

Problems in King Chilli (*Capsicum spp.*) Cultivation and Status of Extension Services in Mon District, Nagaland, India

N. K. Patra¹, Shikmeth Konyak², Sanjoy Das³ and Romen Sharma⁴

ABSTRACT

A study was conducted to identify problems in Naga King Chilli (*Capsicum spp.*) cultivation and to assess the level of extension services received by King Chilli growers in Mon district, Nagaland, India. Data were collected by personal interview with the help of interview schedule from 100 respondents. The respondents were asked to mention important problems faced by them in king chilli cultivation and also asked to suggest measures to address the problems. Altogether, eight problems were identified, these can be categorized into two groups, namely, problems related to 'infrastructure and facility', and 'crop production and management.' Marketing was the most important problem followed by transportation, storage and processing. Farmers are getting only around 1/3rd of the consumers or end users price of their produce. If we ensure the 50 per cent of consumers or end users price for its producer/farmer, then it is easy to achieve 'Doubling Farmers' Income' by 2022. Further, degree of extension support received by the farmers was measured. Performance of public sector extension was in pitiable state, although, third sector performed to some extent. It can be recommended that Agricultural extension delivery mechanism is the pre requisite to surpass the problems in agrarian scenario. A reorientation of institutional and policy mechanism of state agricultural policy and agricultural extension delivery mechanism is urgently needed.

Key words: Extension services, king chilli, marketing, problems in king chilli cultivation.

INTRODUCTION

Naga King Chilli or King Chilli (*Capsicum spp.*) belongs to the family of solanaceae. It is a perennial dicotyledonous plant and the edible part is fruit of the plant. In Nagaland, it is traditionally growing in burned bamboo soils as Jhumming (shifting cultivation is a traditional cultivation system and locally known as Jhum cultivation) and also in homestead, kitchen garden and backyard. It is one of the important spice crops of India especially in the North Eastern part of the country. It is used as a spice, condiment, culinary supplement, vegetable and medicine. But it is globally famous as hottest chilli of the world (www.guinnessworldrecords.com/world-records/hottest-chili) and extract of it is used as a spray for self protection of women and by defense force.

There are mainly five cultivated species of chilli under the genus capsicum viz *Capsicum annum* L., *Capsicum baccatum* L., *Capsicum chinense* Jacquin., *Capsicum frutescens* L. and *Capsicum pubescens* Ruiz and Pavon. Among these cultivated species *C. annum* is most widely growing and have worldwide commercial distribution including India (https://en.wikipedia.org/wiki/Bhut_jolokia).

In India important chilli growing States are Andhra Pradesh, Maharashtra, Karnataka and Tamil Nadu. In Nagaland and North Eastern States of India, Naga King Chilli (interspecific hybrid of *C. chinense* and *C. frutescens*) is most popularly growing spice. It is grown in the states of Nagaland, Assam, Manipur, Arunachal Pradesh, Tripura, Mizoram and Meghalaya (https://en.wikipedia.org/wiki/Bhut_jolokia). The Naga King Chilli

¹ Assistant Professor, Department of Agricultural Extension and Communication, School of Agricultural Sciences and Rural Development, Nagaland University, Nagaland

^{2, & 3} Assistant Professor, Department of Agricultural Extension, School of Agricultural Sciences and Rural Development, Nagaland University, Nagaland – 797106.

⁴ Sharma Romen, Scientist, ICAR, Jharnapani, Nagaland.

is a traditional food item of the people of Nagaland and believed to be the centre of origin of this chilli. In the year 2010, Nagaland produced 23, 700 MT of chilli (mainly king chilli and cultivation of common chilli is very less) from an area of 3, 400 hectares (Statistical Handbook of Nagaland, 2011).

