

Excel – Parle – Farmers – A case of Partnership

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Even after 59 years of independence, the quality of life of the Indian farmer has not improved as much as expected. The reasons for such a situation are not too far to seek. The terms of trade have never been favourable to agriculture and hence there has been no capital formation in the sector, which eventually resulted in lack of infrastructure creation leaving agriculture as a non-remunerative enterprise with absolutely stunted growth. Under these circumstances it is only towards the end of 10th plan period, the first time in the history of independent India, that the growth in Agriculture has recorded a rate of 1.8 percent against the projected annual growth rate of 4 percent. Thanks to the green revolution (37 years ago in late sixties) the country is able to reach self-sufficiency in food grains. In the last one decade the number of farmers' suicides have risen, water table has dropped, crop yields are stagnant, cost of farm inputs, implements, diesel have increased, land holdings fragmented and credit flow is scarce clutching the farmer in an all-round trap.

Given this scenario Indian agriculture not only needs a second green revolution or evergreen revolution but also requires a commercial treatment. It is in this context that agriculture needs to be opened up gradually while guarding and protecting the interests of the vulnerable farming community. To achieve this end a collaborative effort by joining hands with various public, private and NGO partners would pave the way for agricultural growth. Several initiatives in public-private partnership mode for agricultural development suggest that such experiences have enriched the agri value chain benefiting all the stakeholders.

Excel Crop Care Limited (ECCL) initiated one such experiment called 'Excel and Me' where 'me' represents the farmers. ECCL extended its network to the farmers to provide services related to farm advisory, inputs and crop agronomy, which has improved the economic and overall living conditions of farmers in the given geographical area of their operation.

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Objective

The main objective of ECCL is to minimize the cost of cultivation of crops, improve production and productivity by providing advisory services and package of practices, thus increasing the income of farmers.

About Excel

Excel Crop Care Limited previously known as Excel Industries Limited is a pesticide company. Excel started its operations 60 years back with an objective to provide services to farmers and build the confidence in farmers so that business would grow as the farmer grows. The company began with three manufacturing plants and over 1200 employees producing a range of market-leading brands. The company has a distribution network of 40000 dealers and customer base running into millions in the national and international market.

Over a period of time the company learnt that when a farmer uses the advice, he places his crop and future of his family in the hands of the company. This strengthened the commitment and focus to serve the farmers along with the business. The company is propagating a scientific approach to agriculture, which aims to will do away with wasteful practices and lead to better crop yields with lesser expenses. The company promotes Integrated Pest Management (IPM) to the farmers and demonstrates the use of Integrated Crop Management (ICM) techniques using innovative methods.

Excel And Me

Excel and Me is a project dedicated to the cause of Indian agriculture, with farmers becoming increasingly discerning and aware of the choices for agro solutions. In a nutshell, Excel and Me promotes a blend of modern technology and traditional farming methods with clarity and a systems approach to agriculture that is both long term and sustainable.

Excel, over the years, had initiated this systems approach wherein Integrated Pest Management (IPM) and Integrated Crop Management (ICM) were consistently promoted and propagated with a simplified practical understanding of these complex solutions. ICM is a comprehensive system of modern farming techniques, balancing the economic, production and environment related factors at farm level. As a result of these measures farmers are able to take advantage of increased productivity and reduced costs.

Under this programme Excel has selected 12 states, 25 locations, 20 crops and covers 251 villages in the country. The details are given in Table 1.

Table 1

S.No.	Zone	State	Locations	Crops	VAPs*
1.	North	Punjab	Mansa, Rayya	Paddy, Cotton, Tomato, Chilli, potato, wheat, mustard, pea and vegetable crops	2
2.		Haryana	Fatehabad Shahabad	do	2
3.		Uttar Pradesh	Banaras, Bilaspur	do	2
4.	South	Karnataka	Shurpur, Chickmagalur	Cotton, paddy, turmeric, tomato, chilli, G.N.Banana, flower, mango, gram	2
5.		Andhra Pradesh	Tanuku, Guntur	do	2
6.		Tamilnadu	Jampai, Gudiathum	do	2
7.	West	Madhya Pradesh	Indore, Ratlam, Khandwa	Soyabean, cotton, rose, wheat, gram, garlic, potato	3
8.		Rajasthan	Hanumangarh, Pushkar	do	2
9.		Maharastra	Katol, Narayan Gaon	do	2
10.	East	Bihar	Nalanda, Hajipur	Cauliflower, paddy, cotton, guava, brinjal, potato, onion	2
11.		West Bengal	South 24 Pargana North 24 Pargana	do	2
12.		Assam	Sonaribali, Bechimari	do	2

