FICCI



Improving the Productivity of PULSES

Through Public Private Partnership



Documentation of 'Grow More Pulses Value Chain Project' by Rallis India Ltd. and Department of Agriculture, Government of Maharashtra

Supported by the Public Private Partnership for Integrated Agriculture Development Programme

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Executive Summary



Executive Summary

Maharashtra is the first state in India to implement projects under the Public-Private Partnership (PPP) for Integrated Agriculture Development scheme. In 2012, the State Department of Agriculture rolled out ten projects, each focussing on improving value chains for nine crops through public-private collaboration and co-investment. Projects were undertaken for the following crops - maize, soyabean, pulses, cotton, onion, tomatoes, potatoes, grapes, pomegranate and sugarcane. The partnership rolled out with the aim of developing integrated value chains for specific crops reaching out to at least 200,000 farmers in the state.

FICCI undertook the documentation of the Value Chain Development of the Pulses Project implemented by Rallis India Limited. The objectives of the study was to assess the outcomes in terms of increase in productivity, farm incomes; document the processes of developing linking farmers with input and output markets; and to identify the processes that enable a successful partnership between the government, private industry and farmers.

Rallis India Limited was associated with the PPPIAD project in Maharashtra since its inception. It was one of the companies selected to implement the PPP programme based on its reputation, credibility and strong linkage of working with the farmers. Red Gram (Arhar), Black Gram (Urad), Green Gram (Mung) and Bengal Gram (Chana) have been the crops grown under the pulses project.

Developing the right package of practices and its education to the farmers has been a central element of the project. Information and awareness about new practices that have the potential to increase production have increased the knowledge and skills of the farming community. It has made them resilient to the threats related to growing pulses. Direct connect with the farmers, well planned training programmes and exposure visits have informed the farmers about the modern methods of farming.

The project has enhanced the productivity of the framers with the application of right kinds of inputs (seeds, fertilizers, pesticides, irrigation) and knowledge about appropriate farming practices. Regular advice on extension services by the Rallis team has contributed to the adoption of best practices resulting in enhanced productivity.

The buyback arrangement of Rallis promises to the farmers a guaranteed market at competitive prices. The processes adopted at the procurement centres are completely transparent and do not incur any loss of produce. There is no possibility of cheating in weight and collection of samples for testing. Payments made to the farmers are quick and gets deposited into their bank accounts directly. There are no middlemen in the operations as is the case with the local mandis, thereby saving a lot of time and harassment to the farmers.

The project has helped is activating farmer groups in the intervention areas. It was a conscious decision by Rallis to activate farmer groups with the long term aim of sustainability and sharing of resources. It has created a framework where the government and the private company have worked in tandem with the government, supporting the development of the back end of the supply chain while private company provided the market linkage opportunities to the farmers.

There is a well defined institutional mechanism created both at the government and company level to oversee the implementation and monitor the progress of the project with periodic reporting and assessment across all levels.

Based on the interactions with the various stakeholders it was felt that the project design ought to be modified to include all farmers in a village. In order to enhance the sustainability of the interventions the project duration should be increased from the current one year period to at least two years.

On time availability of inputs is crucial for generating positive outcomes. It is therefore essential that inputs are provided to farmers at least a month before sowing. Project approval needs to be given accordingly so as to ensure that the company undertakes project activities well in time. The package of practices should be finalised in consultation with the company and the agriculture department and approved as part of the project proposal.

Delay in transferring subsidy to the farmer's acts as a deterrent for the adoption of micro-irrigation. A mechanism to ensure subsidy reaching the farmers in the least possible time needs to be worked out. The company can compile information about farmers who have applied for subsidy under the project and submit it to the government for speedy approval. The Agriculture Department can explore initiating an award scheme for farmers/ farmer groups who have done exceptional work in the delivery of the project goals for encouragement.

While the first year has seen initial success, it is important that the concerns raised are addressed in the project design and implementation so as to provide enhanced opportunities to the farming community and maximise the outcome. The project will be able to leave a lasting legacy by way of transforming the way farming is practiced with the engagement of the government and private company keeping farmer's interest at the core of all the interventions.

Public Private Partnership for Integrated Agriculture Development (PPPIAD)

1





1 Public Private Partnership for Integrated Agriculture Development (PPPIAD)

Agriculture and allied activites is an important sector for the Indian economy. It supports more than 50 per cent of the country's population and accounts for 13.7% of gross domestic product (GDP) at constant prices (2012-13). India ranks first in the world when it comes to production of milk and pulses, second in rice, wheat, sugarcane, groundnut, fruits and vegetables and cotton production. It is also a leading producer of spices and plantation crops as well as livestock, fisheries and poultry.

A number of private sector companies are active in the field of agriculture and agri-business, directly engaging with the farmers and improving their farm incomes. While most of these initiatives are quite successful, they are limited to specific geographical regions, crops and limited number of farmers. On the other hand, the government has increased funding to farmers through variety of schemes/subsidies for improving productivity/market linkages, etc. Unfortunately, the outcomes do not commensurate with the quantum of government spending, mainly due to the limited extension capabilities leading to gaps in execution, delivery and results.

Federation of Indian Chambers of Commerce and Industry (FICCI) has been working on devising policies and suggestions that contribute to increasing farm income, productivity and global competitiveness of Indian agriculture. Over the years, through its long standing collaboration with the Ministry of Agriculture, Government of India, FICCI has worked to promote public-private partnerships in various parts of the agriculture value chain including agri warehousing, farm mechanisation, extension, secondary agriculture, risk management and agri-marketing reforms.

FICCI was instrumental in developing a policy framework for public-private partnership for integrated agriculture development (PPPIAD) jointly with the Ministry of Agriculture, Government of India (GoI). The Ministry of Agriculture, GoI issued the guidelines on August 14, 2012.

The main objective of the PPPIAD scheme is to facilitate large scale integrated projects led by private sector players in the agriculture and allied sectors, with a view to aggregating farmers, creating critical rural infrastructure, introducing new technologies, adding value and integrating the agricultural supply chain. The PPP model aims to reduce the transaction costs and enhance the access to subsidies/schemes for farmers through a single facilitator i.e. the company and motivate companies to build a profitable/self sustaining model for improving the complete supply chain. The PPPIAD programme embodies the following three main principles

- Combine operational efficiencies of the private sector and the investment by the public sector;
- Quantifiable outputs with defined timelines and strategies; and
- Move away from business as usual approach replacing traditional methods of farming by modern and scientific methods.

Download PPPIAD gudielines - http://www.nhm.nic.in/Archive/PPPIAD-Brochure.pdf

FICCI is engaging with the Small Farmers Agri-Business Consortium (SFAC) for promoting the adoption of the guidelines. It is involved in increasing the awareness amongst the private sector and various State Agriculture Departments to implement projects under the PPPIAD framework.

Maharashtra: State Profile 2



2. Maharashtra: State Profile

Maharashtra with an area of 30.77 million hectare is the third largest state of the country, constituting 9.36% of the total geographic area of India. The total population of the state is 112.37 million which constitutes 9.29% of the country's population. The state is highly urbanised with 45.2% people residing in urban areas. The population density of Maharashtra is 366 persons per square km.

Maharashtra's Gross State Domestic Product (GSDP) for 2011 was INR 901,330 crore (US$140 billion) in current prices contributing 14.4% of India Gross Domestic Product (GDP) at current prices. The GSDP has been growing at a rapid pace over the last few years and is expected to grow at 7.1% during 2012-13. The industrial and services sector together contribute about 87.1% of the state's income. Agriculture and allied activities sector contributes 12.9% to the state's income. Maharashtra ranks fifth in the country with Human Development Index of 0.572 against India's Human Development Index of 0.467.

The state has 35 districts which are divided into six revenue division viz. Konkan, Pune, Nashik, Aurangabad, Amravati and Nagpur. There are 33 Zilla Parishads, 351 Panchayat Samitis and 27,906 Gram Panchayats for local self-governance in rural areas.

Maharashtra is one of the major industrialized states of India, contributing 27% of national industrial output. Around 46% of the GSDP is contributed by industry. Pharmaceuticals, petrochemicals, heavy chemicals, electronics, automobiles, engineering, food processing and plastics are some of the major industries in the state.

Agriculture in Maharashtra

Agriculture, including allied activities, accounted for 12.4% of the GSDP at current prices in 2011-12 but its role in State's economy is much wider as agriculture continues to be the main occupation of the state. Around 64.14% of the people are employed in agriculture and allied activities. During the XI Five Year Plan (FYP), an average growth of 4.3% was achieved against the target of 4%. The growth target for agriculture and allied activities sector in the XII FYP remains at 4%, as in the XI FYP.

Large numbers of irrigation projects are being implemented in the state to improve irrigation. The State Government has undertaken various major, medium and minor irrigation projects to create maximum irrigation potential. By the end of June, 2011, the total irrigation potential created was 48.25 lakh ha, of which, 26.71 lakh ha was from major irrigation projects, 8.55 lakh ha was from medium irrigation projects and remaining 12.99 lakh ha was from minor irrigation projects.

The state encourages cultivators to adopt sprinkler and drip irrigation systems by giving 60% subsidy to small and marginal farmers and 50% subsidy to other farmers for purchase of sprinkler and drip irrigation equipments.

Maharashtra has 226.1 lakh hectares of land under cultivation and 52.1 lakh hectares area under forest. Out of total cultivable land in Maharashtra about 60% land is under food grain cultivation and the state contribution to the total food grain production of the country is around 5.8%. Maharashtra is major producer of Jowar and Arhar contributing 46.09 and 29.11%, respectively to the total production of India. It is second largest producer of cotton (22.21%), soybean (28.14%), and cereals (13.56%) in the country.

A watershed mission has been launched to ensure that soil and water conservation measures are implemented speedily in the un-irrigated areas. Animal husbandry is an important agriculture related activity. The State's share in livestock and poultry population in India is about 7% and 10% respectively.

The State grows both food crops and cash crops. The main food crops of Maharashtra are mangoes, grapes, bananas, oranges, wheat, rice, jowar, bajra, and pulses. Cash crops include groundnut, cotton, sugarcane, turmeric, and tobacco. The State is a major producer of oilseeds. It has an area of 12.90 lakh hectares under various fruit crops like mango, banana, orange, grape and cashew nut. Soyabean has emerged as major oilseed crop with growth of 164 % in area and 214 % in production during last 10 years in the State and contributing 91.6 % oilseed production in 2012-13.

The total and per hectare use of chemical fertilizers in the state is estimated to be 65.8 lakh MT and 155.2 kg respectively for the year 2011-12 while the total use of chemical pesticides and bio-pesticides for the same year were 8,926 MT and 1,045 MT respectively. The consumption of fertilizers is expected to decrease while usage of pesticides is expected to go up in the year 2012-13.

Agri - Marketing Reforms in Maharashtra 3





3. Agri - Marketing Reforms in Maharashtra

Maharashtra has made rapid strides in reforming agriculture marketing. The amendment made to the State Agricultural Produce Marketing (Development and Regulation) Act in 2006 has opened up the market to competition and encouraged private investment in infrastructure development and agro- processing.

Maharashtra was one of the first few States to amend the APMC Act in 2006. The amendment of the APMC Act has enabled licensed direct marketing agencies and private markets to participate actively in the agricultural marketing. Farmers in the State are now able to sell their produce in open markets and not constrained to the APMC (Agricultural Produce Marketing Committee) market yards.

The Maharashtra APMC Act was amended on the lines of the Model Act suggested by the Central Govt. The amendments include provisions for establishment of proper markets, some elements of direct marketing, special commodity markets, farmers-consumers markets and single licensing system for all APMCs. Restrictions or regulations on storage are imposed as per the directives of the Central Government under the Essential Commodities Act.

Chronology – Agri-Marketing Reforms

2003 – Amendments for Terminal Market.

2005- Setting up of Private Market, Direct Marketing, Farmer Consumer Market, Single License to Trader, Cadre of APMC Secretary, Special Commodity Market, Regional/Divisional APMC.

2006- Amendments to the APMC Act.

2007- Rules of the amendments prepared and implementation of amended Act started.

Achievements

- Direct Marketing Licenses
- Private Market Licenses
- Licenses for E-trading
- Single License to Traders

Market linkage is currently the responsibility of the Maharashtra State Agricultural Marketing Board (MSAMB). However, its focus is more on fresh and primary processed products. The food-processing sector needs special attention for establishing sustainable market linkages. MSAMB therefore needs to give specific focus on providing direct marketing linkages to the processing industry. Some of the major marketing initiatives implemented in the state include:

- Development of agricultural marketing infrastructure, grading and standardization;
- Dissemination of arrival and price information of agricultural commodities;
- Computerization of 291 APMCs and 54 submarkets;
- Agri-Export Zone: Creation six facility centres for export;

- Initiation of the rural godown scheme;
- Information about market arrivals, prices, weather forecast, market guidelines to farmers through SMS on mobile phones;
- Modernization of terminal markets in the state;
- Direct supply of agriculture produce by farmer to consumers and consumer societies;
- Shetkari Bazaar to increase direct trade between producer and consumer.

Public Private Partnership for Integrated Agriculture Development in Maharashtra 4





4 Public Private Partnership for Integrated Agriculture Development in Maharashtra

The Maharashtra Public-Private Partnership (PPP) for Integrated Agriculture Development project was initiated in November 2011. It formed part of a long term vision of Shri. Radhakrishna Vikhe Patil, Minister for Agriculture and Marketing, Government of Maharashtra (GoM) to improve the way agriculture is done in the state. The project initiated under the able leadership of Dr. Sudhir Kumar Goel, Additional Chief Secretary Agriculture, Government of Maharashtra (GoM) was in collaboration with the World Economic Forum. The partnership rolled out with the aim of developing an integrated value chain for specific crops reaching out to at least 200,000 farmers in the state.

