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Cabbage Commodity Agribusiness Management

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Abstract

The purpose of this research is to assess and evaluate the performance of the agribusiness system in relation to the Cabbage crop. The Agribusiness System is comprised of four (four) components: In the first place, there is the upstream agricultural industry. The marketing system that has been established is an ordinary marketing system, meaning that it provides complete autonomy to every marketing agency and producer farmer in the conduct of their individual enterprises. Supply networks for cabbage in general tend to be driven by the dynamics of supply and demand in the market, and are still predominated by conventional supply chains whose primary outlets are traditional marketplaces.

Introduction

There is no doubt that the agriculture sector plays an extremely vital and strategic role in the national economy. Due to the fact that the agricultural sector continues to offer employment for the majority of the people, particularly in rural regions, and that it continues to provide the community with food Growing the agricultural sub-sector of horticulture, which includes vegetables, fruit, decorative plants, and biopharmaceuticals, is one of the most significant foreign currency earners in the world. As a result, the economic potential of horticulture agriculture remains bright. The problem of developing horticultural agribusiness in general is more often found in aspects outside of farming (off farm) than in aspects of farming (on farm). This is because the obstacles to developing horticultural agribusiness are more frequently found in aspects of post-harvest handling and marketing than in aspects of farming (on farm).

During horticultural agribusiness meetings, one of the issues that is often brought up is the issue of price changes off-farm (Hazell & Wood, 2008). Due to the uncertainty of the revenue that will be generated, high price fluctuations are not beneficial for the development of the horticultural agricultural industry. As a result, high price fluctuations can have a negative impact on the decision of capital owners to invest in horticultural agriculture. It is a viable source of cash income for rural farmers as well as a source of family income due to the fact that it is backed by vast domestic and international market prospects as well as favorable land and climatic conditions. Beyond their status as the world's largest commodity, vegetable commodities also serve a variety of functions such as providing community nourishment, earning foreign currency, and assisting in the development of agro-tourism and agro-industry operations.

Because it is one of the primary sources of income for farmers, cabbage (Brassica oleraceae) ranks first among the eighteen types of commercial vegetables that have been given priority in their development. Cabbage has a high economic and social value because it is one of the primary sources of income for farmers (Weinberger & Srinivasan, 2009). In addition, cabbage has a wide range of applications, particularly in the preparation of meals for the home, and it includes a variety of vitamins and minerals. Chopped cabbage (cabbage) is frequently produced in the highlands, and it can be harvested reasonably rapidly at the age of three to four months. Cabbage can grow on a variety of soil types and may be planted at any time of the year. One

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of the reasons why farmers prefer to plant cabbage is because of its nutritional value. Cabbage types are quite diversified and widely distributed across the country. From region to to region, cabbage is grown in almost everywhere.

Just like the price of other vegetable commodities, the price of cabbage changes from time to time according to supply and demand in different parts of the world, particularly in China and India and Europe. In contrast, the cheap price of cabbage is caused by an excess of production and poor quality of cabbage, and the high price of cabbage occurs outside the cabbage growing season, resulting in a reduction in the supply of cabbage. In this particular instance, the success of the cabbage production process is mostly enjoyed by collectors, since the prices that are established for farmers are rather low and constantly fluctuating in value.

Cabbage, sometimes known as cabbage, was formerly a wild plant found in the subtropics. This cabbage plant is native to Europe and Asia Minor, with populations concentrated in the United Kingdom and the Mediterranean region. The wild cabbage that grows around the Mediterranean coast, in England, Denmark, and the north west of France, as well as the coast of Glamorgan, is regarded to be the source of the cultivated cabbage plant's beginnings. Wild cabbage grows both year-round and periodically in the wild, and the seeds are picked by Europeans when it has matured. A total of 70,000 cabbage seeds were retrieved from a total of 5000 plants, which were subsequently transplanted in the field. At this point, it was discovered that the cabbage plant variants had expanded roots and that the leaves could be consumed as a vegetable.

The ancient British realized that the cabbage plant can be shaped into a spherical, similar to an egg, and named it "Celtic Bresic." The discovery of cabbage plants by the ancient Egyptians and Greeks between 2000 and 1500 BC (BC) is documented.