* Village Agricultural Practitioners

The programme identifies location specific problems of the farmers and then works with them by adopting "ICM Plots" where the work starts from correct practices in land management, water management, soil management, pest, disease and post harvest management. This integrated approach has reduced farmer's cost of cultivation and increased productivity and profitability.

Details of the area, farm families, ICM demos and other impact points of the programme are presented in the following tables. The impact assessment

on these locations viz Rayya in Punjab, Sahabad in Haryana and Bilaspur in Uttar Pradesh were available when the study was taken up.

The details of 1) total area under this programme, 2) Farming families covered, 3) Total biomass available in the study villages, 4) ICM demos conducted during the year 2004 and 5) the soil analysis and its results are given in table nos. 2,3,4,5 and 6 respectively which are self explanatory.

Table 2: Total Area under Excel & Me

ZONE	Total Cropped Area (Acres)	Total Cropped Area Under Excel & Me (Acres)	Percentage
North	87271	18079	20.72
South	41173	10104	24.54
East	20527.42	8497.09	41.39
West	175035	27375	15.64
All India	324006.42	64055.09	19.77

Table 3: Farming families under Excel & Me

ZONE	Total Farming Families in Selected Villages	Selected Farmers under Excel & Me	Percentage
North	11908	1022	8.58
South	16041	1200	7.48
East	12240	1500	12.25
West	17943	1355	7.55
All India	58132	5077	8.73

Table 4: Total Biomass available

ZONE	Total Cow Dung Available(T)	Kharif Crop Biomass(T)	Rabi Crop Biomass(T)	TOTAL
North	27683.5	16014	8270	51968
South	6424	17197.7	11252	34874
East	19165.38	43082.06	18156.96	57400
West	10951.75	8887	134187.2	154026
All India	64224.63	85180.76	171866.16	298268

Table 5: ICM demos conducted during the year 2004

Zone	ICM demo conducted	Crops covered
North	101	Paddy, Chilli, Tomato, Brinjal, Pea, Cotton
South	54	Paddy, Cotton, Tomato, Banana, Tumeric Chillie
East	38	Paddy, Brinjal, Onion
West	40	Soyabean, Cotton, Rose
All India	233	

Table 6: Soil Analysis and Results

A total of 1065 soil samples were analyzed all over india, and the results were;

- Organic Carbon: 65.07% of the samples analyzed were low in organic carbon content while 29.38% were having medium and 5.44% having high carbon content.
- Nitrogen: 40.37% of the samples were low in nitrogen content, 11.17% were having medium and 14.92% having high nitrogen content.
- Phosphorus: 45.82% of the samples analyzed were low in Phosphorus content, 35.11% were medium and 16.65 % were found to be high in phosphorus content.
- Potassium: 43.19% of the samples were low in Potassium content, 30.71% medium and the rest having a high potassium content.
- pH: Out of the total 1065 soil samples analyzed, 24.69% were found to be acidic soils while 48.3% were alkaline.

It was also noted that the number of sprays were reduced in the range of 25 percent to 36.36 percent when comparing between the ICM plots and non ICM plots for paddy crops in three regions of the study. Therefore it can be concluded that the cost of cultivation is brought down to an extent on account of using ICM practices. The details are given for the different regions viz Rayya, Bilaspur and Shahabad in the Table nos 7.1, 7.2 and 7.3 respectively.

The most important factors noticed in the study were rise in the yields per acre, reduction in the cost of cultivation per acre and reduction of cost of plant protection per acre. On all the three parameters it was found that ICM plots resulted in better yields, with lesser cost of cultivation and with lesser cost on plant protection measures. It has resulted in greater monetary gains to the farmers. These results were found on similar pattern across the three study regions the details of which are given in table nos. 8.1, 8.2 and 8.3 respectively.

