ABSTRACT

ANALYSIS OF SUPPLY CHAIN PERFORMANCE AND PRODUCTION RISK MITIGATION OF CRYSTAL GUAVA AT *PLANTATION GROUP* 2 PT GREAT GIANT PINEAPPLE

By

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Crystal guava is one of the leading horticultural fruit commodities with promising prospects in domestic and national markets, supported by steadily increasing consumption. This growing demand necessitates efficient supply chain management and structured production risk control to ensure product quality and continuity of supply. This study aims to analyze the structure and performance of the crystal guava supply chain and to identify and mitigate production risks at PT Great Giant Pineapple. The research was conducted using a purposive approach by involving six key respondents representing each segment of the supply chain. Supply chain conditions were analyzed using the Food Supply Chain Network (FSCN) framework, while supply chain performance was evaluated using the Supply Chain Operations Reference (SCOR) model, encompassing the attributes of reliability, responsiveness, and flexibility. Production risk analysis was carried out using the House of Risk (HOR) approach, covering Phase 1 and 2. The results indicate that the crystal guava supply chain at PT Great Giant Pineapple is well integrated, spanning from plantation operations and packing houses to distributors and final consumers. Overall supply chain performance falls within the superior category, as reflected by high delivery accuracy, compliance with product standards, strong flexibility, and efficient order fulfillment lead time. Risk analysis identified 25 risk events and 31 risk agents, of which 11 priority risk agents were determined based on the Pareto 80:20 principle. The main risk agents are associated with limited water availability during the dry season, damage to water sources, and production uncertainty caused by climatic variability. The results of HOR Phase 2 established 11 priority mitigation actions, with the most effective strategy being the construction of new reservoirs and the deepening of existing reservoirs to ensure sustainable water availability for production. The implementation of these mitigation strategies is expected to significantly reduce production risks and enhance the sustainability of the crystal guava supply chain performance.

Key Words: Guava, PT Great Giant Pineapple, *Risk, Risk Mitigation,*

ABSTRAK

ANALISIS KINERJA RANTAI PASOK DAN MITIGASI RISIKO PRODUKSI JAMBU KRISTAL DI *PLANTATION GROUP* 2 PT GREAT GIANT PINEAPPLE

Oleh

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Komoditas jambu kristal merupakan salah satu buah hortikultura unggulan yang memiliki prospek di pasar domestik dan nasional dengan konsumsi yang terus meningkat. Peningkatan permintaan menuntut pengelolaan rantai pasok yang efisien serta pengendalian risiko produksi yang terstruktur agar kualitas dan kontinuitas pasokan dapat terjaga. Penelitian ini bertujuan untuk menganalisis kondisi dan kinerja rantai pasok komoditas jambu kristal serta mengidentifikasi dan memitigasi risiko produksi pada PT Great Giant Pineapple. Penelitian dilakukan secara purposive dengan melibatkan enam responden kunci yang merepresentasikan tiap bagian. Analisis kondisi rantai pasok menggunakan kerangka *Food Supply Chain Network* (FSCN), sedangkan kinerja rantai pasok dianalisis menggunakan model *Supply Chain Operations Reference* (SCOR) yang mencakup atribut *reliability, responsiveness,* dan *flexibility*. Analisis risiko produksi dilakukan menggunakan pendekatan *House of Risk* (HOR) fase 1 dan fase 2. Hasil penelitian menunjukkan bahwa struktur rantai pasok jambu kristal di PT Great Giant Pineapple telah terintegrasi dengan baik mulai dari kebun, packing house, distributor, hingga konsumen akhir. Kinerja rantai pasok secara umum berada pada kategori superior, ditunjukkan oleh tingkat ketepatan pengiriman, kesesuaian standar produk, fleksibilitas, serta *lead time* pemenuhan pesanan yang efisien. Analisis risiko mengidentifikasi 25 kejadian risiko dan 31 agen risiko, dengan 11 agen risiko prioritas berdasarkan prinsip Pareto 80:20. Agen risiko utama berasal dari keterbatasan air saat musim kemarau, kerusakan sumber air, serta ketidakpastian produksi akibat cuaca. Hasil HOR fase 2 menetapkan 11 tindakan mitigasi prioritas, dengan strategi paling efektif berupa pembangunan embung baru dan penambahan kedalaman embung *existing* untuk menjamin ketersediaan air produksi. Implementasi strategi mitigasi ini diharapkan mampu menurunkan risiko produksi secara signifikan dan meningkatkan keberlanjutan kinerja rantai pasok jambu kristal.

Kata kunci: Jambu, Mitigasi Risiko, PT Great Giant Pineapple, Risiko