

4. Review of work done under group farming

“Group Farming and Micro Irrigation A Way To Prosperity”

Dr. Kapse is a Scientist in Horticulture, has worked as a Director, National Institute of Postharvest Technology, MSAMB, Pune. During year 1997 Dr. Kapse worked on large Scale export of Mangoes to European Countries and developed the postharvest technology for export of Mangoes where Mangoes shelf life needs to be increased up to 35 days while exporting of such types of Mangoes. Though he could able to develop technology and was instrumental in successful export of Mango, he was not able to see the benefit reaching to the common farmer being ignorant and unaware of applicable knowledge. Therefore with the objective of increasing productivity of marginal farmer and making their life prosperous by involving them in the high tech farming field production, processing, marketing & export, Dr. B.M. Kapse developed the concept of “Group Farming” in Marathi it is called as “Gut Sheti”.



Happy Family in the field of Maize under Drip Irrigation with 51 Qtl. per Acre yield

Agriculture in India is not an organized sector, above this climate change and unpredictable monsoon has made the small farmers life miserable. The ultimate solution to address these challenges is to make farmer aware and persuade them to opt for available options and advance farming technologies. With this objective, Dr. Kapse took initiative to form a Farmer Group by selecting poor farmers from five villages in Jalna Dist. of Maharashtra. in the year 2000. Initially in a village Jiradgaon with small piece

of area five acres was developed to produce export quality mango orchards was established. Now with the help of modern technique such as drip, sprinklers, mulching larger piece of land is now made cultivable for orchid crops also with advance agronomy and crop protection management farmer productivity is increased along with quality of produce. In this way the export quality mangoes will be exported by the marginal farmers can get the export benefits. The total area under mango is now 1000 acres. Also farmers across Jalna; Aurangabad and Buldana districts have 700 acres sweet orange, 200 acres Amla, and 20 acres of Sapota. The farmer's are now taking almost all the agronomical crops with group system. The bearing of mango has started during the current year.

Group Farming technology developed in Jalna district for the first time in India in 1986. Poor and marginal farmers are being benefited in Marathwada, now it is spread in all over India.

The Group Farming as described by Mr. S. V. Shiradkar, Dy. Project Director, ATMA, Aurangabad, is as follow.

PREAMBLE

The Group Farming has covered farmers from about 17 villages Mostly in Jafarabad & Bhokardhan Tahasils of Jalna District, Gangapur Tahasil of Aurangabad District and Deulgaon Raja Tahasil of Buldhana District.

In recent past Jalna District almost became the draught prone area even though earlier major area was classified in assured rainfall zone in the district. Since last decade the rainfall in the area is showing the decreasing annual rainfall trend thereby the water table has gone down tremendously. In the last year the rainfall received was 324 mm. as against 785 mm normal average rainfall. The erratic and irregular is rainfall pattern is most common in the region.

This is also accompanied by lack of river and irrigation projects. Jalna dist has highest irrigation backlog in the State as per backlog indication committee formed in 1997 by the directives of His Highness The Governor of Maharashtra. All these led to very harsh situation for the farmers.

The light to very light and rocky soil accompanied with low rainfall and least irrigation less than 8%, resources, the area is mostly known for rain fed agriculture which hampered the farmer's income and their living standard. There by most of the farmers are below poverty line. Due to ignorance of technical knowledge, low income,

unfavourable climatic condition and deprived facilities farmers are turning to labour work even shifting elsewhere in search of work for their lively hood, farmer's are now moving to the cities like Aurangabad, Mumbai are becoming labourer.

As per Government record the human development index is lowest in India in Jalna District in general and Jafrabad, Bhokardhan Tahsils in particular.

