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**Examining the Management Controls Mechanisms between Farmers and
Sellers in Natural Farming**

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Abstract

The purpose of this study is to clarify the impact and characteristics of management controls and cultural controls on the relationship between farmers and sellers in natural farming. Earlier studies mainly focused on management accounting techniques such as activity-based costing, class costing, and direct costing applied in agriculture or discussed the implementation of balanced scorecards. However, such techniques by themselves cannot clarify the farmer–seller relationship, and researchers are gradually recognizing the importance of maintaining a shared philosophy and trust-based relationship between farmers and sellers. In the natural farming domain, a special community called *Fukyukai*, including both farmers and sellers, has been established. The current study includes a case study on the relationship between farmers and sellers in natural farming, surveys farmers and sellers to clarify their perspectives, and investigates the characteristics of management controls that affect the relationship. In this manner, this study clarifies the significance of cultural controls and the establishment of organizations to implement these controls. In addition, results reveal the roles played by management controls in strengthening the farmer–seller relationships, such as (1) protecting farmers from criticism by neighbors practicing conventional farming and mutual assistance based on *Fukyukai* with farmers and sellers as members and (2) securing customers and production and sales systems for farmers and sellers. In natural farming,

unlike conventional farming, the role of cultural controls in establishing relationships between farmers and sellers is more significant than that of financial figures based on costs and profits. This study's contribution to the research literature is that it clarifies a management method to strengthen the relationship between farmers and sellers in the natural farming domain and provides a management model to be used by other farmers and sellers.

Keyword: Management Control; Cultural Control; Management Philosophy; Trust;
Case study

1. Introduction

Research on management accounting examines the applicability of management accounting techniques in agriculture (Inamoto, 1990; Seki, 2021; Tobita, 2018; Tobita & Ganbo, 2016). Some discussions focus on cost accounting and calculation techniques, including the allocation of indirect costs (Iegushi, 2015, 2016; Ono, 1985; Takei, 1995; Yasuda, 2017, 2018), as well. Furthermore, some researchers clarify the agricultural corporations that unite multiple farmers and cite examples involving the use of the balanced scorecard (Kato & Kosugi, 2019; Tobita, 2018; Tobita & Ganbo, 2016). Hence, researchers mostly focus on farmers or agricultural corporations and examine the application of double-entry bookkeeping, the design of cost accounting techniques, and methods for calculating corporations' business profitability.

On the other hand, research has also indicated that the agricultural products produced by farmers and agricultural corporations are being sold through methods such as “acquiring individual customers in the neighborhood” (Tobita & Ganbo, 2016) and purchasing activities by cooperatives (Huang et al., 2017; Takei, 1995). However, the former method does not provide stable sales and the latter involves strict purchasing standards, and the products produced by some farming methods such as natural farming may not be available for purchase. In the context of this study, natural farming indicates a production system that does not use pesticides or fertilizers. It is different from conventional farming, which is a production system that uses pesticides and fertilizers, and organic farming, which uses less amounts of pesticides and fertilizers. This study incorporates the ideas of interviewees and specifies a production system that does not use pesticides or fertilizers similar to natural farming, unlike conventional farming.

Farmers who have adopted a natural farming production system find it difficult to sell their products. Hence, it is important to secure adequate sales routes and ensure a stable supply of products to buyers, such as restaurants and supermarkets. Therefore, it is important to build and maintain relationships between buyers (sellers who sell agricultural products to final consumers) and suppliers (farmers). Currently, diverse distribution formats are available for agricultural products generated through natural farming; whereas some methods promote general direct sales and purchases by cooperatives and supermarkets, others are centered on special communities focusing on natural farming (Huang et al., 2017). For example, Okayama Prefecture established a natural farming executive committee that brought together farmers, sellers, and even consumers to enhance the production and sales of natural farming products (Huang et al., 2017; Kato et al., 2020, 2021). These cases highlight the importance of maintaining relationships among the buyers (sellers), suppliers (farmers), and customers of natural

farming products.