**Table 7.1: Reduction in number of sprays:
ICM vs Local Plot for Paddy Crops at Rayya**

S.N	Farmers Name	Village	Time Interval Between Sowing & 1st Spray (Days)		No. Of Spray	
			Icm	Local	Icm	Local
1	Major Singh	Bhinder	30	30	2	2
2	Bitoo Sarpanch	Bhilaipur Dogr.	30	25	1	3
3	Gurdyal Singh	Dolonangal	25	25	2	2
4	Harjinder Singh	Bhorshi Rajp.	25	25	3	3
5	Balwant Singh	Pherumann	30	25	2	2
6	Mukhtiar Singh	Jodhe	26	20	2	3
7	Jagir Singh	Wadala	25	15	2	4
8	Sukhraj Singh	Sra Talwandi	25	29	3	4
9	Lakhwinder Singh	Jallowal	30	25	3	4
10	Anoop Singh	Kot Mehtab	25	25	2	3
	AVERAGE		24.8	24.4	2.2	3
% INCREASE / DECREASE						26.66

**Table 7.2: Reduction in number of sprays:
ICM vs Local Plot for Paddy Crops at Bilaspur**

S.N	Farmers Name	Village	Time Interval Btwn Sowing & 1st Spray (Days)		No. Of Sprays	
			Icm	Local	Icm	Local
1	Hardev Singh	Sihor	19	22	3	4
2	Charan Singh	Hajratpur	22	24	3	4
3	Sada Singh	Kartarpur	15	13	2	4
4	K.S.Khare	Artillery Farm	60	15	1	2
5	Kulwant Singh	Scindh House	30	32	1	1
6	Lakhvindra Singh	Jamunapur	25	23	1	2
7	Tajendra Singh	Jafrabad	21	16	2	3
8	Suveg Singh	Gotiya	-	9	-	1
9	Lalu Singh	Bidua Nagla	55	46	1	1
			27.44	22.22	1.55	2.44
% INCREASE/DECREASE			23.4			36.36

**Table 7.3: Reduction in number of sprays:
ICM vs Local Plot for Paddy Crops at Shahabad**

S.N	Farmers Name	Village	Time Interval Between Transplanting & 1st Spray (Days)		No. Of Sprays	
			Icm	Local	Icm	Local
1	Ramesh Chander	Khanpur	34	39	3	4
2	Ujagar Singh	Kishangarh	43	39	3	4
3	Udey Singh	Dorana	52	40	3	4
4	Gurcharan Singh	Nalvi	35	39	3	4
5	Gurmail Singh	Jainpur	33	54	3	4
6	Jasbir Singh	Saidpur	34	36	3	4
7	Gurpartap Singh	Padludamli	35	30	3	4
8	Dharampal Singh	Isherheri	35	30	3	4
9	Amit Kakkar	Kalsana	45	65	3	4
10	Ratan Singh	Nagla	38	50	3	4
	AVERAGE		38.4	42.2	3	4
% DECREASE						25%

**Table 8.1: Yield Benefit and Cost Reduction:
ICM Package at Rayya**

S.N.	Village	Yield Kg. Per Acre		Cost Of Cultivation (Rs. /Acre)		Cost Of Plant Protection (Rs. /Acre)	
		Icm	Local	Icm	Local	Icm	Local
1	Bhinder	3500	3300	2765	2800	400	700
2	Bhilaipur Dogr.	3200	3100	3445	3645	200	515
3	Dolonangal	3450	3550	2955	4555	400	400
4	Bhorshi Rajp.	3500	3500	3510	3510	450	450
5	Pherumann	1200	1100	2920	2870	350	350
6	Jodhe	1900	1800	3075	3225	400	550
5	Wadala	1150	1000	2655	2905	400	750
8	Sra Talwandi	1100	1100	3255	3005	500	750
9	Jallowal	1000	900	2135	2850	615	815
10	Kot Mehtab	1150	1100	3220	3220	400	450
	AVERAGE	2115	2045	2993.5	3258.5	411.5	573

