



IMPACT AND SATISFACTION ON PER DROP MORE CROP SCHEME IN PMKSY [PRADHAN MANTHIRI KRISHI SINCHAYEE YOJANA] A STUDY WITH REFERENCE TO RURAL AREAS IN SULUR TALUK.

*Deepika.U **Dr.S.Arunpriya

*M. Com (CA), Department of Commerce (CA), Dr. N.G.P Arts and Science College, Coimbatore.

** Professor in Department of Commerce (Finance), Dr. N.G.P Arts and Science College,
Coimbatore.

ABSTRACT

The Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) is a program aimed at enhancing the irrigation potential and water use efficiency in agricultural practices. This study focuses on evaluating the impact and satisfaction levels of PMKSY implementation in Suler Taluk, Tamil Nadu. Using a mixed-methods approach, data was collected through surveys, interviews, and field observations. The analysis revealed significant improvements in irrigation infrastructure, water availability, and crop yield, leading to enhanced livelihoods and economic outcomes for farmers in Suler Taluk. Moreover, the study assessed the satisfaction levels of farmers towards the scheme's implementation, highlighting areas of success and areas requiring further attention. The findings provide valuable insights for policymakers to refine and optimize the PMKSY implementation strategies to better meet the needs and expectations of farmers in Suler Taluk.

Keywords: Pradhan manthiri Krishi sinchayee yojana, irrigation infrastructure, water availability, awareness, enhanced livelihoods.

INTRODUCTION

Indian irrigation infrastructure includes a network of major and minor canals from rivers, groundwater well-based systems, tanks, and other rainwater harvesting projects for agricultural activities. Of these, the groundwater system is the largest of the 160 million hectares of cultivated land in India, about 39 million hectares can be irrigated by groundwater wells and an additional 22 million hectares by irrigation canals. In

2010, only about 35% of agricultural land in India was reliably irrigated. About 2/3rd cultivated land in India is dependent on monsoons. The improvements in irrigation infrastructure in the last 50 years have helped India improve food security, reduce dependence on monsoons, improve agricultural productivity and create rural job opportunities. Dams used for irrigation projects have helped provide drinking water to a growing rural population, control flood and prevent drought-related damage to agriculture. However, free electricity and attractive minimum support price for water intensive crops such as sugarcane and rice have encouraged ground water mining leading to groundwater depletion and poor water quality. A news report in 2019 states that more than 60% of the water available for farming in India is consumed by rice and sugar, two crops that occupy 24% of the cultivable area.

Drip irrigation is a method of delivering water directly to the roots of plants in small, Agriculture provides raw materials for various industries and is the primary driver of food security for India's large population. The allied sectors of agriculture include horticulture, animal husbandry, dairy, also increasing scope for biotechnology applications in agriculture.

SCOPE OF THE STUDY

PMKSY focuses on the development of irrigation infrastructure such as dams, canals, reservoirs, and water harvesting structures. This leads to increased irrigation coverage, especially in areas with limited access to water resources, thereby boosting agricultural productivity. By promoting modern irrigation techniques like drip and sprinkler irrigation, PMKSY aims to improve water use efficiency in agriculture. This helps in reducing water wastage and ensures optimal utilization of available water resources. The scheme encourages the adoption of sustainable agricultural practices by promoting efficient water management techniques. This can have a positive impact on rural livelihoods and contribute to poverty reduction. This provides resilience to farmers against climatic uncertainties and helps in stabilizing agricultural production. The implementation of PMKSY involves the creation of rural infrastructure such as water storage structures and irrigation facilities, which can contribute to overall rural development and improvement in the quality of life in rural areas.

STATEMENT OF THE PROBLEM

Limited financial resources can impede the comprehensive implementation of the scheme. Inadequate rural infrastructure, including water storage and distribution facilities, may hinder the efficient delivery of irrigation benefits to farmers. The adoption of advanced irrigation technologies and practices might face resistance or difficulties in implementation due to the technical expertise required. Unpredictable climatic conditions can affect the success of the scheme as it heavily relies on stable weather patterns for optional water management. Lack of awareness and education among farmers about the benefits and proper utilization of irrigation facilities may limit the scheme's effectiveness.

OBJECTIVES OT THE STUDY

- 1.To study the socio-economic status of the Respondents.
- 2.To study the awareness among farmers about “per drop-more crop scheme.
- 3.To study the adoption of drip irrigation and other water saving technologies.
- 4.To analyse the respondent’s satisfaction towards drip-irrigation technologies to enhance water usage efficiently in sulur taluk.
- 5.To know the opinion about “Per drop-more crop” scheme.
- 6.To study the problems faced by farmers in practice of per drop-more crop.

METHODOLOGY AND TOOLS

This section contains the methods and techniques through which the research and analysis is carried out.

SOURCE OF DATA

The study is based on both primary and secondary data. The secondary data on number of watersheds in different districts and total number of beneficiaries in each watershed have been collected from farmers. The primary data were collected from the selected respondents of different locations of the study area.

SAMPLING DESIGN

In this research, I have used convenient sampling method to select the sample population.

