International Journal of
Economics Development Research, Volume 4(3), 2023
pp. 1389-1395

Sugar Cane Mold Marketing Partnership by Sugar Cane Farmers in Mojokerto Regency

Oscarius Yudhi Ari Wijaya[1], Diah Rani Nartasari[2], Sulistiyani[3]

Abstract:

This study analyzes the sugarcane agribusiness partnership between the Gempolkrep Sugar Factory and sugarcane farmers, focusing on the partnership's contribution to income, profits, and challenges faced. In a competitive business environment, marketing management plays a key role, with strategies like attractive packaging helping to draw customers. The research, conducted through in-depth interviews with 30 farmers using simple random sampling, applied qualitative and quantitative analysis. The partnership offers market guarantees, capital support, profit-sharing, and training while encouraging cooperation and limiting chemical use. Entrepreneurial groups also receive training in marketing, packaging, online presence, and accounting to boost production and expand market reach. Expected outcomes include the availability of larger storage tanks for molasses and sugarcane through government subsidies, increased income from higher sales, and enhanced business visibility and efficiency through blogs and online platforms.

Keywords: *Partnership, Sugar Cane Drops, Sugar Cane Farmers*

Submitted: 28 May 2023, Accepted: 17 June 2023, Published, 30 June 2023

1. Introduction

Entrepreneurship or better known as Entrepreneur is someone who creates a new business, by facing risks and uncertainties, and who aims to achieve profit and growth by identifying opportunities through the resources needed to gain benefits. In reality, quite a lot of people come up with grandiose ideas related to various kinds of businesses, but most of them never realize them. In fact, entrepreneurs implement their ideas.Entrepreneurship is a dynamic process in which people create incremental wealth. This wealth is created by individuals who bear the main risk, in the form of capital risk, time and or career commitment in terms of providing value for a particular product or service. The product or service may not be new, or unique, but value must still be created by the entrepreneur through efforts to achieve and allocate the skills and resources needed(Adolph, 2021)

The plantation sub-sector has a very important role and potential in the national economy because this sector is one of the sources of livelihood for the Indonesian people from upstream to downstream industries. One type of plantation commodity is

[1] *Akademi Sekretari Dan Manajemen Indonesia (ASMI) Surabaya , artaprima@gmail.com*
[2] *Akademi Sekretari Dan Manajemen Indonesia (ASMI) Surabaya, narta72@gmail.com,*
[3] *STKIP Bina Insan Mandiri, sulistiyani@stkipbim.ac.id*

sugar cane. Sugarcane (Ari, N. K., Putu, N. L., Arimuti, 2016)is an annual grass that grows abundantly in tropical and snow-free areas. This plant requires hot temperatures, high exposure to sunlight, sufficient water, and fertile land with good irrigation (Ministry of Agriculture, 2014). Sugarcane plays a very important role as an industrial raw material. Sugarcane is the main raw material in the sugar industry in Indonesia. Sugar is also an important commodity because it is a source of livelihood for sugarcane farmers. As an agricultural commodity, sugar has been designated as a special commodity. This was determined in the WTO (World Trade Organization) negotiation forum (Azmie et al., 2019)The development of sugarcane commodities is very necessary as an effort to meet the needs of industrial raw materials, so that it can meet the raw materials for the sugar production process and will create prosperity for farmers and improve the national and regional economy. According to (Marniati, Prof.Adjunct, 2020)the potential for developing plantation commodities in Indonesia is very large, but in its development there are several problems including development strategies and institutions. The problems faced by sugarcane farmers are the lack of capital for farming, the limitations of farmers in terms of processing their farming products, and the difficulty in marketing their business products, so that sugarcane farmers cooperate with the sugar industry which always needs sugarcane raw materials. In addition, according to (Tapaningsih et al., 2022)the sugarcane industry is expected to have an impact on the structure of the regional economy by increasing regional income.

Mojokerto Regency contributes the most to the supply of sugarcane raw materials to the Sugar Factory in Mojokerto, reaching 60.28% and the number of partner farmers is 967 farmers spread across 11 sub-districts, especially in Jetis District with the highest number of partner farmers, namely 173 farmers. Partnering with the Sugar Factory is the main choice for sugarcane farmers in Mojokerto Regency. This is because sugarcane farmers are unable to process their own farming products, partnering with the Sugar Factory, sugarcane farmers get a definite market guarantee, so that sugarcane farmers do not have difficulty in marketing their farming products, sugarcane farmers easily get production facilities and production costs from the Sugar Factory so that sugarcane farmers are able to increase their farming productivity(Salam, 2020).