In addition, since health issues and environmental protection are important considerations today, natural farming, which was developed independently by Japanese farmers, is expected to have an advantage over conventional farming. Although the agricultural products of natural farming are inferior in shape to those of conventional farming, their costs are within affordable limits, their selling price is 2–3 times higher and their shelf life is longer compared to conventional farming products (Huang & Carpenter, 2016; National MOA Natural Farming Promotion Council, 2012, 2013; NPO MOA Natural Farming Culture Foundation, 2011). Therefore, research on the production and sales of natural farming products is expected to have significant social benefits.

According to the field research conducted by the authors, farmers performing natural farming build their own sales channels and expend interorganizational efforts. Many implement unique initiatives, such as establishing special communities, enhancing the cohesion between farmers and sellers, and engaging in production activities. The special communities emphasize developing a shared philosophy between farmers and sellers. Accordingly, rather than developing cost accounting or profitability calculation techniques (performed by conventional farmers), farmers involved in natural farming largely adhere to cultural controls and emphasize the installation of a common philosophy between farmers and sellers. However, the construction and implementation of such controls remain unclear.

Based on this discussion, the current study's purpose is to examine the management accounting activities of farmers and sellers in the natural farming domain and clarify the characteristics of the management controls implemented between farmers and sellers. By realizing its research purpose, this study is expected to supplement current knowledge on natural farming in agricultural management accounting research. The study provides a model for agricultural management accounting across agricultural organizations for use, as well. Furthermore, the development of natural farming is beneficial to human health and the environment and, hence, has social significance. Therefore, this study is considered to have both theoretical and practical significance.

In this study, Section 2 summarizes earlier studies and specifies research questions, and Section 3 discusses the case study. Subsequently, Section 4 discusses the results, whereas Section 5 states the study's conclusions, contributions to the research field, and limitations.

2. Literature review

2.1 About the relationship between farmers and sellers

Although no earlier study examines the relationship between farmers and sellers in detail, some studies focusing on farmers or sellers do mention this relationship. Tobita and Ganbo (2012, 2016) introduced the case of *Sadashige*, which implemented reductions in pesticide and fertilizer production. Originally, *Sadashige* was a farming group based in a village; however, to embody the village's philosophy of "protecting the land together," they underwent rigorous reorganization (Tobita and Ganbo 2012, p. 76). After conducting districtwide discussions and study sessions, as well as repeated inspections and debates, the *Sadashige* farming group was reorganized into an agricultural cooperative corporation in November 2001. All agricultural product sales are carried out by the corporation.

In *Sadashige*, based on bookkeeping accounting, which had been practiced for many years, accounting information, including details regarding profits, losses, and fund management, was used for intra-organizational communication and consensus building. For example, the corporation is said to have improved its management efficiency by avoiding rough calculations and realizing investment economic calculations related to the purchase of agricultural machinery. Furthermore, following the introduction of the balanced scorecard, farmers who were producers and cooperative members expended efforts to realize strategic goals.

The *Sadashige*'s strategy was to address the regional survival issues caused by an aging population and a declining birthrate and consider the following key strategic factors: "disseminating information to consumers" and "acquiring individual customers in the neighborhood." To unite farmers and implement the aforementioned strategy, the corporation considered it important to promote communication among members and share strategies and philosophies.

Subsequently, Tobita (2018, p. 417) examined *Sadashige*'s accounts, applied direct costing, and explained the indicators "community return amount" and "community agricultural income" for profit distribution to farmers. The term community return amount indicates the sum of labor costs, land rent costs, work outsourcing fees, and executive compensation paid by the *Sadashige* corporation to farmers as expenses. The sum of the community return amount and the *Sadashige* corporation's ordinary income is the community agricultural income, which is the agricultural income earned by farmers. In this manner, a profit-sharing mechanism was established to maintain the relationship between farmers and the corporation, and such profit information was shared among members to increase the farmers' sense of participation in management. A similar case can also be confirmed in Tobita and Ganbo (2015).

In their study, Kato and Kosugi (2019) examined two organizations, the NPO Okayama Prefecture Kimura Style Natural Farming Executive Committee, and Yamashin

Shoten Co., Ltd. The natural farming executive committee has approximately 100 farmers. Traditionally, farmers tended to develop their own sales routes. Therefore, to maintain relationships with farmers, the committee buys and sells rice from these farmers. However, for sales, the committee makes use of its connections because it has a network of local JAs (i.e., JA Okayama, JA Okayama Nishi, JA Kurashiki Kasaya, and JA Tsuyama, which are organizations belonging to Japan Agricultural Cooperatives). Furthermore, the committee is currently working to establish a certification system and develop new agricultural products using natural farming to expand the sales volume of farmers' agricultural products.