One of the main objectives of initiating the project was to enable pooling of resources to increase productivity and improve marketing. According to Dr. Goel the partnership would help in providing project based extension services for effective value chain development. "While the project provided an opportunity for an enabling environment for the private sector and government to work together, the main focus of the initiative was to enhance the productivity and subsequent income of farmers, adds Dr. Goel."

In 2012, ten projects rolled out in the first phase, each focussing on improving value chains for nine crops through public-private collaboration and co-investment. Projects were undertaken for the following crops - maize, soyabean, pulses, cotton, onion, tomatoes, potatoes, grapes, pomegranate and sugarcane (See Table 1).

Companies were asked to submit their proposal in a prescribed format which sought details on the area of intervention, crops, number of farmers involved, practices to be adopted, benefits to the farmers and outcome in terms of increased productivity and financial details. The financial details were further broken down into farmers share, companies share and government support under the various government schemes, an indication of convergence of central and state schemes.

The close involvement of the private sector and back end support of the government institutions were critical to the success of the partnership. The project components included the formation of farmer associations and in depth training and capacity building to inform them of the package of practices to improve production. It was equally important to provide the farmers an assured market and the procurement by private companies helped in bridging the gap and ensuring higher monetary returns.

Table 1: PPP projects initiated in 2012-13

Value Chain Development Commodity	Participating companies	Project Cost in Crore Rs.	Districts covered	Area (ha)	No of farmers impacted
Pulses	Rallis India Ltd	128.26	3	32,000	35,962
Soyabean	ADM India	4.25	5	33,300	63,750
Maize	Monsanto, Pioneer, UPL, Venkateshwara Hatcheries	6.42	5	5,000	6,000
Cotton	Nuziveedu Seeds Ltd.	27.07	3	4,135	3,423
Onion	Jain Irrigation Ltd.	8.55	4	1,700	3,423
Tomato	Hindustan Unilever Ltd.	15.00	1	483	618
Potato	Pepsico. Ltd	9.76	2	920	1,207
Grapes	Mahindra	6.41	4	200	200
Sugarcane	12 sugar mills	37.76	9	1,200	1,200
E-content development for specified crops	RML Services	1.16	6	NA	1,500,000

Data Source: Department of Agriculture, Government of Maharashtra

The projects in the first year of its implementation (2012-13) impacted around 1 lakh farmers covering nine crops across the various districts of the state. An investment of Rs. 244.46 crore (roughly 40.7 million US$) has been made of which around 29% is funded by the private sector, 40% by farmers and 31% by the Government of Maharashtra.

It is important to note that funding pattern varies across the different projects but it is heartening to note that farmers and private sector's share in all the projects have been more than the government share indicating that this is not merely a state funded project but has the strong involvement of the private sector along with farmers in terms of mobilization of resources towards generating positive outcomes for growth and development of the agriculture in the state.

Evaluation and Documentation: Pulses Project 5





5 Evaluation and Documentation: Pulses Project

Periodic review meetings and interactions between companies implementing the PPP projects and the Department of Agriculture, Government of Maharashtra have indicated the benefits of the interventions with testimonials from farmers validating these claims.

Documented evidences indicate the success of the programme in terms of the commitment of a large number of private players to work on ten different value chains which is a first of its kind initiative in the state. Another important aspect of the programme was related to overcoming the traditional mistrust in agriculture between the corporate sector and the government.

However, a complete evaluation and documentation of the projects had not been undertaken upon the completion of the first year. It was with this background that Federation of Indian Chambers of Commerce and Industry (FICCI) and World Economic Forum initiated a discussion with Dr. Sudhir Kumar Goel, Additional Chief Secretary-Agriculture, Government of Maharashtra to evaluate and document the projects.

FICCI has been involved in the formulation of the PPPIAD guidelines with the Ministry of Agriculture, Government of India and was therefore keen to document the learnings from the pilot projects implemented in Maharashtra for dissemination and advocacy.

The first project to be evaluated and documented was the value chain development of pulses project implemented by Rallis India Ltd. This was one of the largest projects undertaken in first year of the PPP initiative covering 35,962 farmers across the three districts of Latur, Osmanabad and Nanded. In addition, the project was chosen for the important reason that pulses are the cheapest source of protein for a large section of the population in India. It is the second most important constituent of Indian diet after cereals. But due to rising prices, the per capita consumption of pulses is declining. Slow pace in production growth of pulses vis-a-vis demand have forced government to import pulses. The productivity of pulses in India is lower than most of the major pulse producing countries. At 650 kg a hectare, India's productivity for pulses is way below that of its international counterparts, which produce about 2,000 kilos a hectare

Therefore it was important to study the role of the private sector in enhancing the productivity of pulses, which constitutes an essential crop both in terms of its nutritive value and importance in the dietary habits of a large section of the country's population.

Objectives

The study was undertaken with the following objectives:

a. To assess the outcomes of the project in terms of increase in productivity and farm incomes and document processes of linking farmers with input and output markets; and

b. To document the processes which enable a successful partnership between the government, private industry and farmers.

Methodology

The study was to be completed in the duration of two months and involved the following steps as part of the methodology:

a. **Discussion with Dr. Sudhir Kumar Goel, Additional Chief Secretary, Govt. of Maharashtra:** A discussion with Dr. Goel was held in Mumbai on August 26, 2013 to understand the initiation of the PPP project in the state and get his insights on the study design and methodology.

b. **Review of secondary literature and developing the questionnaire:** Secondary information was obtained from the PPPIAD secretariat based in the Department of Agriculture, Government of Maharashtra and Rallis India Ltd. The documents included the proposal, baseline study, progress reports and presentations. Based on the review of literature and baseline information, a questionnaire was developed for collecting responses from the farmers on important parameters like inputs, capacity building, increase in yield and incomes, procurement and feedback on the delivery of the project.

c. **Visits to the project sites:** FICCI team visited the three districts of Latur, Nanded and Osmanabad during September 19-27, 2013 to undertake the questionnaire survey and discussions with farmers and officials of the project implementation team (both government and private company). The team visited four villages in Latur district and two villages each in Nanded and Osmanabad district. The list of villages visited and the number of farmers interacted in each of the village is given below (See Table 2).

Table 2: Villages visited

Date of Visit	Village	Block	District	Number of Farmers
20/09/2013	Panchincholi	Nilanga	Latur	25
20/09/2013	Limbala	Ausa	Latur	26
21/09/2013	Bhatagali	Latur	Latur	33
21/09/2013	Vadaval Nagnath	Chakur	Latur	40
22/09/2013	Padoli	Osmanabad	Osmanabad	54
23/09/2013	Dhanuri	Lohara	Osmanabad	42
24/09/2013	Narangal	Degloor	Nanded	38
25/09/2013	Mustapur	Billoli	Nanded	69

A total of 327 farmers were surveyed in the eight villages across the three districts. The list of officials (GoM and Rallis India Ltd) interacted is given in Annexure 1 while the list of farmers surveyed is given in Annexure 2.

d. **Interactions:** with Mr. Uday Deshmukh, Principal, Regional Agriculture Extension Management Training Institute, Government of Maharashtra, Pune and Coordinator-Pulses Project and Mr. Ravinder Kumar, Senior Manager, Rallis India Ltd. and Mr. Prashant G Chavan, Assistant Manager, Rallis India Limited were held to understand the delivery of the project and elucidate responses on the project implementation, outcomes and improvement areas.

   Discussions were also undertaken to understand the perception of the government and private sector on key areas requiring attention going forward. Interactions were also held with Dr. T S Mote, District Superintending Agriculture Officer, Latur on the involvement of the agriculture department in the delivery of the project and members of the Rallis team.

e. **Collation of findings and developing the first draft of the report:** Based on the review of secondary literature, results of the questionnaire survey and one on one and group discussions, a draft report was submitted to Department of Agriculture, Government of Maharashtra and Rallis India Limited for their comments.

f. **Developing the final draft:** Based on the comments received to the first draft, a final report will be submitted to Department of Agriculture, Government of Maharashtra and Rallis India Limited.

Value Chain Development of Pulses
Project: Rallis India Limited 6



6 Value Chain Development of Pulses Project: Rallis India Limited

Rallis India Limited initiated the Grow More Pulses (MoPu) project in Pudukottai district of Tamil Nadu in December 2009 to improve pulses productivity in India. The aim was to fulfil the domestic requirement of pulses and reduce dependency on import from other countries. It focussed on providing know how on efficient mode of production for increasing yields. Since then, the project has spread to the states of Maharashtra, Madhya Pradesh and Karnataka impacting 1.60 lakh farmers.

Rallis India Limited was associated with the PPPIAD project in Maharashtra since its inception. It was one of the companies selected to implement the PPP programme based on its reputation, credibility and the strong linkage of working with farming communities. Red Gram (Arhar), Black Gram (Urad), Green Gram (Mung) and Bengal Gram (Chana) have been the crops grown under the programme.

Project location

The pulses project was initiated in the three districts of Latur, Nanded and Osmanabad located in the Marathwada regions of the state (See Figure 1). A brief profile of the three districts is given below:

Figure 1: Project intervention districts



Source: Maps of India

Latur - Latur district is located in the Marathwada region of Maharashtra. Out of the total population of 24.54 lakh, around 75% reside in rural areas of the district. The average rainfall of Latur district ranges from 600 to 800 mm, mainly during the monsoon months from July to October. The total geographical area of the district is 7.15 lakh hectares of which around 91.8% is under cultivation. The forest cover of the district is 1,800 hectares and land under non-agricultural use is 21,400 hectares. Under agriculture land use, the net sown area is 5.29 lakh hectares, area sown more than once is 1.59 lakh hectares and gross cropped area is 6.88 lakh hectares which is around 93% of the total geographical area of the district.

The net irrigated area of the district is 3.19 lakh hectares with rainfed area of 2.94 lakh hectares. The sources of irrigation are canals and open wells. Application of micro-irrigation is gaining importance covering an area of 8,000 hectares in the district with 1,700 hectares under drip irrigation and 6,300 hectares under sprinkler irrigation in 2009-10.

Latur district is mainly depended on agriculture. Around 80% of the population of district is dependent on agriculture and allied activities. The cropping pattern of the district is dominated by jowar which is grown widely in the area. Other important food crops raised in the district are bajra and pulses. In areas where irrigation facilities are available, wheat and gram are grown in rabi season.

Nanded - Nanded district has a predominantly agrarian economy. According to 2011 census, Nanded has a population of 33.61 lakh, out of which 72% reside in rural areas. The climate is extreme with large variations in temperature. The district receives rain from the south-west monsoon during the months of June to December. The average rainfall in the district is 1,150 mm.

The total geographical area of the district is 10.3 lakh hectares of which around 78.2% is under cultivation. The forest cover of the district is 8,500 hectares and land under non-agricultural use is 35,800 hectares. Under agriculture land use, the net sown area is 7.1 lakh hectares, area sown more than once is 1 lakh hectares and gross cropped area is 8.1 lakh hectares which is around 79 % of the total geographical area of the district. The net irrigated area of the district is 1.12 lakh hectares. The source of irrigation are canals (Upper Penganga, Purna and Manar projects), tanks, bore wells, open wells farm ponds and lift irrigation schemes. The area under micro-irrigation in the district is 12,230 hectares of area in the district with 5,210 hectares under drip irrigation and 7,020 hectares under sprinkler irrigation in 2009-10.

Predominantly kharif crops are grown in the district but rabi crops are also cultivated. The principal kharif crops are jowar and cotton. Other kharif crops include paddy, tur, mung, and urad. The principal rabi crops are jowar and wheat.

Osmanabad - Osmanabad district lies in the southern part of state. According to 2011 census, Osmanabad has a population of 16.57 lakh, out of which 83% reside in rural regions of the district. The climate of Osmanabad district is generally dry. The rainy season starts from mid June and remains till end of September. The average rainfall of this district is 765.5 mm.

The total geographical area of the district is 7.48 lakh hectares of which around 77.78% is under cultivable area. The forest cover of the district is 4,400 hectares; land under non-agricultural use is 17,900 hectares. Under agriculture land use, the net sown area is 5.19 lakh hectares, area sown more than once is 3.22 lakh hectares and gross cropped area is 8.42 lakh hectares which is around 112.5 % of the total geographical area of the district.

The net irrigated area of the district is 1.07 lakh hectares with a rainfed area of 4.13 lakh hectares. The source of irrigation is canals, tanks, bore wells, open wells farm ponds and lift irrigation schemes. The area under micro-irrigation in the district is 1,550 hectares of area in the district with 1,050 hectares under drip irrigation and 500 hectares under sprinkler irrigation in 2009-10.

The major irrigated crops in the district are sugarcane, wheat, sunflower, summer groundnut, gram and rabi jawar while kharif jawar, mung, gram are non-irrigated major crops, depending solely on rainfall. Sugarcane is the important cash crop of the district.

Intervention approaches

The project through a series of well designed intervention approaches worked on various aspects beginning with selection of farmers, training and capacity building, field demonstrations, formation and farmer groups and informing them about the appropriate package of practices required for the production of pulses. These intervention approaches helped in the delivery of the project by preparing the farmers and developing their knowledge and skills. Approaches adopted during the project are indicated below:

a. Selection of Farmers: Rallis India Limited has been working with farmers of this region since 2011-12 and had established some linkages with them. With the introduction of the PPPIAD project in 2012-13, the first step was to select farmers. Officials of the Rallis team and District Agriculture Department admitted that it was a tough task to select a group of farmers from the entire village.

