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Overall Technological gap among coconut growers

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Abstract— *The present study was conducted during 2022–2023 in Tumkur district of Karnataka, employing an ex-post-facto research design to assess the overall technological gap among coconut farmers. Tumkur was purposively selected due to its prominence as a major coconut-producing area in the state. Based on the variations in productivity, four out of the ten taluks namely Tiptur, Turuvekere, Chikkanayakanahalli, and Sira were chosen for the study. A total of 120 coconut growers, comprising 30 randomly selected respondents from each taluk, participated in the research. It was observed that, in case of Tiptur taluk significant number of coconut growers (56.66 %) came under the low level of technological gap. In case of Turuvekere taluk three-fifth of the coconut growers (60.00 %) came under medium level of technological gap. In case of Chikkanayakanahalli taluk half of the coconut growers (50.00 %) came into the high level of technological gap. Whereas in the case of Sira taluk three-fifth of the coconut growers (60.00 %) fell under the high level of technological gap. Overall it was found that significant number of coconut growers (42.50 %) fall under medium level of technological gap to high level of technological gap (32.50 %) followed by low level of technological gap (25.00 %).*

Keywords— ***Coconut growers, Overall, Technological gap, Tumkur***

I. INTRODUCTION

Coconut is an important agrarian crop in India providing livelihood, food security and raw materials for various industries. Despite its significance, many coconut farmers continue to experience low productivity levels due to limited adoption of recommended technologies. This gap between available scientific practices and what is actually implemented at the farm level is referred to as the technological gap. Understanding this technological gap is crucial because it directly affects yield, profitability and resource efficiency. Identifying the extent and causes of the gap can help in formulating effective extension strategies, training programs and policy interventions tailored to farmers' needs. Moreover, bridging this gap is essential for ensuring sustainable coconut cultivation and improving the socio-economic status of growers. The present study was undertaken in Tumkur district of Karnataka, one of the leading coconut-producing regions in the state, to assess the overall technological gap among coconut growers. Studying the technological gap is thus critical for bridging knowledge and practice, enhancing productivity and ensuring sustainable coconut farming in the region.

II. MATERIALS AND METHODS

The present study was conducted during 2022–2023 in Tumkur district of Karnataka employing an ex-post-facto research design to assess the overall technological gap among coconut farmers. Tumkur was purposively selected due to its prominence as a major coconut-producing area in the state. Based on the variations in productivity, four out of the ten taluks namely Tiptur, Turuvekere, Chikkanayakanahalli and Sira were chosen for the study. A total of 120 coconut growers comprising 30 randomly selected respondents from each taluk participated in the

research. For understanding the Technological gap, the procedure followed by Nagaraj (1999) [2] with suitable modifications was used. Technological gap refers to the difference between the recommended technology and the actual technology used by the coconut growers at field level. Thus, after computing technological gap scores, the respondents were grouped into high, medium and low categories by taking the mean and standard deviation as a measure of check.

III. RESULTS AND DISCUSSION

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It was observed from Table 1 that, in case of Tiptur taluk significant number of coconut growers (56.66 %) came under the low level of technological gap. In case of Turuvekere taluk three-fifth of the coconut growers (60.00 %) came under medium level of technological gap. In case of Chikkanayakanahalli taluk half of the coconut growers (50.00 %) came into the high level of technological gap. Whereas in the case of Sira taluk three-fifth of the coconut growers (60.00 %) fell under the high level of technological gap. Overall it was found that significant number of coconut growers (42.50 %) fall under medium level of technological gap to high level of technological gap (32.50 %) followed by low level of technological gap (25.00 %). The possible reasons could be due to lack of knowledge about recommended cultivation practices, unavailability of critical inputs and unavailability of timely information from extension functionaries about various improved agriculture technologies to coconut growers, lower achievement motivation and conviction to use good agricultural practices for better yield and income.

The respondent's moderate information seeking behaviours, contributed due to low management orientation and moderate to low scientific orientation towards recommended coconut growing procedures may all be contributing factors to the respondent's medium overall technology gap. This demonstrated unequivocally that there is huge potential for intensifying extension operations to raise coconut output. This emphasizes the necessity of stepping up extension efforts by the relevant extension agency to raise awareness, information seeking behavior, management orientation, scientific orientation and ultimately increase adoption of recommended cultivation practices and narrow down the technological gap. According to Darade (2017) [1] and Sanjota and Natikar (2014) [3], the study's findings concurred with their studies.

Table 1: Overall technological gap among coconut growers

Category	Tiptur (n_1=30)		Turuvekere (n_2=30)		C. halli (n_3=30)		Sira (n_4=30)		Total (n=120)	
	f	**%**	***f***	**%**	***f***	**%**	***f***	**%**	***f***	**%**
Low < 85.58	17	56.66	8	26.66	3	10.00	2	06.66	30	25.00
Medium (85.58-96.12)	11	36.66	18	60.00	12	40.00	10	33.33	51	42.50
High > 96.12	2	06.66	4	13.33	15	50.00	18	60.00	39	32.50
f = Frequency and **%** = Percentage										

IV. CONCLUSION

Identifying technological gap helps in recognizing the barriers farmers face such as lack of awareness, access or training and enables the development of targeted interventions. By addressing these issues through effective extension services and farmer education, the technological gap can be narrowed leading to improved yields, better income and the long-term growth of the coconut farming sector.

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