



Research Article

SHALLOT AGRIBUSINESS VALUE CHAIN IN LOWLAND AREA OF MAJALENGKA REGENCY, WEST JAVA PROVINCE, INDONESIA

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Abstract- Shallot (red onion) is one of the economic value of horticultural commodities in Indonesia. This commodity's potential to increase farmers' income. Shallot farmers supposedly have received profit from the high price of shallot in the market, but in reality, the economic conditions of shallot farmers in Majalengka lowlands area have not changed yet. The purpose of this research is to study the value chain of shallot agribusiness in the lowland area of Majalengka Regency which apply justice in each chains. Data collection is obtained using the interview technique through questionnaires that had already been prepared in advance. The respondents in this research include agroinput actors, producer or shallot farmers, market participants (wholesalers, traders, retailers), financial institutions, partners, and other related participants needed. This research uses value chain analysis by applying stages of the entry point, value chain mapping, value chain management, determining the profit margin on each chains' actors, analysis of governance structure, and upgrading value chain. The result shows that the agribusiness value chain need to be improved in terms of management in both primary and supporting actors. This shallot business is profitable and worth the effort. In the lowland area there are 5 shallot marketing channel patterns. The biggest profit margin is in the channel pattern 1. Observation on the value chain shows that farmers still have a low bargaining position. One of the efforts to overcome the problem is by reviving the role of cooperative/Gapoktan (farmers group assembly) in the marketing process to minimize the role of intermediaries.

Key Words- Value Chain, Shallot, Marketing, Lowland Area

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Introduction

Shallot (red onion) is one of the leading vegetable commodities that has long been cultivated by farmers intensively and included in the unsubstituted spices group that serves as a food seasoning and traditional medicine. Demand for shallot continues to increase in line with the increase of population. Shallot production is seasonal and planted in certain months, even though people need and use this commodity almost everyday. In 2014, the highest average production of shallot in Indonesia is in January, June, and July [1]. West Java province is one of the main provinces of shallot producers spreaded in four regions, namely Cirebon Regency, Bandung Regency, Garut Regency, and Majalengka Regency. Of these four, Majalengka Regency has a growing productivity every year with the average improvement production of 7.38%. The 2016 average productivity of shallot in Majalengka is 9.84 tonnes/ha [2]. Shallot crops spread across three plains of highland, medium land, and lowland areas. Majalengka Regency is one of the areas which received a cluster program development of shallot agribusiness initiated by Bank of Indonesia. However, this area still has the low productivity under the production potential of above 20 tonnes/ha. Some of the problems relating to low productivity include: (a) the availability of quality seeds, (b) the limited infrastructure and means of production, (c) there has been no specific location of SOP which correctly applied yet, (d) a marketing problem of unfair value in each chains, especially in lowland area of Majalengka Regency. According to the result of a research conducted by [3], series of problems existing

in shallot commodity of Majalengka Regency are related to the attacks of pests and diseases, the provision of facilities to finance the purchase of fertilizers and pesticides, and the influx of imported shallot which causes the low selling price in the market. It is in line with the research conducted by who stated that the problems frequently appear in the system of agrihorticulture in general are issues ranging from the production process up to the marketing phase that has not yet given an optimal incentive to farmers. They received less added-value compared to other actors in the chain [4]. The fluctuation of shallot price is one of the causes of profits decrease earned by farmers. According to [5], shallot price fluctuation occurred due to the over supply generated in great harvest, the influx of imported shallot, and the role of middleman. Other causes are the fluctuations of fertilizer and chemical price, as well as climate influence. Based on data from Markem farmers group existed in the lowland area of Majalengka Regency, the shallot price at the level of producer/grower on July 14, 2017, was Rp 9,000/kg. Meanwhile, the average price in Majalengka traditional market was recorded at Rp 15,000/kg. On the other hand, prices at the retail level recorded Rp. 20,000/kg. Farmers received low income due to their low bargaining position compared to other actors in the chain. Nevertheless, farmers are the key factors with a significant contribute in production process to produce the desired products. But in reality, farmers are often suppressed in the price negotiation so that their profit becomes low. There are many factors which affect farmers' bargaining position, such as the inadequacy of access for network market and pricing information, as

well as the lack of technology mastery. The farmers' low bargaining position, according to [5], can be resulted in an unfair distribution of profits and open the opportunities to rely on other parties, especially in stage of marketing. Such dependency occurred due to farmers' incapability to market their product professionally and rather rely on various marketing channels instead. That kind of marketing caused the product need to go through some intermediaries first before it gets into the hands of consumers. The intermediaries mentioned are the middlemen who suppressed farmers/producers to gain doubled profits for themselves. The above background brings out an interesting research question to be examined, which is how to create the efficient shallot agribusiness value chain that deliver justice/fairness at any point in the chain, as well as to be able to accelerate the development of shallot agribusiness viewed from added-value and the sustainability of structured market-oriented production to secure farmers' income.

