AN OPPORTUNITY AND POLICY TO IMPROVE PERFORMANCE OF PEANUT AGRIBUSINESS IN SOUTH SULAWESI

Peluang dan Kebijakan untuk Meningkatkan Kinerja Agribisnis Kacang Tanah di Sulawesi Selatan

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ABSTRAK

Agribisnis kacang tanah di Provinsi Sulawesi Selatan sudah lama berkembang walaupun belum optimal. Pada musim panen kacang tanah produksi regional yang berasal dari lahan sawah maupun lahan kering bisa digunakan untuk kebutuhan lokal, bahkan diperdagangkan antarpulau. Jika musim panen sudah lewat, pedagang kacang tanah akan memenuhi kebutuhan lokal dengan mendatangkan kacang tanah dari luar pulau dan impor. Produksi di tingkat petani mengalami hambatan seperti penggunaan benih yang kurang berkualitas, penggunaan pupuk dan sarana produksi lainnya tidak optimal, dan infrastruktur jalan yang buruk. Pungutan tidak resmi banyak dalam pengangkutan kacang tanah dari sentra produksi ke pasar di perkotaan. Pedagang kacang tanah umumnya membeli kacang tanah dari petani berupa polong segar atau polong kering. Keuntungan pedagang besar diperoleh melalui kegiatan pasca panen dengan mengolah kacang tanah polong segar atau polong kering menjadi biji kering. Pengecer di perkotaan menjual kacang tanah dalam bentuk polong segar maupun biji kering. Konsumen kacang tanah dalam bentuk biji kering sebagian besar adalah pabrik pengolahan kacang tanah setempat. Akses kredit untuk petani akan bisa meningkatkan produksi kacang tanah melalui pembelian sarana produksi yang lebih baik dalam hal kuantitas dan kualitas. Pedagang seharusnya bisa difasilitasi akses kredit program untuk permodalan agar skala usahanya meningkat dan biaya operasionalnya lebih murah. Kemitraan antara petani dengan perusahaan pengolah kacang tanah dapat meningkatkan kinerja agribisnis kacang tanah di Provinsi Sulawesi Selatan.

Kata kunci*: agribisnis, kacang tanah, produksi, kemitraan*

ABSTRACT

Peanut agribusiness in South Sulawesi does not develop optimally. During harvest season the peanut production of this province is sufficient to meet local demand and is sold for inter-island trade. During off-season local demand for peanut is fulfilled through inter-island trade and import. The traders usually buy fresh pods and dried pods from the farmers and traders' profits are earned through processing them into dried beans. Retailers in urban areas sell fresh pods and dried beans. The main consumers of dried beans are local peanut processors. Credit access for the farmers may improve quantity and quality of peanut production. Roads improvement in peanut producing centers may accelerate peanut transportation and reduce its transportation cost. Illegal retribution should be removed. The traders need credit access for their business scale improvement.

Partnership between the farmers and the peanut processing companies will enhance peanut agribusiness in South Sulawesi Province.

Key words: *agribusiness, peanut, production, partnership*

INTRODUCTION

Currently, the government still emphasizes food crops development policy on increasing rice production compared to those of other food crop commodities. All development incentives and sources are prioritized to develop rice industry as the main staple food. Thus, it leads to less development of secondary crops and their yields are far below their potentials. However, increased production of secondary crops will contribute significantly in improving the farm households' incomes, strengthening food security, creating business for private sectors to invest in agricultural-related business, especially the small and medium enterprises, in the secondary crops processing business.

Beside known as the major rice-producing province, South Sulawesi is also well known as the main secondary-crops producing area. Among the potential secondary crops in this province is peanut. However, peanut production in South Sulawesi decreased from 41.8 thousand tons in 2006 to 39.7 thousand tons in 2007. Bone Regency is the main peanut producing area with harvested areas of 15,808 hectares and production of 15,223 tons in 2006. Peanut harvested area in this Regency in 2007 decreased to 12,871 hectares and the production declined to 13,206 tons. This Regency is also the main rice producing center in this province.

Although the peanut productivity in South Sulawesi was below the average national yield (1.2 ton per hectare), the share of peanut production to total secondary crops production is higher compared with that of soybean. Low productivity in farm level is due to lack of knowledge in peanut farming, namely lower application rates of inputs such as fertilizers and seed, less fertile land, pest attacks, improper weed control, and also low quality of seed. By introducing good agriculture practices, it is possible to increase productivity of peanut up to 3.5 ton per hectare of fresh pods or equal to 2.0 ton per hectare of dried peanut pods with its revenue to cost (B/C) ratio of around 1.98[1]. It indicates that peanut is potential to be used for raw material of food-processing agro industry which will create employment and improve value added in rural areas. The advantage of growing peanut compared with other secondary crops is the function of its nitrogen, as one of important nutrients, in peanut crop that contributes to soil fertility. By applying crops rotation, for example with paddy, the structure of nutrient content in the soil could be restored.

[1] http://sulsel.litbang.deptan.go.id, Rabu, 30 April 2008.

From the demand side, use of peanut as a raw material for food industry has a promising prospect. Share of food and beverage industry is almost 46 percent from total value added of the medium and large scale industry. Food and beverage industry is potential to fulfill domestic demand and export market.

To boost peanut agribusiness in South Sulawesi some indicators should be improved. Those indicators include increased production, enhanced scale of economy of peanut industry, and improved efficiency of supply chain management. This paper aims to explore the supporting factors in peanut agribusiness in this province and necessary policy to take, such as yield improvement, all-year production distribution, and processing and marketing efficiencies.

SUPPLY OF AND DEMAND FOR PEANUT IN SOUTH SULAWESI

Peanut Production

Peanut production both at national and provincial levels is not prioritized by the government in food crops development. So far, the government still prioritizes rice, corn, and soybean. Food crops prioritized by the Food Crops and Horticulture Service in South Sulawesi Province were rice, corn, soybean, citrus, mangostene, mango, bread fruit, durian, and shallot. That is no wonder if national peanut production including in South Sulawesi does not reveal an impressing trend. In 2009 total national peanut harvested area was 622,149 hectares with its production of 776,596 tons. South Sulawesi province in 2009 ranked the fifth in terms of peanut harvested areas and production with each of 25,785 hectares and 32,331 tons (Table 1). Peanut yield in this province was equal to that at national level, namely 1.25 tons per hectare of dried bean. Share of peanut production of this province was 4.2 percent to national production. The first to fourth ranks of peanut production were East Java (216,474 tons), Central Java (162,430 tons), West Java (89,454 tons), and Yogyakarta (65,893 tons) provinces (BPS, 2010).

During the period of 2007-2009 the growth rate of national harvested area was -2.96 percent/year while that in South Sulawesi was -14.39 percent/year. National growth rate of peanut production was 0.78 percent/year and that in this province was only -10.46 percent/year. During the period of 2002-2007 growth rate of peanut yield in South Sulawesi province (3.45% per year) was higher than that at national level (2.18 % per year).

Bone Regency in 2009 contributed 25,083 tons or 77.2 percent of total peanut production of this province. The other peanut producing centers in this province were Sinjai, Wajo, Gowa, and Bulukumba. For the period of 2007-200 peanut production of South Sulawesi decreased from 41,759 tons to 39,738 tons or its growth rate was -4.84 percent. The production decline was mainly due to

decrease in harvested area (-7.52%) even though the yield grew by 2.90 percent. Bone Regency was one among the 11 regencies which experienced negative growth rate of peanut production.

