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Inventory Management and Accounting System for Fruit Traders in Traditional Market in Sayan Village, Ubud Gianyar District: Agribusiness Perspective

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ABSTRACT
In an agribusiness system involving agricultural supply chains, inventory recording is one of the economic resources that plays an important and strategic role, especially for the fresh fruit marketing chain, which is vulnerable to damage. Inventory is the main current asset for fruit traders in traditional markets with fast cash flow. This condition requires traders to manage and record inventory properly to maintain business continuity and minimize losses caused by damage or rotting of fresh fruit. However, in practice, fruit traders in the traditional market of *Sayan Village* have difficulty managing inventory, especially related to unorganized inventory accounting records. The purpose of this study was to analyze the inventory accounting system of fruit stall traders in the traditional market of *Sayan Village*, *Ubud District*, Gianyar Regency. This study uses a quantitative descriptive approach. Data collection was carried out through a survey technique with interviews of 3 respondents, who were determined by purposive sampling. The results showed that all fruit traders selling at fruit stalls in the traditional market of *Sayan Village* do not record inventory accounting. This results in difficulties in determining the amount of merchandise at the end of the accounting period and calculating gross profit. To make more accurate records and improve the efficiency of agricultural businesses, traders are advised to implement a periodic inventory recording system and conduct inventory assessments using the *FIFO* method.

Keywords: agribusiness, accounting, inventory, fruit traders, traditional markets

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INTRODUCTION

The national economy depends on the agricultural sector, especially in rural and semi-urban areas of Indonesia (Anggadini & Puspitawati, 2011; Fretis et al., 2025; Krisnamurthi, 2020). The trade of fresh fruit in conventional markets is one of the most important sub-sectors, as it not only provides nutritious food to the community but is also the main source of income for farmers and traders. However, the perishable nature of fruit products requires an effective inventory management system (Adedeji, 2020a; Coelho & Laporte, 2014; Joosten et al., 2015; Sandora et al., 2023).

Agribusiness is a system that includes all actions starting from the production, processing, distribution, and marketing of agricultural products. Krisnamurthi (2020) states that agribusiness is a business chain system that includes the procurement of agricultural production facilities, production, processing, distribution, and marketing of agricultural products, which are carried out by various actors ranging from individuals to companies. Fruit traders in traditional markets play an important role in the horticultural agribusiness chain because they act as intermediaries that connect farmers with consumers (Chaudhary et al., 2018). This makes the position of traders strategic in the product marketing chain.

Fresh fruits are one of the agricultural commodities in the horticulture sub-sector that have perishable properties and a limited shelf life. Fresh fruit has perishable characteristics and

a limited shelf life, so inventory control is important, especially in modern retail, to maintain the quality of the fruit (Sandora et al., 2023). The ability of traders in traditional markets to manage inventory and maintain the freshness of fruit is very important to determine the success of the trading business being carried out.

A good inventory recording system is not only important for creating financial reports but also helps in making business decisions such as determining the selling price, reducing losses caused by spoilage, and planning purchases and sales appropriately according to market demands. In agribusiness, this system helps traders maintain consistent supply, product quality, and customer satisfaction. An integrated agribusiness system is able to manage all processes from production, processing, distribution, to marketing effectively, so as to maintain continuity of supply and the quality of the products produced. With good management, agribusiness can meet market needs in a timely manner and according to the quality standards expected by consumers, which contributes to customer satisfaction and business sustainability Fretis, 2025).

The traditional market of Sayan Village is one of the traditional markets in the Ubud District area that still survives to this day amidst the development of the modern retail market and the status of the Ubud area as a leading tourism destination in the Province of Bali. Fruit traders at the traditional market of Sayan Village face difficulties in monitoring the availability of fresh fruit due to the wide variety of fruits available to customers, ranging from local or domestic fruits to imported fruits. Each type of fruit has different durability, shelf life, and product availability. Fruit traders have to face this problem in controlling inventory at the traditional market of Sayan Village (Duong et al., 2018; Fu et al., 2019; Gazdecki, 2018; Karaesmen et al., 2010).

