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Assessing the knowledge of farmers on doubling farmers income of Assam through behaviour change communication strategy

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Abstract

Doubling Farmers Income is a scheme adopted by the government of India for increasing total outputs across agricultural Subsectors through higher productivity. On 13th April 2016, Ashok Dalwai Committee set up the Doubling farmer's income. The committee has submitted the final report in 14 volumes to government in September 2018 containing all strategies for DFI through Policies, reforms and programmes. To attain this goal, the Committee identified the following seven sources of income growth which include crop productivity, livestock productivity, Resource use efficiency, Increase cropping intensity, Diversification in agriculture, Remunerative prices on farmers produce and also shifting to non-farm occupation. The data is collected through structured interview schedule which consist of both Dependent and independent variables. The interview schedule contains of 75 statements related to knowledge of the farmers on doubling farmer's income. More than half of the respondents (66.67%) of the respondents had medium level of knowledge regarding the Constraints faced by the farmers in doubling farmers' income. Slightly more than half (53.33%) of the respondents had medium level of knowledge regarding the SBCC mass media exposure. The data showed that (60.42%) of the respondents has medium level of knowledge regarding the production and productivity enhancement strategies for doubling farmers income. The findings indicated that half (50.83%) of the respondents had medium level of knowledge regarding the Farming cost reduction and maximizing strategies for doubling farmers' income. From all the knowledge table the data shows that majority (52.90%) of the respondents has Medium level of knowledge regarding Doubling Farmers Income. This paper gives a overviewed about the level of knowledge of farmers on doubling farmers income.

Keywords: Doubling farmers income, behaviour change communication, knowledge

1. Introduction

Indian agriculture has a long, ancient, and illustrious history that dates back to the Indus Valley civilization. India is now the world's biggest producer of spices, pulses, and milk. Furthermore, the country has the most land dedicated to cotton, wheat, and rice cultivation. Agriculture continues to provide a living for roughly half of the working population. Agriculture is at the heart of the Indian economy, despite structural changes in the agricultural sector. Agriculture's GDP share fell from 43 to 17.32 per cent between 1970 and 2017. Despite actions done from time to time to make farming lucrative and relieve farmers from unnecessary economic hardship, the agrarian problem persists.

BCC is an effective communication approach which helps to promote changes in knowledge, attitudes, norms, beliefs and behaviours.

Social and Behaviour Change Communication is a process of interactively communicating with individuals, institutions, communities and societies as part of an overall programme of information dissemination, motivation, problem solving and planning. Doubling Farmers income well-coordinated and aligned Behaviour Change Communication (BCC) messages from different channels of

communication such as mass media and interpersonal communication (IPC) play a key role in increasing knowledge, changing attitudes, and encouraging adoption of healthy behaviours among the farmers. This coordination will help the farmers to motivate and to bring changes in behaviour through various developing modules and by linkage with government and other programmes. Doubling farmers' income in such a short period is an overwhelming task for decision makers, scientists and policy makers. Doubling farmers' income is possible through increasing total output and better price realization in market, reduction in production costs, and diversification of product, efficient post-harvest management, and value addition.

The government agenda for doubling farmers' income by 2022 aims at a holistic development of the farming community. It might demand more novel strategies and change in the policy framework in near future. The income enhancement of farmer would come mainly from sources like increase in productivity of crops & livestock, improvement in efficiency of input use that would save cost, increase in cropping intensity at farmers' field, diversification towards high value crops, better remunerative price realized by farmers, engaging in non-

farm activities, adopting land use planning, efficient management of the farm resource base and organizing producers for marketing etc. This could only be possible through application of Science & Technologies in agriculture, government supportive policies and development of infrastructure.

The Ministry of Agriculture and Family Welfare constituted an Inter-ministerial Committee in April, 2016 to examine issues relating to “Doubling of Farmers Income” (DFI) and recommend strategies to achieve the goal by bringing changes in behaviour of the farmers. Social and Behaviour change communication (SBCC) also known as BCC is needed to increase the knowledge and attitude of the people and thus it will act as a communication strategy to encourage the farmers.

