Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development
Vol. 17, Issue 4, 2017
PRINT ISSN 2284-7995, E-ISSN 2285-3952

VALUE CHAIN OF SHALLOT AGRIBUSINESS IN MEDIUM LAND OF MAJALENGKA, WEST JAVA, INDONESIA

Sri Ayu ANDAYANI[1], SUHAENI[2], Latief Z NUR[3]

[1]University of Majalengka, Faculty of Agriculture, Jl. KH Abdul Halim 103 Majalengka 45418, West Java, Indonesia
[2]University of Singaperbangsa, Agribusiness Studies Program, Jl. H.S. Ronggowaluyo, Teluk Jambe, Karawang 41361, West Java, Indonesia.
[3] University of Majalengka, Management Studies Program, Faculty of Agriculture, Jl. KH Abdul Halim 103 Majalengka 45418, West Java, Indonesia

Corresponding author: sri.ayuandayani@yahoo.com

Abstract

This study has a purpose to assess the value chain of shallot agribusiness in medium land of Majalengka. The data is collected through interview using a questionnaire that was prepared in advance. Respondents in this study include agroinput actors, growers or shallot farmers, market participants (wholesalers, retailers), financial institutions, partner institutions, and required resources. This study uses a value chain analysis through stages of entry points, value chain mapping, value chain management, the determination of the profit margin on each chain actors, analysis of governance structures, and upgrading the value chain. The results showed that agribusiness value chain management needs to be improved, both at primary actors and supporting actors. Their business is profitable and worth the effort. There are five marketing channel patterns of shallot in the medium land of Majalengka. The biggest profit margin is in channel pattern one, namely farmers-farmers' groups-partner institution-consumer.

Key words: *value chain, shallot, marketing patterns*

INTRODUCTION

Shallot (red onion) is one of the agricultural products with high economic value. This commodity has a potential to increase farmers' income. Shallots are commonly consumed as cooking spice in Indonesian household. Nevertheless, shallot production is slower compared to the very high demand of the product from household and food industry which pushes up its price.

Majalengka is one of the shallot-producing regency in West Java Province, Indonesia. The average productivity of shallot in Majalengka in 2016 amounted to 9.84 tonnes/ha [2]. Shallot commodities spread across three lands; the highlands, medium land, and lowland. Majalengka is also one of the regions that receives the agribusiness cluster development program of shallot initiated by *Bank Indonesia*. However, Majalengka has a low level of shallot productivity under production potential of above 20 ton/ha. Some of the causes include the following: (a) the availability of quality seed, (b) the limitations of infrastructure and production facilities, (c) the implementation of SOP-specific location properly, (d) problem of unfair marketing in each chain.

The problems of various in onion commodity in Majalengka Regency could be rank according the problems related to pest attack, provision of facilities to finance the purchase of fertilizers and pesticides as well as imported onions that cause low selling price onion farmers in the market [3].

It is in line with research [1], the problems that often arise in system of horticulture agribusiness in general is the problem from the stage of production to marketing of horticultural products have not fully provide the optimal incentive to farmers, part of value received by farmers is still minimal when compared with the actors in other links.

Nevertheless, the position of shallot supply during the last five years is surplus. The problem of domestic shallot market is price fluctuations caused by the uneven distribution throughout the year (there is rainy season as off-season*)* as well as poor management of stock mechanism which causes the insufficient

production within high-season to meet the need of off-season. Therefore, a reformation in shallot production management during the dry season (high-season) and rainy season (off-season) is needed to sustain the shallot production throughout the year in the lowlands, medium land, or highland.

This phenomenon raises an interesting research question of how to create an efficient value chain and deliver justice at every point of shallot agribusiness, followed by the ability to accelerate the development of shallot agribusiness viewed from the added value and production sustainability to guarantee farmers' income.

MATERIALS AND METHODS

Research methods

The value chain of shallot agribusiness research in the medium land of Majalengka uses primary and secondary data. Primary data was collected by questionnaires from respondents. In general, respondents consist of agro-input actors, growers or shallot farmers, market participants (wholesalers, retailers), financial institutions, partner institutions, and other sources needed. Secondary data were obtained from the Central Bureau of Statistics, Agriculture Department of Majalengka, West Java Province; Agricultural Department and other related agencies.

