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IMPACT OF MANAGEMENT AND COMMUNICATION ON SUSTAINABLE FAMILY FARM

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ABSTRACT

The present research in Extension should pay adequate attention to include family and family farm as major component because it is the basic of Extension. Extension is the voice of farmers and voiceless families. Their voices come through family farm. Family farm is the life philosophy of farmers that too small and marginal ones. Any research we think in Extension should include family, family farm, family happiness and quality life.

KEY WORDS: *Family Farm, Impact, Quality Life*

INTRODUCTION

Change is the law of nature. Changes lead to development. At each phase of development we face challenges. In 1960s famines threatened the South Asia and we discovered Green Revolution as the right answer. We at present are in cross road. Although fear of big famine is no more there but482 million people remain as chronically hunger. Out of them 70% reside in world's insecure food zones. By 2050 we have to feed a population of 9 billion. Due to climatic change we are facing the problems of land and water degradation along with environmental problems. To save from the problem the concept of family farm is now considered to find a way out. The ultimate focus is with small and marginal farmers who are 500 million in number (FAO, 2014). These farmers manage the world's majority ate agriculture land and produce most world's food. The characteristics of family farms are different in different countries but invariably they are poor, owners of small land holding, socially back ward, economically weak and politically neglected. In case of Odisha the mentioned characteristics are added with illiteracy and poorly managed. The definitions of family farm signify the dimensions of ownership of land, contribution o labor and sale of produce. On the basis of land holding the farmers are classified as marginal, small, medium and large farmers.

Keeping the call of FAO for promoting of family farms the author has tried to examine and study the potentiality of family farms to provide income to the owners to lead a satisfying life. Small-scale agriculture is an alternative to factory farming or more broadly, intensive agriculture or unsustainable farming methods that are prevalent in primarily first world countries. It is therefore identified as sustainable agriculture. In this type, the farming is done on small size of holding and other factors of production are small in quantity and scale of production is also small. The advantages of small scale farming are: i) Intensive cultivation is possible, (ii) Labour problem do not affect the production, iii) It is easy to manage the

farm, iv) There is less loss due to natural calamities like frost, heavy rainfall, and diseases, and v) Per unit output increases.

The mean farm size varies by country. It varies from 0.8 ha in Egypt, 1.0 ha in Ethiopia and 1.3 ha in India to 25 ha in Columbia and 73 ha in Brazil. In general, farms are smaller in countries with high population densities. This mean size is a reflection of a number of factors, not least historical legacy and the institutional and legal arrangements relating to land access and land reform. In Asia, mean farm size seems to have shown an overall decline over the 20th century (Eastwood *et al.*, 2010). In terms of the ratio of agricultural area to agricultural population, there has been a decline over the period 1980 to 2010, possibly suggesting a lack of alternative income-earning opportunity set in the context of an increasing population and stagnating growth in agricultural area.

In India, an overwhelming proportion of farmers are marginal (0.01–1 ha) or small (1.01–2 ha). More than 80 per cent of farmers in India belong to such marginal and small farm size groups. These two farm size groups also account for a large proportion of the total farm households in most states. Due to sub- division of landholdings and other processes such as land distribution, their percentage has been increasing over time. The percentage of marginal farmers (0.01–1 ha) has gone up from nearly 38 per cent in 1953-54 to about 70 per cent in 2002–03 (NCEUS, 2008). Thus, the share of marginal and small farmers has increased substantially, not only in terms of numbers of farmers and holdings but also, more significantly, in terms of owned and operated area. The smallholding character of Indian agriculture is much more prominent and pertinent today than ever before.

Land, food and agriculture:-

Generally, very little new land has been brought into agricultural production in recent decades. The land is under increasing pressure due to urbanization, desertification, salinisation, and allocation to alternative uses such as production of bio-fuels. The allocation and use of water resources place added pressure on agriculture in many regions. Increases in agricultural production are essential to meet the consumption demand from increasing population and incomes. At least by 2050 – it is expected that agricultural productivity investments will make it possible to meet the increased demand from existing agricultural land resources, while reducing some of the environmental threats from increased production (Nelson et al., 2010).

