

RUMAH MOCAF INDONESIA

IMPACT REPORT
2023

in collaboration with



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MESSAGE FROM THE CEO



FOREWORD

Riza Azra, CEO Rumah Mocaf Indonesia

Dear good people,

On behalf of our team, I am pleased to present Impact Report of Rumah Mocaf 2023 edition that will highlight our journey as a growing SME focusing on cassava-based product.

My journey on developing cassava started in 2014, my encounter with cassava farmers in my hometown, Banjarnegara, who suffered losses due to falling cassava prices made me very concerned. Indonesia was one of the largest cassava producing countries in the world but unfortunately many cassava farmers were living below the poverty line. Cassava, when processed into mocaf (modified cassava flour), can be used as a substitute or supplement to wheat flour, creating a substantial market opportunity because Indonesia is the world's largest wheat importer. The establishment of Rumah Mocaf carrying missions to empower cassava farmers and to strengthen national food sovereignty in Indonesia through rebuilding the culture of consuming cassava-based products.

Through this impact report, we'd want to highlight our efforts, progress, and improvements in implementing the SDGs. Rumah Mocaf is committed to promote the preservation of the environment and the quality of life for people, especially for the smallholder cassava farmers in Banjarnegara, Central Java, Indonesia.

We are determined to expand both in terms of business and impacts. Our commitment is to put sustainability as the main foundation in running Rumah Mocaf. In order to achieve sustainability, we must make a conscious effort to balance all aspects, including economic, social, and environmental factors, so that all of our stakeholders can enjoy the benefit. However we need your support along the way. We believe collective efforts will have a better impact on a better future for the next generation.



ABOUT RUMAH MOCAF INDONESIA



OUR JOURNEY

Cassava is a local commodity in Indonesia that has been a part of its cultural dishes. Cassava grows well in all regions of Indonesia and can be cooked directly or processed into a basic food ingredient such as modified cassava flour or commonly known as ‘mocaf flour’. Mocaf flour is considered a healthy food ingredient due to rich fiber and gluten-free, but it’s not yet commonly used by most people as an alternative to replace wheat flour that is still relying heavily to import products. As an agrarian country, Indonesia reliance on wheat import has hinder the demand for cassava, affecting the prosperity of cassava farmers.

In 2014, Riza Azra met a group of cassava farmers who were experiencing big loss because their cassava only sold at Rp 200 per kilogram. It was devastating for them that they let the cassavas rot in the field rather than sell it. The meeting was a defining moment for the development of Rumah Mocaf Indonesia. Later that year, Riza then took the initiative to led an empowerment program to teach farmers a new innovation to process cassava into mocaf flour that has similar characteristics with wheat flour.

In 2017, the empowerment movement had developed into a social business and marked the official start of Rumah Mocaf Indonesia. With the same empathy that we had felt from the beginning, Rumah Mocaf Indonesia and our brand, Mocafine, was established to provide the finest quality of mocaf and other cassava products to our customers while also improving the farmers’ welfare and contributing to Indonesia’s food sovereignty.



To become the world’s largest producer of cassava based products that empower local community and support national food sovereignty.



- Empowering local cassava farmers and local talents.
- Producing and marketing quality cassava-based products to support food sovereignty.
- Reviving the rural economy (economic decentralization) through mocaf production centers.

OUR JOURNEY



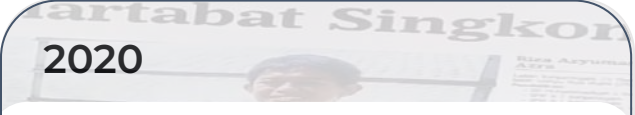
2014

The beginning of the journey. Riza Azra started to educate farmers in Banjarnegara to process cassava into mocaf flour




2018

Formed Banjarnegara mocaf association for ensuring cassava quality and started to connect them with other stakeholders



2020

Won *Anugerah Bangsa Buatan Indonesia* award for culinary category from the Indonesian Ministry of Tourism and Creative Economy



2022

- Worked with smallholder cassava farmers in 7 villages in Banjarnegara
- Received Food SMEs Award from the Indonesian Ministry of Trade



2017

The official beginning of Rumah Mocaf Indonesia. There were 7 smallholder cassava farmers group working with Rumah Mocaf Indonesia