It was in Europe that cabbage farming began, and it was not until more than a century later that this plant became popular as a culinary element. It is because of this that some people believe that modern cabbage plants are the product of selection from wild cabbage plants that have been growing for more than a thousand years. After being introduced to the European and American continents via colonization in the area around the IX century, cabbage has spread across the world. Prior to the XIV century in England, the new cabbage identified the form of the leaves as being spherical like the bark of the plant, and this was the beginning of the modern cabbage. It was in Japan's Hokkaido prefecture during the nineteenth century when cabbage growing techniques were taught. It had spread around the globe by 1970, with 20 European nations and 18 Asian countries having adopted cabbage as their national crop. It had also spread to other countries in Africa and South and Central America.

Agribusiness Systems

Agribusiness is a new way of looking at agriculture in the sense that what was previously done in a sectoral approach is now done in an inter-sectoral fashion, or what was previously implemented in a sub-system is now implemented in a system. In this way, agriculture includes vertical and inter-subsystem links, as well as horizontal linkages with other systems or sub-systems outside of agriculture, such as services and transportation (financial and banking, transportation, trade, education and others).

The Agribusiness System is comprised of four (four) components: In the first place, there is the upstream agricultural industry, also known as upstream agribusiness or upstream agribusiness, which includes industries that produce agricultural production facilities (inputs), such as the agro-chemical industry (fertilizers, pesticides, and veterinary drugs), the agro-automotive industry (agricultural tools and machinery, agricultural product processing tools,

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and machinery), and the plant/animal seedling/seeding industry. Second, agriculture in its broadest meaning, which is sometimes referred to as farm agribusiness, namely farming, which encompasses the production of food crops, horticulture, plantations, animal husbandry, and forestry, as well as other related activities. In the third place, there is the downstream agriculture industry, also known as downstream agribusiness or downstream agribusiness, which is defined as industrial activities that transform agricultural products from raw materials into processed products, including intermediate products and final products. Fourth, agricultural support services, such as trade, banking, education, aid from officials or specialists, as well as government rules that are beneficial to farmers, are available. in this manner, and so on the four components are intimately tied to one another and are fully incorporated into the system. In this way, agribusiness development is the growth of industry and agriculture at the same time as the development of related services. Until recently, agricultural growth has been fragmented and has not been conducted in an integrated, coordinated, and harmonic way, based on the realities on the ground.

When it comes to agriculture as a whole, a competitive advantage in this period of globalization since it does not yet have a seed industry capable of assisting in the growth of agribusiness as an entire sector. As reported, when establishing an agribusiness system, farmers generally use low-quality seeds, resulting in lower production and product quality. Additionally, the imported seeds used may not be suitable for the climate, resulting in lower productivity and product quality. farmers are developing farming in order to produce products that are highly competitive in the global market. Their business has been tailored to the climatic and topographic conditions that are characteristic of a tropical area; however, these characteristics need to be improved in terms of quality and productivity in the future. Human resources and technology are two constraints that occur in the growth of agriculture in general, since they are required for government facilitation in the form of aid.

The expansion of vegetable crops represents a significant possibility and promise for expanding the regional economy and farmers' income, particularly in the highlands of the country. In the development of vegetable agribusiness, agricultural technology has a significant impact on increasing farmers' income, and as a result, farmers' income and welfare will increase if agricultural technology is implemented in an integrated manner throughout the agribusiness system, the management of vegetable agribusiness in its commercial growth is carried out via an agribusiness system as a whole, which includes all subsystems, and it is interconnected between one subsystem and another. Improvement is the most important component in the growth of the vegetable agribusiness. The rehabilitation, development, and reorganization of agribusiness, institutions, and supporting infrastructure will result in the growth of production capacity. Business investment and infrastructure investment are required to achieve the growth and development of production capacity. The policy of reviving fisheries and forests has been implemented. In agriculture, the growth of agribusiness is aided by the facilitation/support of factors such as on-farm and off-farm technological advancements, investment, agricultural mechanization, and promotion and development that is tailored to local conditions.

It is the agribusiness function that encompasses all operations ranging from product procurement and processing to distribution and marketing that are carried out by a farming firm or agricultural industry and are intertwined. Agribusiness can be thought of as an agricultural system that is composed of several sub-system components, including upstream agribusiness sub-systems, farming, agricultural product processing sub-systems, agricultural product marketing sub-systems, and supporting sub-systems, and that can function effectively if none of the sub-system components is malfunctioning or failing.

