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# Cultivation, Certification and Consumer Welfare: Exploring the Legal Enforcement Mechanisms for the Protection of Indian GI Mangoes

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## Abstract

*Mangifera indica*, commonly known as Mango and hailed as the "king of fruits," is indigenous to the Indian subcontinent. As per the National Horticulture Board, India is home to about 1500 varieties of mangoes, including 1000 commercial varieties. Despite this rich diversity, only a handful of mango varieties have been designated with Geographical Indication (GI) protection under the Geographical Indication (Registration and Protection) of Goods in 1999. As of September 2024, 200 agricultural goods are registered as GIs, which account for 31 percent of the overall GI registrations in India. Among the agricultural goods registrations in India, fifteen varieties of mangoes are registered as GIs owing to the quality, reputation, or other characteristics attributed to their respective geographical origin. Furthermore, nine different varieties of mangoes are either under pre-examination or examination stages of scrutiny for the grant of GI. However, these renowned products encounter myriad obstacles from the inception of cultivating GI mangoes until the final delivery to end consumers. For the purposes of this paper, the issues are segmented into two phases, namely, cultivation and post-cultivation. In the former phase, adverse climatic conditions such as extreme heat waves and monsoon failures contribute to delays in flowering and early fruit dropping before ripening, ultimately disrupting the production of these distinguished GI mangoes and prompting cases of unethical cultivation practices hampering the sustainability of GI mangoes. The paper accentuates the post-cultivation issues throughout the supply chain, such as logo perplexities, information asymmetry, traceability issues, adulteration during transit, low-quality control standards, and the absence of testing protocols and facilities. These hurdles jeopardize the authenticity and quality of GI mangoes, impeding potential economic and cultural benefits for producers and their regions. The methodology used for the present paper is a mixture of doctrinal and non-doctrinal, where primary data will be collected by conducting an empirical study in the GI mango regions of Kerala, Maharashtra, and Tamil Nadu. The paper finally suggests measures for innovation in the governance and marketing of GI mangoes, advocating accountability of local chain actors and stringent legal enforcement mechanisms to curb counterfeiting, adulteration of GI mangoes, and provide additional protection for mango products such as pulp, juice, pickles, etc. derived from the GI mangoes.

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