Developing an Educational Program for Midori Farm

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Developing an Educational Program for Midori Farm

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Abstract

Our project goal was to design an educational and interactive program for the community around Midori Farm to increase interest in sustainable farming and provide an opportunity to learn English. We interviewed various farms and evaluated three programs that were suitable for Midori Farm: farm to institution, institution to farm, and independent programs. The purpose of the interviews was to see how educational farms function, how they engage their students, and how they advertise themselves. We also spoke with Midori Farm to discuss the resources they can provide for an educational program. We recommended a timeline for Midori Farm, beginning with a farm to institution program that leads to an institution to farm program, then later expanding out to independent programs.

Executive Summary

Midori Farm is a small farm located to the north of Kyoto, Japan. The farm is owned by Chuck Kayser, who uses the farm to promote the importance of agriculture in Japan. Midori Farm hopes to expand their mission of education by creating an educational program with the hopes of revitalizing interest in farming. The purpose of this project was to provide Midori Farm with outlines for interactive educational farm programs as well as a plan for implementing them.

To achieve this we established 4 objectives:

1. Assess the successes and failures of similar educational programs on other farms to learn what could be adapted to Midori Farm's programs
2. Identify the resources Midori Farm can provide for an educational program to determine what they have to offer.
3. Identify the audience and methods of engagement that keep their interest.
4. Develop a plan to encourage student interest in attending a farm school program at Midori Farm.

For **objective one**, we conducted nine interviews with people connected to either educational farms or education in general. Six of these interviews were with farm education program owners or managers, which helped us get a better idea of what things we should look at when planning potential programs for our project. We conducted additional research via articles and websites, looking for academic sources on what makes a successful farm education program.

To find information for the **second objective**, we had multiple conversations with our sponsor Chuck Kayser, the owner of Midori Farm, to get an idea of what resources are available to lend to this program. These interviews yielded several contacts for potential partnerships as well as the differences between the two farm locations. From this, we determined appropriate class sizes and what students would need to bring to these lessons.

For the **third objective**, we interviewed educators to help us understand how to engage students in different age groups in a farm education program. These ideas included activities that were engaging in a farm school and advice on how to provide students with a productive learning experience. Several farm owners had advice on what engages their students the most. Aside from interviews, we also went out to a farm to get our own first hand experience with what we found the most engaging so that we could incorporate it into our final program proposals.

For **objective four,** we used the information from interviews, visits, and research to develop three broader program formats and a variety of more specific subsections under each of these plans. Each of these is meant to cater specifically to Midori Farm, but can be extrapolated out to other similar farms who want to start educational programs of their own.

The Farms

Midori Farm comprises two locations, both located about an hour north of Kyoto. We analyzed both farms in terms of strengths, weaknesses, opportunities, and threats, organizing our findings into a SWOT table. We found that both farms could be used for an educational program.

We recommended that Midori Farm start by using its Keihoku location because it is in a more populated area and is more easily accessible. Over time, the educational programs can be expanded to utilize both locations. We also determined the types of programs that Midori Farm would not be well suited to support.

We discussed with Midori Farm's owner, Chuck Kayser, about the types of educational programs he does and does not want. Combining this information with the programs Midori Farm could not support, we created a table to highlight the aspects of an educational program that the farm should and should not focus on. We used both tables to frame our research into specific plans for the educational farm program.

The Programs

We organized the recommended programs that Midori Farm implemented into the following categories:

- Farm to Institution
- Institution to Farm
- Independent Programming

As seen in Figure 1, we created specific program plans for each category based on the institutions that are partnered with and the activities that are done.

In **Farm to Institution** programs, farms actively reach out to local institutions and work closely with their administrators to develop projects with meaningful missions and goals that are relative to farming. For institutions, we recommended that these projects range from implementing a garden to offering special lectures. The opportunity for Farm-to-Institution programs allows for farms to actively reach out to schools first-hand without heavy promotion or advertisement. Farm-to-Institution programs also open doors for expansion with institutions coming to the farms for a full farming experience.

For **Institution to Farm** programs, the institutions visit farms for a full day experience. We found that this model is most effective for schools, universities, and retirement homes. Institution-to-Farm programs also provide expansion opportunities because mixed age groups attend. We found that visitors will want to return on their own time, bringing along their family and friends.

Independent programming allows people to visit the farm for scheduled activities on their own time. Effective workshops that we found through research include farming chores, seeding kits, window gardening, and pottery. Independent programming is more flexible, as people can schedule on their own time. These programs are also beneficial to farming programs, as they encourage partnerships with different business owners such as potters or chefs.

Farm to Institution	Institution to Farm	Independent Programming
Farm to School	School to Farm	Farm Lessons
Farm to University	University to Farm	Seeding Kits
Farm to Retirement Home	Retirement Home to Farm	Window Gardening
Farm to Cafe	Cooking Classes to Farm	Pottery

Figure 1. *Program categories and their individual plans*

Implementation Timeline and Recommendations

With many defined programs to consider, it is important for Midori Farm to grow into these programs comfortably. We suggested a timeline to follow in order to build helpful connections and successfully implement these programs.

We recommend the farm begins with farm to institution programs by reaching out to potential partners. Bringing farm education programs to institutions is a low-effort way to introduce institutions to the value such programs can bring. As the farm's reputation improves, the institution will be more willing to provide the resources to bring groups out to the farm. During the winter off-season is a good time to start reaching out to these institutions and building contacts. As spring approaches, the farm should try to implement these programs at institutions.

Once these partnerships are made, the farm should have an easier time getting the institutions to come to the farm. Institution to farm programs, such as field trips, have high return rates due to the valuable experiences they bring. This would work best in late spring and early summer, when the farming season is at its peak, and institutions such as schools and universities are still active.

With the revenue and exposure gained from these programs, the following fall and winter seasons would be a good opportunity to expand and invest in more independent programs on the farm.

Implementing an educational farm program at Midori Farm will give students an authentic farm experience and teach them about the importance of sustainable practices and the environment. Increasing interest in agriculture in the younger generation can revitalize the farming industry in Japan. These farm programs can also provide an opportunity for English vocabulary learning based on the farming activities that students are participating in.

Figure 2. *Panorama of Midori Farm from Midori Farm's photo folder*

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Chuck Kayser, for allowing us to work with Midori Farm and for providing us with the resources and information we needed while we worked remotely.

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Julie Rawson and Jack Kittredge of Many Hands Organic Farm, for inviting us to a CSA day on the farm and showing us a first hand experience of working on a farm

Authorship

Olivia Bell, David Danielian, Jonathan Nguyen, and Kirsten Roethel all contributed to the creation of this project. Each section was reviewed and edited by all members. This page describes which members wrote which sections in more detail.

Olivia contributed to this report by writing the background section on language barriers and the objective 1 information under the methodology section. For these, she conducted academic research appropriate to language barriers and how they contribute to education, and then applied some of this information combined with actual implementation to recount how Midori Outreach evaluated the strength and weaknesses of other farm education programs. Olivia additionally created the project plans for the Farm Chores, Seeding Kits and Pottery sections, including contributing to the introduction of Independent Visits. To gather the information compiled in these sections, she visited the websites of a variety of existing farm education programs from which a rough appropriate cost could be gleaned. In addition, she assembled information on contacts and logistics.

David contributed to the background, writing the Decline Of Farming in Japan section, conducting research on the state of organic farming in Japan. For the methods, David helped write the objective 2 and 4. In the findings section, he wrote the plans and created tables for the Window Gardening, On Site Housing, and Off Site Housing sections. Conducting cost analysis for each of the programs and opportunities. He also wrote the recommendations section and helped create the timeline, compiling our findings into more concrete guidelines to follow for implementation.