In India, Agriculture is still mainstay of majority of population and almost 55% to 60% population is engaged in agriculture. Agriculture has recorded a spectacular growth in past two decades. In the post Green- revolution era, intensive agriculture was promoted and adopted on large scale. It has resulted in record increase in both production and productivities in food grains oilseeds & also in fruits & vegetables. However we are facing some "Side-effects" of this era of intensive agriculture, in spite of use of imported technology, in most of crop the yields are just stagnant and, declining in some of the crops. The cost of production shoot up in most of the crops & issues of profitability become critical. Agriculture become input oriented, expensive & farmers became completely dependent in respect of seed, fertilizer, implements, labourers. On other hand with increase in population we are witnessing rapid fragmentation of land. The average size of land holding declined from 4.28 ha (1970-71) to 1.65 ha in 2001; leading to economically non viable small farms. These small farmers are unable to bear the high cost/ investment for adoption of modern technologies in order to sustain the higher productivity levels, with growing small farms & small farmers the issues of productivity, profitability, adoptability & sustainability are becoming sharper. Now it's high time to address these issues as early as possible. Various strategies are being developed & several approaches are being tried. Thus Dr. Kapse, is involved to organize small & resource poor farmers in to groups, developing groups of assetless farmers & building them as service providers & thereby generate better livelihood facilities & reduce poverty.

CONCEPT OF GROUP FARMING

Small farmers face economic, technical & social challenges. Even in good productivity years, they undergo marketing hassles & seldom able to earn good profits. Their low scale of production puts them into disadvantage, & these small farmers cannot compete & meet the market requirements, on other hand the globalization is posing steep competition. Now there are good opportunities through globalization but farmers need to overcome the first challenge of efficiency. Efficiency in resource utilization, adoption of modern technology, production of quality produce, processing & marketing. It is not possible for small farmers to raise their efficiency individually in attaining higher return per acre of land, per drop of water or per rupee invested. Drawing wisdom from age old experience. "Together we stand and divided we fall," Dr. Kapse, came up with a strong promising option of Group Farming to address above challenges. Dr. Kapse not only promotes group farming for just survival but as a bridge to prosperities. Through better income generating options, efficient application of technical interventions & thereby increasing the cost, benefit scenario in favor of farmers. As groups small farmers can come together to adopt modern technology & produce higher quality agri- produce & thereby can capture the emerging domestic markets as well as enter into world market. These groups can undertake the processing, value additive marketing activities united. Some of the objectives of group farming as conceptualized by Dr. Kapse are as narrated below.

- Farmers should come together to help themselves.
- Identifying the common needs, opportunities and potential & then orientation of farmers to come together.
- Bringing together small farmers in clusters & developing the groups.
- Adoption of suitable common cropping pattern on large scale by these groups & federation of these groups in cluster of villages.
- Adoption of modern technology by the group farmers use of a common technology for production of high quality produce.
- Adoption of advance irrigation systems like drip & sprinkler in cluster, & increasing water use efficiency

- Conservation of land & water resource on community basis & thereafter judicious use of these resources in a sustainable manner.
- Bringing all crops including cereals under Drip Irrigation, no drop of water will be given to the field without Drip or Mirco Irrigation.



Irrigation and fertigation with drip irrigation

Now a day, we speak lot about group-led extension. The group farming approach is also helpful in fastest adoption & speed of technologies. It is also offering us a great advantage to offer the farmers to improved technologies. Such a long term continuous adoption & use of technologies really crucial for overall development of farmers. Dr. Kapse is motivating farmers to adopt group farming since last 6-8 years.



Stall of group farming in 12th Sinchan Parishad held in Aurangabad - January 2011

SUCCESS STORIES OF GROUP FARMING

The first successful attempt of group farming initiated by Dr. Kapse is of Jiradgaon Village in Ghansavangi block of Jalna District. Dr. Bhagwanrao Kapse took innovative approach in building group of farmers. It's not just small groups & sporadic successes but that they grow together to hold hand at village and at cluster of village level, they support each other to promote advance farming activities and establish successful techno-economic farming system development through constant guidance from Dr. Kapse and technical experts, guests which Dr. Kapse has network in various field. At the same time Dr. Kapse play critical role to involve the farmers from all economic categories, social classes & integrate them together in such way that they support and strengthen each other. Dr. Kapse also very effectively involve local leaders, political leaders & officials working in the districts to engage with farmer and create platform where all the issues and challenges are discussed and possible solutions are suggested. This has led in gaining a momentum & recognition of group farming.

The first attempt of group farming led by Dr. Kapse by forming Indico Falotpadak Sangh Jiradgaon. In the project he has undertaken successful plantation of Kesar Mango on area 1000 Acre with ultra modern technique i.e. high density, modern insitu, method of plantation which has been developed by Dr. Kapse and popularised as a Jiradgaon Method of Insitu Mango Plantation. In the second phase the crops like Pomegranate, Sweet Orange, Aonla & Custard Apple were also included in the project.



