production with very low economic returns.

Amidst this bleak scenario, the Trusts operationalised its 'Reviving the Green Revolution (RGR)' initiative in Punjab in 2002, to seek solutions to arrest the stagnation in agriculture in Punjab that had set, due to the

above said reasons. It is aimed at bringing diversification in agriculture by shifting some area from predominant cropping system of paddy-wheat cultivation to popularize less water consuming crops as an economically viable alternative to paddy; reduction in cost of production; value addition to crops to increase profitability from farming; conservation of natural resources especially soil health and sub-surface ground water; and protecting the environment from pesticides and pollution caused by crop residue burning.

The financial support of the Trusts (2002-15) to Punjab Agricultural University, Ludhiana; Department of Agriculture, Government of Punjab; and the RGR Cell to promote "Diversification" led to standardization and adoption of Integrated Pest Management (IPM)

technology in Cotton and Basmati rice for profitable cultivation of these crops, in place of rice. Large scale demonstration of IPM has led to increase in income from Rs. 46,000 to Rs. 173,000 per household for Cotton and from Rs. 150,000 to Rs. 300,000 for Basmati. Since the entire Cotton and Basmati growing areas of Punjab are sown under Wheat crop during the Rabi season, the extension of the Integrated Productivity Management Approach in Cotton-Wheat and Basmati-Wheat based cropping systems has further enhanced the income of the project farmers to Rs. 281,192 and Rs. 440,000 under two Cropping Systems, respectively. The successful operation of these interventions under Cropping Systems approach has been demonstrated in eight Clusters of 25 villages each under Cotton-Wheat and Basmati based cropping systems.

Since the beginning of the initiative in 2002, it has resulted in adoption of 1,200 Cotton-growing villages for demonstration of Cotton IPM technology at village level and leading to mass scale impact. One educated youth from each

<sup>1</sup>Tata Trusts

<sup>2</sup>The Reviving Green Revolution (RGR) Cell is a Registered Society under the Societies Act.

adopted village was trained and deployed as a Scout for providing readily available agro-advisory during, as well as after completion of projects. Similarly 150 villages (across the Basmati belt in Punjab) were adopted each year (2009-12) for popularization of IPM in Basmati. Village level demonstrations were conducted to popularize cultivation of Groundnut, Moong, Maize, and Vegetables. Five Self Help Groups (SHGs) of farmers were established, which now are registered as Producer Companies, for adequate and profitable marketing (which was the main hurdle in the adoption of these crops). A total of 5,00 Nutrition Gardens were also established for year round availability of home grown vegetables for enhanced consumption and nutrition of each family.

#### Impact created through the initiative

- Cultivation of Cotton was revived and annual production increased to over 20 lakh bales (compared to 10.8 lakh bales at the start of the project), which generated additional annual revenue worth Rs. 750 crore to the economy of the State.
- An effective pest control was achieved even with 40-45% reduction in use of pesticides, giving an additional income of Rs. 11,500/ per ha, with an additional income of Rs. 57.50 crores from an area of 50,000 hectares, covered each year under the project.
- Additional employment worth Rs. 75 crores per annum was generated for picking of Cotton for women of landless families.
- Adoption of the new Clustering Approach amidst clusters of 100 contiguous villages for the entire Cotton-Wheat cropping system provided an additional income of Rs. 2.3 lakhs per household over the baseline income.

- The Basmati IPM project provided an additional income of Rs. 17,000 per hectare over an area of 50,000 hectares under Basmati with additional annual income of Rs. 85 crores to the Basmati growing farmers in project areas.
- Cleaner environment due to reduced use of pesticides under IPM led to an increase in honey bee colonies from 9,700 to 30,000 and consequent increase in honey production from 1,780 tons to 14,000 tons during this period.
- The Indian Cotton Textile Industry honored the Trusts with a Special Award at the Indian Cotton Conference during November 2013 for their contribution towards enhancing social welfare of Cotton farmers.
- Each Nutrition Garden provided, on an average, 300 kilograms of vegetables, thereby leading to savings of Rs. 7,300 per household per year – an amount which each family would have otherwise spent for purchasing vegetables from the market.

Besides the direct impact, the initiative was successful in creating indirect impact with the Trusts' Associate Organizations through conducted field visits in implementation of agriculture-related projects as well as review and substantial improvement in the quality of finalized Annual Work Plans through provision of technical inputs.

#### REVIVING GREEN REVOLUTION CELL

The Cell, established in 2008, is now a registered body housed in PAU with formal institutional structure and is responsible for prioritization of thrust areas of funding by the Trusts in the country, besides monitoring progress of ongoing projects. The most critical gaps limiting income from commonly used agricultural practices of a particular area are identified where suitable interventions have an obvious scope for noticeable

enhancement in livelihood of small and marginal farmers. The most appropriate agricultural interventions are then identified and validated through the concerned local Agricultural Research Institute like PAU (Punjab Agricultural University) in Punjab and TNAU in Coimbatore. The further large scale popularization of such technologies is then taken up in collaboration with State Departments of Agriculture (DoA), Directorate of Horticulture (DoH), other partner Organisations of the Trusts such as PAU and other agencies such as WWF, India. All such activities are undertaken under the technical guidance and supervision of the RGR Cell as Nodal Agency.

#### Key Objectives/Mandate of RGR Cell

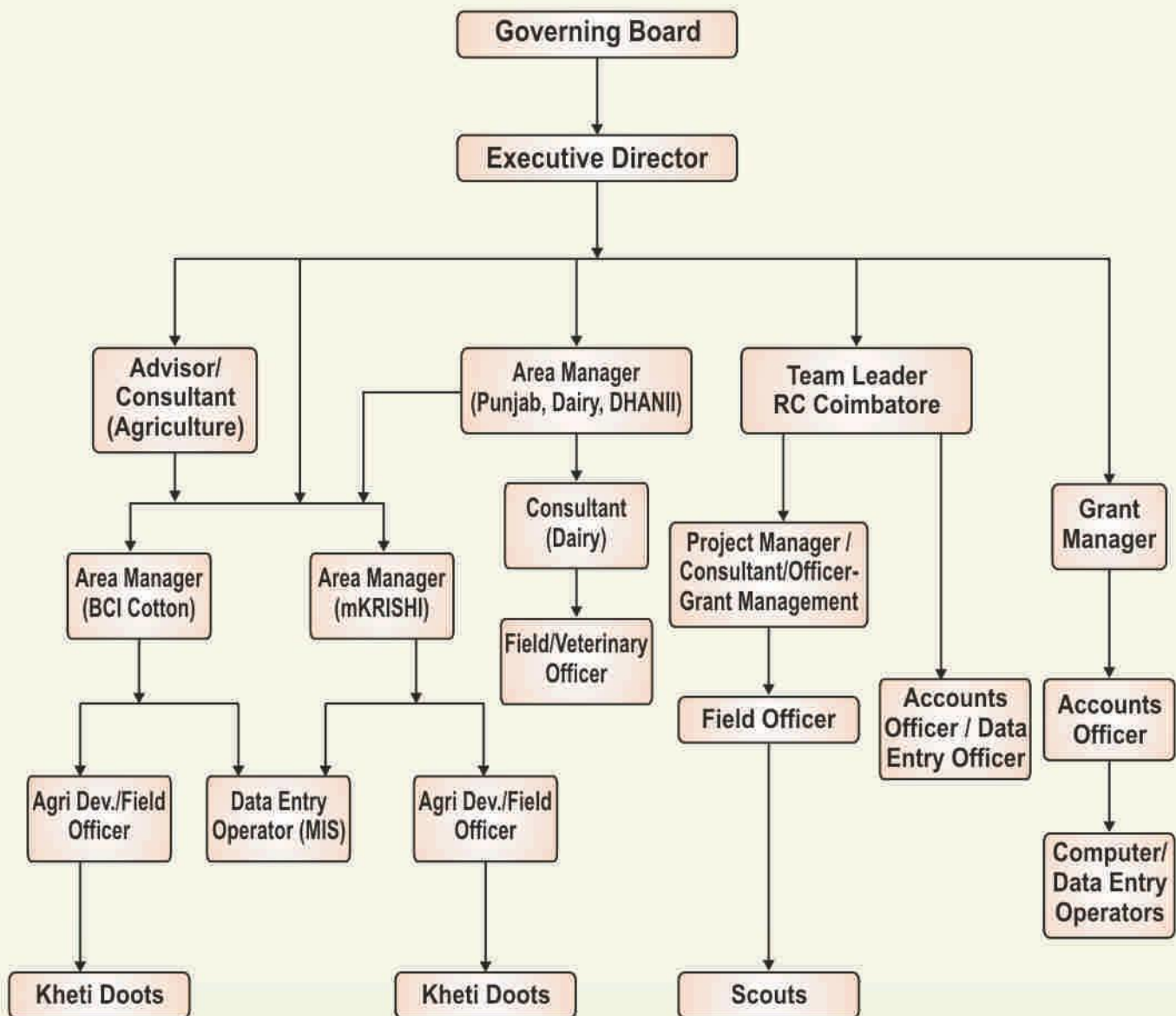
- Support large scale activities for adoption of technologies by the farmers in prime areas of concern in agriculture
- Support development departments of state governments and the private sector in frontline extension activities for increasing agricultural productivity and augmenting economy of farmers
- Support activities that build market linkages of farmers, growth of subsidiaries and encourage agro-based entrepreneurship
- Support researchable issues in agricultural universities to fill in the gaps of agricultural technologies developed. Cell is now responsible for prioritization of thrust areas of funding in PAU and TNAU, besides monitoring progress of ongoing projects. Besides implementing key projects on promoting crop diversification, the Cell also act as an idea incubator for developing potential sustainable agriculture technologies.