In recent years, King Chilli is gaining importance in the scientific community as it was reported to be the world's hottest chilli variety (measuring 8, 55, 000 Scoville Heat Unit, SHU) beating the Mexican Red Savana Habanaros at 5, 77, 000 SHU. Officially it was declared as the hottest of all spices on 9th September 2006 by Guinness world record limited (https://en.wikipedia.org/wiki/Bhut_jolokia and www.guinnessworldrecords.com/world-records/hottest-chili). The Nagaland state Government also got the patent rights of Naga King Chilli from Government of India under Registration and Protection Act. 1999 (www.nagalandpost.com and www.nelive.in).

King Chilli is one of the potential crops and it is immensely potential in terms of high profit and income generating spice crop. This is abundantly growing in the state of Nagaland and supporting the farmers' economic status and State economy as a whole. In spite of such type of huge contribution to rural and State economy, potentiality is relatively underutilized. The State is regarded as centre of origin of Naga King Chilli (www.nagalandpost.com and www.nelive.in), but up-gradation and improvement of the existing pattern of king chilli cultivation is relatively less emphasized.

Taking all the issues into consideration, a study was conducted to explore the various problems involved in king chilli cultivation and status of extension services to address the problems of cultivation. Study was carried out with following objectives-i) to identify the various problems faced by farmers in King Chilli cultivation and measures suggested by them for improvement, and ii) to study the status of extension services for King Chilli cultivation. The study was in lined with Awatade *et. al.*, 2019 & Deka *et. al.*, 2018

METHODOLOGY

Nagaland is a beautiful state of North Eastern region of India and the State is lies between 250600 and 270400 latitude North of Equator and between the Longitudinal lines 93020'E and 95015'E.

The Geographical area of the state is 16,579 sq km (Govt. of Nagaland, 2006) and total population is 19,80,602 (Census, 2011). State consists of 11 Districts

and King Chilli is found to be grown in almost all the districts. Among all the districts, 'Mon' is one of the districts where it is grown abundantly (Govt. of Nagaland, 2006). As a result, Mon district was purposively selected for the study.

Mon District is situated in the North Eastern part of Nagaland. It is surrounded by the plains of Assam in the North, Arunachal Pradesh in the North East, Myanmar in the East, Tuensang and Longleng District of Nagaland in the South and South West, respectively.

The District has an area of 1,786 sq km with a density of 140 persons/ km² and population is around 2,50,671 (Census, 2011). More than 90 per cent of the population is Konyak tribe and staying in the rural areas. Agriculture is their main source of income for livelihood and survival.

There are eight rural development blocks in the District. Out of these, two blocks, namely, Wakching and Mon were selected, as because, maximum households of these blocks were growing king chilli. Further, from each block one village was selected. A total of 50 king chilli growers from each block/village with more than 3 consecutive years of experiences of growing king chilli were selected and total 100 king chilli growers were selected as respondents for the study. Both primary and secondary data were collected for the study. An interview schedule was prepared and finalized by pre testing for data collection. The empirical measure of various factors related to king chilli culti-vation was done by frequency, percentage, mean, standard deviation and ranking.

To know the problems involved in king chilli cultivation, farmers were asked to indentify/inform about various problems faced by them in king chilli cultivation. To mitigate the problems, respondents were also asked to suggest measures according to their experience and persuasion. In spite of all issues related to cultivation, the issues of marketing and extension delivery mechanism were well emphasized to address the problems in respect of King Chilli cultivation.

RESULTS AND DISCUSSION

Various problems faced by the farmers in King Chilli cultivation and measures suggested by them to solve the problems are presented in Table 1. All the reported problems are classified into eight major categories and further sub- categorized into 14. Based on the response of the respondents, ranking is done from I to VIII as most important to least important as per frequency of the responses.

