

Does Geographical Indicator contribute to agricultural sustainability? Lessons from the Kaipad rice ecosystem of Kerala, India

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Abstract – The study shows that GI recognition has brought about collective actions in the area and as a result, the stakeholders are experiencing positive income effects. Analysis of yield for traditional and high yielding varieties reveals that the breeding efforts of rice scientists have also contributed to the betterment of farm incomes in the area. Evidence from Kaipad also confirms that increasing producer welfare can interest and engage more farmers into the system to save tradition and preserve it for the new generations. In nutshell, GI recognition has contributed towards the socio-economic and environmental sustainability of Kaipad tracts. In the developing country context, GIs could be a tool with which producers can do wonders, only if they try and enter the niche markets through well crafted marketing strategy. Kaipad rice as a GI is in its infancy. More time, patience, resources, quality control mechanisms, product differentiation, and popularisation strategies need to be invested.

Keywords–Conservation; sustainability; yield gap; ecologically responsive.

INTRODUCTION

Kaipad rice cultivation system is climate resilient, saline prone, traditional, organic rice cultivation system in which farmers are following rice and fish rotational cultivation practices over the years (Radhika *et al.*, 2021a). Kaipad rice has been included in the Geographical Indications (GI) registry since 2014 (GI application No. 242). The application was forwarded by the Malabar Kaipad Farmers' Society (MKFS) and facilitated by the state agricultural university. The most popular traditional cultivars of this tract are Kuthiru and Orkayama. Apart from the traditional varieties, farmers are also cultivating High Yielding Varieties (HYV) developed by Kerala Agricultural University (KAU) viz., Ezhome^{1,2,3,4}. The farmers of the Kaipad tract strictly follow the traditional code of practices and manage to keep their fields under natural controls to preserve the unique quality inherent to the system (Radhika *et al.* 2021b). There is six rice GIs registered from the state of Kerala. The field level experience suggests that there are significant differences observed in economic welfare among rice GIs which can be attributed to the efficiency of collective action of the stakeholders (Radhika *et al.* 2018; Blakeney *et al.*, 2020).

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MATERIAL AND METHODS

Kannur district was purposively selected for the study since the district had the maximum area under the Kaipad paddy. The data was collected randomly from 50 farmers in 2 phases (2014 and 2019). The data collection combined quantitative and qualitative surveys, which were all conducted through direct interview as well as telephonic interview methods.

RESULTS AND DISCUSSION

The profitability of any crop is determined by the cost of cultivation, yield realized, and value of output.

Table 1. Cost of cultivation of Kaipad paddy during pre and post GI recognition (USD/ha)

Particulars	Pre GI	Post GI
Cost of cultivation	855	1145
Average yield/ha	2313	3241
Cost of production/quintal	37	35
Gross Income	604	1280
Net Income	-336	20
Bc Ratio	0.64	1.02
Price/kg	Below MSP	Above MSP

The uniqueness of the production process in Kaipad is that neither fertilizers nor plant protection chemicals are used. Labor accounts for more than 90% of the cost of cultivation in Kaipad. Since the area is swampy, the cultivation practices from land preparation to harvesting are cumbersome and of risky nature requiring skilled laborers. With increasing labor cost, the cost of cultivation is showing an upward trend over years. High labor cost and scarcity of skilled labor are the major constraints in the cultivation of paddy in Kaipad tracts. Kaipad system is creating 279 man-days of employment/ha which includes mount preparation, boundary strengthening, land preparation, transplanting, weeding, harvesting, threshing, transporting the harvest to the nearest vehicle access, and winnowing.

This spread of usage of HYV was evident in the results of cost of production in the post GI period. The cost of production has declined by about 5% during the post GI period (Table 1). The breeding efforts to develop saline tolerant Kaipad varieties by Kerala Agricultural University were successful. The average yield of 'Ezhome-1' and 'Ezhome-2' was 3.5 tonnes per hectare and 3.2 tonnes per hectare respectively, which was 70% and 60% more than that of local cultivars (Vanaja *et al.*, 2017). The native farmers were convinced about the preferable characteristics and yield potential of these varieties as the field trials of these varieties were carried out in the farmers' fields. The producers who still preferred to cultivate traditional Kaipad varieties over HYV slowly shifted their preference seeing the positive results obtained by fellow farmers who cultivated these HYV.