2019

Started to educate farmers about how to produce mocaf and other derivatives products apart from production activities



2021

- Launched new products, cookies from cassava
- Penetrated export market in Oman and Turkey
- Won Kick Andy Young Heroes Award 2021

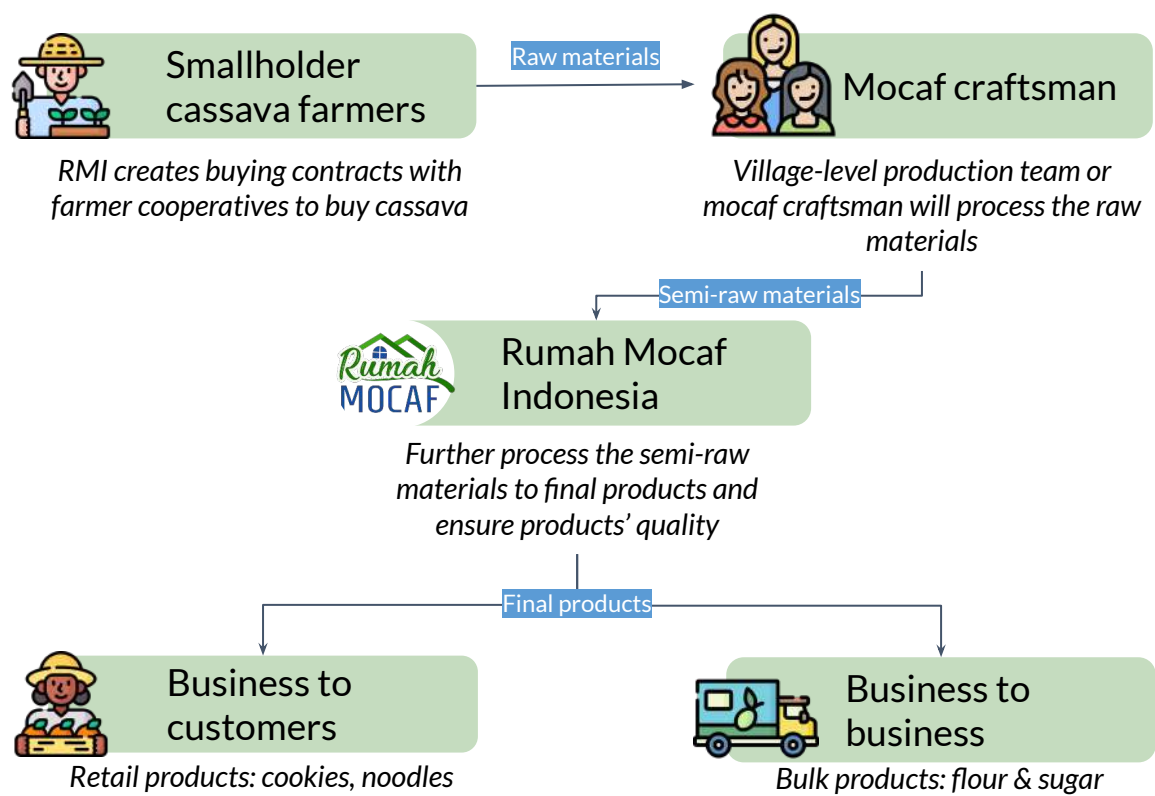


2023

Started to promote and educate customers and the the community about diverse food sources through regular cooking classes

BUSINESS MODEL

Value Chain



Our Products

- Cassava flour
- Cassava sugar
- Premix flour
- Cassava cookies
- Cassava noodles

Our Certifications



A photograph of two woven baskets filled with harvested roots in a forest setting. The baskets are made of light-colored wood or bamboo, woven in a traditional pattern. They are filled with thick, brown, cylindrical roots, likely ginseng or a similar medicinal plant. The baskets are placed on the forest floor, which is covered with dry leaves and twigs. In the background, there are more trees and foliage, creating a lush, green environment. The lighting is soft and natural, suggesting a sunny day in a shaded forest.

IMPACT HIGHLIGHTS

2023 IMPACTS SUMMARIZED

Rumah Mocaf Indonesia has been committed the best mocaf and other cassava derivative products. We strive to promote and contribute to increase the value of cassava and empower its smallholder farmers. We believe that local commodity could improve the livelihoods of the people and the resilience of the planet.