#### Organizational Set-up

The RGR Cell, Ludhiana is headed by Executive Director (ED) and supported by Area Manager (Punjab, Dairy, DHANII) from the Trusts. The Cell's annual budget during 2017-18 was around Rs 4.00 million, which included the budget for the fully functional Regional Centre (RC) established in 2010 at TNAU, Coimbatore to provide impetus to RGR Initiative in Tamil Nadu. This budget is excluding that on projects being implemented by RGR Cell. The ED also functions as the Secretary of the Governing Body of RGR Society. With respect to the RGR programme, the ED, reports to the Director – Program Implementation, Tata Trusts and the Governing Body of the RGR Cell. The total staff in RGR (Punjab) at present is twenty five, including a Senior Advisor Agriculture, an Advisor-Agriculture, two Consultants, two Area Managers, two Agriculture Development Officers, seven Field Officers, one Grant Manager, one Account Officer, three Computer/data entry Operators. The Regional Centre, RGR Cell in Coimbatore, Tamil Nadu is supervised by Team Leader, RGR Regional Centre under the guidance of Executive Director, RGR Cell.

The total staff in RGR (Tamil Nadu) at present is five, including One Project Manager, one Field Officers, One Officer-Grant management, one Accounts Officer and Data Entry Operator based in Coimbatore.

The Hierarchical HR Structure of Reviving Green Revolution Cell is as follows:





## Board Meetings

Reviving Green Revolution Cell held its 22<sup>nd</sup> & 23<sup>rd</sup> Governing Body Meeting on September 01, 2017 and March 20, 2018, while the 11<sup>th</sup> Annual General Body Meeting of the Society was held on September 01, 2017.

## RGR Cell partners

RGR Cell has established a wide strategic support division, which includes various partners viz. Departments in Punjab Agricultural University (PAU), Ludhiana; Department of Agriculture (DoA), Government of Punjab, Chandigarh and Government of Tamil Nadu, Chennai; Directorate of Horticulture (DoH), Punjab; World Wide Fund for Nature (WWF), New Delhi and Tamil Nadu Agricultural University (TNAU), Coimbatore. The Cell is headquartered in Ludhiana and setup its Regional Centre in Coimbatore, Tamil Nadu in October 2010.

## Key Areas of Interventions:

- Dissemination of farm adoptable model of technologies for small and marginal farmers for improving their livelihood in Punjab and Tamil Nadu.
- Dissemination of Integrated Productivity Management technologies for Cotton, basmati, vegetables and other alternate crops to achieve targets set out in RGR initiative for diversification of agriculture to save land and water resources as well as improve human health and environment.
- Facilitation of marketing of alternate crops for sustaining the diversification process and improving the economy of small and marginal farmers.
- Expansion of RGR initiative to replicate the success stories under RGR initiative.
- Cropping System instead of Crop based interventions

## Operational Areas / Mode of Operation of the RGR Cell

1. Nodal agency for projects implementation: RGR Cell directly implemented projects on Integrated Productivity Management of Cotton-Wheat Cropping System; Better Cotton Initiative project; Basmati based Cropping System project; Nutrition gardening; Marketing project directly through its own field staff in collaboration with DoA / DoH, Government of Punjab. In 2017-18, the RGR Cell, which functions as an idea incubation unit for the Trusts, implemented of mKRISHI® - a mobile-based agro-advisory service aimed at covering 250,000 households across Punjab and Tamil Nadu. The integration of Information Technology in agriculture aims at bringing about sustainability of agricultural interventions, by ensuring that farmers continue to receive latest University recommended techno-advisory and don't have to depend on local agri-input dealers for information.

Outreach for year 2017-18

State	No. of Villages	No. of HHs
Punjab	1,500	320,000
Tamil Nadu	108	34,000
<b>Total</b>	<b>1,608</b>	<b>354,000</b>



RGR Cell displaying activities in PAU Kisan Mela at Ludhiana (September, 2017)

## 2. Monitoring/Review of the Projects:

Besides supervising its own field projects, the RGR team is also actively involved in monitoring of Trusts' projects to Tata Trusts associate organisations besides its Regional Center run projects in Tamil Nadu. The Team conducts regular project reviews and provided recommendations for improvement in projects. The Action Taken Report is also shared by RGR team for follow-up.

## 3. Evaluation of the Impact of the action taken:

Under each sub theme of the RGR initiative, the professional teams are involved in project implementation, monitoring the progress, providing technical inputs and collating the output and impact to meet the targets. The teams are closely involved in generating data on the interventions and simultaneously the Impact Assessment Studies by independent expert(s) and Third Party Monitoring and Evaluation (M&E) are also undertaken.

## 4. Audits of the funds received:

A complete financial record is maintained by RGR and

is regularly audited as well. The RGR Cell has also internal auditor deputed by Tata Trusts.

## 5. MoUs with partner organizations:

1. The RGR Cell signed Memorandum of Understanding with WWF, India on June 15, 2017 for the implementation of Better Cotton Initiative project in 300 villages.

## Operational Strategy

The most appropriate agricultural interventions are identified and validated through the concerned local Agricultural Research Institute like PAU (Punjab Agricultural University) in Punjab & the TNAU (Tamil Nadu Agricultural University) in Tamil Nadu. The further large scale popularization of such technologies is then taken up in collaboration with State Departments of Agriculture and through other partner Organisations of the Trusts. All such activities are undertaken under the technical guidance and supervision of the RGR Cell as Nodal Agency. Regular monitoring of operations and even a periodic field review is conducted to assess the impact and mid-term modifications, if so required.