The agricultural production corporation Midori no Sato is directly managed by Yamashin Shoten Co., Ltd. The company sells natural farming products at lower prices than ordinary agricultural products. The company was able to solve distribution issues because it secured customers at low prices and established a production, sales, and consumption cycle within its group. In addition, regarding production, the company successfully achieves low prices by collaborating with welfare organizations. Moreover, by hiring people with disabilities, farmers and agricultural corporations were able to secure the labor necessary for natural farming, produce crops, and make social contributions (Kosugi & Kato, 2019).

Further, Kosugi (2021) addressed the relationship between farmers/agricultural corporations and people with disabilities to ensure agriculture–welfare collaboration. Kosugi (2021) focused on management controls and clarified that, often, controls based on flexible culture are implemented between farmers/agricultural corporations and people with disabilities. Farmers and agricultural corporations hire people with disabilities to do farm work and emphasize placing the right person in the right place, enhancing individuals' sense of attachment to agriculture, and setting goals that consider individual characteristics without setting clear rules. In this manner, the corporations controlled people with disabilities. It is important to foster a sense of camaraderie among people with disabilities, as well. Accordingly, farmers/agricultural corporations spread the message “Let's all do agriculture together” through various activities. In this manner, farmers, agricultural corporations, and people with disabilities worked together to improve the quality of agricultural products. Further, cultural controls and personnel controls (job setting according to individual characteristics) complemented the achievement of goals (Kosugi, 2021, p. 44).

2.2 Cultural controls

Based on the cases mentioned in section 2.1, it is necessary to implement controls

to manage the relationship between farmers and sellers. Through the control processes, attachment becomes stronger, and trust is formed between members, which contributes to sales and costs. The implementation of culture-based controls, such as trust and philosophy, is believed to contribute to the achievement of sales and cost targets. In other words, cultural controls are implemented to achieve accounting profits.

According to Malmi and Brown (2008), cultural controls are the collective values, ideals, and beliefs of members that influence their actions and thoughts. Merchant and Van der Stede (2017) argue that culture exerts pressure on individuals who deviate from the group's values and ideals and promotes mutual monitoring among members. Based on these arguments, in this study, culture refers to the common values, ideals, and philosophies of members, and cultural controls mean building these common aspects and sharing them among members. In general, cultural controls complement results controls or the achievement of accounting figures. For example, according to earlier research, cultural controls are primarily carried out and clear financial figures are considered unnecessary only in the early stages of an enterprise's founding. With the enterprise's growth, results controls become the main focus area and the achievement of financial indicators becomes a necessity (Sandelin, 2008). However, in some countries, such as Japan (Merchant & Van der Stede, 2017, p. 95), cultural controls are the main cause of concern. This study focuses on Japanese agricultural organizations, which can be interpreted using cultural controls.

Grafton and Mundy (2017) provide several examples of cultural controls based on trust and highlight several points of caution. When cultural controls are implemented and philosophies and strategies are shared through the trust-based relationships formed among members, individual members may sacrifice short-term profits for long-term ones (Grafton & Mundy, 2017). When they rely solely on trust, members display opportunistic behaviors based on their ingrained philosophies and others tend to anticipate and act on such behaviors (Grafton & Mundy, 2017). This is believed to strengthen the members' mutual monitoring function and put pressure on the other members to not behave opportunistically.

In summary, earlier research clarifies that to maintain the relationship between farmers and sellers, financial figures such as cost reduction, community return amount, and community agricultural income should be emphasized. Moreover, it is necessary to control members by culture, for instance, by cultivating a sense of camaraderie and trust among them through various activities. Also, it is important to maintain well-developed relationships between farmers and sellers. Further, to maintain such relationships, it is necessary to implement cultural controls, build relationships based on trust, and share

philosophies among individuals.