Increase income and welfare of farmers and communities



Rumah Mocaf Indonesia involved **625 farmers**



Absorb **67 tonnes of cassava** per months from farmers



Farmers experienced **40% increased income**



90% of the mocaf craftsman team is women




Empowered women villagers that previously have **no income**




Conducted training twice a year related to **income management**


Increase farm productivity




Increased **production yield** by **2-3 times**




Managed **40 hectares** in Banjarnegara




Covered **7 villages** in Banjarnegara



Conducted training twice a year related to **integrated and natural farming**




90% production waste converted to natural fertilizer




3 villages utilize integrated and natural farming


Empower local youths through employment



90% of the employees are local Banjarnegara youths



Local youths working at RMI experienced **40-70% increased income**



Regular **personal and professional trainings** for employees








**IMPACT
DEFINITIONS**

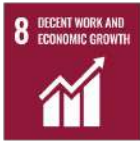


RUMAH MOCAF AND THE SDGs

Rumah Mocaf is dedicated to aligning its efforts with the United Nations' Sustainable Development Goals (SDGs), recognizing them as a comprehensive roadmap for addressing the world's most pressing challenges. With 17 interconnected SDGs, our commitment extends to collaborating with various stakeholders, including local farmers and suppliers, to actively advance these global objectives. Our strategy at Rumah Mocaf is intricately designed to support these goals, with each of our commitments and impact areas directly corresponding to one or more SDGs. Through our key initiatives, we actively contribute to the fulfillment of the SDGs, striving to play a vital role in fostering sustainability and progress in line with these universal targets.

Rumah Mocaf undertakes a proactive role in advancing the SDGs through the following key initiatives:

SDG Target		Key Initiatives & Desired Future Impact	
	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Rumah Mocaf is dedicated to enhancing the well-being of our partnering farmers. On average, our farmers earn around \$7.5 per day, reflecting our commitment to their economic upliftment.	
	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	We are dedicated to promoting food diversity by incorporating mocaf, aiming to diminish reliance on imported flour susceptible to climate-related and cross-border challenges.	
	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	We are steadfast in harnessing the potential of mocaf as a primary food source, aiming to safeguard Indonesia from food scarcity by production cassava-based product such as cookies, bread, and noodles. We are conducting regular cooking class for cassava based products to promote the awareness.	

SDG Target		Key Initiatives & Desired Future Impact
<div></div> <div><p>2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment</p><p>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality</p></div>	<p>Through comprehensive training and support, our collaboration has boosted farmers' income by 40%. and empower women villagers that previously have no earnings to additional earning around Rp500,000 per month. We plan to increase farmers productivity twice by 2026.</p> <p>We embrace sustainable farming practices, such as integrated and natural farming, and work hand in hand with our farmers. In 2023, 3 villages have applied the sustainable farming practices.</p>	
<div></div> <div><p>4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship</p></div>	<p>Rumah Mocaf employ local youths and empower them through trainings and for their skill development. We conduct a regular training 2 - 3 times in a year.</p>	
<div></div> <div><p>5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life</p></div>	<p>Rumah Mocaf ensure women participation with 60% of high-level management roles held by women and 45% of our workforce comprised of women.</p>	

SDG Target	Key Initiatives & Desired Future Impact
<div data-bbox="59 261 197 401"></div> <div data-bbox="218 254 696 482">8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value</div>	<div data-bbox="731 254 1339 406">Adhering to Banjarnegara's minimum wage, we prioritize fair compensation for our employees, further reinforcing equitable pay with additional benefits, such as bonus.</div>
<div data-bbox="59 660 197 801"></div> <div data-bbox="218 648 696 876">10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status</div>	<div data-bbox="731 648 1339 913">We are empowering farmers to be equipped with sufficient financial management skill through income management training. In 2023, we conducted 2 trainings and after the sessions, 65% of the participants were starting to save up their income.</div>
<div data-bbox="59 998 197 1139"></div> <div data-bbox="218 994 696 1411">12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment</div>	<div data-bbox="731 994 1339 1145">Our products are labeled as organic Indonesia. Furthermore, we minimize waste by utilizing integrated farming method, ensuring a sustainable production process.</div>

RUMAH MOCAF AND THE THEORY OF CHANGE

As a commitment to drive impact and intentional change, we employ a Theory of Change as a foundational framework for our purpose-driven initiatives. Through this structured approach, we aim to articulate the pathway to impact. Through internal reflection, analysis, discussion, and engagement with stakeholders, Rumah Mocaf Indonesia developed the primary and secondary impact indicators. Primary indicators are the impacts that directly influence business operations, whereas, secondary indicators are the broader impacts that stem from our actions.