Table 1. Harvested Area, Yield, Production, and Trends of Food Crops by Region, Indonesia, 2009

No.	Region	Harvested Area (2009)	Trend*) (%/year)	Yield (ton/ha)	Trend*) (%/year)	Production (ton)	Trend*) (%/year)
1	Indonesia						
	Peanut	622,149	-2.96	1.25	2.18	776,596	-0.78
	Corn	4,156,706	6.98	4.23	7.53	17,592,309	15.02
	Soybean	721,499	23.40	1.35	2.18	972,945	25.59
	Rice	12,883,576	2.90	5.00	3.05	64,398,890	5.93
2	South Sulawesi						
	Peanut	25,785	-14.39	1.25	3.45	32,331	-10.46
	Corn	299,669	6.75	4.66	11.71	1,395,742	18.80
	Soybean	26,632	43.41	1.55	-0.85	41,279	41.48
	Rice	862,017	5.75	5.02	3.09	4,324,178	8.95
3	Bone Regency						
	Peanut	14,583	29.25	1.72	-1.36	25,083	3.28
	Corn	294,810	3.30	4.48	9.98	1,320,000	16.40
	Soybean	16,258	3.86	1.71	4.15	27,801	21.98
	Rice	840,853	0.54	4.92	2.13	4,139,492	6.80

Sources: BPS (2009), BPS South Sulawesi (2009)
Notes :*) Trends for 2007-2009

Out of 23 regencies/municipalities producing peanut, 15 regencies/ municipalities had yields greater than that of provincial average (1.168 tons/ha). Those 15 regencies/municipalities were Gowa, Pangkep, Luwu, Wajo, Tana Toraja, Sidrap Soppeng, Enrekang, Barru, Pinrang, Luwu Timur, Palopo, Makassar, Takalar and Selayar (Figure 1).

Bone Regency produced the highest peanut volume among other the regencies/municipalities. However, high peanut production of Bone came from biggest harvested areas because its yield (1.026 tons/ha) was lower than that of provincial average. Harvested area of peanut in Bone in 2007 was 12,871 hectares or triple than that in Sinjai Regency.

Higher harvested areas and low yields were also experienced by Sinjai and Bulukumba Regencies. Both regencies had peanut harvested areas of 4,283 and 3,904 hectares, respectively, and their yields were below provincial average, namely 0.956 ton/ha and 0.677 ton/ha.

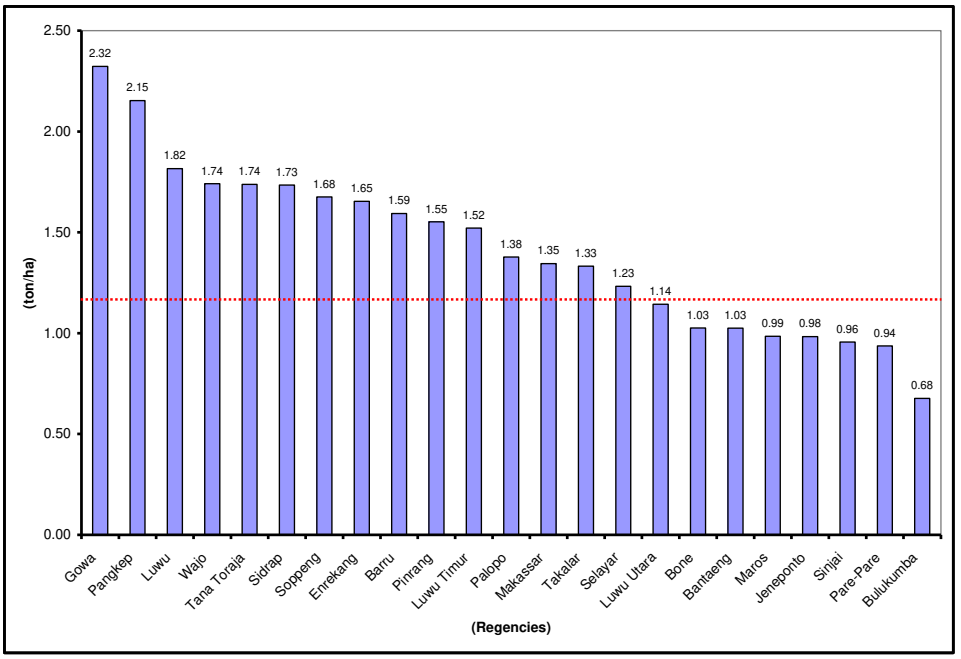

Figure 1. Peanut Yields by Regency in South Sulawesi Province, 2007

Along with land use competition among food crops at national level, it was also revealed in South Sulawesi Province. Impacts of development program on rice, corn, soybean production increase through incentives of inputs subsidy were increases in harvested areas of those commodities and the decrease of peanut harvested areas.

Bone Regency has the biggest harvested area of peanut in this province. Nevertheless, harvested area in this regency kept decreasing since 2006 to 2008. In 2006 the peanut harvested area in Bone was 15,213 hectares and it decreased to 14.795 hectares and 10.17 hectares, respectively in 2007 and 2008. Due to more favorable climate, i.e. higher rainfall, peanut grown in upland areas tended to expand for the period of 2006-2008. On the other hand, peanut grown in lowland areas tended to decline because farmers preferred to planting rice and corn.

Both yields at upland and lowland in this regency increased from 2006 to 2007, but decreased in 2008. However, average yield in 2008, i.e. 1.57 tons/ha, was much higher compared with those of provincial (1.4 tons/ha) and national (1.17 ton/ha) levels.

Costs and Income of Peanut-Mixed and Single-Crop Farms

Peanut is the fourth food crop priority after rice, corn, and soybean. Types of food crops grown by the farmers on dry season after rice were mainly

based on their potential profits. In some regencies producing peanut, e.g. Maros and Bone, peanut was already grown since a long time ago. In both regencies, peanut was grown either in lowland or upland during second planting season after rice. Peanut could be planted in monoculture or mixed cropping. The farmers in Bone used to grow peanut as a mixed cropping, but those in Maros grew it as a single crop. Local varieties were commonly adopted in both regencies even though the farmers previously adopted Gajah variety, i.e. one of improved variety released by Bogor Research Food Crops Institute. Farmers-own seed production could be grown until five generations and, thus, the variety adopted was just called as local variety.

Peanut mixed-cropping with corn was common in Bone Regency, but peanut as a single crop is usually grown in Maros Regency. Yields of single-crop peanut and mixed cropping were each of 1.152 tons and 2.419 tons per hectare of fresh pods which were equal to 35 – 40 percent of dried pods.

Low yields of peanut in the study area were due to: (1) low adoption of improved varieties; (2) less intensive crop management because of lack of knowledge on peanut farming; (3) lack of fertilizers application; and (4) pests and diseases attack. Other constraints faced by the farmers were lack of capital for inputs purchase, low bargaining position in peanut marketing, and limited market-opportunities for unprocessed peanut. Furthermore, some remote areas had poor road infrastructure which increased transportation cost. This resulted in more profit gained by the traders rather than by the farmers especially during harvest season lasting from October to March when peanut supply was abundant.