Table 1: Prioritization of problems in King Chilli cultivation as identified by farmers and suggestive measures by them to overcome the respective problems

Category	*Fand %	Rank	Nature of problems	Suggestions
Marketing	78	I	No regulated market within the village Non availability of buyers/ traders as per requirement Fluctuation and less remunerative price Long distance between field and markets	<ul style="list-style-type: none"> ➤ Create market opportunities/linkages ➤ Involve more traders ➤ Agri- link road ➤ Export of product
Transportation	72	II	Non availability of proper public transport facility Poor road condition	<ul style="list-style-type: none"> ➤ Own or community vehicle/transport ➤ Availability of more public transportation from the village to the markets ➤ Better road maintenance
Storage	68	III	Lack of storage facility Early spoilage of fruit	<ul style="list-style-type: none"> ➤ Sell the produce as early as possible. ➤ Establish proper infrastructures for storage from the State Government.
Processing	57	IV	Smoking reduces value Lack of dryers / insufficient dryers in the village	<ul style="list-style-type: none"> ➤ Provision of providing dryer from different departments ➤ Avail dryers from concern departments/ NGOs ➤ Value addition to King Chilli ➤ Capacity building on processing
Weed	46	V	Labour intensive	<ul style="list-style-type: none"> ➤ Training on proper weed management ➤ Use of salt
Harvesting	44	VI	Improper handling causes loss of fruits Burning of skin and hand due to high pungency	<ul style="list-style-type: none"> ➤ Proper harvesting of the fruits along with the stalk ➤ Careful handling after harvest ➤ Use of hand gloves to avoid skin burning due to handling
Land preparation	27	VII	High labour charge Non availability of labour	<ul style="list-style-type: none"> ➤ Working in group and help alternately during land preparation ➤ Less labour intensive method should be followed ➤ Capacity building on Minimum tillage
Site selection	22	VIII	Shifting of land	<ul style="list-style-type: none"> ➤ Select area with good accessibility for cultivation ➤ Acquire larger area of land ➤ Southern area of hill is more suitable for cultivation

*F= Frequency; %= per cent

Study showed that (Table 1) marketing is the most important problem in King Chilli cultivation which is ranked as first and identified by 78 per cent of the respondents. Some of the problems in respect of marketing of king chili are lack of regulated markets, non availability of traders as per requirement, fluctuation and less remunerative price and distance of the king chilli field from the market.

In India, 60 per cent farmers are not interested to continue farming if they have alternative (NCF 2006). Not getting remunerative price by farmers is a perennial problem in Indian agrarian context. Farmers are the producer of agricultural commodities but they are getting 1/3rd of the price paid by consumers or end user and remaining 2/3rd of price enjoyed by traders, middlemen and wholesalers (Kapoor, P and A. Saraiya). If we ensure the 50 per cent of consumers or end users price for its producer/grower, then it is very easy to achieve Doubling Farmers' Income by 2022. It is explored that all farmers are selling their produce to the middle man, retailer and wholesaler, side by side they are also selling directly to the consumers Table 2. To ensure the 50 per cent of consumers or end users price for the growers. In this respect, Ao and Patra (2018) also included issues of the hurdle of marketing of farm produces to assess the performance of Watershed programme in Wokha District of Nagaland and observed that the availability and accessibility of market to sell farm produces were improving.

On the other hand farmers are less knowledge-rich about marketing and training is an effective alternative as viewed by Shruti *et al.* (2018). Simultaneously, they are reluctant to adopt some strategies to fetch a higher and remunerative price. For instance, grading of farm product is an easy and simple procedure to fetch higher and remunerative price but 65 per cent of farmers did not adopted this (Table 3). Remaining 35 per cent of farmers have adopted the grading for higher price. Size of fruits is the primary consideration for grading (35% have adopted), some of them (21%) have adopted colour of fruits as a parameter for grading and 21 per cent of them have followed both the parameters for grading (Table 3).

Falling down of price at the pick season of production is another identified problem due to lack of proper regulation of market by public sector and lack of proper storage facilities. Moreover, minimum support price (MSP) scheme to protect the farmers from loss did not reach upto the requirement and this crop is not included in the group of MSP schedule (MSP... <http://agricoop.nic.in/sites/default/files/english.pdf>). On the other hand facility of storage and processing of farm produce at the time of bulk production did not reach upto the requirement.

