JEBIN Journal of Economics Business Industry
Volume 1, Number 1, 2023, pp 30-39
https://jurnaljepip.com/index.php/Jebi/index
E-ISSN: 3025-0986
P-ISSN: 3025-0528

Minimizing Fresh Fruit Bunches Inventory Costs Using Continuous Review System and Blanked Order System Methods

Galuh Amanda Sihotang[1]*, Ferida Azka Damiyati[2]
[1,2] Universitas Sumatera Utara, Medan, Indonesia
galuh.sihotang1@gmail.com

Received: June 25, 2023; Revised: July 20, 2023; Accepted: July 30, 2023

ABSTRACT
PT X is a company engaged in palm oil processing. The company's inventory of FFB raw materials is erratic, depending on the production needs. In processing palm oil raw materials, companies in the logistics or inventory department cannot be separated from the problem of FFB raw material inventory, which is part of the primary needs for company production. This company faces issues, namely the fluctuation in demand and lead time for placing orders, which can cause stockouts and shortages in FFB raw material inventories, which disrupts production process activities. The purpose of the research conducted was to conduct an analysis of raw material inventory control using the continuous review system and blanked order system methods to avoid the occurrence of raw material shortages in the raw material inventory to be used and to minimize the total inventory costs that must be incurred at the company and determine the best inventory method. The results obtained from this study were getting a safety stock of 1,638 tons and a known reorder point of 5,093 tons for the schedule of reordering FFB raw materials using the continuous review system method. Based on the results of calculating inventory costs using the constant review system method, it is the most optimal method with a minimal total inventory cost compared to the blanked order system method and the previous company policy, with savings generated by 0.10%.

Keywords: Inventory Costs, Continuous Review System, Blanked Order System, Safety Stock

INTRODUCTION

The production process can run effectively and efficiently if there is supervision and control of raw material inventory. This will be a significant problem because the amount of stock will determine or affect the smooth production process of the company (Mahapatra, 2021). The amount of inventory needed by the company is different for each company, and the existing factory depends on the type of factory, the amount of production volume, and the process. Planning and controlling raw materials is often the main problem in scheduling the most appropriate material inventory time so that production activities do not experience disruptions and the costs incurred for the inventory of these materials do not increase much (Joseph, 2020).

Companies with policies on raw material inventory can reduce inventory costs to a minimum and increase the target results of optimal production, so company profits can also increase (Zhang, 2023) (Sangeetha, 2020). Especially in palm oil mill companies, the amount of FFB raw materials needed is erratic, sometimes following the harvest season schedule and production capacity (Altamirano, 2020). The company experiences difficulties if the FFB raw materials obtained are too much and experience shortages, so the production target results are not optimal (Alsunaidi, 2021).

PT X is one of the companies engaged in palm oil processing. The types of production produced include CPO, fibre, and kernel. These products have quality by RSPO standards and continuously make continuous improvements to meet customer satisfaction. The problem with PT X is that the amount of raw materials is quite intense changes when the palm oil harvest season arrives, causing a buildup of fresh fruit bunches (FFB), and this will cause increased storage costs due to overstock, and in these mills most often experience a shortage of FFB raw materials. The problem is still a shortage or excess of fresh fruit bunches. Sei Rokan Palm Oil Mill, due to orders or purchases that are less efficient and effective, can affect the crude palm oil (CPO) production process, and the cost of raw material inventory is more incurred due to less effective and maximum inventory control in the company. The production results of processed FFB are not by the predetermined target, so the company's profits experience many shortcomings. The shortage of raw materials significantly affects the cost of raw material inventory. The increasing cost of inventory shortages will also

increase the total cost of stock that must be incurred. So, practical and efficient inventory control is needed to minimize the company's inventory cost and avoid the emergence of raw material inventory shortages.

Palm oil processing activities into CPO at PT X experience problems with fluctuations and the amount of raw materials that are pretty intense when the palm oil harvest season arrives and when it is not the harvest season, causing shortages and excess raw materials, namely fresh fruit bunches (FFB), as well as the amount of raw material needs and production results do not obtain optimal results. Table 1 shows data on the amount of FFB raw materials and target raw material needs (Bezerra, 2020).