Research Method

The research on shallot agribusiness value chain in lowland area of Majalengka Regency uses primary and secondary data. Primary data was collected through questionnaires from respondents. Secondary data obtained from the Central Bureau of statistics, the Department of Agriculture of Majalengka Regency, the Province Department of Agriculture, and other related agencies. The forward and backward search using *snowball sampling* is done to obtain the samples on the next point in this value chain mapping, analysis of governance structure, critical success factors, and upgrading value chain [6]. Analysis Method According to [7], the shallot value chain is a key framework to set input factor and its services, then the two are put together in order to develop, transform, or manufacture a product, continue with how the product moves physically from manufacturer to consumer, how to make this product adding value along the chain of marketing, and helping to increase the level of its efficiency.

Methods of analysis used is a value chain analysis with the stages as follows:

1. Entry point
Entry point *i.e.*, to determine at which point the research will begin. The entry point in this research of value chain analysis is the shallot farmers, then a search is conducted using a snowball system to get the samples on the next point up to the consumer.
2. Value chain mapping is determined after the main and other actors of value chain have been identified by tracing back (go backward) or forward (go forward). Value chain mapping is used to:
 - a. Identifying the factors that play a role in the formation of value chain
 - b. Mapping the flow of money that rolled along the value chain
 - c. Mapping the flow of goods from upstream to downstream (agroinput to output).
 - d. Charting the flow of information on prices, demand, production planning, as well as a new innovation
 - e. Mapping the flow of Reserve Logistic in form of products return
 - f. Identify and map out the supporting industry and stakeholders involved
3. To analyze the management of value chain at any point.
4. To determine the profit margin of each actors obtained through input-output relationships and then calculate the business feasibility. According to [8], the approach method used in measuring whether a business worth to try or not can be done by calculating R/C ratio.
5. Analysis of Governance Structure
Analysis of governance structure is determined after the actors and the map of value chain are known, then identifying which related agencies can be involved for the improvement of shallot value chain
6. Upgrading the value chain
Value chain improvement is done by optimizing the level of efficiency of the existing chain by upholding the principle of fairness for every actors in the marketing chain.

Result and Discussion

The Characteristics of Shallot in The Lowland Area of Majalengka Regency

The shallot variety cultivated in lowland area of Majalengka Regency is Bima

Brebes. Farmers in the lowlands adopted this variety due to the influence of shallot farmers in Brebes Regency. Based on the results of the survey in the field, variety of Bima Brebes is different from Bima Curut which is a common type of shallot cultivated by farmers the medium land of Majalengka Regency. The comparison of two varieties is as follows:

Tabel-1 Description of Bima Brebes and Bima Curut Varieties Based on Farmers' Observation

Description	Bima Brebes	Bima Curut
Bulb size	Medium to big size	Big size
Bulb shape	Round-oval shape	Round-oval shape
Bulb Color	Light red-dark red color	Dark red color
Shallot Shoots	4-9	3-7
Harvest time	55-60 DAP	55-60 DAP

DAP = Days after planting

Based on the research results by [9], variety of Bima Brebes in the Brebes Regency can improve farmers' total net income amounting to 345.050 billion rupiahs. The return on investment (ROI) of 71.125% meansevery Rp 100.00 invested can provide an increased profit to farmers of Rp 71.125. In addition to providing profits, Bima Brebes can also penetrate the supermarket and sell in a high value. The average yields earned by shallot farmers in the lowlands area are around 5-7 tonnes/ha. The highest yields in great harvest time reach 10-13 tonnes/ha. The average highest yields of shallot obtain in June, July, and August. While in September, October and November, the shallot supply decreases due to water irrigation constraint. In January to May, shallot supply is also hard to get due to farmers who rarely plant the shallot. Normally, December to March are months of rainy season, therefore farmers decided to plant rice. The shallot supply in the span of one year in the lowlands area of Majalengka Regency can be seen in the following table. The time plant for shallot commodity grown in the lowland area of Majalengka Regency is as follows: the first planting is done in November to December, the second one in March to May, and the third in June to August. Farmers would plant rice until they switch into shallot again. Thus, the shallot is planted 3 times a year by means of intercropping with red pepper, green pepper, and bitter melon. Characteristics of shallot quality are determined by market demand. The shallot drying process is included as one of the characteristics of shallot quality determined by intended market, namely:

1. Local shallot (drying for 2-3 days)
2. Askip shallot (drying for 7-10 days)
3. Rogol shallot (without leaves and roots)
4. Pretes shallot (have been cleaned from residual soil and other foreign matter attached to)

Table-2 The Annual Shallot Supply in the Lowlands Area of Majalengka Regency

Month	1	2	3	4	5	6	7	8	9	10	11	12
Number of Production	Crop rotation to rice in January until mid March		Medium		High		Crop rotation to rice in September until mid November		Low			
Sources of availability			Bima Brebes variety		Bima Brebes variety				Bima Brebes variety			
The ease of getting the shallot			Difficult to get		Easy to get				Quite difficult to get			
Average quantity (tonnes/ha)			6-8		10-13				5-7			
Prices at farmers' level (Rp/kg)			7,000-10,000		15,000-20,000				11,000-13,000			
Quality			Medium to Poor		Good				Poor			

Source: Primary Data Analysis, 2016

The Result of Value Chain Mapping

The results of shallot agribusiness value chain mapping in Majalengka Regency, especially in lowland area, involve many actors in delivering the products from

upstream to downstream. The shallot agribusiness value chain structure can be seen in [Fig-1].

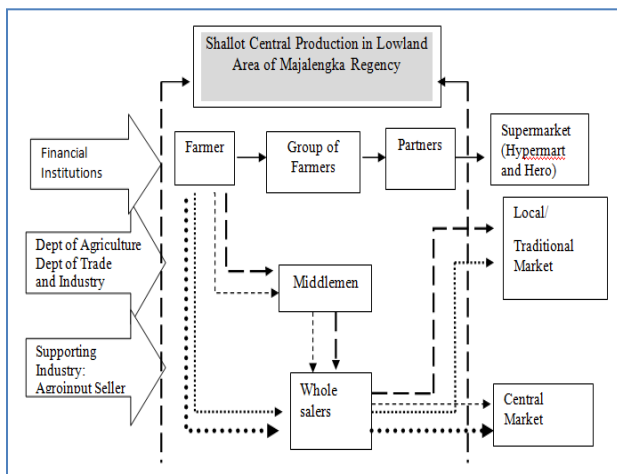


Fig-1 The Structure of Shallot Value Chain in Lowland Majalengka

There are several factors causing farmers to have no option in marketing their shallot to other more profitable markets. The factors are as follows:

1. Shallot farmers in the lowlands area have no cooperatives yet
2. The lack of role of farmers group, assembly farmers group, and Agribusiness Sub Terminal (STA) in helping farmers to market their yield to modern market as well as to the processing industry.
3. The high degree of farmers' dependence upon wholesalers.
4. The high cost of harvesting and post harvesting which make farmers reluctant to do the harvesting themselves and choose to hand it over to the middlemen instead
5. The limited storage shed and drying process which is done manually.
6. Lack of information toward market access and prices.
7. Farmers' urgent and immediate need is one of the factors causing their dependency on the wholesalers or local collector/traders. Moreover, the shallot characteristic of easily damaged due to the lack of on-site storage shed would encourage farmers to immediately sell them despite the price is not that good [10].

[Fig-1] indicates that the structure of shallot value chain in Majalengka Regency involves 2 actors, namely the primary and the supporting actors.

a). The primary actors of the shallot value chain in Majalengka Regency

The primary actors of shallot value chain are breeder seed farmers, shallot farmers/producers, farmer groups, partners, middlemen, and wholesalers. They can be seen in [Table-3].