Yield benefit with ICM package over local package: = 70 Kg /Acre

Reduction in cost with ICM: = Rs. 265.0

Extra net income / acre with ICM: = Rs. 1340

(Cost of extra produce + Reduction in cost cultivation)

**Table 8.2: Yield Benefit and Cost Reduction:
ICM Package at Bilaspur**

S.N.	Village	Yield Kg. Per Acre		Cost Of Cultivation (Rs. /Acre)		Cost Of Plant Protection (Rs. /Acre)	
		Icm	Local	Icm	Local	Icm	Local
1	Sihor	3575	3225	5634	5659	611	470
2	Hajratpur	2900	2800	5315	5601.5	623.5	944.5
3	Kartarpur	2835	2700	4585	4931	436	901
4	Artillary Farm (Behat)	2250	2000	4860	5128	445	530
5	Sindia Horse Farm	3100	3000	4829	4933	340	340
6	Jamuna pur	3200	3010	4776	4819	340	580
7	Jafrabad	3175	3025	5109	5248	560	830
8	Gotiya	2750	2700	4636	4737	225	485
9	Biduanagar	1580	1550	4722	4753	340	310
	AVERAGE	2816	2679	4940.2	5089.8	435.61	598.94

**Table 8.3: Yield Benefit and Cost Reduction:
ICM Package at Shahabad**

S.N.	Village	Yield Kg. Per Acre		Cost Of Cultivation (Rs. /Acre)		Cost Of Plant Protection (Rs. /Acre)	
		Icm	Local	Icm	Local	Icm	Local
1	Khanpur	3030	2900	8735	9240	460	680
2	Kishangarh	3000	2900	7545	8495	520	680
3	Dorana	3120	3000	4520	4670	460	730
4	Nalvi	3030	2900	7320	8250	460	680
5	Jainpur	3140	3000	4745	4560	520	730
6	Saidpur	3000	2860	5420	5165	460	680
7	Padludamli	3200	3040	7320	8260	460	680
8	Isherheri	3120	3040	4520	4770	520	680
9	Kalsana	3270	3100	4520	4780	460	730
10	Nagla	3220	3100	7320	8250	520	680
	AVERAGE	3113.0	2984.0	6196.5	6644	484	700

Yield benefit with ICM package over local package:

= 129 Kg /Acre

Reduction in cost with ICM:

= Rs. 447.5/acre

Extra net income / acre with ICM:

= Rs. 1221.5/acre

(Cost of extra produce + Reduction in cost cultivation)

The pesticides load reduction was also studied and it was noted that the toxicity in soil was reduced to an extent of 38 percent in Rayya region (table 9.1), 18 percent in Bilaspur region (table 9.2) and 53 percent in Shahabad region (table 9.3)

Table 9.1: Pesticide Load Reduction at Rayya

Toxicity Colour Indicators	Toxicity CLASS	ai g/ha used	
		FF	ICMF
Red	I	23.7	0
Yellow	II	505.8	319.6
Blue	III	0	0
Green	IV	8.75	10
Total		538.25	329.6

* Reduction 38%

Table 9.2: Pesticide Load Reduction at Bilaspur

Toxicity Colour Indicators	Toxicity CLASS	ai g/ha used	
		FF	ICMF
Red	I	216.6	0
Yellow	II	242	209.7
Blue	III	495.2	563.5
Green	IV	4.2	2.7
Total		956.7	776.1

* Reduction 18%

Table 9.3: Pesticide Load Reduction at Shahabad

Toxicity Colour Indicators	Toxicity CLASS	ai g/ha used	
		FF	ICMF
Red	I	90	0
Yellow	II	497.2	385
Blue	III	0	0
Green	IV	334.8	42
Total		922	427

* Reduction 53%

The results of this study are highly encouraging, suggesting that use of ICM practices not only improve that monetary gains of the farmers per unit of land but also improve the health of the soil.

VAP as an organic link

Excel appointed a local Agriculture graduate as a Village Agriculture Practitioner (VAP) and located them at their village itself to handle the cluster of villages by visiting and providing services to the farmers. The VAP has been trained in Participative Training Techniques (PTT) that covers various aspects like brainstorming sessions, instruction plans and talks, skill transfer and other interactive programs. These ensure that the farmers are totally involved in the discussions and all their problems come forth. Since every farmer is allowed to voice his concern and opinions, the entire team gets involved in analyzing and troubleshooting techniques. Critical problems are then discussed with agriculture scientists and optimum solutions are formulated. The VAP then help farmers implement the solutions in their farms in a much better way.