Team from Tata Trusts & RGR reviewing cotton crop

## Reviving Green Revolution Initiative (Punjab)

### Programme Goals & Objectives for 2017-18

Entire Cotton and Basmati growing area of Punjab is sown with a succeeding second crop (Wheat). The successful operation of IPM approach to cover the entire Cotton - Wheat and Basmati - Wheat based cropping system has been well demonstrated in clusters of 25 villages, each spread over 150 to 200 villages. This further needs to be extended to larger area covering the crop cycle for ensuring noticeable diversification in agriculture of Punjab.

Basmati and Cotton which have been promoted on larger area for crop diversification are relatively less prone to market uncertainties, all the other possible alternatives of paddy need some kind of marketing intervention to make them economically competitive with the prevailing assured and remunerative system of marketing for rice. Consequently, the Producer

Companies (PC) have been nurtured for ensuring profitable price recovery and ensuring adequate market clearance for all crops which do not fall under the Minimum Support Policy. These PCs, however, need to be further strengthened for coverage of the larger farming community and the scale of business. The RGR Cell, while operating the above projects, brought out noticeable technical and operational gaps in the execution of other Trusts' funded larger projects, including agricultural activities, as a part of their project designs. The team of agricultural experts at the RGR Cell can provide technical support to all the Trusts' funded projects, involving agriculture-based livelihoods. There is also an urgent need to prioritize region-specific critical agricultural problems along with the most appropriate solutions, in order to plan need-based interventions with suitable human and financial resources.

### Coverage Target

Theme	Collaborating institutes	No of districts	No of villages	No of HHs	Area (Ha)
Cotton-Wheat cropping system	Tata Trusts; Department of Agriculture (GoP); PAU; BCI; WWF	6	900	235,000	500,000
Basmati based cropping system	Tata Trusts; Department of Agriculture (GoP); PAU	3	600	80,000	120,000
mKRISHI	Tata Trusts; Tata Consultancy Services (TCS)	9	--	2,00,000	--
RGR Cell (Punjab) - Market Linkages#	Tata Trusts; ATMA	4	5	5,000	--
RGR Cell (Punjab) - Knowledge Resource Center	Tata Trusts	--	--	--	--

# Project villages from ongoing districts

## Intended Outcome / Impact

The project on 'Integrated Productivity Management for Upscaling the Cropping Systems' approach targeted to cover 320,000 households across 1,500 villages in 9 districts in Cotton and Basmati growing areas in Punjab as given below. Detailed list of Blocks is given as Annexure-I.

S.No	Indicators	Target	Achievement as on March 31, 2018
<b>1</b>	<b>Outreach</b>		
1.1	Total number of Villages covered	1,500	1,500
1.2	No. of Household	3,20,000	3,09, 626
1.3	No. of Districts	9	9
1.4	Area covered (Ha) under Cotton-Wheat, Basmati based Cropping System and Marketing project	620,000	5,27,088
<b>2</b>	<b>Impact</b>		
2.1	Annual Gross Income (Rs. / HH)	354,000 (Cotton-Wheat) 539,000 (Basmati based Cropping System) 109,000 (Marketing)	4,46,960 (Cotton-Wheat) 5,08,314 (Basmati based Cropping System) 109,000 (Marketing)
2.2	Reduction in agrochemicals use (%)	40-45	10.9% in Cotton-Wheat and 95% in Basmati-Wheat (More pesticides application in cotton shrunked the % reduction)

## PROGRESS OF RGR INITIATIVE IN PUNJAB

### Integrated Productivity management in Cotton-Wheat Cropping System

#### Key achievements:

- 44,514 farming families were adopted from 200 villages of direct implementation spread over 5 districts of cotton belt.
- The adoption of recommended IPM technology by the adopted farmers in the project villages resulted in significant reduction in use of insecticides. About 11 % reduction in the number of sprays was recorded in cotton crop.
- Since the participatory farmers could properly identify insect-pests and were familiar with the economic threshold levels. So based on this they used recommended pesticides and sprayed required dose at right time with they spent about 17 percent less on insecticides in comparison with the non-participatory farmers.
- With the use recommended agronomic practices along with integrated nutrient management (INM) and integrated pest management (IPM), participatory farmers got 10 percent more yield.
- With the judicious use of inputs and due to increased yield, participatory farmers earned 20 percent more net profit over the non-participatory farmers.
- Radio talks held regularly to acquaint farmers on cultivation of cotton and wheat.
- Regular monitoring through Kheti Doots/ review with line departments done which



Scouts Training at PAU



Farmer's Training Camp

resulted in giving feedback to Punjab Agricultural University and DoA, Punjab to manage the pest attack in cotton crop.

- Existing partnership with PAU and DoA was strengthened with increased credibility of RGR. Scout model well appreciated and Kheti doots trained by RGR were deployed by DoA with additional grant. BCI approved 1.7 Crore for coverage of additional 400 villages for 2018-19.

## Integrated Productivity management in Basmati based Cropping System

### Key achievements:

- During last year, 66,202 farming families were engaged from 200 villages of direct implementation from 3 districts of traditional basmati growing belt.
- Due to mass awareness, 100 percent adoption of seed and nursery treatment has been achieved in the adopted villages.
- With the adoption of high yielding varieties, judicious use of various agri inputs and increase due to increased yield, participatory farmers earned more net profit over the non-participatory farmers.
- Berseem cluster development in Gurdaspur district.
- Area under basmati cultivation in adopted villages increased from 1,27,825 ha in 2016 to 114,224 ha in 2017.
- Soil (1176 nos) and Water samples (520) testing facility provided to farmers
- Berseem Seed production area expansion undertaken



Program Review Team lead by Mr. Sujit Kumar visited Basmati based cropping system project

## Better Cotton Initiative Project

The BCI project envisages a programme "Upscaling Sustainable Cotton Production With Smallholders Across 300 Villages In South-western Districts Of Punjab" that focuses on the theme of Better Cotton Initiative with minimum use of pesticides and the least disturbance to the environment. With an objective of better cotton production for the people who produce it, better for the environment it grows in and better for the sector's future.

### Key achievements :

- The project was implemented by engaging 31,392 farmers to form 899 learning groups in 9 Producer Units (PUs) covering 1,41,467 acres of cotton.
- 3,596 Learning group (LGs) farmers' meetings were organized by Field Officers and Field Facilitators in all the nine Producer Units (PUs). During these meetings, the farmers were familiarized with the latest techniques concerning judicious use of fertilizers and irrigation water besides efficient management of weeds, diseases and insect-pests in cotton.
- 628 Special camps were organized to train the farm workers (Local and Migrant) regarding safe use of insecticides, clean cotton picking, decent work including elimination of discrimination among labour, freedom of association, child labour etc.
- In order to create awareness among the school children about the child rights, negative impacts of child labour in cotton, 185 training programmes were arranged in different schools in the adopted villages.