Table-3 The primary actors of shallot agribusiness value chain in Majalengka Regency

No	Actors	Role in the shallot value chain
1	Farmers	Farmers can be divided as follows: - Farmers of seeds breeder: they provide shallot seeds, then they sell them to shallot growers. In this lowland region of Ligung, there is only one shallot seeds breeder of Bima Brebes variety. - Farmers of shallot producer/grower: Those who do the cultivation of shallot, either as tenant farmers or tenants of land
2	Group of Farmers	They have a role to collect shallot from farmers, to coordinate, and do the marketing.
3	Middlemen	They have a role in purchasing shallot from farmers, do the harvest and then sell the harvest with total number of middlemen less than 10%.
4	Wholesalers	They also purchase crops from farmers, perform a drying process, packaging, and deliver products to destination markets

b). Supporting Actors of Shallot Agribusiness Chain Value in Lowland Area of

Majalengka

The supporting actors are indirectly involved in the process of shallot value chain. Among them are: stall of production means/agricultural inputs, Department of Agriculture, Department of Trade and Industry, financial institutions, BP3K, intermediaries, wholesalers, central market traders inside and outside Java, and retailers. The processing of post-harvest has already been done in the lowland area manually by women farmers. The supporting actors of shallot value chains can be seen in [Table-4].

Table-4 The Supporting Actors of Shallot Value Chain

No	Actors	Role in Shallot Value Chain
1	Partners	Partner institution mentioned here is the General Director of Horticulture which signing a one year purchasing contract with Markem farmers group of Ligung region with the price of shallot 20,000/kg
1.	Stalls of Production Facilities	A place to buy means of production for shallot farmers
2.	Department of Agriculture	The institution in charge of agricultural policies, granting assistance and information from the government
3.	Department of Trade and Industry	The institution in charge of trade policy of agricultural products, distributor assistance, and information from the Government
4.	Financial Institution	Financial institution provides loans to actors of shallot value chain in getting working capital or investment. It also gives capital assistance via BRI through the CTF.
5.	Bank of Indonesia	Provide training of organic fertilizers and pesticides, field school, and workshop at BI Cirebon
6.	BP3K (Hall extension of agriculture, fishery and forestry)	Government agencies in the field of agriculture is responsible for providing technical guidance on the value chain of shallot in the sub-district area
7.	Seed Hall	Institution that provide certification of seeds and seed-making training
8.	Central Market Traders	They divided into market traders of inside and outside Java: -market inside Java: Obtaining shallot supply from the wholesalers and distribute it to the central market of Java -Market outside Java: Obtaining shallot supply from wholesalers and distribute it to the market outside Java.
9.	Local/Traditional Traders	They are traditional traders around Majalengka and obtain shallot from the wholesalers and middlemen

3. Management of Shallot Agribusiness Value Chain in Majalengka Regency

1.) Activities of Value Chain at Shallot Farmers' Level

a. The Process of Planning (Plan) at Shallot Farmers' Level

The process of production planning in farming is very important to obtain the yields in accordance with our expectations. The process of planning activities conducted by shallot farmers in lowlands area comprises of selecting the planting site, determining the shallot variety to be planted, organizing the planting schedule, choosing the financial institution to cooperate with, and creating a marketing plan. The research location of shallot in the lowland area took a sample in Ligung region. They planted shallot type of Bima Brebes variety. Their planting schedules have never experienced an error. Markem farmers group of Ligung have an easy access to the financial institution to gain capital working, but unfortunately the numbers are not yet sufficient for them. Average yields of Ligung farmers were about 5-7 tonnes/ha. Of the entire crops, 60% of yields used for sale-consumption and 40% made for shallot seed to be utilized by their own or being sold to other farmer through a seed breeder farmer in the group. Of the overall shallot sale-consumption, 40% are sold to small wholesalers and 60% are sold to major wholesalers which will then sell the shallot to central market. Farmers would receive two ways of payments: prompt/cash payment and late/delay payment. Late payment last for at least 3 to 7 days.

b. Procurement Process (Source) at Shallot Farmers' Level

The process of production facilities procurement for agriculture is very limited, especially for subsidized fertilizer. But the supply of organic fertilizer is fairly easy because the supply is sufficient and obtained from local ranchers. For the provision of seeds, farmers usually buy them from seeds breeder. Markem

