PERFORMANCE ANALYSIS OF KRISHI BHAGYA SCHEME IN AGRO-CLIMATIC ZONE-3 OF KARNATAKA

ABSTRACT

India has been predominantly an agricultural country. The progress of India is very much dependent on the development of agriculture. In recent years, effect of climate change seen in the form of long dry spells and heavy rains in rainfed areas causing drought and floods, respectively. However, these vagaries can be overcome by adopting soil conservation measures, changing cropping pattern, rain water harvesting etc., The present study was undertaken 'to know the utilization pattern of the components by the KBS beneficiaries' in Bagalkot and Vijayapura districts of Karnataka during 2017-2018 by the ex-post-facto research design with the sample size of 120 beneficiaries. The results revealed that contour bunds were constructed to increase ground water table (6.67 %) and control erosion (5.83 %). The probable reason might be that, majority of them having semi-medium land holdings. So, they are not ready to reduce the area on their productive lands. All the beneficiaries were constructed farm ponds to harvest rain water to provide protective irrigations in critical stages of crops to get good yield, collected water is also used for providing drinking water for humans and animals (77.50 %). All the beneficiaries installed diesel pump set to lift water from farm pond. Diesel pump is available in lower price and is compulsory to get subsidy under this scheme. So, the poor farmers can able to purchase and used for own purpose. Forty per cent of beneficiaries providing irrigations to the crops through sprinkler irrigations once in two weeks. So, that not even a drop is wasted and crop gets the required quantity of water at the right time for better yield. Thirty-five per cent of beneficiaries growing capsicum and tomato (15.00 %) in poly house. This study implies that KBS is facilitating the farming community not only in increasing production and productivity, but also in conserving natural

resources to the greater extent. Therefore, the replication of the KBS for the non-beneficiaries is most desired to transform the socio-economic condition of the farming community at large.

Key words: Krishi Bhagya Scheme, Farm pond, Poly house, Diesel pump, Micro irrigation and poly house.

Introduction

India has been predominantly an agricultural country. Agriculture plays a vital role in India's economy and 54.60 per cent of the population is engaged in agriculture and allied activities. It is the main source of food, fodder, fuel and providing raw material for small scale agro-based industries. The increased agricultural production depends upon the number of factors of which, water plays an important role. Water is an essential and precious resource upon which our ecosystems and agricultural production depend. Extreme climatic situations such as drought, heat wave, flood, cyclone, and stormy rainfall have caused adverse impact on human society.

Seventy per cent of farmers in Karnataka depend on rain for their crops. These rainfed fields don't have any form of assured irrigation during dry spells. Frequent dry spells play havoc with crops & lives of rainfed farmers. When rains fail at crucial crop stages, crops fail wholly or partly. The total losses or lower yields reduce rainfed farming to an unsustainable proportion. It results to face a risk of debt by farmers. In rainfed agriculture the challenge is to store the run-off rain water from the farmer's field and use stored water for crops when dry spells occur.

The Government of Karnataka has launched a flagship scheme named "KRISHI BHAGYA SCHEME" (KBS) to support farmers to construct a farm pond with polythene lining (to prevent percolation), installation of diesel pump, sprinkler irrigation system (for efficient water utilization), in-situ soil moisture conservation and alternative cropping systems to achieve sustainable growth in agriculture through conservation, storage and efficient use of rain water, adoption of profitable cropping systems, cultivation of high income earning horticultural crops, promotion of animal husbandry activities, establishment of processing industries and promotion of infrastructure creation for agriculture.

Methodology

An "Ex-post facto design" was used in the present study. Ex post facto research' is systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables. In ex post facto research, direct control is not possible: neither experimental manipulation nor

random assignment can be used by the researcher. Basically, ex post facto research has, so to speak, an inherent weakness: lack of control of independent variables. The study was conducted in Agro- climatic Zone-3 of Karnataka during the year 2017-18. In Zone-3, two districts namely Bagalkot and Vijayapura were selected based on the highest number of KBS beneficiaries. From each selected district, 60 beneficiaries were drawn by following random sampling procedure. This study comprises of 120 beneficiaries as respondents.