Table 2. Cost Structure of Peanut Mixed Cropping in Bone Regency, South Sulawesi, 2009 (per hectare)

No.	Item	Volume (kg)	Price (Rp/kg)	Value (Rp)	Percentage (%)
A.	Cost				
1.	Seed	80	8,000	640,000	42.95
2.	Fertilizers				
	Urea	20	2,400	48,000	3.22
	Phonska	0		0	0
	SP-36	0		0	0
	ZA	40	3,000	120,000	8.05
3.	Pesticides	2	55,000	110,000	7.38
4.	Labor	24	25,000	600,000	40.27
5.	Other costs			20,000	1.34
	Total Costs			1,490,000	100.00
B.	Income	1,258	2,885	3,600,000	
C.	Profit			2,110,000	
D.	B/C ratio				1.42

Source: Sayaka *et al.,* (2009)

Total costs for peanut farm as a mixed cropping was Rp 1,490,000. Farm gate price of wet pods was Rp 2,885/kg. Thus, peanut farm business earned gross income of Rp 3,600,000/ha with net profit of Rp 2,110,000 and B/C ratio of 1.42 (Table 2).

Yield of single-crop peanut was 1,875 kg/ha of fresh pods with its price of Rp 3,000/kg. The farmers got gross income of Rp 5,625,000 and they had to spend total costs of Rp 1,750,000. Thus, net profit of single-crop peanut farm was Rp 2,894,000/ha (Table 3).

Table 3. Cost Structure of Peanut Single Cropping in Maros Regency, South Sulawesi, 2009 (per hectare)

No.	Item	Volume (kg)	Price (Rp/kg)	Value (Rp)	Percentage (%)
1.	Seed	80	8,000	640,000	23.43
2.	Fertilizers				-
	Urea	20	2,400	48,000	1.76
	Phonska	50	2,000	100,000	3.66
	SP-36				-
	Topsil	1	33,000	33,000	1.21
3.	Pesticides	2	60,000	120,000	4.39
4.	Labor			1,750,000	64.08
5.	Other costs			40,000	1.46
	Total Costs			2,731,000	100.00
	Income	1,875	3,000	5,625,000	
	Profit			2,894,000	
	B/C ratio				1.06

Source: Sayaka *et al.,* (2009)

Cropping Patterns of Food Crops

In general, cropping patterns depend on types of soil and irrigation availability. Specifically on upland, cropping patterns depend on dry and wet months in a year. Farmers usually grow horticulture and secondary crops on dry land. Bone Regency produces many types of food crops, e.g. rice, corn, soybean, peanut, sweet potato, cassava, mungbean, and sesame. In lowland during wet season which lasts from October to March, most commonly grown food crop is rice. This food crop is usually grown in monoculture. Farmers could grow rice twice a year followed by corn, peanut, and soybean during dry season (April-September). For the rain-fed wetland where no irrigation water available during dry season, farmers could only grow rice once a year and they grow secondary crops for the rest of the plantings seasons. Sometimes peanut and corn are grown in mixed cropping. Some farmers could grow rice all year around (three times) where irrigation water is sufficiently available.

In upland, rice is grown once a year during wet season in monoculture. During second planting season farmers grow corn, peanut, soybean, sesame. Corn

is either grown in monoculture or mixed-cropping with peanut. Few upland farmers cultivate peanut in monoculture. The next season the upland is usually fallow due to drought which makes farmers hard to grow crops (Figure 2).

Wet Season (October – March)		Dry Season (April – September)
Lowland		
Rice	Rice	Rice
Rice	Rice	Secondary Crops (Corn + Peanut); (Peanut); (Soybean)
Rice	Secondary Crops (Corn); (Corn + Peanut); (Peanut); (Soybean)	

Upland		
Rice	Secondary Crops (Corn); (Corn + Peanut); (Peanut) (Soybean) (Sesame)	Fallow

Figure 2. Cropping Patterns of Food Crops in Bone Regency (Sayaka *et al.,* 2009)

Peanut peak season in South Sulawesi takes place from February to April (Figure 3). During this peak season the harvested area was 20,941 hectares or 60.5 percent of total harvested area of 34,011 hectares in overall South Sulawesi in 2007. The remaining harvested areas were distributed on the other months of the year. Peanut production in the peak season was 23,513 tons of dried bean or 58.2 percent of total production in 2007.

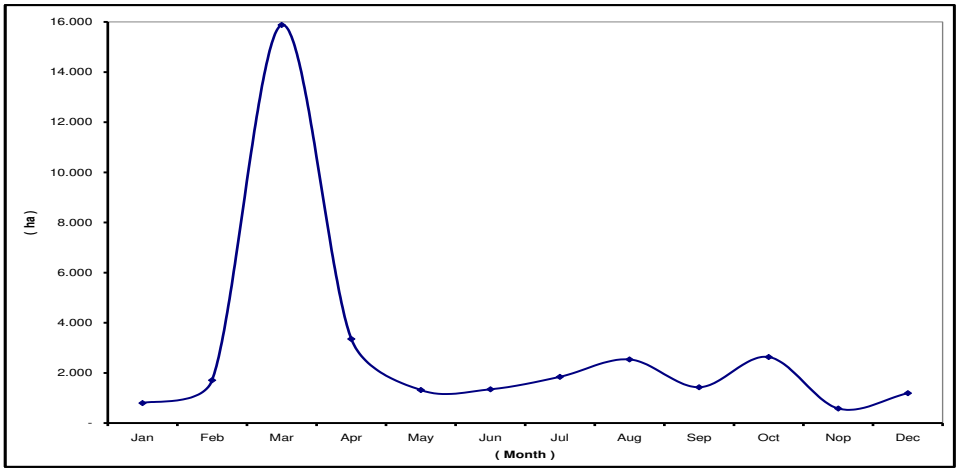

Figure 3. Peanut Harvest Pattern in South Sulawesi, 2007

Bone, Sinjai and Wajo Regencies had the same harvest patterns, namely from February to April. Bulukumba and Gowa Regencies had different harvest patterns (Figures 4 and 5). Those three regencies supplied 18,167 tons or 77.3 percent of total peanut production in the province (of 23,513 tons) during the peak season.