Table 1 FFB Raw Material Needs and Number of Shortages

Moon	Amount of Raw Material (Ton)	Target Raw Material (Ton)	Shortage of raw materials (Ton)	Percentage of deficiency (%)
October 2022	16,421	17,392	971	5.58 %
November 2022	18,567	19,143	576	3.01 %
December 2022	14,329	15,378	1,049	6.8 %

Based on Table 1, it can be seen that the company experiences a shortage of raw materials every month. The percentage result can be a problem because the percentage amount is almost 7% of the total target of basic material needs that should be achieved. The greater the percentage of the shortfall, the more the company loses because it is far from achieving the production target. The shortage of raw materials also impacts other production results, such as kernels that do not reach the target. Efforts were made to achieve this target. The company previously did nothing and only ordered raw materials suddenly but experienced an increase in FFB prices by 1.35%, so sometimes it happens repeatedly every month.

The solution to PT X's problems is to conduct inventory control analysis using the continuous review system and blanked order system methods (Franceschi, 2021). Both ways are used because the amount of raw material demand is not fixed or probabilistic, so it cannot be estimated precisely how much will be ordered and the raw material items ordered for repeated use in one year (López-Guzmán, 2021). This method is expected to minimize inventory costs compared to previous inventory costs. Because in the factory, a target of raw materials must be met every month. So, if the raw material target alone cannot be met, the company's production target cannot be met (Sarma, 2021).

Each company and the order amount made cannot minimize the costs incurred in booking. A method of repeatedly ordering several items that the company will use is usually called the blanket order system method (Kocer, 2020). The blanket order system method is a technique that is often used to increase efficiency in ordering and purchasing items, which can affect the level of efficiency of raw material inventory management (Podell, 2022).

METHODS

Data Collection Techniques

Data collection is carried out by the data needed in this study. The data required for this study are primary data and secondary data, namely (Aggarwal, 2022):

1. Primary data

This primary data was obtained from the results of direct observation at PT X. The data obtained are raw material inventory data, the number of raw material shortages each month, message costs, storage costs, and raw material prices, which are the problems of inventory shortages that still often occur today (Dinh, 2021).

2. Secondary data

This secondary data is obtained from existing sources within the company. This data includes the company's profile, organizational structure, vision, and mission. Data collection is carried out within 12 months (Zheng, 2020). This raw material requirement data is needed to benefit the problem analysis process in the inventory of raw materials produced by PT X.

Data Processing

The stages of data processing in this study are as follows:

1. Calculation of continuous review system method

Calculation using this method, the characteristic of the calculated inventory system is that the amount of FFB raw materials ordered at the time of order is not fixed or probabilistic (Clemente-López, 2023). This method is also called the Q method. This ordering method will continue until the amount of inventory reaches the maximum point of the list (S) (Gutierrez, 2021). The value of S is obtained by adding the order point and quantity. The advantage of this system is that FFB supplies will always be available so that demand will always be met. The stages carried out in this method are preceded by preparing data on raw material needs, lead time data, storage cost data, and message costs. After all the data is collected, the calculations in this method are carried out (Samanta, 2023)(Hassan, 2023). The assumptions that must be present in using this method are that the cost of ordering is fixed, the demand for raw materials varies, and waiting times are not required (Dutoit, 2020). The calculation of this method will produce an optimal order lot size, permanently fixed for each time an order is placed, and minimize the total cost of the company's inventory (Bast, 2023).

2. Calculation of blanket order system method

The calculation carried out in the blanket order system method is on raw materials continuously placed in the long term, such as FFB (Kumar, 2022). Because in the palm oil mill, FFB will always be needed for production. This method is usually for companies that have gone through the tender and auction process and the contract system in advance to determine the raw materials (Cao, 2022). A blanket order system is made for one year's needs for items purchased in bulk. The routine purchasing process usually applies to items whose suppliers are clear because there is a long-term agreement between the supplier and the company. This data preparation method is the cost of messages, storage costs, raw material prices and safety stock. This method is carried out not by direct appointment or tender, but by selection and investigation, where the research concerns factory facilities, product quality, factory machinery and experts owned (Bazizi, 2021). Companies will get discounts if they purchase products in large quantities (Indah, 2023). Procurement of goods with this method is more specific and guaranteed because it uses a contract system at a particular time (Batista, 2022). The calculation of this method uses a monthly or one-year time according to the contract time to be determined. This calculation method reduces the number of ordering activities carried out repeatedly to a single order and prevents a shortage of raw material inventory (Zheng, 2021)(Malca-Ramirez, 2020).