It was agreed that farmers to be included in the project should have a land of 1 hectare. In some cases farmers with a land of 0.5 hectare have also been selected for the project but this has not been the general trend. Farmers were asked to submit the following two documents for their application to be considered for inclusion in the project - Form 7x12 (comprising information about the land type and usage) and Form 8A (comprising information on land ownership).

A team comprising officials of Rallis and Agriculture Department identified farmers who were growing pulses for some time as it was essential to work with farmers who had prior knowledge on growing the crop. In addition, some progressive farmers were identified who were eager to take additional responsibility and work with the company in creating models leading to enhanced yields and which could serve as learning's for the farming community and be replicated in the subsequent years.

Farmers belonging to the Scheduled Caste (SC), Scheduled Tribes (ST) and women were given priority subject to fulfilling the minimum land holding criteria and availability of the documents. Special attention was given to farmers who have formed farmer groups for inclusion in the project with an objective of improving productivity and sharing of resources. In some cases, the farmer groups were dormant and project interventions have helped activate the groups as well as initiate new groups.

A group of farmers in Limbala village point out the benefits that they have realised because of the activation of their farmer group, "we were able to maximise the returns because of our coming together, especially in getting our produce to the Rallis procurement centres through sharing of costs in hiring vehicles."

Table 3 indicates the number of farmers selected in each of the village across the three districts. It includes details on the total acreages and the area under pulses cultivation.

Table 3: Project spread

S. No	District	Block	No. of Villages	No. of Farmers	Acreage (Ha)
1	Latur	Ahmedpur	25	2,293	2,100
2	Latur	Ausa	29	3,005	2,700
3	Latur	Chakur	34	2,710	2,400
4	Latur	Latur	12	749	700
5	Latur	Nilanga	43	3,725	3,200
6	Latur	Renapur	21	1,695	1,600
7	Latur	Shirur Anantpal	26	1,773	1,600
8	Latur	Udgir	20	1,896	1,800
9	Latur	Deoni	26	1,711	1,500
10	Nanded	Billoli	18	1,643	1,400
11	Nanded	Deglur	16	1,442	1,200
12	Nanded	Mukhed	14	1,180	1,000
13	Nanded	Naigaon	18	1,384	1,200
14	Osmanabad	Lohara	23	3,556	3,150
15	Osmanabad	Omerga	25	3,844	3,400
16	Osmanabad	Osmanabad	22	3,356	3,050
	Total		**372**	**35,962**	**32,000**

Data Source: Rallis India Limited

When asked about the approach of selecting few farmers in the village for the project, a vast majority of the respondents (85%) said that they would want the project to be inclusive i.e. include all farmers of the village. According to the farmers, inclusivity will enhance the impact and not create a feeling of discrimination amongst the ones who are not chosen as part of beneficiaries of the project.

The study team however did not find any negative feelings amongst the farmers who were not selected as beneficiaries. This was mainly due to the fact that the project design was open in including the entire village during the training programmes. Secondly, the farmers understood that the selection was on the basis of certain parameters like minimum size of landholding and availability of all necessary documents like form 7X12 and 8A.

b. **Formation of farmer groups:** Rallis initiated efforts to make the farmers realise the benefits of forming farmer groups. If the programme was to sustain in the long run, it would be necessary to form the farmer groups. With this rationale, the projected implementation team organised meetings in the villages to urge farmers to come together for form a farmer group. Farmers were informed about the benefits under the various government schemes available to the farmer groups.

The farmers were provided with booklets containing information on the benefits of forming groups; the process to form a group and get it registered and detailed instructions on the day to day working of the groups. The booklet, prepared with support from the Agriculture Department was of immense use as it acted as a complete dossier for interested farmers. Rallis also sought the support of sarpanches and village elderly in getting the community together.

c. **Package of Practices:** Rallis along with officials of the Agriculture Department developed a set of package of practices covering 14 elements related to the entire value chain of inputs, production, harvest, procurement, capacity building and awareness generation. The package of practices was shared with the farmers during the training programmes in the beginning of the project and periodically during the year. Members of the Rallis project implementation team have been in constant touch with the farmers (at an interval of 7-10 days) since the inception of the project and even after the completion of the project.

d. **Training programmes and exposure visits:** Capacity building programmes for farmers formed an essential component of the PPP project. The rationale behind this was to increase the knowledge and awareness level of the farmers and inform them of best practices. Rallis proposed to carry out 200 training programmes across the three districts and has conducted all the programmes at periodic intervals. Short trainings, field visits and regular connect with farmers have been undertaken at regular interval.

Responses from farmers across the three districts indicate that the interaction of the Rallis staff with the farmers was once in every week. In addition, farmers had the convenience of calling members of the Rallis project team. The farmers see the constant availability and advice of the Rallis team as a major motivation factor for adoption of the practices and its timely implementation.

While speaking about the training programmes conducted during the year members of the Rallis team said "we laid a lot of importance on building the capacity of the farmers in the project as our experience had shown that it is the adoption of correct practices that increases yield. The training programmes were designed keeping in mind the needs of the farmers and individual attention was given to the farmers to address their concerns."

The progressive farmers trained during the capacity building programme passed on the messages to other farmers in the village and this helped in sharing of information and best practices amongst the farmer groups.

Rallis have taken farmer groups for exposure visits named as 'Prerna' to other states where MoPu project in being implemented. The company facilitates regular interaction amongst farmers to share best practices and discuss problems related to the production of pulses, additional crops to improve earnings and get solutions through mutual discussions.

Figure 2: Elements of farmer connect



Rallis has taken substantial efforts to establish connect with farmers and periodically engage with them at every stage of crop production all through the year. The various components of Farmer

Connect are shown in Figure 2. According to Rallis, 'Farmer Connect is the most critical aspect of the pulses initiative. It not only allows the company to educate and train the farmers but also reflects the commitment of the company to be with the farmers at all times.'

e. **Pest management:** The pulses crop was subject to regular pest attack impacting the production and yield by 25-50%. Sucking pest, wilt, rust, powdery and downy mildew, pod borer were the major diseases impacting the crops. Rallis identified pest attack as a major challenge in ensuring the success of the project and undertook serious efforts to inform the farmers of the major pest attack and educate them about the usage of pesticides, fungicides and their right application at the right time.

The farmers were provided with insecticides, pesticides and fungicides in the kit containing fertilizers and were taught about the right application time and dosage. Almost all the farmers surveyed in the study have reported none to very few incidences of pest attack after the project was initiated. Aniruddh Jadhav, a farmer in Mastapur village in Nanded district while speaking of the benefits of pest management techniques said, "My crop was infested by powdery mildew which impacted the output. After being trained about pest management techniques in the PPP project, I have applied the right dosage of fungicides and was able to save my crop."

f. **Procurement and bank support:** The PPP project focussed on two major aspects – enhancing production through better inputs, training and better market linkages and price through friendly procurement mechanism. Rallis India Limited has established procurement centres in Latur where farmers have sold their produce and got higher returns as compared to the local mandi. Rallis procures Arhar while Urad, Gram and Chana are sold in the local market by the farmers.

Rallis have facilitated the opening of zero balance bank accounts for all the farmers with the local branch of HDFC Bank. Farmers have received an ATM cum debit card and cheque book and all payments to the farmers who have sold their produce to Rallis have received their money directly into their bank accounts.

Intervention areas

The Value Chain Development of Pulses project has changed the approach to farming. Farmers have moved from traditional methods to modern and scientific methods of farming. This includes the adoption of proper inputs - their right application, dosage and timing. The major intervention areas adopted as part of the project are indicated below:

a. **Soil testing:** Farmers were trained about the benefits of soil testing and the right method of collecting samples from their fields for testing. Farmers were asked to collect soil sample from their fields and Rallis would provide a vehicle and staff for collection of samples to be sent to the labs for testing. A farmer had to pay a charge of Rs. 15/- per sample as lab fees for getting his soil sample tested for Nitrogen, Phosphorus and Potassium (NPK). The samples were sent to private labs, Krishi Vigyan Kendras (KVKs) Department of Agriculture Laboratories across the three districts for testing.

Some farmers had also gone in for testing of micro-nutrients is soil. However, the tests were done in private laboratories recommended by the Agriculture Department and the cost ranged from Rs. 180 to Rs. 250 per sample for testing of micro-nutrients which was borne by the individual farmers. The results of the soil testing were made available to the farmers and they were advised on the right amount of fertilizer dosage based on the requirement of the soil.

b. **Nutrition (Application of fertilizers):** Farmers were mainly using Diammonium Phosphate (DAP) as a fertilizer for growing pulses and did not have an idea on the right dosage. Many farmers mentioned that the amount of DAP used by them during each season varied from 2-3 bags per acre as they were not aware of the right amount needed for growing crops. However, as a result of soil testing, farmers have switched to a dosage based application of DAP in their fields.

Shri. Bandu Tukaram Teli, a farmer in Limbala village of Latur district says "I used to apply 2 bags of DAP (100 kg each) in 1 acre of my field prior to the project. However, when I was informed of the results of soil testing, my application of DAP came down to 1 bag for each acre, thereby resulting in significant savings. I realised that I was over applying fertilizers which provided me no benefits and was a wasteful expenditure."

Farmers were not aware about the application of micro-nutrients in the field and the training programmes informed them of the crucial role played by soil micronutrients (Zinc, Iron, Sulphur) in increasing their production. Farmers began using Zinc and Ferrous Sulphate as micro-nutrients supplements in their fields.

c. **Application of PSB and Rhizobium:** PSB and Rhizobium help in fixing nitrogen in the soil. Very few farmers applied PSB and Rhizobium in their fields prior to the project. This scenario has changed during the project and farmers have realised its merit. As part of the project, kits containing 100 kg DAP, 20 kg Zinc Sulphate, 10 kg Ferrous Sulphate 250 gm PSB and Rhizobium each, insecticide were provided to the farmers. These kits were provided at subsided rated to the farmers through Maharashtra Agro Industrial Development Corporation (MAIDC).

d. **Seeds:** Farmers have used their own seeds as well as used certified seeds (new and high yielding varieties like BSMR 736, 853). There is a need to increase the adoption of high yielding varieties of seeds. Findings of the survey indicate mixed result regarding the use of certified seeds with almost an equal ratio of farmers using their own seeds and certified seeds respectively. As part of the project, seeds were provided to the farmers at subsidised rates with a subsidy of Rs. 12/kg of the seeds under the NFSM scheme. It was the responsibility of the Agriculture Department, GoM to provide seeds from the Maharashtra State Seeds Corporation (MSSC) Limited or Agriculture University of the region to the farmers.

Rallis India Limited has taken up certified seed production with the farmers in the project area and farmers are provided a subsidy of Rs. 10/ kg. The idea was to create awareness on the importance of using hybrid and certified seeds for greater benefits in future. Rallis initiated preparation and transplantation method in red gram resulting in yield improvement for the farmers. A farmer in Limbala village was able to obtain a yield of 1,600 kg in an acre due to transplanting of seedlings and intercropping with turmeric. Similar cases of doubling of yield have been observed amongst the red gram farmers of the district.

e. **Seedlings:** The normal practise amongst the farmers was to use their own seeds stored from the harvest of the preceding year. Rallis has encouraged farmers to go in for growing seedlings. The company identified progressive farmers who were eager to shoulder additional responsibilities for carrying out demonstrations in their fields and grow seedlings as part of the project. Farmers who have grown seedlings have indicated a savings of 15% in the overall expenses for pulses production. It also saves them from being cheated by local shopkeepers who sell inferior quality seeds. These progressive farmers act as resource persons during the training programmes to inform other farmers the benefit of growing seedlings in order to achieve a better produce.

f. **Sowing and Spacing:** Farmers were practising line sowing without any attention to spacing. Subsequent to the training sessions undertaken as part of the project, farmers practised line sowing with adequate spacing based on soil type, variety of crop and irrigation method. Dibbling method was also adopted by the farmers. Farmers have also gone in for intercropping of pulses with soyabean, sugarcane vegetables (tomato, cauliflower, cucumber) and turmeric. Education was also provided on thinning for better growth of the crop.

g. **Irrigation:** The project is undertaken in areas which face erratic rainfall and the main source of irrigation is borewell and tubewells. It was envisaged that micro-irrigation facilities - drip and sprinkler irrigation systems will be provided to 2,000 and 5,100 farmers respectively. The government would provide a subsidy of 50% to the farmers for installing micro-irrigation systems in their field.

The slow adoption of drip and sprinkler irrigation system to the tune of 20 and 70% respectively is attributed to the delay in receiving the subsidy from the State Government. The delay acts as a major deterrent for farmers to invest large sums of money for installing micro-irrigation system. There are instances where the farmers have not received the subsidy from the past two years. Farmers are now sceptical for going in for micro-irrigation primarily because of the following two reasons:

- Installation of a micro-irrigation system requires an initial capital investment of Rs. 50,000 – 75,000 per hectare and farmers find it difficult to arrange for this large sum of money.
- The delay in receiving the subsidy acts as a major disincentive for the farmers to invest their savings.

