



Potential and Constraints of Biopharmaceutical Plants in East Kalimantan Province

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Abstract

Biopharmaceutical plants (drugs) in East Kalimantan Province have tremendous potential for the Farmers' Economy in particular and the Economy of Society in general. Farmers have not felt this potential because it faces existing obstacles. In this study, the Pharmaceutical Business Laboratory, Faculty of Pharmacy, Mulawarman University, will be analyzed for its role in finding solutions to existing obstacles. Research results are expected to be helpful in terms of the resource-advantage theory and in terms of Implications that can be done by Stakeholders, which aim that the potential of Biopharmaceutical Crops can bring the welfare of Farmers and Communities.

Keywords: Biopharmaceutical Plants, Potential, Constraints, the resource-advantage theory

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1 Introduction

The potential of Biopharmaceutical Plants in East Kalimantan Province is extraordinary. However, the blessings of nature in the form of soil fertility and weather always illuminated by the sun have not been able to advance the welfare of Biopharmaceutical farmers in East Kalimantan Province.

The obstacles faced by Biopharmaceutical farmers such as; maintaining the quality and quantity of Biopharmaceutical crop production,

as well as the marketing of the resulting production

The production of biopharmaceutical plants in Kalimantan Timur Province, such as the Ginger Plant (Ginger or *Zingiber officinale*), experiences production fluctuations. Data in figure 1 shows fluctuations in production from 2010 to 2020.

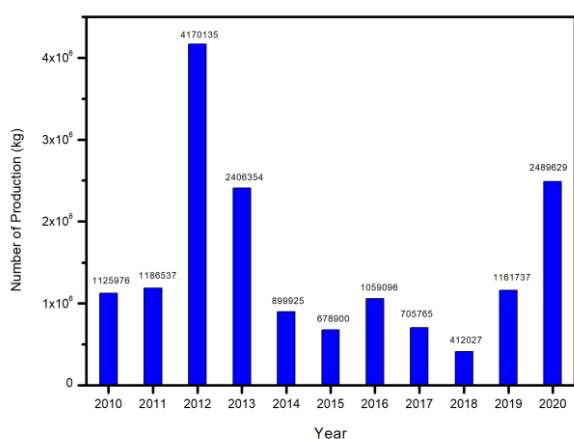


Figure 1. Ginger Production in East Kalimantan Province

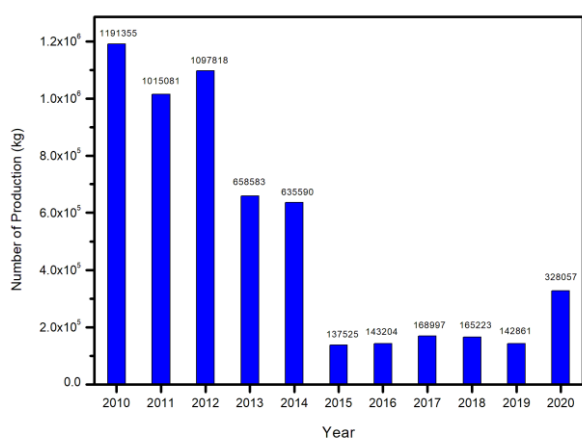


Figure 2. Alpinia galanga Production in East Kalimantan Province

In addition to the Ginger Plant, there is also a Laos or Lengkuas plant (*Alpinia galanga*), with a long history, namely from 2010 to 2020, can be seen in figure 2, seen a decrease in production from the *Alpinia galanga* plant.

In addition to the two Biopharmaceutical plants, there are still types of Biopharmaceutical plants, such as; Kejibeling (*Strobilanthes Crispa*), Temu Ireng (*Curcuma Aerogynosa*), and many other Biopharmaceutical plants.

The obstacles experienced by the producers (farmers) of Biopharmaceutical crops are the quality and quantity of products produced and product marketing. The products produced are only natural products and do not have added value, so farmers only enjoy the price of these natural products.

From figure 1 and figure 2, it can be seen that the number of biopharmaceutical plant production has decreased significantly from year to year.

The presence of the Pharmaceutical Business Laboratory, Faculty of Pharmacy, Mulawarman University, is good news for Farmers and Industry to increase the potential of Biopharmaceutical crops and provide solutions to existing constraints.

Laboratory of the Faculty of Pharmacy, Mulawarman University, Samarinda City, East Kalimantan Province, Indonesia, recently completed the Pharmaceutical Business Laboratory from sixteen existing Laboratories. This laboratory has the vision of "Making the pharmaceutical business laboratory of the Faculty of Pharmacy Mulawarman University (UNMUL) a superior laboratory and as an agent of change in national and international development" and the mission of "Providing benefits with added value to Pharmacy Students in their contribution to society in the field of pharmaceuticals and Fostering the spirit of entrepreneurship to pharmacy students and able to create new jobs."

By involving all stakeholders, the Pharmaceutical Business Laboratory is expected to provide biopharmaceutical crop farmers' welfare and present the Sustainability of the Biopharmaceutical Industry in East Kalimantan Province.

