



## CONFERENCE PROCEEDINGS

# INNOVATION ON CROSS-DICIPLINARY FOR ACCELERATION RECOVERY

**28<sup>th</sup>**

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**International Conference**

# IRCUM

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INTERNATIONAL RESEARCH CONFERENCE OF UNIVERSITY MAARIF HASYIM LATIF  
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# INTERNATIONAL CONFERENCE PROCEEDINGS

## The 28<sup>th</sup> ADRI-UMAHA 2022 “INNOVATION ON CROSS-DICIPLINARY FOR ACCELERATION RECOVERY”

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March 24, 2022

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## **PREFACE**

### **WELCOME FROM THE CHAIRMAN OF THE 28<sup>TH</sup> ADRI – UMAHA INTERNATIONAL CONFERENCE 2022**

Dear distinguished Guest, Ladies and Gentlemen,

Welcome to the 28<sup>th</sup> ADRI – UMAHA International Conference 2022, which is organized by ADRI-Universitas Maarif Hasyim Latif (UMAHA), Sidoarjo – Indonesia, with supported by Perkumpulan Ahli Dan Dosen Republik Indonesia (ADRI) – LPPM UMAHA, Hassan First University, Maroco – Tikrit University, Iraq – Fathoni University, Thailand – Sultan Zainal Abidin University, Malaysia – Universiti Sains Malaysia, Malaysia– Narotama University, Surabaya and STKIP Singkawang. The main theme for the 28<sup>nd</sup> International Conference is 'Innovation on Cross-Disciplinary for Acceleration Recovery. The aim of the Conference is to invite academics, researchers, engineers, government officers, and students from the field of all disciplines (such as Humanities, Social and Technology Sciences, etc.), to gather, present and share the results of their research and/or work and discuss the future and impact of for Acceleration Recovery. Taking this opportunity, I would like to convey my sincere thanks and appreciations to our keynote speakers and invited speakers from Hassan First University, Maroco – Tikrit University, Iraq – Fathoni University, Thailand – Sultan Zainal Abidin University, Malaysia – Universiti Sains Malaysia, Malaysia– Narotama University, Surabaya and STKIP Singkawang for their support of this important event. I would also like to invite all participants in expressing our appreciation to all members of the 28<sup>th</sup> ADRI – UMAHA International Conference 2022 organizing committee for their hard work in making this conference success. Finally, we wish you all fruitful networking during conference, and we do hope that you will reap the most benefit of it. Do enjoy your stay in UMAHA Sidoarjo campus, and thank you very much!

**Dr. Dony Perdana** – Universitas Maarif Hasyim Latif Sidoarjo. Chairman of the 28<sup>th</sup> ADRI – UMAHA International Conference 2022

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## **DUALITY FUNCTIONS OF MULBERRY AND MULBERRY FARMERS' RATIONALITY IN SOUTH SULAWESI**

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### **ABSTRACT**

The mulberry plant is basically cultivated for silkworm food. During its development, mulberry has many commercial benefits, especially as a medicine. Based on these benefits, mulberry farmers in Pakkatto Village have made commercial innovations. It is in that context that this article aims to reveal these innovations. This research was conducted in Pakkatto Village, Gowa Regency as the center of mulberry plant development in South Sulawesi. This research is descriptive qualitative. There were 10 informants purposively from the mulberry farming community. Data collection was carried out through interviews, observation, and literature study. The data analysis technique used a three-way technique. From the results of this study, the following points were obtained: the innovations of the farmers were (1) making mulberry tea (teabags and brewed tea). (2) make mulberry juice. (3) making a traditional scrub powder from mulberry roots and leaves. They market the results of this innovation through stalls in the region. The conclusion of this study is that the innovation carried out by mulberry farmers is based on the commodity potential possessed by the mulberry plant itself.

**Key words:** commodities, innovations, mulberry plants, powder scrub, tea bags

### **INTRODUCTION**

The mulberry plant is known as a multi-purpose plant. In addition to having a high content of substances and minerals, this plant is also an industrial plant which is cultivated by the government as food for silkworms.

In Indonesia, only a few areas are used as centers for the mulberry plant industry, one of which is South Sulawesi. In South Sulawesi, the government built 3 industrial centers, namely Enrekang Regency, Soppeng Regency, and Gowa Regency.

Since the entry of mulberry cultivation in Gowa Regency in the 1960s, the main purpose is only for silkworm food to produce cocoons and then be processed into silk. This situation continues to this day because silk as one of the export commodities still needs to be maintained to increase the country's foreign exchange (Nurjayanti, 2011).

