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Contract Farming and Smallholders

*Critical Perspective on Peanuts Contract Farming
Experience in NTB Province of Indonesia*

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List of Abbreviations and Acronyms

ACIAR	Australian Centre for International Agricultural Research
ADB	Asia Development Bank
AIAT	Assessment Institute of Agricultural Technology or BPTP
AusAID	Australian Agency for International Development
BALITKABI	<i>Balai Penelitian Tanaman Kacang-kacangan dan Umbi-umbian</i> or ILETRI
BAKORLU	<i>Badan Koordinasi Penyuluh Pertanian</i> or the Agricultural Extension Coordination Board
BDSP	Business Development Service Provider
BIGA	<i>Biji Tiga</i> (Three Seeds/Kernels)
BMT	<i>Bumi Mekar Tani</i>
BOS	<i>Bantuan Operasional Sekolah</i> or School Operational Assistance
BPN	<i>Badan Pertanahan Nasional</i> or the National Land Agency
BPS	<i>Badan Pusat Statistik</i> or the National Statistical Agency
BPTP	<i>Balai Pengkajian Teknologi Pertanian</i> or AIAT
BRI	<i>Bank Rakyat Indonesia</i>
FAO	Food and Agricultural Organization
FAQs	Frequently Asked Questions
GAP	Good Agricultural Practices
GAPMMI	<i>Gabungan Pengusaha Makanan dan Minuman Seluruh Indonesia</i> or the Indonesian Food and Beverage Association
GF	Garuda Food
GoI	Government of Indonesia
IDR	Indonesian Rupiah
IFC	International Finance Corporation
ILETRI	Indonesian Legumes and Tuber Crops Study Institute or BALITKABI
IPM	Integrated Pest Management
LAP	Land Administration Project
LF	Lead Firm
N/A	Not Available
NESS	Nucleus Estate Smallholders Scheme
NIS	Nut-in-Shell
NTAXs	Non-Traditional Agricultural Exports
NTB	<i>Nusa Tenggara Barat</i> (Province of Western Nusa Tenggara)
NTT	<i>Nusa Tenggara Timur</i> (Province of Eastern Nusa Tenggara)
PNPM-AP	<i>Program Nasional Pemberdayaan Masyarakat-Agribisnis Perdesaan</i> or the National Program for Community Empowerment-

	Rural Agribusiness
PNPM-MP	<i>Program Nasional Pemberdayaan Masyarakat-Mandiri Perdesaan</i> or the National Program for Community Empowerment-Rural Development
PRO	Pilot Roll Out
R & D	Research & Development
R, D & E	Research, Development & Extension
SADI	Smallholders Agribusiness Development Initiative
SLPHT	<i>Sekolah Lapang Pengendalian Hama Terpadu</i> or Field School of Integrated Pest Management
SMAR	Support for Market Driven Agricultural Research
VCA	Value Chain Analysis
Yarnen	<i>Bayar Panen</i> (Pay and Harvest or Payment at Harvest Time)

Abstract

This paper examines the experience of contract farming between Garuda Food (which is represented by PT Bumi Mekar Tani (BMT) in NTB) and peanuts smallholders in NTB as the case study. The selection of this pilot model of private-smallholders partnership as the case study is worthy of study because the existence of opportunity to replicate the applied model both for the similar commodity or others in the future under the national policy on rural development. This is a complex contract farming scheme. It involves not only a private company and smallholders but also a donor program with national scale agendas that consist of testing various new approaches in rural agribusiness development and market driven research, development and extension services.

This paper will present the analysis of fundamental aspects of the contract farming program, starting from the contract itself regarding how it has been designed and implemented, how the contractual relationship can emerge, as well as the changes and risks that have been caused by the scheme and how the contract addresses them.

Keywords

Contract farming, smallholder, family labour, market and price guarantee, power relation

Chapter 1

Introduction

1.1 Background

Contract farming has many formats of application, while the progress and implementation is closely related to the agrarian transition process induced by the changing of policies and interests of governments, investors (and in many cases, international development organizations) in agricultural and industrial development in the concerned country. Looking at the country specific of this case study, Indonesia, contract farming has been playing a central role in the country's agrarian transition since the colonial period (share cropping under the *cultuurstelsel*/compulsory cultivation system) until the post-colonial period (the breaking up of ex-colonial large plantations to outgrower schemes and the emergence of nucleus estate smallholders scheme for both state and private owned agro-industries under the transmigration program).

The long history of contract farming practices in Indonesia presents both positive and negative experiences of smallholders in the country. The introduction of high value commodities, such as coffee, rubber, cocoa, and tobacco (along with the technologies) under the system has contributed to the promotion of income and until now these commodities are still remain as cash resource potentials for the smallholders in certain regions. However, the stories of exploitation and power abuse, especially land grabbing and 'modern slavery' by the state and the big capital owners are also becoming part of the practice of this system in many cases.

As mentioned above, contract farming application is strongly influenced by the changing of policies and interests of governments, investors and international development organizations. In the case of Indonesia, the pattern is similar. The fall of Suharto regime in 1998 at the same time of Asian economic crisis, the enforcement of Structural Adjustment Program along with market liberalization and the changing of both government and donor's paradigm on poverty alleviation by emphasizing on rural livelihood development as 'the safety net' in addressing massive unemployment in urban areas is strengthening the likeliness of contract farming to become part of solutions in addressing poverty in Indonesia. Regarding the effect of Asian Crisis in 1998, Adhiati wrote:

The economic crisis in Indonesia has provided potential investors with a huge landless and impoverished proletariat and more than one million internally displaced people (refugees) desperately seeking employment and income and ready to join new plantation development schemes [...] (Adhiati, 2001).

Despite the mixed experiences of contract farming in Indonesia, this system is still believed as one possible mechanism to improve the livelihood of smallholders and provide them with the benefits of economic liberalization. Through this system, agro-industry can assist smallholders to shift from subsistence or traditional agriculture to the production of high value non-

traditional agricultural exports (NTAXs). This not only has the potential to increase incomes of the contracting smallholders but also have multiplicative effects in the rural and broader economy (Patrick, 2004: 3). Direct benefits from contracting include improved access to market, credit, and technology, better management of risk and improved farm family employment. While indirect benefits are the improved business enabling environment in contract locations as the prerequisite of the success of contract which includes both physical (infrastructures and facilities) and non physical (policies and regulations) environment and improved social aspects, such as the empowerment of women.

In the Indonesian context, the likeliness of contract farming to take lead in the agricultural reform is also supported by the changes of government policies in providing services to farmers and the sector which is more market driven as the consequence of the structural adjustment program, and the existence of various donors' programs in Indonesia that encourage product and market specialization both at practical and policy level as what will be presented in the study case.

1.2 Justification of the Research

This paper examines the experience of contract farming between Garuda Food (which is represented by PT Bumi Mekar Tani (BMT) in NTB) and peanuts smallholders in NTB as the case study. The selection of this pilot model of private-smallholders partnership as the case study is worthy of study because the existence of opportunity to replicate the applied model both for the similar commodity or others in the future under the national policy on rural development. This is a complex contract farming scheme. It involves not only a private company and smallholders but also a donor program¹ with national scale agendas that consist of testing various new approaches in rural agribusiness development and market driven research, development and extension services.

While the existing discussions and assessments on this model so far have been only focused on the economic impacts of the model, by measuring the improved performance, in terms of volume, value and income, this study will focus on the actual experience of the contract farmers under the scheme. This paper will present the analysis of fundamental aspects, starting from the contract itself regarding how it has been designed and implemented, how the contractual relationship can emerge, as well as the changes and risks that have been caused by the scheme and how the contract addresses them.

¹ This contract farming scheme is implemented with the support of Smallholder Agribusiness Development Initiative (SADI), a bilateral cooperation program between Indonesia and Australia.

1.3 Research Questions

This paper attempts to answer the following question:

What are the impacts of peanuts contract farming on the promotion of smallholders' welfare?

In answering the main research question, the author will focus on four sub-questions are as follows: (1) What are the characteristics of the peanuts farming contract? What are the terms of the contract? (2) What are the risks faced by smallholders by entering the contract? How are they addressed by the contract? (3) Why are farmers willing and not willing to enter the contract farming scheme? and (4) What is the farmers' actual experience with contract farming?

The remainder of this paper is organized as follows. Section II discusses the theoretical framework by explaining the lead firm concept, contract farming definitions, benefits and risks, the significance of contract in contract farming and issues and risks that will be investigated in the study. Section III describes the methodology used in this study. Section IV briefly discusses the partnership program of BMT. Section V discusses the survey instrument and basic data. Section VI presents the analysis of the data which breakdown into parts to explain the issues and risks that assessed in the study. Section VII discusses the results and presents the overall conclusions.

Chapter 2

Analytical Framework and Explanatory Concepts

This chapter outlines the analytical framework and explanatory concepts required to analyse the issues and risks of contract farming in this paper. The first part presents the definitions, benefits and risks of contract farming. The second part discusses the significance of contract in contract farming. A discussion is also presented in the third part regarding the relation between contract farming, family farms and labour. These three parts will be used as the basis in analyzing the key issues and risks in case study that presented in the fourth part of this chapter.

2.1 Contract Farming Definitions, Benefits and Risks

There are many kinds of contract farming definition as can be find in various literatures. The definition is often confused because the existences of different types of contracts and actors (private sector firms, public sectors firms and parastatals, international development agencies) (Baumann, 2000: 7). The rich definition of contract farming is explained by White (1996) as follows:

There is no standard terminology for the different types of contract farming arrangements [...] (other authors sometimes use “satellite farming” as the generic term, reserving “contract farming” for private sector contracting schemes, cf. Glover, 1992:3); “outgrower scheme” refers to government contracting schemes, in which public enterprises purchase crops from farmers; “nucleus estate smallholders (NES) schemes are a sub-type of outgrower schemes, in which the corporate nucleus administers a plantation as well as processing plants, and where contract purchases supplement plantation production (White, 1996: 4-5).

For the purpose of this paper, the author refers to the definition given by Baumann:

A system where a central processing or exporting unit purchases the harvest of independent farmers and the terms of purchases are arranged in advance through contract (Baumann, 2000: 7).

In principle, contract farming is favourable because of its risk sharing nature. It divides risk between producer and contractor; the former takes the risk of production and the latter the risk of marketing. This system allows a better way for the producer to access inputs, such as the improved on farm and off farm technologies and easier access to credit, and market assurance. For the contractor, the system allows them to have control over production process through regular supply of commodity (raw material) in specific standard, volume and timing without have to invest in land, hire labour or manage large scale farming operations (Glover, 1984 and Baumann, 2000).

The absence of necessary backward and forward market linkages (i.e. extension advice, mechanization services, seeds, fertilizers and credit, and guaranteed and profitable markets for their output) in most of rural areas has been hampering the rural farmers and small-scale entrepreneurs from enjoying

maximum profits from their productive activities. Well-organized contract farming does, however, provide such linkages, and would appear to offer an important way in which smaller producers can farm in a commercial manner. Contract farming is considered as an institutional solution to the problems of market failure in the markets for credit, insurance, and information because it often involves the provision of seed and fertilizer on credit, technical assistance, and a guaranteed price at harvest.

Similarly, contract farming also provides investors with the opportunity to guarantee a reliable source of supply, from the perspectives of both quantity and quality (FAO, 2001: 1). A firm deciding to enter into a contractual agreement should of course have already come to the conclusion that transaction costs associated with this arrangement are less than either trying to work through the spot market or vertically integrating through plantation production (Winters, 2005).

Many critics have alleged that contract farming excludes smallholders and mostly favour large farmers. Companies often prefer large farmers because it cuts down on transaction costs and allows for a more uniform quality of product. Glover wrote that in cases where firms chosen to work with smallholders, there are three possible factors of the decisions, either singly or in combination. First, the most suitable area for production is characterized by smallholders predominance, and the firm simply works with whatever suppliers are available. Second, the local government may encourage the firm to cooperate and empower the smallholders. Third, smallholders may have lower costs of production than large scale farmers or be willing to accept lower prices or greater shares of risk (Glover, 1984: 1147).

Regarding the contracting relationship with smallholders, there are many critics that large agribusiness firms use contracts to take advantage of cheap labour and transfer production risk to farmers. These critics rise because under contract farming arrangements the farmer is contracted to sell his crop not his labour, and working under contract always requires farmer to work more intensively (i.e. longer hours) and extensively (i.e. using children and other non-paid household labour) to increase output or quality. Moreover, many risks involved in agricultural production are passed on to smallholders with potential of unbalance contractual relationship that makes it to be potentially exploitative (White 1996: 3 & 5).

2.2 Significance of Contract in Contract Farming

The relationship in contract farming is ideally to be a partnership between two parties (the producer and contractor) which by www.businessdictionary.com is defined as follows:

Type of business organization in which two or more individuals pool money, skills, and other resources, and share profit and loss in accordance with terms of the partnership agreement. In absence of such agreement, a partnership is assumed to exist where the participants in an enterprise agree to proportionately

share the associated risks and rewards².

This definition constitutes an equal relationship between the involved parties, both in profit and loss/risk sharing. However, as suggested by White, that it is important to bear in mind that the contract is a representation of a relationship rather than the relationship itself, and the divergence between the two may be crucial. Its implementation takes place in specific social and political contexts and depends on how various actors and groups exercise their powers to subvert and manipulate the scheme in their own interests (White, 1996: 7). In relation to this, Patrick wrote that the benefits of contracting for smallholders depend primarily on their bargaining power in the contract. The bargaining power will be limited especially if they are unorganised, have few assets and lack of alternative income opportunities. With unequal bargaining position, contracting probably may leave smallholders only marginally better off than without contracts (Patrick, 2004: 8).