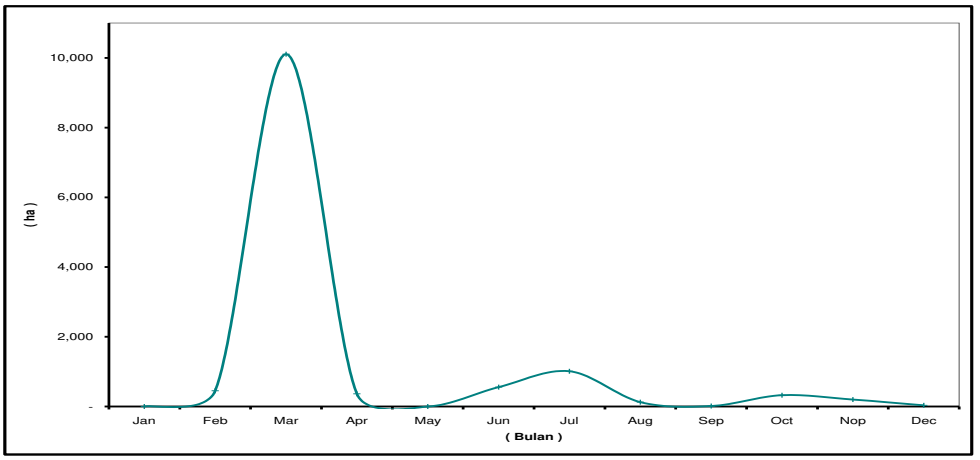

Figure 4. Peanut Harvest Pattern in Bone Regency, 2007

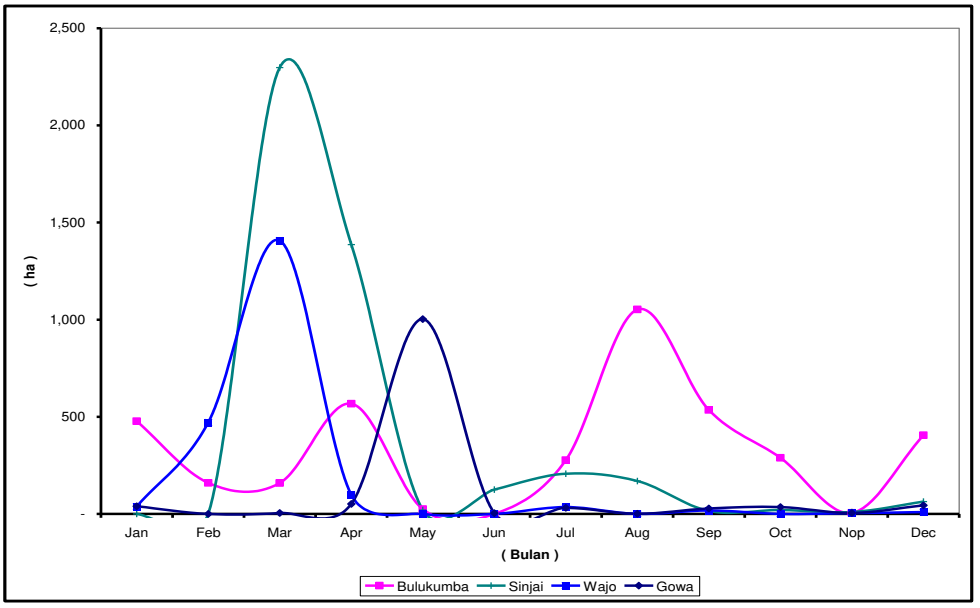

Figure 5. Peanut Harvest Patterns in Bulukumba, Sinjai, Wajo and Gowa Regencies, 2007

Peak season in Bulukumba Regency takes place from June to October. Fewer peanut harvests in this Regency also last on January and April. Gowa Regency experiences peak season from April to June. Besides its fluctuation, peanut supply in this province is available all year around It is possible because this province has two different seasons, i.e. wet and dry seasons, at once while some regencies have transitional season. Producing peanut outside harvest seasons in the Regencies Bone, Bulukumba, Sinjai, Wajo, and Gowa could distribute the production more equally along the year.

Peanut peak season in Bone Regency in 2006 took place from January to April. In 2007 and 2008 the peak seasons shifted to October - January. Peanut production in peak season in 2006 was 4,955 tons. In 2007 and 2008 its production volumes during peak seasons were 5,312 tons and 4,373 tons, respectively (Figure 6). Dried-pod price fluctuated more than that of dried bean. Farmers usually sold dried-pod peanut during harvest season and its price became lower due to more supply.

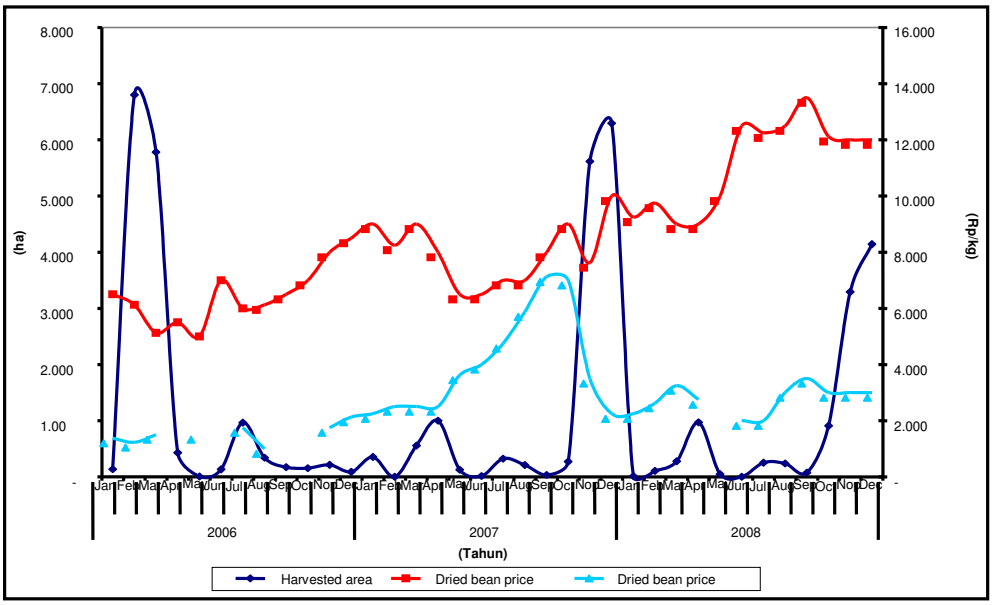

Figure 6. Peanut Harvest Pattern and Market Prices in Bone Regency, 2006-2008

Constraints in Growing Peanut

One of the reasons of low peanut yield in South Sulawesi was relatively low adoption of certified seed. Most peanut variety adopted by the farmers was Gajah planted on 11,866 hectares or 49 percent out of 24,429 hectares of planted areas of peanut in this province. Local varieties and other varieties were grown in the farm areas of 5,188 hectares (21.24%) and 4,748 hectares (19.44%),

respectively. Other improved varieties, such as Macan, Kelinci, Kijang, Bison, Jerapah, Kancil and Bima, were favored less by the farmers. The Agricultural Office of South Sulawesi Province even could not find the varieties of Tapir, Rusa and Singa (Table 4).

Certified peanut seed adopted by the farmers in this province was only 10 tons in 2008. The certified seed was just sufficient for 145 hectares of peanut farm land assuming that seeding rate was 70 kgs. The growth rate of the certified seed was 70 percent and its potential yield was 2.4 tons/ha of dried pod. Besides increased yield due to certified seed application, it will also improve the farmers' income from Rp 5,6 millions to Rp 7,2 millions per hectare, and profit will enhance from Rp 2,894,000 to Rp 4,059,000 per hectare. Neverheless, the farmers adopting certified seed have to spend more on seed cost from Rp 640,000 to Rp 1,050,000 per hectare or 64 percent higher comapred to using uncertified seed. Certified peanut seed was only 0.46 percent out of harvested areas of 31,791 hectares in 2008. Lower adoption of certified peanut seed causes low peanut production. It needs serious notice from the related institutions to overcome this issue.