The existence of an agribusiness subsystem that can be carried out between business actors regarding mutually beneficial relationships or related cooperation, so that it can be a reason for both parties to carry out a partnership cooperation relationship. The Sugar Factory requires a supply of raw materials from sugarcane farmers for the sustainability of sugar production. The Sugar Factory is also interested in providing guidance to sugarcane farmers in terms of cultivation techniques in order to improve the quality and quantity of their production. Sugarcane farmers need market guarantees, capital, and assistance with agricultural production input facilities and infrastructure.The partnership between the Sugar Factory and sugarcane farmers has been implemented. The partnership between the Sugar Factory and sugarcane farmers is expected to be able to create a balance of roles and benefits for each other, so as to achieve the goal of the partnership, namely mutual benefit. This study aims to analyze

the pattern of sugarcane agribusiness partnerships in Jetis District, Mojokerto Regency, analyze the contribution of the Sugar Factory(Sunardi et al., 2018).

The role of members of the community service group and sugarcane farmers in carrying out partnerships, analyze the income and profits of sugarcane farmers, and analyze the obstacles faced in partnership. The partnership carried out in this service is the marketing of sugarcane molasses by sugarcane farmers produced from the Sugar Factory.Sugarcane molasses is obtained from the separation of sugar crystals in the processing of sugarcane. The processing process begins with grinding sugarcane to remove raw sap in the form of juice, after which the raw sap will enter the purification process to obtain clear sap by settling the dirty sap, then the clear sap enters the evaporation process which aims to increase concentration to the saturation level. Up to this stage, the thick sap resulting from the evaporation process will go through the process of forming sugar crystals through cooking, after the crystals are formed and through the cooling stage, separation is carried out using a centrifuge and filter so that raw sugar and sugarcane molasses are obtained(Prasetyo et al., 2021).

In East Java, especially in Surabaya, micro and small businesses have made a significant contribution to the national economy. These micro businesses are classified as marginal businesses, characterized by the use of relatively simple technology, low levels of capital and access to credit, or maybe none at all, and tend to be oriented towards the local market. Micro businesses play a significant role in economic growth, absorbing labor through job creation, providing goods and services at low prices, and overcoming poverty. In addition, micro-enterprises are also one of the main components of local economic development and have the potential to increase bargaining position. ready to be marketed and there are also cans of molasses that have been filled and then distributed to customer stalls(McKenna & Beech, 1995).

2. Theoretical Background

Product Potential : Sugarcane molasses is waste from repeated sugar crystallization so that it is no longer possible to process it into sugar. Sugarcane molasses still contains 50% to 60% sugar. Bioethanol is basically ethanol or an alcohol compound obtained through the biomass fermentation process with the help of microorganisms. Bioethanol obtained from fermentation can have various levels. Bioethanol with a content of 90-94% is called industrial grade bioethanol. If the bioethanol obtained has a content of 94-99.5%, it is called neutral grade bioethanol.Generally, this type of bioethanol is used for mixing alcoholic beverages, and the last is fuel grade bioethanol. The content of this level of bioethanol is very high, at least 99.5%. The easiest way to make bioethanol is with materials that contain high sugar content, one of which is sugarcane molasses. Sugarcane molasses is a by-product of a sugarcane factory that has a very high sugar content (>50%)(Tapaningsih et al., 2022).

Mastery of product storage techniques :
The productivity of a commodity can be influenced by the use of appropriate production factors such as the use of superior seeds and fertilizers without residue.

The high price of fertilizers causes farmers to look for alternatives by utilizing available resources. The availability of molasses can be used by farmers as liquid organic fertilizer or others. In agriculture, liquid organic fertilizer molasses can be applied directly to plants to help the growth process. Molasses fertilizer can fertilize the soil and does not cause large residues for the plants themselves. Farmers apply this organic fertilizer as a base fertilizer.The high demand creates a business opportunity in the procurement of liquid organic waste molasses. In addition to the demand for molasses, the vast area of corn fields has caused an increase in the demand for labor outside the family for the application of the molasses process. This causes the business of providing liquid organic materials molasses to need to be developed by adding labor services in terms of molasses storage, packaging, and marketing. This demand is an opportunity for molasses business owners so that it needs to be equipped with an analysis of income calculations for future business development. The storage used is using storage tanks, storage tanks, and using flexi tanks that have been packaged using modern plastic(Darmawan et al., 2023).

