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RESEARCH NOTE :

Production constraints of maize cultivation under Mokokchung district of Nagaland

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SUMMARY : The present study was conducted in Mokokchung district of Nagaland. Purposively eight villages were selected from four selected rural development (RD) blocks. From those eight villages 200 respondents were selected randomly. The study reveals that the major constrains of high quality protein maize production was noted in non-availability of quality seed by 89.50 per cent of the respondents which comes under infrastructural constraint.

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KEY WORDS :
Constraints, High quality maize, Villages, Production

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Maize is one of the most important cereals, next only to wheat and rice in the world agriculture with respect to both area and production. It is a cereal crop belonging to the family Poaceae that is used as a source of carbohydrate to both human (in the developing countries) and animal feed worldwide due to its high feeding value it is recently used in production of bio-fuel. It is an annual crop of great importance, it was domesticated from America. Maize is the queen of coarse cereals by virtue of contributing to about one-third of its production and maintaining the highest productivity among the coarse cereals grown in India. Among all the cereals grown in India, maize ranks fifth in total area, third in total production and third in yield per hectare. In India the area under maize cultivation is 8.26 million ha producing 16.72 million tonnes, with the mean productivity of 2024 kg ha^{-1}. According to some experts, India has to produce 20 million tonnes of maize grains to meet its requirement for human consumption, animal feed and industries by 2020.

Maize is one of the principal crops cereals in North Eastern Hill states. This crop is resilient and can adjust to diverse growing environment differing in soil, rainfall and weather. There has been consistent in area under maize to due extension of its cultivation in North Eastern Hill states. The demand for maize has been increasing year after year mainly to due its utilization in pig poultry and rabbit feed and maize based industries. Maize growing farmers in Nagaland by and large have adopted only non monitory inputs and parley the adoption of high yielding variety.

Total maize production in Nagaland was 809.94 (000 tons). and the area under the crop was 698.74 (000 ha) during the 1979-80 to 2004-05 (Dhakre and Sharma, 2010).

The study was conducted to know the constraints faced by the maize growers in Mokokchung district of Nagaland. Four RD block and eight villages from these RD blocks were selected purposively to meet a required sample size of 200. The respondents were selected randomly. Primary data were collected by interview method with structured scheduled prepared. Secondary data were collected from journals, books, bulletins etc.

The results presented in Table 1 indicate that the important problems associated with successful production of maize with respect to agro-climatic component were other environmental factors (like heavy rain, drought etc.,) (71.00%), moisture stress during crop growth period (60.00%) and poor soil fertility (40.50%), which were ranked first, second and third, respectively according to their degree of importance. As regards to the technological constraints, lack of knowledge for suitable variety (78.00%) was found the most important problem as experienced by 85.24 per cent farmer respondents followed by lack of knowledge on scientific crop production (60.50%). Non-availability of quality seeds emerged the most important problem faced by farmers in cultivation of maize crop as almost every farmers (89.50%) reported the same under with respect to the present infrastructural facilities in study area. This was followed by other problems (like unavailability of water storage structures, electrical facility etc.) (86.00 %), lack of irrigation facilities (73.00%), non-availability of agricultural chemicals at the time of need (66.00%) and inability to purchase modern agricultural implements (53.00%). Further reveals non-availability of labour during peak period, low selling price, high cost of agricultural chemicals, non-availability of processing industries (Value addition) and non-availability of timely credit facilities were the major problems under economic constraints as mentioned by 62.50 per cent, 57.00 per cent, 55.00 per cent, 43.00 per cent and 32.50 per cent respondents, respectively resulting in poor adoption of high quality maize in the district. It was also found from the same table that limited help from extension personnel

Table 1 : Constraints as responded by farmers in production of maize

Sr. No.	Constraints	Frequency	Percentage	Rank
1.	**Agro- climatic**			
	Soil fertility	81	40.50	III
	Occurrence of pests and diseases	46	23.00	IV
	Irrigation problem	120	60.00	II
	Other environmental factors (like flood, drought etc.)	142	71.00	I
2.	**Technological**			
	Lack of knowledge regarding package of practices	121	60.50	II
	Lack of knowledge for suitable variety	156	78.00	I
3.	**Infrastructural**			
	Non-availability of quality seed	177	89.50	I
	Inability to purchase modern agricultural implements	106	53.00	V
	Lack of irrigation facilities	146	73.00	III
	Non-availability of agricultural chemicals at the time of need	132	66.00	IV
	Other problems (like unavailability of water storage structures, electrical facility etc.)	172	86.00	II
4.	**Economical**			
	High cost of agricultural chemicals	110	55.00	III
	Non-availability of timely credit facilities	65	32.50	V
	Non-availability of labour during peak period	125	62.50	I
	Low selling price	114	57.00	II
	Non-availability of processing industries (Value addition)	86	43.00	IV
5.	**Social**			
	Limited help from extension personnel during crop production	140	70.00	I
	Limited support from family, friends and other relatives	15	7.50	II

during crop production (70.00%) was a major problem under social constraints followed by limited support from family, friends and other relatives *i.e.* 7.50 per cent. It is evident from the findings that there exists a wide gap between development of technologies and their transfer to actual farming situations. Hence, these constraints perceived by the farmers can be overcome by the following suitable strategies like suitable, improved, short duration of high yielding varieties of maize recommended for the district should be made available to the farmers at the time of sowing. State Department of Agriculture and Zonal Research Stations may take initiatives in this regard.

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