Another important factor that may affect the benefits and flexibility of a contract is the duration of the contract, which is divided into long term (for tree crops) and short term contracts (for seasonal crops). The advantage of a long term contract is contract farmers usually will be provided with more complete supports, i.e. financial or in kind supports for basic daily life, access to credit for agriculture inputs, and so forth. However, long term contract may require farmers to submit their assets as collaterals – which is usually land certificate, and in many cases used by companies as collaterals for their corporate bank loan. Under a long term contract, farmers also do not have flexibility to withdraw from contract if they finally find it not profitable for the long run or if the company is behaving badly. Many of this is caused by the possession of land certificates by the companies which gives them power to control farmers and give sanctions, including the possibility for farmers to lose their land if they break the contract. This practice of land grabbing also happens when the companies failed to repay their loan and ended with the acquisition of the insured land by the bank³.

2.3 Contract Farming, Family Farm and Labour

Contracting usually requires a legal title to land, which already excludes the landless and tenants (Baumann, 2000: 30-31). However, one should bear in mind that the motivation for companies to enter a contractual relationship is not only to have access to land but also access to cheap labour which is the main advantage provided by contracting with smallholders.

Cheap (or free) and abundant labour is always associated with family farm as can be seen in the argument presented by Lipton as follows:

² See <http://www.businessdictionary.com/definition/partnership.html>

³ This is a popular case in many oil palm plantations in Indonesia. Many farmers (usually transmigrants) lost their lands when the companies went bankrupt, and apparently their certificates were used as bank collaterals.

Small farms have lower labour-related transaction costs and more family workers per hectare, each motivated to work and to find, screen and supervise hired workers [...] small farms have advantages in early developing countries, which have low capital per unskilled worker and scarce land per person (Lipton, 2005: vii).

The argumentation given by Lipton emphasizes the availability of lower labour-related transaction costs as the main advantage of family farm. In the context of contract farming, this advantage is closely related with the type of crops cultivated under the contract farming scheme. The crops cultivated should be suitable to smallholders' production. Fruits and vegetables are promising choices because many of them are typically labour intensive. They require heavy inputs of labour for the cultivation, harvesting and further processing activities. These requirements can only cheaply be provided by family labour (Glover, 1984: 1143).

Despite the arguments about the availability of 'cheap labour' in the family farms as an advantage, the internal labour division within a household itself remains complex. White wrote that one of the ironies of household-based contract farming is that it is often precisely a case of 'his' crop and 'her' labour. In contract farming, this is essential because usually it will be men who sign the contract with further implications to other family members who are involved, in the context of internal labour division, decision making and control of earnings between household members based on hierarchies of age and gender (White, 1996: 6 & 8).

In the traditional agricultural system, crops are also usually associated with sexes, 'his' crop and 'her' crop. Main crops, such as staple and cash crops are associated with men. While marginal crops (low value, planted in dry season and for daily subsistence use), such as vegetables and dry seasons crops are becoming the areas of women. The labour division also becomes more complex with the existence of non-farm or wage employment in the labour structure of the family. This type of employment usually will be significant in dry season, when staple and cash crops are not productive and income from farm is not sufficient to support the economy of the family. The existence of permanent or temporary wage employment will significantly affect the labour division in a family if the contract farming deals with marginal type of crops. Here, the family will experience the shifting of control over decisions and gains. 'Her' crops will immediately become 'his' crops, when the marginal crops are becoming profitable, with no guarantee that men will leave their wage employments especially because of the 'opportunity cost' consideration. The tendency of this situation to happen is also propagated by the existence of various gendered technologies that targeting women as the main users, which at the end will turn the 'empowerment' objective of the technologies to be 'exploitative' in practices, when women will spend more time than before doing farming activities because of the availability of technologies.

Further, many studies (for example White, 1996) indicated some smallholders as the 'middle class peasantries' and are not actually family farms (family labour based production units). They act as small or medium-scale enterprises based mainly on wage labour. The relationship between this type of smallholders and their labours under the contract farming scheme adds the

complexity of power structure in this scheme. These labours may benefit from the increasing of employment opportunities under the contract but may also be discouraged if the arrangement of contract does not recognize their existence (and usually not), especially if the increasing of productivity requires intensive mechanization and technology application that may reduce the requirement for their labours.

This complex problem can be seen as a result of the misinterpretation of subsistence in development perspective. Mainstream actors, such as government and international development organizations in their analysis tend to see subsistence as a backward behaviour, and consider subsistence farmers, especially their labours, as idle or unproductive potentials that need to be optimized through selective interventions⁴. Most analysis failed to recognize the existence of income diversity in subsistence context which implies the opportunity costs consideration when farmers (their labours) are asked to be commodity-focused. Those analysis also ignore the gender aspect of power relations within household labour. Both genders are merely considered as production factors without recognizing the existence of inequalities between them. On the top of that, the success indicator used in measuring the achievement of livelihood is always emphasized on the increasing of outputs and income as the representation of welfare rather than to see the allocation process of production factors and the distribution of the profit itself within household and the subordinates.

2.4 Issues and Risks

As suggested by Winters, et. al (2005: 66), there are three issues that essential in analyzing contract farming: (a) what types of smallholders might benefit from contracts; (b) whether contracts improve returns on smallholder capital; and (c) if and how contracts affect the allocation of labour and use of inputs. These three issues are closely related with three potential risks of which the farmers may expose to as follows:

Firstly, the shifting from subsistence food crop farming to high value commercial crop farming may expose the farmers to food security risk. In the traditional rural societies who are dominantly grow food crop for their self-consumption purpose, the increasing of income from growing high value cash crop commodity may lead them to intensify the allocation of resources, especially land for increasing the productivity. The decreasing of ratio of growing food crop to cash crop may also induced by the contractors who insistence on mono-cropping (Baumann 2000, 32). Considering the area specific where the case study is undertaken, West Nusa Tenggara is one of the poorest region in Indonesia where the incidents of food shortage and famine happen regularly during the dry season. Therefore, the risk of food security

⁴ So far, policy makers only see subsistence farming as the result of lack of accesses to finance, market and technology. Addressing these three issues is seen as a guarantee for a smooth transition from subsistence to commercial agriculture

should be an important aspect in examining the impact of the contract farming system on farmer welfare.

Secondly, commodity specialization requires the adoption and application of certain technologies to meet the specific standards of product as required in the contract. While one advantage of contract farming system as claimed by the advocates of the system is its potential to transfer technology to farmers by the contractors, there is a risk that the transfer does not necessarily contribute to the development of a farmer technology as an integrated system (Bauman 2000: 22). Besides of the technology dependency, there is also a potential risk of market dependency where the variety of crops grown by farmers under the contract have been modified to meet the specific requirements of the contractor and the product cannot be sold to other buyers. The study will assess dependency risk by examining the sustainability of technology transfer, specifically the adoption of the required Good Agriculture Practices (GAP), equipments, and seed stock. In addition to that, this study will also stress a focus on the marketing flexibility aspect within the case study.

Thirdly, the contract farming system has been criticized as a way for the contractors to avoid risks of agricultural production and the problems of fluctuation in demand and supply by passing them on to farmers. Furthermore, it is also seen as a system for self-exploitation of family labour (Glover, 1984, White, 1996 and Baumann 2000). In regards to this exploitation issues, this study examines the potential exploitation risk faced by farmers in terms of: (1) balance in roles between the lead firm and contracted farmers; (2) shift in labour use within the farm family; and (3) any social implication that might have caused by this system.

Chapter 3

Research Methodology

For this study⁵, the author surveyed 713 smallholders⁶ out of 72 farmers groups in 7 peanuts growing districts in NTB Province that grouped in 2 main categories: BMT partner farmers and non BMT partner farmers. The survey (questionnaire distribution) used structured sampling method. The surveyed population was based on the data given by BMT and PNMP-AP field officers. The survey areas cover both the areas of BMT (West Lombok, Central Lombok, North Lombok, East Lombok and Dompu) and non-BMT (Bima and West Sumbawa). Due to missing data, a final sample of 709 smallholder survey forms were used, and consists of 344 partner farmers (48.52%) and 365 non-partner farmers (51.48%). Since the surveyed contracted farmers and non contracted farmers are from the same areas and have access to similar infrastructures, face similar prices and have similar assets, the non contracted farmers are a legitimate comparison group.

Table 1
Distribution of respondents based on categories

Categories	Total	Percent age
Contract farmers	324	45.70%
Contract farmers in PNPM AP areas	20	2.82%
Non-contract farmers	289	40.76%
Non-contract farmers in PNPM AP areas	75	10.58%
Suppliers	1	0.14%
Total	709	100%

Note:

- Contracted farmers are farmers who have contractual relationship with BMT in the current planting season or have contractual experience in the previous planting seasons.
- Contracted farmers in PNPM AP areas are farmers in PNPM AP areas who have contractual relationship with BMT in the current planting season.

⁵ The gathering of field data (primary and secondary) was conducted in line with the consultancy work that the author performed for the AusAID-SADI Program. Most of the data used in the two activities are similar.

⁶ The survey was undertaken in July-August 2009 in 2 main islands of NTB (Lombok and Sumbawa) and involved 10 enumerators. The survey included, enumerators training, questionnaire testing and supervision of the field survey. Total time allocated for the field survey in the 2 islands was approximately 3 weeks.

- Non-contracted farmers are farmers who do not have contractual relationship with BMT and do not supply directly to the firm.
- Non-contracted farmers in PNPM AP areas are farmers in PNPM AP areas (West Lombok and Dompu Districts) who do not have contractual relationship with BMT and do not supply directly to the firm.
- Suppliers are farmers who do not have contractual relationship with BMT but supply to the firm through the spot market (regular suppliers).

In addition to the questionnaire distribution, the author conducted series of semi-structured interviews with related actors from BMT, Peanuts Industry Forum, Mataram University, SADI, PNMP-AP provincial and sub-district officers, and farmers in several locations. The field study also involved visits to several peanuts growing areas in Lombok and Sumbawa and participation in a workshop on Strengthening Peanut Industry in NTB through LF Approach on August 5, 2009.

The collection of primary data through semi structured interviews, aside from the questionnaire survey, was the primary source of information for the author in examining the real practice of the peanuts contract farming. Certain questions may have to be repeated in several occasions both to the same interviewees and to other related parties for cross checking purpose. Any dispute of answer given by the interviewees was final checked with the available secondary data and questionnaire results.

A detailed review of the previous published works was conducted to gather secondary data. Special emphasis was given on reports of SADI Program on the peanuts value chain analysis by IFC, the peanuts profitability potential study by the Australian Centre for International Agricultural Research (ACIAR)⁷, internal program reports on the progress of peanuts lead firm project, and other related reports including the report on farm risk reduction assessment for Nusa Tenggara Islands, Eastern Indonesia. Secondary data was also gathered from BMT, Mataram University and *Badan Pengkajian Teknologi Pertanian* (BPTP) of NTB.

⁷ In peanut sector, ACIAR is partnering with BPTP NTB and Mataram University as well as with the Indonesian Legume and Tuber Crops Study Institute (ILETRI) in conducting study on peanuts and development as well as dissemination of quality seeds.

Chapter 4

The BMT's Partnership Program

This chapter provides information on the BMT's partnership program. The first part presents the profile of BMT at a glance and then followed by the second part on SADI's supports to the Partnership Program. The third part will discuss about the peanuts potential in NTB. These three first parts are the introduction to the last part of the chapter which explains in detail the design of the partnership program. The data presented in this chapter are drawn from both primary and secondary data collected from the field research.

4.1 BMT at Glance

PT Bumi Mekar Tani (BMT) is a subsidiary of Garuda Food Group, a major snack foods and beverages producer in Indonesia. Garuda Food was founded in 1958 in Pati, Central Java under the name of PT Tudung, and started its business as a tapioca flour producer. The business then becomes bigger and expansive with a main focus on snack foods business. One of the known flagship products of Garuda Food is the peanut based snack (roasted and coated peanut snacks and peanut candies). As part of the further expansion strategy in the peanut based snack business, the group decided to expand its raw material supply area outside of Java. Among the alternative potential areas (South Sulawesi and NTB), Garuda Food decided to put their investment in NTB based on the industry survey on the potential peanut production in the province.

BMT started its operation in 2005 by establishing a fresh peanut processing facility in Mataram with a processing capacity of 30-40 ton fresh peanut per day. This facility is not a processing plant for final products. Here, the fresh wet peanut are processed (dried, roasted and packed) before being sent to Garuda Food main factory in Pati, Central Java for further processing and marketing. A future plan has been established to expand the capacity up to 75-100 ton fresh peanut per day by constructing a new plant in West Lombok. The new plant is prepared to anticipate the increasing of peanut production in NTB.

BMT supplies its fresh peanut from 2 sources: (1) partnership program (contract farming); (2) spot market through regular suppliers. BMT applies different pricing policy for each source, where the paid price for regular suppliers is higher (based on market price fluctuation) than the paid price in the Partnership Program. The ratio between the 2 schemes is relatively equal. However BMT expects to increase the supply of raw materials from the partnership program in order to achieve a sustainable and more efficient supply chain process.

