

Current Issues and Problems of Building Local Food System in Japan: A Case Study of Farm-to-School Program in Tōhoku Region, Iwate Prefecture

東北地方・岩手県における産直給食の現状と課題

MISUDA Yosinobu,¹ YAMADA Kana,² and SATÔ Kôya³

三須田善暢, 山田佳奈, 佐藤幸也

Keywords: Farm-to-School Program (FTS), Local Production for Local Consumption Movement (LPLC), Community-Supported Agriculture (CSA)
産直給食, 地産地消, CSA

1 Introduction

1) Problem Setting and Prior Works

In recent years a ‘local production for local consumption’ movement (LPLC), which we call *Tisan-Tisyô Undô* in Japanese, has gained larger popularity in Japan. In a broad sense, we can say that this is one form of the Community-Supported Agriculture (CSA). As part of LPLC, the ‘farm-to-school’ program (FTS) that uses local farm products in school lunch is drawing keen attention all from over Japan. We select cases of FTS in Iwate Prefecture and describe the characteristics and the current problems of FTS. Iwate Prefecture is located at northern Tōhoku region, which is one of the bases of Japan’s food production.

There have been many studies on Japanese FTS. Among them, Odaka (2006) which investigated various FTS in Japan is worth mentioning. She paid special attention to the production-circulation process that concerns farm products supply with a core question, “why FTS does not develop even though the both the dieticians and chefs are strongly supporting the program?” (Odaka 2006: 3). She arranged various FTS from “two points of view. One is ‘burdens’ of dieticians or farmers who deals with produce. The other is ‘distances’ between farmers and school kitchen

and children who are involved in this program” (Odaka 2006: 15). Odaka then classified three types of FTS. The first is Type A, which is the system that utilizes structure of the wholesale market shipment. This type of FTS is often seen at large vegetable production areas. The second is Type B, which is the system that farmers supply their products directly to schools. This type of FTS is often seen at areas where production of vegetables is not popular. The third is Type C, which is the system that applies a distribution coordinator. This is often seen at rural areas adjacent to bigger market. (Odaka 2006: 21-2) (see Fig. 1). This paper follows Odaka’s informative classification. We then set up new types of FTS based on characteristics of Iwate Prefecture in Tōhoku region.

2) Overviews of the Case Study Area

The FTS in Japan has already become popular nationally. Geographically speaking, this program is more popular and developed in western Japan rather than eastern Japan, but in recent years it also came into practice in Tōhoku region.

It must be noted that it is difficult to measure and compare the accurate rate of LPLC in terms of school lunch program, because there are some methodological and technical problems. Therefore, we take data on LPLC as background information to grasp the trend. According to “Investigation on Rate of Using Local Products for School Lunch,” national average of LPLC rate is 21.2% (in 2004) with the basis of the number of cooked ingredients (Ministry of Education, Culture, Sports, Science and Technology). This report states that the average LPLC rate at Akita Prefecture is 27.7%, Iwate Prefecture is 27.0%, Aomori Prefecture is 25.7%, Yamagata Prefecture is 25.5%, Miyagi Prefecture is 23.8%, and Fukushima Prefecture is 23.0%. In other words, prefectures in Tohoku region all show the higher rate than national average. The above rate depends on the basis of the

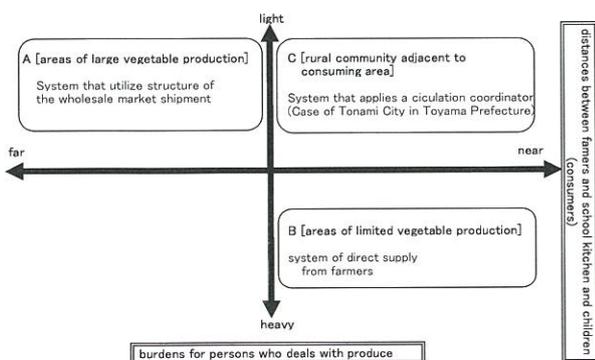


Fig. 1 Positions according to 'burdens' and 'distance' (Odaka 2006)

¹Department of International Cultural Studies

²Iwate Prefectural University, Faculty of Policy Studies

³Miyagi Gakuin Women’s University, Faculty of Liberal Arts

number of cooked ingredients, but if it was counted based on ingredient weight, numbers of Iwate Prefecture (in 2006) shows that fresh vegetables are 33.5%, staple food (rice and bread) are 78.5%, and whole food products are 52.6%. This suggests that Iwate prefecture had considerably higher rate of FTS.