2 The Concept of Synergy

2.1 Relationship Concept

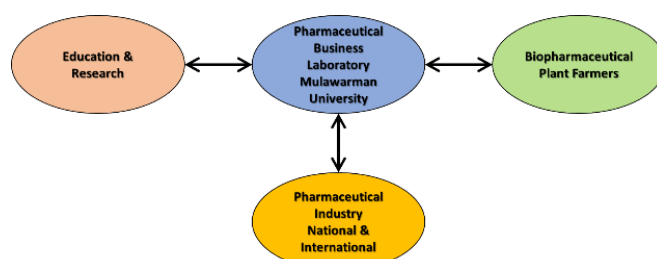


Figure 3. Concept of Relationship Synergy

The Pharmaceutical Business Laboratory Mulawarman University's central role can be

seen in figure 3. The central role as a link between Biopharmaceutical Plant Farmers, Education & Research, and Pharmaceutical Industry National & International.

2.2 Central Role of Laboratory

The approach to explaining the central role of Mulawarman University's Pharmaceutical Business Laboratory, using Resource Base View (RBV). This is done based on the product to be produced, namely Biopharmaceutical products, which have four elements of RBV, namely; valuable, rare, difficult to imitate, and nonsubstitutable.

Resource Base Theory contends that the possession of strategic resources provides an organization with a golden opportunity to develop competitive advantages over its rivals.[1]

The central role of the Pharmaceutical Business Laboratory, such as the research conducted[2], that having a gatekeeper position in a collaborative network offers great potential for companies to gain a competitive advantage.

Biopharmaceutical plant farmers have added value from Biopharmaceutical plant products, after conducting training from experts at the Faculty of Pharmacy, Mulawarman University, coordinated by the Pharmaceutical Business Laboratory. In addition to providing training in the cultivation of Biopharmaceutical crops, the Pharmaceutical Business Laboratory, also conducts product marketing training for farmers. In addition, another important role is to connect biopharmaceutical plant farmers with the biopharmaceutical industry, thus creating synergy that is mutually beneficial for both parties.

Strategy Management that places Biopharmaceutical Products with guidance from the Pharmaceutical Business Laboratory, will be valuable, rare, difficult to replicate, and cannot be replaced. RBV can be a good way to see human resources as a source of organizational competitive advantage and corporate entrepreneurship as product innovation capabilities as competencies.[3]

3 Results and Discussion

The role of Mulawarman University Pharmaceutical Business Laboratory uses the resource-advantage theory approach, also

known as the resource-based view (RBV). The Biopharmaceutical plants have a Sustainable Competitive Advantage.

RBV is key to superior organizational performance. If a resource exhibits VRIN (valuable, rare, difficult to imitate, and nonsubstitutable) attributes, the resource enables the firm to gain and sustain a competitive advantage.[4] Pharmaceutical Business Laboratory should look inside the organization to find the sources of competitive advantage instead of looking at the competitive environment.[2]

The Dean of the Faculty of Pharmacy, Mulawarman University, has given his views on the "Profile of Pharmaceutical Competence and Laboratory Management at the Faculty of Pharmacy, Mulawarman University to Become a Channel for the Growth of the Indonesian Natural Materials Industry", so it is hoped that the concept of the Laboratory as a Canal for the Growth of the Natural Materials Industry in Indonesia, can be realized and sustainable.[5]

Biopharmaceutical plants have not been categorized as rare plants, but it is not impossible if one day, biopharmaceutical plants become rare, worthless plants, and can be replaced by other types of drugs that can bring unfavorable side effects to the human body.

Strategic Management with the RBV approach, which will be carried out by the Pharmaceutical Business Laboratory, aims to make Biopharmaceutical plants in East Kalimantan province, can make Biopharmaceutical Plants have a sustainable Competitive Advantage, so that it is hoped that Biopharmaceutical Plant farmers will become prosperous farmers.

By using the RBV strategy, the Pharmaceutical Business Laboratory, the Faculty of Pharmacy, Mulawarman University hopes that pharmacy students will also have a competitive advantage and are ready to apply the knowledge they gained while studying at the Faculty of Pharmacy, Mulawarman University.

4 Conclusions

The Mulawarman University Pharmaceutical Business Laboratory's strategic role is indispensable for Biopharmaceutical Farmers, Pharmacy Students, and the biopharmaceutical industry.

The role of the Mulawarman University Pharmaceutical Business Laboratory in providing knowledge to farmers about how to grow and process plants properly and correctly, as well as crop yields that are in accordance with the standards of the Biopharmaceutical industry.

Another role of the Pharmaceutical Business Laboratory of Mulawarman University is the role of providing knowledge on how to market farmers' products in the domestic market or international market.

Clusters of farmers must be mapped in each district and city in East Kalimantan Province, so that each farmer in each region can synergize with each other in meeting market needs.

Students of the Faculty of Pharmacy, Mulawarman University, can increase their knowledge from the Faculty of Pharmaceutical Business. This is due to the knowledge provided by the Pharmaceutical Business Laboratory not only in college, but also preparing students to be able to understand business processes that exist in the real world.

Students of the Faculty of Pharmacy, Mulawarman University can also be a companion for farmers in providing their knowledge to farmers from the moment of planting to the final stage.

The students of the Faculty of Pharmacy of Mulawarman University can ultimately contribute to the regional economy and the welfare of the farmers, through the knowledge they have gained at the Faculty of Pharmacy of Mulawarman University, especially the knowledge and field practical work they go

through in the Pharmaceutical Business Laboratory.

The synergy between stakeholders is the key to the success of the Sustainable Biopharmaceutical Industry.

5 Acknowledgments

The Faculty of Pharmacy, Mulawarman University.

6 Conflicts of Interest

The authors declare no conflict of interest.

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