

**MANAJEMEN RISIKO PRODUKSI TEBU (*Saccharum
officinarum* L.) DI KECAMATAN MATUR KABUPATEN AGAM**

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**FAKULTAS PERTANIAN
UNIVERSITAS ANDALAS
PADANG
2026**

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ABSTRAK

Tebu (*Saccharum officinarum* L.) merupakan salah satu komoditas perkebunan yang memiliki peranan penting dalam meningkatkan pendapatan petani dan mendukung pembangunan sektor pertanian. Namun, produksi tebu di Kecamatan Matur, Kabupaten Agam, masih mengalami fluktuasi akibat berbagai risiko produksi yang mempengaruhi keberlanjutan usahatani. Penelitian ini bertujuan untuk mengidentifikasi sumber-sumber risiko produksi pada usahatani tebu, mengukur tingkat risiko produksi dan merumuskan strategi manajemen risiko yang tepat. Penelitian ini menggunakan metode survei dengan pendekatan kuantitatif dan kualitatif. Identifikasi risiko dilakukan menggunakan *fishbone diagram*, sedangkan pengukuran tingkat risiko menggunakan metode *Failure Mode and Effect Analysis* (FMEA) dan diagram Pareto untuk menentukan risiko yang bersifat kritis. Hasil penelitian menunjukkan terdapat 14 penyebab utama risiko produksi yang dikelompokkan ke dalam empat kategori, yaitu bencana alam, hama dan penyakit, sumber daya manusia, serta sarana dan prasarana produksi. Berdasarkan hasil analisis FMEA dan diagram Pareto, diperoleh delapan risiko yang tergolong kritis karena memiliki persentase kumulatif kurang dari atau sama dengan 80%, yaitu mati pucuk, kesalahan sistem tanam, penggerek batang, benih tidak unggul, kerdil, uret, mosaik, dan terlalu banyak gulma. Risiko dengan nilai *Risk Priority Number* (RPN) tertinggi berasal dari serangan hama dan penyakit. Oleh karena itu, diperlukan penerapan strategi manajemen risiko yang meliputi strategi preventif dan mitigasi, seperti penggunaan bibit unggul, penerapan jarak tanam yang sesuai, pengendalian gulma secara rutin, pemupukan berimbang, penggunaan pestisida nabati, pemangkasan tanaman yang terinfeksi, serta dukungan kelembagaan melalui kemudahan akses terhadap pupuk subsidi, distribusi bibit unggul, dan pendampingan teknis yang berkelanjutan.

Kata Kunci: Tebu, Risiko Produksi, *Fishbone diagram*, FMEA, Diagram pareto

RISK MANAGEMENT OF SUGARCANE (*Saccharum officinarum* L.) PRODUCTION IN MATUR DISTRICT AGAM REGENCY

ABSTRACT

*Sugarcane (*Saccharum officinarum* L.) is one of the plantation commodities that plays an important role in increasing farmers' income and supporting the development of the agricultural sector. However, sugarcane production in Matur District, Agam Regency, still experiences fluctuations due to various production risks that affect the sustainability of farming activities. This study aims to identify the sources of production risk in sugarcane farming, measure the level of production risk, and formulate appropriate risk management strategies. The study employed a survey method using both quantitative and qualitative approaches. Risk identification was carried out using a fishbone diagram, while risk levels were measured using the Failure Mode and Effect Analysis (FMEA) method and Pareto diagram to determine critical risks. The results showed that there were 14 main causes of production risk, which were grouped into four categories: natural disasters, pests and diseases, human resources, and production facilities and infrastructure. Based on the results of the FMEA and Pareto diagram analyses, eight risks were identified as critical because they had a cumulative percentage of less than or equal to 80%, namely top shoot dieback, planting system errors, stem borers, poor-quality seed, stunting, white grubs, mosaic disease, and excessive weed growth. The risk with the highest Risk Priority Number (RPN) was caused by pest and disease attacks. Therefore, the implementation of risk management strategies is necessary, including preventive and mitigation measures such as the use of superior seed, appropriate planting spacing, regular weed control, balanced fertilization, the use of botanical pesticides, pruning of infected plants, as well as institutional support through easier access to subsidized fertilizers, distribution of superior seed, and continuous technical assistance.*

Keywords: *Sugarcane, Production Risk, Fishbone Diagram, FMEA, Pareto Diagram*