In this paper, we select three cases from Iwate Prefecture¹⁾. The first case is Daitô Town, where FTS was started by small farmers' groups from an early stage (1987-) under the leadership of dietitian and farmers. The second case is Yahaba Town, where FTS was formed with a direct sales store (farm stands) under the leadership of JA (Japan Agricultural Cooperatives) and local administration. The third case is Tôno City. This city has a ongoing project to build the 'General Food and Nutrition Education Center,' which aims to provide food service not only for school children, but also for the whole community. It is led by administrative leadership, but a lot of experts such as academic scholars also participate²⁾.

The reason why we select these three cases is that they would adapt in some level to the Odaka's classification. In Daitô, the leader who had a strong idea enabled to develop FTS. The leader's influence and aging of farmers, however, made this case unable to develop regionally, resulting in low rate of LPLC. In Yahaba, although they were troubled with aging of farmers like in Daitô, they succeeded in maintaining the stable supply system because of leadership by local administration and JA that combined a direct sales store. In addition, there is an extremely competent organizer. The project of the 'General Food and Nutrition Education Center' in Tôno derived from discussions of merits and demerits that were observed in cases of Daitô or Yahaba. We will describe the characteristics of each cases as follows.

2 Case 1: Daitô Town³⁾

1) Overview of Daitô

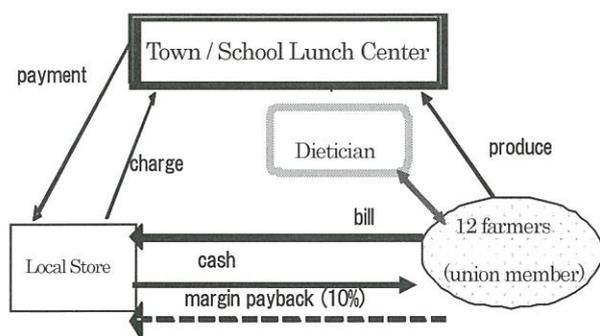


Fig.2 Case of Daitô Town (1987 -)

Daitô Town is an agricultural and mountain village located in the southernmost of Iwate Prefecture. It merged with Itinoseki City in 2005. The number of the households is 5,097, and the population is 16,704 (from 2005 national census). The amount of sales of agricultural production is about 26.6 billion yen. As for breakdown of sales, rice is 8 billion yen, vegetables are 2 billion yen, and livestock is 14 billion yen, which is predominant. The number of the farm households is 2,704. Of these, number of full-time farm household is 409, and number of part-time farm households are 1,587 (from 2005 agriculture census). In terms of the scale of farm management, the number of 50a-1.0ha is dominant (38.8%: 2005). Population of primary industry comprises 26.0%, secondary industry 34.2%, and tertiary industry 39.7% (from 2005 national census).

From the general overview, it is clear that most farmers in Daitô Town are medium or small scale farm household. Hence, with exception of a few vegetables that is produced for the market, farmers grow vegetables almost entirely for their self consumption. Therefore, when they have surplus products, they give them to another person or just throw them away. The planning of FTS had such local background, thus the main target was the medium or small scale farm household.

The overall LPLC rate of FTS at Daitô Town is only 3.7% in 2005 (on the basis of cost of ingredients), but the LPLC rate for fresh vegetables alone is 29.3%. The total low rate comes from the fact that rice and bread are purchased from private firms.

2) Formation and Development of FTS in Daitô

FTS in Daitô was started in 1987. The introduction of FTS took place with strong influence of Ms. I, who became a school dietician at the Oohara school lunch center of Daitô in 1978. At that time, locally-grown vegetables were not used for school lunch in Daitô, thus the rate of relying on frozen vegetables was high. Under such condition, she voiced an opinion about "bringing up health of children with safe local farm products of low pesticide" (Hasimoto 1991: 84). She tried to introduce FTS in Daitô, and asked for help from her dietician colleagues, the board of education, the agriculture committee, JA, and many more.

What was characteristic about her vision was that she aimed to contract products with higher price than market prices, so that the maintenance of a farm household could be possible. Such 'producer-priority' thinking is based on an idea that we should not only consider school lunch as a site of supplying meal, but also consider it as one mean to sustain

local farms, which would contribute to revitalize local economy. Her thought, however, caught a big backlash from other dietitians.

