

The potential development of Porang in North Lombok, Indonesia

by Malina Rohmaya

Submission date: 14-Apr-2023 09:44AM (UTC+0500)

Submission ID: 2064146669

File name: Rohmaya_2022_IOP_Conf._Ser._Earth_Environ._Sci._1107_012107.pdf (442.01K)

Word count: 2761

Character count: 15226

PAPER · OPEN ACCESS

The potential development of Porang in North Lombok, Indonesia

9
To cite this article: Malina Rohmaya *et al* 2022 *IOP Conf. Ser.: Earth Environ. Sci.* **1107** 012107

View [the article online](#) for updates and enhancements.

You may also like

- 6
- [Value chain mapping of porang \(*Amorphophallus muelleri*\) in Wonogiri Regency](#)
S M Handayani, F Widadie, Setyowati et al.
- 10
- [Study of NTFP trade policy: case of coffee and porang](#)
R Effendi, T Puspitojati, I Bangsawan et al.
- 4
- [Morphological characteristics of Madiun 1, the First Porang \(*Amorphophallus muelleri* Blume\) released cultivar in Indonesia](#)
Novita Nugrahaeni, Ratri Tri Hapsari, Trustinah et al.



The Electrochemical Society
Advancing solid state & electrochemical science & technology

243rd ECS Meeting with SOFC-XVIII

Boston, MA • May 28 – June 2, 2023

**Abstract Submission Extended
Deadline: December 16**

[Learn more and submit!](#)

The potential development of Porang in North Lombok, Indonesia

Malina Rohmaya^{1,4}, L. Sukardi^{1,2,3} and Taslim Sjah^{1,2,3}

¹ Study Program of Dryland Agriculture, Postgraduate, University of Mataram, Indonesia

² Study Program of Agribusiness, Faculty of Agriculture, University of Mataram, Indonesia

³ PERHEPI, Mataram Commissariat, Indonesia

⁴ PT Bapeltanbun Department of Agriculture and Plantation West Nusa Tenggara, Indonesia

E-mail: malina.rohmaya@gmail.com

Abstract. Porang has a huge potential to be developed in North Lombok, Indonesia, provided an abundance of land availability and suitability, and this is coupled with a large market porang agribusiness, starting from the subsystem of upstream through to downstream. For better business performance, partnership amongst several parties needs to be developed. This paper aims to identify the model of partnership in porang agribusiness, together with the rights and obligations of each party involved, and finally find the ways to improve the current partnerships in one way or another. This study is carried out in four villages within four districts in North Lombok. Interviews were conducted to collect data from porang farmers and their counterparts in North Lombok. Data were analyzed descriptively to answer the research objectives. The study found that partnership occurred in mutually beneficial for parties, covering advantages and disadvantages in each party, to move together into win-win solutions, in the form of plasma core partnership. The partnership needs to encourage for longer periods and expanded to other regions for its positive impact in helping improve people life and the economics of the regions.

1. Introduction

Porang (*Amorphophallus muelleri*. Blum) is a plant that has economic value but has not been widely cultivated. The porang market is wide open for both domestic and international markets. In 2009 the need for porang tubers for porang chips reached 3,400 tons. Meanwhile, porang tuber production in East Java in that year was only able to provide around 600–1,000 kg of dried chips [1]. This condition is a potential opportunity to develop porang as a cultivated plant to increase sources of income and farmers' welfare.

North Lombok Regency has a fairly high dry land potential, which is around 38,000 ha for the development of food crop agriculture in general, and until now, only about 30% has been utilized, and its productivity is still very low [2]. Considering the biological potential of dry land in North Lombok Regency, which is large enough for the development and demand for porang commodity, which has already begun to be developed in several villages in North Lombok Regency, including Ganda Suli Bakong Farmer Group (Sambik Elen Village); Senaru Mandiri Farmer Group (Senaru Village); Maju Terus Farmer Group (Loloan Village), and Berkah Bersama Farmer Group (Sukadana Village) [1].



Problems faced by farmers in porang cultivation in North Lombok Regency are still lack of knowledge about cultivation plants, limitations mean infrastructure production, capital as well as marketing results production. One of the efforts that can be made to increase the production and income of porang farmers is the porang agribusiness partnership so that the commodities produced can play a role in global trade so as to improve the welfare of farmers. The partnership is an institution that is commonly applied in the development of agribusiness and agricultural industrialization in developing countries, including Indonesia, which aims to reduce the impact of imperfect information, uncertainty, high transaction costs and risks [2,3].

The existence of a partnership pattern between farmers and government and private institutions will be able to help increase productivity, ensure a good supply of seeds, provide capital aid, provide market guarantees for farmers, and lead to an increase in farmers' welfare. If the partnership between farmers and government and private institutions goes well, increased income will be achieved.