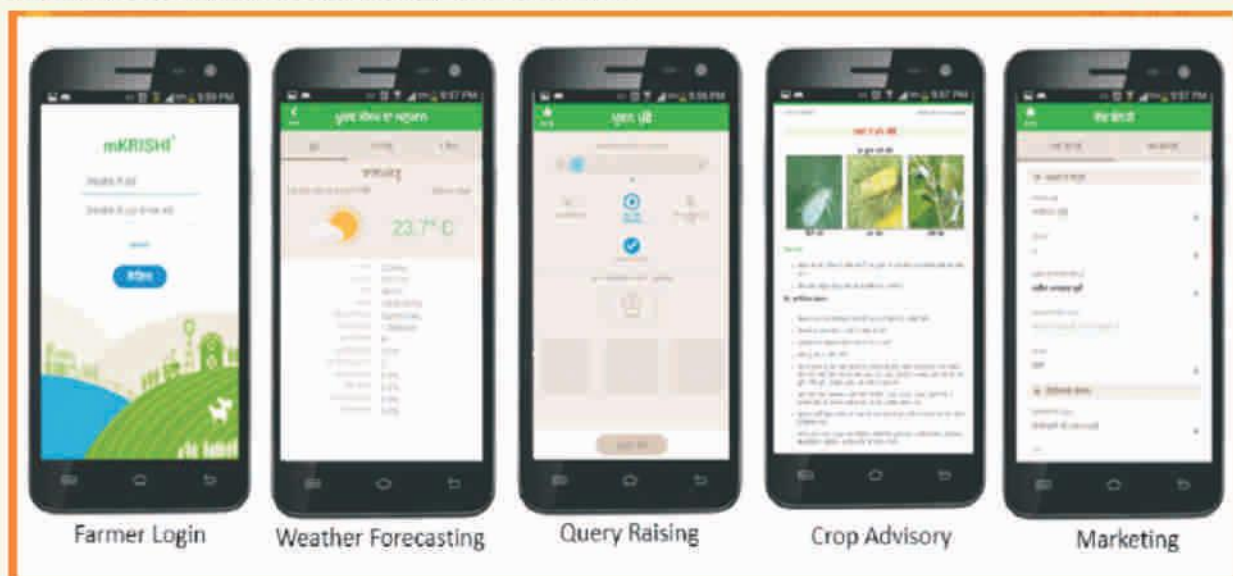


**Awareness on Child Labour to school students**



**Mr. Nils Ragnar Kamsvag, Ambassador Norway to India alongwith delegates from Embassy of Norway visited village Alisher Khurd (Mansa) on March 14, 2018. The officials interacted with beneficiaries in order to understand different activities carried out by WWF/RGR Cell under BCI project.**

**Deployment of IT Tools for Transfer of Technology:** The main project on improving productivity and income of farmers from cropping system based interventions through conventional system of agro-advisory was over but it was continued through mobile based advisory by suitably modeling mKRISHI® application. The main emphasis was on registering more number of farmers for this service and to get it modified and updated as per farmers' requirements and preferences to make it attractive to farmers. An extensive interaction with the TCS through personal meetings and workshops took place to get the required changes.



**Screenshots of mKRISHI Android APP**

**Key achievements:**

- Mobile based agro advisory service mKRISHI® deployed across 1300 villages spread over 9 districts of Cotton and Basmati cropping belts of Punjab.
- Keeping focus on building farmer database, details of two lakh farmers were collected by using existing resources of the ongoing projects. 1,67,518 farmers have been registered and are making use of this service.
- Crop protocols for cotton, rice, basmati and wheat crop were developed and delivered through text and voice messages to concerned farmers. Further, crop protocols for Kinnow, key potential vegetable crops like tomato, potato etc. have also been developed.
- Key focus was on the further refinement of the mKRISHI service as per farmers' need. In this regard, a number of advanced features and changes were suggested to TCS and few of them have already been developed and deployed.
- Agri news module for farmer APP has been developed and deployed in the month of November. This module is very helpful to keep farmers informed about various agriculture related updates.
- Other newly developed feature, Crop static data have detailed information about the improved cultivation practices along with pictures of harmful insect pest and diseases. This feature is helpful for farmers to get clear identification of insect and about their damage.



Key Indicators/ Activities	Unit	Annual Target	Achievements
Geographical coverage	Districts	9	9
Collection of farmer details from field	Lakh	2.0	2.0
Registration of farmers	Lakh	2.0	1.67
Development of crop protocols	#	4	7

#### Key refinements/newly developed module

Key Indicators/ Activities	Achievements
Further refinement of service	<ul style="list-style-type: none"> <li>• Query filtration</li> <li>• Separate APP at farmer, scout and expert level</li> <li>• Agri news</li> <li>• Crop static data</li> <li>• Query answer through APP</li> <li>• Insect pest surveillance</li> </ul>



## ਐਮਕ੍ਰਿਸ਼ੀ- mKRISHI<sup>®</sup>



ਐਮਕ੍ਰਿਸ਼ੀ ਸੇਵਾ ਰਾਹੀਂ ਖੇਤੀਬਾੜੀ ਸੰਬੰਧੀ ਹਰ ਪ੍ਰਕਾਰ ਦੀ ਜਾਣਕਾਰੀ ਤੁਹਾਡੇ ਮੋਬਾਈਲ ਫੋਨ ਉੱਪਰ ਦਿੱਤੀ ਜਾਵੇਗੀ।  
ਇਹ ਮੁਫਤ ਸੇਵਾ ਸ਼ੁਰੂ ਕਰਵਾਉਣ ਲਈ **1800 300 28520** ਤੇ ਮਿਸ ਕਾਲ ਕਰੋ।

ਆਈ ਵੀ ਆਰ ਸੇਵਾ ਨੂੰ ਵਰਤਣ ਲਈ ਟੋਲ ਫਰੀ ਨੰਬਰ

**1800 210 8282**

ਤੇ ਕਾਲ ਕਰੋ



- 1 ਨਵਾਂ ਸਵਾਲ ਪੁੱਛੋ
- 2 ਸਵਾਲ ਦਾ ਜਵਾਬ ਸੁਣੋ
- 3 ਫ਼ਸਲ ਸੰਬੰਧੀ ਜਾਣਕਾਰੀ
- 4 ਚੇਤਾਵਨੀ ਸੁਣੋ
- 5 ਮੌਸਮ ਸੰਬੰਧੀ ਜਾਣਕਾਰੀ

ਐਮ ਕ੍ਰਿਸ਼ੀ ਐਪ ਡਾਊਨਲੋਡ ਕਰਨ ਲਈ

<http://rgrcollipb.com/mkrishi/farmer.html>

ਤੇ ਕਲਿਕ ਕਰੋ








Flex showcasing IVR and Android based services

## The Digital Revolution

*Gurtej Singh is one among the many farmers who rely on mKRISHI mobile platform to solve their agricultural problems and get a fair price for their produce*



**Gurtej Singh on his agricultural land with his cellphone**

Seventy per cent of India's population depends directly or indirectly on agriculture. Yet, farmers do not seem to be able to take advantage of the advances in agricultural technology. Gurtej Singh was one such farmer. A resident of Ramgarh Chungah, in Shri Muktsar Sahib District in Punjab. Singh's main livelihood is from agriculture. Completely ignorant about high yielding cultivars and other improved agricultural practices, Singh followed the cotton/wheat cropping cycle, farming his eight-acre holding using traditional ways.

All this changed once he joined the Trusts' Cotton IPM project being implemented by Reviving Green Revolution Cell (an associate organisation of TATA TUSTS), and began to attend village-level farmer meetings. Once he adopted recommended practices, his cost of cultivation went down, and he began to see a significant improvement in his income. Connecting with the project, and attending village-level meetings was soon expedient, but it was also difficult to fit these in amidst his work on his fields and at home.

