

Gender Sensitivity in The Value Chain Of Guava And Shallot Commodities in Mijen Sub-District, Demak Regency

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Abstract: - Agriculture is one of the sectors that involves women in the development process. The high number of female workers in the agricultural sector indicates the large involvement of women in agricultural activities both upstream and downstream. Shallots and Citra Guava are horticultural commodities that are widely cultivated by farmers, therefore these commodities need to be developed. The purpose of this study was to determine the role of gender and value chains in the commodities of Shallots and Citra Guava. This research method uses sex disaggregation with sampling techniques using snowball sampling, this research uses primary data obtained from field study activities through questionnaires and interviews with actors who play an important role in the value chain of citra water guava and shallots. While purposive sampling is a sampling technique with certain considerations. Women play an important role in marketing and distribution of agricultural products. Women can be involved in the sale of agricultural products, packaging, and distribution of products to local and regional markets. Women are also involved in marketing activities. Value chains in shallots and guava image Women are involved in every value chain, but in the line of collectors and stalls, men are more dominant than women, while at the retailer level, women are more dominant than men.

Key-Words: - Value chain, gender, water apple, onion, Demak-Central Java.

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1 Introduction

In the era of technological advances and information networks like today, the development of human civilization encourages the enforcement and equalization of human rights, one of which is the encouragement of gender equality. In every society, men and women have different gender roles. There are differences they make in their communities so that their status and power in society become different (Mosse 1996). The concept of gender also leads to the formation of culturally established or general stereotypes about specific gender characteristics, in the form of paired characteristics that can describe gender differences. It can be seen that it is formed contradictory to each other, but its characteristics are interrelated. (Rostyaningsih, 2010). The push for gender equality provides space for women to be more involved in the economy. Women's involvement does not only occur in urban areas but also in rural areas.

In rural areas, especially in agriculture, gender issues are closely related to an unequal division of

labour. The role of female workers is often not considered even though women's workload is no less large than that of male workers, besides that women's employment status is also unclear. Women play an important role in marketing and distribution of agricultural products. Women can be involved in the sale of agricultural products, packaging, and distribution of products to local and regional markets. Women are also involved in the marketing activities of farmer groups, or through modern distribution channels. The role of women in agriculture can be seen from the contribution in every agricultural product value chain activity from upstream to downstream. Central Java Province is one of the largest horticultural crop producing provinces in Indonesia. Central Java ranks first in the provinces producing shallots and guava crops in Indonesia with 556,510 tons and 66,007 tons respectively in 2022 (BPS, 2022)

One of the largest shallot and guava producing areas in Central Java is Demak Regency. According to BPS data in 2022, Shallot Production in Demak

Regency ranks second after Brebes Regency, which is 586,689 tons. As for water guava commodities, Demak Regency ranks first in Central Java, amounting to 164,928 quintals.

The largest shallot and guava producing area in Demak Regency is located in Mijen District. Mijen sub-district has an area of 50.29 km². The area of shallot harvest in Mijen District is 3,489 ha. While the production reached 287,583 quintals. In addition to shallots, the horticultural commodity that has the largest amount of production in Demak Regency is guava, which is 42,661.40 quintals. (Sipedas. Directorate General of Horticulture, 2023). With the production of shallots and guava occupying the top position in Demak Regency, a study was taken comparing gender sensitivity in the two commodities.

In addition to knowing gender roles in the marketing process of shallots and guavas, value chain analysis can also be used to determine the effectiveness of marketing margins that occur during the distribution process. The low bargaining position of farmers results in uneven and unequal distribution of profits and becomes an opportunity for dependence on other parties, especially in terms of marketing. This dependence is because farmers have not been able to carry out professional marketing patterns and rely on marketing through various marketing channels, so to reach consumers must go through intermediaries such as middlemen who pressure producers to get multiple profits (Laili, 2014). The purpose of this study is to determine the role of gender and value chain in Shallots and Guava Citra commodities.

