The Pharma Innovation Journal 2022; SP-11(11): 1837-1839

www.ThePharmaJournal.com

The Pharma Innovation

ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2022; SP-11(11): 1837-1839

www.thepharmajournal.com
Received: 28-08-2022
Accepted: 30-09-2022

Harendra Kashyap
Department of Agricultural Extension, CoA, IGKV, Raipur, Chhattisgarh, India

HK Patra
Assistant Professor, Department of Agricultural Extension, SGCARS, Jagdalpur, Chhattisgarh, India

Corresponding Author:
Harendra Kashyap
Department of Agricultural Extension, CoA, IGKV, Raipur, Chhattisgarh, India

Problems faced by tribal beneficiaries farmers and their suggestions to enhance the adoption of major crops under the integrated watershed management programme (IWMP)

Harendra Kashyap and HK Patra

Abstract
In India, 85 million hectares of the area are rainfed due to the number of biophysical and socio-economic constraints which affect the soil productivity as well as the productivity of crops and livestock. These include uneven distribution of rainfall, land degradation, low level of input use, and technology adoption. This leads to poverty, water scarcity and rapid depletion of the groundwater table, soil erosion. It has an adverse effect on the livelihood of the farming community residing in the rainfed area. The present study was carried out in an integrated watershed management programme during 2021-22 in the periphery Bastar district of Chhattisgarh state because lots of programmes related to watersheds are going on in these two blocks and have a maximum number of tribal populations in the Bastar districts. This study was conducted in randomly selected 8 villages identified from 2 blocks namely Bakawand and Tokapal of Bastar district. The sample comprised 120 tribal beneficiaries' farmers were taken as respondents. It was observed that the important problems reported by the majority of the respondents reported poor economic condition of the beneficiaries farmers. Followed by insufficient Water in ponds/well for irrigation purposes, timely not available of fertilizers and seeds, etc. The suggestions given by the respondents were Fertilizers and improved seeds should be provided timely by the Govt. agencies emerged as the main suggestion. The other suggestion was needed more water harvesting structures, more interventions should be incorporated in the watershed area to develop irrigation facilities.

Keywords: Watershed, IWMP programme, problems, suggestions

Introduction
The Integrated Watershed Management Programme (IWMP) is a modified programme With the objective of binging various programme such as the Integrated Wasteland Development Programme (IWDP), Dessert Development Programme (DDP), and Drought Prone Area Programme (DDAP) under one common integrated programme. IWMP is one of the Flagship programmes of the Ministry of Rural Development. The scheme was launched during 2009-10. Integrated Watershed Management Programme (IWMP) aims at prevention of soil erosion, regeneration of vegetative covers, recharging of the groundwater table. The watershed programme is primarily a land-based programme, which is increasingly being focused on the water with its main objective being to enhance agricultural productivity through increased in-situ moisture conservation (Manivannan, 2010) [6] and protective irrigation for socio-economic development of rural people (Ahluwalia, 2005; Joshi *et al*., 2008) [1, 4].

India has a net cultivated area of 142 million hectares (mha) out of this, only 85 m/ha is rainfed and suffers from low agricultural productivity, soil degradation, lack of water holding capacities, lack of fodder, and poor quality of livestock, all this factor have together resulted in abject poverty and malnutrition for those living in these areas.

In Chhattisgarh, being a tribal-dominated state more than 2.07 crore population is scheduled to cast and scheduled tribes constitute 44.7% and about 80% of the population dependent on agricultural and allied activities. Most of the tribal farmers have a subsistence nature of farming with limited resources and mainly depends on forest and some traditional type of farming for their livelihood. It is very necessary to use and adopt innovative agricultural practices to reduce the problems of the tribal farmers and improve the socio-economic condition with increasing production and development of the tribal farmer of this state. Studies by Deshpande and Narayanamoorthy (1999) [9], Khirsagar *et al*. (2003) [5], and many others have acknowledged that watershed development programmes are the potential to augment

income and reduce poverty among the watershed communities. Considering these problems Chhattisgarh state watershed agency (CGSWMA) set up by the state government has an individual bank account. CGSWMA will approve the watershed project for the whole state under the approved strategic plan (SPSP). CGSWMA has an integrative professional support team to establish the programme.

