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Agricultural entrepreneurship in Lower Brahmaputra Valley, Assam

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Abstract

The present paper explores the role played by farmer entrepreneurs in making farming a profitable livelihood avenue in Lower Brahmaputra Valley in Assam. Agricultural entrepreneurship is often construed as a means for empowering the rural unemployed youth. In this context of Assam, the present paper attempts to understand the reasons for agriculture remaining unprofitable and the strategies used by the emerging agricultural entrepreneurs in promoting it as a profitable like a business venture. It is based on key informant interviews with 30 agricultural entrepreneurs in the Lower Brahmaputra Valley, Assam. A multi-stage sampling procedure was adopted to select districts, block, villages, and agripreneurs. The qualitative data was coded with the help of ATLAS ti software and analyzed with the help of SPSS. Results have shown that farmers in the Lower Brahmaputra Valley have more potential in the farming sector but self-motivation is highly required. Most of them were less educated and from the family background of farming. To promote the agripreneurship concept in Assam government, officials have to be free from corruption and partiality based on their political links. Middle man, low awareness, less knowledge about the crops, market facilities and most importantly demand and supply comes as a constraint in developing entrepreneurship in the agricultural sector. Results have also indicated that in lower Brahmaputra Valley, Assam farmers are facing lots of problems including human-wildlife conflict, irrigation, and improved variety of seeds. A common platform and unity amongst farmers regarding the prices of the product are very much important without which farmers fail to get the benefits. Societal recognition is more important in pursuing an occupation like agricultural entrepreneurship.

Keywords: Agricultural entrepreneurship, Business development strategy, Rural development

Introduction

Agricultural entrepreneurship is often construed as a tool for empowering the rural unemployed youth who have the capability of starting an enterprise and to excel in the fields of agriculture and allied activities (see Vik and McElwee, 2011). According to Vik and McElwee (2011) agricultural entrepreneurs are those farmers who engaged on a full-time or part-time basis in a series of deeds that are related to farm and agriculture as the main source of income. Agricultural entrepreneurs are those who own the farm and aged under 45 years, entrepreneurially alert and always motivated by pull factors, technically trained, active continual professional development, strategic orientation for diversification of the farm, contribute to rural growth, understand market potentialities, use technology

appropriately, knowledge-intensive, interested in profit maximization, having cooperation and networking skills through alliances and networks (see McElwee, 2008).

Generally, farmers can play two types of roles such as farmer as a farmer with very limited diversification, and farmer as an entrepreneur with high-value agricultural opportunities (see Mcelwee, 2008), high entrepreneurial orientation always differentiates farmers by their constant improvement in their products and markets, practical decision making, risk-taking, and tough competition with other ventures (see Basso, Fayolle, and Bouchard, 2009). The concept of entrepreneurship is much relevant with farmers to develop the farms they need to adopt appropriate technologies, and the role of agriculture is no longer limited to increase of food production, even the agriculture sector actively contributes towards the development of rural areas (see Rudmann, 2008).

Agripreneurship is a sustainable employment strategy that will ensure self-reliance and economic self-sufficiency to the entrepreneur and also to the community of the entrepreneur (see Uche and Familusi, 2018). Agribusiness includes the manufacturing and distribution of farm inputs, crop production activities, storage, processing, and distribution of farm products made from them (see Rajesha, Talang, and Kumar, 2016). The development of agricultural entrepreneurship refers to the promotion of entrepreneurial skills amongst common individuals and building the entrepreneurial approach in the field of agriculture (Uplaonkar and Biradar, 2015).