Based on earlier research, the current study addresses the following research questions: (1) How are cultural controls implemented to maintain the relationship between farmers and sellers? (2) Since it is difficult to secure profits and collect cost data in agriculture, and natural farming is highly dependent on nature, should we implement cultural controls that complement the financial figures, such as general enterprises and conventional farming?

3. Research Method

This study used a qualitative research method based on interviews to clarify how farmers and sellers spread their philosophy and how they think. In addition, since it is difficult to quantify the philosophy and thoughts of farmers and sellers, this study was conducted qualitatively. The interviewees were Enterprise N, a seller who sells natural farming agricultural products to consumers, and Farmer A, who sells natural farming agricultural products to Enterprise N.

Enterprise N sells natural farming agricultural products alone, and its president is the chairman of the Natural Farming Promotion Association (NCPA), a special community for natural farming. Further, the association is one of the biggest natural farming communities in Japan. Farmer A has been engaged in natural farming for approximately 40 years. This farmer has been observing the development of natural farming over several years and clearly understands what its important aspects are. In this sense, by interviewing Enterprise N and Farmer A, the authors obtained meaningful opinions on the management controls of the relationship between farmers and sellers. These opinions were related to natural farming and reflected the essence of natural farming from a long-term perspective.

Interviews were conducted twice in September 2022 (approx. 2 hours with the president of Enterprise N) and in December 2022 (approx. 6 hours with the president of Enterprise N, the employees of Enterprise N, and Farmer A). Both the interviews were semi-structured. In addition to conducting these interviews, the authors examined the conditions of fields and reviewed the internal documents collected by Farmer A and Enterprise N. Even after the interviews, the authors communicated several times with Farmer A and Enterprise N through e-mail to confirm the collected information.

4. The Case

4.1 Background information

4.1.1 Enterprise N

Enterprise N, which is located in Chiba, Japan, was founded in 1985. It primarily handles various aspects of natural farming agricultural products. The enterprise's capital is 19 million yen, and it has approximately 80 employees (as recorded in an interview dated December 2022). The sales for fiscal 2022 were approximately 900 million yen. Enterprise N has the following objectives.

The essence of “living” can be learned from the natural world. Naturally grown crops that do not use pesticides or fertilizers teach us the laws of nature and the rules by which life is nurtured. That's why we want to spread the word about natural farming. Learn from nature, surrender to what happens, and be grateful for being alive.

Based on these values, I (the CEO) hope that we can move forward to a sustainable society where all living things are naturally abundant.

We (enterprise N) are engaged in a business centered on natural farming. We want as many people as possible to not only enjoy ingredients that are safe and secure but also cherish the vitality of nature.

We want to provide a lifestyle that is in harmony with nature, as it should be.

(From enterprise N homepage, <https://naturalharmony.co.jp/about/>)

The business concept is to make social contributions through natural farming and provide safe and secure agricultural products. To realize this idea, Enterprise N developed businesses such as regular home delivery and store management.

Enterprise N's suppliers include many farmers engaged in natural farming. To farmers producing agricultural products, enterprise N offers stable prices through a contract. To secure consumers and realize stable purchases from farmers, Enterprise N provides production information (i.e., a wide range of information, including information on seeds and harvesting methods) and personal photographs of farmers in its online store to consumers. This also leads to stable customer purchasing.

4.1.2 Natural Farming Promotion Association

NCPA helps disseminate farmers' understanding of natural farming techniques. The association was launched in November 2011, and the president of Enterprise N became the chairman of the promotion group in October 2021. Further, the former chairman of NCPA was Farmer A.

The following are the main aims of NCPA.

The purpose of natural farming is to purify the soil so that the original potential of the soil and crops can be demonstrated. We will realize this purpose through the activities of the association.

Based on the principles of respect for nature, adaptation to nature, and natural norms, we actively engage with nature as part of nature while learning from the principles.

We have established the NCPA to ask aspiring farmers about this initiative, facing head-on the contradictions between industry and agriculture, and questioning agriculture in the region, Japan, and the world.