RESULTS

Production and Marketing Aspects

aspects of the company's production and marketing, among others:

1. The production capacity of the palm oil mill is ± 60 tons of FFB/hour. The possibility of development continues to be carried out considering the addition of oil palm plantation areas that can produce more fruit.
2. The products produced by the company are Fresh Fruit Bunches, CPO or semi-finished oil, and Palm Kernel. These products are sent to various factories and used as raw materials for processing finished products such as cooking oil, butter, soap, diesel fuel, lubricants, etc.
3. The waste processed from palm oil is processed to be used as fertilizer
4. The oil produced by palm oil comes from the flesh of the fruit, which is often known as CPO (Crude Palm Oil), and the oil produced from the kernel is often known as CPKO (Crude Palm Kernel Oil), and the remaining processing, such as empty stalks, can be used as fertilizer for oil palm lands. At the same time, shells and fibre can be used for boiler fuel.

Calculation of Continuous Review System Method

The calculations are the average order amount, safety stock, reorder point, and total cost of controlling FFB raw materials. The following calculations are carried out using the continuous review system method:

Annual demand (D)	= 247,048 tons /year
Demand standard deviation (S)	= 4,299 tons/year
Lead time average (L)	= 0.014 years
Average requests during *Lead Time*	= 3.458 tons/year
Standard deviation *Lead Time* (SL)	= 508 tons /year
Charge per booking (A)	= IDR 3,260 /message
Cost of inventory shortage (Cu)	= IDR 22,950 /ton
Storage cost per ton (h)	= IDR 462.73 /ton

FFB raw material price per ton (P) = IDR 1,700,000 /ton

Expected total cost of inventory costs per year
OT=Ob+Op+Os+Ok
OT = DP + $\frac{AD}{q0}$ + h ($\frac{q0}{2}$ + r – DL) + Cu $\frac{D}{q0}\int_r^{\infty}(\mathrm{x}-\mathrm{r})\,f(\mathrm{x})dx$
Purchase cost (Ob)
Ob = D x p
= 247.048 x IDR 1,700,000
= Rp.419,981,600,000

Booking fee (Op)
Op = $\frac{\mathrm{AD}}{\mathrm{q0}}$
= $\frac{3{,}260 \text{ x } 247{,}048}{5{,}077}$
= IDR 158,632

Saving Cost (Os)
Os = h (+ $\frac{q0}{2}$r – DL)
= 462.73 ($\frac{5{,}077}{2}$+ 5,093 – 247,048 x 0.014)
= IDR 1,930,509

Cost of inventory shortage (Ok)
Ok = Cu $\frac{D}{q0}\int_r^{\infty}(\mathrm{x}-\mathrm{r})\,f(\mathrm{x})dx$
= 22,950 x $\frac{247{,}048}{5{,}077}$ x 0.91
= IDR 1,016,244

Total cost of inventory
OT = IDR 419,981,600,000 + IDR 158,632 + IDR 1,930,509 + IDR 1,016,244
OT = IDR 419,984,705,385 /Year

After calculating the inventory control of FFB raw materials using the continuous review system method, the total inventory cost using the constant review system method was IDR 419,984,705,385

Raw Material Inventory Calculation Using Blanket Order System Method

A blanket order system is a way of ordering items repeatedly (repetitively) and helps solve problems for several things not included in inventory. The following is the calculation of the blanket order system for one year.

1. Determine the Number of Messages (Q)

The number of messages needed and the variable FFB raw material requirements are shown in Table 2.

Table 2. Number Of Messages Needed and Variable Raw Material Requirements

Moon	Requirement (Ton)	Message Fee	Saving Cost	Number of Messages (Ton)
October 2021	17.392	IDR 3,260	IDR 462.73	495.03
November 2021	19.143			519.33
December 2021	15.378			465.48
January 2022	20.114			532.36

February 2022	17.371	494.73
March 2022	17.113	491.05
April 2022	18.524	510.89
May 2022	22.917	568.25
June 2022	19.137	519.27
July 2022	23..841	579.59
August 2022	26.159	607.11
September 2022	29.959	649.72
Total		6,432.86