Research highlights the magnitude of women's participation in agricultural value chains, as suggested previously by other researchers, Tisorn et al (2023) estimated the impact of inclusive agricultural value chain interventions on agricultural productivity and investigated differential impacts on productivity by ethnicity and gender in Nepal. Similar research has been made in another context by Jessica et al (2023) who classify gender sensitivity strategies in terms of women's roles around 30% participate in program activities. Joseph et al (2022) who explained that the research carried out helped to consider various alternatives to women's involvement with the global food system. It is useful not only to look at the increase in women's participation, but also to consider the quality and prospects of that participation across the value chain. Nonetheless, additional research is

needed to identify gender sensitivity to agricultural commodity chain values

2. Research Methods

The research was conducted in Mijen District, Demak Regency. As a starting point for the study starting from citra water guava and shallot farmers, the site selection was carried out deliberately (purposive) because Mijen District, Demak Regency is one of the largest production centers for image guava and shallots in Demak Regency. This research uses a combination of qualitative and quantitative approaches (Creswel, 2017). Mixed methods combine elements of quantitative and qualitative research in one study. This approach aims to combine the advantages of both so as to provide a more comprehensive and in-depth understanding of the phenomenon under study. Data integration is done at the stage of data collection, data analysis, or interpretation of results. This study used primary data obtained from field study activities through questionnaires and interviews with actors who play an important role in the value chain of guava citra and shallots. Data collection will be conducted in May 2023. The study also used secondary data obtained from the Central Statistics Agency, Directorate General of Horticulture, Demak Regency Agriculture Office, as well as various data from other supporting literature.

Sampling is done by snowball sampling and purposive sampling techniques. Snowball sampling is a technique of determining a small number of samples and then enlarged. While purposive sampling is a sampling technique with certain considerations (Sugiyono, 2014). Snowball sampling in this study involves the process of identifying samples in a network that takes place continuously by considering that each marketer is an individual or group involved in the flow of activities along the value chain. Respondents were taken from various actors in the onion and guava commodity chain ranging from farmers, collectors, shippers, stalls, and retailers with a total of 50 respondents.

Value chain mapping analysis includes both qualitative and quantitative approaches. The success of econometric analysis ultimately depends on the availability of appropriate data. Therefore, it is important that we take the time to discuss the nature, sources, and limitations of data, sources, and limitations of data that may be encountered in empirical analysis. (Damodar N. Gujarati, 2009).

There are no standard rules governing which approach is better, but there are recommendations for a qualitative approach first and then followed by a quantitative approach (Cresswell, 2017). The main

problem in value chain mapping is how to get numbers and values as variables to be studied. Therefore, data collection starts from each actor who acts as a respondent in the value chain.

According to ACIAR, 2012 The value chain mapping process consists of ten stages: (1) determining the core processes carried out by each actor, (2) identifying each actor involved in the core process, (3) mapping the flow of added value of a product in the value chain, (4) mapping the flow of knowledge and information of a product, (5) mapping the volume of products, the number of actors, and the number of jobs, (6) mapping the geographical flow related to the transfer process product, (7) mapping the product value stream at various levels, (8) mapping the relationships and linkages of each actor related to the transaction, (9)

mapping potential barriers and solutions, and (10) making a value chain map matrix.

3. Results and Discussion

The value chain is a key framework for understanding the shared use of inputs and services used to grow, transform or produce a product. Furthermore, physically the product moves from producer to consumer and there is a process of creating added value and increasing productivity. In addition, the value chain can be a reference point for improving services and the business environment (Webber and Labaste, 2010).

The guava value chain in the Mijen District area of Demak Regency can be grouped into 5 (five), namely:

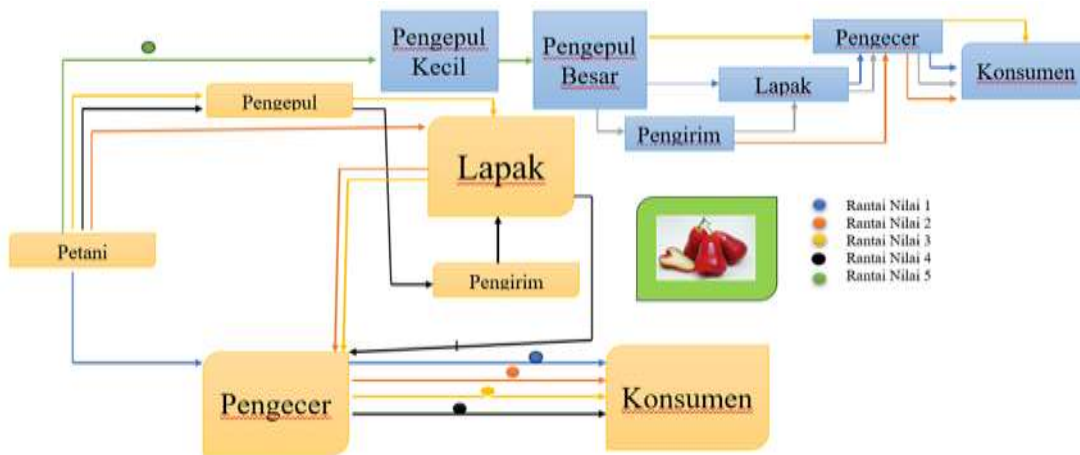


Figure.1 Water guava Value Chain
 Source: primary data, processed (2023)

There are five value chains in guava citra marketing:

1. Value chain 1 distribution from farmers to retailers then to consumers.
2. The 2nd value chain from farmers is sold to stalls, then to retailers and to consumers.
3. The 3rd value chain from farmers then to collectors to stalls then to retailers and to consumers.
4. The 4th value chain from farmers to collectors, then to stalls then to retailers and to consumers.
5. Value chain number 5 from farmers to small collectors then to stalls then to retailers and to consumers.

Most farmers sell onion products to collecting traders at the village level, which creates multi-layered supply chains and results in inefficient value chains for farmers. Increasing direct sales from farmers to wholesalers can help reduce the number of intermediaries and increase farmers' profit margins. Of the five value chains in guava image,

the effective value chain is number 3, because the capacity of guava received by Lapak is more than the value chain 1 and value chain 2, so that the guava sent to retailers also has more capacity.

Meanwhile, the smaller added value obtained by traders and to consumers, does not reflect the smaller profit they receive compared to farmers. Traders and retailers are not able to support the composition of value added to stalls then to retailers and to consumers. When to large volume of traders and stalls, especially for inter-regional stalls with accumulated income from cash flow turnover and the high volume of fresh shallots traded make the profits received in a year much higher than farmers, slashers or other onion traders. (Noor et al., 2016)

As for the marketing area, namely:

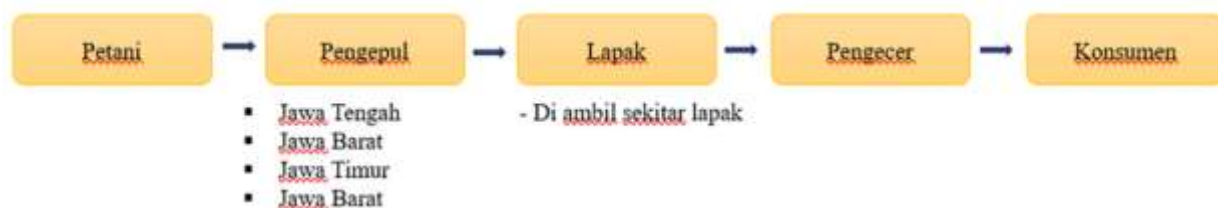


Figure 2. Guava marketing area
 Source: primary data, processed (2023)

Java, and West Java, after the guava passes through the value chain to the stall, the stall is bought by retailers around the stall, be it in the stall around Central Java, East Java, West Java. Marketing margins in each value chain are as follows:

For marketing on guava image from farmers to collectors then marketed around Central Java, East

Table.1 Marketing tables in each value chain

Perp	Value Chain 1		Value Chain 2		Value Chain 3		Value Chain 4		Value Chain 5	
	Selling Price Rp/kg	Marketing Margin Rp/kg	Selling Price Rp/kg	Marketing Margin Rp/kg	Selling Price Rp/kg	Marketing Margin Rp/kg	Selling Price Rp/kg	Marketing Margin Rp/kg	Selling Price Rp/kg	Marketing Margin Rp/kg
Farmer	15,000	-	15,000	-	15,000	-	15,000	-	15,000	-
Collector	-	-	-	-	16,500	1,500	16,500	1,500	-	-
Sender	-	-	-	-	-	-	18,500	2,000	18,500	3,500
Stalls	-	-	19,500	4,500	19,500	3,000	19,500	1,000	19,500	1,000
Retailers	25,000	10,000	25,000	5,500	25,000	5,500	25,000	5,500	25,000	5,500

Source: primary data, processed (2023)

The amount of added value of stalls between regions from buying and selling guava is relatively the same for between seasons, but differs depending on the length of the marketing chain. The largest interregional stall added value for the marketing chain that directly buys from through collecting merchants (Noor et al., 2016).