Jonathan contributed by creating the table of contents. In terms of writing, Jonathan contributed to this report by writing a portion of the background section and objective 3 details under the methods section. In the background, Jonathan wrote for the section Farming Survivability in Japan along with its subsections of the Fukushima Incident of 2011 and its effects and Difficulties in finding employees for Farm Establishments. For the findings section, Jonathan wrote the introduction paragraph for Farm to Institution. Jonathan also contributed his writing to the Farm to School, Farm to Retirement Home, and Retirement Home to Farm sections.

Kirsten contributed to this report by writing the farm section of the executive summary, the background section on farm school learning, the Midori Farm project section, as well as the objective 2 and 4 methods. She researched different types of educational farms and their benefits while comparing them to the mission of Midori Farm and the desires of the project sponsor. Kirsten also contributed to the Analysis of Midori Farm, creating graphics and writing the analysis of the two farm locations. Additionally, she wrote and contributed to the introduction of Institution to Farm as well as writing the plans for Farm to University, Farm to Cafe, School to Farm, University to Farm, and Cooking Classes to Farm. Finally, she labeled and listed the figures used in the report.

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Introduction

Farming is one of the oldest professions known to man. In fact, alongside shepherds and toolmakers, farmers helped to raise civilization to the place it is now. With the ability to put down roots, civilization could grow in one place without the need to seek wild vegetation and livestock (National Geographic Society, 2019) and farming played a key role in that evolution. Since then, farming has remained invaluable to the way we live our lives, supplying us with nutrition and allowing us to continue building our societies around the places of our choosing. However, the popularity of farming has not risen in tandem with its importance to our lifestyle. Globally, amongst developed countries and particularly with young people, the regard for farming has been falling, and nowhere is this seen as strongly as in Japan (Uchiyama, 2014). Interest in professional farming is falling at alarming rates in Japan, and with it the surrounding communities are losing their hold as well.

Despite a decrease in farming in Japan, there are still many successful small farms bringing interest back to the field. Midori Farm is a small farm outside of Kyoto owned by former English teacher Chuck Kayser. He hopes to help spark a new interest in farming and sustainable farming practices in his community by using his farm's resources and his teaching abilities. Our goal is to work with Midori Farm to create interactive educational opportunities to incorporate farm education with English learning to raise awareness on the benefits of sustainable farming.

The topics discussed in this paper include the loss in interest of sustainable farming practices in Japan, the farming industry's ability to survive in modern day Japan, the importance of farming and gardening education, and the language barriers inhibiting the communication between communities. The history of farming systems and policies helped our group pinpoint the decline in interest for sustainable farming practices. There were many indications that farmers struggled to work with the ever-changing environment upon natural occurrences and disasters. In researching different styles and understanding, traditional lecture courses garnered the least interest. Lastly, we learned that lack of communication in any group creates a divide in how thoughts are shared. In the subsequent methods chapters, the development of objectives are used to assess the issues learned from the topics.

Background

The Decline of Agriculture in Japan

In Japan, there has been a large loss of interest in agriculture. The past decade alone has seen an over 36% decline in the population of people participating in farming (Statistics Bureau, 2021). As a result, Japan's food self-sufficiency ratio has dropped to 40% in recent years, forcing them to rely on imports for a majority of their food intake (Yamashita, 2008). Part of the issue is the largely elderly demographic of farmers. Over 73% of the population engaged

in farming in Japan are 60 years old or above (Statistics Bureau, 2021). Due to this aging demographic and a lack of successors taking the job, farmland abandonment has increased dramatically. Over 40% of the farmland has been abandoned or repurposed for residential use since 1961 (Su, G, 2018; Yamashita, 2008). As this trend continues and Japan produces less of its own food, the population runs the risk of losing the food security and environmental benefits that come from maintaining a strong sustainable farming industry.

Sustainable Farming and its Slow Adoption

With a lack of interest in farming comes a lack of accountability in farmers to adhere to sustainable farming practices. These practices include growing food organically and limiting the use of synthetic chemicals in pesticides and weedkillers. Beyond making food safe and healthy for consumers, sustainable farming encourages biodiversity and has minimal negative impact on or even positive effect on local ecology and the environment. For example, on a farm on Sado Island of the Niigata Prefecture, rice paddy fields were flooded over the winter to give aquatic creatures shelter to survive the cold season. It also served as a feeding ground for an endangered bird species (Zhenmian, 2013, p. 235). With proper management, farms are able to play an active role in preserving the environment.

The concept of environmentally friendly farming began growing in Japan in the late 1990s, although its adoption has been slow. By 2000, an “Eco-farmer” certification program was established in Japan to distinguish organic farmers who adhere to environmentally friendly farming practices. However, by 2013, only 2.20% of farmland in Japan was certified as sustainable (Zhenmian, 2013, p. 235-236). Despite this, evidence shows that farm owners in Japan are largely ready and willing to implement sustainable practices. In a study that assessed farmer’s attitudes towards sustainable farming in an area of the Shimane Prefecture, a vast majority of farmers expressed a high level of concern for and interest over environmental issues in agricultural development (Rahman, 1999, p. 32). Another study analyzed perspectives among stakeholders in the agricultural field, such as farmers, researchers, and policy makers, on the issue of nitrogen overuse on farms. This is an important issue in sustainable agriculture, as nitrogen can lead to air and water pollution. The conclusion was that the stakeholders, in general, did have a good understanding of the issue and its importance. Another topic that stakeholders agreed on was the need to raise awareness of nitrogen overuse to the general public (Ragkos, 2021). Farmers seem to agree on environmental issues, but lack incentives to act on them.

Barriers to Entry and Public Disinterest

Despite positive attitudes toward sustainable farming, there are many barriers that stop farmers from adopting these practices. Sustainable farming significantly increases the labor input required to grow crops. Limiting the use of chemical pesticides and weed killers means farmers have to use more natural and manual methods. Strategies such as cultivation, mulch use, and hand-weeding become necessary to prevent weeds. To avoid pests, farmers have to maintain a diverse

population of insects and animals to keep harmful species in check (Zinati, 2002, p. 608). This requires careful planning and knowledge. It also leads to a lower and less consistent production output, especially during the transition period. On average, organic farming yields 25% less output than conventional farming globally. Even so, with proper management and time to transition, farms have the potential to return to regular or near regular yields (Zhenmian, 2013, p. 236 ; Zinati, 2002, p. 607). Despite all of this, the most important barrier that sustainable farming needs to overcome is a lack of demand from consumers. In Japan, rice produced using eco-friendly practices only sells for about 5% higher prices. However, studies show that educated consumers value organic foods at over 30% higher prices than conventionally produced foods (Zhenmian, 2013, p. 237). In order for organic farming to be profitable, more consumers need to learn the benefits and make the decision to buy organic. Until the demand for organic foods increases, many farmers simply cannot afford to lose the efficiency of conventional farming.

Farm Survivability in Japan

Fukushima Incident of 2011 and its Effects

The decline of agriculture and its interest in Japan contributes to an increased difficulty for farms to survive. The array of environmental issues that farmers must also contend with only exacerbates that struggle. Earthquakes and tsunamis are common occurrences that Japanese residents face. Contrasting natural occurrences, the Fukushima incident of 2011 was a nuclear explosion that destroyed much of the land. In the wake of the explosion, the farmlands of Fukushima had contamination of "soil and water but also made agriculture a risky business for farmers" (Kimura, 2014). A farming family had plans to sell a large amount of their organic products to a big chain grocery store, but upon the disaster of Fukushima, the grocery store cut their purchases of the products (Rosenberger, 2016). The aftermath of the incident brought along the loss of farm lands, which increased difficulties in crop production. Some farmers felt the need to drop the profession. One farmer claimed in an interview, "she was farming organically to raise children in a healthy environment and to produce safe food, so the accident undermined these fundamental reasons for her to farm" (Kimura, 2014). She therefore stopped farming based on her principles of raising her children on an organic farm. Due to the difficulties in adjusting to environmental changes, a lot of people have lost interest in trying to rebuild the lands. The effects of the Fukushima incident left farmers in a scramble for adaptation.