In North-East India, the agricultural entrepreneurship and agribusiness have been recognized as one of the important avenues for rural development. The region has unique diversity in agro-climatic conditions and has a huge potential for enhancing the production and productivity of various agricultural and horticultural crops (Gogoi and Borah, 2013). The state of Assam experiences 11.45% GSDP growth rate (2014–2015) at current prices (India, 2017). The agricultural and allied sector plays a dominant role in the economic development of the state which contributes more than 26% to total GSDP in 2008–2009 current and constant prices (see Sharma, 2007). Increased agricultural production can encourage the entrepreneurial activities in rural areas such as diversification of farms, new products, the growth of rural service sector, emergence of the agro-processing ventures, and spreading out the product into new markets (see Larsen et al., 2009). Assam has been divided into three important physical regions based on its agro-climatic zones: (a) Brahmaputra Valley, (b) Barak Valley, and (c) the Hilly areas. In Lower Brahmaputra Valley zone, around 90% of human labor employment in the farm as the crop and homestead has contributed a substantial share of net returns (see Bhowmick, Sarma, and Talukdar, 1999).

The present study explores the role played by farmer entrepreneurs in making farming a profitable livelihood avenue in Lower Brahmaputra Valley in Assam.

Review of literature

In the last three decades, the concept of entrepreneurship has captured the attention of a wide range of scholars and professionals across the disciplines. Farm-level entrepreneurship has also been extensively discussed (Gupta and Gupta, 2015). There are several studies on varied agricultural entrepreneurial activities. For instance, there are attempts to conceptualize and operationalize of agripreneurship at different levels (see Díaz-Pichardo, Cantú-González, López-Hernández, and McElwee, 2012).

There are studies on entrepreneurship in organic farming (see Munda, Das, and Patel, 2014), growth and increasing trend of entrepreneurial activities in agriculture and allied

activities (see Chakraborty, 2014; Mujuru, 2014). There are many studies on the identification and development of entrepreneurial skills among farmers (see McElwee, 2005, 2006; Mikko and Pyysiäinen, 2006). There are a few studies focus on the management of farm and farm support for entrepreneurship (see Kahan, 2012; McElwee and Annibal, 2010). Concepts related to entrepreneurial orientation and market orientation for the success of an entrepreneur (see Baker and Sinkula, 2009; Faria and Mixon, 2016; Reynolds, 2005), importance on technological development in agriculture (see McElwee and Bosworth, 2013).

In spite of copious literature on agricultural entrepreneurship, a major research gap could be noted. There are rarely any studies of agricultural entrepreneurship in the context of Assam through the agro-climatic zones of lower and upper Brahmaputra valleys contribute significantly to the agricultural production in the state. The present study tries to fill this gap in the literature of agricultural entrepreneurship in India.

The present study attempts to explore the attributes of agricultural entrepreneurship from the emic perspective of the farmer entrepreneurs themselves. Further, it tries to identify the attempts made by them to make farming a profitable avenue like a business venture. It also tries to identify the constraints faced by them in their development as entrepreneurs. As a prelude, the present paper tries to explore the structural bases of the agricultural entrepreneurs in terms of their demographic, social, and economic background. It also tries to highlight the important aspects of farming such as cropping and involvement in allied activates.

Methodology

The present study is based on the qualitative data collected through key informant interviews. The study is based on key informant interviews with 30 agricultural entrepreneurs in the Lower Brahmaputra Valley, Assam.

Sampling

The unit of study is the individual agricultural entrepreneur while the population includes all agricultural entrepreneurs in the Lower Brahmaputra Valley of Assam state in India. A multi-stage sampling procedure was adopted to select districts, blocks, villages, and agripreneurs. Amongst the 10 districts from Lower Brahmaputra Valley, two districts have been chosen based on the intensity of agricultural activity. The most agricultural intensive districts of Goalpara and Bongaigaon were chosen purposively. First, of the 10 districts in the Lower Brahmaputra Valley, 2 districts had been chosen, based on the intensity of agricultural activity. Secondly, 3 blocks (1 from Goalpara and 2 from Bongaigaon) were selected purposively, and 2 villages were chosen from each block. Thus, a total of 6 villages was chosen from the already selected districts. Thirdly, in the selected villages a listing exercise of farmers was made to identify the farmers and agricultural entrepreneurs. Fourthly, all agricultural entrepreneurs agreeing to be part of the survey were selected.