Under such circumstances, Ms. I gathered like-minded persons at Daitō farmer's union, which is related to Communist Party, and organized 'Daitō direct marketing meeting (DDM)' (renamed as Daitō direct marketing center (DDC) in 1992) with 12 members. For the first time, FTS was started at elementary school in Oohara area, but the town authorities eventually decided to expand FTS to the whole town in 1990.

3) FTS in Daitō: Past and Present

The system of FTS in Daitō is as follows (Fig. 2). First, farmers identify vegetables which they can deliver to each school lunch center. School lunch centers receive that notice, and they send their monthly order form to DDM. Based on that order form, farmers reply farm products which can be delivered, the quantity of products, and date of delivery at a monthly meeting. At the same time, farmers report farm products which will be harvested in next month. Afterwards, each member delivers their farm products to each school lunch center early in the morning. The price of products is decided by farmer so that their profit from this business would be guaranteed. With exception of some farm products, the price is set consistent throughout the year. When farmers cannot supply the produce, the school lunch centers use a local store as usual.

One of the characteristics of Daitō's system is the practices of 'margin payback.' It is a system that farmers pay back 8.9% (initially 10%) of sales to local stores to supplement stores' loss of granting advantages to farmers. By this system, DDM tried not to discard local stores which formerly delivered farm products to school lunch centers⁴.

The main forces that supported the FTS in Daitō were the dietitians and medium or small scale farmers. We could say this activity was led by 'a dietician-farmer leadership.' This system, however, changed gradually. We can point out four major changes. These are (1) Decrease of students; (2) Division of the group because of members' conflicts over organization's objectives; (3) Absence of new members for DDM, resulting in aging of members (many members are over 60 years old) and decrease of supply of vegetables; (4) Changes in dietician's attitude toward using locally-grown products. After Ms. I quit her dietitian position in 1992, the original idea of FTS was gradually weakened by another dietitian. Members express the dissatisfaction that "the dietitians might come to use a local stores when vegetables

are cheaper during the season."

4) Interim Summary

Affected by such changes, current DDC members are mostly over 60 years old, and their annual income from FTS are about 200,000-400,000 yen, which are situated as their tiny fraction of income. In addition, many time-consuming labors on shipment are unpaid. Thus it can be said that FTS are supported by undercompensated 'voluntary' participation by DDC members. Under these circumstances, the original ideal of FTS is not realized to a satisfactory level. Therefore, FTS lacks the power to be a significant contribution to the regional development and the rate of LPLC remains far from increase.

3 Case 2: Yahaba Town

1) Overview of Yahaba

The second case is the study of Yahaba Town, which is located nearby Morioka, central city in Iwate. The population of Yahaba Town is about 27,000 and households of 8,380 in 2005. The Yahaba's population by industry is as follows: 11% of the town's population is in primary industry, 18% in secondary industry, and 71 % in tertiary industry (all in 2005). The number of farm households is 1,591 and the dominant farm management scale is 1.0-2.0ha. (33.1%: 2005). As for the output from agriculture, the total sales are about 4.9 billion yen, and more than half of it comes from rice production. Vegetables are not widely grown in this town.

2) Processes of constructing FTS and Its Present State in Yahaba Town

When looking at the situation of school lunch program

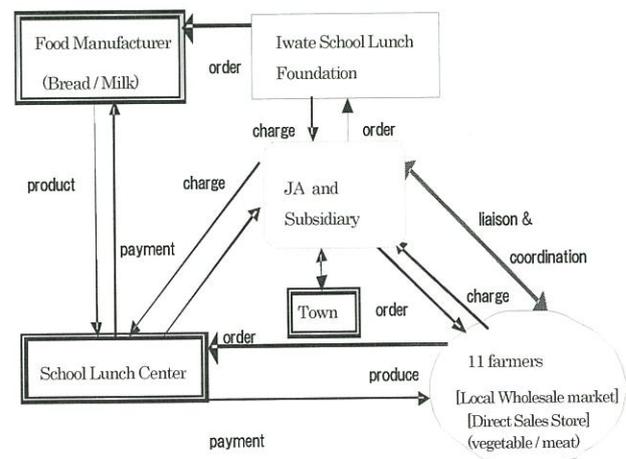


Fig. 3 Case of Yahaba Town (2004 -)

that related to LPLC in Yahaba, the rate of using local vegetables is 30.9 % (on the basis of ingredient weights), and the total LPLC rate of local food products is 43.5% in 2006. Here, we will briefly explain the processes of construction of the FTS in Yahaba.