Difficulties in finding employees for Farm Establishments

With the aftermath of the Fukushima incident, farmers also face difficulties in finding employees for their establishment. This is a significant struggle for farmers, as a majority of them are aged 65 and above (McGreevy et. al, 2019) and will not have someone to carry on their work and livelihood in crop productions. The issue of finding employees within farming establishments can be seen when only a handful of farmers are still in need of finding someone to continue their

farming production (McGreevy et. al, 2019). To compensate for the lack of workers in the farming industry, a program was implemented that allowed foreign people to come into Japan and work on farms. “For this reason, farmers whose operations are too large for their own and family labour must hire Japanese workers or foreign trainees, mostly Chinese youth who can stay with one Japanese farm for up to three years” (Ando et al., 2013). Trainees from foreign countries help alleviate a lot of issues of finding workers for farms. The major shortcoming of this strategy is that a lot of trainees are only working for a limited time, which still does not provide workers permanently on farms. These limitations set forth the difficulty in finding employees for the general populace of farmers.

Farm School Learning

Japan’s deficit in numbers of farmers requires an innovative way to interest the population in sustainable farming and buying local food. When consumers interact with and experience the process of growing fruits and vegetables, they will be able to better understand the ways that their food gets to them (Appleton Farms Education, 2021). Farm schools are one way to make this connection with consumers, exposing them to fun and educational experiences on a local farm.

Farm schools also benefit the local community by linking agricultural education with the community’s sustainability and need for additional educated workers (Corbett et. al, 2017, p. 4). In a study surveying farm school educators, the teacher responses showed that there were some issues with a farm school structure. The issues include the conditions of the farm, finances, and teacher abilities to oversee and engage all students (Lambert, Stewart, Claflin, 2018, p. 197). Implementing a farm school education program would require looking into these potential problems in order to avoid or negate them. Additionally, despite the hope that farm schools will provide students with interest in joining the agricultural workforce, “...few school farms programs provide pathways that actually respond to the workforce needs of the industry” (Corbett et. al, 2017, p. 9). Farm schools can have their shortcomings, but when they are well developed, they contribute a beneficial education on a variety of materials to their students.

Farm Schools and the Community

Those who are associated with farm schools find there are many benefits it brings to both the farm and community. One farm school teacher expressed, “...there’s a really positive feel about the school farm, and I think that the community would generally say, ‘It’s a wonderful learning environment, it’s a wonderful space that we’re doing good things, it’s well run, it’s well managed’” (Corbett et. al, 2017, p. 4). Perception of farm schools and their effectiveness are also positive, especially from workers. A study done in Oregon, USA collected data through surveys to determine uses, perceptions, and barriers when using farm schools (Lambert, Stewart, Claflin, 2018, p. 197). Results from a question asking teachers

about the effectiveness of their schools showed, “The strongest levels of agreement [75% agreeing or strongly agreeing] were with the [questions] ‘All students have the opportunity to participate in hands-on activities at the facility’ and ‘The facilities are an extension of the classroom’” (Lambert, Stewart, Claflin, 2018, p. 206). Farm schools are seen as a beneficial part of a local community by providing students an opportunity to learn about farming and sustainability.

Gardening Education

Engaging in learning in a farm environment can give students a better understanding of the importance of a healthy and nutritional diet (Parmer et. al, 2009, pp. 215-216). Being able to interact with and view the process of growing fruits and vegetables through their senses, known as hands-on learning, teaches students nutritional habits and how their food gets to them (Appleton Farms Education, 2021; Satterthwait, 2010, p. 7). Attending a farm school that encourages interaction with the foods it produces can benefit a student’s health, as good nutritional habits can be grown from increasing their consumption of fruits and vegetables (Parmer et. al, 2009, p. 216). In a study about the impacts of school gardens on student’s knowledge of vegetables, the results found, “Participating in nutrition education improved vegetable preference, [but] participants liked the vegetables even more when the gardening component was included” (Parmer et. al, 2009, p. 216). Having a hands-on learning experience with vegetables and gardening can positively impact how the students involve good nutrition in their eating habits.

Communication with Language Barriers

Not only is method important to a students’ learning experience, but their environment plays a huge role as well. The environment in which students learn can have a major impact on their enthusiasm. In a study done on student motivation, the author explains, “According to theorists interested in person-environment fit, there are negative motivational consequences of being in an environment that does not fit well with one's needs” (Eccles et. al, 1993, p. 557). In a foreign language class, having a fun learning environment increases the chances that children will have high motivation, low anxiety, and high self-esteem when learning (Stoimcheva-Kolarska, 2020, p. 15). Children’s ability to communicate in a foreign language improves when they are in a calm and fun atmosphere for learning (Stoimcheva-Kolarska, 2020, p. 14). Practices that involve manipulating objects, exploring, and “playing” with materials have also been shown to enhance learning (Satterthwait, 2010, p. 8). One study on learning environments explains that using objects during education encourages the process of understanding the information, while also stimulating the student with play activities (Stoimcheva-Kolarska, 2020, p. 14). The combination of a playful environment and being able to interact with objects as well as communicate with other students provides a great advantage to students’ education.

The Importance of Communication and Community

Communication plays a vital role in the lives of everyone. Humans are social creatures, and as a reflection of that, we build our lives together. Having a sense of commonality is so important that it can be used to help heal people or increase their longevity (Nicholson and Kay, 1999; Ohs and Yamasaki, 2017). In the case of traumatized Cambodian women, creating a group of similar people with whom they were able to exchange their shared experiences was a vital step towards their recovery from trauma, as they shared common ground on a number of levels (Nicholson and Kay, 1999). On a broader scale, the use of community and "communication plays an important role in maintaining the psychological and physical health of people as they age" allowing for a more fulfilling experience of late age than those without (Ohs and Yamasaki, 2017; Hummert, 2010). However, because of the intrinsic link between communication and community, when one is removed, the other often goes with it, taking away all of the advantages that come with either.

Detriments of Language-Based Communication Breakdown

The inability to communicate via a common tongue can be a huge detriment to both community and learning alike. There is strength in numbers, and fragmented communities who feel they cannot talk to each other lose that strength, as well as the many benefits of an uplifting community (Morrison et. al, 1997). Rural groups in India are an example of the greater impact alienation can have, as their "size, distances, poverty, illiteracy, linguistic variety and a host of barriers have prevented [these] rural population[s], largely farmers and local craftsmen, from full inclusion in the mainstream of national growth" (Sharma, 2010, para. 1). As their fragmentation from the wealthier, more urban Indian groups increased, partially exacerbated by language barriers and an associated inhibition of communication, these groups have faced inequality in their quality of life. Despite the important role they play in the daily life of other groups, these populations have fewer resources (Sharma, 2010) and thus a lower quality of life in general. Without the greater communication abilities afforded by either better education or commonality with other groups, these populations continue to experience the negative effects of poor communication and language and dialect barriers.

Building Communication Through Language Barriers

Community can be built from nearly any base when given the proper tools. If language barriers have caused a breakdown in the collective through lack of communication, then there are a variety of approaches that can be taken to remedy this issue. One potential solution is by designing a program that specifically keeps language barriers in mind in order to properly cater to them and broaden understanding for all members of the group in the process. In a 2002 study, instead of treating language barriers as an impediment to learning, educators used them to help enrich the studies of all of the students involved. They found that there were many

possibilities for using hypermedia to explore language "where learners are culturally and linguistically diverse", enriching all of their studies in the process (Rosaen, 2002, conclusions and implications para. 8). Beyond that, another common method of building community is centering around an activity, rather than on interpersonal connection, so language barriers become less of a detriment to connection. In Hakka, Taiwan, a farm-to-table community program like this was implemented, which intended to bring together a community where researchers had noted there was a lack of communal bonding. Not only were they able to improve the general well being of those who participated, but the researchers noted "good health and well-being—cannot be achieved without building resilient societies" (Chou and Huang, 2021, conclusions para. 3).