This is where mKRISHI, a mobile application developed with the help of TCS, comes in. Aiding the last-mile technology transfer to the farmers, mKRISHI provides the latest agricultural university recommended practices directly to a farmer's mobile handset via SMS, Voice messages and IVR. A toll-free number has been set up in order to allow farmers to send in their queries as needed. Responses are quick to follow, either via text or voice call. The entire system is backed by existing field staff in project areas, and agri-experts / consultants who act as quality checks for the information that's being sent out. According to Gurtej Singh, 'mKRISHI is a great tool for advanced agriculture. Its weather advisory feature is very reliable.' The weather advisory message on 6th March 2017, had helped Singh save his crop from water logging

## Linking farmers with Markets

### Key achievements:

- Five fully functional Producer companies
- Registration of Barseem Brand named was started and encountered with objections. Finally the name Pehal is under process.
- Market linkage with Pagro foods and Cremica
- Linkage with State Department of agriculture for machinery/equipment and KVKs for advisory
- Training and Exposure visits of farmers and members of PC



PC Members from Hoshiarpur PC displaying their Products at Kisan Mela held by PAU at Ludhiana

It has been an ambitious project with an attempt to organize farmers for collective marketing and quite encouraging response was witnessed especially for marketing of vegetables and some supplementary activities like nursery raising, honey production. But marketing activities for noticeable additional income required supplementary activities through value addition and agro-processing for marketing of both agricultural produce as well products. It however required some financial support to farmers for infrastructural development, which could not be provided due to some procedural ambiguities.

## Improving nutritional status of farming families

### Key achievements:

- The project was implemented with the collaboration with Department of Horticulture, Punjab. The core objective of this project was to demonstrate the potential and utility of Nutrition Gardens for economic gains and nutritious diet.
- During this phase, total 26 villages were selected from 7 districts of the Cotton and Basmati project areas. Villages were shortlisted on the basis of availability of quality water to irrigate nutrition gardens.
- From these villages total 500 farming families were adopted. on the basis of land availability with them and care was taken to involve maximum participation of farmer women.
- They were provided technical guidance of the project so that cultivation of vegetables is taken up as a matter of routine. Since availability of quality seed in small quantities is the key hindrance for growing vegetable in kitchen gardens so seed kits and nursery seedlings were provided to all the project farmers for establishment of nutrition gardens.
- During FY 17-18, out of targeted 500 farming families, total 461 adopted the nutrition garden as per planned layout.

### Tata Dairy Mission

Under the Tata Dairy Mission, the Trusts are partnering with "Dairy Health and Nutrition Initiative India Foundation (DHANII)" - a Section 8 Company - to sustainably enhance incomes of milk producers by building their capacity vis-à-vis milk production, animal health, breed improvement and animal nutrition. To ensure fair prices for their milk, these producers are being organized under Producer Companies, which are equipped with latest technologies, infrastructure and assured market linkages.

During 2017-18, 4 Milk Producer Companies (MPCs) were fully operational in Rajasthan (2), Punjab (1) and Uttar Pradesh (1) with technical support from NDDDB Dairy Services (NDS). In addition, process is underway to link 85 villages from CSPC catchment area in Gujarat with MAAHI Milk Producer Company.



RGR team educating dairy farmers on animal husbandry aspects

In Punjab, Ruhaanii Milk Producer Company Ltd. covered 74 villages in Budhlada (Mnasa) and Rori block (Sirsa) during 2017-18 and 84 MPPs were established. A total of 2,737 members were linked with MPC and out of these 27% were women members. Average milk procurement for 2017-18 was 8,693 KgPD. Two Bulk Milk Coolers were operational and members contributed 29.4 Lacs towards the share capital.

RGR Provided backend support in MPCs catchment area through advising the farmers on (i) Animal health and general care, Feed & Nutrition, Breed improvement, Clean milk production; (ii) Milk potential assessment in 16 villages in Budhlada and (iii) Sahayak identification and opening Milk pooling Points (MPPs).



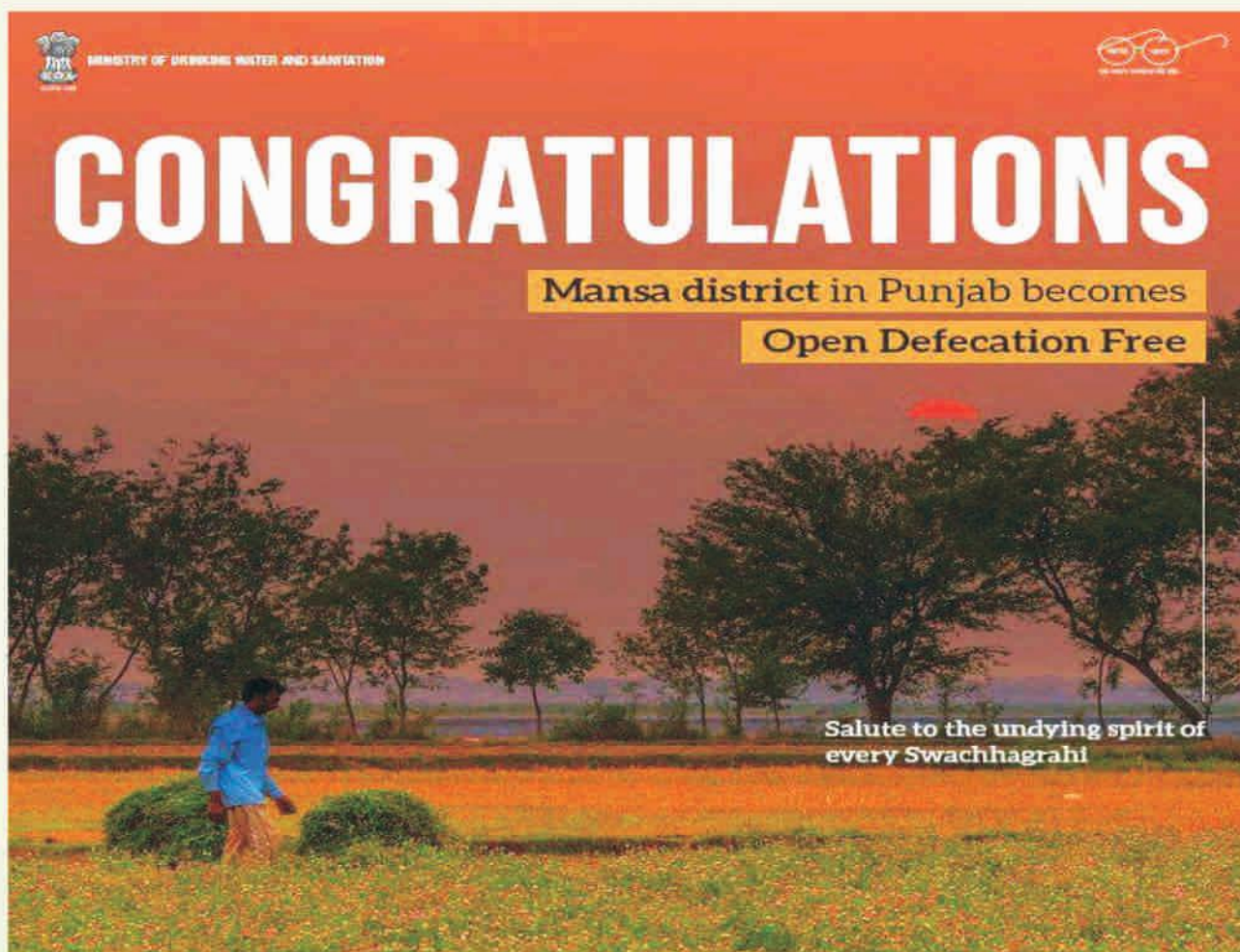
Share certificate issued by Ruhaanii MPC