This research was conducted in farmers' group of Cijurey, Kulur village, in the medium land of Majalengka regency. Samples determined by non probabilistic with entry point of main business actors (shallot farmers), continue with forward and backward searching using snowball sampling to obtain samples at the next point in the value chain mapping, analysis of governance structure, critical success factor, and upgrading the value chain [5].

Analysis method

The onion value chain is the key skeleton key for setting the onion input factor and its service, than the two are incorporated in order to grow, transform or produce a product, how to product moves physically from producer to consumer, how to make product and value along marketing chain so as to improve the efficiency [10].

The analytical method used is value chain analysis with the following stages:

(1)Entry point (shallot farmers), is used to determine the starting point of the research. Once the entry point is determined, the next thing to do is searching using snowball system to obtain a sample for the next point up to the consumer.

(2)Value chain mapping, is determined after the identification of the main actors of the value chain and other actors obtained by tracing backward and forward. Value chain mapping is used to:

(a)Identifying the factors that play a role in the formation of the value chain

(b)Mapping the flow of money that rolls along the value chain.

(c)Mapping the flow of goods ranging from agro-input (upstream) to agro-output (downstream).

(d)Mapping the flow of information on prices, demand, and production planning as well as new innovation.

(e)Mapping the flow of logistic reserve in the form of return goods.

(f)Identifying and mapping the supporting industry and stakeholders involved.

(3)Analyzing the value chain management at every point of the chain

(4)Determining the profit margin of each actors which is obtained through the input-output relationship and then calculate the business feasibility. The approaching method used to calculate the business feasibility can be done by R/C ratio [4]

(5)Analysis of Government Structure is determined after actors and map of the value chain are known. After that, the relevant institutions which are likely to be involved in improving the value chain of shallot need to be identified.

(6)Value chain improvements are done by optimizing the efficiency level of the existing chain by promoting the principle of justice for all actors in the marketing chain.

RESULTS AND DISCUSSIONS

Product Characteristics of Shallot in Medium Land of Majalengka

The research product of shallot in the medium land is conducted in Cijurey farmer groups, Kulur village, District of Majalengka, West Java, Indonesia. The group is chaired by *Mr. Didi* with 25 members. Shallot variety cultivated is *Bima Curut*, that suitable to be planted in the medium and lowland area. Based on the research results, the *Bima Curut* variety grown in the medium land has 48.2 cm height with 9.1 fruit bulbs [6]. *Bima Curut* variety preferred by farmers because of its larger-size bulbs, that preferred by consumers and it is expected to penetrate the supermarket and get a high-value selling.

The average highest harvest of shallot in medium land acquired in June, July, and August, which known as the great harvest months, when the highest yields can reach 10-13 ton/ha; even the average yields only around 5-7 ton/ha/year. Meanwhile, in September, October, and November, the supply of shallot is decreased due to the difficulties in obtaining irrigation water, and also between January to May, the supply of shallot is quite rare because farmers rarely grow shallot. Between December to March (the rainy season) the farmers will switch their crop into rice or vegetables.

Shallot commodity is planted gradually in the medium land of Majalengka. The first planting was between November - December, the second was between March to May, and the third was in June to August. Furthermore, farmers would plant rice until the shallot planting season comes. Thus, the shallots are planted three times a year by intercropping with red pepper, bird's eye chilli, vegetables, and bitter melon. The Shallot Supply in medium land of Majalengka in One Year, can be seen in Table 1.

The characteristics of shallot quality, based on market demand, and drying process is one of the quality characteristics which is determined by the intended market, which are:

(i)Local quality red shallot (drying for 2-3 days)
(ii)Skip quality red shallot (drying for 7-10 days)
(iii)Shallot without leaves and roots *(Rogol* red shallots quality)
(iv)Shallot that have been cleaned from residual soil *(Red shallot pretes* quality).