Doubling farmers’ income has now a day’s become more noticeable and upgrading rapidly. With establishment of sustainable technologies and increasing of higher productivity farmers are able to contain the strategy for doubling of farmers’ income through various policies, reforms & programmes. Changing the behaviour of the farmers through various social and behaviour change communication strategy made the farmers bringing changes through adopting proper knowledge, attitude and practice for doubling their income.

The Government of India in 2016 announced to double the farmers income (DFI) by 2022 by shifting the focus from agricultural output and food security to income security. Farm household income comprises revenue from sources viz., wage, crop production, livestock rearing and non-farm activities. India also witnessed a sharp increase in the number of farmers suicides due to losses from farming, shocks in farm income and low farm income, there is need to double farmers income to promote farmers' welfare, reduce agrarian distress and bring parity between income of farmers and those working in non-agricultural profession.

2. Methodology

The study was conducted in the state of Assam in three agro-climatic zones namely Upper Brahmaputra Valley Zone, Central Brahmaputra Valley Zone and Lower Brahmaputra Valley Zone. A multistage random sampling design was followed. One district from each agro-climatic zone was selected randomly. From each of the selected district one block were selected randomly. Further two (2) villages from each selected block were prepared by using simple random sampling method. Thus, finally six (6) villages were selected for carrying out the present research study. For selection of the respondents, a list of farmers who are actively participating in Agriculture and allied areas was prepared in consultation with the Agriculture development officer of each selected villages. Forty (40) farmers were selected from each village by using simple random sampling method. Thus, Eighty (80) farmers from each district were selected for the study. Altogether Two forty (240) farmers were selected as respondents for the present study. Structured interview schedule was prepared to collect information according to the objectives of the study. The

data were collected through personal interview method and analyzed with the help of appropriate statistical techniques such as frequency percentage and ‘t’ test.

3. Results and Discussion

3.1 Knowledge of the respondents on Doubling Farmers Income

Knowledge refers to the detailed information acquired by the respondents about doubling farmers’ income. It is the detailed information that the farmers acquired about identified strategies and constraints and knowledge about DFI through various mass media exposure and also to acquire knowledge on the non-farm income generating strategies in an effective way.

The findings indicate in the fig 1 show that 52.9 per cent of the respondents had medium level of knowledge regarding doubling farmers’ income followed by 32.4 per cent had low and 12.9 per cent had high level category respectively. The findings suggest taking action in imparting knowledge on doubling farmers’ income through various training programme, awareness campaign or by adopting intervention programmes.

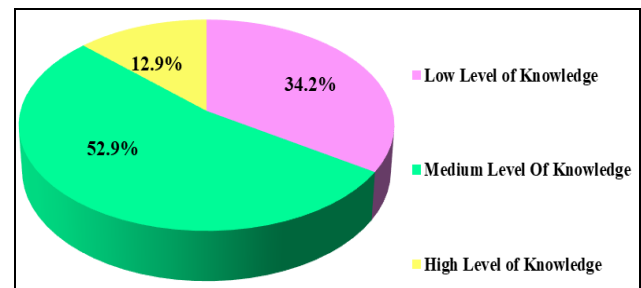


Fig 1: Knowledge of respondents on Doubling Farmers Income

3.1.1 Constraints faced by the farmers in farming System approach towards Doubling Farmers Income

The knowledge level of the respondents on doubling farmers’ income is assessed through various aspects like constraints faced identified strategies for production and productivity enhancement and also through mass media exposure. Constraints faced by the respondents for doubling farmers’ income give detailed information about the problem faced by the respondents in farming system for doubling their income. The result of the knowledge on constraints faced by the respondents towards doubling farmers’ income is presented in Table 1. The findings indicate that majority (61.67%) of the respondents had medium level of knowledge on constraints faced by the farmers in farming System approach towards Doubling Farmers Income followed by 38.33 per cent of the respondents had low and no one of the respondents had high level category respectively. The findings indicate that respondents are unaware about various government initiatives and not even have in depth knowledge on marketing strategies due to lack of infrastructure facilities and high labor cost.