2. Determine the Cost of Saving (Cost)
Table 3 shows the results of storage costs using the blanket order system method.

Table 3. The result of Saving Costs With The Blanket Order System Method

Moon	Number of Messages (Ton)	Saving Cost	Total Saving Cost
October 2021	495.03	IDR 462.73	IDR 114,532
November 2021	519.33		IDR 120,155
December 2021	465.48		IDR 107,696
January 2022	532.36		IDR 123,169
February 2022	494.73		IDR 114,463
March 2022	491.05		IDR 113,612
April 2022	510.89		IDR 118,202
May 2022	568.25		IDR 131,473
June 2022	519.27		IDR 120,141
July 2022	579.59		IDR 134,097
August 2022	607.11		IDR 140,464
September 2022	649.72		IDR 150,322
Total			IDR 1,488,326

3. Determine Purchasing Cost

Determining the purchase cost requires variable FFB raw material needs and FFB prices per ton. Table 4 shows the cost of purchasing by blanket order system method.

Table 4 Purchasing Cost

Moon	Requirement (Ton)	FFB Price Per Ton	Purchase Cost
October 2021	17,392	IDR 1,700,000	IDR 29,566,400,000
November 2021	19,143	IDR 1,700,000	IDR 32,543,100,000
December 2021	15,378	IDR 1,700,000	IDR 26,137,500,000
January 2022	20,114	IDR 1,700,000	IDR 34,193,800,000
February 2022	17,371	IDR 1,700,000	IDR 29,530,700,000
March 2022	17,113	IDR 1,700,000	IDR 29,092,100,000
April 2022	18,524	IDR 1,700,000	IDR 31,490,800,000

May 2022	22,917	IDR 1,700,000	IDR 38,958,900,000
June 2022	19,137	IDR 1,700,000	IDR 32,532,900,000
July 2022	23,841	IDR 1,700,000	IDR 40,529,700,000
August 2022	26,159	IDR 1,700,000	IDR 44,980,300,000
September 2022	29,959	IDR 1,700,000	IDR 50,930,300,000
	Total		IDR 420,486,500,000

4. Determine Safety Stock Costs

The cost of safety stock using the blanket order system data method, from the amount of safety stock obtained, and the calculation results using the continuous review system method that has previously been carried out.

Safety Stock Cost = Amount Safety Stock x Saving Cost
= 1,638 × IDR 462.73
= IDR 757,951

5. Determine Total Inventory Cost (Total Cost)

The total cost of inventory using the blanket order system method is shown in Table 5.

Table 5 Total Inventory Cost

Moon	**Message Fee**	**Saving Cost**	**Purchase Cost**	**Safety Stock *Cost***	**Total *Cost***
October 2021	IDR 6,520	IDR 114,532	IDR 29,566,400,000		IDR 29,567,279,003
November 2021	IDR 6,520	IDR 120,155	IDR 32,543,100,000		IDR 32,543,984,626
December 2021	IDR 6,520	IDR 107,696	IDR 26,137,500,000		IDR 26,138,372,167
January 2022	IDR 6,520	IDR 123,169	IDR 34,193,800,000		IDR 34,194,687,640
February 2022	IDR 6,520	IDR 114,463	IDR 29,530,700,000		IDR 29,531,578,934
March 2022	IDR 6,520	IDR 113,612	IDR 29,092,100,000		IDR 29,092,978,083
April 2022	IDR 6,520	IDR 118,202	IDR 31,490,800,000	IDR 757,951	IDR 31,491,682,673
May 2022	IDR 6,520	IDR 131,473	IDR 38,958,900,000		IDR 38,959,795,944
June 2022	IDR 6,520	IDR 120,141	IDR 32,532,900,000		IDR 32,533,784,612
July 2022	IDR 6,520	IDR 134,097	IDR 40,529,700,000		IDR 40,530,598,568
August 2022	IDR 6,520	IDR 140,464	IDR 44,980,300,000		IDR 44,981,204,935
September 2022	IDR 6,520	IDR 150,322	IDR 50,930,300,000		IDR 50,931,214,793
Total	IDR 78,240	IDR 1,488,326	IDR 420,486,500,000		IDR 420,497,161,978

Results of Total Overall Inventory Cost

The results of calculating the total inventory cost between company policies using the continuous review system method and the blanked order system method are the total inventory cost is more minimally generated using the constant review system method. While in the blanked order system method, the total inventory cost is slightly larger. Figure 1 shows the difference in the initial and inventory costs using research methods.