SAMPLE SIZE

The sample size taken for this study is 260 respondents selected from sulur taluk through a questionnaire and interview schedule with 14 questions.

TOOLS

The data gathered through questionnaire for the study were consolidated in relevant and classified under relevant headings. Those data were analysed within the help of statistical techniques such as:

1. Simple Percentage Analysis
2. Chi-Square Test
3. ANOVA
4. Simple Ranking Analysis

LIMITATION OF THE STUDY

- The success of the scheme depends on the availability and effectiveness of irrigation infrastructure. In some areas, the lack of proper irrigation facilities could limit the impact of the scheme.
- Farmers may face challenges in adopting new and efficient water-use technologies due to factors such as lack of awareness, training, or financial resources.
- The financial burden on farmers to invest in new technologies and practices might be a limitation, especially for small and marginal farmers who may struggle to afford the initial costs.

REVIEW OF LITERATURE

Balamurugan, V. (2021)¹ An analysis of adoption of drip irrigation system on sugarcane cultivation in pappireddipatti taluk of dharmapuri district. Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar. ‘Drip irrigation system minimizes the fertilizer usage’ was perceived as effective of the PMKSY beneficiaries. The farmers reported that the fertilizers can be easily applied to the plant and excess usage of fertilizers can be drastically reduced. Through this fertigation method, the nutrient loss due to leaching, weed pressure is reduced in contrast through broadcast application. Through fertigation the application of fertilizers usage can be increased from 25 per cent to 30 per cent for the crops as it directly deposits in the root region of the crops.

Badodiya, S. K., Jain, R., Singh, S. R. K., & Kulmi, G. S. (2021)² “The study was on the impact of drip irrigation technology among farmers”, intends to evaluate the existing level of knowledge and adoption of drip irrigation technology by the farmers. Knowledge is one of the important components of behavior and, as such, plays an important role in the covert and overt behavior of farmers. In this way, it will be essential to know the level of variation and the factors that cause the variation in the level of knowledge and adoption of drip irrigation technology by the farmers. Understanding the factors that influence farmers' knowledge and adoption of drip irrigation technology can be extremely beneficial for extension workers, administrators, policymakers and others in related fields.

Balamurugan, V and M. Vetrivelan. (2019)³ Scientific orientation had exhibited a positive and significant association at 0.05 per cent level of probability. This might be due to the fact that most of the beneficiaries had high to medium level of scientific orientation, innovativeness and economic motivation. This would also tend to favour their attitude towards scientific innovations and enabled them to aware about drip irrigation technology in PMKSY scheme. Subsequently, the farmers who have higher aspiration and direction towards scientific techniques for drip irrigation system would have acquired higher knowledge level. . It is clear from the study that the drip irrigation agencies, financing institutions and others to supply adequate standard spare parts and other appropriate measures to ensure the satisfactory situation for proper adoption of drip irrigation method.

Beal, G.M.; Rogers, E.M. and Bholen, J.M. (2019.)⁴Drip irrigation system minimizes the number of labourers' was the perceived effectiveness of the respondents. This technology greatly helps to reduce the number of labourers in the field. As the farmers have to pay more labour charges this method helps to cut down the cost for labourers. Drip irrigation system reduces the pest and disease problem was also perceived as another advantage. Flooding the field is the main reason for the invasion of pest to field and weeds as well. Pest and disease problem can't be avoided in cultivation of crops but it can be effectively managed. Drip Irrigation technology helps a lot in controlling the pest and disease.

RESEARCH GAP

There could be a gap in understanding the extent of adoption of modern irrigation technologies and practices promoted under PMKSY among farmers in Suler Taluk. Research might explore factors influencing adoption rates, barriers to adoption, and strategies to encourage wider acceptance and utilization of these technologies. Research could explore the adequacy, coherence, and effectiveness of these arrangements in achieving the objectives of the scheme and addressing the needs of stakeholders.

ANALYSIS OF THE DATA

In research, data analysis is the act of examining, purifying, converting, and analysing data in order to find relevant information, make inferences, and aid in decision-making. In many disciplines, including the social sciences, natural sciences, engineering, and business, it is an essential stage in the research process.

PERCENTAGE ANALYSIS

S.NO	FACTOR	NO.OF. RECONDENTS	PERCENTAGE
1	GENDER (MALE)	175	67.3
2	AGE (31-40YRS)	131	50.4
3	FAMILYOWNED LAND	91	35.0
4	LESS THAN 5YRS	91	35.0

- Majority 67.3% of the respondents are Male.
- Majority 50.4% of the respondents are between the age group of 31-40 years
- Mostly 35.0% of respondents are aware of family-owned land.
- Mostly 35.0% of the respondents are come to agriculture less than 5years.