The qualitative data was coded with the help of ATLAS ti software, and the coded data were further analyzed with SPSS. The coded data was analyzed with the help of simple percentages and averages.

The main limitation of the study is that it only confined in two districts from Lower Brahmaputra Valley, Assam. The sampling was purposive and size was not enough large. So the findings of the present may have limited generalizability.

Results and discussion

The discussion on the results of the present study is presented in seven sections. The "Introduction" section presents a discussion on the demographic social structural bases of the informants. In the "Methodology" section, the landholding and agrarian structural aspects are discussed. The "Results and discussion" section presents a discussion on the allied activities of the informants. In the "Cropping pattern" section, the cropping pattern of the informants is presented. The attributes of the farmer as a businessman are discussed in the "Perceived attributes of successful farmer as businessman" section. In the "Efforts made by farmers to make farming remunerative" section, the efforts made by the informants to make farming profitable are discussed while in the "Conclusions" section, the constraints perceived in their entrepreneurial development is discussed.

Demographic and social structural bases of key informants

There are various studies available on social structural bases of the agripreneurs. In this section, the demographic and social characteristics of the key informants have been disused. The demographic and social profiles of key informant interviews KII include the characteristics of them such as age, educational status, and community (see Table 1).

Age is the first demographic attribute that determines the social status of an individual in Assamese society. The respondents were categorized as youth (<= 34), early middle age (35–44), late middle age (45–54), and aged (55+) based on age. The highest proportion of the farm entrepreneurs were under early middle age (35–44) which was 37%. Late middle age (45–54) was reported as 27% and aged (55+) were reported as 23%, whereas only 13% youth (<= 34) were reported as engaged in agricultural entrepreneurship activity. Mean age of key informant interviews was worked out to 44 years. This corroborates the view of McElwee (2008) who says that agricultural entrepreneurs are those who own the farm and aged under 45 years. However, the results show that nearly one-half of the informants have crossed late the middle age.

Education status is the second major demographic characteristics which determine entrepreneurial behavior. The education status of the key informants does not indicate agricultural education but it simply shows the formal education of the farm entrepreneurs. The results show that almost all of them were literates. Over 43% of the key informants had education up to high school level. Nearly one-third of them had primary education (30%). Over 17% had higher secondary education. Some of them had graduation (7%). Thus, the education status of the farmer entrepreneur also shows the potential for training in entrepreneurship.

Community is the third demographic characteristics which determine social status in the society. In the present study, the endogamous Tribe/Jati was considered a community. Based on the KII responses, the majority of the respondents belong to tribal communities such as Koch Rajbongshis (40%), Koiborto (20%), and Rabha (20%) while other communities were few. Among others, the Nath Yogi (17%) community had a significant proportion of the key informants while a few of them belong to other communities (3%). Interestingly, these Jati/Tribal groups have been traditionally practicing agriculture in the Lower Brahmaputra Valley for a long time.

Religion is the fourth important demographic factor. Most of the key informants were Hindus (97%) and while the remaining few have reported as Christians.

Table 1 Demographic and social structural bases of key informants

Sl. no	Characteristic	Frequency $N = 30$	Percent
I	Age group		
	Youth (<= 34)	4	13
	Early middle age (35–44)	11	37
	Late middle age (45–54)	8	27
	Aged (55+)	7	23
	Mean age	44 ± 10	
II	Educational status		
	Illiterate	1	3
	Primary education	9	30
	High school level	13	43
	Higher secondary	5	17
	Graduation level	2	7
II	Community		
	Koch Rajbongshi	12	40
	Koibito	6	20
	Rabha	6	20
	Yogi	5	17
	Assamese (others)	1	3
IV	Religion		
	Christian	1	3
	Hindu	29	97
Source: Computed		**Mean ± SD**	

Land holding patterns

Farm diversification and landholding had been considered as an important attribute of agricultural entrepreneurship. They can generally increase the net income, reduced dependence on agricultural subsidies and greater income stability (Clark, 2009). In this section, the landholding patterns of the farmer entrepreneurs are discussed. The landholding pattern of the key informants has been discussed in terms of their experience in cultivation, size of operational holding, and size of land owned (see Table 2).