In 1995, JA Iwate Tyûô built a direct sales store and began to collect a lot of vegetables. After several years, since around 2003, few farmers who had been producing vegetables for self consumption began to distribute their vegetables to school lunch. When the new school lunch center was established in 2004, the mayor decided to promote the LPLC. As a core to its movement, the mayor ordered to increase the rate of using local food products for school lunch. After discussion with the union president of JA Iwate Tyûô, he determined to start FTS through JA.

In terms of the FTS system in Yahaba, it has two characteristics. First, through JA subsidiary that functioned as a coordinator, the food products were delivered collectively (except for milk) to school lunch center. Second, it involved the direct sales store to this FTS system.

As described in the Fig. 3, the food products for school lunch are supplied not only by the farmers but also by the direct sales store, which is operated by JA. The latter takes the role of coordinator, as it accepts the order from school lunch center and places the order to farmers. It can be said that this method makes the supply of food products more stable. After the JA subsidiary sends the orders to the registered farmers (11 members in 2005) by FAX, farmers who accepted the order deliver the vegetables to the refrigerator that are set up in the community. If there are products which were ordered but not collected sufficiently, the order goes to a branch of JA in Yahaba. And if it is impossible to get all of them locally, the order is sent to the direct sales store. When it is still not sufficiently nevertheless, the order is placed to the wholesale trader or to Morioka central wholesale market.

On the other hand, farmers can sell the products which do not meet the standard of the school lunch and the surplus of their harvest to the direct sales store. Since the system like this has the concept to give priority to the local products, it makes possible to increase the rate of LPLC. For instance, regarding the local products from the whole Iwate (except for Yahaba), the LPLC rate is close to 50% in this FTS system.

In addition, this system decreases farmers' burdens which have been met by Daitô farmers, because the JA subsidiary can substitute to manage the paper work. At the same time, outsourcing the work of cutting vegetables to the local

factory or processing industry contributes to reducing the work for cooks and dieticians. The overall system makes good use of surplus products.

This kind of system involves an organizer of JA subsidiary, who managed the direct sales store. He worked at the JA's retail store for many years, and tried to increase the rate of LPLC with his knowledge and experiences. According to him, the most difficult point was the opposition from dietitians, which was similar to the case of Daitô. The reason was that the possibility of handling the sub-standard products would cause much labor for them. However, after long discussions, cooperative relationship has been built in the end.

3) Interim Summary

Compared with the case of Daitô, the power of leaders of local administration and JA at the early stage was a critical factor for Yahaba's system. Such top-down approaches made it possible to address some problems. At the same time, as we referred, this system enabled to decrease the invisible labor that farmers were responsible. With some work substitutions by JA subsidiary, the change contributed to increase rate of LPLC with stable supply of products with participation of JA and the direct sales store.

However, just like Daitô, Yahaba also has the problems. Many of the farmer members are aging, nearly 70 years old or more, and there are not many continuing members. Furthermore, the income from FTS is very small, just like Daitô case. It shows that the Yahaba system, too, is basically relied on farmers' 'voluntary' commitment.

Unlike Daitô's case, Yahaba does not set the price of products higher than market standard to guarantee the farmers' income. This might imply as one of the crucial differences between Yahaba and Daitô in regard of the 'idea' that community is willing to support farmers. At the same time, however, we need to pay careful attention to the fact that local administration and JA Iwate Tyûô had already built strong connection and that they had been united with deep trust each other. It seems important to show leaders' attitude toward cooperation between them and citizens.