However, over time the development of human thought has progressed. The farmers also found a lot of information that the mulberry plant

has many benefits, especially it can be used as traditional medicine or herbs. A number of research results show that mulberry with all its parts has benefits (Isnan & Muin, 2015; Lastridewi et al., 2017). However, the method of treatment is still conventional, such as drinking boiled water from mulberry leaves or sticking mulberry leaves on sick limbs. Even methods like this still exist today because they are the most practical and simplest way to do it when needed.

In the last five years, the presence of the internet in remote areas has caused information to be absorbed quickly, including mulberry farmers. The availability of information about the mulberry plant from various regions, either through research results or as a local experience, is also consumed by the Pakkatto community, thereby enriching their knowledge.

Through the internet, they began to imitate many things and then they modified and innovated to develop the potential of the mulberry plant.

In addition, they are also thinking about commercializing the results of the mulberry plant innovation. Whereas so far the nature of social

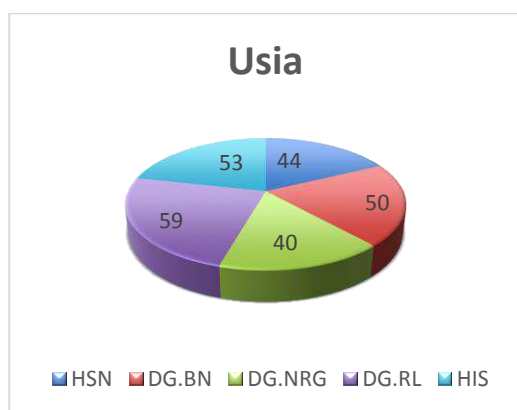
solidarity dominates the farmers in the village compared to business rationality.

Plant innovations carried out by farmers have been studied by various academics, including: (1) star fruit cultivation innovation in Blitar City (Rianto et al., 2018), (2) Sorghum cultivation innovation in Bantul Regency (Wijayanti et al., 2015), (3) Innovation of the citrus crop intercropping system (Aryawan, 2020), and (4) Innovation of watermelon fruit production (Wahyudi, 2014).

Innovative ideas related to mulberry plants are always new in the context that no one has done it before, although the term copying and modifying and innovating still applies. Therefore, this study reveals the forms of mulberry plant innovation by farmers in Pakkatto village.

### RESEARCH METHODS

This study uses a qualitative descriptive method that describes matters related to the focus of this research, namely the innovation of mulberry plant commodities to be of commercial value. Data were collected through interviews with farmers as informants and observation as primary data and literature study as secondary data. Both primary data and secondary data, both reinforce each other. Determination of informants using purposive sampling technique on 5 mulberry farmers with the consideration that they have been farmers for 5 years, and have knowledge or experience related to mulberry plants. The data from the interviews were analyzed using a three-way technique, namely data reduction, data categorization, and drawing conclusions. The results of the literature review are used to strengthen the interview data (Miles & Huberman, 1999).



**Figure1. Research Informant Identity**  
Source: Data processing result, 2022.

## RESULTS AND DISCUSSION

### A. Mulberry plant as an agro-industri

The mulberry plant is a forest-based agro-industrial plant managed by the Ministry of Forestry through the Balai Persuteraan Alam unit.

The entry of this plant in South Sulawesi has been started since 1962 from Java, which was introduced by silk thread traders. This is also the forerunner to the development of this plant because the community immediately planted mulberry in the same year (Nurjayanti, 2011).

Data obtained from interviews with informants that when this research was conducted, there were around 200 families in Pakkatto who cultivated mulberry on a total land area of 46.75 ha. They are also grouped into 21 farmer groups which are directly supervised by the Gowa District Forestry Department through the local Silk Unit.

As told by TSR (54 years old) that his parents were one of the first generation farmers involved in mulberry cultivation, which was fostered by the Balai Sutera of Gowa Regency. According to him, the project is aimed at the agro industry because the Ministry of Forestry has almost no activities.

The same situation was also expressed by another HSB informant (59 years old) whose parents are also from the early generations of mulberry farmers. He said that his parents were only instructed by the leadership at that time to take care of the mulberry plant and he did well.

The description of the interview results above confirms that the farmers work according to their designation. They grow mulberry only for the benefit of the silk industry and nothing more.

Theoretically, the actions of the farmers as described above reflect the instrumental rationality of farmers as described by Weber. Their main purpose is actually to produce silk. To achieve this, all activities supporting its achievement have been designed in such a way, and one of them is planting mulberry which is the domain of the farmers.

Village communities are always identified with traditional rationality and value rationality. However, the introduction of industrial-based mulberry farming patterns and work systems has conditioned the Pakkatto villagers to act with instrumental rationality. As it is known that 'industry' which is the jargon of 'capitalism' is always oriented towards measurable productivity, and based on profit and loss. This then conditions the local community on an instrumental rational way of thinking.