Table 1: Distribution of the respondents according to the Constraints faced by the farmers in Farming System approach towards Doubling Farmers Income

Sl. No.	Category	Frequency	Percentage	Mean	S.D
1.	Low level of Knowledge (4 -6.33)	92	38.33	8.12	1.43
2.	Medium level of Knowledge (6.34-8.33)	148	61.67		
3.	High level of Knowledge (8.34-10.66)	0	0.00		

3.1.2 Knowledge of the farmers about SBCC based on their Exposure to Mass Media

With the advancement of the technology and easy availability almost all the people now a day’s get information quickly through various mass media which help the farmers to get updated with the latest technologies and aware about the government initiatives in an effective manner. Farmers are exposing through various mass media which make them updated with all the information related to farming even living in any remote area. The findings reveals

in table 2 indicates that 53.33 per cent of the respondents had medium level of knowledge on mass media exposure through SBCC whereas 44.17 per cent had low and 2.50 per cent had high level category respectively.

The findings reveal that respondents had an average level of knowledge towards mass media exposure and large majority of the respondents possessed mobile/internet this may be because it gives visual information along with audio and it is easy to convey any information as seeing is believing.

Table 2: Distribution of the respondents according to the knowledge of the farmers about BCC based on their Exposure to Mass Media

Sl. No	Category	Frequency	Percentage	Mean	S.D
1.	Low level of Knowledge (>2)	106	44.17	4.63	0.43
2.	Medium level of Knowledge (5-6)	128	53.33		
3.	High level of Knowledge (<9)	6	2.50		

3.1.3 Knowledge on identified strategies for doubling farmers’ income

For identifying the strategies for doubling farm income knowledge adopted by the respondents were classified in to four broad groups;

- 3.2.3.1 Production and Productivity enhancement
- 3.2.3.2. Farming cost reduction and maximizing strategies
- 3.2.3.3 Non –farm income generating strategies
- 3.2.3.4 Reasons of yield gap/productivity gap

3.1.3.1 Production and Productivity enhancement

Production and productivity enhancement is a suitable identified strategies adopted for doubling farmers income by

creating, growing and manufacturing of the farming products and services. Under production and productivity enhancement knowledge of eleven (11) strategies are assessed among the respondents. The result of the knowledge of the respondents is presented in the Table 3 the findings indicate that majority (60.42%) of the respondents had medium level of knowledge on production and productivity enhancement whereas 38.75 per cent respondents had low and 0.83 per cent had high level category respectively. Findings indicate that respondents are concerned about strategies needed for enhancement in farming for doubling their income

Table 3: Distribution of the respondents according Production and Productivity Enhancement

Sl. No	Category	Frequency	Percentage	Mean	S.D
1.	Low level of Knowledge (> 4)	93	38.75	6.71	1.10
2.	Medium level of Knowledge (7-9)	145	60.42		
3.	High level of Knowledge (<12)	2	0.83		

3.1.3.2 Farming cost reduction and maximizing strategies

This strategy give detailed information about the cost of seed, manure's and fertilizers, irrigation, labour needed for farming. It is the information that is acquired by the farmers and can be used in various farming situation. Under farming cost and maximizing strategies knowledge of eleven (11)

strategies are assessed among the respondents. The result of the knowledge of the respondents is presented in the Table 4 The findings indicate that majority (60.20%) of the respondents had medium level of knowledge on farming cost reduction and maximizing strategies whereas 39.80 per cent respondents had low level of knowledge and no one of the respondents had high level category.

Table 4: Distribution of the respondents according Farming cost and maximizing strategies

Sl. No.	Category	Frequency	Percentage	Mean	S.D
1.	Low level of Knowledge (> 4)	118	39.80	6.56	1.18
2.	Medium level of Knowledge (6.66-7.99)	122	60.20		
3.	High level of Knowledge (<10.65)	0	0.00		

3.1.3.3 Non-farm income generating strategies

Knowledge on non –farm income generating strategies give detailed information about financial assistance and availing benefits from the government. It is the information acquired

by the farmers regarding various investment and future benefits and controlling and saving the surplus money. Under non-farm income generating strategies knowledge of six (6) strategies are assessed among the respondents. The

result of the knowledge of the respondents is presented in the table 5 The findings indicate that majority (66.67%) of the respondents had low level of knowledge on non-farm income generating strategies whereas 23.75 per cent respondents had medium and only 9.58 per cent had high level category respectively. Further the findings implies that the respondents had very low knowledge regarding non-farm income generating

strategies as they mainly focused on farming as a prime occupation. The respondents are not concerned of saving the money for neither future benefits nor are they involved in any other activities rather than farming, findings call for taking intervention programme arranged with the concerned authorities and also training on budgetary and finance is also necessary for them to conduct as they are deprived from this knowledge as seen in the study.