Primary indicators

- Increase income and welfare of smallholder cassava farmers and their communities
- Increased farm productivity

Secondary indicators

Empower local youths

Theory of Change

Resources	Activities	Purpose
Capacity for increasing income and welfare for smallholder cassava farmers and their communities	<ul style="list-style-type: none">• Sourcing raw cassava with fair price• Hiring cassava farmers' wives and other community members to work at the production process• Providing income management and financial literacy trainings	<ul style="list-style-type: none">• Increase income for smallholder cassava farmers and the Banjarnegara community• Increase awareness and financial literacy in the farmer's household
Capacity to provide trainings and assistance related to integrated and natural farming	<ul style="list-style-type: none">• Training for integrated farming• Training and assistance of natural farming	<ul style="list-style-type: none">• Reduce farming waste• Reduce the use of external input to promote natural ecosystem• Increase farm productivity
Capacity to create diverse and ethical work environment	<ul style="list-style-type: none">• Hiring local youths in Banjarnegara• Employee training and development• Involving women in managerial positions	<ul style="list-style-type: none">• Empower local youth• Enhancing employees' skills and knowledge• Include women representation in managerial positions
Capacity to increase awareness in food diversity	<ul style="list-style-type: none">• Promoting diverse food sources to customers and communities	<ul style="list-style-type: none">• Increase awareness in diverse and healthy food products

A man with a mustache, wearing a wide-brimmed straw hat and a white polo shirt with red sleeves, stands in a field. He is holding a large, thick, brown cassava root. The background is a blurred forest of tall, thin trees.

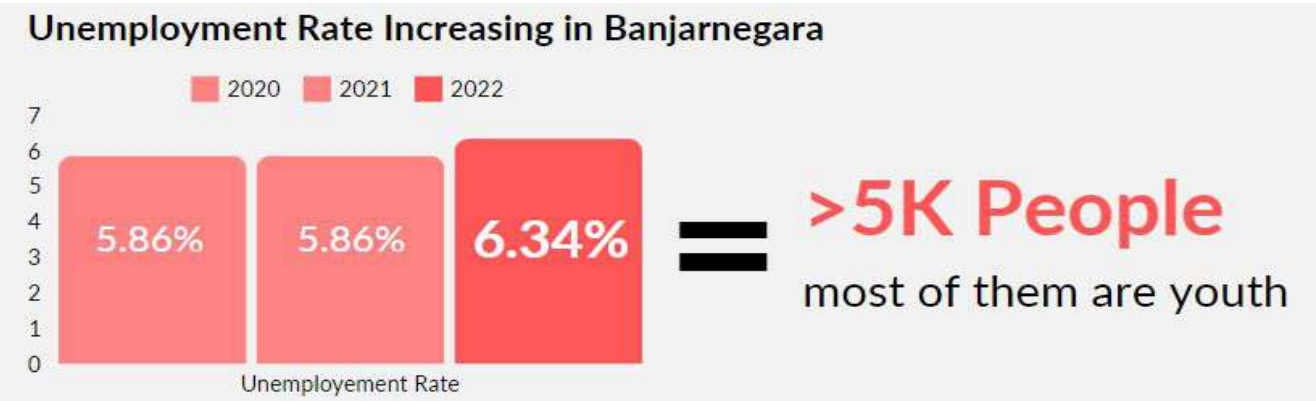
EMPOWERING SMALLHOLDER CASSAVA FARMERS

PRE-PROSPEROUS CONDITION OF CASSAVA FARMERS IN BANJARNEGARA

In the rural areas of Banjarnegara, Indonesia, cassava farming has long been a mainstay of the local economy. However, the once-thriving agricultural sector is now grappling with significant challenges.

Data reveals that a considerable percentage of cassava farmers are facing dire financial conditions. According to recent data, approximately cassava farmers in Banjarnegara are living below the average national income and even worse below the regional minimum wage.