Table 1. The Shallot Supply in Medium Land of Majalengka in One Year

Month	1	2	3	4	5	6	7	8	9	10	11	12
Total Production	January to the middle of March, crop rotation by planting rice		Medium			High			September to the middle of November, crop rotation by planting rice		Low	
Source of Procurement			*Bima Curut* variety (from local breeder)			*Bima Curut* variety (from local breeder)					*Bima Curut* variety (from local breeder)	
Access to get the shallot			Hard to get			Easy to get					Quite hard to get	
Average quantity (ton/ha)			6 – 8			10 - 13					5 – 7	
Farmers' price (IDR/kg)			11,000 -12,000			15,000 – 20,000					13,000 -15, 000	
Quality:			Medium – Poor			Good					Poor	

Notes. Primary data (own calculation)

The Mapping Results of Value Chain

The mapping results of shallot agribusiness value chain in Majalengka, especially in medium land involves many actors in delivering products from upstream to downstream. The structure of the agribusiness value chain of shallot can be seen in Figure 1.

There are several factors which made farmers have no option to sell their shallot crops to more profitable markets, as follows:

(i)The lack of significant role from cooperative, farmers' group, farmers' group association, and Agropolitan Sub Terminal (STA) that can help farmers in marketing their crop yields to the modern market (Hypermart

and Hero supermarket) and processing industries.
(ii)The high level of farmers' dependence to the wholesalers.
(iii)The high cost of harvesting and post-harvesting, reluctantly the farmer went to usurer.
(iv)The lack of storage facilities and manual drying process.
(v)The lack of information on market access and pricing.
The structure of the agribusiness value chain of shallot can be seen in Figure 1.

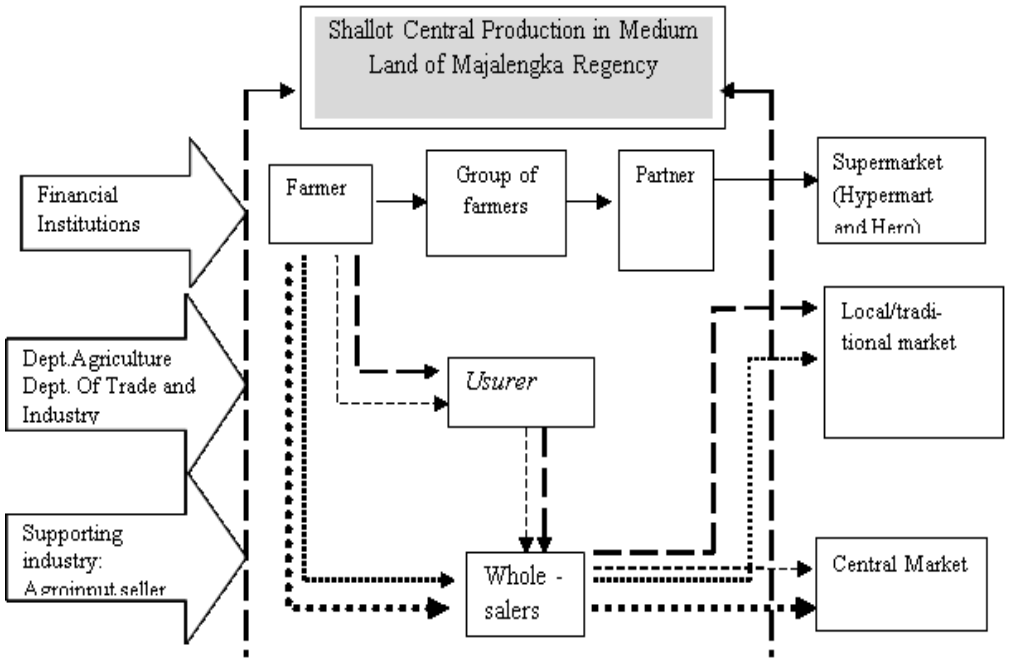

Fig. 1. Structure of Shallot Value Chain in Medium Land of Majalengka
Notes: Primary data.

The urgent farmers need, is one of the factors of dependence on collecting traders, other than that the onion product are easily damaged characteristics due to the lack of storage facilities so that this will encourage farmers to sell immediately despite the low price [9].
Figure 1 shows that the structure of shallot value chain in medium land of Majalengka involves two actors, the primary actors and supporting actors.
a) Primary Actors, are the main actors in the shallot value chain system, which are: farmers seed breeders, shallot growers/producing farmers, farmer groups, partners, usurer, wholesalers. The primary actors can be seen in Table 2.