The ongoing partnership is the CSR partnership of PT Astra as a provider of technology and assistance, as well as with the Cooperative of Berkah Gumi Lombok and PT Reza Narayana, which will absorb porang production from farmers to be processed into chips. By implementing an appropriate partnership mechanism and desired by all stakeholders in this partnership model, it is expected to form a good partnership pattern and lead to improved welfare of porang farmers in the dry land of North Lombok Regency.

Problems faced by porang farmers in the field dry North Lombok Regency are a lack of capital for farming, unsupported production facilities, and difficult market access. One of the efforts made by the local government of North Lombok Regency to overcome these problems is to apply a partnership pattern between farmers and institutions managed by the government and private sector. Through this partnership pattern, it is hoped that it will increase productivity, ensure a good supply of seeds, pesticides, and fertilizers, provide business capital, provide market guarantees for farmers, and lead to an increase in farmers' welfare. The objectives of this study are to (1) describe the partnership model of porang farmers in dry land of North Lombok Regency; (2) analyze the suitability in the aspects of farming porang in dry land in North Lombok Regency. This study is expected to improve the condition of porang growers and other groups in the community.

2. Methods of Study

This study took place on the island of Lombok, especially in North Lombok Regency. The data in this study are primary data collected through interviews with porang farmers. Secondary data from various sources complement primary data. The research areas taken were North Lombok Regency, the Ganda Suli Bakong Farmer Group (Sambik Elen Village); Senaru Mandiri Farmer Group (Senaru Village); Maju Terus Farmer Group (Loloan Village), and Berkah Bersama Farmer Group (Sukadana Village). The research location was determined by *purposive* sampling with *consideration* of the area with the largest population to achieve the research objective. According to Surakhmad (1990) *purposive sampling* is a sample taken intentionally for reasons known to the characteristics of the location [4].

Primary data collection was obtained through interviews with porang farmers, guided by a questionnaire. In-depth interviews were carried out to agricultural extension workers, administrators of the Berkah Gumi Lombok cooperative and other related parties related to this research, guided by a list of specific topics investigated. The data were then analyzed using qualitative descriptive statistics to achieve the research objectives. For data analysis, the statement of farmers' perspectives on stakeholders in porang farming from the facts that exist in accordance with the main tasks and functions of each stakeholder in porang farming using cross-tabulation analysis and then interpreting it.

3. Results and discussion

3.1. Dryland and porang

North Lombok Regency has sufficient potency of dryland at about 38,000 ha for development agriculture plant food in a broad sense and until moment this new about 30% is utilized and its productivity is still very low [2]. Porang was originally a forest plant, which was never planted with the intention of being consumed. The use of porang began in 1942 during the Japanese occupation. Previously, Japan had planted another type of *Amorphophallus* in its country, specifically *A. Konjac*. When colonizing Indonesia, Japan found porang (*A. Muellen*) in Indonesia. Because of its resemblance to *konjac*, the Japanese used it for food while in Indonesia. At that time, Indonesian farmers did not know the benefits of porang [5]. In the dissemination module on porang cultivation [6], it is stated that Porang is one of Indonesia's native plant species that grow in the forest, is a shrub (herb) plant that has tubers in the soil. Porang tubers have high economic value because they contain glucomannan which is good for health and can be easily processed into food.

The porang plant has a strategic value that needs to be developed because it offers large export opportunities [7]. The agricultural quarantine agency notes that exports of porang in 2018 were recorded at 254 tons, with an export value of Rp 11.31 billion to Japan, China, Vietnam, Australia, and others. Indonesia exports porang in the form of tubes or flour. In addition, porang exports have increased in recent years According to system data automation quarantine Indonesia *Full Automation System*, in the work area Hall Big Quarantine Agriculture Surabaya in 2017, exports porang as much as 4.3 tons of porang dry worth Rp. 61 billion. In 2018 export porang as big as 5.5 tons with a value of Rp. 77 billion. Meanwhile, in the first half of 2019, exports porang dry already reached 3.7 tons with a value of Rp. 51 billion [5].

3.1.1. *Partnership in Porang Business in Dryland North Lombok Regency.* According to Law Number 9/1995 on partnership [8] there are six partnership patterns in business, including the following.

1. Core-Plasma: the core carries out the development and provision of production facilities, technical guidance to the marketing of products, and plasma increases production.
2. Sub-contract: finished goods produced by large or medium-sized enterprises consist of components, one or more components produced by small businesses. The price of components is usually determined by the purchaser of the contract.
3. General Trading: there are two ways, i.e. large businesses marketing goods produced by small businesses or small businesses supplying the needs of medium or large businesses.
4. Franchising: small businesses are granted trademark licensing rights and marketing distribution channels with management assistance.
5. Agency: small businesses are given special rights to market goods and services.
6. Other forms.