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The growth of agricultural, financial, scientific, and educational institutions is a critical aspect in the success of agribusiness enterprises. The findings of a research on institutional impact on irrigation adoption were shared by a local farmer, who expressed his disappointment that the interaction between farmer institutions was not successful and was too simplistic in the context of agribusiness growth. When handled with competent human resources in accessing technology, information, markets, and finance, agribusiness has the potential to boost farmers' incomes. A competent agricultural management system results in increased rice production.

Cabbage Cultivation Facilities and Infrastructure

Seeds, organic fertilizers, synthetic fertilizers, insecticides, and land leasing are only a few of the resources and infrastructure required to support the cabbage production process. Among the requirements for good seeds are that they are whole seeds, which means that they have not been injured or deformed, that they are free of pests and diseases, that they are pure seeds, which means that they have not been mixed with other seeds or seeds that have been exposed to dirt, and that they are taken from superior or superior types. Cuttings from healthy plants germinate at an 80% rate, and excellent seeds sink to the bottom of a container of water.

Prepared seeds are meant to boost plant resilience to disease while also speeding up seed germination. (1) Sterilization of seeds, which may be accomplished by soaking the seeds in a fungicide solution containing the appropriate dosage for 15 – 30 minutes or by soaking the seeds in hot water at a temperature of 55o C for 15 – 30 minutes are both acceptable methods of preparation. Second, by soaking the seeds in water, where the excellent seeds will float to the surface, seeds may be selected for planting. (3) Soak the seeds for about 12 hours, or until the seeds seem broken, to ensure that the seeds sprout fast after being soaked in water.

Some factors to consider while choosing a seeding site in the process of seeding are if the soil has pests and diseases, whether it receives enough sunshine, and how near it is to a supply of potable water. Sowing in beds, seeding on the roof, and direct seeding are all options for getting the job done. Maintaining seedlings in order for the seeds to germinate successfully is outlined below. Weeding of nuisance plants; watering of the seedlings every morning and evening, depending on the weather; opening and shutting of the seedling shade; and other measures are listed below: applying fertilizer solution that has been concentrated to 0.55 grams/liter and spraying pesticides with a dosage that is equal to or more than what is necessary Dispensing of pesticides and fungicides in order to deter the presence of pests.

Handling of Cultivation Process

Cabbage plants may be picked when they are huge, thick, and have matured between 3 and 4 months following seed dissemination, depending on the variety. The average output for egg cabbage is 20-60 tons per hectare, while the average yield for flower cabbage is 10-15 tons per hectare.

The following features of mature cabbage are seen: the cabbage heads stiffen when the cabbage heads are pressed; the leaves are glossy green; the outermost leaf has wilted; and the size of the cabbage crop has been observed to be the greatest. Harvesting the results should not be delayed since the crop will break (crack) and, in certain cases, turn rotten if it is harvested too late. When it comes to cauliflower, if you wait too long, the blooms will shatter and the flower stalks will come out, resulting in a lower-quality crop.

Poor picking will result in mechanical damage to the cabbage crop, which will lead the crop to get infected with pathogens, making it susceptible to spoilage. To avoid this, make sure that the cabbage is mature and ready to be picked before harvesting it. Use a sharp and clean knife

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while picking the cabbage to prevent this from happening. Cutting occurs at the base of each cabbage stem, and the picking process is followed by selecting cabbage that has been contaminated with pathogens before returning to the beginning of the series with healthy cabbage.

After picking, the cabbage is gathered in a shaded location where it will not be exposed to direct sunlight, allowing the respiration rate to be lowered and so allowing for the production of high-quality and large-quantity cabbage. The collection is done with care, and nothing is stacked on top of each other and tossed about. Sorting cabbage heads to separate those that are excellent and of high quality from those that are not good or damaged, such as those with cracks, abrasions, and other damage. In order to categorize the crop into quality classes I, II and so on, the following characteristics are taken into consideration: the number of leaf wrappings, uniformity of shape, uniform size, density of shoots, maximum dirt content, maximum cabbage faults, and the length of cabbage stalks. Cabbage storage should be done with consideration for the kind of cabbage, the temperature, the humidity, and the moisture content. The storage life of cabbage is 4-6 months (high moisture content cabbage) and 12 months (low moisture content cabbage) when kept at 32-35 degrees Fahrenheit and 92-95 percent relative humidity. The weight loss is 10% when stored at these temperatures and humidity levels. The packaging is made of polyethylene plastic, and it must be transported in boxes or wooden crates (field boxes) with a capacity of 25-30 kg per crate.