Table 2. Primary Actors of Shallot Agribusiness Value Chain in Medium Land of Majalengka

No	Actors	Role in Shallots Value Chain
1	Farmers	Farmers can be divided into two groups : - Farmers seed breeder: act as provider of shallot seeds and distribute them to shallot growers. In medium land, especially in the Cijurey farmer groups, there is one shallot seed breeder of *Bima Curut* variety. - Farmers/shallot growers: people who do the shallot cultivation, whether as sharecroppers or tenant farmer.
2	Farmers Group	A place to collect shallots from farmers and also the place for coordination and coaching.
3	Usurer	Usurer has a role in purchasing shallots from farmers, processing the harvest and post-harvest, but they are only 10% of the farmer.
4	Wholesalers	They purchase yields from farmers, do the drying, packing, and deliver the products to the destination market.

Notes: Primary data

b) Supporting Actors

The supporting actors are those who indirectly involved in the shallot value chain in Majalengka. Fertilizer and pesticides/agroinput minimarket, Department of Agriculture, Department of Trade and Industry, Banking, Counseling agency of Agriculture, Fisheries, and Forestry), Brokers, Wholesalers, Wholesale market traders in Java, Wholesale market traders outside Java, and Retailers. But there is not any processing industry, in the medium land. The actors who support the shallot value chain can be seen in Table 3.

Table 3. Supporting Actor of Shallot Value Chain

No	Actors	Role in Shallots Value Chain
1.	Partner Institution	Partner Institutions is *Kapalindo*, an organization of *LPPM UNPAD* which markets and accommodates the agricultural products from farmer groups to Hypermart and Hero supermarket
2.	Agro-input minimarket	Serve to purchase the production facilities for shallot farmers.
3.	Department of Agriculture	Institution responsible for agricultural policy, channeling assistance and information from the government
4.	Department of Industry and Trade	Institutions responsible for trade policy of agricultural products, supporting agent and delivering information from the government
5.	Banking	Financial institutions that lend money to the actors of shallot value chain for working capital or investment.
6.	*Bank Indonesia*	Provide training of organic fertilizers and pesticides, field schools, and workshops at *Bank Indonesia*, Cirebon
7.	Counseling Agency of Agriculture, Fisheries, and Forestry)	Government agencies in the field of agriculture responsible to provide technical guidance on the value chain of shallot at district level
8.	Seed Agency	Agency that provides seed certification and training on seed-making
9.	Central Market/Wholesale Traders (CMWT)	CMWT can be divided into two, namely the wholesale market in Java and outside Java: - Java wholesale markets: receive shallot supply from the merchant/traders shipper (wholesaler) and distribute them to central market in Java - Wholesale markets outside Java: receive shallot supply from the merchant shipper (wholesaler) and distribute them to central market outside Java
10.	Local/Traditional Market Traders	Traditional traders around Majalengka (for example, in Maja market) and obtain shallots from merchant shipper (wholesaler) and usurer
11.	Cooperative	The existed cooperative which only takes a role in technical assistance.

Notes: Primary data

Management of Shallot Agribusiness Value Chain in Medium Land of Majalengka

1). Value Chain Activities at Shallots Farmer Level

a. Planning Process at Shallot Farmer Level

Production planning is very important in agribusiness so the product can meet the expectation. Planning activities undertaken by shallot farmers include the planting site selection, determination of shallot varieties to be planted, planting schedules, financial planning, and marketing.

The location of shallot research in medium land took place and get samples from Cijurey farmer groups. The suitable shallot variety planted in that area is *Bima Curut*. Planting schedules have never encountered an error. In terms of financing, Cijurey farmer groups have easy access to financial institutions, but the number has not been sufficient enough.

The average yields obtained by farmers is around 5-7 tons/ha. Of the entire crop, 75% is made as shallot consumption and 25% is used as seed for their own use or for sale to other farmers by selling them first to breeder farmers in farmer groups. Of overall shallots consumption sold, 40% went to small wholesalers and 60% sold to big wholesalers which will then be sold to the wholesale market. Payments to farmers are cash, but if there is a delay it won't be more than 5 days.

b. Procurement Process at Shallot Farmer Level

Procurement of production for farmers is quite limited, especially for subsidized fertilizer. However, the supply of organic fertilizer is quite easy since it has lot in numbers and being purchased from local farmers. For seed procurement, farmers usually buy from the existing seed breeders. *Cijurey* farmer groups have been able to produce their own shallot seed. However, there is only one farmer who has already certificate of *Bima Curut* variety. The requirement for shallot seed is good quality with its proper size (not too big or too small), good leaves, no foul, and the water

content only 30% so that it can be stored for 2-3 months. Shallots for seed, should be 40-50 days minimum of age after harvesting or drying. To be used as seeds, shallot bulbs are simply sun drying manually, by hanging them on racks in the kitchens or simple storage building owned by farmers. But when the rainy season comes, the drying process of shallot bulbs is done by the smoking system in order to stay dry and to avoid rot. The need of seed per hectare as much as 800 kg with the price of ready-to-plant seeds of IDR 50,000/kg.