The current partnership model implemented in porang farms in dryland areas in North Lombok Regency is the partnership between 11 farmer groups in North Lombok, Cooperative of Berkah Gumi Lombok, PT Astra and PT Reza Narayana. The role of each involved partnership is described as in the following.

1. Farmer Groups
Farmer groups in this partnership play a role in the provision porang production resulted from the farms. Benefits earned by farmer groups in this partnership is the availability of seeds and certainty for selling porang productions.
2. Government
Government in this is the Department of Agriculture of North Lombok Regency, and plays a role in provision of extension workers for group farmer as well as ensuring the availability of production inputs for farmers, especially fertilizers and pesticides.

3. PT ASTRA

PT Astra does indirect partnerships to farmers through CSR funds owned to do construction and provision of machines in the form of machines for wash porang tubers.

4. The Cooperative of Berkah Gumi Lombok

The Cooperative does activity in partnership with 11 farmer groups in the form of a core plasma partnership where the farmer becomes the nucleus and the farmer group as plasma. The Cooperative provides seeds of porang for cultivation by farmers and provides extension services in porang cultivation, under collaboration with field officers and other related parties. Further, the cooperative purchase and collect porang productions at agreed prices. Moreover, the cooperative makes a contract with purchasing companies, reinforced with MOU to trade porang productions.

5. PT Reza Narayana

PT Reza Narayana in this partnership, is to do partnership purchasing contract with the cooperative of Berkah Gumi Lombok, and buys Porang at dealed prices set out in the contract.

The Partnership Model is drawn as in the Figure 1. The model involves porang farmers, purchasing companies, and cooperative. The partnership relationship that occurs is as follows: PT Astra, through its CSR funds, provides assistance to farmer groups in the form of porang processing equipment, such as porang tuber cleaning tools, porang tuber cutting tools, porang chips. In addition to providing assistance with equipment, PT ASTRA also provides training to farmer groups through the Berkah Gumi Lombok Cooperative so that the farmer groups can process porang tubers into chips and then the products are ready for market. With the assistance and training tools from PT ASTRA, the farmer group is able to process porang tubers into chips, which can then be marketed through a collaborative system with the Lombok Gumi Berkah Cooperative, which is then marketed to PT Reza Narayana.

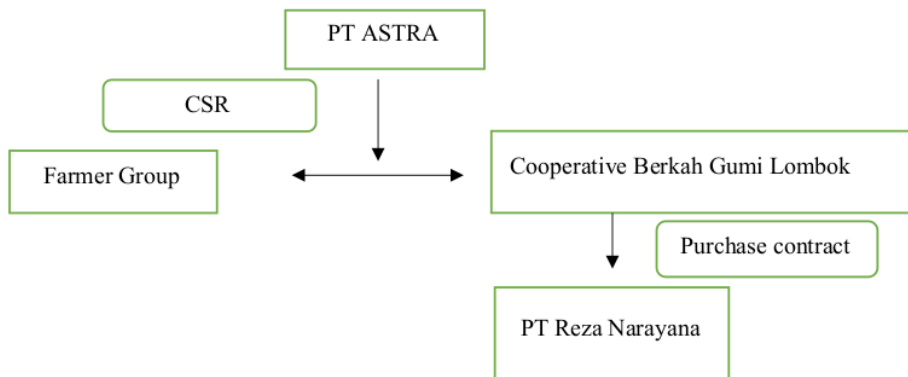


Figure 1. Model of partnership in porang business in North Lombok Regency.

3.2. *The suitability of partnership model in porang farming in dryland of in North Lombok*

In determining which aspects of porang farming are suitable for the partnership model according to the farmer's perspective, the researcher measures the suitability of the porang farming aspects according to the farmer's perspective on the partnership model through the activities carried out in porang farming partnerships in North Lombok Regency. From the measured aspects of cultivation marketing aspect, farmers still need assistances. The expected assistances include to in the availability of porangseeds, as well the supervision in porang cultivation. With the partnership, the problem of availability of seeds can be overcome because the core company provides seeds that will be planted by farmers, and to do accompaniment in implementation cultivation. Besides, assistance by partners, is also carried out assistance by energy extension worker from service agency related.

For knowing the suitability in the aspect of marketing according to farmer perspective in porang farming to the partnership model, the measured item in study this consist of 3 activities, including:

purchase porang in accordance to market price, raise porang price and purchase of farmer harvests. The results of the analysis carried out on all variables show that the suitability of the marketing aspect according to the farmer perspective in porang farming to the partnership model. Therefore, it can be concluded that the marketing aspect of the implemented the partnership in porang is categorized as suitable, with porang productions from farmers bought by partner with the initial agreement among farmers with the partner.