Important development differences exist in the country may be generating or inhibiting growth in agriculture. The factors that inhibit growth include weak economic incentives and inability to adopt yield and productivity enhancing techniques due to lack of access to information, extension services and technical skills or lack of adapted technologies. Poor infrastructure including irrigation, weak institutions and discouraging farm and food policies also contribute. Overall, in recent years, yield growth rates have slowed down considerably including for major commodities. In particular, the growth rates of cereal yields have been falling since the Green Revolution years.

The structure of the farming system and the impact of the scale of the farms and mix of farmer types are rarely placed centre stage in the national debates and the seminal works on food and agriculture. There are limited definitive data and analysis on the type of farmer and farm household, and scale of landholding. Without such evidence to inform the underlying assumptions on forward projections in agricultural productivity and on national food production, issues such as changing farmer profiles and interest of future generations in farming give rise to risks on the future of the food supply and indeed to employment and economic growth that have not been understood or addressed.

Oxfam (2011) describes on large- versus small-scale agriculture and seeks to debunk a series of myths that surround small-scale farming, suggesting that neither big nor small is bad or indeed beautiful. First, although yields on smallholder farms are lower than those on large farms, often by a considerable margin, lower yields do not necessarily translate into lower efficiency. On the contrary, smallholder farms' costs are lower than or roughly equal to those of large farms in two-thirds of the comparisons. This suggests that there is no strong case to replace smallholder with large-scale cultivation on efficiency

OBJECTIVES OF THE STUDY

The study was designed to examine the potentialities of small farm to meet minimum financial requirements of the owner farmers. The concept was to find out the possibilities of obtaining profit from farm to manage the family by different land holding sizes. In other words the concept was put to verification of working with small family farm to meet the growing family requirements. The small scale farming system or family farm revolves around six important variables. These are (i). Social system (ii) economic system (iii) technology in-flow (iv) production system (v) market link and (Vi) quality life including that of satisfaction.

REVIEW OF LITERATURE

Rolling and Engel (1989) focused on local innovation is adopting technologies and practices. They stated that the innovative farmers build on existing knowledge and share it with the others members of the community.

Faure and Kleene (2002) emphasized on farm business school and management advice for family farms which have resulted positive impact in West Africa.

Wettasinha et. al. (2008) stated that farmers are constantly experimenting, adopting and innovating to improve their farming systems. Indigenous knowledge is a major driver of local innovation which makes use of local sources is site appropriate and address the specific constraints, challenges and opportunities perceive at local level.

Vernooy et. al. (2009) stated that program in family or farmer led depends on the nature of the participation both farmers and researchers.

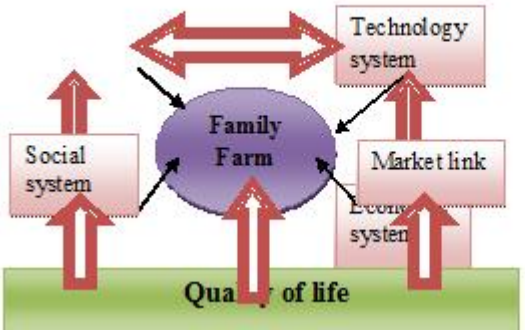
Proctor and Lucchesi (2012) mentioned that social net working associated with collective action can general help to make small holder farming more attractive to rural youth.

Reimers et. al. (2013) indicated that basic education is the most fundamental part of HRM. It helps in improving agriculture productivity and farm incomes and as such has significantly impact on agriculture productivity.

METHODOLOGY

The data for study were collected from 120 farm families including marginal and small farmers of equal size from coastal tract of the state of Odisha. The personal interaction and personal interview methods were applied to collect relevant information which was analyzed after careful editing.