4.2 SADI's Supports to the BMT's Partnership Program

Since early 2008, SADI⁸ through IFC-SADI started a partnership with Garuda Food, a major snack food industry in Indonesia to provide support to the development of peanut potential in Nusa Tenggara Barat (NTB) by utilizing Garuda Food's experience with smallholder supply chain development. One objective of this partnership is to demonstrate the economic value of building durable linkages between smallholder farmers and the lead firm.

In this partnership, SADI does not provide financial subsidy to Garuda Food. The partnership exists based on mutual interest of both parties in the development of peanut sector. SADI utilizes the experience of Garuda Food in this sector to improve the supply chain of peanuts farmers, while in return SADI helps the firm to strengthen links back into their supply chain, facilitates networking with local stakeholders in peanuts sector, links the industry with various peanuts focused research and development institutions at local, national and international levels and provides technical assistances to the firm.

SADI does not involve directly in the specific of contract farming administration, such as the drafting or revision of contract. However, SADI through its technical assistances to the firm provides advisory services to improve the potential benefits for both the firm and farmers. Monitoring and evaluation activities by the Program Management Office of SADI are also conducted to examine the practices of contract farming (such as the baseline survey that conducted by the author for the SADI), where the results are used as feedback to the firm on issues to be improved and as the evaluation of the lead firm model.

4.3 Peanuts Potential in NTB

While the future of peanut sector in NTB is promising since the existence of BMT, as the only big scale processor in NTB that requires continuous and stable supply of fresh peanut, the production of peanut itself in NTB is still not optimum yet. As peanut is a low priority crop in government policy, there was no formal regional peanut agribusiness or research, development and extension programs to develop peanut sector in NTB until Garuda Food supported by SADI started the peanut development program in 2008.

Peanut in NTB rank third after soybean and maize in terms of area planted to cash crops. The production of peanut is dominated by smallholders growing small areas in rotation with other crops⁹. Peanut are grown in the two main islands of NTB (Lombok and Sumbawa). According to the peanut study of ACIAR (ACIAR-SMAR 2007/219), most of peanut area in Lombok is under low land rice-rice peanut (>80%) or rice-peanut-rice (10%) cropping system (West and Central Lombok), while in Sumbawa about 95% peanut is planted in

⁸ See Appendix 3 for detail information on SADI and Lead Firm Approach.

⁹ As a legume, peanut is used to restore soil structure and fertility through nitrogen fixation.

upland (Bima), once a year during wet season. The average productivity of peanut in NTB has been low and stable at around 1.2 ton per ha for the past 5 years (see the Table 2 below).

Table 2
Total peanuts farming areas and productivity in NTB (2003-2007)

Regency/Municipality	Area Harvested (ha)	Productivity (ton/ha)	Production (ton)
West Lombok	10,451	12.34	12,898
Central Lombok	4,434	13.45	5,964
East Lombok	1,321	13.41	1,772
Sumbawa	1,854	12.65	2,345
Dompu	826	12.39	1,023
Bima	5,260	13.67	7,192
West Sumbawa	423	12.69	537
Mataram	45	13.63	61
Bima Municipality	874	12.82	1,121
Total	25,488	12.91	1,121
2006	34,860	12.61	43,956
2005	35,214	12.32	43,397
2004	41,020	12.00	49,226
2003	34,039	11.89	40,489

Source: Statistics of NTB Province, 2008

The same study also indicates that the productivity of peanuts farmers in NTB is constrained by lack of access to good quality seeds and the lack of knowledge on crop protection and best management practices. Profitability is limited by low and erratic market prices and options as well as a weak bargaining power of individual farmers.

4.4 The BMT's Partnership Program

The demand for fresh peanut by BMT is around 30 ton per day, which means that the industry needs 9000 ton of fresh peanut per 300 operational days annually. However, until now, BMT is only able to supply 4000 ton of fresh

peanut annually (50% of its requirement) both through its partnership program and regular suppliers. There is a certain month, when the processing plant stop operating due to the absence of supply (usually in the month of June every year), while in the following months (July-August) it will receive abundant of supplies that requires the plant to operate beyond its daily capacity¹⁰. This unstable supply pattern is becoming a serious concern of BMT in securing its raw materials supply.

BMT has its specific varietal preference for its NIS (nut-in-shell) market and therefore buys only a few selected varieties (mostly Bima variety or known as BIGA (*'biji tiga'* or 3 kernels). While this variety is local in Sumbawa (particularly in Bima), but in Lombok it is not popular. Local production in Lombok is dominated by 2 seeded varieties, such as *Kelinci*, Panther, *Kidang* and *Singa*. The difficulty in supplying the required variety has been forcing BMT to accept whatever varieties available in the market to fulfill its daily production quota. The non-Bima varieties are used as mixtures in the production process. However, for the long run, BMT expects to secure its supply of the preferred varietal at the desired quality and quantity.

Partnership (*Kemitraan*) program or contract farming is chosen as the firm's strategy in securing its raw materials supply. The program was started since 2006 and has been modified several times to make it attractive to the participating smallholders.

At the beginning of its implementation, the partnership program adopted the Harvest and Pay (*'YARNEN'* or *Bayar Panen*) system. The participating farmers received subsidized seeds credit (BIGA varietal at the subsidized price)¹¹ and technical assistances from BMT's field staff¹². In 2008, the company changed the system by adding cash advance support to groups (Rp 1.5 million per ha disbursed in 3 parts). At harvest the firm took the first 50% of group harvest. The other 50% was sold to the company at the contacted price per kg. This system provided risk protection where farmers were freed

¹⁰ The plant was constructing its third drying machine when the author visited the plant in July 2009 to anticipate the potential over supply of fresh peanut in July-September.

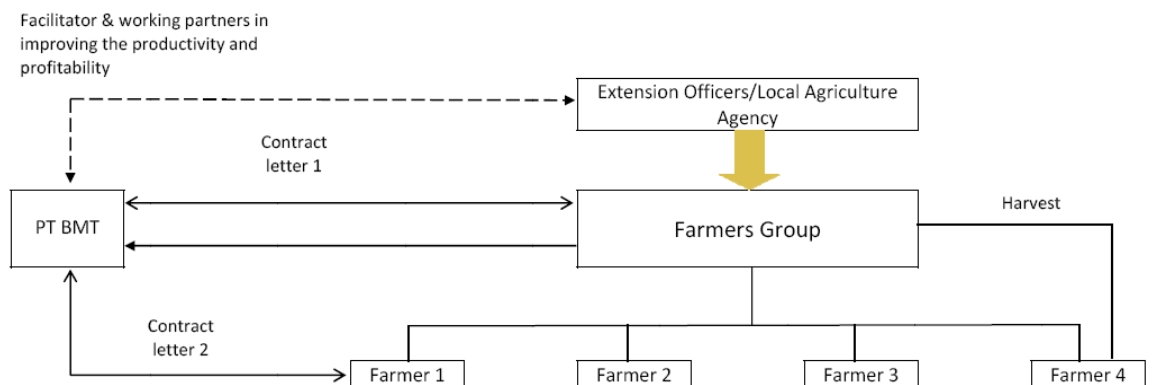
¹¹ The contract farmers are provided with subsidized seeds credit which will be repaid at the harvest time (automatically deducted from the buying price by BMT). The price paid by farmers is half of the market price. When the study was administered in July 2009, the subsidized price was Rp. 8,500 per kg. BMT provides 120 kg seeds per hectare and farmers only have to pay for the amount of seeds that they used for planting since usually certain percentage of the seeds are disqualified (small and shriveled seeds).

¹² At present, BMT has 13 field staff plus 2 supervisors working on Lombok Island. All field staff have undergraduate degrees in agriculture. They provide advice to farmers on farming practices, monitor the crop and provide feedback to BMT. They are also mobile geographically following the peanut planting season in NTB. Each of field staff is responsible for the total of 75 hectares partnership land per peanut planting season (3-4 months). BMT expects to increase the coverage area to 100 hectares per field staff.

from paying the credit and inputs for failures factors caused by BMT, such as harvest loss because of miscalculation of planting time. However this innovation was not favourable by the participating farmers because profits to individuals were higher under the YARNEN system since farmers only had to pay for the subsidized seeds credit instead of giving up 50% of their harvest to BMT.

In 2009, the firm decides to go back to the previous YARNEN system with several adjustments on the system. Under the current YARNEN system, besides providing subsidized seeds and technical assistances, BMT also simplifies the contracting process by eliminating unnecessary layers and increasing transparency. In the previous systems, BMT supplied their raw materials from farmers through the field collectors (in the previous contract systems, the contract was between BMT and the field collectors who then subcontract to farmers). However, there were indications that the field collectors manipulated the price information that caused farmers to lose trust on the contract. In the new system, BMT establishes direct contracts with farmers through their groups (see Figure 1). Contract is made transparent to all participating farmers and each of them holds a copy of contract letter.

Figure 1
The 2009 Harvest and Pay System



Source: PT Bumi Mekar Tani

In establishing contract with smallholders, BMT applies several conditions in selecting the participating farmers: (1) The contract is made between BMT and farmers group. Farmers are represented by the group; (2) The total area is 10 ha (minimum requirement, although in the implementation this is still negotiable) and located in one integrated location (*satu hamparan*). The location is maximum at 400 m above sea level; (3) The area should be supported by the necessary infrastructures, i.e. irrigation and roads; (4) Farmers are not allowed to grow other crops in the location at the same time to prevent competition for water and soil nutrients; (4) The decision to enter the contract should be voluntary and farmers are required to understand the contract and fully obey the conditions.

The contract basically involves three parties: BMT, farmers group and farmers. The contract only applies for one single season and will be extended/renewed based on agreement of all participating parties. The roles of BMT in the contract are to provide market guarantee at the pre determined price; to provide technical assistances and to provide subsidized seeds credit. While the roles of farmers group as the mediator are to provide assistances to the members, to control the distribution of seeds and the repayment at the harvest time, to record the farming activities of the members starting from the planting of seeds, growing and harvesting, to facilitate meetings among members and with BMT, to arrange and coordinate the transportation of products to BMT processing plant according to the required conditions and to manage the group saving. In the contract making, farmers are represented by the head of the group. The head of farmers group negotiates with BMT about the expected price and supports from BMT¹³. He or she also negotiates within the group to determine who will participate and who might opt out¹⁴.

Farmers in the contract are obligated to follow and obey the conditions stated in the contract; proactively participate in the peanuts farming and maintain the record of activities and costs occurred; to grow and maintain the plants optimally based on the guidance of BMT; they are not allowed to sale the harvest to other buyers and willing to be sanctioned for any violation of contract¹⁵.

External parties, i.e. field extension officers, staff of local agriculture office, PNPM-AP field officers are potentially involved but do not have active roles in the negotiation of the contract. Their roles are based on their specific mandates and or expertises, i.e. field extension officers and staff from local agriculture office play role in delivering information on available inputs or technology packages, or can also provide professional technical assistances as Business Development Support Providers (BDSPs) to farmers under the community

¹³ The price negotiation is commonly conducted by groups before they enter the contract farming scheme. Based on author's observation, the negotiation mostly happens due to the unawareness of farmers on the pricing system of BMT. They tend to focus on the basic price offered by BMT – which is lower than the market price – and compare it directly with the market price without being aware of the price incentives and other supports that provided under the contract. During the field research, the author was informed that some of the potential groups in PNPM locations postponed their participation in the contract due to disagreement on the offered basic price.

¹⁴ The participation of a group in the partnership scheme does not mandatorily require all members to participate. Based on the interview with those who opted not to participate in the current contract period, they indicate a lack of trust on the contract scheme due to their past bad experience with other companies in different commodities (mostly maize). In the interview, they said that they would like to see first the achievements of other farmers before deciding to participate in the next contract period.

¹⁵ Repayment of seeds credit at the market price and will be banned from future participation in the BMT's partnership program.

grant scheme of PNPM-AP; while PNPM-AP sub-district facilitators play role in facilitating groups in preparing and developing proposals related to peanut development activities for the community grant scheme, such as the establishment of peanut demonstration plot, trainings by BDSPs, field visit to successful peanut growing areas and also facilitate the communication between the group and BMT¹⁶.