Bonding is important for a community, as is communication, and neither can exist without the other, making language barriers an important factor to consider as they can create strong roadblocks in community-building endeavors, like those being undertaken by Midori Farm.

Midori Farm's Project

As the number of farms decreases and the ages of established farmers increases in Japan, Midori Farm aims to turn fallow fields into productive and organic farmlands, while simultaneously introducing modern practices of sustainable agriculture to the traditional farming techniques used for generations. (Midori Farm, 2017). Midori Farm was established in a small mountain village by Chuck Kayser in 2008 (Midori Farm, 2017). In the years since, Mr. Kayser has used the farm to host tours of the farm experience, to house volunteers who work on the farm, and to hold different types of events for all ages. The farm states that its mission is to "...revive farmland and rural areas through organic farming and educational events. We are striving to bring back the traditional food system to restore the health and environment of Japan." (Midori Farm, 2017).

Recently, Mr. Kayser has taken to farming full time, leaving his position as a school teacher. With his expertise in education, he has done online lectures about Midori Farm and its practices. Additionally, the farm holds events such as talks, workshops, camping trips, hiking trails, and crop harvesting, all in an effort to achieve their mission statement (Midori Farm, 2017). Since his first language is English, Mr. Kayser faces challenges of a language barrier when running a farm in Japan. The difficulties in communication make it hard for him to attain his goal of educating visitors about the importance of sustainable and organic farms.

Mr. Kayser has asked for assistance in creating a farm school to be hosted at Midori Farm that will blend together an education on farming and lessons in English speaking. He hopes to bring in more guests to the farm in order to support Midori Farm financially and to promote the benefits of local farming. The farm school lessons would not only be meant to teach students about farming and speaking English, but also about planting the seed of interest in farming culture to motivate the next generation to help Japan's farming industry.

Methods

The goal of this project is to design an educational and interactive program for the local community around Midori Farm that will assist in increasing interest in sustainable farming and provide an opportunity for students to learn English. To work towards this goal, we developed the following objectives:

1. Assess the successes and failures of similar educational programs on other farms.
2. Identify the resources Midori Farm can provide for an educational program.
3. Identify the audience and methods of engagement that keep their best interest.
4. Develop a plan to encourage student interest in attending a farm school program at Midori Farm.

We completed these objectives through research into farm schools, visits to local farm schools, and interviews with stakeholders in educational farms. In this section, we will discuss each objective and the procedures we followed to achieve them.

Objective 1: Assess the successes and failures of similar educational programs on other farms

The program we want to introduce to Midori Farm is fairly unique in nature, as incorporating language learning into educational farms is not a common practice. As such, we needed to take in information about both kinds of school programs to find a successful combination for both.

First, we began research on possible farm education programs with whom we could contact. To find these farms, we used search terms that included “education”, “farm”, “in Massachusetts”, and “in Japan” in hopes of finding a variety of programs to assess. We found 12 farms local to us in Massachusetts and two in Japan, all of which are listed in Appendix A. We then sent out emails to 9 of the local farm locations and both of the Japanese farms asking for potential interview dates. After corresponding and scheduling, we conducted six virtual interviews via Zoom with farm education program leads from the five local farms:

- Many Hands Organic Farm
- The Farm School in Athol
- The American Farm School of Thessaloniki
- Island Grown Initiative: Martha’s Vineyard Farm-to-School Program
- Natick Community Organic Farm

During this time, we also began reaching out to the contacts suggested by our sponsor and advisors, including a former farm school student, a former Eikaiwa teacher, an urban gardening specialist and program lead, and a current elementary school and university teacher.

We conducted a virtual interview with the former Eikaiwa teacher to get an idea of how linguistic learning would work with this format, the former farm school student to

understand what was meaningful in her experience, and the elementary and university professor to get an idea of how to engage different age groups.

Overall, we collected information from five small farms through nine interviews, supplementing additional understanding via research on their websites, articles about their programs, as well as a visit to volunteer at one local farm. During our interviews, we asked the generalized questions found in Appendix B, such as:

- What made you want to create a farm school?
- How long have you been running a farm school?
- How has the farm school changed since it was first started?
- Do you feel that the farm school has raised awareness of the farming lifestyle?

In addition to these broad questions, we also asked unique ones based on each school, which can be found in Appendix C. For each of the additional interviews, we used the more specialized questions for each contact as written in Appendix D. We combined this information with general observational data from our time visiting and working on an educational farm to build our understanding of what constitutes a successful farm education program.

Objective 2: Identify the resources Midori Farm can provide for an educational program.

With a better understanding of similar educational programs, we needed to assess what Midori Farm can provide to its own educational program. In this step, we determined the resources Midori Farm has that can contribute to a successful educational program. These resources included physical infrastructure, staff, budget, and connections to other institutions. We relied on semi-structured interviews with Midori Farm's owner, Chuck Kayser, for information on Midori Farm's resources.

Interviews

To better understand the type of program that Midori Farm can support, we conducted interviews with Chuck Kayser. The purpose of the interviews were to:

- Understand Midori Farm's current infrastructure and the number of students it can support.
- Assess the time, assets, and money available for an educational program.
- Compare previous educational and outreach programs or events at Midori Farm that might have had similar requirements.

From our questioning, we were able to determine the program formats that the farm can utilize. We organized our

findings to reflect what programs Midori Farm could and could not support, as well as what the farm did and did not want.

SWOT Analysis

Midori Farm is composed of two separate locations. The original farm is located in Kutsuki, while the newer location is in Keihoku, both of which are about an hour north of Kyoto. Each farm brings their own advantages and disadvantages when it comes to running an educational program. We analyzed the strengths, weaknesses, opportunities, and threats of both farms in order to compare them to each other. A SWOT table was created in order to determine how each farm is differently suited for the variety of programs.

Objective 3: Identify the audience and methods of engagement that keep their best interest.

After identifying the resources that Midori Farm has for a program, we needed to identify the populations to target for an educational farm. To accomplish this, we:

- Interviewed a teacher in Japan who has students that would be the ideal audience for an educational farm program
- Interviewed educational farms about how they engaged their students in education
- Coded the responses into student ages and the most engaging activity
- Considered additional advice given on engaging students

Interviews

To understand what keeps different demographics engaged in learning, we interviewed an educator who is both an elementary school teacher and a university professor. During the interview, we asked about:

- The ages of the students he teaches
- What keeps the different most interested in
- How engagement differs when teaching younger versus older students

Additionally, we conducted interviews with local Massachusetts farms. Since the interviews conducted had an assortment of information, the topics that were relevant for Objective 3 were questions that related to the age demographic of these programs and what kept them engaged.

Research and Analysis

The interview data we collected from Objective 1 assisted in our analysis of engagement. Notably, The Farm School, Natick Community Organic Farm, and Island Grown Initiative provided many details for us on how to properly engage students. From these schools, we learned that students have a wide array of engagement techniques listed above. The

main idea from the research is that with students being given a choice, they will put forth the effort and engagement.

Objective 4: Develop a plan to encourage student interest in attending a farm school program at Midori Farm.

With an understanding of the potential programs and their audience, the next step was to find the most effective way to market the program to reach the target audience and get them interested in an educational farm.

Understanding Farm Education

In order to understand the experiences that Midori Farm is hoping to provide, we also visited and volunteered at Many Hands Organic Farm, a local farm in Barre, MA. By getting first-hand farming experience as outlined in Appendix E, we were able to assess what a customer should expect going into a program like this and what they could get out of it. We wanted the promotion to cater to the strengths of the program. With this in mind, we assessed the best methods of marketing to reach the audience that would enjoy a farm education.

Advertising Plan

A plan was developed for advertising the farm's new educational program through the use of social media and Midori Farm's website. To do this, we analyzed the websites and promotional materials of the farms we contacted to get an idea of how educational farms brand themselves and advertise programs. We also looked at the social media pages and asked questions in interviews to learn about how they engage their existing customer base. We then compared our findings to Midori Farm's outreach efforts to see any areas where they can improve.