Fruit traders face challenges in inventory management, starting from recording stock, determining the cost of goods sold, to managing losses due to spoilage (Adedeji, 2020b; Aulia et al., 2024; Beierlein et al., 2013; Karabassov et al., 2016; Kirci et al., 2022). The lack of implementation of a good inventory accounting system leads to inefficiencies, both financially and operationally, which ultimately impacts the sustainability of their agribusiness (Wahdan & Emam, 2017). Therefore, the purpose of this study is to analyze the inventory recording system carried out by fruit vendors in the traditional market of Sayan Village, as well as to get an overview of the problems or obstacles faced by traders, and to provide suggestions for the implementation of a more appropriate inventory recording system in order to increase profit efficiency in the agribusiness marketing system at the trader level (Bacco et al., 2019; Klerkx et al., 2019; Sharma et al., 2022; Zhu et al., 2018). The novelty of this research is that in addition to examining the inventory recording system of fruit vendors in traditional markets, which is part of the agribusiness chain of the horticultural sub-sector, this study also provides recommendations to fresh fruit traders in the traditional market of Sayan Village related to the recording and assessment of inventory periodically to improve the efficiency, transparency, and sustainability of fruit traders' businesses in traditional markets.

METHOD

This study uses a descriptive research method with a qualitative approach. This research was carried out at the Traditional Market of Sayan Village, Ubud District, Gianyar Regency. The selection of sample areas was carried out using purposive sampling techniques, with the

consideration that the Sayan Village Traditional Market is one of the traditional markets that still exists amidst competition with modern retail markets in the central area of world tourism in the province of Bali. The type of data used in this study is qualitative. The analysis unit in this study is fruit traders who sell fruit in the Traditional Market of Sayan Village, while the observation unit is fruit traders who sell at the traditional fruit market—specifically 3 people who were selected by purposive sampling, with the consideration of having knowledge and experience in fresh fruit marketing activities for at least 10 years. This type of research data consists of primary data and secondary data. Primary data were obtained from direct interviews with respondents. The technical data analysis used involves analyzing and interpreting the results of interviews with respondents who are fruit traders to obtain information related to the method of recording inventory of goods at fruit traders in the traditional fruit market in Sayan Village.

RESULTS AND DISCUSSION

Overview of Sayan Village Traditional Market

The Sayan Traditional Market is an important part of the life of the village community because it serves as a place to buy and sell daily necessities such as meat, fruits, vegetables, and worship tools. The market maintains local trading practices that rely on a bargaining system typical of the traditional Balinese market.

The Traditional Market of Sayan Village consists of market stalls and spaces used by traders to sell various basic needs of the community. Like traditional markets in general, the existence of the Traditional Market of Sayan Village faces several problems such as an unhygienic market environment, irregular spatial layout, and poorly maintained facilities, including chaotic parking areas and unmaintained stalls. This reduces customer satisfaction and may reduce people's interest in shopping in traditional markets. The rearrangement of the Traditional Market of Sayan Village is necessary to make the place cleaner, more comfortable, and well-organized so that the circulation of visitors and traders becomes more efficient. This is important to maintain the function of the market as a center of the local economy while also attracting the interest of people who prefer the modern market.

Sayan Village's Traditional Market plays an important role in the local agribusiness supply chain, particularly as a place where local farmers distribute agricultural products and produce to end consumers. The market also functions as a meeting place between farmers, traders, and consumers in order to support the economic continuity of agribusiness in the village and its surroundings. This market serves as a trading center for daily necessities and helps maintain economic stability for the lower middle group that depends on local products.

Types of Preparations

The inventory of merchandise owned by traders in the Traditional Market of Sayan Village is fresh fruit. Fresh fruit purchased from direct farmers or collectors and fruit supplier traders becomes the traders' inventory to be sold in the market.

Based on the results of the research, the types of merchandise inventory owned by fruit traders can be categorized based on several aspects, including:

Fruit Type

1. Local/Domestic Fruit: This category includes various types of fruit grown by local farmers in Gianyar Regency and Bali Province in general, as well as other regions in Indonesia. Mangoes (various varieties such as arumanis, manalagi, gedong), bananas (cavendish, milk, raja), oranges (local, Siamese), salak, rambutan, papaya, watermelon, melon, pineapple, avocado, durian (seasonal), and other seasonal fruits.
2. Imported Fruits: Some merchants also sell fruits imported from other countries, mainly to meet the demand of customers who are looking for a specific type or variety of fruit that is not available locally. Subtropical fruits such as apples (fuji, washington), grapes (red, green), oranges (sunkist, mandarin), kiwi, pears, plums, and so on. Most of the availability of these imported fruits largely depends on the season and the supplier network.