Marketing Management: Financial Regarding the marketing of sugarcane molasses waste, the prospects for the future are still very good. If the collection of sugarcane molasses waste is innovated, the market segment will be larger and can compete in modern markets, not only in traditional markets, among farmers and sugar factories. And marketing can be expanded to a wider area because the storage is larger, the packaging is better, and through online and the storage used using storage tanks, storage tanks, and using flexi tanks that have been packaged using modern plastic. The development of marketing management is emphasized with training in creating blogs for farmer groups and online marketing and will be attempted to cooperate with sugar factories so that waste in the form of sugarcane molasses can be marketed there, in addition because it has been marketed online, the packaging of sugarcane molasses waste is made more attractive by providing a more attractive nuance. The Indonesian Secretariat and Management Academy Surabaya will continue to provide assistance - assistance in terms of marketing lecturers and students of ASMI Surabaya are encouraged to market sugarcane molasses waste from the two farmer groups by marketing through the ASMI Surabaya fanpage(Marniati, Prof.Adjunct, 2020).
Simple Accounting :Light accounting bookkeeping is given to 10 members of the molasses farmer group, so that they record all expenses and income, so that they can calculate how much profit or loss. Simple accounting bookkeeping assistance will always be provided by ASMI Surabaya and even if it is large enough, credit can be applied for at the Bank or credit can be obtained from the East Java cooperative office.

3. Methodology

This research was conducted at the Sugar Factory. The location selection was done intentionally (purposive), with consideration of the Sugar Factory. The Sugar Factory in Mojokerto is one of the most productive sugar factories in Indonesia and Jetis District is an area with the largest number of partner farmers in Mojokerto Regency.The types of data used in this study are quantitative data and qualitative data. Quantitative data is used to calculate production costs, land area, number of

production facilities and infrastructure, production volume, level of acceptance, and level of farmer income. Qualitative data is used to explain the general description of the Sugar Factory, characteristics of respondents, patterns and mechanisms of partnerships that are established, contributions in partnerships, and obstacles in carrying out partnerships.

The data sources used in this study were obtained from primary data and secondary data. Primary data is data obtained directly from respondents with interview guidelines in the field. Secondary data is data obtained from various agencies and from various literature related to the research. The data collection method in this study is an in-depth interview using a questionnaire.The population in this study is a homogeneous population, so the sampling technique used is the simple random sampling method. The random sampling system is a sampling method that is carried out randomly because the population is considered homogeneous so that the sample is considered to be able to represent the population (Sugiyono, 2022). (Sugiyono, 2013)stated that the smallest sample size that can be accepted for descriptive research is a minimum of 10% of the population, so the number of samples taken is 30 people (17%). This study also used two key informants from the Sugar Factory. The data analysis method in this study used qualitative descriptive methods and quantitative methods. Qualitative descriptive methods to describe the partnership pattern between Sugar Farmers and sugarcane farmers. Contributions in partnerships, and obstacles faced by the Sugar Factory, and sugarcane farmers in carrying out partnerships based on information from respondents and key informants.

4. Empirical Findings/Result

In the initial design of the study, the tool assembly was carried out with simple tools that were assembled in such a way that the process of managing molasses in the storage could still be carried out. This study was conducted for one month in one variation(Ika & Vol, 2023). Because there were three variations in this study, the duration of this study was more than three months.The treatment was carried out at room temperature. Room temperature changes very often with extremes, so that a better treatment process can be carried out.Data processing in this study was carried out using a completely randomized design method.The data obtained and entered into the calculation and were carried out using Microsoft Excel.

Discussion

Molasses is a material obtained from the remains of sugar making from sugar cane. Molasses or known as molasses there are two, namely molasses that are thick black and brownish. The molasses used in this study is molasses that are thick black. This molasses contains sugar with a content of 50%. The important composition in molasses is TSAI (Total Sugar as Inverti) which consists of sucrose and reducing sugar. Molasses has a TSAI content of between 50-65%. In general, this TSAI number greatly affects the fermentation process. The higher the TSAI number, the better the results.In this study, molasses with an invert sugar content of 50% was used and this is good enough for the basis of fermentation. Before the study was conducted, the

molasses was first diluted. This study focused on finding out the effect of the duration of aeration and dilution on alcohol production. In addition, because the fermentation system is greatly influenced by the high and low levels of acidity, pH measurements were carried out on the system. This needs to be considered in the fermentation process, temperature and pH greatly determine the length of life of the Sacharomycess sereviceae fungus.Dilution here is used as Factor B and three variations are carried out to see which dilution has the most influence. The variations in dilution carried out are: 1: 1.5, 1: 2, 1: 2.5. After dilution is carried out, it is then mixed with yeast and urea. Urea here acts as a yeast assistant in the fermentation process. This mixture is then put into the fermentor

The fermentor used should be a laboratory fermentor that can control temperature, pH, and pressure. However, due to the current conditions, the study was conducted using a self-assembled fermentor.After all the ingredients are mixed and put into the fermentor. The aeration process is carried out, where the duration of this aeration is Factor A which will be seen for its effect on alcohol production. The variations in the duration of aeration carried out are 24, 48, 72 and 96 hours.The aeration process can be seen in Figure 4.2 which is carried out and then continued with the fermentation process. The total fermentation days carried out are 25 days. Checking the alcohol content is carried out routinely, namely on days 10, 15, 20 and 25. The alcohol content is known by dipping the alcohol meter into the product. Meanwhile, the pH is known by dipping the universal indicator as a reference, then dipping the pH meter and the resulting pH is recorded. This study was conducted with three repeated measurements. This is done so that the data produced is accurate