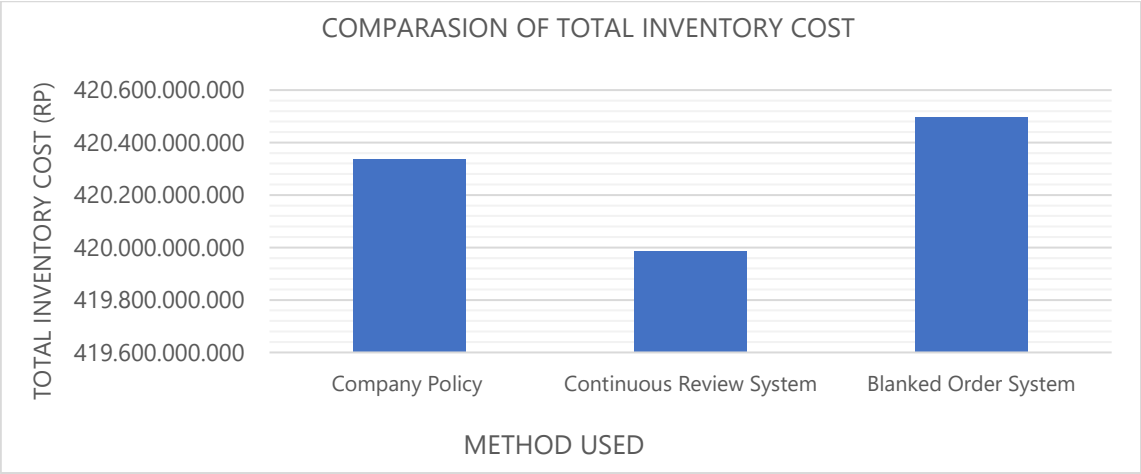

Figure 1 Comparison of Total Inventory Costs

The graph results in Figure 1 show that the total inventory cost is minimal compared to the company's policy so far when using the continuous review system method. Order costs, purchase costs, storage costs, and shortage costs influence the total inventory cost in this method. A comparison of company policies with the proposal to use the continuous review system method for saving costs can be seen in Figure 2 to Figure 6.