There is an interest amongst the farmers to adopt micro-irrigation owing to the scarcity of freshwater sources for irrigation. However, the government needs to create an enabling environment for the speedy adoption of micro-irrigation system for its farmers. In addition to micro-irrigation Rallis project team members have informed the farmers on the need for on farm conservation of water, recharge of wells and sharing of water in times of scarcity.

h. **Nipping:** is defined as the practice of removing the terminal bud which allows the plant to grow vertically, thereby making it bushy. In case of Arhar, nipping is carried out in the time period of 45 – 50 days and 55 – 65 days in case of long duration varieties for better growth and spread. Farmers were not following this practise prior to the initiation of the project and this has been another important learning gained during the project as mentioned by the respondents.

Developing the right kind of practices and its education to the farmers has been a central element of the PPP project. Information and awareness about new practices that have the potential to increase production have not only increased the knowledge and skills of the farming community, it has also made them resilient to the threats related to growing pulses. A combination of the right inputs as intervention areas coupled with the approaches to continuously engage with the farmers have produced significant results as intervention outcomes. Table 4 indicates the achievements under the various practices implemented in the programme.

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with the farmers have produced significant results as intervention outcomes. Table 4 indicates the achievements under the various practices implemented in the programme.

Table 4: Package of practices

Element	Units of Measurement	Target for 2012-13	Achievement
Soil testing	Number	27,000	10,840
Seed Distribution	Quintal	5,150	5,150
Seedlings Production	Ha.	150	200
Seed Production	Quintal	7,400	500
Drip Irrigation	Ha.	10,000	2,000
Sprinkler	Ha.	7,000	5,100
Demonstrations	Ha.	32,000	32,000
Trainings	No.	200	200

Data Source: Annual Progress Report by Rallis India Ltd. PPP project 2012-13

There has been involvement of the officials of the State Agriculture Department in developing the package of practices in association with the Rallis team. District and Block level agriculture officers and officials from Latur Agriculture College have been associated in the training programmes and field visits. Farmers acknowledge the fact that the joint involvement of the officials from Rallis and State Agriculture Department in the training programmes has in providing better learnings to them.

Dr. T S Mote, District Superintending Agriculture Officer, Latur while speaking of the association of the government department and Rallis informed that it had been a learning experience for both the officials of his department and Rallis India to jointly undertake activities with the farmers. "The project created an opportunity where both the parties involved (Department of Agriculture, GoM and Rallis India Ltd.) came together for undertaking meaningful and target oriented activities for agriculture development in the state."

Intervention outcomes

The PPP project revolves around two major components - enhancing the productivity of the pulses through adoption of efficient farming practices and better incomes to the farmers through assured market linkages and price realisation. The outcomes of the project as identified during the study are given in the following five headings:

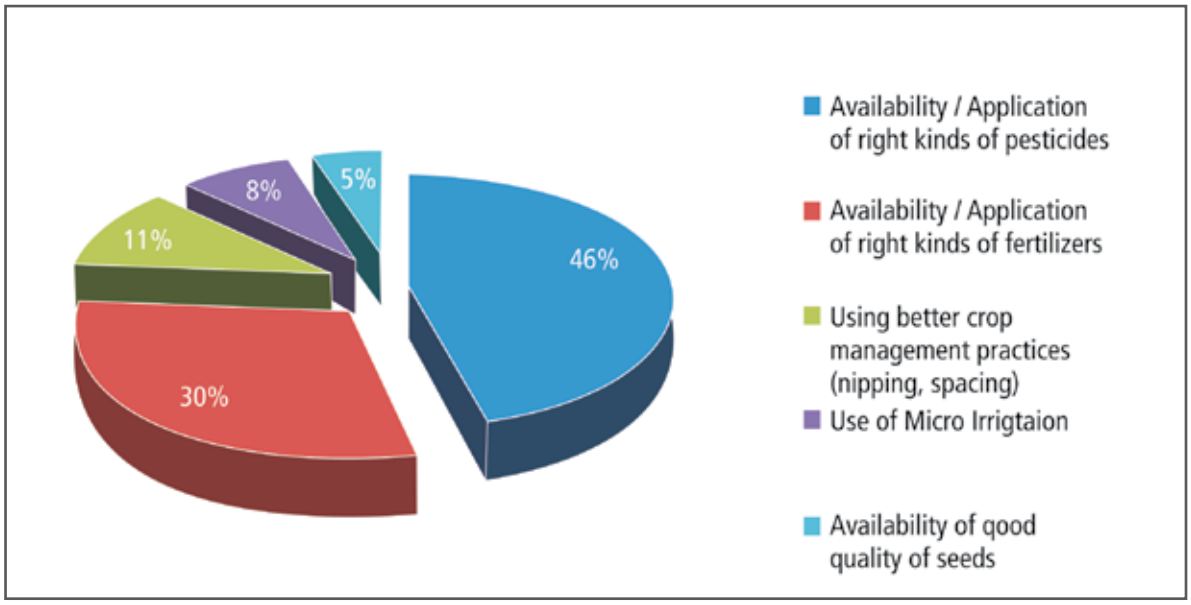
a. **Adoption of best practices:** Training and exposure visits have enabled the farmers realise the best methods of growing pulses. This has been one of the major reasons for the success of the programme. Soil testing provided them information on the right dosage of inputs to be applied for producing the highest output. As a result of this, the use of fertilizers have come down, ultimately resulting in decreasing the cost of production.

Apart from the conventional use of urea, farmers are using micronutrients like Zinc Sulphate and Ferrous Sulphate which has increased output as well as enhanced the quality. Micronutrients are important for plant growth, as plants require a proper balance of all the essential nutrients for normal growth and optimum yield.

The farmers learned about the techniques and benefits of treating seeds before sowing. This method protected the seeds from disease and insect infestation. At the same time it enhanced the germination potential of the seed which in turn results better output. Regular advice on extension services by members of the Rallis team has contributed to the adoption of best practices resulting in enhanced productivity.

When asked about the single major reason which the farmers attribute for enhancing the production, the response was overwhelmingly in favour of the availability and application right kind of pesticides (46%), followed by availability and application right kind of fertilizers (30%). 11% of the farmers attribute using better crop management practices like nipping, seed treatment and spacing to be the main reason for increase in production while 8% and 5% of the farmers attribute the increase in production to the use of micro-irrigation and use of good quality seeds respectively (See Figure 3).

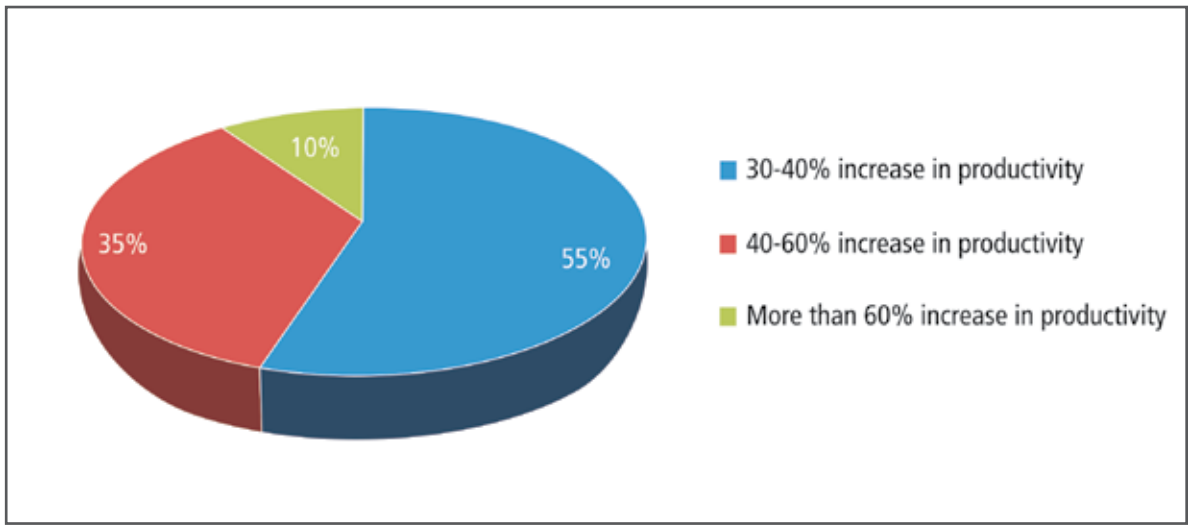
Figure 3: Single major reason for enhancing production



Data Source: FICCI primary survey with farmers

b. **Productivity enhancement:** With the adoption of best practices, farmers have realized higher productivity of the crops. There is a difference in the percentage increase in productivity amongst the farmers surveyed from 30 to 65%. However, all the farmers involved in the project have reported an increase in production of all the pulses 55% of the farmers surveyed have reported an increase of 30-40 % increase in productivity, while 35% and 10% farmers of the farmers surveyed have reported an increase of 40-60% and more than 60 % increase in productivity respectively (See Figure 4). The maximum and average yields for the various crops (Arhar, Urad, Moong and Gram) are depicted in Table 5.

Figure 4: Percentage increase in productivity



Data Source: FICCI primary survey with farmers

Table 5: Maximum and average yields

Crops	Arhar	Urad	Moong	Gram
Average Yield in kg/ha	1,900	1,600	1,000	2,100
Highest Yield in kg/ha	4,000	2,300	1,700	3,500

Data Source: Annual Progress Report by Rallis India Ltd. and Survey with farmers

c. **Assured market and higher returns:** The buyback arrangement of Rallis promises to the farmers a guaranteed market at competitive prices. The processes adopted at the procurement centres are completely transparent and without any loss of produce. There is no possibility of cheating in weight and collection of samples for testing. National Collateral Management Services Limited (NCMSL) is responsible for doing the quality check and certifying the produce at the procurement centre. Payments made to the farmers are quick and gets deposited into their bank accounts directly. There are no middlemen in the operations as is the case in the local mandis, thereby saving a lot of time and harassment to the farmers.

It is important to mention that Rallis has set up procurement centres only in Latur whereas the project is implemented in the three districts of Latur, Nanded and Osmanabad. It was observed that farmer's from far flung areas of Nanded district have never come to Latur to sell their produce despite the advantages of a fair, efficient and fast mode of procurement. It was observed that villages within 50 km of the procurement centre have come to sell their produce while, other have preferred selling it in their local mandis.

In addition to the distance, another factor which impacts the decision of the farmers regarding the selling their produce is the trap of the middleman. There are incidences where the farmers have taken a loan from the middlemen prior to the sowing for buying inputs and therefore are bound to selling their produce to /via the middleman. While there is no doubt that farmers face lesser troubles at the Rallis procurement centre, the rates given for the produce is at par with the prevailing rates in the mandis. Farmers are of the opinion that the company should procure at a higher price, at least for high quality produce.

Table 6: Procurement: Local mandi vs. Company procurement

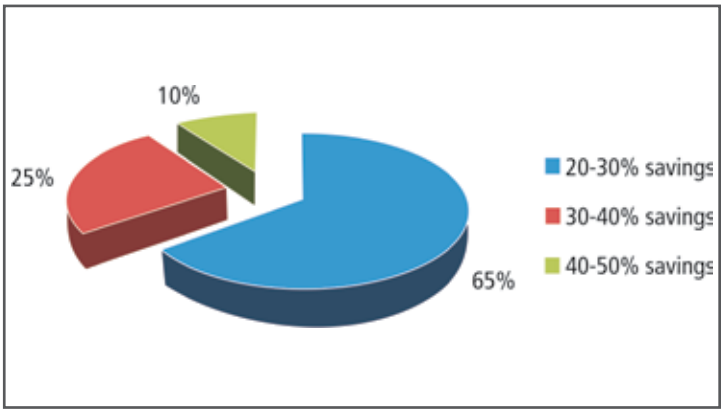
Component	Local Mandi (Market)	Rallis Procurement Centre, Latur
Unloading Charges	Rs 10 per quintal	Nil
Sampling for quality analysis	1-2 kg/quintal	200 gms
Weight and measurements	Traditional weighing machine (increased malpractices)	Electronic weighing machine (error in measurement is minimized)
Commission	2% of the cost	No commission
Bagging	1 Kg taken as piley*	No piley
Losses during weighing	Yes (pulses are dumped onto the machines resulting is losses)	No
Payment	Cash	Direct transfer into bank accounts
Waiting time	On an average 8-12 Hrs Maximum - 3 days	On an average 2-3 Hrs, Maximum 5-6 Hrs

Data Source: FICCI primary survey with farmers

[*Piley: in order to compensate for the loss of grains during the weighing and selling process an amount of grains (usually 1 kg per bag if quantity is greater than or equal to 500 kg) is kept aside as piley. In reality the farmers gets paid for 99 kgs and not 1 quintal.]

d. **Savings of inputs:** Soil testing and fertilizer dosage based on the results have been a major factor in increasing the income and savings on procuring fertilizers. All the farmers surveyed agree that they were not aware of the soil testing and the spending on fertilizers have gone down by 20-30 % as indicated by 65% of the survey respondents (See Figure 5).

Figure 5: Savings on fertilizer expenditure



Data Source: FICCI primary survey with farmers

e. **Collective farming through formation / strengthening of farmer groups:** The project has helped is activating farmer groups in the intervention areas. It was a conscious decision by Rallis to activate farmer groups with the long term aim of sustainability and sharing of resources. Though the activeness of the groups is not uniform across the surveyed districts, it is important to note that steps are being taken by the farmer themselves to cooperate by working in the groups.

For groups that are active, there are regular meetings and records are effectively maintained. Farmers have gone in for sharing of resources like machines and water. Speaking about the functioning of their group, farmers in Panchincholi village of Latur district admit that there is a win-win situation if farmers work in a group. The farmer group has registered themselves and are now aiming to work for other social development activities in their village.