Results and discussion

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

Table 1. components-wise utilization of Krishi Bhagya Scheme

Sl. No.	Components	Frequency (%)
1.	**Contour bunds**	
	To increase ground water table	08 (6.67)
	To control erosion	07 (5.83)
2.	**Farm pond**	
	Protective irrigation	120 (100.00)
	Drinking water for animals / humans or domestic purpose	93 (77.50)
	Other purposes	50 (41.67)
3.	**Diesel Pump set**	
	Used to lift water from farm pond	120 (100.00)
	Used to lift water from canals to fields or farm pond	13 (10.83)
4.	**Micro irrigation (Sprinkler)**	
	Interval of irrigation	
	Weekly once	35 (29.17)
	Once in two weeks	48 (40.00)
	Monthly	28 (23.33)

5.	**Alternative cropping system**	0.00 (0.00)
6.	**Poly house**	
	Vegetables	
	Capsicum	42 (35.00)
	Tomato	18 (15.00)

Table 1 data depicted that contour bunds which involves the placement of lines of stones along the natural rises of a landscape, and contour farming. These techniques help to capture and hold rainfall before it can become runoff. This contour bunds were constructed to conserve soil moisture. Some of the beneficiaries (6.67 %) were constructed bunds to increase ground water table followed by 5.83 per cent to control erosion in sloppy condition of lands. The probable reason might be that, majority of them having semi-medium land holdings. So, they are not ready to reduce the area on their productive lands.

In present scenario, while the world is facing the problem of water scarcity, Farmers are also facing problems in farming like lack of crop production, less earning due to uncertainty in rain and water cycle. Changes in the climatic conditions are resulting in the uncertainty in rainfall distribution. Hence high rainfall areas are receiving low rainfall and vice versa. So throughout the year farmer are able to grow crop in only rainy season. In absence water they can't think about the crop in other than rainy season. So to utilize the arable land resource in growing high income crops , water is necessary for farmers. From the ancient time , farmers have used wells for irrigation purposes but now farmponds have emerged as a great source of water for farmers. Farm ponds are water storage tank or reservoir, designed for rain water harvesting in agriculture land for irrigation purposes, cattle feed and fish farming. India government has targeted to double the farmer's income by 2022. There are many government schemes which provide subsidies to farmer for farm pond construction. Farm pond helps farmer to increase land productivity by 200% as well increase the farmer income. All the beneficiaries were constructed farm ponds to harvest rain water to provide protective irrigations in critical stages of crops like, pod filling stage in groundnut and redgram, bulb development stage in onion, grain filling stage in case sunflower to get good yield and 77.50 per cent of beneficiaries to use to drink water for animals and humans and other purposes includes swimming, washing clothes, animals, implements and also for spraying chemicals for different crops.

A diesel engine water pump for irrigation is the best solution for a flourishing farm and we make pumps as per your irrigation requirements. An agriculture diesel water pump will ensure that water is provided to your fields in the right pressure so that each section of the land receives the correct amount of water. All the beneficiaries (100.00 %) installed diesel pump set to lift water from farm pond. Diesel pump is available in lower price and is compulsory to get subsidy under this scheme. So, all beneficiaries purchased diesel pump to get subsidy. So, the poor farmers can able to purchase and used for own purpose. Forty per cent of beneficiaries providing irrigations to the crops through sprinkler irrigations once in two weeks. KBS beneficiaries started to grow horticultural crops *viz.,* onion, capsicum and tomato by using fond water. So, that not even a drop is wasted and crop gets the required quantity of water at the right time for better yield. Sprinklers were used once in two weeks based on the soil types and availability of moisture levels based on requirement of crop.

Polyhouse is a type of greenhous**e** where specialized polythene sheet is used as a covering material under which the crops can be grown in partially or fully controlled climatic conditions. Mostly drip irrigation system is installed inside a polyhouse for watering purpose. Thirty-five per cent of beneficiaries growing capsicum and tomato (15.00 %) in poly house. Many of them don't have knowledge about flower crops, medicinal crops and other horticultural crops. So, they are following the neigh bours in cultivating the above crops. Farmers are not ready to take risk to introduce new crops in local conditions.

Conclusion

Agricultural sector plays in important role in Indian economy. In recent years, effect of climate change seen in the form of long dry spells and heavy rains in rainfed areas causing drought and floods, respectively. However, these vagaries can be overcome by adopting soil conservation measures likes contour, farm pond, changing cropping pattern, rain water harvesting etc., In recent years, the Government of Karnataka facilitating farmers by providing financial support to implement the soil and water conservation measures. I order to know the extent of utilization of such schemes by the farmers, the present study was undertaken in Bagalkot and Vijayapura districts of Karnataka during 2017-2018 by the ex-post-facto research design with the sample size of 120 beneficiaries. The results revealed that the beneficiaries were utilized that benefits of Krishi Bhagya Scheme and implemented the soil and water conservation measures, the alternative cropping system, installation of diesel

pump set, micro irrigation facilities to save the water and use it to the fullest extent. This study implies that KBS is facilitating the farming community not only in increasing production and productivity, but also in conserving natural resources to the greater extent. Therefore, the replication of the KBS for the non-beneficiaries is most desired to transform the socio-economic condition of the farming community at large.

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