This alarming situation is exacerbated by the lack of interest among the youth in pursuing farming as a viable livelihood option. Many young individuals are instead migrating to urban areas in search of better opportunities or remain unemployment, leading to a dwindling workforce in the agricultural sector. Additionally, the productivity of cassava farms has plummeted in recent years, further exacerbating the economic challenges faced by farmers in the region.




PRE-PROSPEROUS CONDITION OF CASSAVA FARMERS IN BANJARNEGARA


Indonesia, despite its vast agricultural resources, currently relies entirely on imported wheat flour to meet its domestic demand. This heavy reliance on imports exposes the nation to various economic and climatic risks, as fluctuations in global wheat prices and supply chain disruptions can significantly impact the availability and affordability of this essential staple. Data indicates that Indonesia's wheat supply is 100% reliant on imports, making it vulnerable to external factors beyond its control. Moreover, the cross-border economic dynamics and climate-related challenges further compound the nation's dependency on imported wheat flour, highlighting the urgent need for strategic measures to enhance food security and resilience in the face of uncertainty.

Therefore, despite its significance as a staple food crop in Indonesia, cassava is often undervalued and perceived as the least profitable commodity in agricultural markets. The prevailing market conditions, characterized by low prices coupled with the absence of added value and concerns regarding product quality, have marginalized cassava farmers and hindered the development of the cassava industry. Moreover, cassava is one of the untapped potential of local foods that could help in safeguarding Indonesia's food sovereignty and ensuring a sustainable and self-sufficient future for generations to come.


Our missions in empowering smallholder cassava farmers



Smallholders cassava farmers can **increase their income and improve the welfare of their family**




Smallholders cassava farmers can **increase the productivity through sustainable farming practice**




Smallholders cassava farmers can **manage their financial and their business, such as have a saving**


Our achievements



Empower **625 farmers** from 7 villages in Banjarnegara



In average, farmers received **Rp2.1 million of income**



Increased **production yield by 2-3 times**

HOW WE HELP SMALLHOLDER CASSAVA FARMERS TO INCREASE THEIR INCOME

Regular discussion with smallholder farmers

Rumah Mocaf Indonesia started because we were worried about cassava prices dropping between 2014 to 2016. That condition made many smallholder farmers reluctant to harvest their cassava. Through Rumah Mocaf Indonesia, we want to help the farmers getting a fair price for their cassava. Therefore, we formed a smallholder farmer organization called *Gapoktan (Gabungan Kelompok Tani)* to make it easier to work with smallholder farmers. Through the organization that represents majority of the smallholder farmers, we organize regular discussion to decide the fair price for cassava based on farmers' cost of production. This initiative helps us to pay a better price for cassava, higher than what others are paying.

Ensuring income through contracts

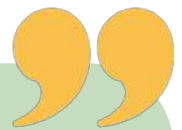
Economic democratization serves as the foundation for agreements between Rumah Mocaf and smallholder farmers. Economic democratization means building mutually beneficial relationships where no party is disadvantaged. Therefore, creating cooperation contracts with farmers as a next step after the discussion is a joint effort to guarantee rights and obligations. For the farmers, they seek assurance that their harvest will be purchased, while Rumah Mocaf seeks certainty in cassava supply. Cooperation contracts are established based on consensus reached through mutual discussions.



Wahyono

Smallholder cassava farmer

Previously, my cassava productivity is low and sold at low prices to offtakers for around Rp1,000 to Rp1.200 per kg. Natural and integrated farming assistance and trainings from Rumah Mocaf helped me in increasing my income through increased productivity and higher cassava price.



INCREASING INCOME FOR FARMERS' COMMUNITY

Farmers and their families are still relying to selling their cassava as the main source of income. This condition inspired Rumah Mocaf Indonesia to empower farmers' wives, families, and their communities to increase their income and be more financial resilient.