4 Case 3: Plan and Problem of the General Food and Nutrition Education Center in Tôno City

1) Plan and Problem of the General Food and Nutrition Education Center

We could say that in Daitô's FTS, reality could not catch up with an ideal, which resulted in having a problem of supply. In Yahaba's FTS, it overcame the problem of stable

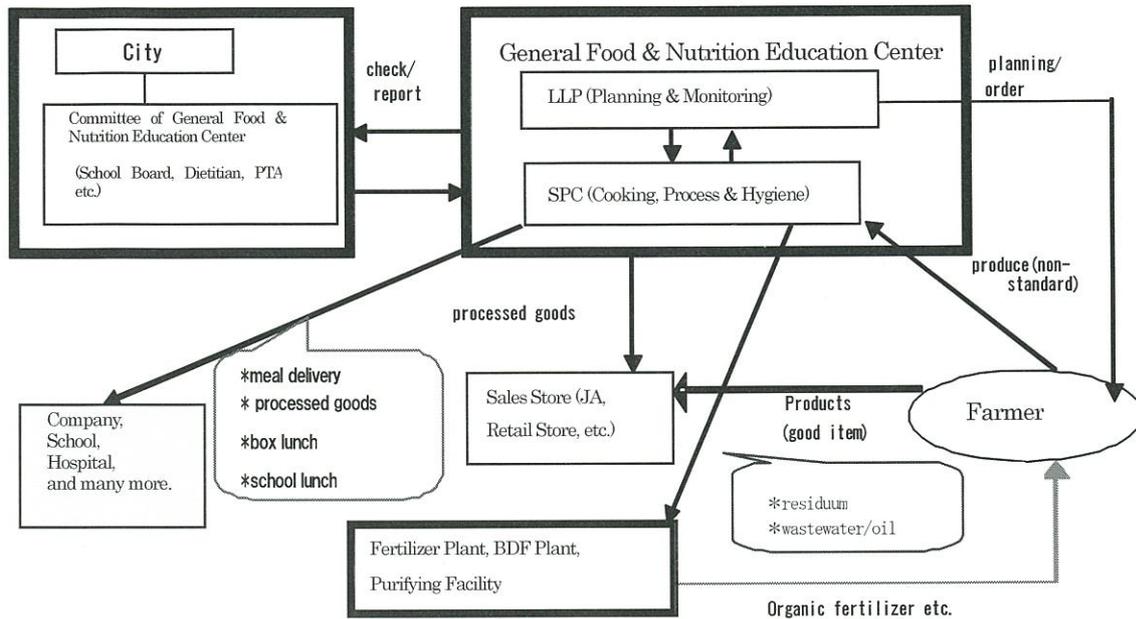


Fig. 4 Case of Tōno City (plan)

supply and miscellaneous clerical works by constructing a FTS system that involved local administration and JA as well as the direct sales store. There remain above-mentioned problems, however. Additionally, we would improve the rate of LPLC more if, for example, we continue the use of school lunch facilities during school vacation period.

Considering such points, the General Food and Nutrition Education Center plan is drawing keen attention to improve the rate of local vegetable use. Tōno plan is a part of the ‘Tōhoku CSA’ model designed by Industrial Vitalization Center for Tohoku (IVICT) and related experts. Here, we want to examine this plan and think about its present problems and suggest its future direction. Since this plan is in the midst of debate in local politics, we note that explanation provided here will be little idealistic.

2) Overview of Tōno and Contents of Plan

While FTS movements are spreading nationally, it became important to associate FTS with food and nutrition education of children. Furthermore, it should be connected with development of local economy. Meanwhile, because legal restrictions limited the use of school lunch center for purpose other than school-related events, it had been difficult to plan a project that involved using school lunch center. As time passed, the existence of the school lunch centers became critical because of the decreasing number of the children.

Recently, however, government agencies began to acknowledge the use of school lunch center for purposes

other than the original intent in a limited condition. Japanese government has intention to introduce private sector nationwide and extend the deregulation. Privatization will accelerate to form the cluster incorporated by agriculture-industry-commerce. This will result in developing the business model that makes use of local resources. Besides, from a point of view of publicity⁵⁾, residents will be highly associated with school education, social education and the public undertaking.

Under these circumstances, the General Food and Nutrition Education Center was planned. Various attempts to utilize LPLC are being discussed. This includes designing of the existing school lunch, promotion of food and nutrition education, and the financial support for the continued existence of the institution. Here, we will introduce Tōno plan.

First, we would like to describe general overview of Tōno City. The number of population is 32,000, and the number of households is 10,733 (2006). The amount of agricultural sales is about 26.6 billion yen; as for breakdown, rice is 8.3 billion yen, vegetable is 0.9 billion yen, industrial crop is 0.7 billion yen, and livestock is 3.4 billion yen. The number of the farm households is 3,984 (2000); among them, 446 are full time farm households, and 2,997 are part time farm households (from 2000 agriculture census). Regarding the size of cultivated land per farm, 50a-1.0ha is dominant (27.1%: 2000). In Tōno, rice crop is mainly cultivated, and multiple farming (vegetables, industrial crops, livestock, etc.) is also cultivated. Population of primary industry comprises

24.8%, secondary industry 33.3%, and tertiary industry 41.9% (2000). Finally, the rate of using local vegetables is 19.6% (cf. Iwate products is 37.5%, including Tôno, in 2003).