During training sessions, even the VAP gets to learn new ideas from the farmers such as traditional knowledge about farming, indigenous pest management techniques like use of neem, mixed cropping, ridge farming techniques, increasing the efficiency of pesticides and fungicides by mixing them with detergents etc. Each VAP hails from the region he operates in and therefore his knowledge base of the local farming, culture and the crops is certainly high. For instance, the VAPs working in north India have excellent command on the cultivation and protection of crops like Paddy, Cotton, Tomato, Chilli, Potato, Wheat, Mustard, and Pea.

Functions of VAP:

- ◆ Study the village area before entering into the programme and find out the major problems and issues in agriculture. The technological solutions are identified and tests at trial plots are conducted before giving advise to the farmers on these issues.
- ◆ Establish relationship with the village leaders, farmers and gradually discuss about the identified issues and tested solutions.
- ◆ Learning from the farmers about their current agricultural practices.
- ◆ Exploring the needs related to education, health and family welfare.
- ◆ Act as information provider to the farmers on all aspects including farm equipments, soil health, soil testing, application of fertilizers, pest control,

number of sprays, dosages to be applied etc.

- ◆ Focus is on farmer's economy through cost reduction and increase in productivity and net profit.
- ◆ Forecasting market driven crop selection for cultivation.
- ◆ Giving proper solutions on use of agri-inputs, seed selection, storage, market support and any value addition to the output.
- ◆ Networking with Agricultural department officials, KVK scientists, and Agricultural university scientists, NGOs that would enable farmers to seek alternative solutions for the unique problems of farmers.

Gyan Kendra

Gyan Kendra, is the place where farmers come and meet the VAP for farm advice, and other inputs. The Gyan Kendras are established at a centrally located point in the selected clustered villages. The center consists of a soil testing laboratory, library, crops photo gallery, a computer that is loaded with crop knowledge on cultivation practices and diseases, and management practices. A computer operator and VAP are available in this center to provide the services. The center provides the following services to the farmers;

- ◆ Soil testing facility
- ◆ Technique for compost preparation of good quality
- ◆ Information about ICM/IPM practices
- ◆ Information about beneficial insects
- ◆ Identification of insects and diseases
- ◆ Knowledge about bio-insecticides
- ◆ Information about good insecticides/pesticides
- ◆ Information about farm inputs and implements like sprayers and nozzles etc.
- ◆ Information about grain storage
- ◆ Information about control of insects and rodents in grain
- ◆ Library facility

Farmers Data Bank

At Gyan Kendra, a farmer's data bank is developed by collecting the base line information of all the farmers covered in Excel & Me programme. The database gives complete insight of the area and practices followed by the farmers. The information against the names of farmers relating to the crops they grow, acreages, method of cultivation, management practices, method of storage of grains etc is also a part of the database.

Excel retail outlet

Excel & Me not only offers advice to the farmers for crop cultivation but also provides quality inputs at a wholesale price. In view of the above, Excel has started a retail outlet at the Gyan Kendra to provide all inputs to the farmers at one place. The farmers who come to the Gyan Kendra not only receive proper advice but they can also get farm machinery on hire. At Gyan Kendra, trained persons for spraying are available on hire basis who also teach the methods of spray to farmers.

Role of public institutions

Presently there is no formal arrangement between Excel and other public institutions like KVK and Department of Agriculture. However, there are informal collaborative efforts to provide proper advice to the farmers. KVK scientists are invited by Excel in the farmers meet to share the latest research and practices. The scientists of Indian Vegetable Research Institute (IVRI), Varanasi, have provided the advice to grow vegetables in Excel and Me villages on the request of ECCL.