Our achievements



30 people involved in mocaf craftsman team, with 27 being women



Mocaf craftsman team located in **2 villages** in Banjarnegara



Empower women villagers that previously **have no earnings**

How we increase our farmers' community income and livelihood

- 1
- In 2017, we reached out to cassava farmers' wives and other community members that were financially vulnerable to join the mocaf craftsman team to process raw cassava from the farmers to semi-raw materials, such as coarse mocaf flour and cassava chips.
- 2
- We provides regular trainings related to mocaf processing to the mocaf craftsman team. The participants learned to produce cassava derivative products, from various cake to nata de cassava. Such trainings help them in understanding various food products from cassava and cultivate their entrepreneurial spirit
- 3
- The mocaf craftsman team receives income per kilogram for processing the raw materials, from peeling the cassava to carrying out the fermentation process. Several of them, around 10% of the mocaf craftsmen, also received additional income from establishing their own small business selling brownies, pies, and cakes made from mocaf flour



INCREASING FARMERS' PRODUCTIVITY

From our experience that spans in almost a decade, one of the most prominent problems for increasing the welfare of smallholder cassava farmers is low farm productivity that results in low income for the farmers. Therefore, increasing smallholder farmers' productivity is one of our impact goal. Through the effort, farmers are empowered to produce more. Hence, even though Rumah Mocaf Indonesia only absorb a fraction of their total production, they could still experience an increased income.

Training in income management

Raising awareness about financial literacy to smallholder farmers has proven to increase their productivity. By having a financial literacy knowledge, farmers are better equipped to allocate resources towards quality inputs, leading to better yields and product quality. Moreover, specific knowledge about income management will help the farmers in making and prioritizing decision that will boost their production and bring long-term values.

In 2023, we conducted 2 training sessions related to income management. The training covered topics such as how to calculate cost of production, understand profit or loss from the sales, and manage household finances. Since a lot of farmers were also the main provider to their household, more than often their income were divided between business and family matters. Hence, one of the key topics was financial literacy, particularly about saving up. After the training session, 65% of the participants were starting to save up their income.



INCREASING FARMERS' PRODUCTIVITY

Training and assistance in integrated and natural farming

Among our agricultural community, smallholder farmers tend to grow various crops and also keep livestock. Acknowledging the prevalent practice, we embarked on a journey to raise awareness related with integrated and natural farming. It involves repurposing production waste, specifically utilizing cassava skins as valuable feedstock and harnessing the waste from livestock as fertilizer for the crops. Thus, promoting a zero-waste ecosystem and reducing the dependency on chemical fertilizer. Through this integrated and natural farming model, we strive to foster sustainability while also aim to increase the farm productivity through improving soil health that hopefully leads to healthier soil that retains water better and provides a more supportive environment for the crops.

We place significant emphasis on comprehensive training and assistance for farmers to ensure the successful implementation of our integrated farming initiative. Regular training sessions, conducted 3 times in 2023, equipped farmers with integrated and natural farming techniques, with a particular focus on utilizing organic fertilizer.

As a result, 90% of the leftover production was able to be used as fertilizer. This includes cassava leaves and feeds that are processed into animal feed. Overall, 3 villages have adopted the use of organic fertilizer, covering 80% of the training participants. In the future, we aim to conduct soil testing to be able to keep track on the farm productivity even more.



INCREASING FARMERS' PRODUCTIVITY

Increase access to other agricultural products

In our commitment to bolstering the resilience and prosperity of smallholder cassava farmers, Rumah Mocaf Indonesia encourages the cultivation of diverse agricultural products. Recognizing the inherent benefits of crop diversification, farmers are encouraged to explore other crops to enhance income streams, improve soil health, and mitigate risks associated with monoculture. Every seeds that we introduce to our farmers are non-GMO and with an aim to increase the land productivity and, hence, provide additional economic value to their households.

As part of this initiative, we took proactive steps to promote and support the cultivation of these alternative crops by facilitating the distribution of seeds and offering assistance on cultivation practices. We our connect smallholder cassava farmers with local government to receive various seeds, such as moringa seeds. We also assisted the farmers during cultivation through our regular meetings. Therefore, we aim to not only elevate the economic well-being of smallholder farmers but also to cultivate a more resilient and sustainable agricultural landscape.