farmers group have already capable of producing shallot seed by themselves, but it is not certified yet. Shallot variety used for seed is usually Bima Brebes. The terms of good quality seeds are the medium size shape (not too large or too small), fine leaves, no rotten, and water levels reduced by as much as 30% so it can be kept for 2-3 months. Shallot for seed has to be 40-50 days of age after being harvested or dried. Shallot for seeds are dried manually by hanging them on a rack in farmers' kitchen or modest building storage. In rainy season, the drying process is done by fogging to keep them dry and not rotting. The needs of seed per ha are accounted 8 quintal with the ready-to-plant seeds of Rp 30,000/kg. Many farmers still have constraints in the procurement of working capital or access to credit in financial institutions. Based on the research conducted by [11], the common barriers in the process of accessing the credit are the unreachable and uneven spread of financial institutions credit for farmers, and also the farmers' poor understanding of that credit. There are some farmers who can access bank credit by mortgaging either their house/land certificates or vehicles. Based on the results of interviews with farmers, they could access credit to Bank Rakyat Indonesia (BRI) with total loan of Rp. 25 million with every six months payment system and total interest of Rp 1.2 million. Other than banks, there are also micro finance institutions, such as PUMK credit. Factors which affect farmers in choosing microfinance institutions (MFIS) as their source of farming capital are their level of education, experiences in farming, number of family dependants, credit retrieval frequency at the same MFIS, the perception, income, and number of credits or loans [12].

c. The Production Process (Make) at the Shallot Farmers' Level

The production process carried out by farmers consisted of land preparation, processing land (the making of guludan or land contour, gutter, and improving the soil texture), planting, and maintaining the plant (watering, fertilizing, pest and disease controlling, and weeding). After 2 months or 60-65 days, shallots are ready to be harvested. The traits of ready-to-harvest shallots are the wilt leaves and yellow color, and shallot bulbs show a little visible on the surface of the ground. Shallot production in the rainy season is 5-7 tonnes/ha, while in the dry season could reach up to 13 tonnes/ha. In rainy season, the productivity is lower due to the planted shallots that should not get too much water or it would cause a rot. The shallots for seeds received different treatment than those for consumption. After shallot-seeds are ready to be harvested, farmers would start to do the process of annulment and binding, either by themselves or take labors from inside or outside the family. The shallot, then, carried out to be dried up by the sun in front of farmers' houses. Vehicles farmers generally used are motorcycles with three wheels or cator (pedicab and motorcycle combined). The drying process takes about 7-10 days under the supervision of one labor to flip the shallot. After that, onions would be cleaned up from the residual soil and other foreign matters attached to in order to look clean and avoid the rotting as well. The shallot then transferred to storage shelves in the kitchen or storage shed with manual furnace below and get one time sprayed of fungicide. After 2-3 months, shallots are ready to be used as seeds. Normally, shallot seed would shrink to 50%. The price of shallot seed ready to plant is around Rp 30,000/kg, Askip shallot's price is around Rp. 24,000-Rp. 30,000 per kg, while shallot for consumption is Rp. 15,000.

d. The Process of Distribution (Delivered) at Shallot Farmers' Level

Farmers in lowland area of Majalengka Regency usually sell the crops in two ways, namely the system of tebas (sold to middlemen prior to harvest time) and harvesting the shallot by themselves. In tebas system, farmers do not have to pay for the harvesting process, distribution, and post harvesting cost. On the contrary, if the harvest is done by the farmers, they have to spend much money for harvesting, distribution, and post harvesting cost. The number of middlemen is approximately 10% of the total number of farmers. Afterward, the crop yields are brought to the wholesalers, partners, and other destination markets.

e. The Process of Return (Return) at Shallot Farmers' Level

Farmers are usually have no product returns (shallot, post harvesting tools, and etc) because they do not apply the contract system with the buyer. Markem farmers group has once signed the system contract with the Horticulture

Department and marked the price up to Rp 20,000/kg.

2). Value Chain Activities at Traders' Level

a. The process of Planning (Plan) at Traders' Level

Farmers groups could act as small wholesaler since they receive shallot from farmers' members. The planning process at wholesaler's level include planning the contract with partner institutions. Partner institutions buy crops from farmers group that serves as the wholesaler. They previously have done planning and monitoring starting from planning before planting, planting time, harvesting and post harvesting. This was done in order to generate crop yields in accordance with the expectations of partner institutions. Farmers do the sorting and grading process to determine which crops deserves to be sent to partner institution. The off grade crops will be sold directly to the market. Payment for the crop yields will be sent out by partner agencies if farmers group have delivered the yields and filled some administrative files. The payment will be channeled to farmers' partners as purchasing cost for the crops. Thus, in general, financing the farmers group through crop yield's payment in every harvesting time with profit is in accordance with their predetermined agreement. Besides shipping to partners, shallot is also sent to market inside Java Island (Jakarta, Bandung, Indramayu and Brebes) and outside Java sent by wholesalers. The contract among them is unwritten and done upon direct communication through cell phones. The wholesalers plan the shallot supply procurement that would be taken from the middlemen and farmers by calculating the post-harvesting cost reduction to be spent. In addition to supply procurement, they also have to plan the amount of capital for payment and distribution cost to the destination.