Because of the geographic position of cabbage production hubs, these vegetable products may be sold not only to suit local demands, but also to other areas and countries. When it comes to the supply chain, it is essentially a sort of service that has been institutionalized in order to connect vegetable farmers and customers.

Government participation in the cabbage supply chain is often confined to ensuring the availability of physical infrastructure such as roads and market buildings. In the case of cabbage, this is especially true. All aspects of the cabbage trade are managed solely by the private sector. It is projected that the first and second supply chains will consume around 80% of the total cabbage supply in the United States. In addition to the third and fourth supply chains, the remaining 20 percent is sold directly to consumers. This diagram illustrates that conventional supply channels, with traditional marketplaces as their primary destinations, continue to dominate the cabbage supply chain.

Farming revenue is calculated as the product of the production multiplied by the selling price of the product (Kankainen et al., 2016). Consequently, according to the above statement, production and price have an impact on farmers' income, where output and price are elements that influence farmers' revenue. The amount of money earned by each marketing agency from the sale and purchase of cabbage on a daily basis is referred to as revenue. The amount of money earned by each marketing firm varies greatly depending on the quantity of cabbage that is traded and at what price it is sold. The fact that the cabbage business generates millions of rupiah every day is an indicator that the cabbage business continues to have its own attractiveness for the cabbage business to continue to build its business. Business in the sector of production and selling of cabbage agriculture goods offers exciting economic potential, and it is anticipated that farmers and merchants would collaborate in order to constantly improve their businesses in the best interests of both parties.

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Table 1. Average Daily Revenue of Cabbage Marketing Institutions in the Local Market.

Marketing agency	Long trying	Transaction volume	Price	Value
Merchant	12,4	303	3.421	1.036.563
Merchant collectors	10,5	1.190	3.569	4.247.110
Big traders	11,9	4.800	3.816	18.316.800
Retailer merchant	10,4	317	4.239	1.343.763
Total		**6.610**		**24.944.236**

The synergy that exists between cabbage producers and marketing institutions in the market environment is the most important source of capital in the production and distribution of cabbage. The availability of cabbage at prices that are mutually favorable to producer farmers, dealers, and consumers will ensure that local markets continue to function properly (Macharia et al., 2016). Table 1 illustrates that the daily revenue of local market cabbage marketing institutions is relatively substantial, with values varying from one marketing institution to the next in terms of size. The biggest income was earned by wholesalers with a total transaction volume of 4,800 kg, generating a total revenue of 18,317,419, while the average price at the wholesaler level was 3,816. While the lowest income was 1,036,553, which was obtained by middlemen/village traders with a transaction volume of 303 kg, the average price was $3,421, and the highest revenue was $1,036,553. Collectors received 4,247,532 with a transaction volume of 1190 kg, for an average price of 3,569, and retailers received 2,013,387 with a transaction volume of 317 kg, for an average price of 4,239. Collectors received 4,247,532 with a transaction volume of 1190 kg, for an average price of 3,569, and retailers received 2,013,387 with a transaction volume of 317 kg, for an average price of 4,239.

Generally speaking, cost refers to the sacrifice of economic resources measured in monetary units that has happened or is projected to occur for the purpose of achieving a certain result. The amount of money spent by marketing agencies in the local market on the treatment of cabbage is referred to as the cost. The expenditures incurred may be broken down into the following categories: transportation fees, unloading and packing, transportation / porters, weighing, purchasing baskets, raffia rope, and local market tickets. In the local market, the expenditures paid by each marketing agency are different from one marketing firm to another. Consequently, if cost is defined as the acquisition price that is sacrificed or used in order to obtain income or revenue that will be used as a deduction from income, then the total costs incurred by each marketing agency will have an impact on the total income of cabbage marketing institutions in the local market Whether the cabbage originates from direct farmers or from beyond the local region, the marketing agency's determination of the difference in price is based on where the cabbage is sourced. There were 711,700 expenses incurred by wholesalers and 30,567 costs spent by retailers, with wholesalers incurring the greatest amount of expenditures. Meanwhile, as stated in Table 2, the expenditures expended by collecting traders total 64,833 dollars, whereas the costs paid by traders total 21,990 dollars.