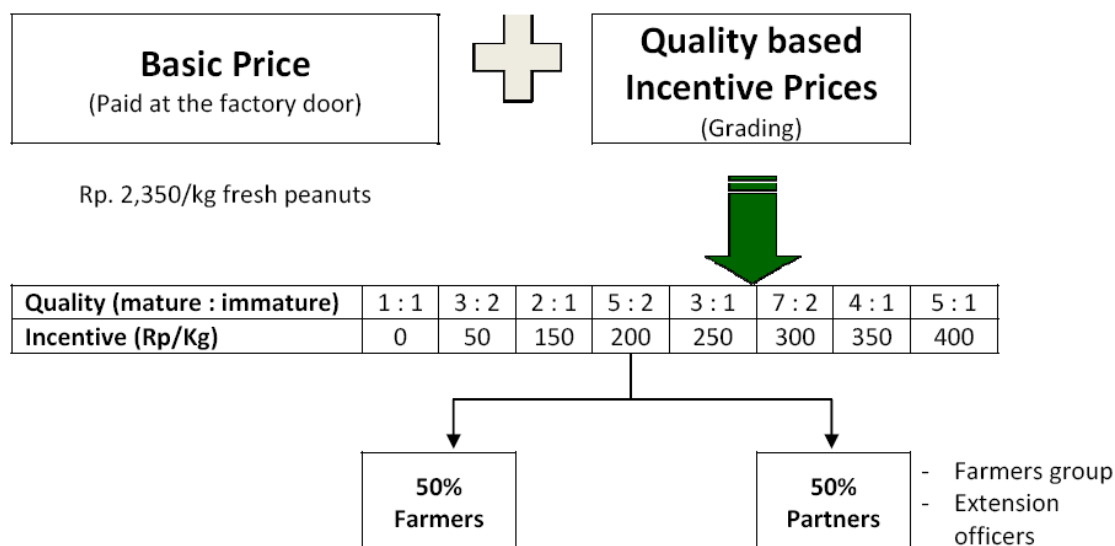
BMT applies strategy to engage external parties, especially the agricultural extension officers in the Partnership Program by allocating 50% of the quality based incentive prices to them based on the approval of the assisted groups. The aim is to motivate the extension officers in providing assistances to farmers in achieving not only the increasing of quantity but also quality towards BMT specifications. According to the staff of BMT, this is also a solution for BMT to address the problem of limited field staff resources faced by the company at the time being.

The buying price is determined unilaterally by the company based on the fluctuation of peanut market prices at the time of contract establishment. BMT applies 2 types of price: basic price and quality based incentive price (see Figure 2 below). The basic price applies for the product with average quality. Farmers will get additional price incentives (maximum Rp. 400 per kg) if their products succeeded to fulfill the quality criteria determined by BMT (mature : immature kernel ratio, see Figure 3 for the detail)¹⁷. The company only accepts fresh wet peanut within 24 hours of harvest. This strict regulation is because of the perishable characteristic of peanut, which is very fragile for aflatoxin problem in post harvest management at farmer level. However, the company still applies separate arrangement (not mentioned in the contract) to accept non fresh unshelled peanuts to protect their farmers from greater loss. Price for non fresh unshelled peanuts is below the basic price and determined based on negotiation between the farmers' representative and BMT. These peanuts are used as raw materials for coated peanuts product. In general, the process of weighing, sorting and grading of peanut is conducted transparently in front of farmers' representatives at the point of sale, either the processing plant or at the farmers' locations.

¹⁶ This is not only for contract but also for sharing experiences and technical assistances.

¹⁷ In the previous system, the collectors may or may not pass on any extra cash to farmers for improved quality.

Figure 2
The pricing system of BMT partnership program



Source: PT Bumi Mekar Tani

There are differences in basic price between buying at the processing plant and at farmers' locations. The basic price paid at the factory door for fresh wet peanuts is Rp. 2,350 per kg. The price will be deducted with several cost items if the buying conducted at farmers' location. Usually the latter price applies in the area where transportation is still an issue and requiring BMT assistances (particularly in Sumbawa). The breakdown of the cost items is shown in Table 3 as follows:

Table 3
The breakdown of cost items for buying at the farm gate

Price paid at the factory door	Rp. 2,350 / kg
Costs of freighting and weighing*	Rp. 50 / kg
Transportation cost to the factory*	Rp. 125 / kg
Contribution to group's saving	Rp. 25 / kg
Net price at farmers' location	Rp 2,150 / kg

* Varies between locations.

Source: SADI's Provincial Coordinator in NTB

Chapter 5

Survey Results and Findings

This chapter discusses the survey results and findings by using several key indicators to assess the impact of the Partnership Program of BMT on smallholders' welfare.

5.1 Participation in the Partnership Program

Participation in the Partnership Program is used to explain the logics behind the decision of smallholders to participate or not to participate in the Program, how they were informed about the program and their understanding on contract conditions which influences their behaviour under the contractual relationship. From the total 344 surveyed contract farmers, there were 156 farmers (45.3%) who were in their first contractual relationship with BMT. Others have already had experiences of 4 years (19 or 5.5%), 3 years (29 or 8.4%), 2 years (52 or 15.1%) and 1 year (88 or 25.5%) working as contract farmers for BMT.

The survey indicates that 63.14% of contract farmers (245) received the information on the Partnership Program from the BMT field officers. Group leaders were the second source of information on the Program as pointed by 80 respondents (20%). The role of other parties, such as government extension officers and PNPM field facilitators was relatively low, where the survey shows result of 2.58% and 4.58% respectively. This situation, especially for PNPM field facilitators, probably exists because of the limited coverage area of the facilitators (only 2 districts in NTB) and the model of communication (socialization) which is top-down (from the leader to the members). In addition, the survey respondents were dominated by farmers who have already had years of partnership experience.

The main drivers of farmers to participate in the contract were also assessed in the questionnaire. Price and market certainties provided by the contract are the main reasons why farmers chosen to participate. 232 (40.7%) and 148 (25.9%) of survey respondents chosen these reasons respectively. The next main driver is the provision of access to technologies (quality seeds, equipments and good agriculture practices). There were 104 farmers (18.25%) who select this option for their reason to participate.

Regarding the understanding and awareness of farmers over the contract conditions, the survey also assessed the transparency of the contract process. 229 contract farmers (66%) claim to have the copy of contract letter and 277 (80%) indicate the existence of socialization of contract conditions in their groups. However, 268 surveyed contract farmers (77.9%) indicate their unawareness on the existence of sanction in the contract if they violate the contract.

While for those who do not participate in the Partnership Program, around 110 respondents (30%) indicate their absence due to the lack of

information on the Program. The other reasons were: “would like to see first the result of other farmers that participate in the program” (57 or 15.6%), “do not like the seed required by BMT” (28 or 7.6%), “the contract is too rigid” (23 or 6.1%) and “traumatized by previous experiences with other commodities” (23 or 6.3%). The survey also found 5 respondents who have previous experiences with BMT and claim the dissatisfactory experiences as their reason for not to engage with the Program anymore.

5.2 Land Ownership and Size

Land ownership and size is used as a key measure in this study because it explains how smallholders participate in the Partnership Program and benefiting from it. Since the program is implemented through groups with minimum land requirement of 10 ha per group, there is no obstacle for farmers with land ownership below 1 ha to participate in it. The total membership in a group is ranging from 10 members up to 197 members¹⁸, where the groups are dominated by famers with landownership below 0.5 ha.

Farmers in Lombok Island are characterized by land ownership below 1 ha, while in Sumbawa, many farmers own land above 1 ha. This condition exists since Sumbawa is the location of intra-province transmigration program. Many *Lomboknese* were transmigrated to Sumbawa during 1980s and receiving land allocation of 2 ha from government. The allocated land is divided into wet land (irrigated land) for paddy and maize and dry land for plantation (i.e. cassava, and tree crops such as cashew, mango, and so forth). However, during the questionnaire survey as well as in the interviews, usually farmers only gave the total of wet land they owned or managed and excluded the plantation area when they were asked about the total land operated for agriculture.

The administered survey indicates 562 (79 %) of the surveyed farmers have full land ownership, 72 farmers (10%) are renting, and 69 farmers (9.5%) are share croppers. It is also found that 388 of the surveyed farmers (54.72%) own land below 0.5 ha and 199 farmers (28.7%) own land of 0.5-1 ha size. The survey also shows that 58% of the surveyed farmers have access to irrigation from the river or dam, and 33% are relying on rainfall for watering the crops. Furthermore, most of the surveyed farmers indicate that they allocate their land fully for peanuts farming (540 or 76.38%), while the rest were still allocating some portion of their land for growing other short term crops, such as vegetables, maize, soybean and dry land paddy as the sources of food supply or cash income.

¹⁸ In Sintung Village, Pringgarata Sub-district, Central Lombok based on the 2009 group list given by BMT. The total land dedicated to the Partnership Program by this group is 81.35 ha.

5.3 Wealth Position

The wealth position as written by Winters (2005: 73) is a key measure in assessing the household's ability to address risk and shock and as an indicator in determining household's social position in the community thus potentially influencing their eligibility to participate in a contract scheme. Among the assets owned by households, land is a key indicator of wealth. Land value is determined by several factors, such as the types of crop grown on the land (tree crops add more value), types of irrigation and proximity to main road and marketplace.

Other indicator is the value of fixed assets owned by households. This includes building, and fixed household assets and agriculture machineries. In the survey areas, both household assets and agriculture machineries are closely related to the availability of power supply in each location. In average every household owns permanent house (made of bricks with standard rural live condition and facilities), and household equipments such as television and radio (refrigerator is still exclusive in the rural areas of NTB due to unstable power supply). Motorcycle is also a common high value asset owned by every household. While for agriculture machineries, such as small planting, weeding and harvesting equipments, are mostly still manual and personally owned by every household. Electronic and motor powered machineries, such as hand tractor, shelling machine, and water pump, are usually owned and operated collectively¹⁹.

Livestock ownership also serves as key indicator in determining the welfare position of household. Cattle and goat are the most common animal assets owned by farmers, where in average one household owns one cattle and or between 1-2 goats. Poultry (chicken and duck) is also common but mostly considered as low value assets. The ownership of high value animals, such as cattle and goat is very important in helping farmers to address shocks or financial emergencies, such as when they are facing harvest failure, severe drought, or sudden costs for healthcare and education.

The ownership of high value tree crops is included in measuring the welfare status of farmers in this study. It is a common practice by farmers to grow high value tree crops, such as cashew, candlenut, jackfruit, mango, mangosteen, coconut, teak, and mahogany on their land²⁰. While not every high value crops are cultivated intensively²¹, these crops also serve as additional income sources especially in dry season since most of them are producing

¹⁹ In most cases, these assets are provided by government or donor programs that requires collective ownership and management over the assets. The aims of the provision of these machineries are to improve the efficiency in farming activities and as a source of group income by renting out to other farmers.

²⁰ There has been a massive campaign by local government and civil society in NTB for farmers to grow timber trees, i.e., teak and mahogany as future investment (5-15 years) for children education (the main topic of the campaign).

²¹ Some crops are planted in the front or backyard of farmer' house or as border signs around the paddy fields.

during that period of time. However, the fluctuation of market prices of certain crops (especially the horticulture crops, such as mango and mangosteen) is still an issue for farmers to be able to depend their incomes from these crops.

The next indicator assessed is the amount of surveyed farmers who have other income sources beside the farming activities. The survey result indicates 345 respondents (48.66%) have non farming activities. The most dominant activity is cattle raising, which is answered by 126 respondents (34.61%). There were only 25 respondents who have formal sector occupations (i.e., rural level official, teacher). Seasonal labour is the second biggest answer given by the respondents. This type of occupation is chosen by farmers as seasonal income during the dry season (117 or 32%) where most of them work as construction labour and labour for other farmers. The average daily labour income is Rp. 30,000, however the number of working days in a month is very depend on the availability of such opportunity in their locations.

Non farming income sources can act as relevant source of finance for undertaking agricultural practices, as they can reduce the capital constraint to some extent. In NTB, seasonal non farming employments are mainly aimed at fulfilling the household consumption because income from farm during the dry season is less profitable. However, non farming employment may also decrease the tendency to adopt some practices that are potentially profitable but require more intensive management because of the opportunity cost consideration (Ancev, 2008: 13). In the field study, the author found a case where seasonal employment as gold miner in Sekotong, Lombok has distracted farmers' attention from farming activities. BMT claims to lose their contract farmers in Sekotong who dominantly prefer to become gold miners. Many are reported to become sudden millionaires, with minimum daily income of Rp. 100 thousand to 1 million.

The last indicator used to assess the welfare status of the surveyed households is human capital. In this study, human capital is measured by referring to school enrollment rate of school age children in the study areas. Schooling is used as an indicator of welfare status since it reflects households' capacity in accessing basic services which in this case is education for the children, and as indicator of social status of the households. Although this issue is not covered in the questionnaire survey, the author raised this issue during the interviews with farmers and local leaders in the field visits to Narmada (West Lombok) and Pekat (Dompu)²². In these two locations, all interviewers indicated a high enrollment rate (elementary school level) in both locations. However, the level of children involvement in farming activities is

²² In Pekat, the author interviewed a teacher from the local elementary school who indicates a high awareness of parents in the village on the importance of education for their children. The existence of the School Operational Assistances Program by central government is also becoming a key driven factor for this situation. According to her, there was only one student who dropped out from school because has to help the parents in the farm but not peanuts farming activity.

still relatively high. The survey indicates 418 farmers (30.18%) to have their children working in the farm with them.

5.4 Access to Finance

Access to finance is used to measure the financial capacity of farmers to participate in the contract farming scheme that requires intensive productivity and quality achievement towards the designed target. The administered survey assesses the financial resources of farmers (both contract and non contract) for their peanuts farming activities. The survey indicates 457 surveyed farmers (45.47%) use their personal savings as working capital, while 389 others (38.71%) prefer to utilize the existing capacities and resources than to make additional investments. These behaviours can be understood because peanut is a low priority crop, and therefore farmers appear not to apply the same level of crop husbandry to peanut as other staple or commercial crops.

In many cases of contract farming, access to finance is an incentive for farmers to participate in a contractual relationship. However, this is not the case in the Partnership Program of BMT. At present, there is no cash credit provided under the Program other than the quality seeds credit. Previous cash advance program was not attractive enough for farmers, considering the relative small amount which was Rp. 1.5 million per hectare and the requirement to submit 50% of the harvest total in return to the given support.