Project finances

The total cost of the Value Chain Development of Pulses project for 2012-13 was Rs. 128.26 crore (US$ 20.1 million (1 US$ = Rs. 60). Out of the total cost - 54.4 % amounting to Rs. 67.18 crore was in form of farmer's contribution and the company (Rallis India Ltd.) share while the remaining 45.6% (Rs. 61.08 crore) was provided in form of subsidy by the Agriculture Department, GoM under the various schemes (See Table 7).

Table 7: Project cost and share

S No.	Items	Cost (Rs. Cr.)
1	Intervention cost	115.77
2	Company investments	9.89
3	Company overheads	2.59
Total Cost of Project		128.26
Subsidy for Farmers from the Government		61.08
Rallis India Limited's and Farmers Contribution		67.18

Project Cost : Rs. 128.2G Cr.		
	Sanction	Actual
Company Share	12.53	7.66
Farmers Share	54.65	16.76
Other Govt. Schemes	44.34	12.86
RKVY Share	16.74	13.28
Total	**128.26**	**50.56**
Procurement Value Rs. 18.23 Cr. is not included above		

Data Source: Annual Progress Report by Rallis India Ltd. PPP project 2012-13

The government subsidies for various components of the PPP project came from different programmes like National Food Security Mission (NFSM), Rashtriya Krishi Vikas Yojna (RKVY) and National Mission on Micro Irrigation (NMMI). The PPP project presents a perfect case of how resources of the government and the private sector can be combined to create meaningful outcomes involving the communities.

Project management

The Value Chain Development of Pulses is one of the large projects under the Public Private initiative of the Department of Agriculture, Government of Maharashtra. Since the inception of the PPP project a well structured institutional mechanism has been put in place both by the state government and the private company, Rallis India Limited for overseeing the project implementation and monitoring the progress.

At the State level, a committee under the chairmanship of Mr. U.G. Dangat, Commissioner Agriculture, Maharashtra oversees the policy and operational level implementation strategies of PPPIAD. Mr. Uday Deshmukh, Principal, Regional Agriculture Extension Management Training Institute, GoM and Mr. Ravinder Kumar, Senior Manager, Rallis India Limited are project coordinators for the pulses project. Both GoM and Rallis have put in place a dedicated team to implement the project (See Table 8).

Table 8: Project implementation team

Department of Agriculture, Government of Maharashtra	Rallis India Limited
Deputy Director – 1 No.	Senior Manager – 1 No.
JDA / SAOs – 4 Nos.	Assistant Manager – 1 No.
Technical Officers / University Professors – 6 Nos.	Project Officer – 3 Nos.
Taluka Agriculture Officer – 17 Nos.	Technical Officer – 5 Nos.
Agriculture Assistants	Crop Advisors – 31 Nos.

While recruiting the project team, Rallis has ensured that qualified professionals are employed for implementation of the project. Technical officers engaged in the Rallis project team are graduates in agriculture and the crop advisors hold a diploma in agriculture. Rallis undertakes extensive training for its staff across levels to keep them up to date with the technological advances and necessary information regarding the project.

The crop advisors interact almost on daily basis with the farmers while the technical officers meet then once a week. Each crop advisor has 10 to 15 villages under his direct jurisdiction while each technical officer covers 2-4 blocks (taluks) and a project officer has a district under him. The team of crop advisor, technical officer and project officer review the progress with the Assistant Manager on a fortnightly basis. This apart the Assistant Manager and the Senior Manger from the Rallis team are in regular touch with the project team to address concerns arising out of the interaction with the farmers.

Rallis submits fortnightly reports to the Project Coordinator (Mr. Uday Deshmukh) who in turn presents an update of the activities with the Agriculture Commissioner and the Additional Chief Secretary Office, Mumbai through the office of Chief Coordinator for PPPIAD, Dr. A.K.Haral at Commissionarete Agriculture, Pune.

There is regular interaction and communication between the Rallis project team and the government team. Speaking about monitoring activities undertaken as part of the project, Mr. Uday Deshmukh, Project Coordinator, Pulses Project adds, "We have developed a periodic mechanism of exchange of information which in form of progress reports as well as through interactions and conversations between the members of the project implementation team."

This mechanism is prevalent across all levels with Dr. Sudhir Kumar Goel taking periodic review meetings with members of the government and private sector implementation team. The World Economic Forum has also been involved organising review meetings during the first year of the project where there are discussions on the progress, challenges facing the implementation and sharing of testimonials from farmers.

Opportunities for future

There are enough evidences and testimonials from the farmers to indicate that the PPP project has benefitted farmers and in that sense has been able to realise the objectives of the project. However, based on the interactions with the officials of Rallis and farmers there are certain areas which need attention for further strengthening the implementation and increasing the effectiveness of the interventions. The major concerns and opportunities are listed below:

a. **Inclusive approach:** Farmers are of the opinion that the PPP project should be inclusive. In the current scope of work, a few farmers are selected in a village on the basis of minimum land holding and availability of proper land records. This creates a feeling of being left out amongst the farmers who have not been selected, despite fulfilling the eligibility criteria. Rallis however does not discriminate amongst the farmers who are not part of the project and involves them in the training programmes but they do not get the benefits in terms of inputs and subsidies. There is unanimity amongst the villagers to include all the farmers in a village in the project.

   Rallis is also planning to develop 'model village' concept in the days to come with the objective of creating five model villages in each block to increase the effectiveness of the project and showcase the positive impacts. Considering there are climatic variations and agronomic practices in the project area it is even more important to include village as the unit of project implementation.

   Keeping the above concerns in mind, the government should consider including an entire village and its farmers in the project outline / guidelines.

b. **Project duration:** The current mechanism of the project involves working with the selected farmers for a period of one year only. The farmers who were part of the project in 2012-13 and no longer associated with the project in the current year (2013-14). Responses from the farmers indicate that only 60% of the farmers who were involved as part of the project in the first year (2012-13) have carried on with implementing the package of practices in the second year (2013-14). In order to effectively realise the benefits and sustain the practices which are taught to the farmers it is essential that the project continues with the same group of farmers for at least a period of 2 years.

c. **On time availability of inputs:** The availability of inputs at the right time is crucial for generating positive outcomes. There have been some instances where farmers have got inputs at a later stage. Since inputs are critical for good agriculture production, on time availability is an important factor to be kept in mind. It is advisable that inputs are provided to the farmers at least a month before sowing.

   In the current scenario, only fertilizers and pesticides are given as part of the kit for pulses cultivation. It is important that good quality seeds are also included. There is a suggestion to allow the private company to develop a complete kit of inputs including seeds, fertilizers, pesticides, micro-irrigation and provide it to the farmers. These can be approved when the proposal is accepted by the government for funding. There is also a suggestion to approve the package of practices and inputs at the proposal clearing stage to avoid delays. In the current scenario, there are discussions on the package of practises to be adopted after the project is approved to include the suggestions of Agriculture Universities/ experts and past experiences.

d. **Expansion of soil testing laboratories:** Farmers have realised the benefits of soil testing which has a direct impact on the inputs and cost of production. But the lack of soil testing labs in the vicinity and time taken to get the results is acting as a deterrent for them to continue with the practise of soil testing. A mobile soil testing lab can be arranged in the project by the company which can go to each village for collecting samples and disseminate the results. The mobile van based lab can also be used for training on extension activities and sale of inputs to the farmers.

e. **Enhancing procurement and storage capacity:** The project has set up effective marketing linkages for the farmers which has increased their convenience and income. Currently procurement centre of Rallis is located only in Latur. Farmers in villages which are located beyond 50-60 km of Latur have sold their produce in the local mandis due to the high costs incurred in transportation and non-availability of timely transportation facilities. There is a suggestion to open procurement centres at the taluka level and the company engaging in procuring Urad, Moong and Gram in addition to Arhar.

   At present the company is allowed to keep only 250 tonne of one crop (including un-processed and processed pulses). When the company plans an expansion in its procurement this condition may pose a deterrent. There is a related problem of shortage of storing space for the procured produce. In view of the above factors, the government may consider giving space to the company to store its produce in government owned warehouses and simultaneously increase the stock limit for storage.

f. **Encourage establishment of processing units:** Considering there are very few processing units for pulses, the government should encourage the private sector to come forward by setting in place right kind of institutional and financial mechanisms.

g. **Access to information:** Framers in the project area have felt the need for greater access to information on weather and diseases based on the location or geography. The mobile SMS services are available to the farmers but the satisfaction levels on the nature and kind of information available is low. Farmers would benefit from improved communication by the Department of Agriculture, Government of Maharashtra on the nature of available subsidies and support in the project, and how to avail these.

Conclusions 7



7. Conclusions

The agricultural produce landscape in India is undergoing significant and rapid change. This is primarily led by changing consumer demand preferences, as rising incomes modify the contents of the household food basket in both urban and rural India. Concern for food safety and assured year-round availability of quality agricultural produce at reasonable prices are demands which have emerged at the top of the supply chain. The share of organised retail in increasing in the country and is likely to play an increasingly important role in influencing the nature of agricultural markets in the coming decade.

The government on its part has played a transformational role in stepping up investments in agriculture by implementing three flagship programmes namely Rashtriya Krishi Vikas Yojna (RKVY), National Food Security Mission (NFSM) and National Horticulture Mission (NHM). The recent passage of the National Food Security Bill will require the sourcing of huge volumes of food from domestic producers. Traditional production and supply arrangements are unlikely to prove adequate in meeting the challenges posed by these developments.

In this regard, the Public Private Partnership for Integrated Agriculture Development (PPPIAD) programme initiated in Maharashtra is a path breaking initiative. It combines the operational efficiencies of the private sector and the investment by the public sector in a framework with targets relating to quantifiable outputs with defined timelines and strategies.

Rallis India Limited, implementing the Value Chain Development of the Pulses project with Agriculture Department under PPPIAD scheme has developed an efficient model to educate farmers beginning from land preparation to harvesting. The company has given importance to details in improving production through regular training, exposure visits, farmer contact programmes and exposure visits. It has also encouraged farmers to adopt best practices.

The project has enabled aggregating farmers into groups and added value for integrating the agricultural supply chain for pulses. There has been significant increase in the production of pulses as a result of the project interventions and improvement in value to farmers in procurement. This has been made possible by implementing a series of well thought out and coordinated training, awareness and demonstration activities. The project created a framework where the government and the private company have worked in tandem with the government, supporting the development of the back end of the supply chain while private company providing the market linkage opportunities to the farmers.

While the first year has seen initial success, it is important that the concerns raised are addressed in the project design and implementation so as to provide enhanced opportunities to the farming community and maximise the outcome. The

project will be able to leave a lasting legacy by way of transforming the way farming is practiced with the engagement of the government and private company keeping farmer interest at the core of all the interventions.

In words of the farmers of Vadaval Nagnath village in Chakur block, Latur District "the PPPIAD project has shown us the way forward, to move out from traditional farming practises and implement scientific measures for enhancing our income and provide a better future to our children."

Recommendations

The observations/ suggestions based on the interactions and primary survey have been tabulated as recommendations for the Department of Agriculture, Government of Maharashtra and Rallis India Limited (See Table 9).

Table 9: Study recommendations

Element	Recommendations for Government of Maharashtra	Recommendations for Rallis India Limited
Project Design	Modify the project design to include all farmers in a village. This will help enhance the impacts at a village level.	Create model villages in each talukas for greater awareness and improving the impacts of the interventions.
Project Duration	Increase the project duration from the current one year period to at least two years. This will enhance the sustainability of the interventions.	Emphasize on the need for sustaining the adoption of package of practices to increase production and subsequent income for farmers.
Project Approval	Ensure that the project approval is given in time such that the inputs are made available to the farmers at least a month before the sowing time.	During the project approval stage finalize the package of practices and get it approved in the project document for reducing delays
Soil Testing		Explore setting up mobile soil testing labs in vans for faster collection of samples and dissemination of results. This van can act as a mobile awareness centre.
Subsidy Mechanism	Reduce delays in transferring the subsidy for micro-irrigation to the farmers. The delay in getting the subsidy acts as a major deterrent for the adoption of micro-irrigation and measures needs to be taken to ensure that farmers get the subsidy in the least possible time.	Compile information of farmers who have applied for subsidy under the project and submit them to the government for speedy approval.
Procurement	Remove the storage limit of 250 tonne to allow companies to procure and store more from the farmers.	Set up procurement centres at the taluka level and start procuring Moong, Urad and Gram in addition to Arhar.

Element	Recommendations for Government of Maharashtra	Recommendations for Rallis India Limited
Processing Centres	Provide institutional and financial support for setting up processing centres for pulses by the private sector.	Develop models for processing centres involving local communities.
Information Sharing	Undertake campaigns to spread information on government schemes and delivery mechanisms.	Deliver information on government schemes during the capacity building and awareness programmes through greater involvement of District Agriculture Department officials.
Recognition for farmers	Develop an award scheme for farmers/ farmer groups who have done exceptional work in the delivery of the project goals.	Give more recognition to progressive farmers/ farmer groups in form of exposure visits and using them as key resource persons for training programmes.