Table 4. Peanut Varieties Distribution in South Sulawesi, Planting Season of 2008 (April-September 2008) – Planting Season of 2008/2009 (October 2008-March 2009)

No.	Variety	Potential yield (ton/ha)	Planted Area (hectares)	Percentage (%)
1	Gajah	n.a.	11,866	48.57
2	Local	n.a.	5,188	21.24
3	Others	n.a.	4,748	19.44
4	Macan	n.a.	1,240	5.08
5	Kelinci	1.62	974	3.99
6	Kijang	n.a.	350	1.43
7	Bison	n.a.	51	0.21
8	Jerapah	1.92	7	0.03
9	Kancil	1.85	3	0.01
10	Bima	1.70	2	0.01
11	Tapir	1.56	-	-
12	Rusa	n.a.	-	-
13	Singa	2.60	-	-
	Total		24,429	100,00

Source: Dinas Pertanian Tanaman Pangan dan Hortikultura Provinsi Sulawesi Selatan (2009)
Pusat Penelitian dan Pengembangan Tanaman Pangan (1999, 2002)
http://ntb.litbang.deptan.go.id (2009)
Notes: n.a. is data not available

Apart from low seed quality, most farmers relied on peanut seed from the traders through a non formal credit scheme in which the farmers had to sell their

harvest to the said traders. Furthermore, it shows that farming capital is urgently needed by the peanut farmers. The related institutions, i.e. Agricultural Service and Banks, had to collaborate to distribute program credit such as *Kredit Ketahanan Pangan dan Energi (KKP-E)* to the farmers.

The Provincial Main Seed Agency for Food Crop and Horticulture (BBI TPH) got difficulties in producing peanut extension seed due to some reasons. Only few farmers were willing to collaborate with BBI TPH as seed growers due to less profit they earned. In addition, only few farmers were interested at purchasing certified seed. Most farmers prefer to planting the peanut seed of their own production or those produced by their neighbors.

Certified seed costs Rp 15,000/kg, or much higher than that of non-certified, namely Rp 7,500 - Rp 8,000 per liter or Rp 9,400 to Rp 10,000 per kg. This price difference was significant to the farmers because they would try to minimize costs of production. In addition, peanut farming practiced by the farmers was not in accordance with the official technology recommendation and less favorable climate caused no significant yields between certified and non-certified seeds.

Lack of subsidized fertilizers supply in the market, especially during 2008, was also another reason why farmers did not apply them on peanut farm. The actual price of subsidized fertilizers was too expensive to the farmers. Official retail price of Urea, for example, was Rp 1,200/kg but the peanut farmers had to purchase it at Rp 1,400-1,500/kg due to their remote farms. Requirement to sell subsidized fertilizers was at least the trader sold it in one sack of 50 kgs. Usually the farmers bought it at lower volume and, thus, the fertilizer price became more expensive. Some peanut farmers did not apply fertilizers at all due to lack of capital.

Pesticides and herbicides application was also limited. Weeds grew uncontrolled on farmers' land and pests, such as rats and caterpillars, frequently attacked their peanut crops. Rotten roots and rotten leaves were commonly found. Some farmers controlled weeds once or twice in a season, but the others did not conduct it at all.

Processors' Demand for Peanut

There were at least three peanut manufacturers which processed peanut for snacks, namely PT Cahaya Anugrah Sejahtera (PT CAS), PT Merpati Dua, and UD Citra Mulia Sentosa (CMS) with its brand name of Panda. Named of peanut products processed by PT CAS were Kacang Disco and Kacang Rempah. PT Merpati Dua produced Kacang Telur (Kacang Atom), Kacang Disco, and Kacang Ayam. UD CMS produced Kacang Telur and Kacang Disco.

PT Cahaya Anugrah Sejahtera (PT CAS)

PT CAS was established in 1991 as the peanut processing business and its trade mark is Kacang Ayam. This company needed 60 tons of peanut monthly or around 720 to 750 tons per year. Peanut processed by PT CAS came from local production, namely Maros, Bone, Barru, Makassar and Sinjai Regencies, and from West Nusa Tenggara (NTB). PT CAS, before 2006, used imported peanut purchased indirectly from Surabaya and Jakarta as raw material. Since 2006 this company met all of its peanut demand from local production. Peanut suppliers of PT CAS were the wholesalers from Maros, Bone, Barru, Makassar and Sinjai regencies. Purchase price of the company was on average Rp 12,000/kg of dried bean at the processor's site. On the other hand, buying price of imported peanut was Rp 11,500/kg. Payment made by PT CAS to the supplier was cash or via bank transfer one week after delivery. No specific requirement to become peanut supplier of this company, except they were able to supply and deliver peanut at agreed price at processor's site. Size and appearance were quality standards established by the company. Communication between the company and suppliers were conducted using telephones.

Around 50 percent of products of PT CAS were Kacang Telur (Kacang Atom). Other products of this company were Kacang Disco (20%), Kacang Rempah (20%), and others. Out of 60 tons of dried bean was added with other ingredients such as sugar, flour, and spices and it became 120 tons of peanut products.

PT CAS marketed around 50 percent of its products through small shops or kiosks and the remaining was sold through super-markets and show rooms. The products sold through small shops were packed in plastic of Rp 500/pack. Its products were also sold to other provinces through the distributors in Sulawesi Island, namely once a week to Palu and Kendari and once a month to Manado. Payments made by the buyers to PT CAS were 2 to 3 weeks later.

PT Merpati Dua

PT Merpati Dua was established 1990. This company needed 0.5 ton of peanut every day or around 15 tons per month or equal to 180-200 tons per year. Dried bean was purchased by this company from South Sulawesi production (around 80-90 % of total demand), namely from Soppeng, Maros, Bone and Sinjai Regencies. In addition, this company still bought imported peanut from Surabaya to meet its demand (10-20%).

Peanut suppliers of PT Merpati Dua were the wholesalers in respective regencies. Purchase price of peanut (dried bean) was Rp 10,600/kg at the processor's site. Payment was made 1 to 2 days after delivery and the money was transferred through the bank. Every peanut trader was welcome as the company's supplier. Peanut bean size and color were the quality standards of the company and its quality was checked through sampling. Peanut transaction was conducted

using telephones. Local peanut is cheaper and has better quality than that of import.

PT Merpati Dua has three methods of peanut purchase. First, this company would come directly to the market if raw material is difficult to get. Second, the company will call its suppliers directly if peanut supply was sufficiently available. Third, the company assigned his workers, e.g. drivers, to meet the farmers to bring and sell their peanut beans to this processor's site. Peanut transaction was made directly between the company and the farmers.

Processed peanut products of the company were Kacang Atom, Kacang Disco, Kacang Asin, Kacang Rempah and Kacang Ayam Emas. The products were sold through small shops or kiosks, supermarkets or outlets in the shopping malls, and other selling agents in South Sulawesi. This company also distributed its products to Palu, Kendari and Manado. Peanut shipment was conducted through its distributors in each province. The buyers paid the peanut products to PT Merpati Dua two to three weeks later.

UD Citra Mulia Sentosa

This company was established in 1994 with its trade mark of Panda. UD CMS needed peanut as raw material as many as 200 kg per week or 800 kgs per month or equal to 10 tons per year. Peanut sorted was around 2-3 kgs due to flat form or rotten. If peanut had good quality, it was not oily and spices added were well attached to the beans.

Process peanut production per cycle was around 250 kgs consisting of Kacang Telur and Kacang Disco. There were one or two cycles of production per week depending on market demand. During *Idul Fitri* celebration there were 4 cycles of production per week. However, this month (February 2009) this company had already 2 weeks did not produce at all due to weak market demand. Usually during fruits season, i.e. February, the processed peanut sale was low (February).