Findings

We begin our findings with an analysis of Midori Farm and its resources in order to explain the type of educational farm program that the farm can support. Additionally, we discuss what aspects of farm education Mr. Kayser is and is not interested in.

We distinguished three categories of educational programs: Farm to institution, institution to farm, and independent farm visits. Farm to institution and institution to farm both involve the farm partnering with an established business in order to create a partnership that shares consumers. Independent farm visits are held at the farm and do not rely on connections to institutions for their students. Within these three categories, we developed multiple plans for programs, activities, and options for housing guests, while gathering contact information for potential partnerships, analyzing costs and fees of the programs, and developing an in-depth user story.

Analysis of Midori Resources

When crafting plans for how to design this program, it quickly became apparent that the needs of our sponsor, Chuck Kayser, and the capabilities of his different locations were essential. Some programs are only possible with certain resources, and others simply do not meet his desired mission. Before discussing potential plans, there are some logistics to go over regarding Midori Farm and Mr. Kayser's desires for the program.

Midori Farm is comprised of two locations, both shown in Figure 3. The first and original is a small, yet beautiful farm located in Kutsuki, while the second one is a newer and larger farm located in Keihoku. Additional maps of both locations can be found in Appendix F.

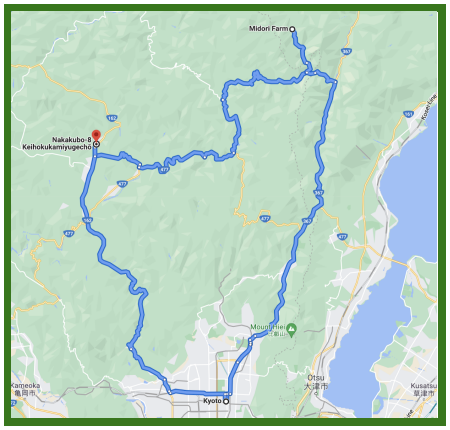

Figure 3. *Map of both Midori Farm locations relative to Kyoto. Keihoku (Left) and Kutsuki (Right).*

To determine which location would be best to use for an educational program, we conducted interviews with Mr. Kayser to determine the advantages and disadvantages of each farm site. The results were combined into a SWOT analysis, or strengths, weaknesses, opportunities, and threats, analysis table for each location.

Keihoku Location	
Strengths ● Closer, more accessible ● Larger location, more facilities ● Nearby tourist destinations (Miyama)	**Weaknesses** ● Less scenic than the original
Opportunities ● Supports about 20 visitors ● About 30 people could stay overnight for a study program on the farm ● Public transportation	**Threat** ● Overnight programs are a challenge for Mr. Kayser, as he is not around 24/7 ● Needs to buy more bedding for guests

Figure 4. *SWOT Analysis of Midori Farm location in Keihoku*

Kutsuki Location	
Strengths ● Aesthetic, beautiful location ● Farm house	**Weaknesses** ● Distance from city, less accessible ● Smaller location
Opportunities ● Cabin/hostel partnership/arrangements ● Could support about 10 students ● Can house 5-6 people overnight	**Threats** ● Partnerships might not work out ● Weather

Figure 5. *SWOT Analysis of Midori Farm location in Kutsuki*

The newer farm resides in a populated area in Keihoku. The SWOT table in Figure 4 shows that the farm is a bigger location with nearby tourist destinations to entice guests to spend a day in the area. Being in a less isolated area, the Keihoku farm is not as scenic as its predecessor. However, its larger size allows it to accommodate more guests as well as house them overnight. The Keihoku farm's location and surroundings make it well suited for a beginner educational farm.

The Kutsuki location is the original Midori Farm. As shown in Figure 5, it is located in a beautiful, mountainous, countryside. The downside to the aesthetic of the farm is that it is isolated and difficult to travel to. The size of the farm also means it would require a small class and would not be suited for a large overnight group. This could be resolved by partnering with local cabins for guests to be housed off of the farm. The Kutsuki location would be best suited for students to get the experience of going to a farm.

Both farms show a great amount of potential for running an educational program, and the information will be helpful in deciding where the program should take place.

Midori Farm's main goal is to give others the experience of organic farming in hopes of bringing excitement back to farming in Japan. After leaving his job as an English language teacher in the Eikaiwa style, Mr. Kayser hopes for a new source of revenue in an education program. His budget is limited and as one of the sole contributors to his farms, he needs a program that is easy to start with room to grow. This means the program must be cost-effective, flexible in terms of schedule, and scalable.

As we began planning for farm education models, Mr. Kayser informed us of the aspects that he would and would not want to include in Midori Farm's program. These specifics were compiled into the table shown in Figure 6.

What to Incorporate	What to Avoid
• Field trips, classes on the farm • Equal balance of farming and education • Prioritize student experience • Assigning tasks based on age • Fees for programs and accepting donations • Having a mission for the educational farm	• Boarding school • Unplanned visits • Having students as part of production • Farm tourism

Figure 6. *Table of specifics for Midori Farm's educational farm program*

Mr. Kayser hopes that his educational program will bring people to the farm for a balance of farming and education, while prioritizing the experience that students will have. Additionally, he hopes to monetize the program with fees or donations. On the other hand, Mr. Kayser hopes to avoid relying on students for production on the farm, as the program should focus more on education than productivity. In terms of

the models, Mr. Kayser does not want to do a drop-in basis for his program arrangements. The main reason behind his avoidance is the liability this type of model brings for him. Mr. Kayser wishes to give students a rough outline of the plan in advance for their visits in order to inform them of what they should expect from a day on the farm. Farm tourism is another model that he is not interested in, as it does not correlate with his farm's mission to revive farmland through education.

Combining the information of what Midori Farm can provide and what it hopes to have in its program allowed us to design multiple specific plans that can be utilized by the farm.

Farm to Institution

In farm to institution programs, farmers actively reach out to local institutions and bring the farm experience to them. Depending on the institution, farmers spend a certain duration carrying out the projects. Farm to institution programs can also influence these institutions to take trips to visit the farms directly to further enhance the farm experience onsite. The institutions discussed in this section include schools, universities, retirement homes, and cafes. Many of these farm to institution programs involve setting up a garden for the institution, for which there is an abundance of resources in Appendix G.

Farm to institution is a great starting point for outreach to local communities. There is a wide variety in which farmers can communicate their lifestyle to the masses such as developing hands-on modules to distribute to classrooms or helping restaurant businesses expand their organic production. The main idea behind a farm to institution program is to combine two separate entities that have the potential to work well together. With the active outreach of farm to institution programs, farmers are taking the initiative to connect with local institutions instead of waiting for them to make the first move. This is an effective way in which farms can promote their mission and purpose for their establishment.

In addition to the different institutions, guest speaking is a point of interest to offer to local communities. Guest speaking can take up many different forms through in-person presentations or livestreams on social media platforms. Contrary to the hands-on learning offered at the other institutions, the guest speaking audiences are listening to the first-hand experiences of farming and visualizing how it functions through the stories being told.

The benefits of a farm to institution is the potential for expansion that comes from the program. Once the programs are completed at their respective institutions, the enjoyment that comes can incentivize them to come out to the farms and experience the programs firsthand. The farmers benefit from the convenience this program offers, while the institutions have a new and enjoyable program added to their structure.

Farm to School

A farm to school program is a program in which farmers actively reach out to schools and collaborate together on educating students about agriculture.

Farm to school programs can vary in length, where students work closely together with farmers and teachers to carry out projects. For instance, Island Grown Initiative offered students projects ranging from gardening to pond building.

The farm must consider the program duration, how lessons mesh with core classes, and fees for the program. The Massachusetts Farm to School Institute program charges ¥60,000 per assigned team. The farm to school program should ideally charge ¥1,500 per student as depicted in Figure 7.