Experience in cultivation is the first factor taken up for discussion. Experience of the key informants was categorized as very low (<= 5 years), low (6–17 years), moderate (18–30 years), and high (31+ years). One-half of the informants had low experience (6–17 years) in cultivation. Nearly one-fourth of them reported their experience as high (31+ years). One-fifth of them had moderate (18–30) experience in cultivation while a few had a very low level of experience (7%). Mean years of experience was worked out to 17 years. The low level of experience among the farmer entrepreneur may be considered as a potential for training them in various aspects of entrepreneurship.

Size of operational holding is the second social structural characteristics of the farm entrepreneurs taken up for discussion. Operational holding means the area of land cultivated by the farmer in spite of its ownership. Size of operational holding of the key informants was categorized as very low (<= 5 bighas), medium (47–101 bighas), and large (102+ bighas). The results show that more than half of the respondents were small farmers (63%). Nearly one-fourth of them were medium farmers (23%). Some of them

Table 2 Land holding patterns of key informants' experience

Sl. no	Particulars	Frequency $N = 30$	Percent
I	Experience in cultivation		
	Very low(<= 5)	2	7
	Low (6–17)	15	50
	Moderate (18–30)	6	20
	High (31+)	7	23
	Mean years of experience	17 ±13	
II	Size of operational holding		
	Small(– 8–46)	19	63
	Medium(47–101)	7	23
	Large (102+)	4	13
	Mean bighas of land cultivated	46 ± 55	
III	Size of land owned		
	(<= 8)	4	13
	Small (9–33)	12	40
	Medium (34–58)	7	23
	Large (59+)	7	23
	Mean bighas of land owned	33 ± 25	
Source: Computed		**Mean ± SD**	

were large farmers (13%). Mean bighas of land cultivated was worked out to 46 bighas which shows that most of them as small farmers. The standard deviation of the size of operational holding was worked out to 55 bighas which shows that there is inequality in the distribution of operational holding among the key informants.

Size of land owned by the farmer entrepreneurs is the third important factor taken up for discussion. The size of the land owned by the farmer entrepreneurs is categorized as marginal (<= 8), small (9–33), medium (34–58), and large (59+) bighas of land. The results show that more than one-third of the farm entrepreneurs (40%) were small farmers and owned the land between 9 and 33 bighas. Then, nearly one-fourth of informants reported themselves owning medium size of farms and large farms respectively, and only a few farm entrepreneurs have reported as marginal farmers. Most of the key informants have inherited land from their fathers. The mean size of land owned by the informants was worked out to 33 bighas which shows that most of the farmers were owners of the small size of land. The standard deviation was worked out to 20 bighas which shows the extent of inequality in the land ownership.

Cropping pattern

North Eastern Region of India is generally considered as organic by default because farmers of NER still practice the same traditional method of cultivation. The state is already well recognized for its various crops like tea, paddy, various horticultural crops, sugarcane, oilseeds, jute, vegetables, and also other agriculture and allied activities. The productivity of the crops other than tea is not satisfactory in the state, and the farmers are deprived of good economic return (Upadhyai and Nayak, 2017).

In this section, the cropping pattern of the key informants is discussed. The cropping of the key informants includes various crops such as rice, vegetables, banana, rubber,