Discussion on Group Farming with Mrs. Supriya Sule- Member of Parliament

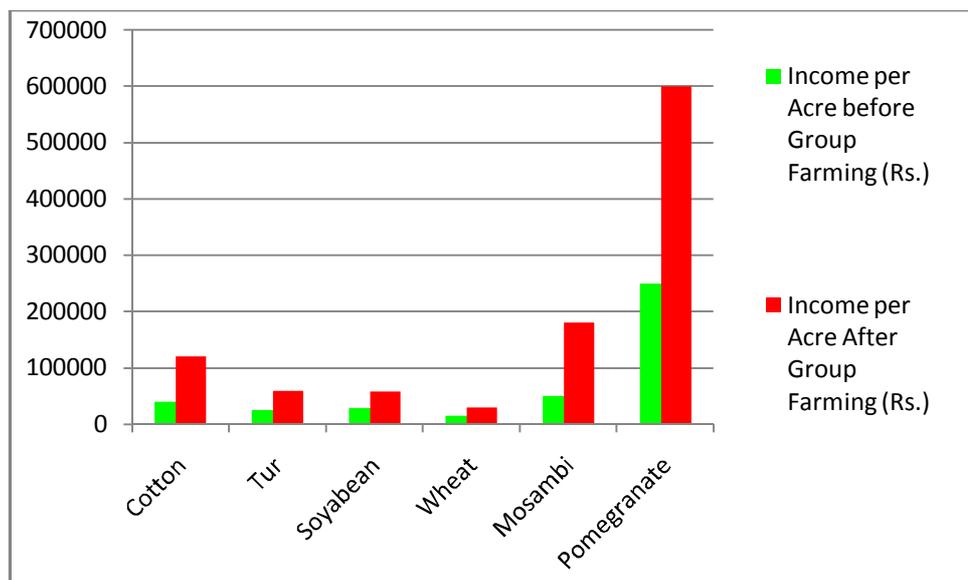
ACTIVITIES AND PROGRESS OF GROUP FARMING

Dr. Kapse organised several meetings of farmers. He studied the farm, farming techniques, natural resources & economic condition of farmers. He too focused approach to address of various needs of farmers. Starting with the activities like selection of seed, soil testing, seed testing, crop planning, water budgeting & water conservation measures with group. Initially farming of sweet orange initiated. Then he focused his attention on the main cash crop “Cotton” of the village. Promoted drip irrigation to cotton.. He involved cotton experts Dr. Bainade, Dr. S. B. PAWAR (Extension Agronomist, VNMKV, Parbhani) and Agri department officials in group activities at Akola Deo, Khamkhed, Javkhed (Taluka Jafraabad, Dist. Jalna) . They have organized group farmer meeting and > 400 farmers were participated to discuss the improved package of practices of cotton crop like optimum fertilizer dose on soil testing basis, ideal plant population per acre, application of basal dose of fertilizer, irrigation through drip system and integrated pest & disease management . As farmers increased their yield 2 to 4 times as well as saved 50 % irrigation water and increased WUE by adopting technology .It was a eye opening demonstration of drip irrigation to cotton crop that can bring in miracles. Farmers are realized the importance of drip and now more than 90% area is under drip system .The highest cotton yield recorded was 30 qtls per acre. (Almost 75qtls/ha).

Increase In Yield Quintals Per Acre in all the villages of Group farming As Follows

Name of Crop	Before Group Farming		After Group Farming		Times Increase
	Yield per Acre (Quantals)	Income per Acre (Rs.)	Yield per Acre (Quantals)	Income per Acre (Rs.)	
Cotton	6-10	24,000 to 40,000	25-30	1,00,000 to 1,20,000	3-4 times
Tur	6-7	21,000 to 24,500	15-17	52,500 to 59,000	2.5 times
Soyabean	7-9	22,400 to 28,800	15-18	48,000 to 57,600	2-2.5 times
Wheat	10-15	10,000 to 15,000	25-30	25,000 to 30,000	2-2.5 times
Mosambi	4-5 tonnes	40,000 to 50,000	15-18 tonnes	1,50,000 to 1,80,000	3-3.5 times
Pomegrate	4-5 tonnes	2,00,000 to 2,50,000	10-12 tonnes	5,00,000 to 6,00,000	2-2.5 times