First, we will connect the producers who previously worked in rural areas to share their information on and experiences with pioneers. Farmers, consumers, and distributors will work together to study and disseminate technology. (from the NCPA homepage, <https://www.jnhfa.com/about/index.html>)

In this manner, NCPA helps connect farmers, sellers, and consumers and serves three purposes for farmers: “Meet like-minded people,” “Use the experience of pioneers,” and “Understand the basics of technology.” In other words, the main purpose of NCPA is to build a network of farmers engaged in natural farming, share knowledge regarding natural farming techniques, and make friends. Further, NCPA provides lectures popularizing natural farming to customers. Finally, as mentioned on its homepage, NCPA serves as a bridge connecting farmers, sellers, and customers.

4.1.3 Farmer A

Farmer A was the chairperson of NCPA until October 2021 and, subsequently, became a consultant for NCPA. Farmer A, who has been farming naturally for approximately 40 years, helps promote the establishment of natural farming techniques. Moreover, Farmer A is a family business having a workforce comprising four people (as indicated by an interview in September 2022).

4.2 Natural farming philosophy and the law of nature

Farmer A clarifies that one must develop an understanding of the natural world to successfully practice natural farming. Unlike conventional farming, natural farming requires practitioners to follow the law of nature. This perspective of Farmer A is highlighted by the following statements:

Among natural norms, this is written as a law. People haven't learned to follow

the law of nature. Many farmers only learn techniques and do not learn the law of nature. But without learning the law of nature, there will be no success. Unless technology is inspired by nature, it will never work. (Farmer A)

Therefore, it is necessary for natural farmers to farm according to the laws of nature and understand the philosophy (law of nature). However, since it takes time for natural farming to produce results, the question is whether it can be continued for a long time. Many people value short-term profits and, hence, do not continue natural farming for long. The following statements address this issue:

Generally, you need to be patient for 3 or 4 years. After that, income will increase. When I tried it, it didn't get any better, no matter how many years passed. People around me made fun of me, and even my parents told me to quit. However, I continued with natural farming. I didn't even return home. Even though I have four children, I am not close to any of them. I left them to my wife.

However, since she had no income, she spent her savings to send our children to school. I managed to get through that. Generally, people would have given up long ago.

Those people who want to do the nature farming came together; but they left saying, "I'm sorry, but I want to quit, I want to quit, I want to quit."

Agriculture has become something that people cannot spend long hours on. People only look at short-term profits.

However, even though it was not scientifically proven at the time, I believed in natural farming. (Farmer A)

As stated here, unless you understand and trust natural farming, you will not be able to continue it because of the high initial cost. In the olden days, when appropriate technology had not yet been established, continuing to engage in natural farming would have placed a heavy burden on people. Those around you tended to oppose you, due to which those who did not have strong beliefs could not continue. Therefore, to help each other, farmers engaged in natural farming formed NCPA.

These farmers did not want to surrender to the voices of the opposition of those around them and, hence, created NCPA as an organization to protect people. The opposition expressed by those around them and the experiences that they all practice natural farming cause the members of NCPA to trust each other. In addition, they conduct

regular “assessment meetings” to share their experiences and assess the quality of natural farming agricultural products before selling them.

Today, in the natural farming domain, appropriate technology has been established, the relevant process has become easy, and profits can be secured. However, it will still take several years for new farmers to produce their products, as clarified by the following statements:

Total income will be a little bit lower than conventional farming. Yields are not as high as in conventional farming. But the net income will be the same.

The selling price is higher.

Fertilizer poison is important here. Due to this, the yield will not increase for a while. Eliminating fertilizer poison takes years. (Farmer A)

As mentioned in the aforementioned statements, new farmers must eliminate fertilizer poison. Fertilizer poison indicates the degradation of soil resulting from the traditional application of fertilizers. When fertilizer poison is present, the yield will not increase and the number of insects will increase. To remove fertilizer poison, NCPA has come up with a “soil preparation plan” and provides support to farmers.