Mukhlis

Smallholder cassava farmer

Organic fertilizer yields better production than their inorganic ones. Using organic fertilizer also increase my farm productivity, rom previously 1-2 kilogram to now 15-20 kilogram. Moreover, now I do not need to buy any more fertilizer and I even get additional income from selling organic fertilizer that I made and sold to the local community






**GROWING WITH
EMPLOYEES
AND
COMMUNITY**


EMPOWERING YOUTHS THROUGH RUMAH MOCAF INDONESIA

Banjarnegara, like many regions, grapples with a significant trend of urbanization, with the youth increasingly seeking employment opportunities outside the region. Limited available jobs for youths in Banjarnegara creates a pressing need for initiatives that can absorb the local workforce and contribute to community welfare. Recognizing this challenge, we are committed to contribute to empower youths through meaningful employment within the realm of local agriculture to enhance the welfare of the entire community.


Our achievements



30 of 33 employees in RMI is youths, with 45% being women



Local youths working at RMI experienced 40-70% increased income



60% of the managerial leaders are women

Inclusive hiring policy



Rumah Mocaf Indonesia is committed to hiring local young talents and ensuring diversity, equity, and inclusion in our workforce. Our hiring practices are strictly non-discriminatory, providing equal opportunities to candidates from all backgrounds. We actively reach out to local talents through social media, employee and community referrals, and partnerships with local schools.

Gender equality



Women play a pivotal role in Rumah Mocaf Indonesia, from the beginning of our journey until now. One of our co-founders is women and more than half of our managerial leaders are women. Going beyond mere representation, our dedication to gender equality extends to the whole team where 45% of us are women. We are proud to have amazing women in our team and believe that our effort to ensure equal opportunities is not just a policy but also a celebration of diversity.

EMPOWERING YOUTHS THROUGH RUMAH MOCAF INDONESIA

Remuneration and benefits



Our employees' salaries are adhering to the Banjarnegara minimum regional wage, ensuring that each team member receives compensation that meets or exceeds the standard. We eradicate any pay gap between male and female employees and provide benefits such as religious holiday allowances, health insurance coverage (BPJS Kesehatan) and labor insurance (BPJS Tenaga Kerja).

Training and development



We believe that investing in our employees' personal and professional growth not only enhances their skills but also contributes to the overall success of our organization. Our personal growth training spans from topics such as critical thinking, problem solving, and leadership, whereas our professional development training is tailored to individual job descriptions.

Health and safety



At Rumah Mocaf Indonesia, we understand that a secure and healthy work environment is critical part of employment commitment as well as part of effort to provide high-quality products to customers. Therefore, we enforce the use of personal protective equipment (PPE) to for all team members and carry out regular training related to health, safety, and environment (HSE) practices.



Tria

Employee at Rumah Mocaf Indonesia
Working at the marketing division, I learned not marketing skills, but also soft skills related with personal growth such as leadership, team management, and communication.



CONTRIBUTE TO SOLVING COMMUNITY'S PRESSING PROBLEMS

Partnership with other businesses for promoting food sovereignty

Indonesia faces challenges related with food sovereignty due to less productive land and a reliance on imported staples. Additionally, the ever-present threat of climate change further disrupts its stability. Hence, there is a rising efforts from various stakeholders to promote food diversification, particularly from local products.

Apart from our efforts in improving farmers' productivity, Rumah Moca Indonesia is also committed to partnering with other businesses to promote food sovereignty through the use of high-quality, locally-sourced moca flour. We supply moca flour to a wide range of businesses, from small and medium enterprises (SMEs) to large industries across Jakarta, Central Java, and East Java. In fact, a 60% of our sales come from these partnerships. Our moca flour enables our clients to create a variety of exciting final products, including premix flour, bakery goods, and even noodles.

Research on health benefits of moca flour

Moca flour is a compelling alternative of flour with a unique nutritional profile. Compared to wheat flour, moca boasts a higher nutrient adequacy rate, making it a potentially healthier choice. Additionally, its gluten-free nature makes it a safe and delicious option for individuals with celiac disease, diabetes, and irritable bowel syndrome.

However, moca flour currently has a lower protein content compared to other options like wheat or rice flour. Recognizing this, we actively seeks to unlock moca's full potential through collaborative research. We are proud to partner with Universitas Muhammadiyah Purwokerto to explore innovative techniques for increasing protein content in moca flour.