There are not many financial services that can be accessed by farmers. Aside from the services provided by *Bank Rakyat Indonesia*²³, formal rural financial institutions are still very rare. Traditional pawning system is one of the preferred ways for farmers to access cash. In this system, farmers give their land physically to the money lenders (usually the well off farmers) who then hold rights over the land, including rights to operate and plant the land until the loan is settled by the borrower. Many farmers are also becoming clients of local loan sharks²⁴. At present, there is a credit program called *Lumbung Kredit Pedesaan* (LKP) or Rural Credit Program by the provincial government which is channeled through *Bank Pembangunan Daerah* (Regional Development Bank) in every district of NTB. Although the program is targeting farmers, however the conditions applied are not different from the conventional credit program. The program still requires collateral (building and land) and 3 % deduction in advance.

²³ A state owned bank, which is the biggest micro finance focused bank in Indonesia with branches and outlets covering almost villages in Indonesia.

²⁴ Known as *Bank Pelecit* (Squeeze-Dry Bank), *Bank Selamat Pagi* (Good Morning Bank), *Bank Subuh* (Sunrise Bank) and *Bank Berjalan* (Walking Bank). The borrower does not go to the bank. The bank's staff comes to the borrower, usually at sunrise in rural areas. Payment is collected daily by the staff. The grace period is one day. When the poor are forced to borrow from this type of institution, they face horrific interest rates (Montgomery. 2008: 13).

From the interviews with BMT staff, the author was informed about the existing efforts of BMT to link the contract farmers with formal banks. *Bank Mandiri*, the biggest state owned bank in Indonesia, and *Bank Tabungan Pensiunan Nasional* (BTPN) have already expressed their interests to support farmers through group based lending system. *Bank Indonesia* (the Central Bank) in NTB has already started to work with BMT to provide their corporate social responsibility grants to peanut farmers to establish demonstration plots in several locations. However, BMT has no plan to become a credit avalist for their contract farmers because their role as a market guarantor is considered already maximum to ensure the profitability of peanuts farming activity which in other words promotes the financial viability of the farmers for banking credit schemes.

5.5 Access to Technology

Contract farming is a way for farmers to have access to improved technologies. The existence of company's direct interest to increase the quality and quantity of harvests produced by farmers becomes the pushing factor for them to provide technical assistances more conscientiously than would a government extension service (Glover, 1984: 1149). In this case study, the aspect of technology transfer to farmers is a key focus to measure the effectiveness of the BMT's Partnership Program. The technology package provided by BMT to the contract farmers is divided as follows: (1) intensive technical assistances to introduce good agricultural practices; (2) the introduction of new quality varieties: and (3) the use of improved multipurpose farming tool.

The importance of access to technology for farmers is indicated by the selection of this factor as the third main reason for farmers to participate in the BMT's partnership program (104 farmers or 18.25%) after the price and market guarantee reasons. Technology limitation (limited knowledge on good agricultural practice and limited supply/availability of quality farming inputs) is also selected as the main factor of potential inability to fulfill the contract.

A successful technology transfer is very important for BMT in achieving the desired level of productivity and to ensure the profitability of the Partnership Program for farmers through the achievement of efficient farming practices²⁵. The consequence of productivity intensification is the increasing of production cost. The survey indicates 257 of surveyed respondents (40.2%) claimed to experience the increasing of production costs because of the intensification or crop shifting. From the list of the increased costs, the costs of labour and farming inputs are on the top of the list, with 45.25% and 37.1% respectively. Both of these are tried to be addressed by BMT through the introduction and application of good agricultural practices, good quality seeds and appropriate farming technologies.

²⁵ Under the pre determined price scheme, farmers' profitability is highly influenced by the productivity and efficiency which is correlated with the quality of technologies applied.

5.6 Access to Market

Peanut is a commodity with high market demand but unstable price. The market prices are lower at peak harvest and the existing supply chain provides negative incentive to farm gate prices. The Partnership Program of BMT offers stable price and market guarantee to the contract farmers. Price stability and market guarantee help farmers to secure their profitability by determining the potential income first before starting their farming activities. Price and market certainties provided by the contract are the main reasons why farmers chosen to participate with 232 (40.7%) and 148 (25.9%) of survey respondents chosen these reasons respectively. On the other side, for those who chosen not to participate, the pre-determined price is not favourable especially when the market prices are higher than the contract price.

Based on the author's observation, the unequal supply of peanut towards the demand of BMT and local market has increased the price of peanut around 50-70% in the last 2 years. The VCA Study by IFC noted that the buying price in March 2007 was Rp. 1,600 (collector price) and the price has risen to Rp. 2,500 – 2,750 (BMT's price in July 2009). The interviews with peanut stakeholders in NTB indicated that peanut is a commodity with high demand but limited supply even before BMT started its operation in NTB²⁶. However the price was relatively low and the value chain was not efficient. There was no incentive for farmers to produce high quality peanut due to insignificant price incentive for quality peanut. The existence of processing plant of BMT that requires regular supplies in big volume plus the application of basic price has succeeded to correct the market. The basic price offered by BMT is becoming the floor price of peanut in NTB and the basis of local market in setting prices. Moreover, the quality improvement activities by BMT through the introduction and wide adoption of high quality seeds plus best agronomic practice also contribute to the increasing of selling prices.

5.7 Labour Use

Labour use is a key measure to assess the level of increasing in labour use because of production intensification under the contract farming scheme and how it affects the use of labour in the households. Labour cost is the major contributor (200 or 45.25% of respondents stated labour cost as the cost that experience significant increase) to the increasing of costs as the consequences of production intensification or crop shifting (changing to peanut). Traditional peanuts farming with a very low inputs especially labour is very common in NTB. Farmers do not process the land before planting, dedicate small amount of labour for the cultivation of crops, and prefer to sale their crops before the harvest time where the buyers (local collectors) will use labour to harvest the crop. These practices may save costs for the farmers but gives minimum

²⁶ Peanut are either sold for local consumption or sent to industry in Java (East Java).

profits for them, in terms of low productivity due to bad agriculture management and very weak bargaining position in price negotiation.

Peanuts farming under the Partnership Program of BMT requires farmers to apply good agricultural practices with a consequence of the increasing of labour use²⁷. Furthermore, in order to achieve the economies of scale for transporting the harvest (wet fresh peanut) to BMT's processing plant in Mataram, farmers are required to transport minimum 5 ton per truck²⁸. The minimum required labour per hectare for timely harvesting process is 20 labours, while to achieve the required 5 tons it will need 2-3 hectares per harvest time. During the peak of harvest time, farmers are usually facing problem of labour shortage. In order to address the increasing of labour cost, BMT advises farmers to work collectively in group and also to adopt the improved simple harvest technology²⁹.

The increasing of work burden is reflected by the tendency of hiring labour for farm activities, as 48.13% of the respondents (617) reported to have been hiring labour³⁰. The second largest option is to involve family members (559 or 43.6%). Working in group as recommended by BMT was only chosen by 80 respondents (6.24%).

In terms of the impact of production intensification or crop shifting on family labour use, there were 239 respondents (64.42% of those who answered the question) who indicated the increasing of responsibilities among family members. The survey also indicates that women (wives) and children hold the biggest portion of family labours that involved in the farming activities with 34.73% (481) and 30.18% (418) respectively. Further, 221 respondents (55.25%) answered that family labours are involved in crop management, 90 respondents (22.5%) claimed to use family labours for harvest and post harvest management, and 46 respondents (11.5%) indicate the use of family labours for seeds preparation and planting. These figures mean that family labours are still significant in all steps of farming activities. Furthermore, these figures also reflect the position of women in the traditional farming community. It has been well known that men and women play distinct roles in farming activities and highly influenced by the status of crops (cash crops vs subsistence crops). Generally, men will be responsible for cash crops and women will be responsible for subsistence crops. Peanut in general is still considered as a low priority crop and receiving a low level of farming inputs, including labour. Based on the author's observation, in general women are playing dominant roles in peanuts farming. However with the increasing of profitability potential of peanut, the role of men is also increasing in this sector.

²⁷ In terms of labour use, the GAP requires the processing of land before planting and periodic weeding.

²⁸ The cost for renting a truck is Rp. 700 thousands for one trip.

²⁹ To use banana stems in separating peanuts from the leaves.

³⁰ The preference to hire labour is also reflected by the existence of 361 respondents (58.04%) who have non farming jobs to hire labour instead of leaving their non farming jobs in addressing the labour shortage.

5.8 Gross Margin and Input Costs

For this analysis, total farm gross margin is calculated in order to compare the effects of the Partnership Program in the return of farmers' investments. Total farm labour use and chemical costs are also included to analyze the effects of contracting on these inputs. The calculation is presented in Table 4 below.

Table 4
A simple comparison of margins between traditional and technology package farming

Items	Traditional	Technology Package
Income*	2,820,000	7,200,000
Production costs**:		
Land preparation	N/A	600,000
Seed	1,020,000	1,020,000
Fertilizer-SP36	N/A	300,000
Pesticides	N/A	100,000
Fuel for water pump	500,000	500,000
Labour-weeding***	600,000	1,200,000
Spraying	N/A	600,000
Labour-harvesting	600,000	600,000
Total production costs	2,720,000	4,920,000
Net profit per hectare	100,000	2,280,000

Source: Processed based on the data provided by BMT

Note:

* = Productivity under the traditional farming system is 1.2 ton per hectare (with average quality of 1:1 - Rp. 2,350 per kg), while the productivity under the modern system is 3 ton per hectare (with average quality of 3:2 - Rp. 2,400 per kg).

** = Production costs in traditional farming system is known to have a low level of inputs (chemical and labour), while production costs in modern farming system using the technology package of BMT will require the increase of investments in chemicals and labour use.

*** = The standard labour use per hectare is 20 labours, @ Rp. 30,000 per day. In the case of traditional farming system, labour cost is considered as 'free' because in most cases it involves family labour.

The results presented in Table 4 suggest a very big gap between the net profit between contract farmers (modern farming system) and non contract farmers (traditional farming system). As shown in the table, traditional system is more efficient in production costs but has a very low productivity. While the total of production costs in modern system is almost double from the production costs in the traditional system, the productivity itself also increases in terms of quantity and quality.

Chapter 6

Issues and Risks in the Partnership Context

This chapter analyses the survey results and findings presented in the previous chapter by focusing on the issues and risks that presented in the Chapter III. Each of these topics will be discussed in the following sections as follows:

6.1 Smallholders Participation in the BMT's Partnership Program

The Partnership Program of BMT is characterized by the participation of smallholders who own small pieces of land, with the smallest size of 0.1 hectare. Since the contract requires a minimum land of 10 ha, therefore the contract is made between BMT and farmer groups instead of directly with individual farmers. The group based partnership allows BMT to work efficiently in providing resources to farmers as well as in supplying (buying) peanut from them.

The participation in the Partnership Program is determined by three agents: the farmers themselves, the head of groups and BMT through its field representative. The decision to enter the contract is voluntary in nature. The head of group is the one who holds responsibility to negotiate within the group to determine who will participate and who might opt out since the participation of a group in the partnership scheme does not mandatorily require all members to participate. The contract only applies for one single cropping season and will be extended/renewed based on agreement of all participating parties, which includes the evaluation on the contractual performance and satisfaction over the results and benefits by the three parties.

There are several key factors for farmers to self select themselves to participate in the Partnership Programs. The existence of price stability and market guarantee are the main incentives for farmers to participate in the Partnership Program. The absence of price and market guarantee prior the existence of this program has been claimed as the main reason why peanut is not a priority crop for farmers (this is also indicated in the Peanut Study Report by ACIAR).

Other reason for farmers to enter the contract is the availability of opportunities to access improved technologies. Farmers are introduced to good agricultural practices (seeds preparation, planting, spacing, crop cultivation and harvesting practices), and simple farming equipments. Most of all, the Program provides opportunity for farmers to link with research, development and extension services, an opportunity which did not exist before.

The contract also increases on-farm demand for labour and therefore is attractive to farmers with larger households facing high costs obtaining off-farm work. Planting peanut as high value dry season crop provides cash income opportunity to family members as labours considering its characteristic as a la-

bour intensive farming. In addition, farmers who have sufficient family labour available for farming work are more likely to participate in the contract since they will be able to work efficiently and reduce the requirement for non family labour.

The participation in the contract also allows farmers to access farm inputs advances (mainly the subsidized quality seeds). The seeds credit helps farmers to address the financial problem when they want to participate in the contract and to achieve the level of productivity required by BMT.

Contracting is a group based activity and therefore should be attractive to farmers with previous experience with agricultural and community groups. Working in group helps farmers to address the problem of economies of scale when they have to deal with production quota and access to farming inputs, technical assistances and labour use.

However there are also several factors that may decrease farmers' interest to participate in the Partnership Program. In NTB as well as in other parts of Indonesia, staple crops (rice and maize) are often culturally and socially significant, providing the family with increased social, therefore farmers may be unwilling to reduce land areas dedicated to these crops (Ancev, 2008: 16). The likelihood of this decision is becoming bigger if the farming area has a very good irrigation which allows farmers to plant rice or maize three cycles in a year. In addition, farmers preferences to grow staple crops are also driven by the long history of supports and subsidies from government for these crops (stable prices, subsidies and allocation of priorities for inputs). This provides farmers with a sense of security under prevalent climatic and economic environments.