Frame work of the study



RESULT

1. Social system and its impact on family farm: -

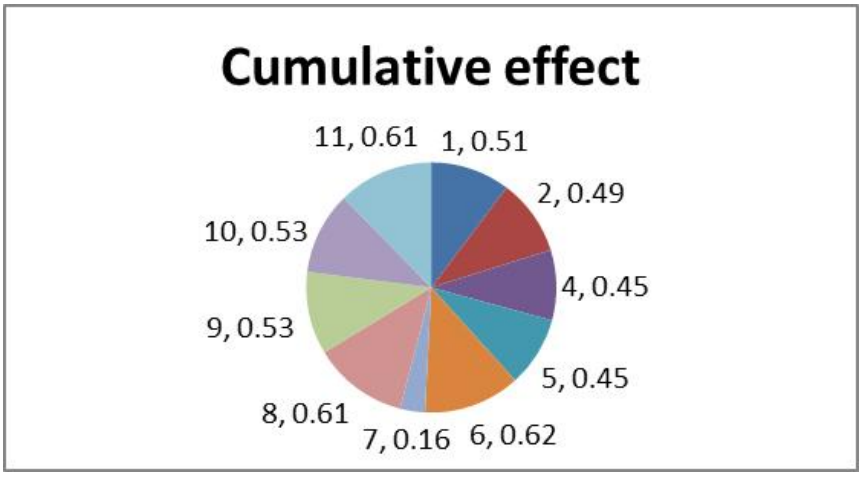
Family farm is closely associated with family life. The farmer, his farm and social system operate in the same line. The close link among these three factors makes family farms viable and productive. The small and marginal farmers of the state come within this category.

The size of operational holding by social group is reported to be 66.50, 23.55, 8.29 and 1.56 percentages for marginal, small, medium and large farmers. The interactional score value of social system and its traits on family farm were ascertained to reveal the relationship as given in table below.

Table 1. Impact of Social system on farm productivity (score analysis)

Social system	Resistance force	Change accommodative	Change Compatibility	Change adoptive	Cumulative effect
1. Family size	0.56	0.34	0.48	0.68	0.51
2. Family labour	0.72	0.30	0.39	0.58	0.49
3.Social status	0.51	0/42	0.45	0.42	0.45
4.Educational status	0.42	0.28	0.58	0.52	0.45
5.Decision making process	0.53	0.58	0.76	0.63	0.62
6.Caste	0.21	0.12	0.16	0.18	0.16
7.Demand of family members	0.67	0.61	0.56	0.61	0.61
8. Aspiration of children	0.48	0.45	0.68	0.52	0.53
9.Outside influence	0.58	0.41	0.62	0.54	0.53
10. Social mobility	0.63	0.52	0.72	0.57	0.61

(Scores have been calculated out of 1)



Results are indicative of facts that resistance force for development of family farm is relatively higher in case of small and marginal farmers with respect to family labor, outside influence, family size, decision making process and social mobility. In other words if these factors are contained the prospectus of family farm becomes brighter.

Change accommodative actors are found to be promoted by demand of the family, decision making process, social mobility and aspiration of children and other family members. The degree of compatibility to promote improvement in family farms are found to be decision making process, social mobility, outside influence, family demand and educational status of the family. The adoption is found to be encouraged by the factors like, family size, decision making process, family demand, family labor and social mobility. In short family farm and its prosperity depend greatly on right decision, demand of the family members and social mobility. Taking right decision, looking to demand of family members and constant mobility to outside locality to observe what progressive farmers are doing will help in increasing production and productivity of small farmers owned by small and marginal farmers.

2. Economic System and its impact on family farm:-

Economic factor is the key to any development and that too more in case of family farm. Investment, management care brings prosperity in family farm. The inter correlation between economic factors and family farm prosperity was calculated as reflected in table below.

Table 2. Impact of Economic system on farm productivity (score analysis)

Economic factors	Correlation value 'r' with farm productivity
1. Sources of income	0.564
2. Use of income	0.762
3. Investment in farm	0.781
4. Occupational diversification	0.781
5. Saving behavior	0.562
6. Credit behavior	0.781
7. Non- farm expenditure	0.581
8. Permanent investment in farm	0.741
9. Use of inputs	0.654
10. Planning	0.604

All these 10 elected variables are found to be closely associated with productivity level of family farms. The family farm concept and its dependents are to examine the economic factors. Credit behavior, investment in farm, diversification in on-going practices, optimum use of income and investment for permanent improvement are the key variables that indicate prosperity of family owned small farms.

3. Technology Communication: At present technologies are available for all types of crops and allied enterprises. As claimed by the scientists the available technologies have enough potentialities to bring drastic change in income pattern of the farm households.