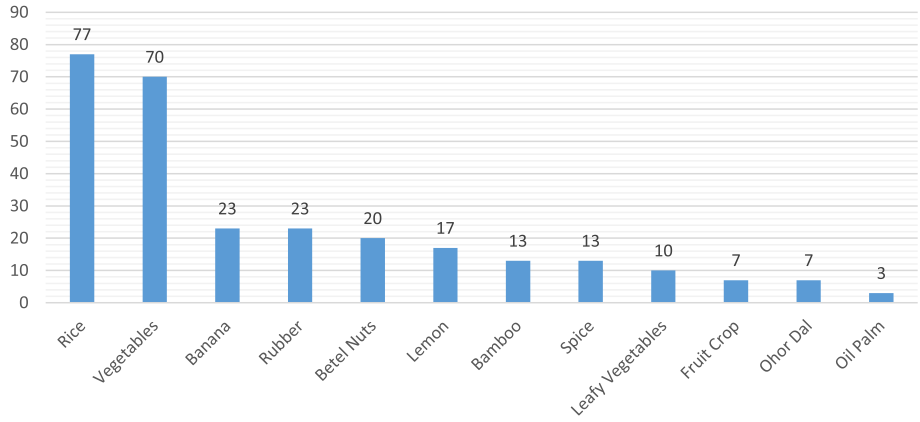

Fig. 1 Cropping Pattern of Key Informants

betel nuts, lemon, bamboo, spices, leafy vegetables; fruit crops, Arhar dal, and oil palm (see Fig. 1). More than two-thirds of the farm entrepreneurs (77%) cultivate rice which was found to be a dominant crop. Over 70% of them cultivate vegetables. Banana (23%), rubber (23%), betel nuts (20%), lemon (17%), bamboo (13%) and spices (13%), leafy vegetables (10%), fruit crop (7%), Arhor dal (3%), and oil palm (3%) were the other crops cultivated by them. Though most of them cultivate the rice for their subsistence, they do cultivate vegetables for market in large numbers. And a significant number of them have started cultivating, banana, rubber, betel nuts, and lemons which were meant for the market. Thus, the entrepreneurs are seemingly moving towards commercialization from subsistence agriculture. It also shows that diversification of cropping is taking place in the Lower Brahmaputra Valley.

Allied activities

Allied activities of agriculture always play a vital role in entrepreneurial growth and development (Chakraborty, 2014; Mujuru, 2014). Mehta, (1995) has held that agriculture is an economic activity in which human being worked hard to cultivate crops in the soil and undertakes allied activities for satisfying the human needs and for entrepreneurial development. It has a major role in farm diversification and augmenting the income of the farmers.

In this section, the results on allied activities of key informants are discussed. Table 3 depicts the results of the analysis of allied activities of the key informants. A majority of the informants do not have any allied activities while more than one-fifth of them were engaged in the fishery. A very few of them (3%) engaged in dairy farming and piggery (3%) in the study area. This also shows the potential for off-farm diversification in the form of dairy farming, fishery, piggery, etc., in the Lower Brahmaputra Valley.

Source of irrigation

Self-regulated institutions and collective action were taken by the farmers can ensure timely access to farming services, such as irrigation of plots and machinery for land preparation as well as output markets (Muchara and Mbatha, 2016). In this section, sources of irrigation of key informants were discussed. Generally, in the study area,

Table 3 Allied activities of key informants

Sl. no	Allied activity	Frequency $N = 30$	Percent
1	Dairy farming	1	3
2	Fishery	7	23
3	Piggery	1	3

Source: Computed

Table 4 Source of irrigation of key informants

Sl. no	Source of irrigation	Frequency $N = 30$	Percent
1	Rainwater	23	77
2	Bore well	19	63
3	River water	4	13
4	Artificial pond	2	7
5	Hilly stream	2	7

Source: Computed

farmers have different sources of irrigation such as rainwater, bore well, river water, artificial pond, and hilly streams for their cultivation and allied activities (see Table 4). The results show that they were dependent on multiple sources of irrigation which can be classified into major and minor ones. The major sources were rainwater and bore well while the minor sources include river water, artificial pond, and hill streams. More than two-thirds of them were dependent upon rainwater (77%). Bore well (63%) was reportedly another major source of irrigation of the farms of the KIIs. River water (13%), artificial pond (7%), and hilly stream (7%) were the minor sources of irrigation.