Innovative farmers of the study area are also suggested to surpass the problem of marketing in respect of king chilli cultivation which also applicable to other farm produces. Creation of market opportunities and market infrastructure is the most important alternative to minimize the problem of marketing. Open up of various scope and avenues of marketing will attract more people

to involve in the trading and marketing of commodities. This will support to get competitive price by farmers.

To know the marketing problem in more details, an attempt has made to identify the sources of information of growers to know the market price of king chilli (Table 2). Three important alternatives are identified from the study. Growers are mostly (64%) depended on the relatives, friends and neighbours those have visited market and collected information related to trend of price of king chilli. Growers are also personally visiting market to know the price and this is reported by 63 per cent of the respondents. Only 3 per cent of the respondents reported that they are collecting market information by using electronic gadgets (Table 2). In this regard Mondal, Patra and Bondyopadhyay (2005) viewed that creation of ICT based rural information centre is an alternative to mitigate the non-availability of market, input and crop management information.

Table 2: Distribution of respondents according to the sources of information of market price, marketing channel accessed and mode of transportation by king chilli farmers

n=100

Sources of information accessed by farmers for knowing market price	Sources		marketing channel		Mode of transportation			
	*F	*%	Channel	F	%	Mode	F	%
Relatives, friends and neighbours who visits market	64	64	Middlemen	100	100	Semi truck	4	4
Personal visits to market	63	63	Wholesalers	100	100			
By telephonic or mobile contact	3	3	Directly to consumer	74	74	Buses and taxi	100	100

*F= Frequency; %= per cent

In Nagaland communications and transportation facilities was inadequate as reported by functionaries of NGOs (Odyuo, Patra and Makar, 2017). Transportation and communication is the second most important problem as perceived by 72 per cent of King Chilli growers (Table 1). Various problems related to transportation are lack of availability of public transport for movement from the farm / farmer's house / village to district headquarter or other towns and market areas for selling of their produce. Bad condition of road or non availability of all weathered/black topped roads is also a limiting factor in availing easy transportation to the farmers in carrying their produce to the market areas. Farmers are mainly accessing public transportation facilities to carry their produce which are meant for movement of people Table 2.

Therefore, creation of proper backward and forward infrastructure in respect of transportation and communication is repeatedly highlighted by the farming community. This can be achieved by construction of agri-

link road, block and district connecting road. In this regard Pradhan Mantri Gram Sadak Yojana (PMGSY) is seen as suitable option for improvement and establishment of road and transportation infrastructure (PMGSY, 2013). Side by side improvement of public sector transportation and arrangement of community vehicle / transportation by village council are also potential alternatives to suppress the problem.

Storage facility is the third most important problem which was highlighted by 63 per cent of the respondents Table 1. Ripe king chilli is perishable in nature and June to first fortnight of September is the peak season of harvesting. During this period climatic condition of the study area is hot and humid which accelerate the rate of spoiling of fruits and rate of spoiling is faster in this season than the any other seasons. To avoid this problem farmers are compelled to sell their produce by earliest to minimize the post harvest yield loss. As a result, facility of storage is most important requirement to extend the availability of fruits round the year and fetching the remunerative price and this issue was highlighted as an important problem by the growers.

Owing to non availability of structured and permanent storage facilities, all farmers have followed traditional storage methods Table 3. Therefore, proper infrastructures related to storage *i.e.*, cold/multi storage facility in the area is needed to enhance the shelf life of the harvested king chilli and extend the period of marketing of produce.

