

OPTIMASI KOMPOSISI KIRIMAN TEBU UNTUK MENCAPAI HASIL GULA OPTIMAL DI PT. INDOLAMPUNG PERKASA KABUPATEN TULANG BAWANG, LAMPUNG

Intisari

Tebu di PT. ILP dipanen oleh divisi *harvesting* melalui kegiatan tebang, muat dan angkut. Kegiatan tebang dilakukan dalam bentuk tebu bakar. Adanya rentang waktu dari bakar sampai giling tebu bakar tersebut dapat mengalami metabolisme yang menyebabkan penguraian polisakarida terurai menjadi disakarida ataupun monosakarida, sehingga mengakibatkan gula dalam tebu berkurang. Oleh karena itu, kegiatan tebang dan angkut yang tepat dan efisien dapat menekan laju penurunan nilai *pol* dan *purity*. Kegiatan tebang dan angkut di PT. ILP dilakukan dalam 3 sistem, yakni *Bundle Cane*, *loose cane*, dan *chopped cane*.

Penelitian ini bertujuan untuk mengetahui: (i) perbedaan kemampuan kirim dari sistem *Bundle Cane*, *Loose Cane*, dan *Chopped Cane*, dan (ii) komposisi kirim optimal dari sistem *Bundle Cane*, *Loose Cane*, dan *Chopped Cane*. Penelitian ini menggunakan metode deskriptif analitis. Jenis data yang dikumpulkan dan dianalisis adalah data sekunder (*time series*) kirim tebu ke pabrik tahun 2012 dan tahun 2013 dari Divisi *Harvesting* PT. ILP berupa laporan *burnt to crush time* (hour) per weeks. Metode analisis data menggunakan metode analisis kuantitatif dengan model *linear programming*.

Hasil penelitian menunjukkan bahwa terdapat perbedaan rerata kirim tebu ke pabrik PT. ILP dari sistem *Bundle Cane*, *Loose Cane*, dan *Chopped Cane* yakni sistem tebang *Bundle Cane* paling tinggi disusul sistem tebang *Loose Cane* dan paling kecil adalah sistem tebang *Chopped Cane*. Disamping itu, hasil penelitian juga menyimpulkan bahwa komposisi rerata kirim dari sistem tebang *Bundle Cane*, *Loose Cane*, dan *Chopped Cane* saat ini belum optimal dalam memenuhi kuota pabrik. Hal ini terlihat dari komposisi pengalokasian kirim tebu ke pabrik PT. ILP pada masing-masing sistem tebang (*Bundle Cane*, *Loose Cane*, dan *Chopped Cane*) mengalami perubahan komposisi pengalokasian dari sebelumnya sehingga adanya perubahan komposisi tersebut masih dapat diperoleh produksi gula yang lebih tinggi dari sebelumnya (masih dapat ditingkatkan). Terjadinya perubahan jumlah tenaga kerja tebang dan biaya variabel per ton tebu akan merubah komposisi jumlah kirim tebu yang optimal ke pabrik.

Katakunci: *bundle cane, loose cane, chopped cane, kirim, optimalisasi*

**OPTIMIZATION OF SHIPMENTS COMPOSITION OF SUGAR CANE TO
ACHIEVE OPTIMAL RESULTS AT REGENCY TULANG BAWANG AT PT.
INDOLAMPUNG PERKASA, LAMPUNG**

Abstract

Sugarcane in PT. ILP harvested by harvesting division through logging, unloading and transport. Logging is done in the form of sugar cane burn. The existence of a span of fuel to burn the sugar cane milling can undergo metabolism that cause decomposition of biodegradable polysaccharides into monosaccharides or disaccharides, resulting in reduced cane sugar. Therefore, logging and proper and efficient transport can reduce the rate of decline in the value of pol and purity. Logging and transport in PT. ILP is done in three systems, namely Bundle Cane, Loose Cane, and Chopped Cane.

This study aimed to determine: (i) differences in the ability of the system to send Cane Bundle, Loose Cane, and Chopped Cane, and (ii) the composition of the optimal delivery system Cane Bundle, Loose Cane, and Chopped Cane. This study used a descriptive analytical method. The type of data collected and analyzed secondary data of sugarcane to the factory shipment in 2012 and in 2013 from Harvesting Division PT. ILP be burnt to crush report time (hour) per weeks. Methods of data analysis using quantitative analysis method of linear programming models.

The results showed that there are differences in the average shipment of sugar cane to the factory PT. ILP systems Bundle Cane, Cane Loose, and Chopped Cane Cane Bundle cutting system where the highest followed Loose Cane cutting system and the smallest is the Chopped Cane cutting system. In addition, the results of the study also concluded that the average composition of the shipment of cutting system Bundle Cane, Cane Loose, and Chopped Cane currently not optimal in meeting the quota factory. This is evident from the composition of the shipment allocation of sugarcane to the factory PT. ILP on each cutting system (Bundle Cane, Cane Loose, and Chopped Cane) to change the composition of the previous allocation so that a change in the composition is still obtainable sugar production higher than before (still can be improved). A change in the number of workers cutting and variable costs per ton of cane will change the composition of the optimal number of items cane to the mill.

Keywords: *bundle cane, loose cane, chopped cane, shipment, optimization*