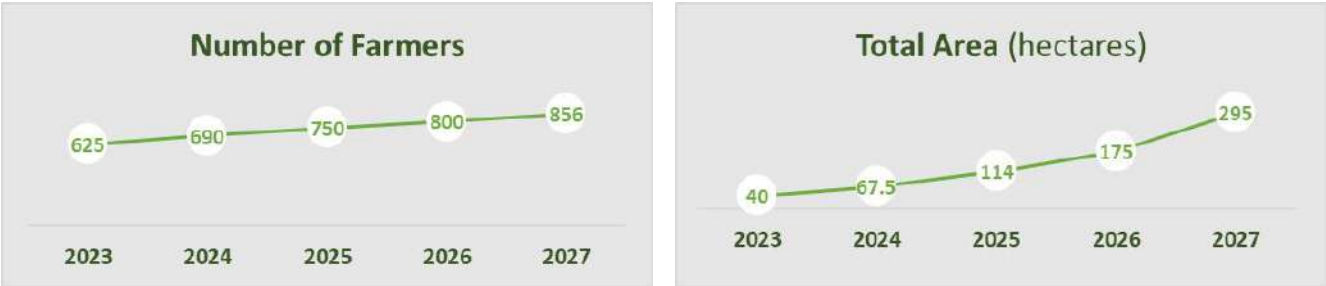
Our ongoing research has yielded promising results, successfully raising the protein content from 1% to 2%. While this is a significant step forward, we remain committed to further advancements. Our ultimate goal is to reach a protein level that at least benchmarks rice flour, creating an even more well-rounded and competitive product.

APPENDIX



PROJECTIONS OF KEY IMPACT INDICATORS

Increase income and welfare of smallholder cassava farmers and their communities



Rumah Mocaf Indonesia is proud to be the pioneers of mocaf and other cassava products in Indonesia. Over the next 5 years, we are optimistic with our business and impact growth. Our projection includes our plan to expand the operation in areas outside of Banjarnegara; thus, anticipating a substantial increase that will not only fortify our business but also empower more farmers. We foresee a rise in the number of smallholder farmers and total areas engaged in our initiatives, reaching 856 smallholder farmers and 295 hectares by 2027. Through producing various derivative products of mocaf and cassava, we will involve more smallholder farmers and their communities, thereby, increasing their income and welfare.

Increased farm productivity



Apart from income, our focus is also increasing smallholder farmers' productivity. Through our assistance and training, we help smallholder farmers to be more productive. Over the next 5 years, our smallholder farmers' productivity and yield estimation shows a positive outlook. For smallholder farmers' productivity, we aim to reach 44 ton per hectare per harvesting season by 2027. Meanwhile, for total yield estimation, we target our smallholder farmers to produce 12,980 ton by 2027. One of the key initiative that we are planning to boost the productivity is a soil testing. Soil testing assistance and training will help smallholder farmers to maintain their soil health, and eventually, productivity.

IRIS METRICS

Metric	IRIS Indicator	IRIS Code	2023 Impact
Agricultural yield	Average Supplier Agricultural Yield: Smallholder	PI1405	30 ton per hectare
Number of smallholder farmers	Supplier Individuals: Smallholder	PI9991	625 smallholder farmers
Income received by smallholder farmers	Payments to Supplier Individuals: Smallholder	PI7852	Rp 2,100,000 per farmer (in average)
Number of female moca craftsmen	Supplier Individuals: Female	PI1728	27 moca craftsmen who process raw cassava to semi-raw materials are female
Income received by female moca craftsmen	Payments to Supplier Individuals: Female	PI2302	Rp 500,000 per month
Sustainable agriculture practices	Soil Health Practices	OI1047	Encourage crop diversification and use of natural fertilizer
Non-financial support to smallholder farmers and their community	Non-financial Support Offered	PD9681	<ul style="list-style-type: none">• Training income management• Training moca processing• Training and assistance in integrated and natural farming• Access to other agricultural products
Non-financial support to customers	Non-financial Support Offered	PD9681	Regular cooking class to raise awareness of healthy food through diverse food sources
Increasing income for local youth	Full-time Wages: Total	OI5887	Salaries adhere to Banjarnegara minimum regional wage with other benefits, increasing 40-70% from their previous job
Training for Rumah Moca employees	Training Type	OI5044	Regular 3 - 4 times of training in a year for personal and professional development
Number of women on managerial level	Full-time Employees: Female Managers	OI157	60% managerial leaders are women

Rumah MOCAF