Key Indicators - Targets for Current Year - 17 - 18	Annual Target	Q1	Q2	Q3	Q4
Trained Human Resources on Dairy sector from Associate Organisation of Trusts	16	-	-	-	31
Animal Nutrition and Health advisory to Punjab MPC (no of HHs)	2,800	105/770	549/1,272	549/2,211	549/2,800
Members mobilization for Punjab MPC	2,800	736/770	988/1,272	2,159/2,211	2,737/2,800

### **WATSAN project in Mansa**

To support Govt of Punjab on Water and Sanitation project, RGR Cell partnered with Govt of Punjab under Tata Water Mission project and Swachh Bharat Mission (G) of Govt of India. Following activities were carried out:-

- RGR Cell is supporting SBM(G) in 80 villages of District Mansa (PB) with the support of Himmatthan Society (Uttarakhand) and Tata Trusts.
- Survey completed in **80 Villages**.
- Total no. of IHHL to be constructed- **4956**
- Mansa district was declared 100 percent Open Defecation Free (ODF)



## Part II:- Reviving Green Revolution Initiative (Tamil Nadu)

### **Key focus: Integrated Livelihood**

#### **Interventions and Expansion of IT services**

RGR Cell, Tamil Nadu has been the alpha organisation in introducing the IPM Package of Practices in Perambalur district and has been successful in maintaining its sustenance in the PoP adoption for the past 4 years of the project intervention. With the learnings in the previous seasons, it was understood that there was a dire need for the introduction of IPM PoP in other major crops (Onion and Pulses occupy major share respectively after Cotton and Maize) in the district. In addition, RGR Cell, has collaborated with Tamil Nadu Agricultural University (strategy partner) to support the project farmers with high yielding new varieties of Pulses and Onion.

#### **Objectives**

1. Promotion of IPM in Cotton, Maize and Onion.
2. Introducing high yielding varieties of Pulses and Onion for additional income
3. Formation of a Farmer Producer Company and initiating agri-input business

Expansion of IT services to other blocks of the project district and establishing the toll free query redressal system.

#### **Key Highlights of the season:**

- Net profit realized by IPM-Cotton farmers was Rs. ,6270/acre as compared to Rs. 5672/acre achieved by Non-IPM farmers.
- IPM farmers received an additional 0.75 -1 quintal of cotton yield as compared to non-IPM farmers.
- IPM farmers saved approximately Rs. 800-1000/acre through applying only recommended dosages of fertilizers as compared to non-IPM farmers.
- Non-IPM farmers on an average sprayed 5 sprays as compared to 4 sprays by IPM beneficiaries.
- Introduction of high yielding varieties of CO RG 6, 7 and 8 (Red Gram); CO6 and Vamban 6 (Black Gram); and CO6 (Green Gram) and

CO5 in Onion has had a good reception. Also, the yield received has been comparatively higher than the traditional varieties sown in the previous seasons.

- The registered Chinnaru Farmer Producer Company (CFPC) has facilitated the sales the CO5 variety Onion to a tune of Rs. 2,00,000 in the Dindugul mandi. Also, during the cotton season, CFPC sold 750 packets of cotton seeds (varieties of regional demand) at Rs. 15-20 less than the local input vendors. The previous financial had a turnover of approximately Rs. 5,85,000 with Cotton seeds and Onion as major contributors to the sales.

S.No.	Indicators	Target	Achieved
1	Outreach		
1.1	Total no. of villages covered	108	108
1.2	No. of Household*	35000	34500
1.3	No. of districts	1	1
1.4	Area covered Under (in Ha)		
	A. Cotton	28000	27175
	B. Onion	Pilot	400
	C. Pulses	Pilot	25
2	<b>Impact</b>		
2.1	Annual Gross Income (Rs./HH/acre)		
	Cotton	35000	27500
	Onion	Pilot	110000
	Redgram	Pilot	18000
	Blackgram	Pilot	7500
	Reduction in agro chemicals in %	25	20

#### **BEST PRACTICES:**

**Significance of Foliar Spray:** As compared to the commonly adopted 19:19:19 in the yester years, 13:0:45 is found to have reached the last mile in the project area owing to intensive extension work by RGR Cell, Tamil Nadu vide deployment of village level scouts; wall paintings; PoP trainings to lead farmers; and ICT. This extensive outreach by RGR Cell, Tamil Nadu was even recognized by the Joint Directorate of Agriculture and the office has been supportive in identifying the pockets of villages for technology dissemination. Weekly alerts in peak flowering season were

disseminated through mKRISHI - mobile advisory, explaining the benefits and the need for spraying 13:0:45 at the correct intervals. On the input side, RGR Cell ensured sufficient availability of 13:0:45 in the market to enable implementation of mobile advisory provided. The Toll Free service reached approximately, 30,000 farmers in the district and immediate redressal of farmer queries provided by field level team.

**Azolla and Nutrition Garden:** In continuance to the nutrition interventions undertaken in the previous season (2016-17), RGR Cell, Tamil Nadu decided to take up establishment of Azolla and Nutrition Garden layouts in a planned manner. Specific targets were assigned to each block's field officer every month and contribution from RGR Cell was released based on the achievements. Also, 2 trainings were conducted by RGR Cell, Project Manager with technical assistance from the regional KVK, Perambalur on the significance of backyard Kitchen Gardening.

In the past financial, almost 250 Azolla pits have been established to ensure year-round fodder requirement for the livestock is met and more than 100 Nutrition Garden layouts have been laid out in the project district. The farmers were forthcoming after realizing the benefits in the previous seasons and had contributed 50% of the total establishment cost (For Azolla and Nutrition Garden layouts).

#### **Farmer Producer Company:**

1. As a first step to encourage farmer entrepreneurship in the project villages, a Farmer Producer Company (registered as Chinnaru Farmer Producer Company (CFPC) Limited) has been set up with 320 member farmers who are now the primary contact farmers in the project villages.
2. Weekly farmer group meetings organized on specific themes to increase awareness on IPM Package of Practices, Azolla, Nutrition Garden and marketing the cotton yield. During prime cotton season, the group

members were trained on potential pests and diseases and their management methods. By way of this, severe outbreak of Grey mildew was curbed as this season, the district had an untimely rainfall which is a key propeller for the disease.

3. Seed distribution and sales of NPK fertilizer to all the member farmers have been tried as pilot business activities vide the FPC. It received good response as the farmers had a margin of 3-5% compared to the local vendors. 750 packets of Cotton seeds were sold.
4. Market linkages for onion farmers have been established with the Dindugul Mandi. Onion produce amounting to Rs. 2,00,000 have been marketed vide CFPC at the Dindugul Mandi in the previous onion season. Also, Cornion have been contacted for facilitating



Joint purchase of seeds and pesticides through the Chinnaru Farmer Producer Company has reduced the cost of cultivation for farmers in Perambalur district

marketing Maize produce for the 2018-19 season.

5. Farmer group at Paravai sold their produce at Tiruchengode Cooperative Marketing Society (TCMS) vide CFPC. Though the margins weren't high in the auction, the Paravai farmer group was able to build a strong network with local traders to procure their remaining produce at a considerably higher bid as compared to the individual farmers.