Marketing margin on guava citra with a large value in value chain number 1, there is a margin of 10,000 rupiah on other chains. Unlike value chain number 5, the more value chains that go through, the smaller the value of profit obtained. The creation

of added value is to realize business efficiency, while the distribution of added value is a process to realize business justice (Bunte, 2006).

In addition to guava, shallots are also the main commodity in Demak District. Where the harvest area reaches 6,748 Ha with a province of 75.70 Kw / Ha and production of 510.809 Kw. (Roof of the Central Java Provincial Agriculture Office, 2022) Unlike the guava commodity value chain, shallot commodities in Demak Regency have more value chains, obtained by 6 groups of shallot supply chains, namely:

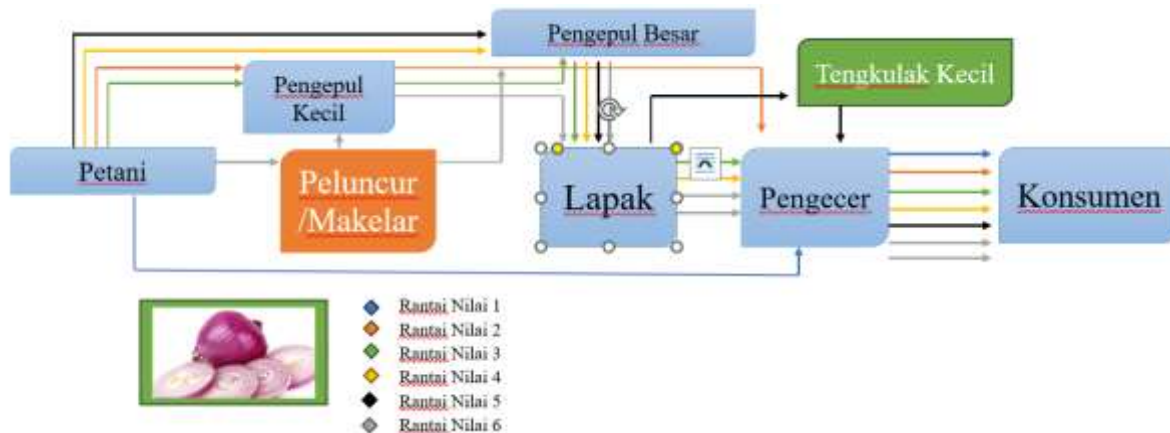


Figure.3 Shallot Value Chain
 Source: primary data, processed (2023)

The marketing areas on shallots are:



Figure 4. Shallot marketing area
 Source: primary data, processed (2023)

The results of observations about the Shallot Value chain consisting of 6 groups involve several parties and variations in the supply chain, the simplest of which only consists of 3 supply chains, namely farmers and retailers who are direct to consumers. This chain is possible the simplest and easiest chain to get a fairly high margin, only the obstacle faced by retailers is the low ability of retailers to be able to reach consumers, so that what can be sold to consumers is only on a small scale.

The second Value Chain, involving 4 links, namely farmers will sell their products to stall owners / large stalls which usually between farmers and stall owners already know each other, so that stalls will be easier to get goods. In its sales, stalls will get help from retailers, because there are still margin opportunities that retailers can get.

The third supply chain, involving 5 links, will appear here the figure of a collector / collector of farmers' products. These collectors usually have middle to upper capital, so they are able to buy farmers' products in large quantities and are able to supply the needs of goods needed at the merchant level. The marketing reach of these collectors can already reach the regional level (within provinces).

The fourth Value Chain involves 6 links, where farmers' products are still purchased by collectors, but here collectors who already have large capital /

top level, and the marketing reach of these collectors has been able to reach nationally (between provinces and even between islands), so that in its operations it requires 1 more link as a transporter / sender of goods over long distances. Sometimes this sender is a party that does have its own business in the field of expedition, so this sender will also provide a separate price benchmark as a margin of profit they will get, because this shipping process is a separate business.