In Chhattisgarh state IWMP-12 and IWMP-13 mili-watershed projects were established in two blocks namely Bakawand (IWMP-12) and Tokapal (IWMP-13) of Bastar districts. Mili-watershed is being used by the villages in the work of faith-based construction and is also micro-watershed committees under the Boriyanala and Koyarnala development. Under the IWMP-12 Boriyanala project there are 6 micro-watersheds in 11-gram panchayat (with codes) 4E2F5C2C, 4E2F5C2D, 4E2F5C2E, 4E2F5C2F, 4E2F5C2G, 4E2F5C2H and selected project under IWMP-13 Koyarnala project there are 5 micro-watersheds whose code respectively 4E2F1C-3b, 4E2F1C-3c, and 4E2F1C-3d, 4E2F1C-5a, 4E2F1C-5b in which 14-gram panchayat are included. The proposed project area is mainly a tribal-dominant area. Tribal communities like Gond, Bhatra, Halba, Madia, Muriya, etc. are residing in this area. Due to the construction of check dams, ponds, deepening of ponds, irrigation drains, and wells. The village gets facilities for disposal and irrigation. Various structures have been constructed in the catchment work in each micro-watershed, which prevented soil erosion and increased the irrigation capacities, which increases the water level in the village and increased the area of farming. User teams have been used in the construction of each structure. Due to this, the villagers got employment-oriented work and migration has been stopped and farmers got benefited from this project.

Material and Methods

The present research was conducted in the Bastar districts of Chhattisgarh state Bastar district comprises seven blocks i.e., Bakawand, Bastanar, Bastar, Darbha, Jagdalpur, Lohandiguda, and Tokapal. Out of these, two blocks Bakawand and Tokapal were selected purposively because lots of programmes related to watersheds are done in these two blocks and have a maximum number of tribal populations in the Bastar districts. In the context of the sampling procedure, from each selected block 4 villages were randomly selected from the watershed area for the investigation. In this way, a total of 8 (4×2) villages were selected for the present investigation. 15 tribal beneficiaries farmers from each selected village were selected randomly, thus 120 (8×15) tribal beneficiaries farmers are selected as respondents for this study.

Result and Discussion

Multiple responses were taken to ascertain the problems faced by the beneficiaries farmers regarding the adoption of improved agricultural practices of the major crops in table 1 So far as the problems faced by the beneficiaries farmers regarding the adoption of improved agricultural practices of the major crop. It was found that the majority of the respondents (65.83%) reported poor economic condition of the beneficiaries farmers is the most important problem. Followed by 64.17 percent insufficient Water in ponds/well for irrigation purposes, 58.33 percent timely, not available of fertilizers and seeds, 55.00 percent lack of knowledge about proper spraying of herbicide, insecticide, and fungicide, 53.33 percent lack of credit facility, 52.50 percent lack of irrigation facility, 50.83 percent lack of technical knowledge, 50.00 percent the small size of land, 45.00 percent lack of education whereas, 43.33 percent lack of information of improved agricultural practices and 39.17 percent some water harvesting structure is damaged.