Perceived attributes of successful farmer as businessman

According to McElwee (2008), agricultural entrepreneurs are always entrepreneurially alert, motivated by the pull factors, technically trained, understand markets, and are knowledge-intensive. In this section, the attributes of the farmer as successful as a businessman in the perception are discussed from the points of view of the key informants.

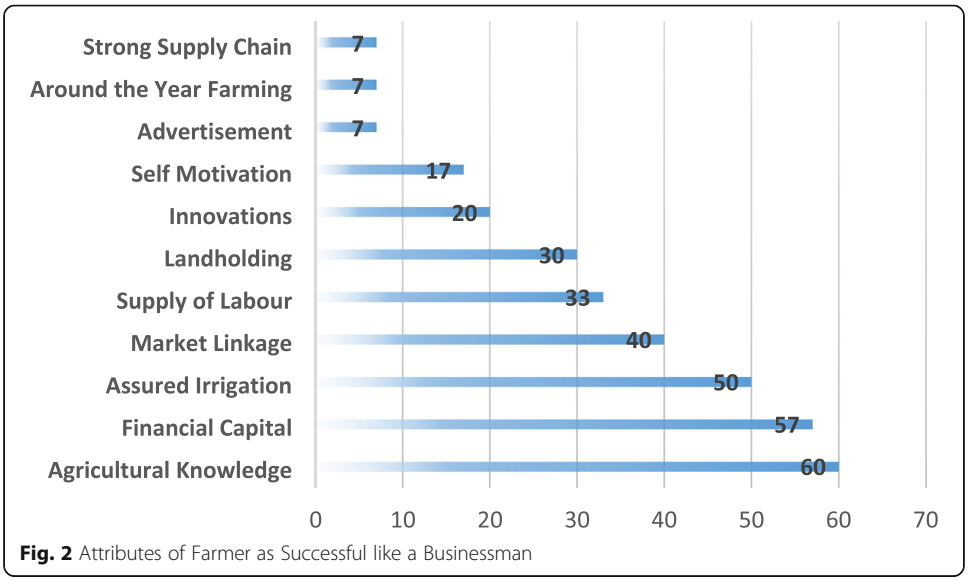

Fig. 2 Attributes of Farmer as Successful like a Businessman

The key informants were asked to answer a question about what makes a farmer as successful as a businessman. The farmers have reported several attributes which were meaningfully clubbed into the attributes such as strong supply chain, around the year farming, advertisements, self-motivation, innovation, landholding, the supply of labor, market linkages, assured irrigation, financial capital, and agricultural knowledge were discussed (see Fig. 2).

The entrepreneurial attributes of farmers pronounced by the farmers can be classified into four categories on the basis of their popularity viz. prominent, moderately prominent, and less prominent and least prominent ones.

The prominent attributes of agricultural entrepreneurship include agricultural knowledge (60%), access to financial capital (57%), and assured irrigation (50%) and more than one-half of the KIIs have recognized them. Market linkage (40%), the supply of labor (33%), and adequate landholding (30%) were reported by nearly one-third of the informants and hence may be called as moderately prominent ones. Innovation and self-motivation (17%) were other notable attributes reported by more than one-tenth of them. They can be called as less prominent attributes. A strong supply chain (7%), around the year farming (7%), and advertisement (7%) were considered as attributes of the entrepreneurial attributes of farmers by a few of the informants. This set of attributes may be conceded as least prominent attributes. It is interesting to see the farmers recognize the important attributes of entrepreneurship and it seems what needs now is support from the government to make agriculture a profitable livelihood avenue in Lower Brahmaputra Valley, Assam.

Efforts made by farmers to make farming remunerative

Efforts from the farmers to make agriculture as a remunerative avenue in rural areas are highly needed. The experts of agricultural entrepreneurship emphasize the role of entrepreneurial orientation and market orientation in the success of farmer entrepreneurs (Baker and Sinkula, 2009; McElwee, 2008).