As seen in Figure 8, visiting 5 schools with 30 students each will provide a profit of ¥84,600. With these funds, farms can expand their programs; one example includes organizing field trips with these schools.

Cost		Fees		Time Commitment	
Gardening tool set	~¥5,500	School Fee	¥1,500/ student	Set up	2 days
Box (x4)	~¥20,000			Planting	2 hours
Watering Cans (x4)	~¥1,600			Harvest	2 hours
Seeds	~¥3,300			Check-Ins	Weekly, 1 hour
Soil (x4)	~¥6,000				

Figure 7. *Cost, fees, and time commitment of a farm to school program*

Fees - Costs		Time
One Time Costs	¥5,500 + ¥1,600 + ¥3,300 = ¥10,400	N/A
Set-Up	4 Square Gardens 5* (¥20,000+¥6,000) = ¥130,000	48 Hours
School Fees	Est. 5 schools with 30 students each ¥1,500 * 30 students = ¥45,000 ¥45,000 * 5 = ¥225,000	5 hour per school, 25 hours
Yearly Totals	¥84,600	73 hours / school

Figure 8. *Estimated yearly profit and time for a farm to school program*

Ritsumeikan Uji Junior and Senior High School	+81-774-41-3000 aip2008@ujc.ritsumei.ac.jp	http://www.ujc.ritsumei.ac.jp/ujc_e/
Kyoto Municipal Oike Junior High School	+81 75-221-0414 oike-c@edu.city.kyoto.jp	http://cms.edu.city.kyoto.jp/weblog/index.php?id=201209
Kyoto Municipal Kinrin Elementary School	075-771-0921 kinrin-s@edu.city.kyoto.jp	http://cms.edu.city.kyoto.jp/weblog/index.php?id=107006

Figure 9. *Contacts and websites of schools for a farm to school program*

How To Start Farm to School

- Look into elementary and middle schools and contact them. See Figure 9 for a list of schools in Kyoto.
- Provide them with the farm's mission as well as project ideas and how they are relative to the school
- Wait for administrators to decide the duration of the program and viability the project assignment
- Allocate resources and funds for the projects

The following user story is inspired by our interview with the Island Grown Initiative.

The Fall term has just begun at a local middle school in Kyoto, where the students are eager to begin their semester-long project with Midori Farm. The students are overwhelmed with the traditional classroom setting where students are kept in a classroom and listen to lectures. This change of pace working with Midori Farm allows them to learn with hands-on activities that come from farming.

Since there are 30 kids in a class, they will be divided into groups of 6 where they will work together with an advisor. This advisor would be an employee from Midori Farm who is willing to work closely with these students and carry out the project. The project assigned is developing a class garden with various tasks assigned to the groups. One task can be to lay out the soil, another task can be to learn how the crops are planted, and the last task can be learning how to harvest crops. Students will be on a trial to learn how to care for crops, such as taking into account how much water is needed, if it needs daily care or every two days. Students will also be exposed to the uses of the garden when they learn that the crops they plant will be used in their lunches.

Upon the completion of the semester, the outcome of the farm to school program is that Midori Farm and the middle school are able to complete the project and develop a fully functioning garden. In between the weeks of working together, students would be able to not only develop social skills, but also to develop bonds between the program workers. With this bond established, it will compel the students to want to further their learning of farming culture. The bond will allow Midori Farm to return to the school and continue working on different projects, potentially even working on projects that students come up with. Now that Midori Farm has been able to make themselves known at this middle school, this may also give incentive for teachers or administrators to take the students out to the farm where resources will be more open to them. The main idea is that there is now a connection between Midori Farm and the school for them to expand from. The students also have been able to experience a different classroom setting where they move from traditional and to more experiential. They are also open to the new opportunities that farming can offer. The students can apply their knowledge in making a permanent career path towards farming or environmentalism.

Farm to University

A farm to university program is similar to the farm to school program with the main difference being the age demographic of the students.

A farm to university program could be a one time event on campus, or it could incorporate farm learning into the student experience through a professor or a club. As outlined in Appendix H, these programs can be very beneficial.

The university setting would allow an abundance of students to participate in the program, as they would not require transportation to a different location. The farm would simply transport its farmers and educational material to the campus for the lesson. The educational materials and its costs for this program can be referred to Figure 10, with estimated profits in Figure 11. The program may start small, but once the university staff and students become more familiar with the farm, it would be easier to incorporate the farm's educational goals into the university in different ways.

<table>
<tr><th colspan="2">Costs</th><th colspan="2">Fees</th><th>Time Commitment</th></tr>
<tr><td>Tools</td><td>~¥1500/tool</td><td rowspan="5">Participation Fee</td><td rowspan="5">¥1000/ student</td><td>8 hours to create each garden</td></tr>
<tr><td>Garden Bed</td><td>~¥10000/bed</td><td rowspan="4">2 hours monthly of maintenance</td></tr>
<tr><td>Watering System</td><td>~¥3000/ bed</td></tr>
<tr><td>Soil</td><td>~¥300/bag</td></tr>
<tr><td>Seeds</td><td>~¥1,000/bag</td></tr>
</table>

Figure 10. *Cost, fees, and time commitment of a farm to university program*

Fees - Cost		Time
Garden	Estimated 3 gardens 3 * (¥10,000 + ¥2,000) = ¥36,000	24 hours
Maintenance	Estimated maintenance once a month 12 * (¥1,500 + ¥300 + ¥1,000) = ¥33,600	24 hours
Participation	Estimated 20 students per month 12 * 20 * ¥1,000 = ¥240,000	N/A
Yearly Totals	¥170,400	48 hours

Figure 11. *Estimated yearly profit and time for a farm to university program*

Biwako Gakuin University	+81748223388 ex-link@newton.ac.jp
Bukkyo University	+81757079110 N/A
Hanazono University	075-811-5181 soumu@hanazono.ac.jp
University of Shiga Prefecture	+81749288200 chiiki_koken@office.usp.ac.jp

Figure 12. *Contacts of universities for a farm to university program*

How To start Farm to University

- Create an event or lesson plan tailored to university aged students
- Contact local universities in Figure 12 who offer events outside of the school or university professors
- Explain the farm's mission in doing the event
- Connect with the local students to promote the farm and any additional educational programs

Figure 13. *Image of Japanese students learning about medicinal gardening from WeHa "Japanese Exchange Students Learn about Medicinal Powers of Plants"*

A sustainability club at a local university is looking to expand student's knowledge of the businesses that have a hand in shaping the environment. With the fall season coming in full swing, the club advisor invited Midori Farm to come in for a meeting and discuss with the current students about some plans and projects. Collaborating with Midori Farm will give them the opportunity to do hands-on work.

The project that both Midori Farm and the sustainability club agreed upon is to implement a garden on campus. The garden will teach the students how gardening can be sustainable. The garden will take weeks to prepare, and within those weeks, the farmer will teach students how to plant, water, and harvest crops from the garden. There will be weekly check-ins from a farm representative to see through the work the students are doing.

Now that the garden is implemented, the students continue adhering to the processes taught to them by Midori Farm and continue production. This opens up an opportunity for the students to expand through their club in fundraising. With the fruits that they planted and harvested, the sustainability club is able to make and sell organic smoothies to students on campus with funds going towards their club to keep it going.

Working on a campus garden gives the students responsibility and experiential learning on the discussions they have had. They learn about the different processes of nurturing crops and how to harvest them. Then with the production, they are able to turn it back and make smoothies to sell and fund the clubs. This shows them the process in how farming culture functions with farmers producing and selling to different manufacturers or groceries to support their establishments.

Farm to Retirement Home

A farm to retirement home program is a program in which farmers visit retirement homes and work with the caretakers on various projects.

Since retirement homes are not education based, their projects can be narrowed down. One project is gardening, as it allows them to interact with their environment and gain responsibility and control over their own production. Making a garden for the retirement home serves as a hands-on project for the elderly with help from farmers. According to TRUiC, a garden startup costs ¥375,000 to ¥500,000. Considering both the costs and profit analysis depicted in Figures 14 and 15, the fees that retirement homes should pay is ¥50,000.