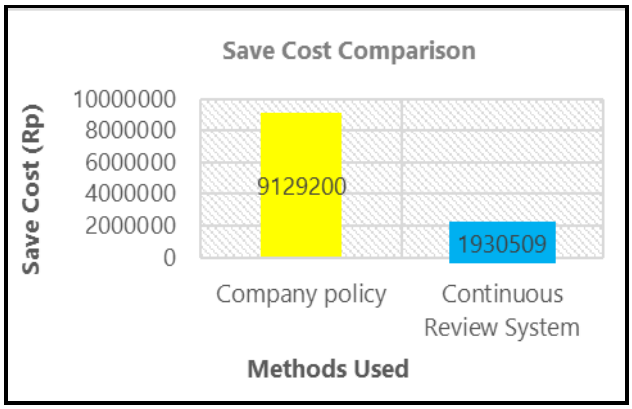

Figure 2 Comparison of Total Saving Costs

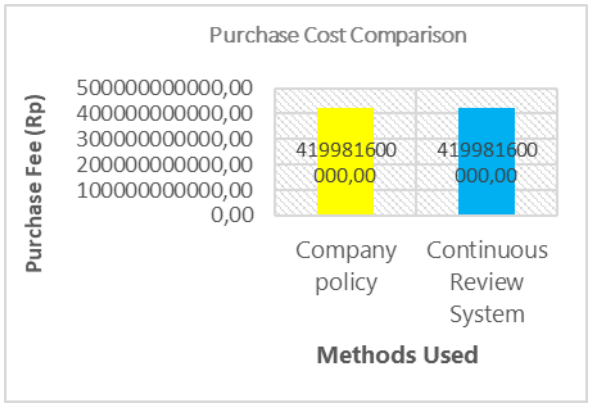

Figure 3 Comparison of Total Purchase Costs

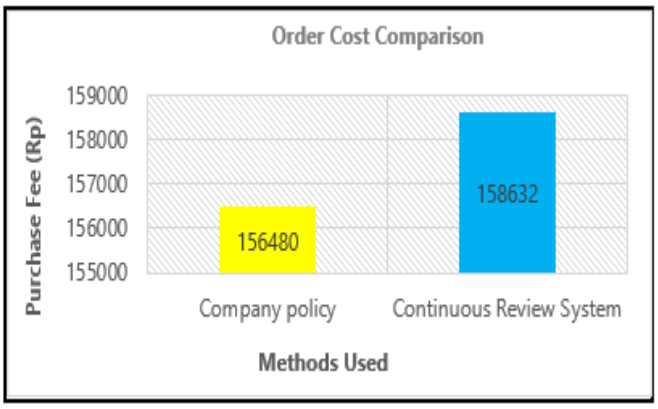

Figure 4 Comparison of Order Costs

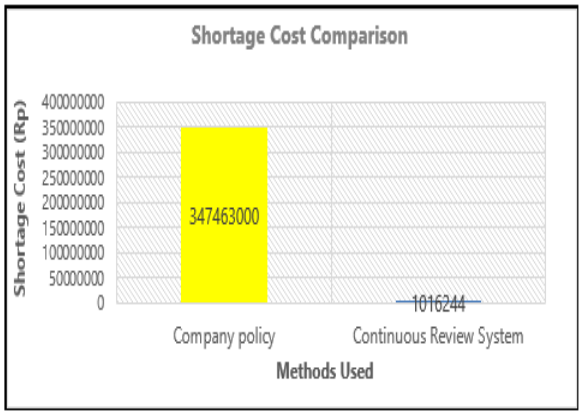

Figure 5 Comparison of Shortage Costs

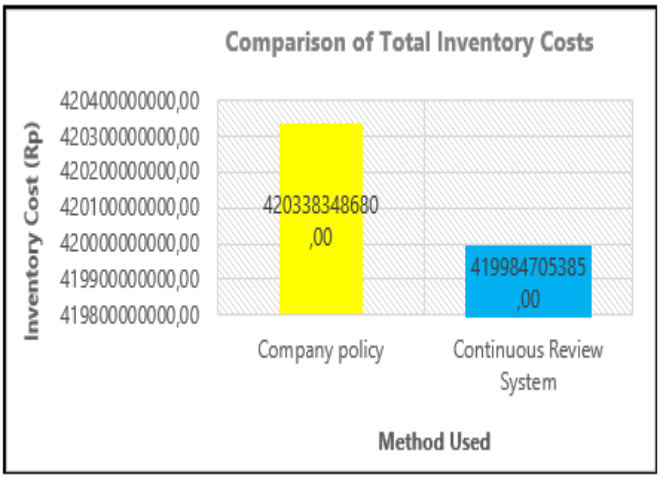

Figure 6 Comparison of Total Inventory Costs

DISCUSSIONS

The total cost of inventories generated using company policy is IDR 420,338,348,680, using the continuous review system method of IDR 419,984,705,385 and using the blanked order system method IDR 420,497,162,673. So, from the results of the total cost of the third inventory, the minimum is to use the continuous review system method, which is IDR 419,984,705,385 with the resulting savings of 0.10% or IDR 353,643,295. The total minimum inventory cost is due to the drastic reduction in the shortage costs that must be incurred. Ordering raw materials using the continuous review system method for FFB raw materials has a minor total procurement cost (Tc) for one year compared to ordering FFB raw materials using the blanked order system method. The results of the (Syamil, 2018) study The results of the probabilistic continuous review system method will obtain optimal order lot sizes, safety stock, and reorder points. Using the continuous review method, a total inventory cost savings of 36% is obtained, and with the continuous review method, a total inventory cost savings of 59% is obtained. The results of the (Sundhari & Putri, 2014) study argue that the optimal solution, if implemented in controlling raw material inventory, is a Continuous Review System (Q), which provides the minimum total inventory costs and can still meet raw material needs in conditions of uncertainty compared to company policies. Subsequent research with the same results, namely (Faurizka & Purwaningsih, 2023) research, has a total cost of raw material inventory using the Continuous Review System Method of IDR 3,843,606,662 per year. Meanwhile, based on company policy calculations, the total inventory cost is IDR 3,849,206,712. So that when compared with company policy the Continuous Review System Method has the most optimum value, then the difference between the two is IDR 5,600,050.