In addition to the procurement of farming facilities, farmers are still experiencing difficulties in the procurement of capital or access to credit to financial institutions. The constraints that occur in the process of accessing credit is still uneven distribution of formal credit institutions to farmers, the level of inadequate human resources of farmers in the understanding of existing credit in financial institutions [11].

Onion farmers in Majalengka regency are also able to access credit to financial institutions. The factors that influence farmers in the selection of micro finance institutions as a source of onion farming system are the level of education of farmers, farmers experience in farming, the number of family dependents, the frequency of credit taking, the perception of farmers, the income of farmers and the amount of credit or loan [8].

c. Production Process at Shallot Farmer Level

Production process carried out by farmers started from land preparation, tillage (mounds manufacture, ditches, improving soil texture/ridges), planting, replanting and maintenance of plants (watering, fertilizing, pest and disease control, and weeding). After two months (60-65 days), the shallots are ready to be harvested. The characteristics of ready-to-harvest shallots are wilted yellow scallions with slightly visible bulb shallots on the soil surface. The productivity of shallot in the rainy season is 5-7 ton/ha, while in the dry season it can reach 13 ton/ha. Shallot production is lower in the rainy season due to the fact that the plants should not get too much water or it would be rot.

For shallots which will be used as seed, once they ready to be harvested, farmers will do the revocation and binding process which is done by themselves or labor inside or outside the family. The shallots, then, dried under the sun outside the house. Farmers usually use a modification of motorcycle and rickshaw, for transporting from farm to farmer house. The drying process is carried out for 7-10 days with one person labor to flipping the shallots. Afterwards, the shallots will be removed the residual dirt to clean and avoid the rot. The next step is to storage on shelves in the kitchen or in storage warehouse equipped with manual furnace underneath and get fungicides spray only one time. After 2-3 months storing, shallots are ready to be used as seed. The seed normally fifty percent shrinkage, and the price of shallot seeds ready to plant is around IDR 50, 000/kg. While askip shallot is only IDR 24,000-36,000/kg and consumption shallots are IDR 20, 000.

d. Distribution process at Shallot Farmer Level

Farmers in the medium land of Majalengka usually sell their crop yields using downpayment system (around 10% of farmers) and the yields are distributed to the wholesalers, partner agencies, and other destination markets, and the rest 90% are direct selling to the buyer. In down payment system, the farmers do not have to spend money for harvesting, distribution, and post-harvesting process. While for direct selling, they have to pay up for harvesting, distribution, and post-harvesting cost.

e. Return Process at Shallots Farmer Level

At farmer level, there is usually no product return (shallots, post-harvest tools etc.) because the farmers do not apply the contract system with buyers. *Cijurey* farmer groups had held a contract with *Kapalindo* and *marked up* the selling price up to IDR 20,000/kg.

2). The Value Chain Activities at Traders Level

a. Planning Process at Traders Level, conducted at the level of trader or wholesalers. Farmer groups can act as wholesalers, and receive shallots from members. The planning process at wholesalers level includes planning contract with partner institutions, namely *Kapalindo*, who buys crops from farmers' groups that act as wholesalers. Previously, *Kapalindo* has done the planning and

supervising, before planting, harvesting, and post-harvesting. This is done in order to obtain the expected yields.

Farmers do the shallot sorting and grading to determine a proper crop for *Kapalindo*, and the off grade will be sold directly to local market. The payment will be made after farmer groups have sent yields and fulfill some administrative files. That payment will be channeled back to farmers' partner as funds to purchase the yields. Thus, in general, capital financing of farmer group partners which paid each harvest with a profit margin was based on the agreement that has been set before. Currently, the cooperation between farmers' groups and *Kapalindo* is not run smoothly due to the constraints of payments from supermarkets (*Hypermart* and *Hero*), that will impact to the farmers as growers.