Table 2. Average daily cost of each Cabbage Marketing Agency in the local market

Component Cost		Institution	Marketing	
	Merchant	Merchant collectors	Big Trader	Retailer Merchant
Transportation	2.100	10.000	210.000	21.833
Unloading and packing	0	10.933	76.800	0
Transport/pelvic porters	11.140	31.733	43.400	8.733
Scales	2.250	2.000	32.124	0
Basket	5.500	9.000	299.000	0

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Such raffia	550	900	31.200	0
Local Market Ticket	550	267	19.200	0
Sum	**22.090**	**64.833**	**711.700**	**30.567**

Revenue and Profit Analysis

Income in agriculture is production expressed in terms of money after deducting costs during farming activities (Brown, 1979). The daily income of cabbage marketing institutions located in the Local Market is the marketing margin value of each marketing agency multiplied by the average transaction volume. The income between cabbage marketing institutions varies in number, this is due to the number of transactions and the average price of cabbage in each different marketing agency. The highest income was received by wholesalers worth 1,184,516 with a transaction volume of 4800 kg. While the lowest income is 86,013 received by middlemen with a transaction volume of 303 kg as shown in Table 3. The low income received by middlemen/village traders is not only caused by the small volume of transactions and is also influenced by the limited use of time to run their business.

When selling cabbage in a local market, a cabbage marketing agency's profit depends on the amount of transactions, the marketing margin, and the expenses spent (Pokhrel, 2010). Market share refers to the amount of difference in pricing between each cabbage marketing agency in the local marketplace (Coltrain et al., 2000). Between marketing agencies, the value of the cabbage marketing margin in the local market is variable. The store receives the highest marketing margin on cabbage, which is 423 percent. Conversely, middlemen/village dealers get the fewest amount of money: $148. The marketing margin earned by middlemen/village merchants is 284 percent, whereas the marketing margin received by wholesalers is 247 percent. In the marketing industry, marketing margin is a monetary measure that indicates the gross profit earned by each marketing firm that operates its company. Marketing agencies make money by reducing their expenses and increasing their revenue (Rust et al., 2002). This is known as profit. Wholesalers made the most money, with a profit of 472,816 dollars, while intermediaries and village dealers made the least, with a profit of 64,023, respectively. Meanwhile, as stated in Table 3 below, the profits obtained by the collecting dealers total 111,748 dollars, while the profits received by the retailers total 103,391 dollars:

Table 3. The number of average profits in each marketing agency every day in

Description	Marketing Institute			
	Middleman/village trader	Merchant collectors	Big Trader	Retailer Merchant
Transaction volume (Kg)	303	1.190	4.800	317
Price (/Kg)	3.421	3.569	3.816	4.239
Acceptance	1.036.553	4.247.532	18.317.490	1.343.671
Marketing Margin (/Kg)	284	148	247	423
Income	86.013	176.581	1.184.516	133.958
Cost	21.990	64.833	711.700	30.567
Advantage	64.023	111.748	472.816	103.391

It is owing to variances in transaction volume, risk coverage, capital, and time spent by each cabbage marketing agency in the local market that each marketing agency achieves a different profit margin on cabbage.

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Conclusion

Specifically, the marketing system that has been established is an ordinary marketing system, meaning that it provides complete autonomy to every marketing agency and producer farmer in the conduct of their individual enterprises. The marketing channel pattern is made up of seven different marketing channel patterns. There isn't a single marketing pattern among the seven types of marketing channels that is often employed by cabbage business people, including both farmers and traders, among the seven types of marketing channels. Supply networks for cabbage in general tend to be driven by the dynamics of supply and demand in the market, and are still predominated by conventional supply chains whose primary outlets are traditional marketplaces. The best advice that can be provided to cabbage farmers who sell their goods is that they should form associations in order to cope with traditional marketing techniques. This will empower cabbage growers to establish themselves as product owners, allowing them to set their own pricing and manage the time of their planting and harvesting of cabbage.

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