

**ANALISIS RISIKO PRODUKSI JAGUNG
(*Zea mays L.*) DI KECAMATAN RANAH AMPEK HULU
KABUPATEN PESISIR SELATAN**

SKRIPSI

Oleh :



Pembimbing I : Dr. Ir. Faidil Tanjung, M.Si

Pembimbing II : Yulistriani S.P.,M.Si

**FAKULTAS PERTANIAN
UNIVERSITAS ANDALAS
PADANG
2026**

ANALISIS RISIKO PRODUKSI JAGUNG (*Zea mays* L.) DI KECAMATAN RANAH AMPEK HULU KABUPATEN PESISIR SELATAN

ABSTRAK

Jagung merupakan salah satu komoditas penting dalam mendukung kebutuhan pangan dan pakan ternak. Namun, produksi jagung di Kecamatan Ranah Ampek Hulu mengalami fluktuasi yang menunjukkan adanya risiko dalam kegiatan produksi jagung. Penelitian ini bertujuan untuk menganalisis sumber risiko produksi, mengukur tingkat risiko, serta merumuskan strategi manajemen risiko produksi jagung di Kecamatan Ranah Ampek Hulu, Kabupaten Pesisir Selatan. Penelitian ini menggunakan metode deskriptif dengan pendekatan survei. Identifikasi penyebab risiko produksi dilakukan menggunakan diagram *Fishbone*, sedangkan pengukuran tingkat risiko dilakukan menggunakan metode *Failure Mode and Effects Analysis* (FMEA) melalui penilaian *Severity*, *Occurrence*, dan *Detection* untuk memperoleh nilai *Risk Priority Number* (RPN). Penentuan penyebab risiko produksi yang menjadi prioritas dilakukan menggunakan diagram Pareto. Hasil penelitian menunjukkan terdapat 14 sumber risiko produksi yang diidentifikasi menggunakan tulang ikan, yaitu banjir, kematian benih karena kekeringan, pemupukan belum berimbang, kematian tanaman jagung, terlalu banyak gulma, kebutuhan air yang tidak terpenuhi, kurangnya pengetahuan petani, penggerek batang, ulat grayak, babi, kerbau, mati muda (busuk akar/*root rot*). Berdasarkan pengukuran metode *Failure Mode and Effects Analysis* (FMEA), penggerek batang memiliki nilai RPN tertinggi sebesar 36,48, diikuti oleh pemupukan belum berimbang sebesar 30,54, kurangnya pengetahuan pengelolaan lahan sebesar 27,45, dan kebutuhan air yang tidak terpenuhi sebesar 24,78. Strategi manajemen risiko yang dirumuskan terdiri atas strategi preventif dan mitigasi, meliputi pengamatan rutin, sanitasi lahan, penerapan pemupukan sesuai rekomendasi, peningkatan pengetahuan melalui penyuluhan dan Good Agricultural Practices (GAP), penyediaan sumber air cadangan, penggunaan insektisida atau pestisida nabati, pemupukan susulan, serta penyiraman tanaman pada fase pertumbuhan.

Kata kunci: Diagram Pareto, Fishbone, FMEA, Jagung, Manajemen Risiko

RISK ANALYSIS OF CORN (*Zea mays* L.) PRODUCTION IN RANAH AMPEK HULU DISTRICT, PESISIR SELATAN REGENCY

ABSTRACT

Corn is one of the important commodities in supporting food and livestock feed needs. However, corn production in Ranah Ampek Hulu District has experienced fluctuations, indicating the presence of risks in corn production activities. This study aims to analyze the sources of production risks, measure the level of risk, and formulate production risk management strategies for corn production in Ranah Ampek Hulu District, Pesisir Selatan Regency. This study employed a descriptive method with a survey approach. The causes of production risks were identified using a Fishbone Diagram, while the level of risk was measured using the Failure Mode and Effects Analysis (FMEA) method through assessments of Severity, Occurrence, and Detection to obtain the Risk Priority Number (RPN). The production risk causes that were considered priorities were determined using a Pareto diagram. The results showed that there were 14 sources of production risk identified using the fishbone diagram, namely flooding, seedling death due to drought, unbalanced fertilization, corn plant death, excessive weeds, insufficient water supply, lack of farmer knowledge, stem borers, armyworms, wild boars, buffaloes, and early plant death (root rot). Based on the Failure Mode and Effects Analysis (FMEA), stem borers had the highest RPN value of 36.48, followed by unbalanced fertilization with an RPN of 30.54, lack of knowledge regarding land management with an RPN of 27.45, and insufficient water supply with an RPN of 24.78. The formulated risk management strategies consisted of preventive and mitigation strategies, including routine monitoring, field sanitation, application of fertilizers according to recommendations, improving farmers' knowledge through extension services and Good Agricultural Practices (GAP), providing alternative water sources, using insecticides or botanical pesticides, applying supplementary fertilization, and irrigating plants during the growth phase.

Keywords: Pareto Diagram, Fishbone, FMEA, Corn, Risk Management.