b. Procurement Process (Source) at Traders' Level

Procurement process in traders' level includes shallot supply, capital, and labor. Procurement of shallot supply is adjusted to the aim market. Usually, the shallot that will be sent to partner institutions should meet the desired grade with 5 kg special packaging. Whereas, the shallots that will be sent to central market have no strict grade determination as partners do since there is no previous contractual agreements on that matter. Shallot volume purchase at traders' level can reach 70 tonnes per growing season. The amount of shallot for a single delivery to central market in Java is 5-7 tonnes per day, while outside Java is 7-8 tonnes per day. The shallot price of farmers' level is Rp. 15,000-Rp 20,000 per kg with the lowest price at Rp 7,000-10,000. Traders or wholesalers usually take profit of Rp. 2,000-Rp 7,000 per kg, while the middlemen is Rp. 2,000-3,000 per kg. The system of payments applied from traders to farmers is prompt/cash and late/delay. The procurement of capital is crucial for traders/wholesalers because they have to finance their business operations. Traders usually get their fund from banks. Bank partner for farmers is Bank Rakyat Indonesia (BRI) through the KUR (credit) project with the payment system of every harvest and 6 months period of interest of 3%. It is not only shallot supply and capital, workforce or labor is also important in the procurement process. Labor procurement mostly taken at post harvesting stage, starting from annulment/peeling process, transporting to the storage, drying, sorting, packaging and delivering. Traders who deliver shallot or the wholesalers have a power to influence shallot price fluctuation in traditional market. If the price is not worth the cost of transporting (or in other words, low price), they usually reluctant to send shallot to market destinations. This can give impact to the rare supply of shallot and raise the price automatically in accordance with the law of market mechanisms. Labors come not only from local residents, but also from other districts/regencies, for example, Brebes region with approximately 25% of labors.

c. Production Process (Make) at Traders' Level

High or low of crop yields is very influential for traders. If the shallot supply in the lowland area of Majalengka experienced a shortage, then traders or wholesalers would look for in other areas in Majalengka (at the highland or medium land) and outside Majalengka, such as to Cirebon Regency, Brebes, or Tegal. To maintain their supply, wholesalers will always ensure the availability of the shallot through the intermediary parties who look around to find the shallot ready to be harvested.

d. Distribution Process (*Deliver*) at Traders' Level

Distribution activities started from the field crops to storage shed or from the middlemen stalls to be sold to market or to partners. The freight cost is usually charged to traders. The drying shallot would be varied depending on the destination market. Market outside Java usually wants a completely drying shallot to avoid the rotting due to the long distance of delivery. For Java market, the leaves or outer skin of shallots are taken out and blowed, then packed and weighed using net sack and transported by pick-up or truck. The shrinkage occurred since the beginning of harvest until the end of the process of distributing was 50%.

e. Return Process (*Return*) at Traders' Level

Return process from traditional markets to traders or wholesalers is barely happened.

3). The Activities of Value Chain at Middlemen/Penebas Level

a. Planning Process (*Plan*) at Middlemen Level

The number of middlemen in lowland area of Majalengka Regency is less than 10%. They are not only coming from local area, but also from other areas such as Brebes Regency. Planning activity for middlemen is to measure the availability of shallot at farmers' level. The risk for middlemen to take is the difficulty of getting shallot supply from farmers, especially in September and October. This is due to the rainy season which makes the farmers reluctantly grow the shallot because of the high risk. One of the high risks they have to encounter is pests and diseases attack. If there is no shallot in Majalengka Regency, middlemen usually search outside Majalengka, for example in Indramayu, Cirebon, Tegal, or Brebes. Another risk that needs to be well-considered in planning activity is the financial. Middlemen have to pay cash for farmers, while they are paid delay for 3-7 days the traders or wholesalers. Farmers will sell in tebasan system if the price of shallot is good, and sell without if the price is low.