Fruit Condition

1. Fresh Fruit: Consumers always expect to get fresh fruit as their main supply. The characteristics of fresh fruits include a bright color, good skin texture (no bruising or damage), a unique aroma, and an ideal level of ripeness.
2. Sorted/Grade B Fruits: Some traders also have fruit stocks with substandard quality, such as non-uniform sizes, few bruises, or sub-ideal ripeness. These sorted fruits are usually sold at a lower price or processed into other products, such as fruit juices.
3. Almost Rotten Fruits/Afkir: Fruits that are ripe, rotten, or severely damaged so that they are not suitable for sale. Usually, these fruits are discarded or used as animal feed if possible. Traders face their own challenges in managing afkir fruits.

Availability Rate (depending on season)

1. Seasonal Fruits: Types of fruits that are only available in certain seasons, such as durian, rambutan, mangosteen, duku, and others. The availability of these seasonal fruits affects the price and sales volume.
2. Fruit All Year Round: Fruit varieties that are usually available year-round, but prices may differ depending on supply and demand. For example, bananas, papayas, watermelons, melons, apples, and oranges.

Inventory Recording System

One of the best ways to manage inventory is to use the inventory recording method, which is an essential component of an inventory management system. Trading businesses should run this method to ensure that data about inventory always corresponds to its physical state in a warehouse or storage place. Another benefit of managing the inventory recording method is for valuation purposes so that the company's assets can be optimized for profit.

There are two types of inventory recording methods that are commonly used by trading businesses, including in agribusiness, namely the periodic method and the perpetual method. By applying one of these two inventory recording methods, a business will easily control the movement of inventory faster and will also reduce the risk of loss and damage to inventory in the warehouse/storage location.

Most of the fruit traders who sell in the Traditional Market of Sayan Village do not record their inventory, and from the results of the research, it was found that the recording method used is actually a periodic (physical) method. In this method, the mutation of the inventory of goods is not recorded in the book, so it contains several weaknesses, including that it is not possible to know the quantity and type of inventory at a given time, and to find out, traders must make a physical calculation of the inventory of goods (stock taking). Fruit traders in the fruit market of Sayan Village generally use a physical/periodic system accounting record (physical inventory system), but not all transactions, especially those related to inventory, are recorded in a journal or additional journal book. In addition, merchandise sales are not recorded on a regular basis. To record every transaction related to inventory, i.e., determining the amount of inventory of goods, it is carried out at the end of the accounting period, which makes it difficult to determine the cost of goods.

Physical or regular inventory recording is inventory recording that contains the following:

1. Inventory mutations are not recorded in the ledger (inventory) but by using the estimated purchase, repurchase, sale, and sale.
2. No use of a stock card.
3. Calculate the cost of inventory by physically setting the final inventory and then calculating the cost of the goods sold.

The calculation of the inventory of merchandise physically is very simple, namely at the end of the accounting period/end of the month, the inventory of merchandise in the warehouse or storage place is calculated in quantity and value or purchase price. Inventory of merchandise used or sold is calculated by subtracting the initial inventory minus the inventory at the end of the period (Puspitawati et al., 2011).

In the future, fruit traders are expected to be able to combine accounting recording with the physical (periodic) and book method (perpetual). Accounting recording of merchandise with the book method (perpetual) differs from the physical method (periodic), where every purchase of goods is recorded in the purchase account. The book method is implemented by creating an individual account for each type of inventory. This inventory helper book can be monitored from the inventory control account of goods in the ledger. By using this method, the preparation of short-term profit and loss statements is also easier.

Merchandise Inventory Valuation Method

The management of the stock of merchandise in a business or enterprise is commonly referred to as the inventory valuation method. Inventory is one of the important elements in business activity that has a significant impact on the company's profits and tax liabilities. The implementation of proper inventory valuation helps to make it easier to determine the cost of goods sold and inventory valuation within a certain period of time.

Stock inventory, or in this study, trade items, is a vital aspect of a business; therefore, the inventory valuation method must be applied. This inventory valuation method can also be seen as a way in which business owners can combine the cost of final inventory with the cost of goods sold. To do this, business owners must be able to manage stock expenditure according

to their business needs. There are many ways to assess inventory, and several methods exist, including FIFO (First In, First Out), LIFO (Last In, First Out), and the Average method.