Table 1: Distribution of the respondents according to problems faced by beneficiaries farmers

Particulars	Frequency*	Percentage	Rank
Lack of education	54	45.00	IX
Poor economic condition	79	65.83	I
Small size of land	60	50.00	VIII
Insufficient water in ponds for irrigation purposes	77	64.17	II
Lack of credit facility	64	53.33	V
Lack of irrigation facility	63	52.50	VI
Timely not available of fertilizers and seed	70	58.33	III
Some water harvesting structures are damaged	47	39.17	XI
Lack of technical knowledge	61	50.83	VII
Lack of information about improved agricultural practices	52	43.33	X
Lack of knowledge about proper spraying of herbicide, insecticide, and fungicide	66	55.00	IV

*Frequency based on multiple responses

Multiple responses were taken to ascertain suggestions given by the beneficiaries farmers to enhance the adoption of improved agricultural practices of major crops are represented in table 2. As regards suggestions of beneficiaries farmers of the IWMP programme to enhance the adoption of major crops to overcome the problems faced by them (table 2) during the adoption of improved agricultural practices. It was observed that Fertilizers and improved seeds should be provided timely by the Govt. agencies emerged as the main suggestion as reported by 60.83 percent of the respondents.

Table 2: Suggestions were given by the beneficiaries farmers to enhance the adoption of major crops

Particulars	Frequency*	Percentage	Rank
The loan facility should be easily met for better production	59	49.17	IV
Fertilizers and improved seeds should be provided timely by the Govt. agencies	73	60.83	I
Need to repairing of water harvesting structure	49	40.83	VIII
Continuous awareness programme should be organized to enhance the adoption of soil and water conservation practices	47	39.17	IX
Requirement of plantation in the slopy area	55	45.83	V
Need more water harvesting structure	70	58.33	II
Requirement of contour bunding to check soil erosion	53	44.17	VII
To develop grazing land	46	38.33	X
Providing technical knowledge for better use of developed resources	42	35.00	XI
Providing information about seasonal insects/pest and their control measures	54	45.00	VI
More interventions should be incorporated into the watershed area to develop irrigation facilities	67	55.83	III
Complete the water harvesting structure which is not completed in the watershed area	25	20.83	XII

*frequency based on multiple responses

The other suggestion was needed more water harvesting structure (58.33%), more interventions should be incorporated in the watershed area to develop irrigation facilities (55.83%), the loan facility should be easily met for better production (49.17%), the requirement of plantation in the slopy area (45.83%), providing information about seasonal insect /pest and their control measures (45.00%), the requirement of contour bunding to check soil erosion (44.17%), need to repairing of water harvesting structure (40.83%), continuous awareness programme should be organized to enhance the adoption of soil and water conservation practices (39.17%), to developed grazing land (38.33%) whereas, providing technical knowledge for better use of developed resources (35.00%) and complete the water harvesting structure which is not completed in the watershed area (20.83%).

Conclusion

It may be concluded that the poor economic condition and insufficient water in ponds, well, and rivers, for irrigation purposes, is emerged as major problems faced by the tribal beneficiaries farmers and the majority of them suggested that fertilizers and the improved seed should be provided timely by the Govt. agencies and more water harvesting structure should be incorporated.

References

1. Ahluwalia, Montek S. Reducing poverty and hunger in India: the role of agriculture, Annual report Eassy. IFPRI; c2004-2005. DOI: http://dx.doi.org/10.2499/0896297519.E02
2. Chandra P. A study on rate of adoption and consequences of hybrid paddy in Cauveri command area, Karnataka state. M.Sc. (Ag.) Thesis, University of Agriculture Sciences, Dharwad; c2001.
3. Deshpandy RS, Narayanamoorthy A. An Appraisal of watershed development programme across regions of India. Artha vijnana, 1999, XLI(4),.
4. Joshi PK, Jha AK, Wani SP, Sreedevi TK, Shaheen FA. Impact of Watershed Program and Conditions for Success: A Meta-Analysis Approach. Global Theme on Agroecosystems Report no. 46. ICRISAT, Hyderabad; c2008.
5. Khirsagar KG. Evaluation Study of Wadgaonlakh Watershed in Osmanabad District of Maharashtra, Osma; 2003.
6. Manivannan S. Impact of bioengineering measures on soil moisture retention and major nutrients under cashew land use in lateritic soils of Goa, Journal of Soil and Water Conservation. 2010;9(1):9-12
7. http://watershed.cg.gov.in/
8. https://iwmpmis.nic.in/