Figure 2. Mulberry Plant Cultivation in Pakkatto Village (Sumber: Dokumen Observasi)

### B. Mulberry and duality function

The use of the mulberry plant for medical treatment and health care which is socially accessible to the Pakkatto community shows the social function of this plant.

The following are two benefits that farmers in the study area get from the mulberry plant socially.

#### 1. Mulberry leaf for medicine

There is no definite data on events or incidents where the Pakkatto community recognizes the function of the mulberry plant as a herbal medicine.

Based on an interview with HAK (44 years old) that their knowledge about mulberry only serves as a remedy for body aches or pains. This knowledge they get from generation to generation. HSN told that their parents used to use mulberry root as a medicine when they were sick. They take the roots and leaves and cook them in an earthen pot until the water is dark brown. After the water is a little warm, just drink it for one day and the next day the body is fresh again.

The same thing was also stated by another farmer, namely DG. BN (50 years old) that when he was a teenager he was often sick and after being given the mulberry plant herb regularly, he rarely got sick anymore. He revealed that before he married as a teenager, he often got sick compared to his other siblings. The disease is not known by the name of the residents. Then someone suggested to drink a mulberry plant potion, then after using it regularly, his health gradually improved.

Observing the description of the interview above, it can be explained that so far the people in the research location have been using the mulberry plant as an ingredient for health. It's just that their knowledge is still based on experience and inherited from their parents. This is reflected in the technical processing of these ingredients, which are still general and simple by taking only the roots or leaves.

In its development, mulberry farmers have come to know that mulberry roots can provide great

benefits and more than what they have ever received if they are treated properly or processed with certain technologies or techniques.

The same is true for other plant parts, especially leaves, which when processed with certain techniques can provide many benefits. This is as stated by the informant Dg. NRG (40 years old) that so far they know that mulberry is only boiled from a mixture of leaves, roots, or skin and used as a drink for the treatment of diseases. Apparently, the leaves alone can be used as a concoction mixed with other plants and made into a drink.

The above description is also strengthened by information from DG mulberry farmers. ML (59 years) that he is very happy with the many benefits of the mulberry plant. He said that the mulberry plant had many benefits. He was also surprised and pleased with the information after being told by his son. So very lucky farmers can grow mulberry.

Based on the description of the interview above, it can be concluded that there was a change in public knowledge regarding the benefits of mulberry plants due to the information they received.

The many benefits of the mulberry plant are also scientifically strengthened through research findings. These benefits range from roots to leaf shoots (Isnain & Muin, 2015) which means that all parts of the plant are useful (Lastridewi et al., 2017), the benefits of treating various types of diseases such as antibacterial (Jurian, V.Y, Suwasono, S, Fauzi, 2016), anemia and tooth decay (Khaira & Ramadhania, 2019), arterial blood pressure (Jurian, V.Y, Suwasono, S, Fauzi, 2016).

#### 2. Leaves and Roots to smooth the skin

Making cold powder using mulberry roots and leaves has only been known in the last two years. Previously, they made a concoction only from mulberry leaves and used it as an external medicine to reduce fever. Mulberry leaves that have been finely ground or chewed until smooth are placed on the forehead.

For the past two years, people have been able to make cold powder from mulberry leaves and roots. Moreover, they also know that the cold powder can function for skin care such as smoothing, nourishing, and beautifying the skin. This is as stated by an SAS informant (44 years old) that he is surprised that there are benefits of such mulberry. He suggested that mulberry is good for beauty.

The same situation was also expressed by HAL (51 years old), which is a senior farmer. He expressed his excitement about the mulberry plant has benefits for skin health care.

Observing the two descriptions of the interview above, it can be stated that the benefits of

mulberry as a skin health and beauty treatment are new information for these farmers.

So far, the process of making cold powder is simple. They only take mulberry leaves and roots and then dry them to dry and then mix them. This is as told by an HIS informant (53 years old) that they have experience making cold powder, but they are more often used for external medicine that is attached to the forehead when they have a fever. Often also affixed to the sick body part.

As long as they know the function for skin care, the community also enriches the concoction with other medicinal plant ingredients such as ginger, turmeric, and kencur rice. This is as told by KMRS (45 years old) that in making this cold powder, the ingredients that must be prepared must be natural, available around the house.

The description above states that in making body scrubs, they don't just make things as they are, but also enrich and improve them. This is indicated by the addition of other additional spices as mentioned above.

Basically, they have done cold powder making by the Pakkatto people long before, even though the benefits are only for internal medicine. Even then the making of the powder is processed in a simple way.

Based on the perspective of science, mulberry does contain powerful antioxidants and antibacterials (Arisman, 2009; Jurian, V.Y, Suwasono, S, Fauzi, 2016; R. et al., 2013). It's just that the local community does not have the capacity to explain such content in mulberry. But experience and beliefs caused them to pass it down to their generations.