CONCLUSION

The optimal order amount obtained using the continuous review system method is 5,077 tons. Based on the safety stock results for FFB raw material inventory, which is 1,638 tons, the company must provide FFB raw materials of at least 1,638 tons. The calculation results using the continuous review system and blanked order system methods, the total cost of raw material inventory can be minimized if using the continuous review system method, IDR 419,984,705,385. In contrast, if using company policy, it is IDR 420,338,348,680. So, from the results of the total inventory costs using the continuous review system method, it can make savings of 0.10% or around IDR 335,643,295. The best inventory method in Decision-making for raw material inventory control is if the company uses the continuous review system method. This is because the total inventory costs generated by this method are smaller than the blanked order system method and pre-existing company policies.

REFERENCES

Aggarwal, A. (2022). Clinical and economic outcomes of continuous glucose monitoring system (CGMS) in patients with diabetes mellitus: A systematic literature review. In *Diabetes Research and Clinical Practice* (Vol. 186). https://doi.org/10.1016/j.diabres.2022.109825

Alsunaidi, B. (2021). A review of non-invasive optical systems for continuous blood glucose monitoring. In *Sensors* (Vol. 21, Issue 20). https://doi.org/10.3390/s21206820

Altamirano, A. (2020). Review of small-capacity single-stage continuous absorption systems operating on binary working fluids for cooling: Compact exchanger technologies. *International Journal of Refrigeration*, *114*, 118–147. https://doi.org/10.1016/j.ijrefrig.2020.02.033

Bast, M. El. (2023). A review on continuous biomass hydrothermal liquefaction systems: Process design and operating parameters effects on biocrude. In *Journal of the Energy Institute* (Vol. 108). https://doi.org/10.1016/j.joei.2023.101260

Batista, J. P. B. (2022). A review of the continuous professional development system for pharmacists. *Human Resources for Health*, *20*(1). https://doi.org/10.1186/s12960-021-00700-1

Bazizi, L. (2021). Stochastic Analysis of the (s, Q) Continuous Review Inventory System with Retrial Demands. In *Proceedings - 2021 IEEE International Conference on Recent Advances in Mathematics and Informatics, ICRAMI 2021*. https://doi.org/10.1109/ICRAMI52622.2021.9585989

Bezerra, M. A. (2020). Automation of continuous flow analysis systems – a review. In *Microchemical Journal* (Vol. 155). https://doi.org/10.1016/j.microc.2020.104731

Cao, P. (2022). Optimal pricing and inventory control strategy for a continuous-review system with product return. *Operations Research Letters*, *50*(3), 295–302. https://doi.org/10.1016/j.orl.2022.03.002

Clemente-López, D. (2023). A Review of the Digital Implementation of Continuous-Time Fractional-Order Chaotic Systems Using FPGAs and Embedded Hardware. In *Archives of Computational Methods in Engineering* (Vol. 30, Issue 2, pp. 951–983). https://doi.org/10.1007/s11831-022-09824-6

Dinh, T. V. (2021). Moisture removal techniques for a continuous emission monitoring system: A review. In *Atmosphere* (Vol. 12, Issue 1). https://doi.org/10.3390/atmos12010061

Dutoit, C. (2020). Statistical process control and maintenance policies for continuous production systems subjected to different failure impact models: Literature review. In *Procedia CIRP* (Vol. 86, pp. 55–60). https://doi.org/10.1016/j.procir.2020.01.050

Faurizka, N., & Purwaningsih, R. (2023). PENGENDALIAN PERSEDIAAN BAHAN BAKU MENGGUNAKAN METODE CONTINUOUS REVIEW SYSTEM (CRS) PADA PT SANGO CERAMICS INDONESIA. *Industrial Engineering Online Journal*, *12*(3).

Franceschi, R. (2021). Intermittently Scanned and Continuous Glucose Monitor Systems: A Systematic Review on Psychological Outcomes in Pediatric Patients. In *Frontiers in Pediatrics* (Vol. 9). https://doi.org/10.3389/fped.2021.660173

Gutierrez, M. (2021). Undershoot and order quantity probability distributions in periodic review, reorder point, order-up-to-level inventory systems with continuous demand. *Applied Mathematical Modelling*, *91*, 791–814. https://doi.org/10.1016/j.apm.2020.09.014

Hassan, A. (2023). Empirical evaluation of continuous auditing system use: a systematic review. In *International Journal of Electrical and Computer Engineering* (Vol. 13, Issue 1, pp. 796–808). https://doi.org/10.11591/ijece.v13i1.pp796-808