This sixth Value Chain is the most complex, in addition to farmers – collectors – shippers – stalls, there are other parties who come into play, namely local small collectors who only have a small ability to buy farmers' products. The goods they collect will be purchased by large collectors where here large collectors will get a little convenience in obtaining goods that are not directly buying from farmers. From this large collector, goods can be distributed to several parties, including: directly to retailers, stalls, or shippers. So this big collector will find it easier to market the goods he has. Although the margin he earns is only a little, but supported by the volume of goods sold is very large, the profits he gets will also be a lot, besides that the capital casflow will run more smoothly. The obstacle faced by this type of large collector is that they must be able to get goods in large quantities and stable to keep there is no loss of supply on demand for goods in the market.

Table 2. Shallot value chain margin

Adapun rantai nilai untuk komoditas bawang merah sebagai berikut :

Pelaku	Rantai Nilai 1		Rantai Nilai 2		Rantai Nilai 3		Rantai Nilai 4		Rantai Nilai 5		Rantai Nilai 6	
	Harga Jual Rp/kg	Margin Pemasaran Rp/kg	Harga Jual Rp/kg	Margin Pemasaran Rp/kg	Harga Jual Rp/kg	Margin Pemasaran Rp/kg	Harga Jual Rp/kg	Margin Pemasaran Rp/kg	Harga Jual Rp/kg	Margin Pemasaran Rp/kg	Harga Jual Rp/kg	Margin Pemasaran Rp/kg
Petani	15,000	-	15,000	-	15,000		15,000		15,000	-	15,000	
Peluncur (makelar)											15,500	500
Pengepul kecil			16,000	1,000	16,000	1,000					16,000	500
Pengepul besar	-	-	-	-	18,000	2,000	18,000	3,000	18,000	3,000	18,000	2,000
Lapak	-	-			20,000	2,000	20,000	2,000	20,000	2,000	20,000	2,000
Pengecer	22,000	7,000	22,000	6,000	22,000	2,000	22,000	2,000	22,000	2,000	22,000	2,000





Source: primary data, processed (2023)

From the results of observations in the field, the role / involvement of both men and women workers is ranging from on-farm / crop cultivation to marketing. In terms of onion cultivation, the role of females is not inferior to males, in which females also take a large part. The margin with the highest profit value in the value chain at number 1, reaches 7000 Rupiah, but the capacity is small, in contrast to the longer value chain profit gets a small profit but can reach a large capacity. Similarly, shallots have several value chains, of course, each post / actor will

take profit margins according to ability or based on price developments in the market.

In addition to the profit margin of the value chain, gender also plays a very large role, can be seen in the following table:

Table 3. Gender Analysis

Rantai Nilai	Jambu Air Citra		Bawang Merah	
				
<u>Petani</u>	✓ 50%	✓ 50%	✓ 50%	✓ 50%
<u>Pengepul</u>	✓ 60%	✓ 40%	✓ 70%	✓ 30%
<u>Lapak</u>	✓ 80%	✓ 20%	✓ 80%	✓ 20%
<u>Pengecer</u>	✓ 30%	✓ 70%	✓ 30%	✓ 70%
<u>Konsumen</u>	✓ 50%	✓ 50%	✓ 50%	✓ 50%

Source: primary data, processed (2023)

Gender issues are often attached to household food security issues. It is known that women have an important role in achieving food security in the household. Women are more involved in farming and meal preparation in the household than men. According to FAO (2015) women produce 60 percent to 80 percent of food in developing countries. However, the contribution of women in carrying out agricultural tasks is not in line with their social status. Women are often disadvantaged in terms of control over resources, such as control over cultivated land and agricultural subsidies. Furthermore, Ellena and Nongkynrih (2017) explained that this lower social status of women can

affect women's diets and have an impact on the health and well-being of children and their families.

Value chains at the farmer level to the consumer level men and women are equally involved in each of these value chains, at the farmer level the roles of men and women are the same 50%, while at the collector level value chains the role of women is 20% from men, at the stall level the role of women is 10% from men, different at the retailer level the role of women reaches 70%, while at the consumer level the roles of men and women are the same 50% each.

In terms of onion cultivation, the role of women is not inferior to men, of which women also take a lot, where jobs with more definite wages and entrepreneurship are attractive to household work preferences (Betcherman and Marschke, 2016).