**Integration of IT in agriculture:** Post mKRISHI IT service launch with SMS and IVR facilities in the previous season, our extension services has majorly expanded vide: 1. Promotion of toll free number for immediate query redressal; 2. SMS alerts on individual villages based on the Date of Sowing; 3. IVR calls; and 4. Dedicated mKRISHI mobile applications (Farmer and Agent applications) with enhanced features. Timely advisory on Cotton and Onion PoP has been issued vide the mKRISHI platform during the peak pest season. In addition, village-specific alerts were sent after taking feedback from the contact farmers and farmer group leaders. Last season, grey mildew was found to be the major disease in Cotton and as per IPM Package of Practices, Tebuconazole has been recommended @ 2.5ml/litre. The alert on Greymildew and Foliar spray has been issued 4 times each during October - December 2017. To further the awareness on the toll-free number, more than

150 flute boards have been at key village locations disseminating the toll-free number and the contact scout for the village.

**Cost of Cultivation and Net profit:** The dedicated mKRISHI platform for timely advisory dissemination has resulted in farmers becoming prudent in adopting the correct Package of Practices. In addition, farmers have contacted the respective village's farmer group members/leaders for information fertilizer/pesticide availability. In 2017-18, the cost of cultivation for IPM farmers was comparatively lesser than non-IPM farmers who realized a net profit of **Rs. 7,240** as compared as again of **Rs. 5,636** in the non-IPM farmers. The spray count also had a decrease as compared to the non-IPM farmers. While the non-IPM farmers had 5 sprays, IPM farmers did only 4 thus resulting in a saving of **Rs. 1,500** in the spray cost.



Dr. Jayamani, Head, Prof - Dept of Pulses explaining the Maruca Pest attack in Redgram FLD\_ Location - Puthuvettaikudi, Veppur



## CASE STUDY

*A producer company for the farmers, by the farmers.*

### **Support from the Trusts' RGR Cell and Chinnaru Farmer Producer Company reduce cost of cultivation and improve profits for Karunanithi and Sakthi**

The agricultural scenario in Perambalur district of Tamil Nadu was plagued by several problems – fragmented land holding, erratic rainfall, monopoly of inputs traders, lack of awareness about latest technologies and recommended practices, to name a few. From sowing to produce marketing, the issues that small and marginal farmers faced were many. To address these issues, the Trusts started a regional centre of its flagship agricultural associate organisation, Reviving Green Revolution (RGR) Cell, in Coimbatore. RGR Cell and Trusts entered into a partnership with Tamil Nadu Agricultural University to find localised solutions through quality research.

The RGR Cell has been focusing on improving agricultural productivity and profitability for small and marginal farmers across the state. A set of pilot projects were implemented in Coimbatore to identify suitable technologies which could significantly impact the quality of lives of farmers in hilly, drought-prone regions of the state. With its continued success through integrated pest management (IPM) technology and mKRISHI information service programme, the Trusts have promoted Chinnaru Farmer Producer Company (CFPC), which is a farmer producer organisation (FPO) registered in Chennai.

FPC aims at providing enhanced services, building relationships and providing agro products through an inclusive approach. It has taken the initiative to form farmer producer groups (FPG) in all its project villages. Regular interactions with farmers have been conducted to explain about the importance of FPO and its collective bargaining power. So far 21 FPGs have been formed with 521 producer members across 108 villages. The primary objective of mobilising farmers into member-owned producer organisations, or FPOs, was to enhance productivity and profitability of agriculturists in the district.

The Trusts, through their RGR Cell, have been supporting CFPC to ensure sustainable income in the agriculture sector for uplifting small and marginal farmers. The aim is to motivate them to work towards excellence and inspire them to pursue agribusiness through innovation. The RGR Cell has partnered with the state's agricultural universities, department of agriculture, as well as international agencies such as the World Wildlife Fund and ICRISAT for both implementation and funding support. Currently, the Trusts have over 65,000 direct beneficiaries in the state.

According to Mr Karunanithi, a beneficiary farmer from Aaikudi village, "I am a member of the FPG in my village. We planned our cropping pattern and purchased the seeds and pesticides through CFPC, and as a result I could purchase the inputs at a wholesale rate. The joint purchase has reduced my cost of cultivation to a great extent, thanks to the RGR initiative of Tata Trusts."

Under the initiative, producer farmers were given the necessary support to identify appropriate crops relevant to their context, provided with access to modern technology through community-based processes including farmer field schools, and their capacities were strengthened through the Tata Trusts' IPM project. CFPC has also established public-private partnerships for networking and linkage. The idea is to develop the agricultural value chain such as revamp marketing infrastructure, value addition, cold storage, strengthening seed production, soil testing, micro irrigation and custom hiring of farm implements and machinery.

Through these efforts, farmers in the region have adopted the recommended agricultural practices which have brought down their cost of cultivation. CFPC has ensured that the commodities reach the farmers directly from the market without any intermediary. It has facilitated their linkage with the mandis which has helped the farmers increase their profits. As stated by Mrs Sakthi, a farmer from Venbavur village, "Due to the increased cost of cultivation, I had earlier given my land on lease. But after attending FPG meetings I started cultivating my land again with the technical support and guidance from the RGR initiative. I am now selling my onion produce with a greater profit. I can't thank the programme enough for the timely intervention".



Women Farmer Group gathered to discuss the plan for the Cotton season at the Cooperative milk society, Paravai (1)

## ACKNOWLEDGEMENTS

The RGR Cell is very thankful to Tata Trusts for funding support for "Reviving Green Revolution" initiative for promoting agriculture diversification in Punjab and Tamil Nadu and support activities to tribal, small and marginal farming communities which have been kept outside the realm of modern agricultural technologies. Funds received from Govt of Punjab and WWF, India are gratefully acknowledged.

## ANNEXURE - I

### PROJECT BLOCKS (PUNJAB)

<b>Cotton-Wheat Cropping System/BCI project</b>	
<b>District</b>	<b>Blocks</b>
Bathinda	Mour; Bathinda; Nathana; BhagtaBhaike; Sangat; Rampura
Faridkot	Kotkpura
Fazilka	Abohar; Khuian Sarvar; Arniwala; Fazilka
Mansa	Jhunir; Mansa; Bhikhi; Budhladha
Sangrur	Sunam; Lehergagha
Shri Muktsar Sahib	Shri Muktsar Sahib; Malout; Giddrebaha
<b>Basmati Based Cropping System project</b>	
Amritsar	Chogawan; Tarsikka; Harsha Chhina; Majitha; Attari; Verka; Ajnala
Gurdaspur	Gurdaspur; Dinanagar; Fatehgarhchurian; Dera Baba Nanak; Dhariwal; Kalanaur
Tarn Taran	Tarn Taran; Gandiwind; Chohla Sahib; Patti; Valtoha; Bhikhiwind

### PROJECT BLOCKS (TAMIL NADU)

<b>Integrated Livelihood Interventions and Expansion of IT services</b>	
<b>District</b>	<b>Blocks</b>
Perambalur	Veppur
	Veppanthattai
	Alathur
	Perambalur