Indah, A. B. R. (2023). Inventory control analysis of sugarcane raw materials with economic production quantity method and additional raw materials with models of continuous review system and periodic review. In *AIP Conference Proceedings* (Vol. 2596). https://doi.org/10.1063/5.0119205

Joseph, J. I. (2020). Review of the Long-Term Implantable Senseonics Continuous Glucose Monitoring System and Other Continuous Glucose Monitoring Systems. *Journal of Diabetes Science and Technology*, *15*(1), 167–173. https://doi.org/10.1177/1932296820911919

Kocer, U. U. (2020). Continuous review (s, Q) inventory system with random lifetime and two demand classes. *OPSEARCH*, *57*(1), 104–118. https://doi.org/10.1007/s12597-019-00393-0

Kumar, M. (2022). Continuous review inventory system for intuitionistic fuzzy random demand under service level constraint. *Sadhana - Academy Proceedings in Engineering Sciences*, *47*(2). https://doi.org/10.1007/s12046-022-01869-4

López-Guzmán, M. (2021). Electrocoagulation process: An approach to continuous processes, reactors design, pharmaceuticals removal, and hybrid systems—a review. In *Processes* (Vol. 9, Issue 10). https://doi.org/10.3390/pr9101831

Mahapatra, A. S. (2021). A continuous review production-inventory system with a variable preparation time in a fuzzy random environment. *Mathematics*, *9*(7). https://doi.org/10.3390/math9070747

Malca-Ramirez, C. (2020). Replenishment system using inventory models with continuous review and quantitative forecasting to reduce stockouts in a commercial company. In *Advances in Intelligent Systems and Computing* (Vol. 1131, pp. 683–689). https://doi.org/10.1007/978-3-030-39512-4_105

Podell, J. (2022). Leveraging Continuous Vital Sign Measurements for Real-Time Assessment of Autonomic Nervous System Dysfunction After Brain Injury: A Narrative Review of Current and Future Applications. *Neurocritical Care*, *37*, 206–219. https://doi.org/10.1007/s12028-022-01491-6

Samanta, S. K. (2023). Continuous review (s, Q) inventory system at a service facility with positive order lead times. *Annals of Operations Research*. https://doi.org/10.1007/s10479-023-05171-2

Sangeetha, N. (2020). Optimal control of postponed demands in a continuous review inventory system with two types of customers. *International Journal of Information and Management Sciences*, *31*(1), 1–14. https://doi.org/10.6186/IJIMS.20200331(1).0001

Sarma, A. K. (2021). Continuous variable quantum entanglement in optomechanical systems: A short review. In *AVS Quantum Science* (Vol. 3, Issue 1). https://doi.org/10.1116/5.0022349

Sundhari, B. W., & Putri, R. R. (2014). Analisis Pengendalian Persediaan Bahan Baku Pembuatan Jaket Tommy Hilfiger Dengan Metode Continuous Review System (Q) Dan Periodic Review System (P) Di Pt. X. *Jurnal Ilmiah Teknik Industri Dan Informasi*, *2*(2), 93–102.

Syamil, R. A. (2018). Penentuan Kebijakan Persediaan Produk Kategori Food dan Non-Food dengan Menggunakan Metode Continuous Review (s, S) System dan (s, Q) System di PT. XYZ untuk Optimasi Biaya Persediaan. *JISI: Jurnal Integrasi Sistem Industri*, *5*(1), 41–49.

Zhang, K. (2023). A review of the system of "daily continuous penalty" in China's environmental protection practice—From the perspective of law and economics. *Environmental Impact Assessment Review*, *98*. https://doi.org/10.1016/j.eiar.2022.106976

Zheng, M. (2020). Comparing effects of continuous glucose monitoring systems (CGMs) and self-monitoring of blood glucose (SMBG) amongst adults with type 2 diabetes mellitus: A systematic review protocol. *Systematic Reviews*, *9*(1). https://doi.org/10.1186/s13643-020-01386-7

Zheng, M. (2021). Barriers and facilitators of diabetes management by continuous glucose monitoring systems among adults with type 2 diabetes: A protocol of qualitative systematic review. *BMJ Open*, *11*(10). https://doi.org/10.1136/bmjopen-2020-046050