Increase In Yield Quintals Per Acre in all the villages of Group farming



**A Case Study of Most Scarcity Prone Village "Khamkheda" TQ Bhokardhan Dist Jalna (Maharashtra State)
Prosperity achieved by using various water saving techniques like Drip Irrigation, Mulching, Anti transperent etc.**

	Crop	Area (Hector)	Yield Per Hactor (Qts.)	Total Production (Qts.)	Rate Rs. Per (Qts.)	Total Amount	
Kharif	Cotton	349	20	6980	3600	254.28	
	Maize	285	40	11400	700	79.8	
	Cotton (Seed)	60	10	600	9000	54	
	Bajra	50	20	1000	1000	10	
	Chilli	20	100	2000	1000	20	
Rabi	Fallow	-	60	-	-	-	
	Jowar	110	10	1100	1200	13.2	
	Wheat	45	15	675	1000	6.75	
	Gram	7	8	56	2500	1.4	
	Male	Total Day's - 130		Wages Rs. - 150/-	-	Total	9.75
Labourers	Female	Total Day's - 130		Wages Rs. - 70/-	-	Total	6.5
	Milk Production	-	-	-	Total	30	
Total Amount						542.65	
Grand Total						542.68 Lakh	
Population of Qty. Year 2007						1297	
Per Capita Income for the Year 2007						41842	

	Crop	Area (Hector)	Per Hector Production (Qts.)	Total Production (Qts.)	Rate Per (Rs.) Qts.	Total Amount Rs. (Lakh)
Kharif	Cotton	452	50	22600	4850	1096.1
	Maize	190	65	12350	1100	135.85
	Cotton (seed)	85	15	1275	15000	191.25
	Bitter Gourd (seed)	820	4	32.8	100000/per kg	32.8
	Shednet	10	1	10		-
	Bajra	20	22	440	1200	5.28
	Soyabean	15	20	300	3600	10.8
	Chilli	18	175	3150	1400	44.1
Rabi	Jowar	130	12	1560	2000	28.08
	Wheat	40	25	1000	2000	20
	Gram	10	15	150	4000	6
	Onion (Seed)	5	8	400	25000	10
	Pomegranate	7	-	-	-	-
Wages for Labour	Male	Total Day's - 130	Wages Rs.250/-	-	Total	13
	Female	Total Day's - 130	Wages Rs. 150/-	-	Total	9.75
	Milk Production	-	-	-	Total	40
Grand Total						1642.92 Lakh
Population Qty.						1544
Per capita Income						106406
Abstract						
Per capita Income of Dist. Jalna						45021
Per capita Income of Khamkheda Village the Year 2007						41842
Per capita Income of Khamkheda Village the Year 2012-2013						106406
Increase as Compared to 2007 Income						64546
Increase over Dist. Jalna						61385
Per capita Income Total Increase in times						2.54 times

Villages in Group Farming

Dist. Jalna	Tq- Jafarabad	Akola (Dev)	
		Delegavan	
		Nimkheda (Korde)	
		Nalvihira	
		Warud BK	
		Jawkheda (Theng)	
		Tembhurni	
		Dongaon	
	Tq- Bhokardan	Khamkheda	
	Umberkheda		
	Tq- Badanapur	Chikhali (Dabhadi)	
Aurangabad	Tq- Gangapur	Ambegaon	
		Manjri	
		Jambgaon	
		Kasoda	
		Nandeda	
		Eklehra	
		Palasgaon	
		Bhoygaon	
		Ambewadi	
		Lasur	
			Tq Aurangabad
			Shamwadi
			Pokhari
			Adgaon (Sarak)
			Mandki
			Gopalpur
			Pisadevi

Some farmers like Sarangdhar Bajirao Savade, Akola (Dev), Balu Vinayak Kapse, Delegavan could get around 25 Qtls/Acre.

Dr. Kapse took the various initiatives for dissemination & adoption of modern technology of irrigation system, construction of farm ponds & protective cultivation.