The purpose of this program is to give the residents an opportunity to go outdoors and live an active lifestyle. Farms can also use this collaboration to invite the residents to come out to the farms, bringing along friends and family members to share the experience with.

Cost		Fees		Time Commitment	
Tool set	~¥5,500	Retirement Home	¥50,000	Set Up	2 days
Box	~¥5,000			Planting	1 hour
Watering Cans	~¥399			Harvest	1 hour
Seeds	~¥144			Nurturing	30 minutes
Soil	~¥458			Check-Ins	30 minutes

Figure 14. *Cost, fees, and time commitment of a farm to retirement home program*

Fees - Cost		Time
One Time Costs	55 + (¥399*4) + (¥1.44 *10) = ¥853,600	N/A
Set-Up	2 Square Gardens 5*(¥10,000 + (¥458*2)) = ¥5,458,000	48 Hours
Fees	Visiting 5 retirement homes ¥50,000 * 5 = ¥250,000	2 hours + 3 hrs (6 weeks of check-ins)
Yearly Totals	¥18,688,400	53 hours / retirement home

Figure 15. *Estimated yearly profit and time for a farm to retirement home program*

Long Life Kyoto Arashiyama	Email Inquiry button on site https://www.j-longlife.co.jp/arashiyama/
Elderly welfare facility instinct	075-254-0030 honnou@honnou.jpn.org http://honnou.jpn.org/
Medical Grand Maison Kyoto Gojo Gazen	0120-036-165 https://grand-maison.jp/contact.html

Figure 16. *Contacts of retirement homes for a farm to retirement home program*

How To Start Farm to Retirement Home

- Contact retirement homes in the region found in Figure 16
- Find out whether or not there is an existing garden
- Appeal to the administrators why it would be beneficial for the retirement home
- Implement the garden based on a criteria

Figure 17. *Image of a retirement home from The Japan Times "The gray wave: Japan attempts to deal with its increasingly elderly population"*

Midori Farm has made contact with a local retirement home and found that there is an existing garden, but it has been unused with no one to nurture it. The caretakers of the retirement home find this connection as an opportunity to change the pace of their residents and give them time to spend outdoors.

Since the existing garden had no nurturing, the farmers participating in this program must make sure that the soil is prepared for the gardening aspect to function. The caretakers can assist the farmers in preparing; this will provide them with supplemental knowledge that they can use to assist the residents once the program ends. This will also relieve the residents from doing laborious work.

With the garden prepared, the farmers and residents can work together to plant different crops and seeds. The processes that are taught to the residents involve the amount of water needed for proper crop growth and a tutorial on how to harvest the crops. Once the residents understand the basics of gardening, farmers can begin to provide them with a schedule of crop growth and how they can monitor it.

Now that the garden is being used and nurtured by the residents of the retirement home, the farmers retain their contact by doing weekly visits to check on the garden and to answer questions from the caretakers and residents.

The garden project bringing the farm to retirement homes allows the residents to change their pace of indoor routines. Bringing them outdoors to get in touch with their environment while also keeping them active in nurturing their garden. It gives them a sense of responsibility and independence within the retirement home.

Farm to Cafe

In a farm to cafe program, the farm would reach out to local cafes that host events. From there, the farm would create an event of their own to be held at the location. The style of program could also be applied to other places that hold events, such as libraries and museums.

The event would be held at a specific date and time at the cafe's location. Depending on the cafe, the event could be advertised on a website or social media, where guests can reserve their spot to attend. This would allow for better preparation regarding the amount of people attending.

Events could vary depending on the cafe's interest. One possible event could be creating a window or rooftop garden for the cafe. The garden could then be used for additional farm events in the future with the guests. Smaller activities could involve a hands-on demonstration that teaches guests how to do basic farming tasks, such as planting seeds.

The cost of having an event at a cafe depends on the hosting cafe. The farm would most likely pay for an event spot, then negotiate the profits of the event with the person who is hosting them. Figure 18 depicts the potential costs of events and partnerships, along with a profit analysis in Figure 19. A farm to cafe program would be expensive for the farm, but having an event hosted by an established business will allow them to reach new people and promote both their farm and additional educational opportunities.

Costs		Fees		Time Commitment
Partnership (Based on location)	~¥5,000-20,000	Event Fee	¥1,500-¥2,000/ person	1 hour
Event or Activity	~¥500/person	Garden Installation Fee	¥30,000	12 hours
Garden	~¥10,000/bed			

Figure 18. *Cost, fees, and time commitment of a farm to cafe program*

Fees - Cost		Time
Event	Estimated 15 participants each event, 3 events per year 3 * ((15 * (¥2,000 - ¥500)) - ¥10,000) = ¥37,500	3 hours
Garden Installation	Estimated 3 gardens 3 * (¥50,000 - ¥10,000) = ¥120,000	36 hours
Yearly Total	¥157,500	39 hours

Figure 19. *Estimated yearly profit and time for a farm to cafe program*

Kamonose-Cabin	075-854-0822 info@kamonosecabin.net	Keihoku
Punipuni-shokudo	075-741-7430 info@punipuni-shokudo.com	Keihoku
Rafu Kobo Cafe & Gallery 360	+81758521152 N/A	Keihoku

Figure 20. *Contacts and locations of cafes for a farm to cafe program*

How To Start Farm to Cafe

- Get in contact with local cafes from Figure 20 to inquire about the possibility of holding events at the location or creating a cafe garden
- Determine appropriate fees for customers and costs for implementing a garden
- Have workshops centered around creating a garden and teaching guests how to garden at the cafe
- Use the garden for future lessons and activities

Figure 21. *Image of a flower cafe from Plates of Art "Flower garden salad at Aoyama Flower Market Cafe, Tokyo, Japan"*

There are a few ways that an event may be run at a cafe or a similar hosting location.

For one, the farm may partner with the cafe to create a garden for them. The cafe would pay the farm for the installation of the garden. From there, the location may hold various events inviting people to take part in the creation of the garden, whether it be displayed in a window, around the property, or even on the roof. Construction activities could involve pouring the soil, planting the seeds, and watering the garden.

Once the cafe has established a garden at the cafe, the farm will have more of a structure for any events that are held there. Guests could come to the cafe for their regular drinks and food, then pay an extra fee to participate in a gardening activity after their meal. The farm could also incorporate lessons into the cafe events, teaching the customers about how some of the food they are enjoying originated from a farm. Additionally, the farm could provide the cafe with fresh produce for their food.

Alternatively, the farm could pay to use the cafe for a designated time and day to run their own event. This event could take the form of a lesson or an activity that customers would pay to participate in. An individual program such as this one would not require the establishment of a garden at the cafe.

At the end of the event, the farm would have time to promote their other educational programs and farm experience opportunities. This would allow them to reach a new group of potential students, as the people who visit cafes are not restricted to any demographic, unlike the school, university, and retirement home programs. The farm would reach a diverse group of people with this program, giving more exposure to their additional educational opportunities.

Guest Speaking

Guest speaking is an effective method of a farm to institution program. Midori Farm has some prior experience in offering guest speaking through TedTalks and various podcasts. Expanding through those mediums can promote the farming lifestyle as well as the different programs and workshops offered at the farms.

Guest speaking can occur in different institutions. The most common is at local schools and universities as depicted in Appendix H. With a target audience of young students who are always eager to learn something new, guest speaking at these institutions opens up an opportunity for them to hear from a different point of view. It would also incorporate critical thinking points that can stick with elementary and middle school students as they grow up. As for university students, it would help them form their current ideas and consider how these topics align with their lives.

To step away from the idea of speaking at specific institutions, there are options for guest speaking at different events. An environment that resembles a TedTalk where people of all ages can attend and listen is one way to offer guest speaking to the masses. Now that the students do not make up a majority of the audience, there is a diverse group of people attending the presentation. There is no age limit to learning different cultures, so offering an environment where anyone can join in to listen is a good way to offer guest speaking.