Table 3: Distribution of respondents according to grading and storage procedures followed by King Chili growers

n=100

Parameters	Grading		Storage		Drying			
	f	%	Parameters	f	%	Parameters	f	%
Followed	35	35	Followed	100	100	Followed	100	100
By colour	21	21	Traditional sieve	100	100	Sun drying	100	100
By size	35	35	Bamboo baskets	82	82	Smoke drying	100	100
Both	21	21	Both	82	82	Dryer	4	4

*F= Frequency; %= per cent

Study also showed that processing is the fourth important problem with 57 per cent of the King Chilli growers are reported this (Table 1). Peak period of harvesting of King Chilli is spanned upto 3-4 months. As harvesting last, only for few months, farmers have to sell off as early as possible in order to prevent losses of harvested fruits. The alternative way to prevent the losses of fruits is either storage or processing. Therefore, like storage, processing is highly potential alternative to reduce the yield loss and fetching remunerative price at the time of bulk production.

Availability of infrastructure for value addition, mainly for processing, *i.e.*, extraction and spray making, medicinal value addition is not exist. Farmers are continuing the processing by traditional method. The most common traditional practices of King Chilli processing are sun drying and smoke treatment (Table 3). But during the harvesting period sun drying is difficult due to non availability of sunny days. Alternatively, farmers are following smoke treatment for drying. In this method ripe fruits are kept in traditional shelves above the fireplace of kitchen for drying. Some farmers are seen to use the dryer supplied by the NGOs but due to inadequate numbers, farmers usually go for traditional smoke treatment in their kitchen which results the devaluation of King Chilli. Smoking not only reduces its value but also time consuming method. Adequacy in availability of dryers would thus help the farmers in easy processing of the fruits. Establishment of processing unit by the state departments and NGOs in the district will also enable in enhancing the value addition to King Chilli. Weed infestation and control of weed is also seen as another important problem in King Chilli cultivation which is reported by 46 per cent of the respondents and is ranked as fifth. The study area is under high altitude and annual rainfall is above 2500 mm (Annual Report, NAIP, 2008), where weed growth is very fast that's why weed infestation and control of weed is an important problem for the King Chilli farmers. Weeding is mostly done by manually along with some traditional hand tools which become labour intensive. There is no reference of using chemicals or herbicides, but some farmers are using common salt at pre-transplanting stage to control weeds of the field. For healthy growth of the plants 2 to 3 manual or hand weeding are essential. Manual or hand weeding is labour intensive and in the study area crisis of labour is an acute problem. As a result, non availability of labour has further intensified the problem of weeds in king chilli cultivation.

Damage of plant during harvesting and yield loss during and after the harvesting of fruits is also an important limiting factor in King Chilli cultivation. Around 44 per cent of respondents cum growers had been perceived this and ranked as sixth problem in king chilli cultivation. It is a soft plant which needs careful handling during harvesting, or else, plants got damaged. Ripe fruits are delicate in nature and proper care is needed during harvest and post harvest stage, otherwise spoilage and loss of fruits will take place. Matured and properly ripe fruits should be harvested by handpicked up along with the stalk so that the fruits can be retained its vitality for longer period. Land preparation for cultivation of king chilli or for any other crops is also an important problem in this region. Problems related to land preparation is highlighted

by 27 per cent of the King Chilli growers and this is ranked as the seventh problem in king chilli cultivation. Farmers are growing king chilli in Jhum field or backyard and homestead garden. In both the cases, land preparation is usually labour intensive. Use of modern instruments like tractor and power tiller is not possible due to steep and high sloppy land. On the other hand crisis of labour is a big problem in the State. As a result, farmers are facing tremendous problems in respect of land preparation as well as at the time of intercultural operation and harvesting.

A considerable number of farmers (*i.e.*, 22 %) from the study area also highlighted that the site selection is a problem for king chilli cultivation. This is ranked as eighth problem in respect of king chilli cultivation in the region. According to the experiences of farmers southern side of hill with burned bamboo soils is favourable for King chilli cultivation in the area.

In this region Jhum cultivation (shifting cultivation) is predominant. Shifting of cultivation from one place/plot to another place/plot after consecutive cultivation of two years is pre-requisite in Jhum cultivation. The shifting from one plot to another is based on the availability of the land. In Jhum cultivation, mixed cropping is primary and cereal crops are in priority. As a result site selected for Jhum cultivation is sometimes not suitable for king chilli cultivation. Thus, site selection is a problem for the farmers.

