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Research Paper

Constraints perceived by farmers in production of soybean in Kabirdham district of Chhattisgarh state

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ABSTRACT : An attempt has been made in this paper to finding the major production constraints of soybean crops. The study was conducted in Kabirdham district of Chhattisgarh state with hundred farmers who were selected randomly. For the study two blocks was selected from district; there after 2 villages from each block was selected purposively according to maximum area and production of soybean. From the farmer of the selected villages, a proportionate stratified sample respondent was considered in order to make a number of respondents equal to 10 per cent. The total numbers of constraints selected for the study were nine, which are categories as technical, institutional, economical and transportaional constraints. Out of these constraints, the major constraints were 'high costs of improved production inputs' followed by 'Problem Lack of labour', 'problems of insect pest, dieses and bad whether side effects, 'lack of resources *i.e.* Money, equipment, 'Lack of latest technical know-How about the crop 'lack of nutrient in soil and lack of sufficient soil testing facilities. The some farmers perception on constraints was 'Lack of financing at reasonable interest rate'. 'Lack of improved and high yielding varieties' and 'Lack of recommended package practices of the crop in the region'.

KEY WORDS : Production constraints, Soybean crop

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INTRODUCTION :

Soybean [*Glycine max* (L.) Merrill] is a major oil seed crop in the world and is called as a golden bean or miracle bean because of its versatile nutritional qualities having 18-20 per cent oil and 38 to 43 per cent protein. It can be grown in varied agro-climatic conditions. Due to its worldwide popularity, the international trade of soybean is spread globally.

It belongs to sub family papalionaceae, the genus *Glycine* comprises of 1200 species. It is originated from South-East Asia. It is the richest, cheapest and easiest source of best quality proteins and fats and having a vast multiplicity of uses as food and industrial products is sometimes called a wonder crop. Soy protein is also good to people who are allergic to animal protein. The estimated world soybean area, production and productivity for the year 2014-15 are 118.01 million hectares with a production of 315.06 million tons and having a productivity of 2.67 tons ha^{-1} (Anonymous, 2015a). These exhibited

an increase in area (14.4%), production (31.01%) and productivity (14.5%) over the corresponding year 2011-12. Among major soybean growing countries currently India ranks fourth in terms of area under soybean and fifth in terms of production. Soybean in India has a leading oil seed crop with 41.5 per cent and 28.6 per cent contribution toward the total oilseed and edible oil production in the country in during 2013-2014. India occupies 11 million hectares of area with 11.64 million tons of production and 955 kg ha^{-1} productivity. The major soybean producing states in India are Madhya Pradesh, Maharashtra, Rajasthan, Andhra Pradesh and Karnataka. Anonymous (2015a) Agricultural Statics at a glance, Ministry of Agriculture, Department of Agriculture and corporation directorate of Economics and Statics, New Delhi.

Chhattisgarh plain has favourable climate for soybean as oilseed crop. Hence, soybean is predominant crop in cropping pattern of farmer in the zone. The zone has medium to heavy soils. The average rainfall of zone is 750 mm. In soybean production, area under soybean, human labour, bullock labour, machine labour, seed, manure, fertilizers and family labour are the important resources. In production process, some of the resources are either over utilization or under utilization. By keeping in view the constrants in soybean production, the present investigation has been undertaken to determine the constrants in soybean production. Soybean can be grown successfully during *Kharif* season in Kabirdham Chhattisgarh. In recent past, cultivation of soybean has been gaining popularity in Chhattisgarh. Kabirdham district was the one of the most important soybean growing district of Chhattisgarh. Selected districts Kabirdham occupy 48.99 ha, (88.64% of area under oilseed crops in Chhattisgarh) Anonymous (2015b) Economic survey of Chhattisgarh, Directorate of economics and Statics Raipur Chhattisgarh. Districts produces 30.92 thousand metric tons soybean.The prosperity of the region and economic stability of the growers mainly depend upon the optimum scale of the soybean production.

MATERIALS AND METHODS :

The data were collected for the research during November-December 2017 with multistage random sampling for this study.

Selection of districts and blocks :

The study was conducted in soybean growing Kabirdham districts, the two blocks was selected from district; there after 2 villages from each block was selected purposively according to maximum area and production of soybean.

Selection of farmers:

From the farmer of the selected villages, a proportionate stratified sample respondent was considered in order to make a number of respondents equal to 10 per cent. These growers was classified on the basis of their holding size as marginal (upto 1 ha.), small (1.01-2.00 ha.), medium (2.01- 4.00 ha.) and large (above 4.01 ha.).

The primary data required for the study was collected through personal interview method with the help of well structured and pre-tested schedule. The data on general characteristics cropping pattern, area under cultivation, detail of cost of cultivation of soybean inputs used and returns and their constraints were elicited from the sample farmers.

RESULTS AND DATA ANALYSIS :

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Farmer's perception on constraints in production:

Table 1 reveals information on constraints faced in scarcity of high costs of improved production inputs. Majority 91.00 per cent of respondent small farmers stated that non-availability of high costs of improved production inputs. Shrey *et al.* (2015), also found that for instance non-availability of inputs at village level, high cost of inputs and lack of technical guidance in time were the major constraints reported by 100 per cent, 86.67 per cent and 71.67 per cent farmers, respectively. However, 86.00 per cent of small farmers expressed problem of lack of labour and 84.00 per cent opined other most important constraints Insect pest, dieses and bad whether side effects. It was observed that 62.00 per cent of small farmer lack of resources *i.e.* Money, equipment etc. and 55.00 per cent small farmer expressed lack of latest technical know-How about the crop. Mbanya (2011), also found that good production practices and technology adoption are vital if soybean farmers are to obtain optimum yields. Row

Table 1 : Constraints faced by farmers in soybean crop production **(Sample size=100)**

Sr. No.	Constraints	Frequency (no. of farmers)	Percentage frequency
1.	Lack of latest technical know-how about the crop	55	55.00
2.	Lack of improved and high yielding varieties	15	15.00
3.	Lack of recommended package practices of the crop in the region	13	13.00
4.	Lack of resources *i.e.* money, equipment etc.	62	62.00
5.	Lack of labour	86	86.00
6.	Lack of nutrient in soil and lack of sufficient soil testing facilities	48	78.00
7.	Lack of financing at reasonable rate of interest	33	33.00
8.	High costs of improved production inputs	91	91.00
9.	Crop affected by Insect pest and dieses and bad whether side effects	84	84.00

planting was not widely practiced by northern region soybean farmers: only 19 per cent of farmers practiced row planting. Further lack of nutrient in soil and lack of sufficient soil testing facilities (48.00%).The other constraints was lack of financing at reasonable interest rate (33.00 %). (15%) of lack of improved and high yielding varieties and (13.00%) of lack of recommended package practices of the crop in the region Shrey *et al.* (2015), also reported that lack of easy credit facilities, timely non-availability of inputs, lack of knowledge, poor quality of seed and plant protection chemicals, poor marketing facilities and poor quality of lands were reported by 63.33 per cent, 58.33 per cent, 55 per cent, 41.76 per cent, 35 per cent and 23.54 per cent farmers, respectively. Looking to the problem faced by the soybean grower it is pertinent to address these constraints. According use of low cost machine for vegetables and cultivation should be given on developing insect and pest resistant varieties of soybean. There is also need to impart training skills to the grower on production aspect through extension support such as on farm training, demonstration etc.credit support should made more affordable and accessible to the vegetables grower in the region.

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