To evaluate the stock of merchandise, fruit vendors in the Traditional Market of Sayan Village apply the FIFO—First In, First Out—method, where the goods that come in first are the goods that are issued or sold to consumers early. According to FIFO's assumption, the system is implemented more strictly, considering that the goods marketed are fresh fruits, where the characteristic of agricultural products is easily rotten and damaged (perishable). In the FIFO method, it is usually assumed that the goods that come in first will also go out first, without considering the quality of the goods or their expiration date. In the FIFO method applied by fruit vendors, the inventory or fresh fruits that are purchased first are sold first, so the quality or freshness of the fruits is maintained and does not rot or spoil.

Inventory Management Constraints

Lack of Accounting and Technology Literacy

The level of accounting literacy and the use of information technology are the main problems faced by fruit traders in the Traditional Market of Sayan Village, similar to most conditions that occur in traders in traditional markets. Most traders still use very simple manual note-taking and rely solely on memory without written records. This leads to an inability to accurately monitor the amount of stock, the flow in and out of goods, and business profits.

In agribusiness, accounting and technology expertise are essential for data-driven decision-making and supply chain efficiency. Traders cannot conduct sales trend analysis, plan purchases, or identify the most profitable products if they do not have good records. Traders also lose out on innovation and competitiveness due to the lack of technology usage, such as simple accounting software or stock applications. This condition should be avoided, especially in the current era of agribusiness digitalization.

Limited Capital for Inventory System Investment

Small-scale fruit traders often face limited capital problems. Traders prefer to buy merchandise rather than invest in a record-keeping system or accounting training. But from an agribusiness perspective, building a record-keeping system is a very strategic form of indirect investment to improve business efficiency.

Limited working capital is difficult to manage optimally if there is no good recording system. Traders cannot know the minimum stock requirement, so they risk experiencing excess or understock. Excess stock increases the risk of spoilage, while a lack of stock leads to lost sales opportunities. This inefficiency can hinder the growth of agricultural businesses and reduce profitability in the long run.

Losses Due to Spoilage and Price Fluctuations

Fruit is an agricultural product that is very susceptible to spoilage because of its perishable nature. Traders find it difficult to rotate stock with methods like FIFO (First In, First Out) if they don't have good inventory management. As a result, fruit that is stored longer often goes unsold and ends up rotting. This not only causes the loss of trading capital in the form of money but also wastes agricultural resources. In addition to spoilage, changes in the price of

fruit in the market are another problem. Harvest season, weather, and market dynamics greatly affect fruit prices. Traders have a hard time predicting when it's the right time to buy large quantities or reduce stocks if they don't record inventory and analyze data beforehand. As a result, traders are often stuck in situations where they buy at high prices and sell at low prices, resulting in a decrease in profit margins. Some obstacles, such as the ones mentioned above, show that poor inventory management is a technical problem. In addition to technical problems, they also directly affect the survival and competitiveness of fruit traders' agribusiness in the Traditional Market of Sayan Village. Going forward, strategic steps are needed to overcome the obstacles experienced by traders, such as providing instruction on accounting knowledge, offering simple record-keeping applications, and providing the ability to obtain microfinance for investments in stock management systems. Therefore, inventory management can be an important component in improving the productivity, efficiency, and sustainability of agribusiness at the traditional merchant level.

Conclusion

Based on the results of the study of the system and procedures for recording the inventory of merchandise implemented by fruit traders at the Traditional Market of Sayan Village, it was concluded that the study of the inventory recording system at the Traditional Market of Sayan Village showed that fruit traders used a very simple and unsystematic accounting system. This makes it difficult to accurately calculate final inventory, cost of goods sold, and profit. Capital limitations, lack of accounting knowledge, and lack of technology are the main obstacles that hinder the implementation of an effective record-keeping system. These conditions lead to losses, spoilage, an inability to anticipate price fluctuations, and difficulty making informed business decisions. From an agribusiness perspective, effective inventory management is essential for business sustainability and data-driven decision-making. Therefore, traders need to record periodic inventories using the FIFO method, and it is hoped that there will be support from competent institutions and the government. In the future, it is necessary to develop simple accounting training and encourage the use of digital recording technology to improve the efficiency and business performance of fruit traders in the Traditional Market of Sayan Village.

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