In the context of science, the scientific community needs empirical rational instruments as a form of accountability and guarantee for the products made. This aspect is very supportive of making product development more varied.

The mulberry plant has been known for a long time by the community at the research site. The interaction of these plants with the surrounding community causes the community to get many benefits from these plants.

As a village community, there are many benefits that people do not know about this plant. This causes their knowledge and actions in utilizing these plants are still simple which Weber called traditional rationality based. This simple knowledge has been passed down from generation to generation.

In the context of the development of time, community activities related to mulberry plants are no longer one-way, namely industrial interests but also lead to broader activities in the form of benefits of mulberry plants that can be accessed by the public socially. They see there is more value in the benefits of these plants that they did not know

before. This condition reflects showing that there are two functions of the mulberry plant, namely industrial functions and social functions that take place simultaneously. This is what is called 'Duality of function'.

Socially, there is a shift in the rationality of the local community which was previously based on traditional rationality to become value rationality. The simple knowledge of cold powder that was born from family inheritance experienced the development of knowledge. The new experience broadens their horizons about the other functions of cold powder. This is then related to value rationality.

Industrially, the instrumental rationality that is the spirit of cultivation persists. The reason is that this project involves many institutional interests in it.

## CONCLUSION

The mulberry plant is a multipurpose plant with their respective functions. There are industrial functions that are project-oriented and there are social functions that are utilized by the general public.

Both industrial and social functions have consequences for actions that are profit-and-loss-based (instrumental rationality) and benefit-based (value rationality). These two rationalities exist simultaneously (parallel) in their respective functions but do not deny each other.

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## REFERENCES

- Arisman. (2009). *Keracunan Makanan: Buku Ajar Ilmu Gizi*. EGC.
- Aryawan, I. G. N. (2020). *Dorong budidaya komoditas unggulan tejakula, peneliti unud kembangkan inovasi sistem tumpang sari jeruk keprok tejakula dan tanaman turi*. LPPM UNIVERSITAS UDAYANA. <https://lppm.unud.ac.id/posts/dorong-budidaya-komoditas-unggulan-tejakula-peneliti-unud-kembangkan-inovasi-sistem-tumpang-sari-jeruk-keprok-tejakula-dan-tanaman-turi>
- Isnain, W., & Muin, M. (2015). "Tanaman murbei"

- Sumber Daya Hutan Multi-Manfaat. *Info Teknis Eboni*, 12(2), 111 – 119.
- Jurian, V.Y, Suwasono, S, Fauzi, M. (2016). Aktivitas antioksidan dan antibakteri ekstrak daun murbei (*morus alba*) terhadap *escherichia coli*. *Prosiding Seminar Nasional APTA*, 256–260.
- Khaira, N., & Ramadhania, Z. M. (2019). Review: kandungan senyawa kimia murbei hitam (*morus nigra* l.) dan efek farmakologinya. *Farmaka*, 16(2), 246–253.
- Lastridewi, N. K., Jamhari, & L, I. (2017). Kajian pemanfaatan tanaman sebagai obat tradisional di desa tolai kecamatan torue kabupaten parigi moutong. *E-Jip Biol*, 5(2), 92–108.
- Miles, M. B., & Huberman, M. A. (1999). *Analisa data kualitatif*. Universitas Indonesia Press.
- Nurjayanti, E. D. (2011). Budidaya ulat sutera dan produksi benang sutera melalui sistem kemitraan pada perusahaan sutera alam (psa) regaloh Kabupaten PATI. *MEDIAGRO*, 7(2), 1–10.
- R., A. A. J., Silva, P. M. F., & Cavalcante, A. L. F. A. Sampaio, F. . (2013). Polyphenols as a source of antimicrobial agents against human pathogens. Nova Science Publisher. Inc.
- Rianto, D., Suyadi, B., & Kartini, T. (2018). Perilaku kreatif dan inovatif petani dalam usaha budidaya buah belimbing di Kelurahan Karangsari Kecamatan Sukorejo Kota Blitar. *Jurnal Pendidikan Ekonomi: Jurnal Ilmiah Ilmu Pendidikan, Ilmu Ekonomi, Dan Ilmu Sosial*, 12(1), 105–108. <https://doi.org/10.19184/jpe.v12i1.7594>
- Wahyudi, A. (2014). Peningkatan produksi buah semangka menggunakan inovasi teknologi budidaya sistem "topas". *INOVASI Dan PEMBANGUNAN – JURNAL KELITBANGAN*, 2(2), 94–111.
- Wijayanti, A., Subejo, & Harsoyo. (2015). Respons petani terhadap inovasi budidaya dan pemanfaatan sorgum di Kecamatan Srandakan Kabupaten Bantul. *Agro Ekonomi*, 26(2), 179–191.