Table 3. Impact of Technology communication on farm productivity (Score analysis N=120)

Technology intervention		
Crops	Perceived response towards success of family farm (%)	
	Mentions	Percentage
1. Crop variety	28	23.33
2. Soil management	21	17.50
3. Nutrient management	19	15.83
4. Plant protection	14	11.67
5. Water management	17	14.17
6. Mechanization	11	9.17
7. Post harvest care	10	8.33
Total	120	100.00
1. Animal feeding	40	33.33
2. Disease control	35	29.17
3. Management	23	19.17
4. Hygiene and sanitation	22	18.33
Total	120	100.00

The family farm in rural areas is composed of minimum two important components like crop and animal husbandry. The family farms are affected by many factors. Data above in case of crop show that new variety, water management, nutrient management, use of farm machineries and post harvest care are the important contributors to make family farm profitable.

Likewise for profit out of animal husbandry is closely related to feeding, management, disease control and hygiene and sanitation of the animals. With opening of milk route, the animal husbandry has become comparatively more profitable for small farm owners. The profit from animal husbandry is higher than that of crop although risk factor is very much significant. Again to supplement to the family farm sector constant capacity building on new technologies is required.

4. Market link and its impact on family farms. Farm, home and market are the life lines of the rural residents. The farmers of different landholders have to depend on market for buying and selling. It is invariably observed that market influences the life and living pattern of people. Local markets have direct impact on family farms.

Table 4. Market link and its impact on family farm prosperity

Market link	Score value	
	Average Score	Rank
1. Marketable surplus	2.09	IV
2. Market contact	2.11	III
3. Contact with middlemen	1.96	V
4. Fluctuation in market price	1.88	VI
5. Buy back	2.25	II
6. Profit and loss	2.26	I
7. Market information	1.75	VII

Data presented in table reflect that profit and loss from small farm provides incentive/disincentive to the farers to go ahead in farming. Buy back system is the most assured way of helping farmers in farming. In case of paddy the problems have been solved as Govt. procures it but as the farmers possess small farm and the paddy is kept for home consumption and surplus produce is very little to meet the economic requirement. Still it is one of the farmer friendly approaches. The other farm produce do not have such scope for remunerative disposal. Marketcontact, marketable surplus, middle men and fluctuation in market price all times brings vibration in the mind of the farmers.

5. Quality of life:-

Quality of life is operationally defined as the degree to which small farm operators wish to lead their daily life in comparison to the word around him. The quality of life as understood regulates the farming activities. Very often the family requirement particularly wishes of housewives are reflected in planning farming activities. The hypothesis is that quality of life has definite relationship with family farm which has been examined.

Table 5. Quality of life and its impact on family farm

Quality of life	Average Score	Rank
1. Family education	5.00	V
2. Health status	7.00	II
3. Status of residence	6.00	IV
4. Family economic status	4.00	VI
5. Decision making	3.00	VII
6. Understanding among the family members	7.50	I
7. Cooperation	6.00	IV
8. Cohesiveness	6.50	III
9. Spirituality	5.00	V
10. Planning	6.00	IV

Both marginal and small farmers are in same footing in the villages of Odisha with slight variation in farming practices. Good understanding among the family members, health status of the family, cohesiveness in families, cooperation, planning, and status of residence have direct influence in making family farm prospective. The influence of spirituality in family life, family educational status, economic standing, and decision making have also positive effect in making a family farm viable to support the family being important ingredients of the livelihood system.

CONCLUSIONS

The study entitled "Impact of Management and communication on sustainable Family Farm" was conducted with a randomized sample 120 farm families consisting of small and marginal farmer of equal size lead to arrive at the following conclusion.

1. The family farms are basic units to increase agricultural production and productivity level which are owned by marginal and small farmers.
2. Social system has impact on family farms which exert resistance to change accommodation, compatibility and adoption technologies find smooth entry into farming system of small farm operators.
3. There are 10 important economic variables which bears direct relations with family farm productivity level. Out of them credit, occupation diversification, investment in farm and optimum use of income are prominent. Technology inflow into system reveal verity, social management and nutrient management contribute significantly towards success of family farm and feeding and disease control to success family stock unit.

4. Market link is one of the important dimensions of family farm prosperity, profit and loss, buy back system and market contact decide the progressiveness of family farm.
5. Quality of life has bearing on family farm prosperity, decision making, understanding, cooperation and cohesiveness lead to sustainable family farming systems.

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