In this section, the efforts of the farmer to make farming remunerative in the study area are discussed. The informants were asked to report the efforts made by them to make their farming a profitable avenue. They reported efforts made by them such as training, farm mechanisation, availing bank loan, adoption of modern agricultural techniques, connection with officials, planning, own investments, organic crop cultivated, advice from experts, investment of returns, exposure visits, use of chemical and fertilizers, commercialisation of the crops, and connection with middle man (see Fig. 3).

These efforts made by the informants to make their farming profitable can be grouped into six hierarchical categories viz., most popular, more popular, popular, less popular, and least popular strategies. The first is the most popular set of strategies and it includes only one effort. Undergoing training constitutes the main effort made by more than half (53%) of the informants to make farming profitable. The second category is the set of more popular strategies and it includes only two efforts. Farm mechanization (43%) and availing of agricultural loans (40%) from banks constitute the more popular effort followed by more than one-third of the informants. The third set of efforts for making farming profitable is popular strategies. Adoption of modern agricultural technology (30%), connection with officials (27%), and planning (27%) which

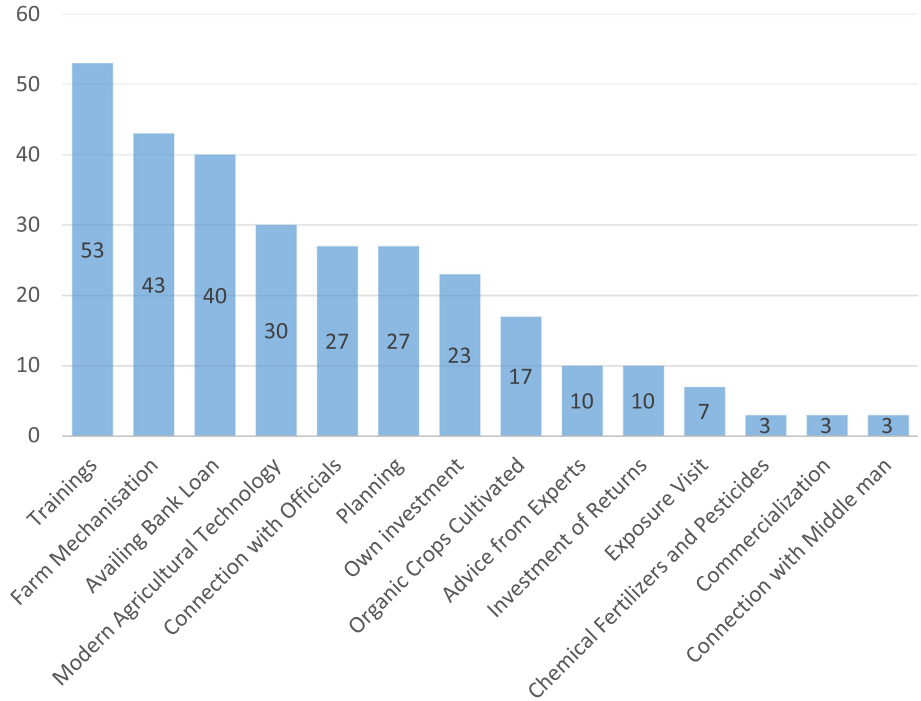

Fig. 3 Efforts Made by Farmers

were the popular efforts reported by more than one-fourth of the informants as efforts to make farming profitable. The fourth set of strategies used by informants for making agriculture as a business-like a venture may be called as less popular strategies. Own investment (23%) and cultivation of organic crops (17%) were reported by nearly one-fifth of the informants. The fifth set of strategies includes those least popular strategies. Advice from experts (10%), investment of returns in agriculture (10%), and exposure visits (7%) were reported as strategies for making farming profitable by nearly one-tenth of the informants. The last set of strategies includes unpopular strategies. Use of chemical fertilizers (3%), cultivation of commercial crops (3%), and connectivity with middlemen (3%) were reported by a few of the informants.

Constraints to entrepreneurial development

Farming is a challenging livelihood option in India, especially in its northeast region. The farmers have to overcome many constraints to be successful entrepreneurs. The informants were asked to report the constraints faced by them in their agricultural development efforts. In this section, the constraints reported by the farmers are discussed.