b. Sources Procurement (*Source*) at Middlemen Level

Procurement activities at middlemen level include the procurement of shallot supply, capital, and labor. Rainy season gives a trouble for middlemen in procuring the shallot supply. Financial support for middlemen is taken from bank loan. Labor procurement should get a careful consideration since the middlemen require many labors for harvesting and post-harvesting process, starting from reaping, transporting from field to the street, transporting use tassa, demolition at the stall, drying process, and post-harvest management.

c. Production Process (*Make*) at Middlemen Level

The middlemen must be good at taking into account the amount of shallot which will be retrieved in order not to experience the risk. That is because the middlemen buy shallot from farmers before the harvest time. After making a deal with farmers, middlemen prepare the labors to harvest and bring the yields to the drying place. The intensity of drying process depends on the destination market. Activities after drying are cleaning (pretas), taking out leaves, blowing, packaging, weighing, transporting, and distributing. The cost for all those processes is borne by the traders or wholesalers.

d. Distribution Process (*Deliver*) at Middlemen Level

The process of distribution for middlemen is transporting the shallot from the crop field to the drying place and takes only a day since the distance between two locations is not that far. The transporting cost depends on the region where the shallot is taken.

e. Returning Process (*Return*) at Middlemen Level

There is no product return at middlemen level because the transaction with traders is done in retail. All the damage and defect occurred after the transaction is borne by the traders or wholesalers.

3. The Profitability of Shallot Farming in Majalengka Regency

Shallot farming in lowland area of Majalengka Regency can be done 3 times in a

year during the rainy and the dry season, alternating with rice and vegetable crops. Some farmers in lowland area of Majalengka Regency do the harvest by their own and some hand it over to the middlemen. Number of harvest and post-harvest submitted to middlemen is approximately 10%. The following table is cost analysis of shallot farming in total area of 1 ha.

Table-5 The Profitability of Shallot Farming in Lowland Area of Majalengka Regency in 2016

No	Description	Total Number	Average Price	Value (Rp)
A	Variable cost			
1	Seed (kg)	1,000	30,000	30,000,000
2	Fertilizers			
	Manure (kg)	1.855,8	1,000	1,855,800
	SP-36 (kg)	120	2,000	240,000
	c. KCL (kg)	110	3,000	330,000
	Urea (kg)	150.75	2,000	301,500
	ZA (kg)	200.15	1,400	280,210
	NPK (kg)	120.5	10,000	1,205,000
	Leaves compost fertilizer (lt)	2	75,000	150,000
	Total of fertilizer Cost			4,362,510
3	Pesticides			3,765,000
4	Labors			
	Men Labor	195.15	70,000	13,660,000
	Women Labor	85.05	40,000	3,402,000
	Total of Labor Cost			17,062,000
	Total of Variable Cost			55,189,510
B	Fixed Cost			
	Rental Farm			10,000,000
	Taxes			40,000
	Depreciation of equipment			3,360,000
	Total of Fixed Cost			13,400,000
	Total of Production Cost			68,589,510
	Total of Acceptance	7,250	15,000	108,750,000
	Profit			40,160,490
	R/C			1.58
	B/C			0.58

Source: Primary Data Analysis, 2016

Average yield per ha is 7.250 kg. Crop yield at rainy season is less in number compared to dry season because the level of rotting is higher and reaches 20% in normal condition, while in abnormal condition there would be so many shallots are wasted away. Off grade shallot is usually processed into fried shallot cooked with traditional or manual equipments. The calculation result of shallots farming in lowland area of Majalengka Regency indicates that the value of R/C ratio is 1.58 which states that for every Rp. 1 spent will add the receipt of Rp 1.58. The value of R/C > 1 indicates that the work done by shallot farmers is worth the effort. The value of B/C ratio 0.58 means every Rp 1 spent cost will generate revenue of Rp 0.58. The value of B/C ratio > 0 indicates that the work done by shallot farmers is profitable.

4. Profit Margin

Based on the research results by [13], it explains that to see the most appropriate marketing channel which provide justice can be seen from the level of profit margin for every kg shallot in each chain marketing.