Shallot yields are sent by the wholesalers to *Kapalindo* and central market in Java and outside Java. The deal does not always in written, but based on direct communication through mobile phones. The wholesalers plan the shallot supply from the farmers with consideration of post-harvest cost reduction that must be spent. In addition to supply, traders must also plan the cost for the payment and distribution to central market.

b. Procurement Process at Traders Level

Procurement at traders level includes shallot supply, capital, and labor. Shallot supply should be adapted to the intended market. Generally, the shallots for *Kapalindo* must meet the grade they desired and require special 5 kg packing. While the shallots for the central market has no difficulty in grade determination because there are no prior agreements.

The volume of shallot purchase at traders level can reach 70 tons per cropping season. In one shipment to wholesale markets in Java, it can reach 5-7 tons per day, while outside Java is 7-8 tons per day. Shallot price at farmer level is between IDR15,000 – 20,000/kg with the lowest price are IDR 7,000-10,000/kg. Trader or wholesalers usually take profit of IDR 500-2,000/kg, while usurer get IDR 1,000-2,000/kg. Traders pay in cash because farmers fear of fraud and the urge to fulfill their daily needs, and this will be crucial for traders/wholesalers because of capital procurement to pay cash to the farmers, so they get it from *Bank Rakyat Indonesia (BRI)* through the small business loan system (*KUR*) that offers 3% interest within 4 months period. In addition to providing supplies and capital, another important thing is the provision of labor, that mostly needed at post-harvest stage. Starting from the process of revocation of shallots in the field, transporting to the storage, drying, sorting, packaging, and shipping. The shipping has greatly affect the fluctuations price of shallots in traditional market. If the price is not comparable with shipping, because the shallot price is lower, they will delay to send so it would affect shallot supply. When the shallot is rare in the market, then the price will go up automatically in accordance with the laws of the market mechanism.

c. Production Process at Trader Level

The high or low production of shallot is very influential for traders. If the shallots supply in medium land of Majalengka is deficient, the traders or wholesalers would search in other areas inside (upper and lower land) and outside Majalengka. To maintain the supply, wholesalers will always have to ensure the availability of shallots through intermediaries who go around to find shallots ready for harvesting.

d. Distribution Process at Traders Level

Traders or wholesalers conduct distribution activities starting from farmers' lands to the warehouse or from the usurer's stall to be sold to the central market or partner institution. The freight cost is usually charged to the traders. Drying shallots are vary depending on the destination market. Central markets outside Java, need the completely dry shallots to avoid rot due the long distance shipping, and for Java central markets need the cleaned (without leaves and root) and blowered. The packaging and weighing using netted sacks and transported by trucks; and it will get 50% shrinkage since the harvest beginning until the end of the distribution process.

e. Returns Process at The Traders Level

Return process from traditional market to traders is almost none.

3). The Value Chain Activities at Usurer Level

a. Planning Process at Usurer Level

Planning activity for usurer is to ensure the availability of shallot at the farmers' level. Generally, the risks that should be taken by usurer is the difficulty to get shallot from farmers, especially in September and October on rainy season. Farmers are reluctant to grow shallots on those months because of the high risks, such as pests and diseases. If the shallot in Majalengka is rare, usurer would search outside Majalengka. Other risks that should actually be planned is financing. Usurer have to pay cash to farmers, while they were paid after 3-7 days delay by traders or wholesalers. The farmers that sell by this system get more prices than the other system.

b. Procurement Process at Usurer Level

Procurement process at the usurer level includes shallot supply, capital, and labor. Shallot supply usually getting hard in the rainy season. For capital procurement, usurer usually got a loan from banks. Providing labor needs full attention because usurer requires much labor for harvest and post-harvest processes, ranging from revocation, transportation from the field to concentrating place, by three wheels vehicle, unloaded process at the stall, drying, and post-harvest handling.

c. Production Process at Usurer Level

At production process, usurer must be careful to avoid the risk of loss, because usurer buying shallots from farmers before the harvesting time. After an agreement with the farmers settled, usurer prepare for labor to harvesting and bring it to drying stall. The length time of shallot drying, depends on the market destination. After drying, the next processes are leaves taking, blowering, packing, weighing, transporting and distributing. The cost is borne by the traders or wholesalers.

d. Distribution process at Usurer Level

Distribution is done during transporting process from the field to the drying place which requires one day because the location is not so far from drying place. Freight costs depend on the region of origin.

e. Returns Process at Usurer Level

There is no product return process at this level, because transactions with the traders conducted in retail. All the damage and defects after the transaction are borne by the trader or wholesalers.