Table 5: Distribution of the respondents according Non-farm Income Generating strategies

Sl. No.	Category	Frequency	Percentage	Mean	S.D
1.	Low level of Knowledge (> 1)	160	66.67	2.98	1.56
2.	Medium level of Knowledge (4-5)	57	23.75		
3.	High level of Knowledge (<8)	23	9.58		

3.1.3.4 Reasons of yield gap/productivity gap

Knowledge of yield gap and productivity gap give the detailed information possessed by the respondents regarding various aspects related to agriculture, animal husbandry, fisheries and horticulture. It is the information that the respondents has acquired and can be used in various situations of farming when there is a difference in actual farm yield with good management that minimizes yield losses which occurs by periodic droughts, low availability of feed and fodder, high stocking and also huge harvest loss

due to poor infrastructure. Under yield gap/productivity gap strategies knowledge of four (4) farming system (Agriculture, Animal Husbandry, Fisheries and Horticulture) strategies are assessed among the respondents with various statements. The findings in the Table 6 indicated that 49.58 per cent of the respondents had medium level of knowledge regarding reason of yield gap/productivity gap followed by 30.00 per cent low and 20.42 per cent had high level category respectively.

Table 6: Distribution of the respondents according Reasons of yield Gap/Productivity Gap

Sl. No.	Category	Frequency	Percentage	Mean	S.D
1.	Low level of Knowledge (> 6)	72	30.00	12.32	2.54
2.	Medium level of Knowledge (9.66-13.32)	119	49.58		
3.	High level of Knowledge (<17.66)	49	20.42		

3.2 Gender wise distribution of knowledge of farmers on doubling farmers’ income

To assess the gain in knowledge among both male and female respondents paired ‘t’ test was applied as a

comparisons of knowledge between both male and female by taking all the scores from the knowledge statements and the data is presented in the Table 7

Table 7: Comparisons of knowledge score between both male and female respondents

Variables	Mean score	S.D	‘t’ value	Sig
Knowledge of male respondents	84.48	3.23	-0.721	0.472 NS
Knowledge of female respondents	84.79	3.17		

NS= Non significant

Thus findings reveal that there is no significance difference between knowledge of both male and female respondents on Doubling Farmers Income.

3.3 Summary of knowledge of farmers on doubling farmers’ income

Majority of the respondents included in the study had medium level of knowledge on the following knowledge statements i.e. constraints faced by the farmers on farming system approach, Farmers knowledge on SBCC based on their exposure to mass media and also had medium level of knowledge on identifies strategies for doubling farmers income whereas the study reveals that there is low level of knowledge on non-farm income generating strategies. From the findings of the study it is indicated that the respondents had medium level of knowledge (52.9%) on doubling farmers’ income. The findings also call for taking immediate action in imparting knowledge on doubling farmers’ income through various interventions or any

awareness campaign

4. Conclusion

The Present study reveals that a large percent of the respondents had medium level of knowledge regarding doubling farmers’ income. So, that they need lots of awareness and motivation towards Doubling Farmers Income its programmes, policies and various benefits of doubling farmers’ income. It was found that the Knowledge of the respondents on Non-Farm Income generating strategies is Low as compared to other strategies for doubling farmers income. This shows that the respondents are not concerned of saving the money for future benefits nor they are involved in any other activities rather than farming. To increase the knowledge on Non-farm income generating activities intervention programme can be arranged with the concerned authorities and also training on budgetary and finance is also necessary for them to conduct as they are deprived from this knowledge. Therefore

emphasis should be given to increase the knowledge, attitude and practice of the farmers towards doubling farmers' income. India also witnessed a sharp increase in the number of farmers suicides due to losses from farming, shocks in farm income and low farm income, there is need to double farmers' income to promote farmers' welfare, reduce agrarian distress and bring parity between income of farmers and those working in non-agricultural professions.

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