## FINANCIAL HIGHLIGHTS 2017-18

### BALANCE SHEET AS AT MARCH 31, 2018

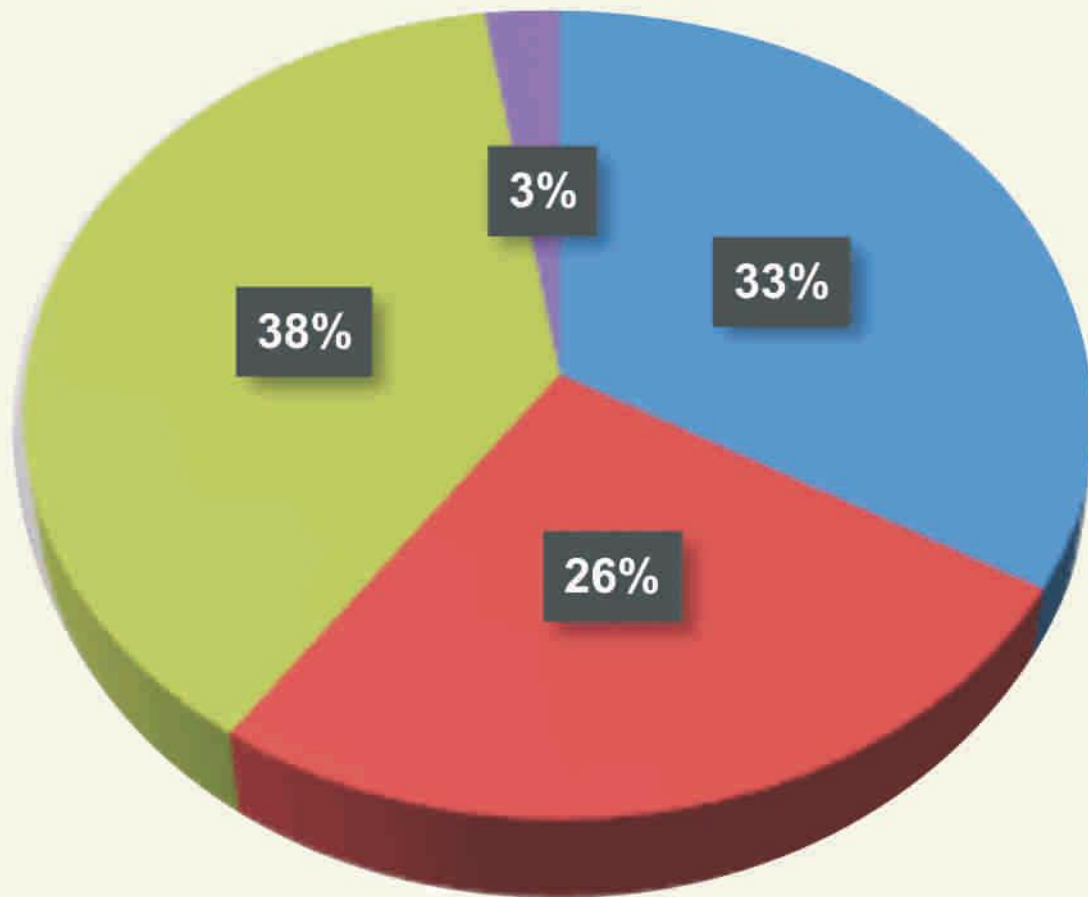
Particulars	As at March 31, 2018 (In Rupees)	As at March 31, 2017 (In Rupees)
<b>FUNDS AND LIABILITIES</b>		
<b>FUNDS</b>		
(a) Earmarked Funds	11,271,881	19,809,720
(b) Fixed Assets Fund	1,112,382	924,173
(c) Income and Expenditure Account	29,389	20,359
	<b>12,413,652</b>	<b>20,754,252</b>
<b>LIABILITIES</b>		
Current Liabilities	46,638	-
	<b>46,638</b>	<b>-</b>
<b>TOTAL</b>	<b>12,460,290</b>	<b>20,754,252</b>
<b>ASSETS</b>		
(a) Fixed assets	1,112,382	924,173
(b) Loans and advances	198,264	135,980
(c) Cash and bank balances	11,149,644	19,694,099
<b>TOTAL</b>	<b>12,460,290</b>	<b>20,754,252</b>

### INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED MARCH 31, 2018

Particulars	For the year ended March 31, 2018 (In Rupees)	For the year ended March 31, 2017 (In Rupees)
<b>Income</b>		
Transfer from Earmarked funds	35,493,147	36,623,937
Transfer from Fixed Assets fund	227,974	178,398
Other income	2,612	1,665
<b>Total Income</b>	<b>35,723,733</b>	<b>36,804,000</b>
<b>Expenses</b>		
Expenditure on objects of the Society		
(i) Grant paid	475,000	1,627,241
(ii) Project expenses	31,390,762	31,547,771
(iii) Establishment expenses	3,620,967	3,448,925
(iv) Depreciation and amortization expense	227,974	178,398
<b>Total expenses</b>	<b>35,714,703</b>	<b>36,802,335</b>
<b>Excess of Income over Expenditure</b>	<b>9,030</b>	<b>1,665</b>

<b>EARMARKED FUNDS</b>		
<b>Particulars</b>	<b>As at March 31, 2018 (In Rupees)</b>	<b>As at March 31, 2017 (In Rupees)</b>
Balance at beginning of the year	19,809,720	23,215,922
Add: Received during the year	26,461,355	32,413,411
Add: Interest Income received during the year	910,617	1,784,481
Less: Transferred to Income and Expenditure Account	(35,493,147)	(36,623,937)
Less: Transferred to Fixed Assets fund	(416,183)	(206,098)
Less: Refunded during the year	(481)	(1,059,588)
Add: Amount refunded by onward grantee/other transfer	-	285,529
	<b>11,271,881</b>	<b>19,809,720</b>
<b>FIXED ASSETS CAPITAL FUND</b>		
<b>Particulars</b>	<b>As at March 31, 2018 (In Rupees)</b>	<b>As at March 31, 2017 (In Rupees)</b>
Balance at beginning of the year	924,173	896,473
Add: Transferred from Earmarked Funds	416,183	206,098
Less: Utilised during the year	(227,974)	(178,398)
	<b>1,112,382</b>	<b>924,173</b>
<b>INCOME AND EXPENDITURE ACCOUNT</b>		
<b>Particulars</b>	<b>As at March 31, 2018 (In Rupees)</b>	<b>As at March 31, 2017 (In Rupees)</b>
Balance at beginning of the year	20,359	18,694
Add: Excess of Income over Expenditure	9,030	1,665
	<b>29,389</b>	<b>20,359</b>
<b>CURRENT LIABILITIES</b>		
<b>Particulars</b>	<b>As at March 31, 2018 (In Rupees)</b>	<b>As at March 31, 2017 (In Rupees)</b>
Provision for Gratuity	46,638	-
	<b>46,638</b>	<b>-</b>

## SOURCES OF FUNDS



## Reviving Green Revolution Cell is registered under :

Society Registration No.	:	<b>680 of 2007-08</b>
Foreign Contribution Regulation Act (FCRA) No.	:	<b>115300042</b>
Registration u/s 12AA (1)(b)(i) of the Income Tax, 1961	:	<b>CIT-III/JB/12A/242/10-11/694</b>
Exemption u/s 10(23C)(iv) of the IT Act, 1961	:	<b>CCIT/LDH/JB/10(23C)(IV)/145/2009-10/2821</b>
Permanent Account Number	:	<b>AAAAR6284L</b>
Tax Deduction Account Number	:	<b>JLDR03215C</b>

### OUR BANKER

**State Bank of India, Punjab Agricultural University Branch, Ludhiana**

### STATUTORY AUDITOR

**M/s Deloittee Haskins & Sells LLP, Mumbai**

### INTERNAL AUDITOR

**M/s PKF Sridhar & Santanam LLP, Mumbai**

### **RGR Offices**

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#### **Regional Center Coimbatore**

RGR Regional Center  
RI Building, TNAU Campus,  
Coimbatore -3, Tamil Nadu

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An Initiative of TATA TRUSTS

# **REVIVING GREEN REVOLUTION CELL**

(Associate Organization of TATA TRUSTS)

Old Communication Centre Building

Punjab Agricultural University, Ludhiana - 141004

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