Annexures

Annexures

Annexure 1: List of officials interacted

Department of Agriculture, Government of Maharashtra

S. No	Name	Designation
1	Dr. Sudhir Kumar Goyal	Additional Chief Secretary, Agriculture
2	Mr. Uday Deshmukh	Principal, Regional Agriculture Extension Management Training Institute, Pune and Project Coordinator, Pulses Project
3	Dr. T S Mote	District Supertending Agriculture Officer, Latur
4	Mr. G B Kalyanpad	Taluka Agriculture Officer, Degloor, Dist. Nanded
5	Mr. V.V. Lahane	Taluka Agriculture Officer, Nilanga Taluka, Dist. Latur
6	Mr. M M Sayed	Mandal Krishi Adhikari, Degloor, Dist. Nanded
7	Mr. PS Deshmukh	Agriculture Supervisor, Mustapur, Degloor, Dist. Nanded
8	Mrs. R R Yennawar	Agriculture Assistant, Mustapur
9	Mr. M Z Khan	Taluka Agriculture Officer, Taluka - Biloli, Dist- Nanded
10	Mr. G N Reddy	Madal Agriculture Officer
11	Mr. R J Chavan	Agriculture Assistant
12	Mr. N K Kokane	Agriculture Assistant
13	Mr. R G Bandewar	Agriculture Assistant
14	Mr. G N Waghmare	Agriculture Assistant
15	Mr. K S Manurkar	Agriculture Assistant
16	Mr. S P Naware	Agriculture Assistant
17	Mr. M K Kadam	Agriculture Assistant
18	Mrs. A.S. Kusbhage	Agriculture Assistant, Village - Mugaon, Nilanga Taluka, Dist. Latur
19	Miss. A.S. Maske	Agriculture Assistant, Village - Panchincholi, Nilanga Taluka, Dist. Latur
20	Mr. N.P. Mandade	Mandal Adhikari, Nitur Mandak, Nilanga Taluka, Dist. Latur
21	Mr. Shankar Madhukar Madole	Agriculture Assistant, Village - Limbala (Dau), Ausa Taluka, Dist.- Latur
22	Mr. M G Ghule	Agriculture Assistant, Village - Vadaval, Chakur Taluka, Dist.- Latur
23	Mr. Deepak Madhav Jadhav	Agriculture Assistant, Village - Dhanuri, Lohara Taluka , Dist.- Osmanabad

Rallis India Limited

S. No	Name	Designation
1	Mr. Ravinder Kumar	Senior Manager
2	Mr. Prashant G Chavan	Assistant Manager
3	Mr. Sunil D Sonkambale	Technical Officer
4	Mr. Ajay Anant Madrewar	Technical Officer
5	Mr. Dinesh Chandrakant Utage	Technical Officer
6	Mr. Trambak Ramji Uppe	Technical Officer
7	Mr. Ajeet Kumar Janakrao Darode	Crop Advisor
8	Mr. Ghodake Ashok Venkat	Crop Advisor
9	Mr. Utage Yogesh Chandrakant	Crop Advisor
10	Mr. Gopal Chandrakant Jagtap	Crop Advisor
11	Mr. Vinayak Lala Rathod	Crop Advisor
12	Mr. Udhav Subhashrao Dhuppe	Crop Advisor
13	Mr. Pradip Ramchandra Kambale	Crop Advisor
14	Mr. Sandeep Bhagwan More	Crop Advisor
15	Mr. Vairale Prakash Vishvanath	Crop Advisor
16	Mr. Devidas Digambar Panchal	Crop Advisor
17	Mr. Shyamsundar Balaji Bodhane	Crop Advisor

Annexure 2: List of farmers interviewed

S. No.	Date	Name of the Farmer	Village	Place	Taluka	Dist
1	20.09.13	Dattatray Kamlakar Kokane	Chilvantwadi	Panchincholi	Nilanga	Latur
2	20.09.13	Baswaraj Virbhadrappa Kokane	Balkunda	Panchincholi	Nilanga	Latur
3	20.09.13	Shivanand S. Kokane	Balkunda	Panchincholi	Nilanga	Latur
4	20.09.13	Mukesh Eknath Mete	Chilvantwadi	Panchincholi	Nilanga	Latur
5	20.09.13	Dagdoba Gyanoba Dive	Panchincholi	Panchincholi	Nilanga	Latur
6	20.09.13	Sayyed Khudboddin Kashim	Panchincholi	Panchincholi	Nilanga	Latur
7	20.09.13	Govind Ramrao Khandekar	Panchincholi	Panchincholi	Nilanga	Latur
8	20.09.13	Vyankat Harishchandra Kolhe	Omerga	Panchincholi	Nilanga	Latur
9	20.09.13	Adinath Suresh Rankhamb	Omerga	Panchincholi	Nilanga	Latur
10	20.09.13	Ratnaji Govindrao Patil	Bhutmugali	Panchincholi	Nilanga	Latur
11	20.09.13	Maharudra Panchappa Shette	Usturi	Panchincholi	Nilanga	Latur
12	20.09.13	Umakant Panditrao Suryavanshi	Makani	Panchincholi	Nilanga	Latur
13	20.09.13	Tukaram Pandurang Suryavanshi	Makani	Panchincholi	Nilanga	Latur
14	20.09.13	Maruti Apparao Tambhale	Kalmugali	Panchincholi	Nilanga	Latur
15	20.09.13	Dattatray Digambar Jadhav	Panchincholi	Panchincholi	Nilanga	Latur
16	20.09.13	Ulhas Magardhwaj Suryavanshi	Makani	Panchincholi	Nilanga	Latur
17	20.09.13	Baswaraj Ram Limbale	Badur	Panchincholi	Nilanga	Latur
18	20.09.13	Mainoddin Mansursab Momin	Kalmugali	Panchincholi	Nilanga	Latur
19	20.09.13	Prabhakar Tukaram Patil	Talikhed	Panchincholi	Nilanga	Latur
20	20.09.13	Shivaji Manmathappa Kubhe	Panchincholi	Panchincholi	Nilanga	Latur
21	20.09.13	Angad Goroba Gavane	Panchincholi	Panchincholi	Nilanga	Latur
22	20.09.13	Baswant Eknath Hangarge	Panchincholi	Panchincholi	Nilanga	Latur
23	20.09.13	Balkishan Nagorao Jadhav	Panchincholi	Panchincholi	Nilanga	Latur
24	20.09.13	Rajkumar Sadhu Jadhav	Panchincholi	Panchincholi	Nilanga	Latur
25	20.09.13	Madhav Vyankatrao Jadhav	Panchincholi	Panchincholi	Nilanga	Latur
26	20.09.13	Shivaji Sandipanrao Bagal	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
27	20.09.13	Prakash Sangram Narangwade	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
28	20.09.13	Limbraj Kashinath Sapate	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
29	20.09.13	Vyankat Baburao Narangwade	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
30	20.09.13	Bharat Shivaji Dongare	Halegaon	Limbala [Dau]	Ausa	Latur
31	20.09.13	Pandurang Vyankatrao Salgar	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
32	20.09.13	Sangappa Shankarappa Teli	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
33	20.09.13	Sanjay Bapurao Patil	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
34	20.09.13	Ganesh Madhav Kovhale	Halegaon	Limbala [Dau]	Ausa	Latur
35	20.09.13	Balaji Chandrabhan Suryavanshi	Nagarsoga	Limbala [Dau]	Ausa	Latur
36	20.09.13	Arab Talib Samad	Nagarsoga	Limbala [Dau]	Ausa	Latur

S. No.	Date	Name of the Farmer	Village	Place	Taluka	Dist
37	20.09.13	Manoj Baburao Dudhbhate	Ashiv	Limbala [Dau]	Ausa	Latur
38	20.09.13	Parmeshwar Shivhar Samangave	Nandurga	Limbala [Dau]	Ausa	Latur
39	20.09.13	Revan Madolappa Gadage	Nandurga	Limbala [Dau]	Ausa	Latur
40	20.09.13	Balaji Hande	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
41	20.09.13	Satish Ravan Kovhale	Halegaon	Limbala [Dau]	Ausa	Latur
42	20.09.13	Vilas Manikrao Narangwade	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
43	20.09.13	Raj Mahamad Patel	Gubal	Limbala [Dau]	Ausa	Latur
44	20.09.13	Rudrappa Vishwanath Birajdar	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
45	20.09.13	Manjur Suleman Patel	Gubal	Limbala [Dau]	Ausa	Latur
46	20.09.13	Dipak Shamrao Patil	Killari	Limbala [Dau]	Ausa	Latur
47	20.09.13	Bandu Tukaram Teli	Limbala [Dau]	Limbala [Dau]	Ausa	Latur
48	20.09.13	Indrajit Manikrao Shinde	Lamjana	Limbala [Dau]	Ausa	Latur
49	20.09.13	Sahebrao Tryambak Kakade	Ashiv	Limbala [Dau]	Ausa	Latur
50	20.09.13	Ismail Muktar Lamjana	Lamjana	Limbala [Dau]	Ausa	Latur
51	20.09.13	Keshav Shivhar Patil	Lamjana	Limbala [Dau]	Ausa	Latur
52	21.09.13	Bhagvat Uttam Vaghmare	Pakharsangavi	Bhatangali	Latur	Latur
53	21.09.13	Dagdu Navnath Erande	Pakharsangavi	Bhatangali	Latur	Latur
54	21.09.13	Gangadhar Nagorao Patil	Bhatangali	Bhatangali	Latur	Latur
55	21.09.13	Priyadarshan Gaurishankar Giravalkar	Bhatangali	Bhatangali	Latur	Latur
56	21.09.13	Srimant Manikrao Patil	Bhatangali	Bhatangali	Latur	Latur
57	21.09.13	Mukta Dilip Babuappa	Bhatangali	Bhatangali	Latur	Latur
58	21.09.13	Vishal Manikrao Todkar	Bhatangali	Bhatangali	Latur	Latur
59	21.09.13	Lakshman Namdev Gokule	Bhatangali	Bhatangali	Latur	Latur
60	21.09.13	Santosh Manoharrao Patil	Bhatangali	Bhatangali	Latur	Latur
61	21.09.13	Mahadev Sangram Boje	Bhatangali	Bhatangali	Latur	Latur
62	21.09.13	Hanmant Narsing Utekar	Bhatangali	Bhatangali	Latur	Latur
63	21.09.13	Hanmant Nagu Gokule	Bhatangali	Bhatangali	Latur	Latur
64	21.09.13	Eknath Govind Gokule	Bhatangali	Bhatangali	Latur	Latur
65	21.09.13	Rameshwar Bhagvatrao Garad	Bhadgaon	Bhatangali	Latur	Latur
66	21.09.13	Khanderao Annarao Shindalkar	Bhadgaon	Bhatangali	Latur	Latur
67	21.09.13	Ambadas Sakharam Kambale	Bhatangali	Bhatangali	Latur	Latur
68	21.09.13	Santosh Dadarao Baile	Malvati	Bhatangali	Latur	Latur
69	21.09.13	Subhash Dashrath Ghodake	Malvati	Bhatangali	Latur	Latur
70	21.09.13	Sidram Gangadhar Shinde	Kasarkheda	Bhatangali	Latur	Latur
71	21.09.13	Gunvant Baburao Belkunde	Kasarkheda	Bhatangali	Latur	Latur
72	21.09.13	Abdul Rahim Gafar Patel	Bori	Bhatangali	Latur	Latur

S. No.	Date	Name of the Farmer	Village	Place	Taluka	Dist
73	21.09.13	Shalik Namdevrao Thormothe	Bori	Bhatangali	Latur	Latur
74	21.09.13	Rameshwar Mahaling Dhumal	Nilkanth	Bhatangali	Latur	Latur
75	21.09.13	Basweshwar Devidas Dhumal	Masla	Bhatangali	Latur	Latur
76	21.09.13	Basling Shesherao Bidve	Masla	Bhatangali	Latur	Latur
77	21.09.13	Navnath Prabhuappa Patil	Bhatangali	Bhatangali	Latur	Latur
78	21.09.13	Narayan Rajesaheb Patil	Bhatangali	Bhatangali	Latur	Latur
79	21.09.13	Ramakant Dattarao Patil	Bhatangali	Bhatangali	Latur	Latur
80	21.09.13	Vinod Bhalchandra Badgire	Sonavati	Bhatangali	Latur	Latur
81	21.09.13	Ram Ashok Badgire	Sonavati	Bhatangali	Latur	Latur
82	21.09.13	Pandurang Pandhari Badgire	Sonavati	Bhatangali	Latur	Latur
83	21.09.13	Mukesh Dnyanoba badgire	Sonavati	Bhatangali	Latur	Latur
84	21.09.13	Balaji Gunvant Madde	Bhatangali	Bhatangali	Latur	Latur
85	21.09.13	Vamanrao rajaram Patil	Gadewadi	Vadval [N]	Chakur	Latur
86	21.09.13	Madhav Ramchandra Degave	Gadewadi	Vadval [N]	Chakur	Latur
87	21.09.13	Sunil Vasantrao Tambare	Vaygaon	Vadval [N]	Chakur	Latur
88	21.09.13	Dnyaneshwar Bapurao Patil	Vaygaon	Vadval [N]	Chakur	Latur
89	21.09.13	Bhaskar Vyankatrao Mane	Vaygaon	Vadval [N]	Chakur	Latur
90	21.09.13	Santosh Ramchandra Honrao	Jam	Vadval [N]	Chakur	Latur
91	21.09.13	Hanmant Bapurao Badgire	Mahadevwadi	Vadval [N]	Chakur	Latur
92	21.09.13	Baburao Dnyanoba Chame	Mahadevwadi	Vadval [N]	Chakur	Latur
93	21.09.13	Sarangdhar Vishnudas Solunke	Nandgaon	Vadval [N]	Chakur	Latur
94	21.09.13	Santosh Shivajirao Solunke	Nandgaon	Vadval [N]	Chakur	Latur
95	21.09.13	Mohan Pandhari Honrao	Jam	Vadval [N]	Chakur	Latur
96	21.09.13	Suryakant Vasantrao Honrao	Jam	Vadval [N]	Chakur	Latur
97	21.09.13	Tukaram Namdev Matlakute	Tivatghal	Vadval [N]	Chakur	Latur
98	21.09.13	Gunderam Raosaheb Shinde	Tivatghal	Vadval [N]	Chakur	Latur
99	21.09.13	Maroti Bhagvat Malshette	Kharabwadi	Vadval [N]	Chakur	Latur
100	21.09.13	Sahebrao Vyankatrao Dappadwad	Kharabwadi	Vadval [N]	Chakur	Latur
101	21.09.13	Santosh Suryakant Kalkote	Sugaon	Vadval [N]	Chakur	Latur
102	21.09.13	Vijaypal Suryabhan Gaikwad	Sugaon	Vadval [N]	Chakur	Latur
103	21.09.13	Sopan Angadrao Kale	Sugaon	Vadval [N]	Chakur	Latur
104	21.09.13	Prakash Dnyanoba Jadhav	Sugaon	Vadval [N]	Chakur	Latur
105	21.09.13	Balasaheb Panditrao Manale	Sugaon	Vadval [N]	Chakur	Latur
106	21.09.13	Tukaram Rakmaji Gangthade	Unni	Vadval [N]	Chakur	Latur
107	21.09.13	Mahadev Virbhadra Birajdar	Limbalwadi	Vadval [N]	Chakur	Latur
108	21.09.13	Jivanrao Nalegaonkar	Nalegaon	Vadval [N]	Chakur	Latur