Extension services for King Chilli growers in study area

Present scenario, climate change is a well-recognized global problem (Patra and Babu, 2017). Therefore, Indian Agricultural extension system is required to re-structure. The extension system is a crucial role player in knowledge and information dissemination to address the problems in the agriculture and allied sectors, support to create resources for agriculture and farming sector. Indian agricultural extension system is an amalgamation of public, private and third sector extension. But public agricultural extension system is the leading role player in the country and Indian public sector agricultural extension system is one of the largest extension delivery system in the world. Private sector agricultural extension system is also playing crucial role at country level in knowledge and information dissemination. Private sector agricultural extension system is performing very well in the areas where market demand of agricultural inputs is huge. On the other hand third sector extension system is generally providing multipurpose extension delivery including agricultural extension in the backward areas and weaker section of the society. Entire north eastern region of India

including Nagaland and study area (Mon district) are designated as backward area and role of third sector in agricultural extension is prominent. As a result, in the study area public as well as third sector extension delivery systems in the agriculture scenario are prominent.

It is presumed that problems in agriculture sector and strong extension delivery mechanism are reversely related. . Extension contact has a positive and significant relationship with adoption behaviour index of growers (Patra *et al.*, 2018). Further, Motagi *et al.* (2018) reported that inadequate advisory and information service was also an important operation constraint in the implementation of the agricultural development programme. In this paper an attempt was also made to study the nature and pattern of extension services provided or followed by the King Chilli growers. To assess the performance of extension delivery mechanism to address the existing problems in the king chilli farming, various issues of extension systems were taken into consid-eration.

Degree of acquaintance with extension agents and farmers is a precondition to achieve proper information and knowledge dissemination. In this regard five commonly present extension functionaries from public sector extension systems, namely, Village Level Workers (VLW), Subject Matter Specialist (SMS) of Krishi Vigyan Kendra (KVK), Agricultural Development Officer (ADO), Horticultural Development Officer (HDO) and functionaries of Agricultural Technology Management Agency (ATMA) were taken into consideration. Non Government Organization (NGO) and others institutes were also taken into consideration under third sector extension system.

It was emerged that third sector's extension functionaries were widely acquainted with the growers and public sector extension functionaries were less acquainted with growers (Table 4).

Table 4: Distribution of respondents according to acquaintance with extension agents and degree of visit of extension agents to farmers' place

Extension agents /functionaries	Acquaint with extension agents		Degree of visit of extension agents to farmers' place					
			Often		Sometimes		Never	
	*f	*%	f	%	f	%	f	%
VLW	10	10	0	0	0	0	100	100
SMS of KVK	19	19	0	0	11	11	89	89
ADO	1	1	0	0	0	0	100	100
HDO	0	0	0	0	0	0	0	0
ATMA	0	0	0	0	0	0	0	0
NGOs (World Vision)	77	77	0	0	46	46	54	54

*F= Frequency; %= per cent

Degree of visit of extension functionaries to farmers' place is another important parameter to assess the performance of extension delivery system. Table 4 shows that most of the extension agents from public sectors did not perform any visit to farmers' place except functionaries of KVK. But NGO workers were performed very well in terms of visit to farmers' place.

Table 5: Distribution of respondents according to frequency of visit to get support from extension agents/system

Extension agents/organizations	Often		Sometimes		Never	
	*f	*%	f	%	f	%
NGO	0	0	25	25	75	75
ADO	0	0	0	0	0	0
KVK	0	0	0	0	0	0
HDO	0	0	0	0	0	0

*F= Frequency; %= per cent

Frequently visit to extension organization or visit to extension workers' place by farmers is also an important indicator to assess the performance of extension system. The Table 5 showed that only 25 per cent of the respondents visited office of the NGO or place of functionaries of NGO to get support from them for improvement of farming of king chilli. But they did not visit other public sector organizations like office of the ADO, KVK and HDO.