CHI-SQUARE ANALYSIS

FACTOR	CALCULATED VALUE	TABLE VALUE	RESULT
IMPROVEMENT IN IRRIGATION FACILITIES	0.01	32.897	ACCEPTED
INCREASE IN AGRICULTURAL PRODUCTIVITY	.397	9.448	ACCEPTED
WATER CONSERVATION EFFORTS	.145	17.130	ACCEPTED
ENHANCED CROP DIVERSITY	.930	3.702	ACCEPTED
REDUCTION IN WATER SHORTAGES	.333	13.507	REJECTED
IMPROVEMENT IN LIVELIHOODS	.369	13.005	REJECTED
EMPOWERMENT OF FARMERS	.087	19.045	ACCEPTED
INFRASTRUCTURE DEVELOPMENT	.007	27.519	REJECTED

In order to study the relationship between the type of land ownership for improvement in irrigation facilities of the respondents, a chi-square test has been applied and the result is given below.

There is no significant relationship between type of land ownership and Improvement in irrigation facilities of the respondents.

ONE-WAY ANOVA ANALYSIS

FACTOR	CALCULATED VALUE	TABLE VALUE	RESULT
ACCESSIBILITY OF SERVICES	1.828	.124	ACCEPTED
EFFECTIVENESS IN ADDRESSING NEEDS	2.827	.025	ACCEPTED
TRANSPARENCY IN IMPLEMENTATION	.947	.437	ACCEPTED
IMPACT ON LIVELIHOODS	3.345	.011	ACCEPTED
COMMUNITY ENGAGEMENT	.768	.547	ACCEPTED
EASE OF ACCESS TO INFORMATION	.554	.696	ACCEPTED
FEEDBACK MECHANISM	.822	.512	ACCEPTED

Through One-way ANOVA analysis the association between the two variables i.e. there is no significant relationship between educational qualification and level of satisfaction for the usage of per drop more drop scheme by the respondents.

There is a significant relationship between educational qualification and the level of satisfaction for the usage of per drop more crop scheme by the respondents.

RANKING ANALYSIS

FACTORS	1	2	3	4	5	6	7	8	TOTAL	RANK
Information campaigns	38	5	26	7	14	10	60	100	836	8
Print and electronic media	8	8	17	53	49	28	39	58	903	7
Extension services	25	14	44	51	46	31	33	16	1176	4
Training programs	19	51	51	28	58	25	16	12	1306	3
Demonstration farms	52	76	45	29	6	28	22	2	1517	1
Mobile apps and portals	64	30	50	62	10	27	9	8	1479	2
Collaboration with NGOs and community-based organization	34	24	27	13	42	55	27	38	1092	6
Incentives and recognition	23	51	9	26	35	47	50	19	1125	5

INTERPRETATION

The above table shows the Demonstration Farms shows first rank, Mobile Apps and Portals shows second rank, print and electronic media shows seventh rank, collaboration with NGOs and community-based organizations sixth rank, Training Programs shows third rank, Extension services shows fourth rank, incentives and recognition shows fifth rank and information campaigns shows eighth rank.

SUGGESTION

Launch extensive awareness campaigns at the grassroots level to educate farmers about the benefits and implementation of the scheme. Use multiple mediums such as television, radio, pamphlets, and village meetings to reach a wider audience.

Provide training and workshops to farmers on modern irrigation techniques, water conservation methods, and the proper utilization of irrigation infrastructure. This will empower them to make the best use of the resources provided under PMKSY.

Tailor irrigation solutions according to the specific needs of different regions and crops. This could involve implementing drip irrigation systems, sprinklers, or other efficient water management techniques suitable for the local environment and crop types.

Leverage technology such as remote sensing, GIS mapping, and mobile applications to monitor water usage, soil moisture levels, and crop requirements. This data-driven approach can optimize water allocation and improve overall agricultural productivity.

CONCLUSION

The study analysed the impact and satisfaction faced by Pradhan Mantri krishi sinchayee Yojana Participants in sulur Taluk. Increased agricultural productivity due to improved irrigation facilities. Reduction in water scarcity and enhanced water availability for farming. Empowerment of farmers through better access to irrigation infrastructure and modern techniques. Potential improvements in socio-economic indicators such as income levels and livelihood security. Surveys or feedback mechanisms to gauge farmer satisfaction with the PMKSY interventions. Assessing the perception of government officials and administrators regarding the program's effectiveness and implementation challenges. Considering community perspectives on the overall impact of the scheme on local development and sustainability. Infrastructure limitations or technical issues hindering the optimal functioning of irrigation systems. Administrative bottlenecks or bureaucratic hurdles impacting the timely delivery of benefits to farmers. Opportunities for leveraging technology, community participation, or publicprivate partnerships to enhance the scheme's efficiency and reach. Conclude by providing an overall assessment of the PMKSY in Sulur taluk, considering both its achievements and areas for improvement. Emphasize the importance of continued support and innovation to realize the full potential of the scheme in fostering agricultural growth, rural prosperity, and water security in the region.

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WEBSITES

- <http://pmksy.gov.in/>
- <http://pmksy.gov.in/Guidelines/PMKSYGuidelines.pdf>
- Operational Guidelines of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) – Micro Irrigation Fund (MIF)
- Revised Guidelines of PMKSY Per Drop More Crop (Micro Irrigation)
- Engagement of Consultants under Prime Minister Krishi Sinchayee Yojana(PMKSY)