Following is the current plan of General Nutritional Education Center in Tôno. First, this plant will use the HACCEP (Hazard Analysis and Critical Control Point) system in order to secure the safety of food. Food service is provided not only for school children, but also for the whole community (such as local firms, hospitals, kindergartens, hotels, and many more institutions). It aims to improve the operation rate and the rate of using local food through multipurpose use, combined with the direct sales store and agricultural processing plant. Once the operation begins, the center is projected to resolve economic difficulty of the surrounding area. Numbers of minimum food supply recipients are 3,000. Additionally, it plans to challenge recycling local resources by using residuum fertilizing plant and BDF (biodiesel fuel) plant. Thus, the plant is expected to not only vitalize local economy and advance rate of LPLC, but also perform 'food and nutrition education' for residents (Fig. 4). These are one of the 'Tôhoku CSA' models. This model is a system which combines actors such as the school lunch center, the direct marketing network operated by the consumer's cooperatives, secondhand agricultural machinery sales network, and many more.

This plan was first announced in 2004, but has been unperformed until now. The reason why it has not made progress is that other issues such as the merger of Tôno City and Miyamori Village and management problem at local JA became more critical. Additionally, a project that is similar to this was also planned in Kawamata Town and Date City in Fukushima Prefecture, but both came to a deadlock after their merger of local governments.

Tôno City, however, somehow is trying to accomplish this project. If this project will be completed, it will be the first facility in Japan, and it will impact the school lunch center all over Japan. We want to continue paying attention to the future and prospects of this plan, which has characteristics of both multi-purposed school lunch center as well as combination of direct sales store and processing plant⁶⁾.

3) Interim Summary

As previously mentioned, this project is still in a planning stage. Therefore, it is difficult to analyze the impact of this new facility. From what we have researched, however, we think that difficulty lies in the coalition of interest groups (local government, JA, Chamber of Commerce, PTA, and

many more). When they are going to accomplish the plan as a policy matter, there are likely to come to some unexpected factors from their relationships against their intentions. In some ways, top-down leadership like Yahaba's case may be needed to accomplish such project. That is, we could say LPLC has not yet become the important issue at local politics level.

5 Conclusion

1) Some Types of FTS led through these Cases

With reference to the matrix of Odaka, we can put three case studies in a matrix (Fig. 5). In this report, however, our focus was on the form of participation to each LPLC, hence we tried to shape a new matrix to describe them with axes of 'form of participation' and 'burdens for persons' (Fig. 6). The four quadrants are:

- ① 'voluntary participation and light burdens for persons' (the first quadrant)
- ② 'institutionalized participation and light burdens for persons' (the second quadrant)
- ③ 'institutionalized participation and heavy burdens for persons' (the third quadrant)
- ④ 'voluntary participation and heavy burdens for persons' (the fourth quadrant)

Our first case study at Daitô, in which the small scale farmers and a concerned dietitian voluntarily constructed their own FTS in a small way, can be put in the fourth quadrant. In other words, although the dietician and farmers have voluntarily led the movement, this is a type that the burdens of the dieticians are heavy and the rate of LPLC is practically low. This case has some interesting characteristics. On the one hand, the people involved in the FTS program shared a strong collegiality and the leadership based on the idea that they were effective. But on the other hand, the system was not fully institutionalized in terms of less involvement of JA and local administration, and it has both instability of supplying produce and insufficiency of evaluating family labor.