Peanut also have to compete with other dry season crops (other than maize), such as soybean and mungbean. These two crops are also known as low inputs crops but with better local market prices (both are sold around Rp. 2,500-3,000 per kg). Only with higher productivity then peanut will be able to compete with these crops³¹. Besides that, peanut also face competition with non farming jobs which may provide promising return to farmers during the dry season and reduce labour availability for farming activity.

In terms of contract, there are still many things regarding the benefits and supports provided under the contract that remain unclear and uncertain for the farmers and require serious attention by the firm. Here, the improvement of information flow and transparency from the firm to farmers and vice versa is very important. The experience with the previous YARNEN and cash advance systems has created trauma for several farmers. Apparently, in the first YARNEN system, BMT supplied their raw materials from farmers through the field collectors (in the previous contract systems, the contract was between BMT and the field collectors who then subcontract to farmers). However,

³¹ *Badan Pusat Statistik* Indonesia (BPS) reports that in 2007 the annual productivity of soybean and mungbean in NTB was 1.22 ton/ha and 0.931 ton/ha respectively.

there were indications that the field collectors manipulated the price information that caused farmers to lose trust on the contract. In the field research, the author also received information that since 2009 BMT has decided to withdraw from Sumbawa and to focus on Lombok only. The official reason given by the company was because they want to focus on the abundant potential on Lombok. Supply from Sumbawa (West Sumbawa) will be from the regular supplier and no longer from contract farming scheme as before. However, information from the field in Sumbawa indicated the existence of conflict between company's representative and contract farmers as the cause of the withdrawal. The comments from both sides are presented in Box 1 below.

Box 1

Conflict between the Firm and Contract Farmers in Sumbawa

"Since January 2009 we decided to stop the contract farming scheme in West Sumbawa and to withdraw our field staff from the region. Staff are asked to focus on Lombok. At present we only have 13 field staff and only enough to cover our operational on Lombok. The potential of land on Lombok is abundant and here the introduction of quality seeds and the GAP is still an issue that requires attention from us" (Abdullah, Field Extension Director of BMT)

"Some farmers were reluctant to be interviewed. They thought that I am a representative of Garuda. However, after I explained that I was there for a study for SADI on Garuda's performance they started to be open. They told me about a manipulation done by the middleman, who took their peanuts without paying them. They asked Rahman (the ex staff in Western Sumbawa) to solve the problem but he ran away" (Ade, the enumerator assigned for questionnaire survey in West Sumbawa)

"Many middlemen in Sumbawa are very influential in the region and some even ran for the local parliamentary election last year. We have cases where they took money from farmers and blamed Garuda for that. Now I am posted in North Lombok and I don't want to go back to Sumbawa anymore. (Rahman, field staff formerly assigned in West Sumbawa)

While the contract is claimed to be improved, several field findings in this study still indicate the unclearness of information at farmers level regarding the buying prices. Many farmers still indicate their unawareness on incentive prices and answered differently when they were asked about the buying price (basic price) by BMT. This situation has been used by some local collectors who benefit from their knowledge on the incentive prices to intercept the contractual relation by offering prices that higher than the basic price. They even provide incentives to farmers such as providing free bags when they purchase the peanut and to free farmers from several cost items that applied in the BMT contract scheme. Peanut that bought at higher prices are sold to BMT at regular market prices which are higher than the contract price³².

³² At present, BMT is the single main buyer in NTB for the quality peanuts (BIGA) and willing to pay for premium prices for this variety. Local processors offer prices below the prices paid by BMT for the supply from regular suppliers/spot market. The other weakness of local processors is the limited buying capacity which is below BMT.

The rigidity of BMT requirement to supply fresh wet peanut from farmers within 24 hours after harvest are still the biggest problem for farmers in fulfilling the contract. The shortage of labour during harvest and the inability of farmers to ensure the timely harvest to achieve the minimum quota per harvest (5 ton fresh wet peanut) are the main factors of farmers inability to fulfill this requirement. Besides that, there is a common practice by farmers in NTB to process their peanut instead of selling them in fresh condition that required by BMT. The post harvest processing is aimed at increasing the selling price of the peanut. Minimum farmers will dry their peanut and then receive double price for the dried unshelled peanut (Rp. 4,500-Rp. 5,000 per kg). The return will be higher if they dry and shelled the peanut (Rp. 8,000-Rp. 9000 per kg of kernels). However, the ratio of selling prices between wet and dried peanut is not too significant considering the moisture content of wet peanut, which is about 50% of the weight (see Table 5 for the comparison). It is considered to add more works and costs for farmers in drying the peanut³³ which at the end will reduce the real profitability.

Table 5
A simple comparison of margins between selling peanuts in wet, dried and dried shelled forms

Investments	Wet Peanuts	Dried Peanuts	Dried and Shelled Peanuts
Market Price (IDR)*	2,750	4,500	8,500
Expenses:			
Raw material (Peanuts) for 1 kg final result (50% moisture content plus 30-40% reduction for the shells)	1 kg	2 kg	4 kg
Farming costs per kg (IDR)**	(1,500)	(3,000)	(6,000)
Post harvest costs (IDR)***	(200)	(600)	(1600)
Margin (IDR)	1,050	900	900

Source: Processed based on the data provided by BMT

Note:

* = Market price for wet peanuts refers to basic price + full incentive price (quality 5:1) offered by BMT (2,350 + 400). The prices for dried and dried shelled peanuts refer to the observed market

³³ The drying process takes around 2-3 days with additional working hours required for the process.

prices at the time the study was conducted. There is no price incentive from the local market for quality peanuts produced by farmers.

** = Farming cost is based on the estimation of BMT per hectare for 1 kg peanuts using technology package (Rp. 4,500,000 for 3 ton of peanuts per hectare).

*** = Post harvest costs for wet peanuts refer to calculation in Table 3, while for dried and dried shelled peanuts are based on estimation of labour cost per kg. It is assumed that the daily labour cost for the drying process is Rp. 300,000 for 3 ton of peanuts (Rp. 30,000 per labour). Total days required for drying is 3 days and 1 day for shelling.

Further, some of the respondents indicate that they are still reluctant to grow the seed varieties required by BMT. The technical problems (i.e. agro-climate differences and lack of knowledge on seeds management requirements) and the scarcity of seeds supply have been becoming the main reasons for farmers not to grow the required varieties. This issue is problematic for both BMT and the farmers. For BMT without being able to secure the supply of required seeds they will not be able to expand their peanuts farming areas. Although BMT is now able to improve the quality of basic seeds to comply with the agro-climate specific of farming areas in NTB (especially in Lombok) through their cooperation with ACIAR-SADI and Mataram University, however replicating the seeds and getting it to farmers in adequate quantities and timely manner is still a serious challenge.

6.2 Contracting and Margin for Smallholders

The comparison of margins between the traditional system and technology package provided under the Partnership Program of BMT as shown in the Table 4 indicates that the program brings significant benefits to farmers who participate. Another comparison in Table 5 shows the calculation of margins for selling peanuts in wet, dried and dried shelled conditions. Again the calculation suggests a higher return for selling peanuts in wet condition as required by BMT.

The increasing of productivity as the result of farmers' investments in inputs shows positive correlation between the investments and profits. It can be concluded that this situation is created by the the existence of price guarantee and clear market for quality peanut in the BMT's Partnership Program.

6.3 Contracting, Labour Use and Input Costs

Findings from the field provide clear evidence that the Partnership Program has a strong influence on labour allocation. It significantly influences the demand for labours (both family and non-family labours) and this demand is primarily met by hiring non-family labour and the increasing use of female labour. The increase in use of labour is the result of the requirement for more intensive farming management practices, such as seeds preparation, land preparation, planting, weeding and harvesting in compare to the previous traditional peanuts farming system. While there is an increasing of work, the application of improved farming tools as introduced by BMT helps farmers and their labours to perform the works efficiently.

As with labour use, the survey results indicate that contracting significantly increases the total expenditure on pesticides, herbicides and fertilizers as well as the requirement for more intensive irrigation which is reflected in the increasing of fuel cost for the water pump (for non-irrigated/rainfed land). However, the increased costs are compensated by the increasing of yields (both quantity and quality) and income.

6.4 Contracting and Food Security Risk

The study results suggest a very low risk of food shortage due to the intensification of peanut production. As a rotation crop, peanut is planted in rotation with the main crops (staple) and used to fix the nutrition content of the soil. There are several planting patterns of peanuts in NTB which are highly dependent on the availability of irrigation (wet and dry land). In wet land the patterns are: paddy-paddy-peanut, paddy-peanut-paddy and paddy-peanut-peanut (but very rare). In dry land, peanut is only grown once in a year (paddy-peanut) and has a very small potential for being grown twice in a year (paddy-peanut-peanut) since farmers tend to prefer to grow paddy, even though it is a dry land paddy if the availability of irrigation allows them to do so. This is again back to the culture of farmers in NTB who still consider the social and cultural value of paddy.

While peanut is a high value crop, most of the peanuts farming activities are managed by female (wives and other family members) whereas the husbands will focus on other crops or having seasonal employments. The diversity of family income sources is a guarantee for food security during the peanuts cropping period.

There are findings indicating that most surveyed farmers do not allocate their land to peanut fully and the existence of other crops (both seasonal and long term crops) or other productive assets (cattle) on their farms suggest the rich diversity of food and cash sources for farmers in addressing the issues of food security both in subsistence and commercial ways.

The proven profitability of peanut under the contract farming scheme of BMT is a very important factor in ensuring farmers' food security. Income generation from an intensive peanut production is a surplus of cash for farmers, considering the typical low profit characteristic of crops grown during the dry season.

6.5 Contracting and Dependency Risk

The concern about the potential dependency risk under the contract farming scheme of BMT is carefully examined in the study. The requirement for the adoption and application of certain technologies to meet the specific standards of product as indicated in many literatures on contract farming does exist in the Partnership Program. Farmers are required to grow the peanuts varieties (BIGA) and to follow the standard farming practices of BMT. While these requirements may limit the flexibility of farmers and obligate them to change

their farming practices, these also can be seen as the answers to the low productivity and profitability problems faced by peanut farmers in NTB.

The interviews with BMT staff, researchers and farmers themselves indicate the utilization and adoption of locally known technologies and materials in the improved farming practices of BMT. There is no high tech adopted, therefore all technologies are easily transferred and adopted by farmers. Farming tools are using locally known technologies and materials (such as the use of banana stem in separating peanuts from the leaves). The currently developed multipurpose farming tool is based on the existing tool and is locally produced³⁴. The Good Agriculture Practices (GAP) is introduced as one integrated package with the quality seeds and is not considered as a big change in farmers' agriculture practices. The major difference between traditional practices and GAP is the increase of inputs allocation, especially labour in the intensive peanuts farming activity.

To ensure a successful transfer of technologies, especially the GAP and quality seeds, BMT applies several strategies as follows: (1) The assignment of full time field staff to farmers groups during the peanut cropping period; (2) To establish cooperation with local extension office to provide their services to farmers. BMT tries to create sustainable link between extensionists and farmers by allocating 50% of the incentive price to them as an incentive to support the groups. (3) The direct involvements of farmers in R & D & E activities of BMT by inviting farmers to their demonstration plots (hosting farmers field day), supporting farmers to develop their own demonstration plots by providing seeds and technical advices³⁵, and so forth; and (4) BMT supports the multiplication of quality seeds in farmers' farms (demonstration plots) to reduce the dependency on seeds supply from BMT. It is estimated after approximately 6 planting cycles, the seeds stock will be stable and there will be no need for farmers to buy seeds (Pomeroy: 2009: Annex B, Notes on Peanut Activities)

As with the assessment on the technology dependency risk, the market dependency risk assessment indicates a positive effect of the improvement of varieties grown by farmers to the marketability of their product. Peanut in NTB is a commodity with high demand but unstable price. In the past, there was no price incentive for quality produced by farmers. The common varieties grown by farmers are known as low quality peanuts. The introduction and widespread of BIGA varieties has increased the market demand for this product and even BMT themselves have to compete with other buyers (local processors) to supply these varieties. While local processors probably pay

³⁴ This multipurpose farming tool is developed by BMT in collaboration with Mataram University. The project itself is funded by IFC-SADI.

³⁵ PNPM-AP farmers are now trialing the improved seeds from BMT and ACIAR-SADI study on their demonstration plots in West Lombok and Dompu. The peanuts produced from these demonstration plots will be divided among the members and used as seeds for their peanuts farming – for eventual sale to BMT (Pomeroy, 2009: 16).

lower price than the price paid by BMT, they usually provide cash credit to the farmers (mostly non contract farmers in Sumbawa) prior harvest as the down payment.

6.6 Contracting and Exploitation Risk

The discussion on exploitation risk is focused on (1) the balance in roles between the lead firm and contract farmers; (2) the shift in labour use within the farmer's family; and (3) any social implication that might have caused by this system.

1. The balance in roles between the lead firm and contract farmers

The balance between the lead firm and contract farmers in the contractual relationship is assessed by reviewing the roles and responsibilities of both parties and how the relationship works in real practices. In general the roles of each parties as presented in Chapter IV is considered to be adequately clear, however the balance of responsibilities between BMT and contract farmers is still overweight on farmers side.

For farmers, it is clearly stated about their responsibilities and the existence of sanctions if they violate the contract (do not follow the requirements of BMT and sale their harvest to other buyers)³⁶. However, the sanction for BMT if the firm fails to fulfill its responsibilities is not yet well defined. This then raise a question about the balance of power between both parties in the agreed contractual relationship.