Based on [Fig-1], there are five patterns of shallot marketing channels in the lowland area of Majalengka Regency as follows:



Table-6 The Analysis Results of Shallot Agribusiness Marketing Margin in The Majalengka Regency

Pattern	1	2	3	4	5
Farmers					
Sale Price	20,000	11,000	11,000	12,000	12,000
Margin	10,540	1,540	1,540	2,540	2,540
Middlemen					
Sale Price		14,000	14,000		
Margin		3,000	3,000		
Wholesaler					
Sale Price		16,000	18,000	16,000	19,000
Margin		2,000	4,000	4,000	7,000
Partners					
Sale Price	30,000				
Margin	10,000				
Traditional Market					
Sale Price		19,000		19,000	
Margin		3,000		3,000	
Total of Margin	20,540	9,540	8,540	9,540	9,540

Source: Primary Data Analysis, 2016

[Table-6] shows the analysis results of profit margin on each shallot marketing channel. The highest profit margin is on channel 1 because it has a short marketing chain. The emphasis on co-operation with partner institutions has to be put on the quality of shallot generated. On channel pattern 1, farmers do the mark-up on shallot price of Rp. 20,000/kg in order to minimize the fluctuations price in the market. The lowest profit margin is on channel 3 of Rp 8,540 due to the long marketing channels to go through. According to Hanafie (2010), the high or low of marketing margins used to measure the efficiency of marketing system. The higher the marketing margins, the more inefficient the marketing system would be. The results of in-depth interviews with shallot farmers in lowland area showed that they have a very high dependence upon intermediaries in marketing, namely wholesalers. Farmers' access to market both traditional and modern is limited. That situation lead them to depend on intermediaries. Capital and technology limitations resulted in farmers' low bargaining position in negotiations with the intermediaries. It also create a considerable discrepancy on price and marketing margin. The high level of dependence to outside parties in marketing gives opportunities for the large number of actors involved in the marketing chain. According to [5], the higher the level of dependence towards other parties will lower the farmers' bargaining position to determine the price. It gives farmers an unfair profit distribution since they only get a very little or none and other parties enjoy much of the profit. There should be a fair system in marketing chain. It is not right to always put farmers in unprofitable position or get the smallest part of benefit. If that happens, the government should take immediate steps to check and supervise at what point does the chain makes a very high difference on shallot price [14]. An effort that can be done to improve farmers' bargaining position is to revive the role of the Cooperative or Gapoktan (the assembly of farmers' group). Cooperative or Gapoktan could be the suitable place to run the marketing process in order to minimize the role of intermediaries.

Conclusion

There are two actors in shallot agribusiness value chain in Majalengka Regency, namely the primary and supporting actors. The primary actors include farmers, farmer groups, and middlemen. Whereas the supporting actors who do not deliberately involved in the shallot value chain include Department of Agriculture, Department of Trade and Industry, bank, BP3K, and etc. The activities of the value chain are distinguished into three, namely the value chain activities at farmers' level, traders, and middlemen. Each of them perform the activities of planning, procurement, production, distribution, and return. Study on shallot agribusiness value chain in the lowland area of Majalengka Regency showed

there are so many improvements need to be taken in reforming management side for both primary and supporting actors. This shallot agribusiness value chain is profitable for the actors and worth the effort. It can be seen from the R/C and B/C calculation with each value of 1.58 and 0.58 respectively. There are 5 shallot marketing channel patterns. The largest profit margin is found in the pattern of channel 1, i.e., the farmer-farmer groups-partner institutions-consumer. The shortest the marketing channels to go through, the more efficient it will be. In the shallot agribusiness value chain, farmers have a low bargaining position due to the lack of access for prices information, markets, capital, and technology. Such situation lead them to have a high level of dependence upon the intermediaries or wholesalers. An effort that can be done to improve farmers' bargaining position is to revive the role of Cooperative or Gapoktan (the assembly of farmers' group) with the aim to run the marketing process and to minimize the role of intermediaries.

Application of research: Shallot (red onion) is one of the economic values of horticultural commodities in Indonesia. This commodity is potential to increase farmers' income, but in reality, the economic conditions of shallot farmers in Majalengka lowlands area have not changed yet. The farmers' low bargaining position, can be resulted in an unfair distribution of profits and open the opportunities to rely on other parties, especially in stage of marketing. This study is expected to be create the efficient shallot agribusiness value chain that deliver justice/fairness at any point in the chain, as well as to be able to accelerate the development of shallot agribusiness viewed from added-value and the sustainability of structured market-oriented production to secure farmers' income.

Abbreviations:

ROI = Return on Investment
 STA = Sub Terminal Agribisnis
 BP3K = Balai penyuluhan Pertanian, Perikanan dan Kehutanan
 BRI = Bank Rakyat Indonesia
 KUR = Kredit Usaha Rakyat

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