UD CMS purchased peanut from H. Abbas on Jl. Ujung Makassar with the price of Rp 13,000-Rp 14,000 per kg, and payment was made 7-10 days later. Marketing areas of this company were Makassar Municipality and Bulukumba Regency through supermarkets (60 %) and kiosks or small shops (40%). Products packaging made by this company was less attractive and it might be the limiting factor in selling. Some times UD CMS bought imported peanut processed for Kacang Disco, but not for Kacang Telur. This company has 20 daily workers and 4 sales persons, and 1 administration staff.

Products of UD CMS consisted of packs of 150 grams and 250 grams which had more demand, and also in 500 grams and 1,000 grams. The company sold the products to the kiosks and supermarkets with payments received 3 weeks after delivery, but if it was paid in cash the buyers would get discount of 5 percent.

Households' and Industry's Demand

Peanut households' consumption in South Sulawesi was 25,738 ton per year or 44.39 percent of total consumption in the province. The next consumption came from food industry (33.49%), restaurant (16.49%), and trade to other islands (4.94%). Overall consumption during the said period was 57,979 ton per year (BPS, 1995, 2000, and 2005).

Demand for peanut in this province relies more on direct consumption from both households and restaurants. It indicates that value added from peanut is still relatively low. Higher value added is derived from food industry which processes peanut into relatively higher-price commodities with more interesting performance and longer storage period. Other process activities, e.g. for feed and health-food ingredient, are relatively low. It shows that peanut processing for other purposes, other than direct consumption, has not yet developed in this province.

Actually, there many products could be derived from peanut. Peanut products consist of pods, nutshells, and stems including leaves. Peanut pods are used as raw material for flour, cooking oil, and food industry. Flour is processed into snack, noodle, and bread. Cooking oils comprise of insecticide, varnish, mayonese, margarine, fat acid, cheese, and soap. Food industry processes peanut pods into fried bean, fermented peanut *(oncom)*, peanut jam, and boiled peanut. Nutshells could be processed into bricket, fiber, plastic raw material, and glue. Leaves and stems of peanuts may be consumed as cooked or fresh vegetables, and also used as organic fertilizer, and feed.

Since the end of 2009 PT Garuda Food as one of national food-processing companies through its agribusiness unit, i.e. PT Bumi Mitra Tani, collaborates with farmers' groups in Sinjai Regency in order to get supply of peanut (Harian Ujung Pandang Ekspress, 2010). The company trains the farmers how to improve peanut farming such that they get higher yields. In addition, the company also offers improved seed and fertilizers through a credit scheme paid after harvest. Peanut harvested by the farmers should be sold to the company with pre-determined selling price agreed by the two parties. The selling price was profitable to the farmers and affordable to the company.

This partnership gives advantages to both peanut farmers and the company. The peanut farmers get factor inputs through a credit scheme in which most of them could not afford if they had to buy them in cash. They also get market assurance for their peanut harvest with relatively profitable selling price. On the other hand, the company gets assurance of peanut supply for its processing plant. In February 2010, the farmers group sold 20 tons of peanut to the company and it is expected to expand in the future (Anshor, 2010).

So far, the company only purchase peanut from partnering farmers in Sinjai Regency and not buy this commodity from other farmers in other regencies in South Sulawesi Province. It is intended to avoid competition in searching raw materials with the peanut local processors and the wholesalers in this province. Currently, the company has not established its processing plant in this province but in the future is already planned (Antara News, 2010). Partnership between PT Garuda Food with the farmers in Sinjai will be expanded to other regencies, such as Bulukumba, Bone, and Maros, as long as the prerequisites are met. Nonetheless, this partnership will enhance local farmers' interest in growing peanut as the market demand increases and the buyers become more competitive.

The company also collaborates with the peanut farmers' groups in West Nusa Tenggara in order to fulfill its supply. It involves around 6,000 farmers with plated area of 1,100 hectares. The farmers through this collaboration could improve their peanut yields from 1.2 to 1.6 tons per hectare. Technical service of this partnership also involves Assessment Institute of Agricultural Technology (BPTP), Universitas Mataram, and peanut traders (Matulessy, 2009). In addition, the company also imports peanut to meet its raw material.

Post Harvest Handling Carried Out by Wholesalers

The collecting traders sold wet pods to the wholesalers at the price of Rp 3,500 to Rp 4,000 per kg, or in the form of dried pods of Rp 7,200 per kg. Wholesalers would sell the wet pods to the retailers in the market. If quality of the peanut was good enough, the wholesaler would dry, shell, sort and pack it into sacks before selling this commodity to the retailers in the markets, the peanut processors, or the consumers. The price of dried peanut bean from the wholesalers was between Rp 11,500 to Rp 13,000 per kg, but it was not included 15 percent of sorted bean sold with lower price of Rp 4,800 – Rp 5,500/kg. Processing cost from wet pods to dried beans in packed was Rp 566/g, while that from dried pods to dried bean was Rp 494 per kg. The wholesalers would get net margin of Rp 315/kg and Rp 584/kg for processing wet pods and dried pods, respectively (Table 5). It meant that the traders got higher profit if they processed dried pods into dried bean rather than handling wet pods into dried bean.

Currently most peanut traders used working capital they got from the banks through a commercial credit scheme. Some of them use their own funds for working and investment capitals. Access to credit program, e.g. People's Business Credit (KUR), will be very helpful to the peanut traders because it will improve their scale of economies with relatively low interest rates.

Table 5. Processing Costs of Peanut Post Harvest at Wholesalers in Bone Regency, 2009

No.	Item	Price/Cost (Rp/kg)	
		Wet Pods	Dried Pods
1	Purchase price from collecting traders	3,571	7,200
2	Post Harvest Activities:		
	- Drying	72	
	- Shelling	150	150
	- Sorting	143	143
	- Weighing		
	- Packing into sacks	24	24
	- Sewing the sacks		
	- Uploading to the trucks/pick-up cars		
3	Other costs		
	- Sacks	97	97
	- Fuel for shelling machine	10	10
	- Fee for collecting traders	70	70
	Total handling costs	566	494
4	Selling price (dried bean)	10,500	11,875
5	Conversion Factor	0.42	0.64
6	Selling price (dried bean) after conversion	4,452	7,600
7	Net profit	315	584

Source: Sayaka *et al*., 2009.

PEANUT MARKETING CHANNELS

Marketing channels of peanut in South Sulawesi is classified into two, namely local marketing channel and inter-island trade. Local marketing channel describes marketing channel of peanut distributed to the consumers in this province. On the other hand, inter-island trade shows peanut distribution from other island to this province and vice-versa.

Local Peanut Marketing Channel

Peanut marketing channel in this province started from farmers who used to selling peanut to collecting traders at district or regency levels. Some farmers could also sell peanut directly to the consumers. The collecting traders would sell this commodity to the wholesalers at district or regency levels. At district level the wholesalers sold peanut to the retailers in the district market then the retailers sold it to the consumers. These district-level wholesalers also sold peanut to the regency-level wholesalers, regency-level distributors, retailers in regency market, kiosks or small shops, and consumers (Figure 7).