Another related important issue is the absence of clear risk management. While shifting from low input varieties to high input varieties is exposing farmers to greater risk, there is no clear arrangement about how the risk will be shared if harvest fails. A very clear risk faced by farmers is the failure to be punctual in transporting their harvest to the processing plant within 24 hours as required by the company. Although, there is a separate arrangement by BMT to accept non fresh unshelled peanuts 'to protect their farmers from loss' at lower price, this kind of arrangement is not representing the goodwill of the company to protect the farmers from risk, especially because it is not officially mentioned in the contract and is based on individual negotiation between BMT staff and farmers representatives. A potential manipulation and exploitation may exist during the process.

Farmers also do not have a strong bargaining position in negotiating the buying price with BMT. The decision of price is made unilaterally by BMT. The reality that the offered price is lower than the price paid by BMT to the regular suppliers may distract farmers' interest to participate in the Partnership

³⁶ The survey suggests that 268 surveyed farmers (77.9%) were not aware of the existence of sanction if they violate the contract. For those who indicate their awareness of the existence of sanction apparently provided different answers, which many did not give the exact answer.

Program or to obey the obligation for not selling their harvest to other buyers – who in most cases are BMT suppliers.

Furthermore, many farmers also still indicate their unawareness on incentive prices and answer differently when they were asked about the buying price (basic price) by BMT. Although in fact, there is a buying price (basic price) difference between buying at the processing plant and at farmers' locations, however these differences are not well informed to farmers. The possibility of layers that hamper the communication of information as what happened in the first YARNEN system may exist again. It is necessary to investigate further from inside the firm itself the root of problem since the current YARNEN system is supposed to be more transparent than the previous system. Without the improvement of transparency, the potential of exploitation risk is very high, which at the end will negatively affect the Partnership Program.

2. The shift in labour use within the farmer's family

Peanuts farming under the Partnership Program of BMT is a labour intensive activity. The intensification of production towards the targeted quantity and quality standards requires farmers to apply good agricultural practices and timely harvesting practice with a consequence of the increasing of labour use. Farmers in many similar cases tend to dedicate family labours first to fulfill the labour requirement before hiring non family labour if the excess of labour requirement still exists. Family labour is typically characterized as free, and therefore increases the efficiency.

In BMT case, the increasing of work burden is reflected by the tendency of hiring labour for farm activities, as 48.13% of the respondents (617) reported to have been hiring labour³⁷. The second largest option is to involve family members (559 or 43.6%). The survey indicates that women (wives) and children hold the biggest portion of family labours that involved in the farming activities with 34.73% (481) and 30.18% (418) respectively. These figures mean that family labours are still significant in all steps of farming activities. Furthermore, these figures also reflect the position of women in the traditional farming community. It has been well known that men and women play distinct roles in farming activities and highly influenced by the status of crops. Generally, men will be responsible for cash crops and women will be responsible for subsistence crops. Peanut in general is still considered as a low priority crop and receiving a low level of farming inputs, including labour. Based on the author's observation, in general women are playing dominant roles in peanuts farming. However with the increasing of profitability potential of peanut, the role of men is also increasing in this sector especially because men are the ones who sign the contract with BMT. This shifting raises a concern about the potential changes in family decision making process regarding labour allocation between men and women.

³⁷ The preference to hire labour is also reflected by the existence of 361 respondents (58.04%) who have non farming jobs to hire labour instead of leaving their non farming jobs in addressing the labour shortage.

A concern is also raised about the potential gender effect of the introduced technology under the contract farming scheme. The simplicity (in the application) of the technology may cause the technology to be considered as 'her' technology and at the end will increase the burden of women labour involved in the farming practices.

There is also a concern about the possibility that the demand for intensive labour use in peanuts farming may affect the opportunities for farmers and their family to access other incomes. However, as indicated by the survey that 361 respondents (58.04%) chosen to hire non family labour to fulfill labour requirement than to leave their side jobs, and 128 respondents (20.58%) answered that they will ask other family members (extended family who are not working) to participate instead of for themselves to leave their side jobs. These findings suggest that the intensive labour requirement does not negatively impact the diversity of family income sources. In fact, it may provide income opportunities for family labour (extended) who are involved in the farming activities. However, the risk of family labour exploitation (women and children) does increase in this case, especially in relation with the previous point on the shifting of control over the decision making on labour dedicated to peanuts farming.

Other concern regarding the labour use within the farmer's family is the involvement of children, especially the school age children in farming activities. The administered survey indicates 418 farmers (30.18%) to have their children working in the farm with them. This figure suggests a high involvement of children in the farming activities. While this study does not include an in-depth investigation on the impact of child labour participation on their school enrollment, the result of several interviews conducted with farmers, local leaders and a school teacher indicates the absence of negative impact of peanut contract farming on school enrollment.

3. Any social implication that might have caused by this system

Social implications of the Partnership Program are assessed by focusing on the social institution condition of farmers. The Partnership Program of BMT is characterized by the participation of smallholders who own small pieces of land, with the smallest size of 0.1 hectare. Since the contract requires a minimum land of 10 ha, therefore the contract is made between BMT and farmer groups instead of directly with individual farmers. The requirement for farmers to work in group by BMT is confirmed to contribute positively to the strengthening of social capital within the community in the program locations. It enables the process of joint learning and resources sharing between the members which in several locations was not exist before (the study indicates that many groups are newly formed for the contract farming purpose).

However, there is a concern regarding the potential exclusion against the non contract farmers due to the firm's strategy to utilize and engage government extension officers with their contract farmer through the allocation of certain percentages of price incentive to them as incentive in assisting the farmers. There is a possibility that extension officers may exclude non contract farmers from their services including from any potential support that may available for them. Also, the provision of cash incentive to government offi-

cials may result in the potential bribery – using them as the extended hand of the firm in controlling farmers and to influence government policy towards the peanuts sector.

This argument of this risk is indicated by some interviewees. Their comments are summarized in Box 2 below.

Box 2

Effects of monetary incentive on extensionist behaviour

“If the demplot test indicates the potential result of 5-7 tonnes per ha, and let’s take only the realistic average result of 3 tonnes, then we can imagine how much incentive that can be earned by an extension officer who helps farmers. If this still continue, I don’t see any reason for us not to support peanuts sector including making it as a priority sector in our policy” (Dr. Mashur, Head of the Provincial Agricultural Extension Coordination Agency in the Peanut Workshop in Mataram, 5 August 2009)

“Last harvest season, an extension officer in Pringgarata alone can earn more than 15 million rupiah from the incentive. That is a very big amount for a civil servant and even bigger than the amount that SADI pays for the BDSP” (Giri Arnawa, SADI provincial coordinator in NTB)

“BMT is very careful regarding giving money to government official. But in this case, the money is not from us. It is from the farmers themselves. We see it as the best way to engage the extension service with farmers. Without the incentive it is difficult for us to expect them to be serious in assisting farmers, especially because peanut is not a priority crop in government policy. We are competing with maize and soybean in terms of dry season crops” (Eddy Cahyono, Farming Manager of BMT)

Chapter 7

Conclusion

The analysis of field findings suggests that the implementation of the Partnership Program by BMT has a significant positive effect on peanut sector development in NTB. The Program provides proven profitability to peanut farmers. It provides a clear market guarantee for peanut farmers and strongly influences the peanut price formation in NTB through its basic price policy that becomes the basis of local price determination as indicated by the current market price which is higher up to 50% in compare to the period prior the Program. This positive effect contributes to the paradigm change of farmers and related stakeholders towards peanut as non priority crop to become high value crop which can be a reliable source of income especially during the dry season.

In terms of participation in the contract, there is a very clear indication of self selection process by farmer in deciding their participation. The characteristic of contract which is seasonal and short term allows farmers to evaluate the effectiveness of the contract on their welfare by themselves and free not to extend their participation if they find their experience unsatisfactorily. While the Program benefits most farmers with land, it also creates employments for landless farmers or family members since peanuts contract farming requires high intensity use of labour in every stage of the production process. This is very significant for a province with high rural unemployment and low income such as NTB.

There is a promising effect of the Program on the promotion of access to finance for peanut farmers through the increasing of the profitability of the sector which promotes the financial viability of farmers for banking credit scheme. The Program also contributes to the strengthening of social capital within the community in the program locations. It enables the process of joint learning and resources sharing between the members as well as community institutional building.

As with above positive key effects of the Partnership Program, the author also has conclusion on several issues that present the weaknesses and problems faced by the Program. Regarding the quality and conditions of the contract between BMT and farmers, there are still rooms that require improvements. In particular, as a partnership based program, the issue of equality between the firm and farmers should be a main consideration by both parties. The current conditions applied in the contract are relatively overweight on farmers' side, such as the unclear of sanction for BMT if it fails to fulfill its commitment, the absence of clear protection for farmers if their harvests fail, and the unclearness of price information among farmers as indicated by the study.

Impact of the Program on labour division in the family farm as well as the shifting of control over income from peanuts farming (used to be women's crop) are crucial issues for attention. The increasing of family labour use as indicated by the field survey may reflect the potential of this problem to exist if not anticipated since the beginning through more in-depth study on the issue

and the application of gender sensitive approach in the Program.

Further, the existing involvement of government extension officer through the incentive based approach may have a positive effect in engaging them with farmers. However, there is a potential negative spill over effect of this strategy in terms of the exclusion of non contract farmers by the extension officers and the abuse of government power by the firm. Therefore, the implementation of this strategy should be carefully examined by both SADI and BMT to prevent the unwanted effects.

Summing up, based on the presented findings and analysis, it can be concluded that the Partnership Program has a positive impact on the development of peanut sector in the study area. It contributes to the promotion of contract farmers income, generate employments, and improve the quality of both on-farm and off-farm conditions in peanut sectors. However, this Program also presents the weaknesses of contract farming scheme, such as the unbalance contractual relationship between the firm and farmers, unclear risk management for farmers as well as the social impacts on labour and gender aspects. Some of the findings presented in this paper still require further study and analysis, especially for the further replication purpose of the Program. In addition, the existence of involvement of donor and broader stakeholders in this Program can contribute to the improvement of the Program towards better achievements through supervision and assistances to both firm and farmers.

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Appendices

Appendix I

Questionnaire used in the field survey (English Version)

Name : _____
Farmer Group : _____
Category
PNPM-SADI Group :
Contracted Farmer :
Supplier :
Non Contracted Farmer :
Village : _____
Sub-district : _____
District : _____
Date : _____
Surveyor Name : _____

1. Are you participating in PT BMT's partnership program?
 - a. Yes
 - b. No

2. How did you learn about PT BMT's partnership program?
 - a. PT BMT field Officer
 - b. Local agricultural/extension office
 - c. PNPM-SADI's FK
 - d. ACIAR-SADI (BPTP-NTB & Mataram Univ.)
 - e. Others

3. How long have you been involved in the partnership program?
 - a. 4 years
 - b. 3 years
 - c. 2 years
 - d. 1 year
 - e. Others

4. What is/are the main reason(s) you want to participate in the partnership program? (can select more than 1 answer)
 - a. I can get a higher price for my peanuts
 - b. I know the price I will get for my peanuts before I plant them
 - c. It ensures market for the peanuts
 - d. It offers access to financial services
 - e. It offers access to improved technology (seeds, equipment, cultivation techniques)
 - f. Others

5. Do you have a copy of the agreement and fully understand about the

- terms and requirements applied under the contract?
- a. Yes
 - b. No
6. Was there any socialization/discussion regarding the contract among the members?
 - a. Yes
 - b. No
 7. What are the farmer's responsibilities under the agreement? (can select more than 1 answer)
 - a. Provide a specified quality
 - b. Provide a specified quantity
 - c. Provide peanuts at a certain time
 - d. Others
 8. Is /are there any sanction(s) applied if you fail to fulfill the requirements?
 - a. Yes
 - b. No
 9. If YES, what is/are the sanction(s)? (can select more than 1 answer)
 - a. Penalty
 - b. Postpone of the next supports
 - c. Cancellation of contract and withdrawal of the given supports
 - d. Police filing
 - e. Others
 10. What is/are the cause(s) of the failure to fulfill the contract?
 - a. Harvest failure (Total lost)
 - b. Low productivity (Normal condition)
 - c. Low productivity (pests and diseases & natural disaster)
 - d. Selling of products to other buyers
 - e. Others
 11. What is/are the main challenge(s) faced by you in fulfilling the contract? (can select more than 1 answer)
 - a. SAPRODI/production inputs problems
 - b. Lack of knowledge on good agriculture practice
 - c. Land limitation
 - d. Post harvest problems (post harvest management, transportation)
 - e. Others
 12. What is/are support(s) provided by PT BMT to you under the contract? (can select more than 1 answer)
 - a. Cash advance
 - b. Seeds credit
 - c. Farming equipments
 - d. Trainings and extension services
 - e. Others