5. Conclusions

Based on what has been done, it can be concluded that, among others, training and socialization on the storage of molasses waste includes the presentation of materials by the implementing team, discussions, filling out questionnaires, and mentoring practices in the management and storage of molasses. The presentation of materials by the implementing team involved 10 members of the Farmer Group. The materials presented include: (a) general knowledge about molasses and its management and storage; and (b) technical production of molasses and its management and storage from molasses waste. The practice of making it, so as to help members of the farmer group understand the process of its storage and management. The farmer group is interested in continuing this process as an alternative to increasing income. Before management, partners are trained to carry out the process of storing molasses solution, including: (a) preparing and measuring the volume of molasses; (b) diluting molasses so that the sugar content of the molasses becomes 14%; (c) calculating and weighing the needs of yeast, urea and NPK; and (d) dissolving yeast, urea, and NPK in the molasses solution. After all the ingredients are mixed in the molasses solution, the next process is the fermentation of the molasses solution for ± 2.5 days. The management process consists of several stages, including: (a) inserting the molasses solution into the evaporator/boiler tube; and (b) heating the solution with a stove to a

temperature of ± 80oC, because at a temperature of ± 80oC, ethanol begins to drip into the previously prepared storage bottle.

Acknowledgement

This research activity and paper is funded by PT Akar Djati through it's Corporate Social Responsibility Program.

References:

Adolph, R. (2021). *Perkembangan Media Sosial Tiktok*.

Ari, N. K., Putu, N. L., Arimuti, I. (2016). Studi kualitatif: Identifikasi penanganan konflik transcultural dalam asuhan keperawatan di Bangsal Perawatan RSUP Sanglah Denpasar, berdasarkan Sunrise Model Oleh Leininger. In *Bimiki* (Vol. 4, Issue 1, pp. 12–21).

Azmie, U., Dewi, R. K., & Sarjana, I. D. G. R. (2019). Pola Kemitraan Agribisnis Tebu Di Kecamatan Jetis Kabupaten Mojokerto. *Agrisocionomics: Jurnal Sosial Ekonomi Pertanian*, *3*(2), 119–130. https://doi.org/10.14710/agrisocionomics.v3i2.5062

Darmawan, D., Anitha, M. M., Tinambunan, P., Si, M., Choliq, A., Sriharyati, S., Sos, S., Hamid, H., Estiana, R., Pt, S., Zulkifli, M. M., Mohammad, I., Sono, G., Ramli, A., Pd, M., Sondeng, S., Sigit Mareta, M. M., Ak, M., Marjani, S. P., … Utami, R. T. (2023). *Manajemen Sumber Daya Manusia Era Digital*. www.sonpedia.com

Ika, J., & Vol, P. U. (2023). *Jurnal ika: pgsd unars vol.13 no.1 juni 2023*. *13*(1), 221–227.

Marniati, Prof.Adjunct, D. (2020). *Manajemen Sumber Daya Manusia*. 2.

McKenna, E., & Beech, N. (1995). *The Essence of Human Resource Management* (p. 63).

Prasetyo, I., Aliyyah, N., Rusdiyanto, Nartasari, D. R., Nugroho, S., Rahmawati, Y., Groda, S. P., Setiawan, S., Triangga, B., Mailansa, E., Prayogi, G. D., Etruly, N., Jazuli, M., Wahyuningsih, N. D., Kusumawati, N. D., Kurniawan, S., Ratri, I. N., Atmojo, W., Sugiarno, Y., … Rochman, A. S. ur. (2021). Impact Financial Performance to Stock Prices: Evidence From Indonesia. *Journal of Legal, Ethical and Regulatory Issues*, *24*(May), 1–11. https://doi.org/10.20944/preprints202104.0795.v2

Salam, K. (2020). *buku Manajemen Pemasaran dan Perilaku Konsumen* (pp. 9–15).

Sugiyono. (2013). *Metodelogi Penelitian Kuantitatif*. Penerbit Alfabeta.

Sugiyono. (2022). *Metode Penelitian Kuantitatif, Kulitatif Dan R & D*.

Sunardi, N., Kadim, A., Tulus, N., Hamid, A., & Lativa. (2018). International journal of applied business and economic research. *Accounting*.

Tapaningsih, W., Rijal, S., Esso, A., Sari, D., Kusumadewi, R., Rachmawaty, Harahap, M., Radiansyah, A., Levany, Y., Relifra, Wijayanti, T., Utami, M., Ramadhi, R., Mustari, & Pustaka, S. (2022). *MANAJEMEN PEMASARAN*.