

ABSTRAK

PT Adi Satria Abadi merupakan salah satu perusahaan yang bergerak dibidang penyamakan kulit untuk membuat sarung tangan golf. Hampir 65% keuangan perusahaan dialokasikan untuk pengadaan persediaan bahan baku kulit yang terdiri dari kulit kambing dan kulit domba. Selain harganya yang mahal, ketersediaan bahan baku kulit juga sangat terbatas. Perusahaan mengalami trade-off dimana disatu sisi bahan baku mudah rusak dan mengalami kadaluarsa tetapi disisi lain ketersediaannya juga terbatas, dan jika tidak mempunyai persediaan yang cukup, proses produksi akan terganggu.

Penyelesaian masalah pada penelitian ini menggunakan model yang dikembangkan dengan mencakup fungsi tujuan yang menjadi tujuan utama perusahaan dalam menangani masalah persediannya. Fungsi tujuan tersebut yaitu meminimasi total biaya persediaan, memaksimalkan bahan baku dengan kualitas bagus, dan meminimasi adanya biaya akibat adanya bahan baku yang rusak dan kadaluarsa. Semua fungsi tujuan dapat mencapai nilai optimal dengan digunakannya pendekatan Fuzzy Goal Programming.

Hasil perhitungan validasi menggunakan software lingo dengan data di PT Adi Satria Abadi didapatkan hasil optimal untuk nilai fungsi keanggotaan fuzzy goal programming (λ) sebesar 0,91551. Dengan hasil nilai tersebut, didapatkan hasil optimal pengendalian persediaan perusahaan yaitu total biaya persediaan selama horison perencanaan sebesar Rp 10.341.630.000 , total bahan baku berkualitas baik yang diterima sebanyak 1.279.542 square feet, dan total minimasi biaya akibat adanya produk yang kadaluarsa sebesar Rp 142.911.691.

Kata kunci : Persediaan, kadaluarsa, Fuzzy Goal Programming

ABSTRACT

PT Adi Satria Abadi is a company engaged in the leather tanning industry to manufacture golf gloves. Almost 65% of the company's finances are allocated for the procurement of raw material supplies for the leather, which consists of goat leather and sheep leather. Apart from the high price, the availability of leather raw materials is also very limited. The company experiences a trade-off where on the one hand raw materials are easily damaged and expired, but on the other hand their availability is also limited, and if they do not have sufficient inventory, the production process will be disrupted.

Problem solving in this study uses a model developed which includes the objective function which is the main objective of the company in dealing with its supply problems. The objective function is to minimize the total cost of inventory, maximize raw materials with good quality, and minimize costs due to broke and expired raw materials. All objective functions can achieve optimal values by using the Fuzzy Goal Programming approach.

The results of the validation calculation using lingo software with data at PT Adi Satria Abadi obtained optimal results for the value of the fuzzy goal programming (λ) membership function of 0.91551. With the results of this value, the optimal results of the company's inventory control were obtained, namely the total cost of inventory during the planning horizon of IDR 10,341,630,000, the total of good quality raw materials received was 1,279,542 square feet, and the total cost minimization due to expired products was IDR 142.911.691.

Keywords: *Inventory, expired, Fuzzy Goal Programming*