13. Does PT BMT require you to purchase seeds from the company only?
- Yes
 - No
14. If YES, what is/are the condition(s) of the seeds ?
- The prices are competitive and the availabilities are guaranteed
 - The prices are higher but the availabilities are guaranteed
 - The prices are competitive but the availabilities are not guaranteed
 - The prices are higher and the availabilities are not guaranteed
15. If PT BMT does not provide you with any cash or in-kind support or you are not participating in the partnership program, how do you get the required capital to invest? (can select more than 1 answer)
- Use the existing capacity and resources
 - Use personal saving
 - Sale assets
 - Borrow money from bank
 - Borrow money from illegal lender
 - Others
16. How do you supply your own farming inputs? (can select more than 1 answer)
- Local cooperative
 - Local SAPRODI kiosk
 - Provided by local agricultural agency (subsidized inputs program)
 - Regular SAPRODI suppliers
 - Others
17. Total land owned or managed by you
- 2-3 ha
 - 1-2 ha
 - 0.5-1 ha
 - 0.1-0.5 ha
 - > 3ha
18. Status of land ownership
- Full ownership
 - Rented
 - Share-cropping
19. Percentage of land dedicated to peanuts cultivation
- 100%
 - 75%
 - 50%
 - 25%
20. Where do you get water for your peanuts? (can select more than 1 answer)
- Rainfed
 - From a river and or a dam
 - From a well with a pump
 - Others
21. Do you grow any other crop at the same time you grow peanuts? (can

- select more than 1 answer)
- a. No, when I grow peanuts, I only grow peanuts (monoculture)
 - b. Yes, I also grow vegetables
 - c. Yes, I also grow
 - d. Yes, I also grow maize
 - e. Yes, I also grow soybeans
 - f. Others
22. How many peanut crops do you grow in one year
- a. All year crop (monoculture)
 - b. All year crop (intercropping)
 - c. Once a year (Paddy-Paddy-Palawija)
 - d. Twice a year (Paddy-Palawija-Palawija)
23. If you just start to grow peanuts: what is/are the main cause(s) of it? (can select more than 1 answer)
- a. Attracted by the promising PT BMT Partnership Program
 - b. Driven by government officials
 - c. Influenced by PNPM-SADI
 - d. Influenced by ACIAR-SADI
 - e. Others:
24. Is/Are there any increasing of cost(s) because of the shifting or productivity intensification?
- a. Yes
 - b. No
25. If YES, what is/are the item(s) of cost that increased due to the shifting or productivity intensification? (can select more than 1 answer)
- a. Land rent
 - b. SAPRODI/production input costs
 - c. Labor cost
 - d. Post harvest costs
 - e. Others
26. Decision to shift and to intensify production may have effects have effects on the application of technologies. How do you address this problem? (can select more than 1 answer)
- a. Use own capital and resources
 - b. Group work
 - c. Receive assistances from PT BMT
 - d. Receive assistances from local agriculture agencies and or extension office
 - e. Others:
27. Decision to shift and to intensify production may have effects on the food security (availability of secure supply of food from own farm). How do you response to this risk?
- a. Maintain the intercropping model (more portion given to staple food production)
 - b. Maintain the intercropping
 - c. Gradual transition from intercropping to monoculture system
 - d. Fully implement

model (but smaller percentage for staple food production)

monoculture system and rely on the potential cash income to buy staple food

28. Decision to shift and to intensify production may have effects on the use of labors. How do you respond to this challenge? (can select more than 1 answer)
- a. Hire labors
 - b. Involve the existing family members
 - c. Extend self working hours
 - d. Working in groups
 - e. Others
29. Do you (and the other family members) have other sources of income besides farming?
- a. Yes
 - b. No
30. If YES, what is it/are they? (can select more than 1 answer)
- a. Employee (formal sector)
 - b. Labor
 - c. Petty trader
 - d. Home business
 - e. Others:
31. How do you address the labor fragmentation in the family if the farming activity requires intensive labor use? (can select more than 1 answer)
- a. Will drop your own side job and focus on peanuts production
 - b. Will keep your own side job and ask the other family members to focus on peanuts production
 - c. Will hire external labors
 - d. Will ignore the requirement, maintain the side job until the profitability is proven
 - e. Others
32. Is/are there any increasing of responsibility(ies) for the family members due to your participation in the Partnership Program?
- a. Yes
 - b. No
33. If YES, what is/are the additional responsibility(ies)? (can select more than 1 answer)
- a. Seeds preparation
 - b. Plant management
 - c. Post harvest management
 - d. Marketing
 - e. Others
34. Who is/are the family member(s) that you involve in the farming activities? (can select more than 1 answer)
- a. Spouse
 - b. Children
 - d. Sibling
 - e. Others

- c. Nephew
35. In terms of marketing of your production, what is your preference?
- | | |
|---|--|
| a. Sell all production to PT BMT | c. Sell most of production to PT BMT and sell the rest to other buyers |
| b. Sell certain percentage of production to PT BMT to fulfill the contract obligation and sell the rest to other buyers | d. If possible, will sell all production to other buyers |
36. If your marketing preference is to sell all production to PT BMT, what is/are the cause of it? (can select more than 1 answer)
- | | |
|---|--|
| a. The contract price is rational | d. Benefit from supports under the Partnership |
| b. Prefer stable price | e. No alternative buyers |
| c. Benefit from the quality incentive price | Others: |
37. If your marketing preference is to sell your production (partial or full) to other buyers, what is/are the main cause(s) of it? (can select more than 1 answer)
- | | |
|---|--|
| a. The offered price is higher and profitable | d. The absence of sanctions |
| b. The contract is too rigid | e. I cannot meet PT BMT's quality and quantity standards |
| c. Other buyers help me with financing production | |
38. If you are familiar with the Partnership Program of PT BMT and decide not to participate. What is (are) the reason(s) of the decision? (can select more than 1 answer)
- | | |
|--|--|
| a. Traumatized by the previous experience (other commodity) | d. The contract is too rigid |
| b. Want to see first the result of other farmers that participate in the program | e. The absence of financial incentive in the program by PT BMT |
| c. Do not like the seed required by PT BMT | f. Others: |
39. What kind of improvement(s) in the contract that you want to suggest for the future? (can select more than 1 answer)
- | | |
|---|-----------------------------------|
| a. More price flexibility | d. Extension services improvement |
| b. Financial assistance | e. Others: |
| c. Technology (SAPRODI and equipments) assistance | |

Appendix II

List of Interviewees

No.	Name	Position/Institution
1.	Abdullah	Director of Field Extension Services, PT Bumi Mekar Tani, NTB
2.	Abdul Rahman	Technical Assistant, PT Bumi Mekar Tani, NTB
3.	<i>Anyar</i> Farmers Group	<i>Anyar</i> Village, Bayan Sub-district, West Lombok District, NTB
4.	Dr. Bakir Ali	Program Manager, PNPM-AP
5.	Benjamin Power	Counsellor for Infrastructure, Rural Productivity and Economic Governance, AusAID
6.	Dr. Djoko Priyono	Peanut consultant (soil nutrients) to BMT
7.	Edy Cahyono	Farming Manager, PT Bumi Mekar Tani, NTB
8.	Fuad	Sub-district Facilitator of PNPM-AP in Narmada Sub-district, West Lombok District, NTB
9.	Giri Arnawa	SADI Provincial Coordinator in NTB
10.	Hasdia	Provincial M&E Specialist of PNPM-AP in NTB
11.	Hasta	Provincial Specialist of PNPM-AP in NTB
12.	Dr. Jacqueline Pomeroy	Program Director, SADI
13.	Junaiddin	Sub-district Facilitator of PNPM-AP in Pekat Sub-district, Dompu District, NTB
14.	<i>Karya Tani</i> Farmers Group	Sembung Village, Narmada Sub-district, West Lombok District, NTB
15.	Lalu Milkan	Sub-district Facilitator of PNPM-AP in Narmada Sub-district, West Lombok District, NTB
16.	Ir. Lusiani Tjokronegoro	Director of Program Development, GAPMMI
17.	M. Din	Sub-district Facilitator of PNPM-AP in Hu'u Sub-district, Dompu District, NTB
18.	M. Ridho Makruf	Provincial Coordinator of PNPM-MP in NTB
19.	Mahrin	Sub-district Facilitator of PNPM-AP in Bayan Sub-

- district, West Lombok District, NTB
20. Dr. Mashur Head of the Agricultural Extension Coordination Agency
 21. *Pepadan* Farmers Group Nusajaya Village, Manggelewa Sub-district, Dompu District, NTB
 22. Rahmad Syakib Operations Officer, IFC Advisory Services-Agribusiness Linkages
 23. *Sari Makmur* Farmers Group Kadindi Atas Village, Pekat Sub-district, Dompu District, NTB
 24. Prof. Swarji Peanut consultant (dryland agriculture) to BMT, and BDSP for peanuts
 25. Zainal Arifin Sub-district Facilitator of PNPM-AP in Manggelewa Sub-district, Dompu District, NTB

Appendix III

SADI and Lead Firm Approach

1. What is SADI

Smallholders Agribusiness Development Initiative (SADI) is a cooperation program between Indonesia and Australia, which is implemented through the Australia-Indonesia Partnership for Reconstruction and Development (AIPRD). The goal of the program is to achieve a sustained increase in rural growth and household incomes through productivity gains, better access to markets, and on and off-farm value-added activities in target provinces of Eastern Indonesia: South Sulawesi, South-East Sulawesi, Nusa Tenggara Timur (NTT) and Nusa Tenggara Barat (NTB). The program was started in 2006 and is anticipated to be implemented for 10 years, with an initial Phase I of 3.5 years.

SADI consists of three subprograms that work in integrated manner to develop a model of private-smallholders partnership by testing and piloting various new approaches in rural agribusiness development and market driven research, development and extension services. The three Subprograms are:

- Subprogram 1: Enhanced Smallholder Production and Marketing (executed by the Ministry of Home Affairs, with management oversight provided by the World Bank).
A pilot agribusiness based rural development project known as PNPM-AP or *Program Nasional Pemberdayaan Masyarakat-Agribisnis Perdesaan* (National Program for Community Empowerment-Rural Agribusiness) is implemented as Subprogram 1 of SADI. SP1 supports Government of Indonesia's PNPM to introduce a component to support livelihoods. It provides block grants to villages to support the development of enhanced household-level economic and farming activities. Farmer groups at the village level are assisted to identify key production constraints and marketing opportunities and receive cash grants to undertake activities to address these constraints.
- Subprogram 2: Strengthened Private Sector Agribusiness and SME Development (executed by the IFC).
IFC-SADI focuses on the strengthening of private sector agribusiness and SME development. The goal of IFC-SADI is to contribute to increased productivity and incomes through development of an improved and more efficient agribusiness/SME environment.
- Subprogram 3: Support for Market-Driven Adaptive Research (executed by ACIAR).
SADI through the Subprogram 3 (ACIAR-SADI) is supporting the reform of both national and sub-national R, D & E policies by focusing on the strengthening of province-based adaptive agricultural R&D capacity so that it is market and client-driven and able to effectively transfer new knowledge to end-users.

These three subprograms are designed to work together to strengthen smallholders' productive capacity, make sure markets work well so that inputs and outputs can be bought and sold efficiently, and ensure that producers are receiving the technical assistance they need.

2. Lead Firm Approach

The essential feature of the overall strategy for the SADI Program is to forge stronger linkages between rural smallholders and the wider Indonesian and global economy – linkages that can be sustained by commercial incentives without ongoing support. IFC-SADI introduces the Lead Firm Approach as one tool to improve market access and long-term sustainability for smallholders by connecting them to selected firms seeking secure and growing supply sources. IFC-SADI uses the lead firm approach for commodities and agribusinesses in target provinces that have natural or comparative advantage. Lead firms are brought into the program based on their commitment to invest in their supply chains, especially chains with products that may originate in Eastern Indonesia. IFC-SADI works with these firms to help them grow their business, including strengthening links back into their supply chain.

IFC-SADI defines lead firms as firms of sufficient size to be able to plan for the future and invest in their supply chains, with growing supply needs, and an interest in sourcing from Eastern Indonesia. The firms do not need to be based in or even currently operating in any of the SADI provinces, but the potential smallholders supplying these firms should be located there.

Further in the Frequently Asked Questions (FAQs) of IFC-SADI, it is written that ideally IFC would like to work with several firms in one area, and with more than one firm in each commodity, to ensure sound competition and maximum benefits for smallholders.

The Lead Firm Approach seeks to improve market access and long-term sustainability for smallholders by connecting them to selected firms seeking secure and growing supply sources. IFC works with these firms to help them grow their business, which include strengthening links back to their supply chain.

There are several conditions applied by IFC in identifying and selecting potential lead firms:

- Partner lead firms must pass sponsorship checks, including anti money laundering check.
- Sufficient size to invest in their supply chain and have large scale of impacts
- Involve large number of smallholders
- Commitment to sourcing from smallholders
- Agreement to disseminate results to wider industry

However it is not easy to find the right lead firms. Several challenges are hampering the process of selection:

- Other programs often provide full subsidy of partner firms in order to recruit private sector participants to the project. IFC requires significant cost-sharing, especially for activities providing fully private goods to the firm(s). More than one potential lead firm has expected a full subsidy on all project related activities due to their experience or discussion with other current or past donor-funded projects.
- The project's early experience – confirms that very small firms seldom have the financial or management capacity to fully participate as partners in a lead firm-led supply chain development program. Typically the firms are unable to draw up comprehensive business plans. This has resulted in an inability to commit to long-term partnership.

In return to the commitment of a lead firm to participate, IFC provides strategic supports to the firm as follows:

- Strengthen farmers, small business, supply chain linkages and infrastructure.
- Facilitate market development of local supply through helping farmers meet quality and quantity requirements.
- Promote environment and social responsibility.