4.3 Natural farming based on the learn from nature philosophy

Natural farming techniques are being developed based on the philosophy of learning from nature, respecting nature, adapting to environmental conditions, and following natural norms. As mentioned in Section 4.2, an important natural farming technique is soil preparation. The following statements explain the discovery of fertilizer poison and preparation of the soil preparation plan:

It is said that if you are patient, all that is left is to increase the yield of crops. Our yields steadily decreased, and insects and diseases never disappeared. I thought it was a lie. After careful investigation, the NCPA found fertilizer poison. After we (farmers) started the organization NCPA, we appointed a technical development manager for the organization and asked him to conduct a follow-up survey. The manager did it for 5 years. Because there is a paper that says that it will disappear in 3 or 4 years, no one in the country has done this. We asked the manager to dig 1 meter of soil and found the fertilizer poison. (Farmer A)

As mentioned earlier, when there was no increase in yield, farmers dug the soil and investigated it scientifically. They found the presence of fertilizer poison and took measures to eliminate it. This was explained to every member by NCPA, as well. However, in the past, since there was no NCPA to support them, many people gave up natural farming on experiencing the detrimental effects of fertilizer poison. Natural farming does not involve the use of any fertilizers or pesticides. Hence, the only way to remove fertilizer poison is to be prepared to wait for a long time and harness the power of nature. These aspects are described in the following statements:

It is difficult to remove the fertilizer poison mechanically. Well, the first step is to crush the chunks of the fertilizer poison into small pieces and leave the farmland alone for about 3 years. Since the chunks of the fertilizer poison occur deep in the land, it is important to choose the right machine. After that, repeat the crushing process. Harness the power of nature to purify the land.

It takes a considerable amount of time to remove the fertilizer poison. In the meantime, some people add artificial substances like fertilizers. Such people are idiots. They do not understand the philosophy of natural farming. They won't get rid of the fertilizer poison.

If you can remove the fertilizer poison, the rest will be easy. Just drop the seeds. Of course, seeds harvested from land with the fertilizer poison are poisonous; so care must be taken.

Therefore, it is necessary to spend a long time removing the fertilizer poison from the soil and seeds. Also, one must change his thoughts to understand the philosophy of natural farming. Once that was in place, weeding became easier, and all I had to do was work 3 hours a day. (Farmer A)

In other words, it is necessary to understand the philosophy of natural farming and accept that it takes a long time to remove fertilizer poison. The process of removal must be based on the philosophy of natural farming. Once the soil is prepared and seeds are grown, the time and effort required for farming is significantly reduced. Accordingly, if a farmer continues to cultivate naturally from a long-term perspective, the burden on the farmer will be heavy in the beginning but become lighter and less costly with time.

4.4 Selling of products to consumers

Farmers engaged in natural farming sell their products through NCPA. Since its establishment, NCPA has considered the production, distribution and selling of

agricultural products as a single process. The president of Enterprise N stated as following:

Without distribution, farmers would not be able to survive. That's why from the beginning, we tried to work together on production, distribution, and selling. We have ensured distribution occurs close to the production area, so that consumers can see the production area and its issues. If you are far away from the production area and production, distribution, and products are not the same, deception will occur due to communication problems. This will cause everyone to suffer. (president of Enterprise N)

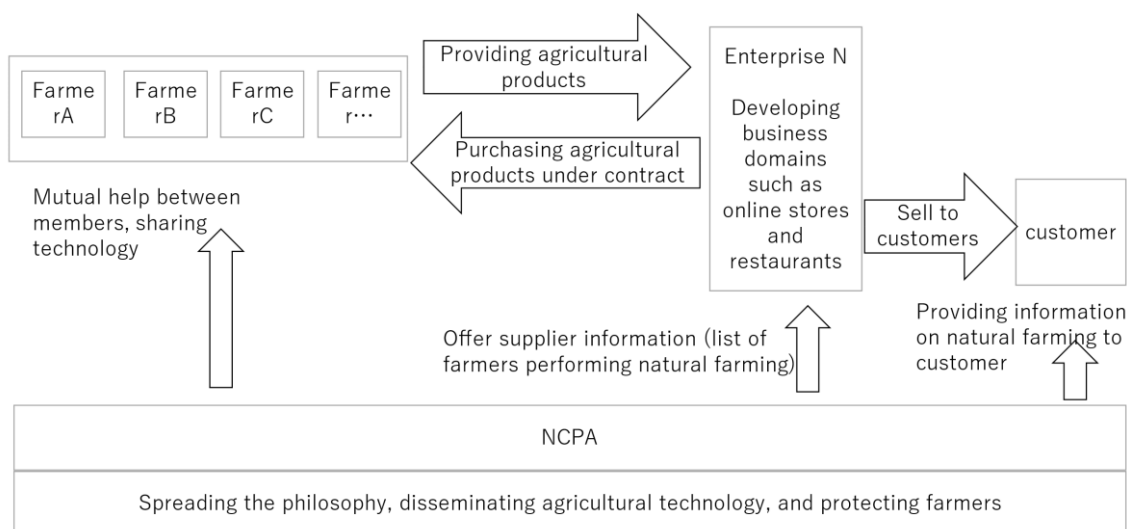
Therefore, NCPA conducts consumer seminars, for farmers and distributors, and conveys the benefits of natural farming to consumers. As mentioned by a customer with a sensitive nose, *“the smell of organic rice after cooking makes me feel sick. However, when I ate farmer A's natural farming rice, I felt glad to be alive”*. In this manner, natural farming agricultural products are particularly popular among people with allergies, food sensitivities, and so on. They taste better than organic produce, as well.