The second case study at Yahaba had characteristics in stability of supplying food products, with positive involvement of administration and JA as well as the JA-owned direct sales store. This case can be placed in the first quadrant for our new matrix. It is true that they have a problem of aging of farmers, which is similar to Daitô case. As we already discussed, however, case of Yahaba has achieved work efficiency decrease in paper works and stable supply of products with the assistance of JA and the direct sales store. We call this type as the system which is well

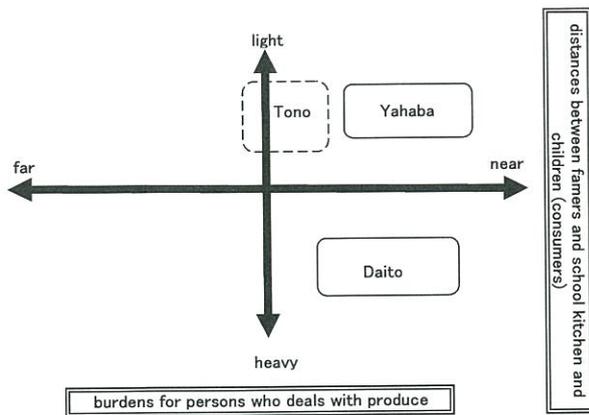


Fig. 5 Positions of 3 cases in Iwate according to 'burdens' and 'distance'

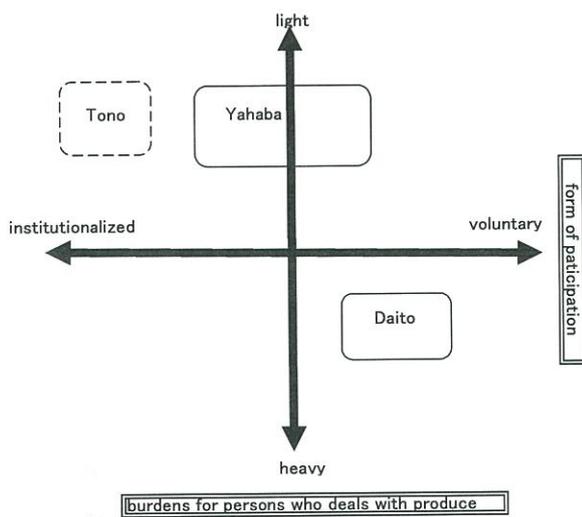


Fig. 6 Positions of 3 cases in Iwate according to 'burdens' and 'form of participation'

institutionalized and has light burdens, as the local administration and JA had a role in leading to unify actors with the direct sales store functioning as an organizer.

This kind of type makes the stable supply possible, but it still has a room for effective use of facilities. To make one further step, the other plan emerged in Tōno (case 3). It aimed to raise the rate of operation of facilities, decrease the cost of school lunch, and increase the rate of LPLC, by extending the meal project to some entities in the community beyond schools. Although the 'General Food and Nutrition Education Center' in Tōno was not yet in operation as of our research, we call it as the third type and put it in the second quadrant. This can be one of the systems where the institutionalization is developed by the leadership of administration and the whole community.

According to this matrix, we can find that the FTS in Iwate is advantageous in the second or third quadrant. In Addition, considering impact to children and supplying safe

products (or farmers' voluntariness), the first quadrant seems to be prominent. Regarding to the profitability (or rate of operation of facilities) and recycling of local resources, we see the fourth quadrant as an effective point.

2) Implications from Three Cases

On the basis of these case studies, we conclude this paper with providing some prospects and the strategy for improvement of school lunch in the system of LPLC.

First, we have to say that even the current system of FTS in Iwate Prefecture, where the rate of using local food products is over 50 %, has not yet worked sufficiently to call it as "the local community supports agriculture." In Daitō, in spite of its role as a pioneer of the FTS, the system is not well recognized by the local people. This kind of situation is also found with the fact that the policy in Daitō was shifted due to change of dietician.

In the light of these circumstances, one critical change will be to plan and construct a system that involves the administration of local government and related local interest groups (JA, Commerce Association, PTA, etc.) to implement these kinds of practices firmly in community. In addition, the mechanism and practice to inform and give actual feeling of the other benefits of FTS for both farmers and local residents (such as students, parents, local retail stores and local industries) will be crucial. In other words, not only the economic benefit but also the awareness of safety of foods or 'food and nutrition education' will be necessary to achieve FTS in a sustainable way.

To realize these 'ideals,' the Tōno's plan of the 'General Food and Nutrition Education Center' was elaborated. Namely, it was aimed to make multiple benefits, such as reducing time-consuming work to adjust demand & supply of products, overcoming the economic difficulty through involving of many actors outside of school, and increasing rate of operation of facilities. This plan is expected to promote the 'food and nutrition education' and recycling of local resources in community.