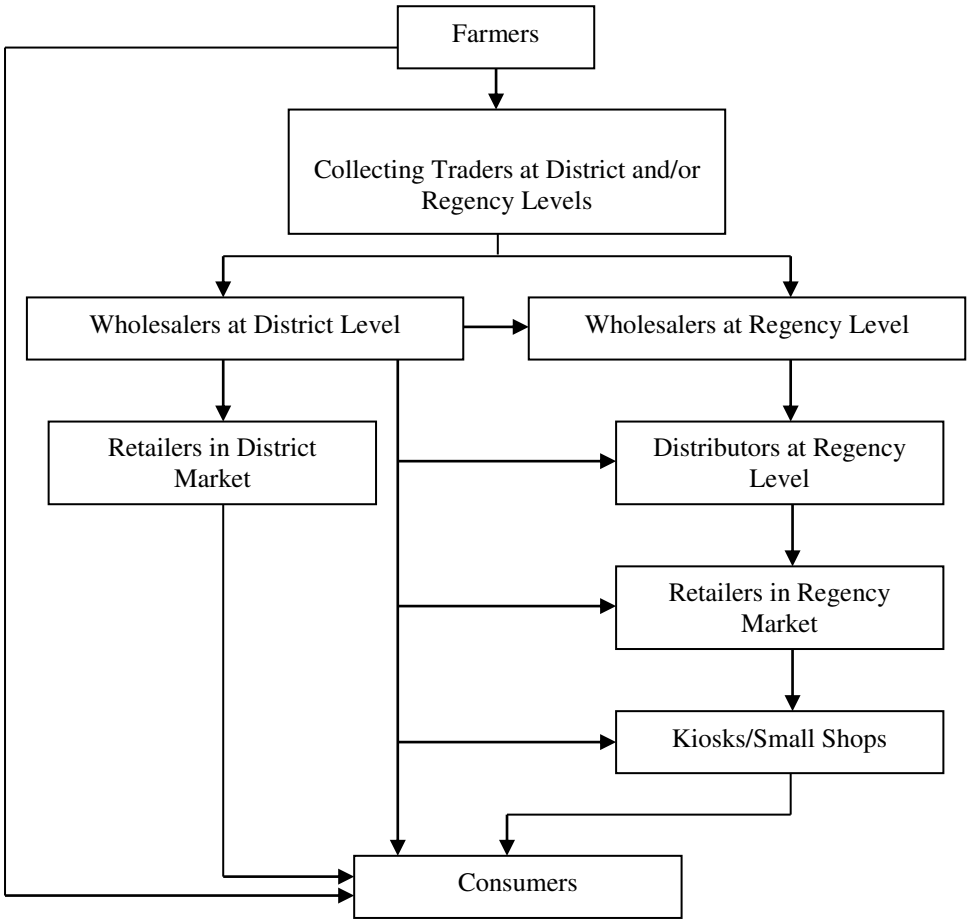

Figure 7. Peanut Marketing Channel in South Sulawesi, 2009
(Sayaka *et al.,* 2009)

Inter-Island Trade

The wholesalers, importers and distributors in South Sulawesi conducted inter-island trade of dried peanut beans. When this province lack of peanut supply the traders will purchase it from outside islands, namely West Nusa Tenggara (NTB) and East Java. During harvest season the peanut supply from Bone, Sinjai and Wajo regencies in this province was abundant and the traders sold it to other provinces, for example East Kalimantan and Southeast Sulawesi. Peanut purchased from East Java (Surabaya) was imported and the traders sold it for households' consumption and raw materials of the peanut processors. Processed peanut was packed in various volumes and sold locally and to other regions. Peanut shipping from West Nusa Tenggara to Bone and Sinjai usually entered through Tujuh-Tujuh seaport in Bone Regency.

Inter-island trade of peanut took place all the year. The traders fulfilled the demand by purchasing peanut from South Sulawesi and from other islands. Peanut demanded by the consumers from outside islands could be local or imported one. The farmers usually sold their peanut production to the collecting traders and these traders sold it to the wholesalers. Finally, the wholesaler sold the peanut to the distributors in Makassar where they shipped it to other island. Meanwhile, peanut processor purchased this commodity from importers, wholesalers and distributors (Figure 8). The traders in Makassar and their respective buyers usually communicated using telephones for transaction based on price, volume, and quality they agreed.

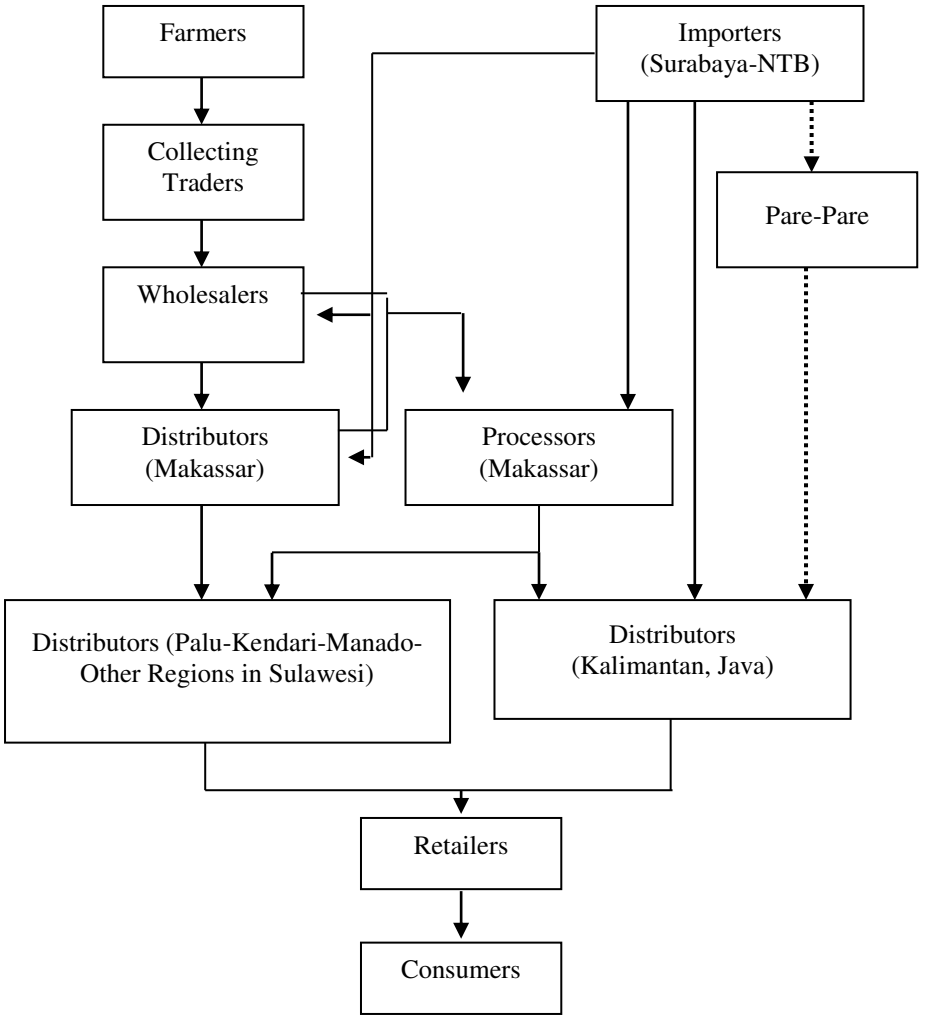

Figure 8. Inter-Island Trade of Peanut in South Sulawesi, 2009 (Sayaka *et al.,* 2009)

Peanut shipped from South Sulawesi to East Kalimantan was previously using seaports in Makassar and Pare-Pare. Currently the west-coast road is good enough for land transportation and the entire peanut was uploaded in Makassar seaport including that from the regencies adjacent to Pare-Pare, e.g. Barru and Soppeng. It made the agricultural commodity traders in Pare-Pare could not sell peanut directly anymore to East Kalimantan.