Constraints to entrepreneurial development perceived by the farmers in the study area include easy money—no hard work, lack of financial capital, non-remunerative price for the produce, lack of organic manure, low level of education, poor market linkage, lack of seeds, lack of encouragement, lack of resources, lack of storage facility, lack of human resource, late production, less mechanisation in farming, poor functioning of AMC, and poor distribution of fertilizers (see Table 5).

Table 5 Constraints to entrepreneurial development perceived by the farmers

Sl. no	Constraint	Frequency	Percent
1	No hard work—easy money	14	47
2	Lack of financial capital	13	43
3	No remunerative prices	12	40
4	Lack of organic manure	6	21
5	Low level of education	6	20
6	Poor market linkage	5	17
7	Lack of seeds	4	13
8	Lack of encouragement	3	10
9	Lack of resources	3	10
10	Lack of storage facility	3	10
11	Lack of human resource	3	10
12	Late production	2	7
13	Less mechanization in farming	1	3
14	Poor functioning of AMC	1	3
15	Poor distribution of fertilizers	1	3

Source: Computed

These constraints to entrepreneurial development perceived by the farmers can be grouped into four hierarchical categories. The first is the most confronted set of constraints and it includes three constraints such as easy money without hard work (47%), lack of financial capital (43%), and non-remunerative price for the products (40%). The second category is the set of more confronted constraints and it includes three other constraints. Lack of organic manure (21%), low level of education (20%), and poor market linkage (17%) followed by more than one-fifth of the informants. The third set of efforts for making farming profitable is popular confronted constraints. Lack of seeds (13%), lack of encouragement (10%), lack of resources (10%), lack of storage facility (10%), and lack of human resource (10%) which were the popular confronted constraints reported by nearly one-tenth of the informants. The last set of constraints may be called as less popular constraints confronted by informants for entrepreneurial development. Late production (7%), less mechanization in farming (3%), poor functioning of AMC (3%), and poor distribution of fertilizers (3%) were reported by a few of the informants.

Conclusion

The present study is a modest attempt to understand the entrepreneurial attributes perceived by the farmer entrepreneurs with a sample of 30 key informants in the Lower Brahmaputra Valley in Assam. The social and agricultural background of the farmers was also explored. The results show that farmers do recognize the attributes critical to entrepreneurship in the agricultural sector from their lived experiences and exposures. Agricultural knowledge, access to financial capital, assured irrigation, and market linkages were perceived as the main attributes of an entrepreneur. They do take efforts to make farming as profitable as a business venture by following a number strategies such as undergoing training, farm mechanization, availing bank loans, adopting modern agricultural technology, and accessing government services. However, they do perceive

constraints such as lack of financial capital, lack of hard work among farmers, non-remunerative prices, lack of organic manure, and low level of education of farmers. These findings lead us to believe that the farmers are ready to become entrepreneurs in their own domain of agriculture and in their own terrain of Lower Brahmaputra Valley. What more needed is the greater support from the government in terms of organizing training programs, helping farmers to get assured irrigation, making financial capital accessible when needed, advanced technology made available to them and integrating them with the direct access to markets, and ensuring remunerative prices to farmers for their crops would help immensely. Farmers do need to learn to work together, work with the governmental, non-governmental agencies, and consumer groups so as to gain control over the market forces by satisfying the needs and aspirations of the consumers.

Abbreviation

AMC: Agriculture Management Committee; GSDP: Gross state domestic product; KII: Key Informant Interview; LBV: Lower Brahmaputra Valley

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Authors' contributions

The corresponding author, KC, worked on the main idea of the article, literature, data collection, and final writing. The method of research and analysis of them was done by the second author KE. Both authors read and approved the final manuscript.

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Availability of data and materials

The data and all the materials used for this study are with the authors and will be made available to the journal on reasonable request.

Competing interests

Both authors declare that they have no competing interests.

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