3. Cost Analysis of Shallots Farming

In medium land of Majalengka, shallot farming can be done three times a year during the rainy and dry season with interspersed of the rice crop and other vegetables. Some of the shallot farmers in Majalengka regency, especially in medium land, do their own harvest while some submit it to usurer. Harvest and post-harvest submitted to usurer accounted less than 10%, and the analysis of the shallot farming cost per one hectare.

Table 4 shows the average yield per hectare. Yields at rainy season are lower compared to the dry season,because the level of rot quite high (around 20%) under normal conditions. In abnormal conditions, a lot of shallots would became waste. Moreover, there has not any shallot processing yet. in the medium land.

The results calculation of shallot farming in the lowlands of Majalengka regency shows that the value of R/C ratio is 1.91 means that every IDR 1 spent, will add revenue by IDR 1.91. The value of R/C > 1 indicates that the work done by shallot farmers deserve to be pursued. B/C ratio value of 0.91 means that every IDR 1 spent, will provide revenue of IDR 0.91, and the B/C ratio value > 0 indicates that the work done by shallot farmers is profitable.

Profit Margin

Based on Figure 1, there are five patterns of shallot marketing channels in medium land of Majalengka as follows:

——————→ Pattern 1 (Farmer-Farmers' groups-Partner-Modern Market/Supermarket)

---------→ Pattern 2 (Farmer- Usurer - Wholesalers-Traditional Market)

– – – – → Pattern 3 (Farmer- Usurer - Wholesalers-Central Market)

.....→ Pattern 4 (Farmer-Wholesalers-Traditional Market)

▪▪▪▪▪▪▪→ Pattern 5 (Farmer-Wholesalers-Central Market)

In order to determine the most appropriate marketing channels which provide justice, it can be seen from the level of shallot profit margin per kg in every marketing chain [7].

Table 4. Analysis of Shallots Farming at Cijurey Farmers' Group

No	Description	Total	Average Prices	Value (IDR)
A	**Variable cost**			
1	Seed (kg)	687.5	30,000	20,625,000
2	Fertilizer			
	a. Organic fertilizer (kg)	2,637.5	1,000	2,637,500
	b. SP-36 (kg)	125	2,000	250,000
	c. KCL (kg)	100	3,000	300,000
	d. Urea (kg)	143.75	2,000	287,500
	e. ZA (kg)	93.75	1,400	131,600
	f. NPK (kg)	125	10,000	1,250,000
	g. Leaves fertilizer (lt)	1	75,000	75,000
	Total of Fertilizer Cost			4,931,600
3	Pesticides			3,155,000
4	Labor			
	a. Men Labor	469.25	70,000	32,847,500
	b. Women Labor	200.5	40,000	8,020,000
	Total of Labor Cost			40,867,500
Total of Variable Cost				69,579,100
B	**Fixed Cost**			
	a. Land Lease			10,000,000
	b. Tax			40,000
Total of Fixed Cost				10,040,000
Total of Production Cost (A + B)				79,619,100
Total Revenue		10,138	15,000	152,070,000
Total Income				72,450,900
R/C				1.91
B/C				0.91

Notes: Primary data (own calculation)

Table 5. Analysis results of Shallot Agribusiness Marketing Margin in Medium Land of Majalengka

Pattern	1	2	3	4	5
Farmer					
- Selling Price	20,000	11,000	11,000	12,000	13,000
- Margin	12,000	3,000	3,000	4,000	5,000
Usurer					
Selling Price		14,000	14,000		
- Margin		3,000	3,000		
Wholesalers					
- Selling Price		16,000	18,000	16,000	19,000
- Margin		2,000	4,000	4,000	6,000
Partner Institution					
- Selling Price	30,000				
- Margin	10,000				
Traditional Market					
- Selling Price		19,000		19,000	
- Margin		3,000		3,000	
Total Margin	22,000	11,000	10,000	11,000	11,000