Parle-Excel-Farmers at Bahraich

Having seen the tremendous response of farmers in Excel and Me programme at Varanasi, Parle joined hands with Excel at Bahraich and initiated a 'Parle-Excel-Farmer' partnership. Bahraich is a backward district of Uttar Pradesh having 267 villages with sugarcane as a major crop and covers seventy thousand acres under sugarcane cultivation. The major drawback of the farmers

of sugarcane is that 96% of them grow rejected varieties of sugarcane with poor farm practices and very low yields. These two corporate partners aimed to cover 7000 ha. area under sugarcane production in the year 2004-05 and achieved 15340 ha in the very first year. Before this collaborative programme, the yield ranged between 250-300 q/acre, which now has risen to 400-450 q/acre. Continuous efforts are made to cultivate high quality sugarcane using high yielding varieties.

Parle-Excel-farmer programme has resulted in

- ◆ Increase in the yield by using improved varieties of sugarcane and package of practices
- ◆ Creating awareness about soil health and increase in the organic carbon content in soil.
- ◆ Creating awareness of using bio-compost and reduction in chemical fertilizer use.
- ◆ Creating awareness about the application of right inputs in the right proportion thus reducing the cost of cultivation.

Parle and Excel venture has helped in raising the living standards of the farmers. ECCL provides extension service to the farmers and Parle provides all the infrastructure facilities required for knowledge transfer. Excel started their extension work under the leadership of Dr. M.V. Potdar and Mr. Ranjan Kumar Singh who were actively involved in providing all farm advisory to farmers. They started encouraging the farmers to adopt hybrid varieties of sugarcane. Parle has provided 13 acres of land as research farm for conducting trials and demonstration of improved varieties. The ECCL took responsibility of conducting trials and demonstration on various improved varieties on this plot for the farmers. Some demonstrations were also conducted at farmer's fields so that building trust could be done very easily.

Parle has established seven Kisan Seva Kendras (KSK) at Parsendi, Kundasan, Badrauli, Marocha, Nandwal, Fakharpur, Bednapur locations within the catchment area of the factory and three more centers are being planned to be established at Bhagwanpur, Khaira, and Kaiserganj shortly. An Agriculture

Development officer (ACDO) is the in-charge for the center operations supported by 1-3 supervisors. The ACDO and supervisors are graduates in agriculture. Each supervisor is responsible for extension activities in 10-20 villages depending on the size of area allotted to the center. The KSK comprises of a training hall, library, soil testing laboratory, and a retail counter where all farm inputs and general grocery items are also sold. The farmers meet the ACDO at the centers to seek advice. Most of the time, the supervisors visit their fields and give the advice.

About Parle

Parle started its business operations in the year 1929 with a small factory set up in the suburbs of Mumbai city, to manufacture sweets and toffees. A decade later, in 1939, Parle Products began manufacturing biscuits, in addition to sweets and toffees. Parle established a reputation for the quality of their products. Parle has one factory at Mumbai that manufactures biscuits and confectioneries while another factory at Bahadurgarh in Haryana manufactures biscuits. Apart from this it has other smaller manufacturing units at different strategic places and has a wide distribution network with wholesalers and retailers.

Parle has nearly 1,500 wholesalers, catering to 4,25,000 retail outlets directly or indirectly. Over the years, Parle has grown to become a multi-million Dollar company. Many of the Parle products - biscuits or confectionaries, are market leaders in their category. Today, Parle enjoys a 40% share of the total biscuit market and a 15% share of the total confectionary market, in India. Parle brands have found their way into the hearts and homes of people all over India and abroad.

The sugarcane factory has been allotted an area of 7 km circular from the factory. This area is called as Gate area. The farmers of Gate area are primary suppliers of sugarcane for the factory. The Government also allotted Center area, which is beyond the Gate area. Some of the farmers of Center area are secondary suppliers of sugarcane to the factory. Parle is working with three sugarcane societies in this region. They are 1. Jarwal society, 2. Government society and 3. Nanpara society. The farmers register with the concerned society by paying Rs. 221 as the membership fee. Once the farmer becomes a member of the society, the farmer's land is surveyed and the hybrid varieties of sugarcane are supplied to the farmers on cost-to-cost basis. Excel

provides the extension services to the farmers. The services of the Excel scientist are available within 1 hour of a call made by the farmer. From time-to-time the farmer's fields is visited by the extension personnel of KSK who provide suitable advice to them. The farmer crop season is closely monitored by Parle-Excel and when the harvesting time comes, the farmer is given a ticket. The farmer takes his harvested crop to the nearest KSK where weighing machines are available. The farmer's crop is accurately weighed and the same is delivered to the factory. The company deposits the value of the produce in the bank account of the farmer. The transportation charges are also being paid to the farmers by the company.