4. Conclusion

Partnership occurred in mutually beneficial for parties, covering advantages and disadvantages in each party, to move together into win-win solutions, in the form of core plasma partnership and purchase contract. The partnership needs to be encouraged for longer periods and expanded to other regions for its positive impact in helping improve people life and economic of the regions.

References

- [1] Rostini T 2014 *Produktivitas dan pemanfaatan tumbuhan rawa di kalimantan selatan sebagai hijauan pakan berkelanjutan* (Institut Pertanian Bogor)
- [2] Ajiyanto 2018 *Analisis Model Kemitraan Pada Usaha Tani Jagung di Kabupaten Lombok Utara* (Universitas Mataram)
- [3] Key N and Runsten D 1999 Contract farming, smallholders, and rural development in Latin America: the organization of agroprocessing firms and the scale of outgrower production *World Dev.* **27** 381–401
- [4] Surakhmad W 1990 *Pengantar penelitian ilmiah: dasar, metode dan teknik* (Bandung: Tarsito)
- [5] Wardiyasa I 2022 *Daya saing komoditi porang Kabupaten Lombok Utara* (Universitas Mataram)
- [6] Suwardji 2013 *Pengelolaan Sumber Daya Lahan Kering* (Universitas Mataram)
- [7] Sulistiyo R H, Soetopo L and Damanhuri D 2015 *Eksplorasi dan identifikasi karakter morfologi porang (*Amorphophallus muelleri* B.) di Jawa Timur* (Brawijaya University)
- [8] Hafisah J 2003 *Kemitraan Usaha, Konsep dan Strategi* (Jakarta: PT Pustaka Sinar Harapan)

The potential development of Porang in North Lombok, Indonesia

ORIGINALITY REPORT

18%

SIMILARITY INDEX

16%

INTERNET SOURCES

14%

PUBLICATIONS

10%

STUDENT PAPERS

PRIMARY SOURCES

- | | | |
|---|--|----|
| 1 | Submitted to California High School
Student Paper | 6% |
| 2 | oceanrep.geomar.de
Internet Source | 2% |
| 3 | www.semanticscholar.org
Internet Source | 2% |
| 4 | S K Dermoredjo, M Azis, Y H Saputra, G Susilowati, B Sayaka. "Sustaining porang (Amorphophallus muelleri Blume) production for improving farmers' income", IOP Conference Series: Earth and Environmental Science, 2021
Publication | 1% |
| 5 | apktipsy.com
Internet Source | 1% |
| 6 | H Irianto, E W Riptanti, Mujiyo. "Coping strategy of porang farmer's household in anticipating long harvest period: Empirical study in Wonogiri Regency, Indonesia", IOP | 1% |

Conference Series: Earth and Environmental Science, 2022

Publication

-
- | | | |
|----|---|-----|
| 7 | perkebunan.litbang.pertanian.go.id
Internet Source | 1 % |
| 8 | E Lastariningsih, T Sjah, I G L P Tanaya. "Economic and environmental studies of conservation agriculture on dryland in Central Lombok, Indonesia", IOP Conference Series: Earth and Environmental Science, 2021
Publication | 1 % |
| 9 | eprints.unram.ac.id
Internet Source | 1 % |
| 10 | E Habibah, E A Suyono, M D Koerniawan, L T Suwanti, U J Siregar, A Budiman. "Potential of natural sunlight for microalgae cultivation in Yogyakarta", IOP Conference Series: Earth and Environmental Science, 2022
Publication | 1 % |
| 11 | gemangabdi.unram.ac.id
Internet Source | 1 % |
| 12 | W Astiko, N M L Ernawati, I P Silawibawa. "Effect of Intercropping on Mycorrhizal Populations, Growth, and Yield on Several Varieties of Maize (<i>Zea mays</i> L.) and Soybeans [<i>Glycine max</i> (L.) Merr.] in Dryland North | 1 % |

Lombok, Indonesia", IOP Conference Series: Earth and Environmental Science, 2021

Publication

13

eprints.umm.ac.id

Internet Source

<1 %

14

netral.news

Internet Source

<1 %

15

Taslim Sjah, Zainuri. "Developing agribusiness for meeting demand of quality foods during and post Covid-19 pandemic", AIP Publishing, 2023

Publication

<1 %

16

Samanhudi, B Pujiasmanto, Sudadi, I H Putra, H M Mumtazah. "The efficiency of Mycorrhiza biofertilizer treatment to the growth and yield of soybean", IOP Conference Series: Earth and Environmental Science, 2018

Publication

<1 %

Exclude quotes Off

Exclude matches Off

Exclude bibliography On