Notes: Primary data (own calculation)

Table 5 shows the results of analysis of profit margins in each shallot marketing channel. The highest profit margin is on channel pattern 1; because it has short marketing chain. However, cooperation with partner institutions was ceased due to the payment constraints. It is unfortunately, because the cooperation has profit potential for farmers. On channel pattern 1, farmers did markup the price IDR 20,000/kg with the aim to minimize the shallot price fluctuations in the market. The lowest profit

margin is in channel pattern 3 of IDR 10,000 due to the long marketing channels.
The level of marketing margin is used to measure the efficiency of the marketing system. The higher the marketing margin, the more inefficient the marketing system [6].

CONCLUSIONS

The perpetrators of onion agribusiness value chain in medium lands of Majalengka district can be divided into two, namely the primary actors and supporting actors. Primary actors include farmers, farmer groups, collectors and clearing traders. While the supporting actors who are not intentionally involved in the process of onion value chain such as store of agricultural production facilities, agricultural service, trade and industry, banking, BP3K; while the value chain activity is divided into three namely the value chain activities at the level of farmers, traders and usurers, each activities are planning, procurement, production, distribution and return.
The shallot agribusiness value chain in medium land of Majalengka shows need any improvements in terms of management for both primary and supporting actors. The effort made by the shallot agribusiness value chain actors is profitable and feasible to be developed. Majalengka medium land has 5 (five) shallot marketing channel patterns. The highest profit margin exists is channel pattern 1 (one), namely farmers-farmers' groups-partner institutions-consumer.

REFERENCES

[1]Adnan, K.M.M, Rahman, M.M., Sarker, S.A., 2014, Marketing Channels and Post Harvest Practices of Onion: A Case of Bogra and Joypurhat District in Bangladesh. Universal Journal of Agricultral Research. 2(2):61-66
[2] Balai Penelitian Tanaman Sayuran (Balitsa), 2017, Keindahan Hamparan Bawang Merah di Dataran Tinggi Majalengka. [The beauty of Shallot Field] Lembang. Pp. 1-5.
[3] Basuki, R.S., 2014, Identifikasi Permasalahan dan Analisis Usahatani Bawang Merah di Dataran Tinggi Pada Musim Hujan di Kabupaten Majalengka (Problem Identification and Shallots Farming Analyze in the Highland Rainy Season in Majalengka District). Jurnal Hortikultura. 24 (3): 266-275
[4] Hanafie, R., 2010, Pengantar Ekonomi Pertanian. Penerbit ANDI Yogyakarta. [Introduction to Agribusiness Economic, Andi Publisher, Yogyakarta] p.5, 8.
[5] Kaplinsky, R. and M. Morries.2001. A Handbook for Value Chain Research, <http://www.ids.ac.uk/ids/global/valchn.html#manuals > (Accessed on June 02, 2013).
[6] Kusmana, R.S. Basuki, Kurniawan, H., 2009, Uji Adaptasi Lima Varietas Bawang Merah Asal Dataran Tinggi dan Medium pada Ekosistem Dataran Rendah Brebes [Five shallot variety from Highland and Medium Land in Brebes Low land]. J. Hort, 19 (3): 281-286.
[7] Ministry of Agriculture and Cooperatives, 2008, Final Report-Product Chain Study Onion. Department of Agriculture. Biratnagar. Nepal.
[8]Rahayu, L., 2015, Aksesibilitas Petani Bawang Merah Terhadap Lembaga Keuangan Mikro Sebagai Sumber Pembiayaan (The Shallot Farmer's Accessability to Microfinance Institution as The Source of Financing.). Jurnal Agraris. 1(1):52-60.
[9]Sabur, S.A, Hossain, M., Palash, M.S., 2006, Marketing System, Seosonality Prices and Integration of Onion Markets in Bangladesh.Bangladesh J. Agric. Econs XXIX, 1 &2: 93-105
[10]Sultan, A., Saurabh, 2013, Acheieving Sustainable Development Through Value Chain. International Journal of ManagingValue and Suply Chain. 4(2): 39-46
[11]Supanggih, D., Widodo, S., 2013, Akses Petani terhadap Lembaga Keuangan. (The Farmer's Accessability to Finance Institution). Jurnal Agriekonomika 2(2):163-173