S. No.	Date	Name of the Farmer	Village	Place	Taluka	Dist
109	21.09.13	Sanjay Narayanrao Birajdar	Nalegaon	Vadval [N]	Chakur	Latur
110	21.09.13	Hanmant Sharnappa Jangave	Vadval [N]	Vadval [N]	Chakur	Latur
111	21.09.13	Ashok Madhavrao Birajdar	Limbalwadi	Vadval [N]	Chakur	Latur
112	21.09.13	Parmeshwar Vitthal Savant	Atola	Vadval [N]	Chakur	Latur
113	21.09.13	Bhanudas Kishan Badke	Atola	Vadval [N]	Chakur	Latur
114	21.09.13	Vishwanath Shette	Atola	Vadval [N]	Chakur	Latur
115	21.09.13	Ramakant Kashinath Bhajage	Vadval [N]	Vadval [N]	Chakur	Latur
116	21.09.13	Hanmant Jangave	Vadval [N]	Vadval [N]	Chakur	Latur
117	21.09.13	Uddhav Annarao Birajdar	Limbalwadi	Vadval [N]	Chakur	Latur
118	21.09.13	Govind Nivrutti Jadhav	Hippalgaon	Vadval [N]	Chakur	Latur
119	21.09.13	Dhondiram Kashinath Rekulge	Vadval [N]	Vadval [N]	Chakur	Latur
120	21.09.13	Mahadev Gorakhnath Ghule	Vadval [N]	Vadval [N]	Chakur	Latur
121	21.09.13	Satish Maruti Shinde	Vadval [N]	Vadval [N]	Chakur	Latur
122	21.09.13	Kashinath Digambar Honrao	Savargaon [T]	Vadval [N]	Chakur	Latur
123	21.09.13	Maharudra Vishwanath Swami	Savargaon [T]	Vadval [N]	Chakur	Latur
124	21.09.13	Vyankat Hippalgave	Kaddukini	Vadval [N]	Chakur	Latur
125	22.09.13	Kisan Bhagvanrao Jagdale	Sangvi	Padoli	Osmanabad	Osmanabad
126	22.09.13	Shrimant Chandrakantrao Patil	Sangvi	Padoli	Osmanabad	Osmanabad
127	22.09.13	Ravindra Pandurangrao Patil	Sangvi	Padoli	Osmanabad	Osmanabad
128	22.09.13	Dnyaneshwar Gundu Pujari	Padoli	Padoli	Osmanabad	Osmanabad
129	22.09.13	Dilip Chakradhari Pawar	Padoli	Padoli	Osmanabad	Osmanabad
130	22.09.13	Rambhau Biru Survase	Samudrawani	Padoli	Osmanabad	Osmanabad
131	22.09.13	Satish Manohar Mansule	Samudrawani	Padoli	Osmanabad	Osmanabad
132	22.09.13	Ramanand Prabhu Dhormare	Samudrawani	Padoli	Osmanabad	Osmanabad
133	22.09.13	Prakash Shahuraj Kadam	Sangvi	Padoli	Osmanabad	Osmanabad
134	22.09.13	Vilas Shesherao Survase	Sangvi	Padoli	Osmanabad	Osmanabad
135	22.09.13	Prakash Shesherao Bankar	Ghugi	Padoli	Osmanabad	Osmanabad
136	22.09.13	Nitin Ashok Javle	Ghugi	Padoli	Osmanabad	Osmanabad
137	22.09.13	Mahadev Harishchandra Dhormare	Mendha	Padoli	Osmanabad	Osmanabad
138	22.09.13	Manik Bapurao Patil	Nandurga	Padoli	Osmanabad	Osmanabad
139	22.09.13	Limbraj Dashrath Saynaji	Nandurga	Padoli	Osmanabad	Osmanabad
140	22.09.13	Mahadev Panditrao Patil	Nandurga	Padoli	Osmanabad	Osmanabad
141	22.09.13	Shankar Rangnath Salunke	Nandurga	Padoli	Osmanabad	Osmanabad
142	22.09.13	Sanjay Rangnath Dhavle	Borgaon Raje	Padoli	Osmanabad	Osmanabad
143	22.09.13	Ashok Vithal Survase	Mendha	Padoli	Osmanabad	Osmanabad
144	22.09.13	Vikram Arjun Giri	Mendha	Padoli	Osmanabad	Osmanabad

S. No.	Date	Name of the Farmer	Village	Place	Taluka	Dist
145	22.09.13	Ramhari Vaijanath Bansode	Sangvi	Padoli	Osmanabad	Osmanabad
146	22.09.13	Vyankat Mahadev Waghamare	Kamegaon	Padoli	Osmanabad	Osmanabad
147	22.09.13	Balaji Vasant Kovhale	Sangvi	Padoli	Osmanabad	Osmanabad
148	22.09.13	Shivaji Dnyandev Kapse	Kamegaon	Padoli	Osmanabad	Osmanabad
149	22.09.13	Arun Sandipan Kadam	Kamegaon	Padoli	Osmanabad	Osmanabad
150	22.09.13	Hanmant Vaijanath Kadam	Kamegaon	Padoli	Osmanabad	Osmanabad
151	22.09.13	Ram Janardhan Pawar	Baramgaon (K)	Padoli	Osmanabad	Osmanabad
152	22.09.13	Dhondiram Mahadev Panhale	Baramgaon (K)	Padoli	Osmanabad	Osmanabad
153	22.09.13	Pratabp Janardhan Shinde	Sangvi	Padoli	Osmanabad	Osmanabad
154	22.09.13	Kiran Dnyandev Bachate	Sangvi	Padoli	Osmanabad	Osmanabad
155	22.09.13	Sudhir Ankush Shirsagar	Kajla	Padoli	Osmanabad	Osmanabad
156	22.09.13	Vilas Vaman Ahire	Kajla	Padoli	Osmanabad	Osmanabad
157	22.09.13	Ramchandra Bhagvan Kadam	Kajla	Padoli	Osmanabad	Osmanabad
158	22.09.13	Ganesh Rajendra Mahamuni	Padoli	Padoli	Osmanabad	Osmanabad
159	22.09.13	Rajendra Gyanba Nalwade	Takli	Padoli	Osmanabad	Osmanabad
160	22.09.13	Sampat Tryambak Rankhamb	Takli	Padoli	Osmanabad	Osmanabad
161	22.09.13	Pratap Balbhim Gaikwad	Takli	Padoli	Osmanabad	Osmanabad
162	22.09.13	Bharat Kisanrao Jadhav	Padoli	Padoli	Osmanabad	Osmanabad
163	22.09.13	Tanaji Vyankat Mule	Chikhli	Padoli	Osmanabad	Osmanabad
164	22.09.13	Kiran Goroba Mahanure	Takli	Padoli	Osmanabad	Osmanabad
165	22.09.13	Nilkant Nanasaheb Kolge	Nandurga	Padoli	Osmanabad	Osmanabad
166	22.09.13	Hanmantrao Chandrakant Devkatte	Nandurga	Padoli	Osmanabad	Osmanabad
167	22.09.13	Jalindar Arjun Pawar	Sangvi	Padoli	Osmanabad	Osmanabad
168	22.09.13	Indrajit Mahadev Nande	Borgaon Raje	Padoli	Osmanabad	Osmanabad
169	22.09.13	Kamlakar Murlidhar Pawar	Padoli	Padoli	Osmanabad	Osmanabad
170	22.09.13	Baburao Bhagvan Gund	Padoli	Padoli	Osmanabad	Osmanabad
171	22.09.13	Tanaji Hariram Gaikwad	Takli	Padoli	Osmanabad	Osmanabad
172	22.09.13	Kakasaheb Bhimrao Patil	Takli	Padoli	Osmanabad	Osmanabad
173	22.09.13	Ravindra Gajendra Ingale	Kangara	Padoli	Osmanabad	Osmanabad
174	22.09.13	Ranjeet Anantrao Ingale	Kangara	Padoli	Osmanabad	Osmanabad
175	22.09.13	Satish Goroba Javle	Ghugi	Padoli	Osmanabad	Osmanabad
176	22.09.13	Deepak Ramrao Pawar	Padoli	Padoli	Osmanabad	Osmanabad
177	22.09.13	Kiran Nanasaheb Gund	Padoli	Padoli	Osmanabad	Osmanabad
178	22.09.13	Vilas prahlad Dhawale	Padoli	Padoli	Osmanabad	Osmanabad
179	23.09.13	Narendra Shivajirao Patil	Ekondi	Dhanuri	Lohara	Osmanabad

S. No.	Date	Name of the Farmer	Village	Place	Taluka	Dist
180	23.09.13	Shahuraj Balasaheb Deshmukh	Ekondi	Dhanuri	Lohara	Osmanabad
181	23.09.13	Pradduman Vasantrao Deshmukh	Rajegaon	Dhanuri	Lohara	Osmanabad
182	23.09.13	Bhavan Madhkar Deshmukh	Rajegaon	Dhanuri	Lohara	Osmanabad
183	23.09.13	Amol Ashokrao Deshmukh	Rajegaon	Dhanuri	Lohara	Osmanabad
184	23.09.13	Balasaheb Yeshvant Jagtap	Bhatagli	Dhanuri	Lohara	Osmanabad
185	23.09.13	Amol Basvanappa Vovandkar	Bhatagli	Dhanuri	Lohara	Osmanabad
186	23.09.13	Govind Madhav Jagtap	Bhatagli	Dhanuri	Lohara	Osmanabad
187	23.09.13	Tanaji Bhanudas Anandgaonkar	Bhatagli	Dhanuri	Lohara	Osmanabad
188	23.09.13	Keshav Maruti Patil	Khed	Dhanuri	Lohara	Osmanabad
189	23.09.13	Dadarao Gurappa Ghavale	Khed	Dhanuri	Lohara	Osmanabad
190	23.09.13	Narendra Shivhari Salunke	Dhanuri	Dhanuri	Lohara	Osmanabad
191	23.09.13	Sambhaji Bhimrao Sonvane	Kavtha	Dhanuri	Omarga	Osmanabad
192	23.09.13	Prabhakar Baburao Survase	Koral	Dhanuri	Omarga	Osmanabad
193	23.09.13	Udhav Madhavrao Jagtap	Gugalgaon	Dhanuri	Omarga	Osmanabad
194	23.09.13	Shankar rama Gaikwad	Chincholi (B)	Dhanuri	Omarga	Osmanabad
195	23.09.13	Digambar Murlidhar Birajdar	Chincholi (B)	Dhanuri	Omarga	Osmanabad
196	23.09.13	Anil Ambadas Jadhav	Ekurgawadi	Dhanuri	Omarga	Osmanabad
197	23.09.13	Omprakash Madanlal Sharma	Ghoral	Dhanuri	Omarga	Osmanabad
198	23.09.13	Govind Vishvanath Pawar	Naichakur	Dhanuri	Omarga	Osmanabad
199	23.09.13	Sachin Shivajirao Jadhav	Makni	Dhanuri	Lohara	Osmanabad
200	23.09.13	Vithal Manikrao Sathe	Makni	Dhanuri	Lohara	Osmanabad
201	23.09.13	Deepak Shrimant Alange	Makni	Dhanuri	Lohara	Osmanabad
202	23.09.13	Govind Kisan Chavan	Makni	Dhanuri	Lohara	Osmanabad
203	23.09.13	Balaji Baburao Sathe	Makni	Dhanuri	Lohara	Osmanabad
204	23.09.13	Karan Vasantrao Deshmukh	Rajegaon	Dhanuri	Lohara	Osmanabad
205	23.09.13	Anil Abhimaneu Deshmukh	Rajegaon	Dhanuri	Lohara	Osmanabad
206	23.09.13	Manoj Kashinath Shyamgire	Madaj	Dhanuri	Omarga	Osmanabad
207	23.09.13	Shivhari Namdev Salunke	Dhanori	Dhanuri	Lohara	Osmanabad
208	23.09.13	Vasim Mubarak Karbhari	Dhanori	Dhanuri	Lohara	Osmanabad
209	23.09.13	Ajit Shrimant Jadhav	Dhanori	Dhanuri	Lohara	Osmanabad
210	23.09.13	Vyankat Shankarrao Kulkarni	Dhanori	Dhanuri	Lohara	Osmanabad
211	23.09.13	Ramesh Raghunat Jadhav	Dhanori	Dhanuri	Lohara	Osmanabad
212	23.09.13	Pravin Madhav Chandanshive	Nagur	Dhanuri	Lohara	Osmanabad
213	23.09.13	Subhash Vithal Kale	Murshadpur	Dhanuri	Lohara	Osmanabad
214	23.09.13	Nagnath Pandurang Bansode	Murshadpur	Dhanuri	Lohara	Osmanabad
215	23.09.13	Mahesh Patil	Murshadpur	Dhanuri	Lohara	Osmanabad
216	23.09.13	Balvant Devrao Patil	Kavtha	Dhanuri	Omarga	Osmanabad