The evidence and analysis presented in the paper by Rangnekar (2003) state that at one level the interest to recognize GI corresponds to the possible use of GIs to protect and reward the holders of indigenous knowledge. The other key interest of relevance corresponds to the possible use of GIs as a market promotion mechanism. With the registration of Kaipad rice as a GI under the GI registry of India, the first objective is fulfilled. There are certain essential conditions necessary for a successful geographical-origin branding strategy for farm produce in developing countries like India. A variety of factors including problems of market penetration, the economics of launching products, the multiplicity of labels and mixed notions of quality, and the threatening presence of substitutes and similar products can weaken the benefits attributed to GI in a supply chain. To capture any profits producers should jointly put in efforts to brand their products and in addition, some restrictions should be put in place regarding who can produce and trade the geographical identifiers. In long run, this can help in preventing misuse of GIs and dilution of the quality of products. All these tasks are resource intensive and challenging for individual stakeholders warrants towards collective through a producer organization.

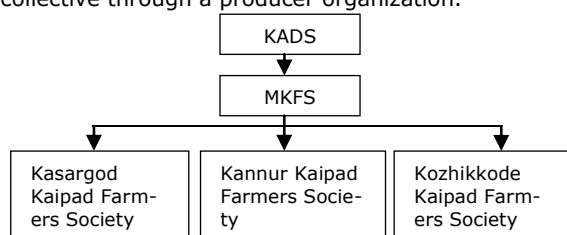


Fig 1. Structure of Kaipad producer organization

Malabar Kaipad Farmers Society (MKFS) is the registered proprietor of Kaipad Rice. In Kaipad MKFS with the active support of Kaipad Area Development Society and other regional societies is trying to tap into marketing strategies to convey these factors. Group farming is being promoted and the society is collecting and marketing rice from the producers at a premium price. The society left no stone unturned in their search for possible markets. They actively participate in fairs conducted by state and private organizations in view to popularise their products. In 2018, National Bank for Agriculture and Rural Development (NABARD) funded a selling point at Kan-napuram Panchayat and the MKFS is marketing through this outlet Post GI registration in Kaipad tracts, most of the farmers were depending on the Malabar Kaipad Farmers Society (MKFS) to market their produce. In contrast to the findings of a previous study (Radhika, 2014), intermediaries functioning in the marketing channel have reduced (Fig 2) as most of the farmers were depending on the Malabar Kaipad Farmers Society (MKFS) to market their produce. The society collects paddy at the farm gate at a price greater than the Minimum Support Price (MSP) announced by the state government. Presently, the society is procuring the Kaipad paddy at a rate of USD 0.40, and if the farmers are selling it as rice to the society, they procure it at a rate of USD 0.92-1.05/Kg depending on quality. The rice is being

marketed to the public at the rate of USD 1.58/ kg after processing and packaging.

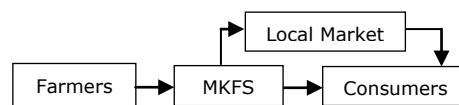


Fig 2. Marketing channels identified in the study area

CONCLUSION

While we proceed to draw conclusions, the positive income effect cannot be fully attributed to GI recognition. With respect to a new GI in a developing country, it is always recommended that producer organizations have a major hand in promoting their products as a brand. Despite the adverse production and economic environment, Kaipad rice growers could increase their market shares and price to a small degree through the concerted effort by MKFS with support from KAU. Evidence of increasing producer welfare can interest and engage more farmers into the system to save tradition and preserve it for the new generation. Further, labor intensive traditional techniques used at all stages of the production process can have higher employment effects. Eventually, we can aim to reduce the acreage of fallow lands and effectively prevent paddy land conversion. Since farmers are not using any plant protection chemicals or chemical fertilizers in Kaipad, the cultivation becomes environmentally sustainable, as well as economical. Kaipad GI rice contributes to the fundamentals of sustainability by preserving cultural diversity and natural resources, ensuring health and nutrition, and better livelihood. Thus, GIs are likely to contribute a positive impact on agricultural and natural resource sustainability, rural development, and biodiversity conservation

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