

## INTISARI

PENGARUH KONSENTRASI *PYRACLOSTROBIN* TERHADAP KANDUNGAN PROTEIN, LEMAK, DAN FENOLIK TOTAL BIJI KAKAO (*Theobroma cacao* L.) KLON ICCRI 04 DAN SCAVINA 6

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Penelitian bertujuan untuk menentukan konsentrasi *pyraclostrobin* yang optimal dalam perbaikan kandungan protein, lemak, dan fenolik total biji kakao klon ICCRI 04 dan Scavina 6. Percobaan lapangan disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) faktor tunggal dengan tiga blok sebagai ulangan. Perlakuan yang diuji adalah konsentrasi *pyraclostrobin*, terdiri dari tiga konsentrasi yaitu 0, 63, dan 126 ppm. Satu set perlakuan konsentrasi *pyraclostrobin* selanjutnya diujikan pada dua klon kakao yaitu ICCRI 04 dan Scavina 6. Penyemprotan *pyraclostrobin* dilakukan sebanyak empat kali, yaitu 1) terbentuknya primordia bunga, 2) bunga memasuki fase anthesis pada hari ke-21, 3) terbentuknya pentil kakao pada hari ke-50, dan 4) hari ke-75 setelah pembungaan. Variabel yang diamati adalah beberapa indikator kualitas biji kakao meliputi kandungan protein, lemak, dan fenolik total. Data yang diperoleh dianalisis varian (ANOVA) pada taraf kepercayaan 95%, dan dilanjutkan dengan uji Beda Nyata Terkecil (BNT) jika hasil analisis varian menunjukkan perbedaan nyata antar perlakuan. Konsentrasi *pyraclostrobin* yang optimal serta hubungan antar variabel pengamatan ditentukan menggunakan analisis regresi. Hasil penelitian memberikan informasi bahwa kenaikan konsentrasi *pyraclostrobin* sampai dengan 126 ppm secara nyata meningkatkan aktivitas nitrat reduktase serta kandungan protein dan lemak dalam biji kakao pada klon ICCRI 04. Sedangkan kenaikan konsentrasi *pyraclostrobin* sampai dengan 126 ppm belum mampu memperbaiki kualitas biji kakao pada klon Scavina 6, terutama terkait dengan beberapa indikator kualitas seperti kandungan protein, lemak, dan fenolik total.

Kata kunci: *pyraclostrobin*, protein, lemak, fenolik total, biji kakao

*ABSTRACT*

THE EFFECTS OF PYRACLOSTROBIN CONCENTRATIONS ON PROTEIN, LIPID, AND TOTAL PHENOLIC CONTENTS OF COCOA BEANS OF ICCRI 04 AND SCAVINA 6 CLONES (*Theobroma cacao* L.)

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The research objective was to determine the optimal concentration of pyraclostrobin in improving the contents of protein, lipid, and total phenolic of cocoa beans that produced by ICCRI 04 and Scavina 6 clones. The field experiment was arranged in Randomized Complete Block Design (RCBD) single factor, with three blocks as replications. The tested treatments were pyraclostrobin concentrations, consisting of three concentrations, namely 0, 63, and 126 ppm. A set of pyraclostrobin concentrations was then tested on two cocoa clones, namely ICCRI 04 and Scavina 6. The applications of pyraclostrobin was performed four times, foliar application, namely 1) the formation of the flowers primordia, 2) the flowers entered the anthesis phase, 3) the formation of cerelle, at 50 days after anthesis, and 4) 75 days after anthesis. Observed variables were several indicators of cocoa beans quality, namely protein, lipid, and total phenolic contents. Data were analyzed using Analysis of Variant (ANOVA) at 95% of confidence levels, and continued with Least Significant Difference (LSD) test. The optimal pyraclostrobin concentration and the relationships between variables were determined using regression analysis. The results provide information that the increase of pyraclostrobin concentration up to 126 ppm was significantly increase the nitrate reductase activity and the contents of protein and lipid in cocoa beans of ICCRI 04 clone. While, the increase of pyraclostrobin concentration up to 126 ppm was unable to improve the quality of cocoa beans in Scavina 6 clone, mainly related to several beans quality indicators such as protein, lipid, and total phenolic content.

Keywords: pyraclostrobin, protein, lipid, total phenolic, cocoa beans