

ABSTRAK

Astrid Febiyani Tjandra. 2020. *Mencari Solusi Masalah Goal Programming Pada Kasus Keripik Pisang Lampung “Kharisma” Dengan Excel Solver*. Skripsi. Program Studi Pendidikan Matematika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam. Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma.

Persaingan industri rumahan saat ini sangat ketat. Untuk bisa memenangkan persaingan, manager perusahaan harus membuat perencanaan produksi yang terbaik. Secara matematis, perencanaan produksi yang buruk akan mengakibatkan *goal-goal* yang sudah ditetapkan dari awal tidak tercapai. Fokus penelitian skripsi ini adalah pada industri rumahan keripik pisang “Kharisma” yang berlokasi di provinsi Lampung yang memproduksi 5 jenis keripik pisang, yaitu rasa original, manis, coklat, balado dan kopi.

Penelitian dimulai dari mengumpulkan data kendala bahan dan kendala waktu proses produksi lalu dilanjutkan dengan menetapkan *goal-goal* yang ingin dicapai. *Goal-goal* tersebut diranking sedemikian sehingga *goal* pertama lebih penting daripada *goal* kedua. *Goal* kedua lebih penting dari *goal* ketiga. *Goal* ketiga lebih penting dari *goal* keempat dan seterusnya.

Langkah berikutnya adalah membuat model *goal programming* kasus keripik pisang “Kharisma” dan menyelesaikannya dengan *excel solver*. Hasil *output excel solver* menyatakan bahwa untuk mencapai *goal-goal* yang sudah dibuat dari awal, manager perusahaan harus memproduksi 28 bungkus keripik pisang rasa original, 6 bungkus keripik pisang rasa manis, 6 bungkus keripik pisang rasa coklat, 18 bungkus keripik pisang rasa balado, dan 10 bungkus keripik pisang rasa kopi per harinya.

Kata Kunci: total penjualan, waktu proses 1, waktu proses 2, *goal programming*, *excel solver*, deviasi.

ABSTRACT

Astrid Febiyani Tjandra. 2020. *Looking for a Goal Programming Solution for the Case of Kharisma's Lampung Banana Crips with Excel Solver. Thesis. Mathematics Education Study Program, Department of Mathematics and Science Education. Faculty of Teachers Training and Education, Sanata Dharma University.*

Home industry competition is very tight. To win the competition, the company manager must make the best production planning. Mathematically, poor production planning will result in the goals that have been set from the beginning are not achieved. The focus of this thesis research is on the home industry of "Kharisma" banana chips located in Lampung province which produces 5 types of banana chips, namely original, sweet, chocolate, balado and coffee flavors.

The research starts from collecting data on material constraints and time constraints of the production process and then continues by setting goals to be achieved. The goals are ranked so that the first goal is more important than the second goal. The second goal is more important than the third goal. The third goal is more important than the fourth goal and so on.

The next step is to make a goal programming model of the "Kharisma" banana chips case and solve it with Excel Solver. Excel Solver's output results state that in order to achieve goals that were created from scratch, the company manager must produce 28 original banana chips, 6 sweet banana chips, 6 chocolate banana chips, 18 balado banana chips, and 10 packs of banana coffee flavors per day.

Keywords: total sales, processing time 1, processing time 2, goal programming, excel solver, deviation.