Enterprise N maintains a specific number of customers. In recent years, prices have been increasing due to the war in Ukraine; further, despite experiencing a reduction in the number of its customers, Enterprise N achieved sales of 900 million yen in 2022 and is currently making a profit. Accordingly, the president of Enterprise N recognizes that NCPA's future challenge will be to increase the number of customers through its activities and Enterprise N's communication with its stakeholders.

5. Discussions

Based on interview data, the authors summarized the relationship among natural farming farmers (farmer A), sellers (enterprise N), and customers, as shown in Figure 1.

Figure 1 Summary of the relationship among farmers, sellers, and customers; NCPA, Natural Farming Promotion Association



(Source: Created by the authors)

As depicted in Figure 1, farmers provide natural farming agricultural products to Enterprise N, which has signed purchasing contracts with farmers and created a system that enables farmers to produce agricultural products with peace of mind. Enterprise N provides information on and photographs of producers in its store to enable customers to purchase with confidence. In addition, although farmers have faced difficulties in producing agricultural products in the past, technical challenges have been overcome by NCPA. For example, research results on fertilizer poisoning, soil preparation, and seed production are shared with NCPA members, which makes production easier today than in the past. The association helps farmers create the soil preparation plan, as well.

NCPA not only disseminates technology but also plays the more important role of disseminating the philosophy of natural farming. The spread of this philosophy can be considered a cultural control. It is important to involve producers, sellers, and even consumers in this philosophy to complete production, sales, and consumption and build a stable business model. The benefit of establishing cultural controls through NCPA is that even when an activity generates no income and creates a deficit, farmers will continue to do it if it is useful to themselves, society, and nature, similar to Farmer A. While performing such actions, individuals should believe in natural farming and understand that it is good for society. As indicated by our interviews, people who are skeptical about

natural farming or just want short-term profits will not be able to continue farming. When Farmer A first started natural farming, his wife took care of their children all by herself; for at least the first 10 years of farming, he had no income and owed more money than he earned. He was criticized by those around him and his family. However, due to his belief in natural farming, Farmer A continued to practice it. NCPA helps natural farmers meet like-minded members and, on encountering difficult situations, members can help each other and continue natural farming. In this sense, the association can be considered to function as a means of cultural control and protect its members.

Following the elimination of fertilizer poison and the establishment of a stable production system, natural farming requires less labor than conventional farming. Since natural farming does not require the use of herbicides, fertilizers, or pesticides, it is believed that farmers can reduce costs and make profits more easily through natural than conventional farming. However, as repeatedly emphasized by interviewees, natural farming is not possible when farmers focus on short-term profits alone. Accordingly, in natural farming, the role of cultural controls is very different from that of increasing farmers' motivation to work through profits, as described by earlier studies (Tobita, 2018; Tobita & Ganbo, 2012, 2016). Overall, it is very important to have a strong belief in natural farming.

Furthermore, through NCPA, farmers and sellers can share this belief with their consumers and ensure stable purchasing, which naturally enables the former to make profits. The comments of farmers and the president of Enterprise N indicate their focus on this aspect. Therefore, if farmers have a strong belief in natural farming; continue to do activities that benefit the environment, health, and society; and always do the right thing, profits will come naturally.