Peanut Import

At national level the volumes of peanut import, usually in shelled peanut, tended to increase during the period of 2006-2008 with the destinations of most large seaports in Indonesia. Peanut import in 2006 was 164,000 tons with its value of US $ 54,000,000 and it expanded to 173,400 tons (US $ 62,200, 000) and 205,300 tons (US $ 99,600,000) in 2007 and 2008, respectively. In 2008 import peanut with destination of Soekarno-Hatta Seaport in Makassar was officially recorded of 300 kgs only. It is possible that peanut import to South Sulawesi was not directly destined to Makassar, but it was imported from Surabaya or Jakarta as if it was inter-island trade.

PROSPECT AND POLICY TO ENHANCE PEANUT AGRIBUSINESS

Peanut harvested area in South Sulawesi during 2007-2009 showed a decreasing trend, but those of corn, soybean, and rice tended to increase. Based on decline trend by assuming no harvested area expansion and no significant improved technology, the peanut production of this province will shrink. The local government has to take significant policy to sustain, if possible to increase, peanut production unless in the long run this province will have to purchase more volumes of peanut from other islands or to import this commodity.

Improving peanut production is possible through applying available recommended technology even though to some extent it will compete with rice and other secondary crops in land use. Increasing peanut production through intensification, namely improving technology applied, will less compete with other food crops. Farm inputs provision is an important step in peanut production enhancement. Farm inputs, such as seed, fertilizers, and pesticides should be available on time and every where the peanut farmers need them at affordable prices. For example, USAID program on introduction of peanut varieties, i.e. Gajah and Kelinci, in this province, specifically in Bone, Sinjai, and Bulukumba Regencies, was carried out in 1986. In 1990's there was once a program of peanut production enhancement in Bone Regency. It is different with development programs of the main food crops more frequently implemented by both the central and local governments. In addition, agricultural extension especially for peanut

agribusiness development needs to be enhanced as it is carried out for other food crops. Peanut processors are encouraged to use local peanut production rather than imported one. It is also possible to encourage the peanut processors to collaborate with farmers' groups to produce peanut as their raw materials.

On the other hand, farm input availability needs infrastructure support, especially roads connecting farmers' settlement and farm areas with the main roads of public transport. Well constructed roads will fasten farm input and agricultural products transportation. Transportation costs will be reduced and farm inputs' prices become cheaper, meanwhile agricultural products prices will be more competitive at farm level. Poor road conditions made higher transport costs due to higher maintenance of the transporting vehicles and longer time to transport the commodity and factor inputs. All of the transport costs were transmitted to farmers which caused lower price of farmers' output and more expensive of input prices. Further efficient transportation could be achieved through eliminating or minimizing illegal transportation fees the traders had to pay. These fees enlarged costs of transportation from the rural areas to the trading center, such as Makassar.

Another infrastructure, such as seaport, also needs improvement. For example, improving Tujuh-Tujuh seaport area in Bone Regency, including the road to the seaport from the main road, would accelerate the transportation from and to this seaport. Tujuh-tujuh seaport is where peanut purchased from other Island came to this surrounding Regency. During wet season the road and area of Tujuh-Tujuh seaport was getting worse.

Extensification through fallow land cultivation for growing peanut will also lessen competition in land use with other food crops. In general fallow land are located in remote areas, lack of transportation access, and less fertile. Cultivating fallow land will be more expensive especially in infrastructure construction costs. Fertile, more accessible land is usually grown with other food crops giving more profits to the farmers.

Demand for peanut from households and industry exists along the year. It means that both sectors will always need peanut regardless the local production fluctuation. If local peanut processing plants could increase their capacities in producing and distributing peanut products, it will boost local peanut production. Partnership of PT Garuda Food and some farmers' groups in Sinjai Regency starting since the end of 2009 will enhance peanut demand. In turn, it will encourage peanut farmers in other regencies to establish partnership with the same company. The Provincial Government of South Sulawesi needs to facilitate such partnership because the company provides farm inputs through a credit scheme, guaranteed profitable buying price at farm level, and technology guidance.

Demand enhancement could be encouraged through further processing of peanut pods not only for fried peanut, but other derived products. Uses of peanut stems and leaves for organic fertilizer are also beneficial to the farmers. Another processing activity, such as feed made from peanut pods, is also another

opportunity to develop in this province. Lack of peanut supply during off-season could be satisfied through peanut shipped from other regions, such as West Nusa Tenggara and East Java, and from imported peanut. Purchase of peanut from other islands and peanut import show that the local demand always sustains. Purchasing peanut from other island is the second alternative as it is carried out by the wholesalers in this province when the local supply is inadequate. Importing this commodity is the last alternative if domestic peanut production is not sufficiently available to distribute in local market.

Higher supply of peanut from this province will be distributed to other islands or regions. It shows that inter-island trade of peanut has a relatively good prospect. It reveals more peanut production in this province is still promising as inter-island trade keeps running well. Expanding peanut markets outside the province will improve local price of peanut, both at farmers' and traders' levels.

CONCLUDING REMARKS

Producing peanut along the year to reduce monthly supply fluctuation, while the demand is relatively constant over time, is the first alternative. Supply chain activities at all level of peanut agribusiness actors run well, so far. Those agribusiness actors, namely farmers, collecting traders, wholesalers, distributors, and processors carried out well their own duties. However, transportation cost from farmers' fields or farmers' houses to traders and consumers could be reduced if roads conditions were better-off. Improving sea port facilities could increase efficiency in inter-island peanut trade. Drying machines collectively owned by the farmers' groups will enable them to dry peanut pods more quickly especially in wet season.

Application of certified seed, sufficient fertilizers, weeding control, and pests and diseases management is essential to improve peanut farm business. It will be better off if the farmers are willing to grow peanut on more fertile land, such as rice and corn, to lessen inputs and to improve yield. Availability of input credit with lower interest rate than that of commercial credit will encourage farmers to buy proper inputs. Partnership carried out by the peanut processing company with the peanut farmers could overcome those constraints.

Prioritizing peanut as the main food crops such as rice, corn, and soybean both at national and provincial levels will improve the government's concern on peanut development. In turn, it will encourage the local government to pay sufficient attention to peanut commodity as one of the main food crops. It is important because many food crop commodities development programs are usually aimed at improving production and profits of rice, corn, and soybean.

Limited data on volume and values of imported peanut as well as inter-island peanut trade, lack of data on households' demand and unavailability of data series on prices at farm, traders, and retailers levels lessen accuracy of analysis of peanut supply and demand. Availability of those data could improve analysis of peanut supply and demand in this province and it is expected that all agribusiness actors, especially peanut farmers, could maximize benefits.

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