S. No.	Date	Name of the Farmer	Village	Place	Taluka	Dist
217	23.09.13	Atul Suresh Chavan	Mulaj	Dhanuri	Omarga	Osmanabad
218	23.09.13	Gahininath Vyankoba Chavan	Mulaj	Dhanuri	Omarga	Osmanabad
219	23.09.13	Jayhind Ravsab More	Murshadpur	Dhanuri	Lohara	Osmanabad
220	23.09.13	Gopalhari Maharaj	Murshadpur	Dhanuri	Lohara	Osmanabad
221	24.09.13	Madhavrao Umbarao kerure	Sugaon	Narangal	Degloor	Nanded
222	24.09.13	Ganeshrao Dattatray Khisse	Sugaon	Narangal	Degloor	Nanded
223	24.09.13	Vitthalrao Ramrao Sugaonkar	Sugaon	Narangal	Degloor	Nanded
224	24.09.13	Maroti Venkoba Kerure	Sugaon	Narangal	Degloor	Nanded
225	24.09.13	Sangram Hanmantrao Bejagamwar	Sugaon	Narangal	Degloor	Nanded
226	24.09.13	Shivling Kishan Bejagamwar	Mansakharga	Narangal	Degloor	Nanded
227	24.09.13	Shivraj Hanmantrao Bamne	Mansakharga	Narangal	Degloor	Nanded
228	24.09.13	Venkat Kondiba Bamne	Mansakharga	Narangal	Degloor	Nanded
229	24.09.13	Balaji Jagannath Bamne	Mansakharga	Narangal	Degloor	Nanded
230	24.09.13	Shyamrao Hanmantrao Bamne	Mansakharga	Narangal	Degloor	Nanded
231	24.09.13	Digambar Marotirao Jadhav	Savargaon	Narangal	Degloor	Nanded
232	24.09.13	Bhikaji Vitthalrao Bamne	Savargaon	Narangal	Degloor	Nanded
233	24.09.13	Atul Venkatrao Moholkar	Savargaon	Narangal	Degloor	Nanded
234	24.09.13	Balaji Digambar kale	Tamlur	Narangal	Degloor	Nanded
235	24.09.13	Gangadhar Hanmantrao Gavte	Tamlur	Narangal	Degloor	Nanded
236	24.09.13	Narsing Digambarao kale	Tamlur	Narangal	Degloor	Nanded
237	24.09.13	Digambar Manikrao Jadhav	Medankallur	Narangal	Degloor	Nanded
238	24.09.13	Shivaji Gangadhar Bodhapalle	Medankallur	Narangal	Degloor	Nanded
239	24.09.13	Madhavrao Tompe Aalurkar	Aalur	Narangal	Degloor	Nanded
240	24.09.13	baburao Pailawar	Aalur	Narangal	Degloor	Nanded
241	24.09.13	Prakash Ganpatrao Kurhade	Karemalkapur	Narangal	Degloor	Nanded
242	24.09.13	Digambar Hanmant Bhagnure	Karemalkapur	Narangal	Degloor	Nanded
243	24.09.13	Shyam Hanmantrao Patil	Chainpur	Narangal	Degloor	Nanded
244	24.09.13	Yadav Gangaram Mallapure	Chainpur	Narangal	Degloor	Nanded
245	24.09.13	Saylu Lachmanna Amratvar	Chainpur	Narangal	Degloor	Nanded
246	24.09.13	Ashok Narsimlu Lokawar	Chainpur	Narangal	Degloor	Nanded
247	24.09.13	Prakash Vitthal Kamshette	Khanapur	Narangal	Degloor	Nanded
248	24.09.13	Dayanand Virbhadra Tadkole	Khanapur	Narangal	Degloor	Nanded
249	24.09.13	Piraji Namdev Patil	Khanapur	Narangal	Degloor	Nanded
250	24.09.13	Kishan Pundlikrao Bhagnure	Shahapur	Narangal	Degloor	Nanded
251	24.09.13	Sanjay Marotrao Potdar	Shahapur	Narangal	Degloor	Nanded
252	24.09.13	Ashok Narsimlu Lokawar	Shahapur	Narangal	Degloor	Nanded
253	24.09.13	Dilip Ramrao Dhire	Alapur	Narangal	Degloor	Nanded

S. No.	Date	Name of the Farmer	Village	Place	Taluka	Dist
254	24.09.13	Chandrakant Madhav Patil	Narangal	Narangal	Degloor	Nanded
255	24.09.13	Vitthal Manik Vananje	Narangal	Narangal	Degloor	Nanded
256	24.09.13	Aakash Shankar Patil	Narangal	Narangal	Degloor	Nanded
257	24.09.13	Tejerao Sangram Katte	Narangal	Narangal	Degloor	Nanded
258	24.09.13	Hanmant Lalappa Majre	Narangal	Narangal	Degloor	Nanded
259	25.09.13	Pandhari Nagnath Nomulwar	Hondala	Mustapur	Mukhed	Nanded
260	25.09.13	Sursinh hanumansinh	Hondala	Mustapur	Mukhed	Nanded
261	25.09.13	Baburao Madhavrao Suryawanshi	Hondala	Mustapur	Mukhed	Nanded
262	25.09.13	Baburao Hanmantrao Gound	Jamb	Mustapur	Mukhed	Nanded
263	25.09.13	Pundlik Shankarao Gound	Jamb	Mustapur	Mukhed	Nanded
264	25.09.13	Rajkumar Shesherao Jogdand	Jamb	Mustapur	Mukhed	Nanded
265	25.09.13	Vijaukumar Patil Chandolkar	Chandola	Mustapur	Mukhed	Nanded
266	25.09.13	Chandrashekhar Patil	Chandola	Mustapur	Mukhed	Nanded
267	25.09.13	Balaji Maroti Mohite	Kinala	Mustapur	Biloli	Nanded
268	25.09.13	Ganesh Gangadharao Pimple	Kinala	Mustapur	Biloli	Nanded
269	25.09.13	Vitthal Balajirao Mohite	Kinala	Mustapur	Biloli	Nanded
270	25.09.13	Madhav Govindrao Bhosle	Kinala	Mustapur	Biloli	Nanded
271	25.09.13	Sanjay Prabhu Chakore	Mustapur	Mustapur	Naigaon	Nanded
272	25.09.13	kondiba Chandar Boinwad	Mustapur	Mustapur	Naigaon	Nanded
273	25.09.13	Powar Sacchitanand Samarthraj	Pachpipli	Mustapur	Biloli	Nanded
274	25.09.13	Baliram Maroti Lone	Pachpipli	Mustapur	Biloli	Nanded
275	25.09.13	Venkat Datta Shinde	Pachpipli	Mustapur	Biloli	Nanded
276	25.09.13	Gangaram Vitthal Gaikwad	Pachpipli	Mustapur	Biloli	Nanded
277	25.09.13	Sanjay Maroti Soneri	Chinchala	Mustapur	Biloli	Nanded
278	25.09.13	Keshav Ashokrao Lone	Chinchala	Mustapur	Biloli	Nanded
279	25.09.13	Santaji Babarao Pandhre	Kothala	Mustapur	Naigaon	Nanded
280	25.09.13	Dnyaneshwar Raghunath Bembre	Kothala	Mustapur	Naigaon	Nanded
281	25.09.13	Mohanrao Nagorao Jadhav	Mustapur	Mustapur	Naigaon	Nanded
282	25.09.13	Sambhaji Devrao Jadhav	Mustapur	Mustapur	Naigaon	Nanded
283	25.09.13	Aanandrao Dnyaneshwar Jadhav	Mustapur	Mustapur	Naigaon	Nanded
284	25.09.13	Gaikwad Avinash nivratti	Atkali	Mustapur	Biloli	Nanded
285	25.09.13	Patil Vishwanath Raosaheb	Atkali	Mustapur	Biloli	Nanded
286	25.09.13	Boinwad Shivaji Nagorao	Atkali	Mustapur	Biloli	Nanded
287	25.09.13	Gaikwad Aananda Gangaram	Atkali	Mustapur	Biloli	Nanded
288	25.09.13	Boinwad Aananda Dhondiba	Atkali	Mustapur	Biloli	Nanded
289	25.09.13	Boinwad Bapuji Mahajan	Atkali	Mustapur	Biloli	Nanded

S. No.	Date	Name of the Farmer	Village	Place	Taluka	Dist
290	25.09.13	Pandharpure Hanmant Jakoji	Ramtirth	Mustapur	Biloli	Nanded
291	25.09.13	Dhumale Madhav Kishan	Ramtirth	Mustapur	Biloli	Nanded
292	25.09.13	Virbhadre Anil Piraji	Ramtirth	Mustapur	Biloli	Nanded
293	25.09.13	Boinwad Maroti Pandurang	Ramtirth	Mustapur	Biloli	Nanded
294	25.09.13	Wakarde Gangadhar Eknath	Ramtirth	Mustapur	Biloli	Nanded
295	25.09.13	Nemale Sopan Gangaram	Ramtirth	Mustapur	Biloli	Nanded
296	25.09.13	Jadhav Manohar	Savli	Mustapur	Biloli	Nanded
297	25.09.13	Lone Motiram	Savli	Mustapur	Biloli	Nanded
298	25.09.13	Kotkar Aananda	Savli	Mustapur	Biloli	Nanded
299	25.09.13	Ramkishan Lone	Savli	Mustapur	Biloli	Nanded
300	25.09.13	Patil Uttamrao Dashrathrao	Savli	Mustapur	Biloli	Nanded
301	25.09.13	Maroti Raghunath Jadhav	Talni	Mustapur	Biloli	Nanded
302	25.09.13	Madhav Gangadhar Dhumale	Talni	Mustapur	Biloli	Nanded
303	25.09.13	Vitthal Ganpati Shetkar	Talni	Mustapur	Biloli	Nanded
304	25.09.13	Dhumale Shivanand Madhav	Talni	Mustapur	Biloli	Nanded
305	25.09.13	Dumne Nagorao Gangaram	Talni	Mustapur	Biloli	Nanded
306	25.09.13	Ashok Vishwambhar Jadhav	Pachpipli	Mustapur	Biloli	Nanded
307	25.09.13	Devidas Digambar Mukadam	Pachpipli	Mustapur	Biloli	Nanded
308	25.09.13	Balvant Vitthalrao Lutte	Pachpipli	Mustapur	Biloli	Nanded
309	25.09.13	Aniruddh Ganpatrao Jadhav	Mustapur	Mustapur	Naigaon	Nanded
310	25.09.13	Balaji Dhondiba Chakore	Mustapur	Mustapur	Naigaon	Nanded
311	25.09.13	Gajanan Devidas Panchal	Ratoli	Mustapur	Naigaon	Nanded
312	25.09.13	Virbhadra Pradip Ashok	Ratoli	Mustapur	Naigaon	Nanded
313	25.09.13	Lone Dattahari Khatiram	Ratoli	Mustapur	Naigaon	Nanded
314	25.09.13	Laxman Prabhu Jadhav	Ratoli	Mustapur	Naigaon	Nanded
315	25.09.13	Patil Ganesh Sadashivrao	Ratoli	Mustapur	Naigaon	Nanded
316	25.09.13	Jadhav Ankush Motiram	Ratoli	Mustapur	Naigaon	Nanded
317	25.09.13	Rajendra Parshuram Kandurke	Chinchala	Mustapur	Biloli	Nanded
318	25.09.13	Hanmant Rajeppa Birkure	Chinchala	Mustapur	Biloli	Nanded
319	25.09.13	Bhujang Ramji Motarge	Eklimore	Mustapur	Naigaon	Nanded
320	25.09.13	Panchal Prakash Gangaram	Eklimore	Mustapur	Naigaon	Nanded
321	25.09.13	Swami Shankar Gangadhar	Eklimore	Mustapur	Naigaon	Nanded
322	25.09.13	Dongre Dhondiba Motiram	Eklimore	Mustapur	Naigaon	Nanded
323	25.09.13	Atul Ramrao Mundkar	Eklimore	Mustapur	Naigaon	Nanded
324	25.09.13	Piraji Govind Zurudwad	Hangarga	Mustapur	Naigaon	Nanded
325	25.09.13	Lone Parmeshwar Shivaji	Hangarga	Mustapur	Naigaon	Nanded
326	25.09.13	Chandrashekhar Patil	Hangarga	Mustapur	Naigaon	Nanded
327	25.09.13	Venkat Maroti Yetale	Hangarga	Mustapur	Naigaon	Nanded

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