Excel has identified the areas where the farmer needs immediate advisory and other help. These are – Termite Management, use of Improved varieties and conversion of crop biomass. For this Parle has provided 3 acres of space for accumulation of press mud which can be converted into compost and distributed to the farmers. The best agronomical practices have been followed in this area. Paired – Row – Technique is a method of raising field crop, which provides good microclimate for the proper growth and development of crop. In this method, proper circulation of air current and penetration of sunlight between the two rows reduces the chances of development of insect-pests and diseases.

The company also provides training to the local rural youth in spraying techniques and quantity of application of such inputs. The farmers also can hire the services of trained persons for spraying available at Gyan Kendra.

In future, the company may tie-up with some more buyers for the produce of farmers. The process, practices of cultivation and quality produce will become the hallmark of Excel brand of quality extension services. The image of ECCL and trust of farmers in them would establish strong linkage with several other buyers and farmers to procure the farm produce.

The company would like to approach other public partners including ATMA/KVK/Department of Agriculture etc. Excel is willing to work out the collaborations in PPP mode to provide the services to the farmers with other stakeholders.

Excel & Me programme is not merely a revenue / business model it is also a service model to build trust among the farmers.

Farmers' speak

Mr. Vikas Varma, working as a Village Agricultural Practitioner (VAP) at Gyan Kendra, Kachnar-Rajatalab, is a postgraduate in Agriculture sciences with specialization in the field of Seed Science and Technology. Every day he visits the villages, meets farmers and discusses crop related problems. He provides advise and the appropriate solutions to the farmers. He plans his visit in such a way that every day he covers 3 to 4 villages. The VAP conducts demonstrations, soil health camps, soil testing, and selection of seeds, seed treatment, water management, application of pesticides, spraying techniques, farm machinery to the farmers. The farmers give him utmost respect and trust him. The immediate problems of farmers are addressed over the mobile by the VAP.

"We farmers are totally at the mercy of the rain god. Changing weather pattern in the recent years has been a major problem and does not allow us to plan like we used to in the good old days. Added to this, the agro companies offer a range of products for complex pest and disease control. We are so confused that we cannot really trust any company or their brands. As for me, I had come to such a stage of frustration that I was seriously considering giving up agriculture much against my father's wish.

However, one day, the Excel VAP visited our village and started looking into the problems quite seriously. Over few cups of tea we discussed various things in detail like consistent pest attacks, immunity of pests to powerful sprays, degeneration of the soil, low quality of yield, and every other thing that has become a farmers' nightmare. That's when I chose to work with Excel and now I am a part of their very important project called Excel & Me".

- A farmer Ram Prasad.

Sri. Narender Mishra, a farmer of village Kallupur cultivates crops like chilli, pea, and wheat in 10 acres of land. He is one of the progressive farmers who follows the farm advice and recommendations given by the VAP of Excel. He does balanced cropping in his land by distributing chilli, pea, and wheat crops. Chilli is the major commercial crop grown in 6 acres land. He earned

thirty thousand rupees per acre as profit during the last season because of reduction in the cost of cultivation and good yield. In future, he would like to follow new techniques / practices in cultivation given by Excel and Me programme. He is a happy farmer with good economic condition and educated children. Like Narender Mishra, there are many other farmers of Excel and Me who are getting benefits out of this programme.

Sri. Satyaprakash Tiwari is a farmer with 13 acres of land in Kortanpur village of Behraich. He lost every thing in agriculture previously, when he was producing potatoes in his field. He was encouraged by Parle-Excel team to cultivate sugarcane crop with high yield recommended varieties. He started cultivating new varieties in three acres of land during last season and got good yield of 450 qu/acre. He earned about Rs.30,000 /acre as profit. Now the farmer has extended his sugarcane crop to 10 acres of land with an aim to get more profits, which can be used for improving economic condition of the family and also to provide good education to children.