Table 3 Gender Analysis by number of HOK

Activities	SHALLOT				GUAVA			
	Workforce		Jml Weekdays (HOK)		Workforce		Jml Weekdays (HOK)	
	L	P	L	P	L	P	L	P
Tillage	2	0	2	0	2	0	2	0
Planting	4	20	2	10	2	1	2	1
Fertilization	6	1	3	0.5	6	0	6	0
Weeding	2	24	1	12	1	3	1	3
OPT Control	20	6	10	3	60	0	60	0
Watering	24	2	12	1	10	0	10	0
Guludan Care	12	1	6	0.5	9	0	9	0
Harvest	4	24	4	24	20	40	20	40
Transport	2	1	2	1	5	0	5	0
Drying	7	2	7	2	0	0	0	0
Sorting	2	15	2	15	2	6	2	6
Storage	2	1	2	1				
Sum	87	97	53	70	117	50	117	50
%	47.28	52.72	43.09	56.91	70.06	29.94	70.06	29.94

Source: primary data, processed (2023)

Onion

It can be seen that the number of workers in cultivation to storage of shallots is more female labor with an average number of male workers 87 people (47.28%) and women 9 people (52.72%), while the number of working days for men is 53 HOK (43.09%) and women 70 HOK (56.91%).

Women turned out to have more roles than men in onion cultivation. It can be seen from the table above that there are several types of activities that really need to be done by women, these activities are: planting, weeding, harvesting, and sorting. Of the four activities, many are carried out by women because they require patience and patience, and usually these things are more owned by female workers. As for soil tillage, OPT control, fertilization, watering, guludan care are almost all

carried out by men, this is because these activities require physical conditions and special knowledge that not many women have, so many are carried out by male labor.

For other activities it is known to be balanced between male and female labor, such as transportation, drying, storage, because this activity is quite easy and not so physically burdensome for someone including women, and most of these activities can be done in their respective farmhouses.

GUAVA

In contrast to the labor needs in guava commodities, most of the workforce is men with a total male workforce of 117 HOK (70.06%) and female labor of 50 HOK (29.94%). Many female workers are needed during harvest to help men in packing goods. Male labor dominates in almost all guava cultivation activities ranging from processing / preparing land, planting, care, transportation and storage and delivery of goods.

There are differences in the number of value chains in shallots and guava citra commodities, in the shallot value chain there are 6 value chains, while in guava citra there are 5 chains, the two commodities are not much different in each link, the effective value chain in chain number 3 is from the farmer level, then collectors, stalls, retailers and consumers, while gender analysis on shallots and guava image, the role of women is very Value chain in shallots and guava image Women are involved in every value chain, but in the line of collectors and stalls, men are more dominant than women, while at the retailer level, women are more dominant than men.

4. Conclusion

In the cultivation of guava and shallots, it was found that the participation of sex disaggregations was better for shallot commodities where between men and women had almost equal portions / participation. As for guava commodities, it is still dominated by male labor. In addition, the amount of labor needs or absorption of labor between shallots compared to guava, more labor in shallot commodities in a certain unit of area and time.

In the value chain or marketing value chain of pomegranate guava in Mijen District, the role of women starts from harvesting and packaging activities at the farmer level. Then for collecting activities carried out by male workers, but for packaging at the collector level carried out by

women until finally guava citra was accepted by consumers.

Meanwhile, in the value chain of shallot marketing in Mijen District, the role of women is no less important. Starting from harvesting and processing activities carried out by male and female farmers. Then in the slashing position, processing activities are also carried out by men and women. At the collector stage, packing activities are also again carried out by male and female workers until finally onion and guava citra products are ready to be accepted by consumers.

Women play an important role in marketing and distribution of agricultural products. Women can be involved in the sale of agricultural products, packaging, and distribution of products to local and regional markets. Women are also involved in marketing activities. Value chains in shallots and guava image Women are involved in every value chain, but in the line of collectors and stalls, men are more dominant than women, while at the retailer level, women are more dominant than men.

Gender roles and norms play an important role in onion farming households, and addressing gender inequality can lead to more efficient and sustainable agricultural practices. In addition, the shallot value chain in Indonesia is dominated by middlemen, and there is little added value at the farmer level. Improving the efficiency and competitiveness of the onion value chain can increase farmers' incomes and better product quality for consumers.

Improving transportation infrastructure can help reduce transportation costs and improve value chain efficiency. Providing farmers with market information can help them make informed decisions about when and where to sell their products, which can help reduce marketing costs and improve farmers' profit margins.

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