Table 6: Distribution of respondents according to the access of mass media and training exposure for King Chilli cultivation

Mass media and training exposure	Never	
	*F	*%
Radio	100	100
Exhibition	100	100
Print media (poster, folder, leaflet, etc.)	100	100
Training Exposure	100	100

*F= Frequency; %= per cent

Table 6 contains information about the distribution of respondents according to the access of mass media and training for their King Chilli cultivation. Mass media has a positive and significant relationship with the modernization of farming system (Patra *et al.* 2004). Despite the fact that the influence of mass media on king chilli and allied farming activities was in the worst state. The farming community of the study area did not access agricultural information or services from radio broadcasting, exhibition, extension teaching materials (like poster, folder, leaflet, etc.) from government / NGOs for up-scaling of their agriculture and allied activities.

Globally, training is the most widely accepted capacity development and human resource development technique with minimum expenditure. Patra, Odyuo and

Mondal (2015) reported that capacity development of functionaries of NGOs of Nagaland is an essential indicator for effective management of development work. Further, training is the most crucial extension activity of NGOs of Nagaland, India for the development of livestock sector (Odyuo *et al.* 2011). It is also commonly accepted in the agricultural extension system for capacity development of farmers and rural artisans. Similarly, capacity development of farmers and rural artisans by extension system can be considered as a performance of extension delivery system. Patra *et al.* (2018) reported that training exposure has a positive and significant relationship with the adoption behaviour index of mandarin farmers. Accordingly, this parameter was taken into consideration to understand the performance of the agricultural extension system. Table 6 shows that none of them (*i.e.* 100%) had participated in any training programme related to King Chilli cultivation.

CONCLUSION

It is emerged that in the study area eight types of problems were present in king chilli cultivation, namely marketing, transportation, storage, processing, weed infestation, harvesting, land preparation and site selection for cultivation of king chilli. All identified problems can be categorized into two groups, namely, problem related to 'infrastructure and facility' creation or non-availability of 'infrastructure and facility', and 'crop production and management' related problem. Creation of better marketing opportunity to the farmers is the prime concern to achieve remunerative price.

Fetching remunerative price of agricultural commodities by growers is mostly depended on smart and professional marketing of the commodity and regulation of marketing system by public sector. For instance, farmers are getting 1/3rd of consumer/end user price (Kapoor, P and A. Saraiya). If we ensure the 50 per cent of consumers or end users price for its producer/grower, then it is very easy to achieve 'Doubling Farmers' Income' by 2022. Smart marketing of agricultural commodities is again depended on other infrastructures like, transportation facility, market information, grading, storage and processing facilities. Productivity is based on crop management, climatic factors, natural resources and availability of infrastructure facilities. Extension system is key role player by know-ledge and information dissemination and support to create resources for agriculture and farming sector. Indian agricultural extension system is an amalgamation of public, private and third sector extension. In the study area public sector and third sector agricultural extension system is the leading role player.

It is presumed that problems in agriculture sector and strong extension delivery mechanism are reversely related; *i.e.* if extension delivery system is performing well, problems seemed to be very less. Performance of public sector agricultural extension system in the study area was in pitiable state and at the same time third sector's role was not up to the desirable extent. As a result, various problems are prominent in king chilli cultivation or in crop production. It can be concluded that agricultural extension delivery mechanism is the pre requisite to surpass the problems in agrarian scenario. Reorientation of institutional and policy mechanism of state agricultural policy and agricultural extension delivery mechanism is urgently needed. Therefore, organizational and political willingness is needed to provide desirable extension services to rural and farming community. If problems of agriculture and allied sectors are accordingly addressed then productivity will reach at optimum level. Maximum productivity per unit area is the basis for better livelihood. It is also mandatory to achieve the 'Doubling Farmers' Income by 2022'.

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