Dr. Kapse guided to growing various crops like soybean ,chickpea ,wheat , pomegranate ,intercropping i.e. cotton and pigeon pea ,pigeon pea and soybean. The most of the farmers were not aware about use of sprinkler irrigation system and they have doubt in their mind. However Dr. Kapse and University Scientist advised to farmers regarding use of sprinkler irrigation during critical stage of crop and that increased the 2.5 – 3 times yield.

MORE YIELDS PER DROP

It is regular practice of many farmers from Khamkhed Group to fill the dry wells with tanker in the month of Jan.-Feb and then planting the cotton in field at the end of May on drip irrigation by using all scientific methods. They are harvesting 28 to 30 quintals of cotton per acre i.e. 4 to 4.5 times more than normal yield.

INNOVATIVE “DWADAS” MEET

A regular visit, meeting & interaction of farmer is most important for jelling all farmers together and this will also help in building a strong relationship among group members. Just to make it happen Dr. Kapse came up with an innovative idea of “Dwadashi” meeting every month. The meeting is organized on a farmer field wherein all group of farmers in village come together, discussed the technologies adopted, shared the experiences, listened to scientist, officials visiting that day & have lunch together.



"110th Monthly Dwadash meeting group lunch"

Probably this is the best way of building federation of groups of farmers. Such strong meaningful, interactive & participatory federation is the strength to keep the various Groups growing. New farmers were also invited to such meeting some of them formed group & undertook group farming after returning.. Till May 2015 such 110 successful “Dwadashi” meetings were organized & still it continuing with a strong message of group farming.

Since last decade Dr. Kapse is working on this concept of group farming. It's a great journey of success showing a promising path for both a new extension approach and new collective adoption-approach. Normally we see groups are developed with limited objectives of getting poor people together and make them survive & live together to face the risks, threats and cut down cost of living of expenses.

Dr. Kapse did it with broad objective, besides this he has shown a way of prosperity through group farming. It was not just for survival but Dr. Kapse is so ambitious & courageous that he initiated group farming with a dream of making farmers stronger, profitable, competitive & also ambassador of modern technologies. That's why he went an experiencing & empowering this concept at group farming since last one decade. Just to note some of the big, emphatic activities he has initiated to strengthen group farming are Building capacities of farmers to make proper decisions, help each other and grow together.

The success is not real till Dr. Kapse's appetite & hunger is increasing day by day to take this group farming the outreach movement on a still wider level, increase and to include as many farmers as possible, so that the farmers can build confidence to move towards a profitable & sustainable agriculture.



Agencies involved in Group Farming as under

1. Command Area Development, Water Resources Department, Aurangabad
2. Agriculture Department, Jalna
3. Zilla Parishad, Jalna
4. Marathawada Agrilcultural University, Parbhani

5. State Bank of India/Bank Of Maharashtra / Gramin Bank.

Dignitaries visit to Group Farming

1. Smt. Supriyatai Sule, MP
2. Hon.Minister Rajesh Tope
3. Shri Raosaheb Danve, MP
4. Shri Chandrakant Danve, MLA
5. Shri Umakant Dangat, Commissisoner Agriculture, (M.S.)
6. Shri Ranjitsingh Deol, Collector, Jalna
7. Shri Chiranjiv Prashad, Supdt of Police, Jalna
8. Shri Shinde R.D., Collector, Jalna
9. Shri Thakur, Collector, Jalna
10. Shri Sham Deshpande, Collector, Jalna
11. Smt. Kerkatta, Collector, Jalna
12. Shri Sanjay Mohite, , Supdt of Police, Jalna
13. Shri Satish Chavan, MLC
14. Shri Prashant Bumb, MLA
15. Shri Santosh Sambre, MLA
16. Shri Bakwad, Director, Horticulture
17. Shri Dr.Vyavhare, Ex. Director, Agri. (GOM)
18. Shri S.L.Jadhav, Director, Agri. (GOM)
19. Shri S.R.Sardar, Joint Director of Agril. Aurangabad

Backbone of Group Farming

1. Shri Ghote R.B., Chief Engineer
2. Shri S.,S. Bainade, Ex Scientist MAU Parbhani
3. Shri S.B.Pawar, Extn Agronomist, MAU Parbhani
4. Shri Jogdand Saheb, Superintending Engineer
5. Shri A.P. Kohirkar, Superintending Engineer