Based on this discussion, The answer to the research question (1) is that it is important to create a special organization to implement cultural controls. To promote natural farming, NCPA should bring together farmers, sellers, and consumers; share the philosophy of natural farming; and make others believe in this philosophy. Furthermore, it is important to not only jointly develop and share natural farming techniques among farmers and sellers but also create a place where these people can forget their cares. Further, NCPA protects farmers from the criticisms of their neighbors and family members and creates trust-based relationships among farmers. In this manner, NCPA plays a major role in implementing cultural controls.

For research question (2), the answer is that the management of natural farming is very different from that of conventional farming and general profit-making enterprises. Our interviews revealed that neither farmers nor Enterprise N thought about profits at the

start of natural farming; rather, they considered what was beneficial to society and the environment. Even later, they did not attribute much importance to profits. The interviewees themselves placed more emphasis on long-term than short-term profits. For example, farmer A continued to pursue natural farming with strong conviction, despite having experienced severe financial crises during the first 10 years of his natural farming career. However, after the establishment of the appropriate natural farming technology for his farmland and the adequate preparation of soil, profits came naturally, and work became easy. As a seller, enterprise N discloses information on producers to consumers and ensures the latter's safety and security so that even if the selling price of natural farming agricultural products is higher than that of conventional farming products, consumers will continue to purchase them. Based on this discussion, it is important that the cultural controls of NCPA do not focus on financial aspects, such as profits and costs, as depicted by earlier studies, but instill the philosophy of natural farming (i.e., good for the environment, good for society, and good for health) among farmers, sellers, and consumers.

6. Conclusion

This study analyzed the characteristics of management control specified by farmers and sellers in the natural farming domain through interviews. This helped construct a control system centered on cultural controls, which was unlike the control system focused on controls based on financial figures depicted in earlier research. Whereas such cultural controls can be identified in the early stages of business establishment documented in earlier studies (Sandelin, 2008), the cultural controls in natural farming examined in the current study have continued for several decades. The probable reason for this phenomenon is that natural farming agricultural products are not supported by agricultural policy and this lack of support places natural farming farmers in a vulnerable situation. Therefore, it is necessary to create among them a psychological trust-based relationship and cultural control-based mutual support system. Furthermore, natural farming is associated with the possibility of becoming less financially important during periods of stable production, since its costs are low.

This study makes an important discovery. To implement cultural controls, NCPA is established as a separate organization, whose functions involve spreading the philosophy; providing protection to farmers; sharing agricultural techniques; and managing the relationship among customers, sellers, and farmers. The creation of such a specialized organization to implement cultural controls was not attempted by earlier studies. However, in this study, NCPA effectively implemented cultural controls, which suggests the

effectiveness of creating such an organization to establish controls. Finally, involving consumers in popularizing the philosophy is considered important for securing sales, as well.

The first contribution of this study to the research field is that it clarifies the characteristics of controls experienced by farmers and sellers engaged in natural farming. Accordingly, natural farming has immense potential for growth since it emphasizes health and addresses environmental issues. The clarification of its characteristics can help create a model for farmers planning to transition to natural farming. In terms of policy, it will generate a need to provide preferential treatment to farmers engaged in natural farming.

The second contribution is that, in cases involving multiple players (including farmers and sellers), this study found it effective to create a separate organization to implement cultural controls. This finding has implications for not only conventional farming but also general commercial enterprises.

This study has the following limitations: First, although this study clarifies the characteristics of cultural controls among farmers and sellers, it does not clarify in adequate detail why cultural controls have become important today. Analysis from a broader perspective, including policy and financial aspects, is necessary, as well. Currently, the authors have only analyzed the thoughts of farmers and sellers; hence, further analysis is required. Second, as clarified by earlier research, management controls based on trust or culture may be delicate and may not be able to guarantee the loyalty of members (Grafton & Mundy, 2017). In other words, there are limits to preventing people from quitting NCPA with divergent philosophies on natural farming. Such aspects are difficult for farmers and sellers to control, and more research is required to manage these issues.

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