Although the future of FTS with LPLC in these cases must continuously be investigated thoroughly, again we must be aware that it is farms that produce many items in small quantity which makes LPLC possible in the present state. In that sense, we can say that the actual system of FTS looks like one of "local agriculture supporting the local community (ASC)," rather than 'community-supported agriculture (CSA).' As a consequence, we need the vision that values "lively farm household supports the community" in order to promote LPLC and FTS.

Acknowledgement

The research conducted for this paper was supported by Grant-in-Aid for Iwate Prefectural University All Campus Research Project Fund (Sociological Research concerning the Sustainable Village Supporters: Comparative Study of CSA between Japan and EU). Portion of this paper was presented at the XII World Congress of Rural Sociology.

Notes

- 1) Regarding the essence of FTS in Iwate, see Satô, Sasaki, Sasaki, Nakazato, and Higasino (2006).
- 2) Satô takes part in this plan from the beginning.
- 3) Misuda (2006) describes Daitô's case in detail.
- 4) This margin payback was abolished in 2008.
- 5) See Simano and Satô (2006) for this basic idea.
- 6) Regarding the present situation of FTS in Tôno and the detail of Tôno's plan, see Satô (2004), Industrial Vitalization Center for Tohoku (2005), Tohoku Research Institute (2007). For 'Tôhoku CSA' model, see Yosida (2005).

References

- Hasimoto Syôiti, "Hokori to Kagayaki no 'Santoyoku Kyûsyoku' no Ninaitetati: Iwateken Daitôtyô Santoyoku no Kai (Leaders of a 'Farm-to-School' with Pride and Brilliance)", *Asu no Nôson (The Village Tomorrow)*, 200: 82-9, 1991. (In Japanese)
- Industrial Vitalization Center for Tohoku, *Heisei 16 Nendo Tônosi Sôgô Kyûsyoku Sentâ o Katuyô sita Sôgô Kyûsyoku Zigyô Tyôsa Hôkokusyo (Report on the General Lunch Business Project Based on the Study of the Tôno General School Lunch Center in 2004)*, 2005. (In Japanese)
- Misuda Yosinobu, "Current-State and Problems of 'School Lunch from Local Farm Activity' in Japan: A Case Study at Daitô-Town, Iwate Prefecture", Paper presented at the Annual Meeting of the Rural Sociological Society, 2006. (<http://www.ruralsociology.org/annual-meeting/2006/proceedings/Misuda,Y.pdf>)
- Odaka Megumi, *Sôken report 18 Gakkô Kyûsyoku e no Zibasan Yasai Kyôkyû ni kansuru Tyôsa (Research on Supplies of Locally-Produced Vegetables to School Lunch)*, Nourinchukin Reserch Institute, 2006. (In Japanese)
- Satô Kôya, "Gakkô Kyûsyoku no Kenkyû: Kondate oyobi Syokuzai Kyôkyû ni tuite no Bunseki (Research on School Lunch: Analysis on a Menu and Supply of a Foodstuffs Ingredients)", *Iwate Daigaku Kyôiku Gakubu Kenkyû Nenpô (The Annual Report of the Faculty of Education, Iwate University)*, 64: 83-104, 2004. (In Japanese)
- Satô Kôya, Sasaki Kazuhiro, Sasaki Hiroshi, Nakazato Hiroshi and Higasino Mariko, "Kyôdôkenkyû Tisan-Tisyô to Gakkô Kyûsyoku: Iwateken no Zissen ni Manabu (Joint Research on LPLC and School Lunch: Learning from the Practices in Iwate Prefecture)", *JA Kyôiku Bunka (JA Education and Culture)*, 66: 12-3, 2006. (In Japanese)
- Simano Mitihiko and Satô Kôya, *Ikiru Tikara o Hagukumu Syoku to Nô no Kyôiku (Education of Food and Agriculture to Foster a Zest for Living)*, Ie no Hikari Kyôkai, 2006. (In Japanese)
- Tohoku Research Institute, *Tônosi Sôgo Kyûsyoku Sentâ Seibi Zigyô ni kakaru Dônyû Kanôsei Tyôsa Gyômu Hôkokusyo (Report on the Feasibility of Introducing Tôno General School Lunch Center)*, 2007. (In Japanese)
- Yosida Hidekazu, "Tôhoku ni okeru Nôson Tiiki Kasseika Sôzôryoku Tyôsa (Research on Creating Vital Rural Villages in Tôhoku)", *IVICT Zyôhô (IVICT Information)*, 68: 24-30, 2005. (In Japanese)