In the digital age of Zoom, Facebook Live, or YouTube, guest speaking can take remote forms. Whether it is the unpredictable factors of a global pandemic or a matter of convenience, performing guest speaking lectures online is another option to take. Similar to a TedTalk style lecture, anyone with a link to a chatroom can join in on the livestream. If people cannot attend the livestream, they can tune in on a video recording uploaded to YouTube or FaceBook to watch on their own time and at their own pace.

With the many different ways that guest speaking lectures can occur, farmers should feel compelled to share their experiences to the public. They have the ability to promote their establishments and what they can offer, or educate people on how farming impacts our lives overall. Guest speaking serves as an outreach to everyone of all ages, so there are no limitations to the people who are eager to learn about farming.

Figure 22. *Mr. Kayser speaking to a group of people from Midori Farm's photo folder*

Institution to Farm

An institution to farm program invites different institutions and the people involved in them to visit the farm and live out an authentic farm experience. These programs last for a certain duration, normally half or full days. The experience offered to institutions involves farming and gardening lessons that allow them to take back knowledge and sometimes a keepsake from their learnings. The institution to farm programs provided include school to farm, university to farm, retirement home to farm, and cooking classes.

Implementing an institution to farm program comes with many benefits. For one, the farm is able to find guests or students for their program by going through the institution, meaning the farm would not need to advertise themselves independently. If the farm decided to advertise independently anyway, the program would be able to reach more people, as both the institution and the farm would be promoting the event. Having an institution organize the students coming to the farm also allows the number and ages of guests to be monitored more efficiently. A school may bring a class of 20 4th grade students, allowing the farm to prepare a lesson appropriate for the size of the class and the ages of the children. The institution may also be able to provide transportation for visitors, saving on costs for the farm. An institution to farm program can be an effective program for the farm in terms of promotion, preparation, and costs.

Institution to farm programs center around bringing people out to the farm and experiencing a day in the fields. Since the farm destination is an important aspect of the program, an institution to farm would be best suited for the Kutsuki location. The Kutsuki farm is a more beautiful location, meaning a day out on the farm would be a memorable experience for the students. However, in order to convince institutions to travel the distance out to the farm, the program would benefit from starting at Keihoku. The Keihoku location is more accessible, so it would be easier to persuade institutions to visit that farm. Once the institutions have a favorable view of the program, the location should shift to the Kutsuki farm in order for a more aesthetic farm experience.

English learning can be incorporated into institution to farm programs with relative ease. Giving students an authentic experience on the farm would include doing tasks on the farm, which can be repetitive and allow time for conversation. In this conversation could be small vocabulary lessons revolving around the activities the students are doing. Alternatively, the institution could bring students out to the farm for an English lesson that uses live props and examples with hands-on learning to help memory. Learning English would be an added bonus to the program and would come naturally with the activities being done around the farm.

School to Farm

A school to farm program, also known as field trips, would see school classes come out for a day of activities planned by the farm to educate and engage students in a variety of farming activities. A field trip format could be the length of a typical school day, or it could span the course of multiple days. A curriculum could be created for the visiting school, but having a lesson plan is not required.

A benefit of school to farm is that most of the requirements can be completed by the school that is visiting, such as transportation. Some expenses would need to be covered by the farm, such as the items listed in Figure 23. These costs are also compared to the proposed fees for the trip in Figure 24.

Having a good connection with local teachers is one of the most important relationships for an educational farm implementing field trips, as they may advocate for visiting the farm again in the future.

Costs		Fees		Time Commitment
Tools	~¥1,500/tool	Field Trip Fee	¥1,000/ student	4 hours
Boots	~¥2,000/person			
Gloves	~¥500/person			
Food	~¥500/person			
Activity	~¥500/person			

Figure 23. *Cost, fees, and time commitment of a school to farm program*

Fees - Cost		Time
One Time Costs	Estimated 20 students per trip, 5 students per task (¥1,500*5) + (¥2,000*20) + (¥500*20) = ¥57,500	N/A
Field Trip	Estimated 10 field trips per year 10 * 20 * (¥1,000-¥600) = ¥80,000	40 hours
Yearly Totals	¥22,500	40 hours

Figure 24. *Estimated yearly profit and time for a school to farm program*

Kido Elementary School	+81775920005 kido@otsu.ed.jp	Kutsuki
Takashima Shiritsu Aoyagi Elementary School	+81740320039 aoyagi-es@scl.city.takashima.shiga.jp	Kutsuki
Hanase Elementary and Junior High School	+81757460131 hanase-sc@edu.city.kyoto.jp	Keihoku
Kyoto Shiritsu Kyotokeihokushochu School	075-852-1133 kyotokeihoku-sc@edu.city.kyoto.jp	Keihoku

Figure 25. *Contacts and locations of schools for a school to farm program*

How to start School to Farm:

- Get in contact with local school teachers and principals, such as in Figure 25
- Learn about what they look for in a field trip
- Create a small scale program tailored to those expectations
- Maintain a good program for a good reputation
- Program will expand as more schools become interested.

The following user story is inspired from our interview with The Farm School in Athol and is outlined as a schedule in Figure 26.

Children would arrive at the farm on a school bus, accompanied by teachers and chaperones. The trip would support upwards of 30 students, with the activities tailored for elementary to middle school children. The day would begin with a tour of the facilities, where the children would learn what the farm does, what they will be doing throughout the day, and any basic safety procedures or necessary disclosures.

Students will be asked to participate in a variety of activities. The class should be split into small groups of 4-5, each getting an adult to supervise them. After getting into groups, the students will rotate between different tasks in order for everyone to experience different aspects of farming. The rotational method will also ensure that students will not be left doing a task for too long. This time would also be the perfect time to implement language learning.

Students will be brought to one of the farmhouses for lunch. The farm may provide students with lunch made from their crops, allowing the students to help cook or prepare meals for themselves. Alternatively, students could pack their own lunch for the trip. This would be the ideal time for a discussion with students about what they did on the farm. Farmers could take time to ask or receive questions about the farm.

To end the day, the class will go outside on the farm for one last activity or for free time to play with each other and be physically active. Once their energy has been let out, they will head back to the school, just in time for dismissal.

Schedule for a School to Farm	
9:00 AM	Students arrive at the farm by bus
9:15 AM	Tour the farm and learn about what they'll be doing for the day
10:00 AM	Groups rotate at each farm task, 20 minutes each
10:40 AM	Break
10:50 AM	Continue task rotation, 20 minutes each
11:30 AM	Prepare and cook lunch
11:45 AM	Lunch and a lesson
12:30 PM	Free time on the farm
1:00 PM	Leave the farm

Figure 26. *Potential schedule for a school to farm program*

University to Farm

A university to farm program could be done in a variety of ways, such as partnering with a university which sends their students to volunteer and learn on the farm for one day.

The students could work on a project or work as volunteers on the farm. In addition to working on the farm, the students would be able to travel and visit other locations in their downtime.

Similarly to school to farm programs, there is a benefit that these students would be able to arrive at the farm either on their own or by transportation provided by the school. Since students would be doing volunteer work, extra tools and supplies would need to be purchased, some of which are shown in Figure 27. Even with these purchases, Figure 28 shows the program would be profitable with the appropriate fees applied.

Students who visit the farm and have a great experience may tell those close to them about what they did and why they enjoyed the trip. Doing so will spread the word of the farm and its educational programs, allowing more visitors over time.

Costs		Fees		Time Commitment
Food	~¥500/person	Half Day	¥1,500/person	4 hours
Tools	~¥1,500/tool			
Boots	~¥2,000/person	Full Day	¥2,500/person	8 hours
Gloves	~¥500/person			

Figure 27. *Cost, fees, and time commitment of a university to farm program*

Fees - Cost		Time
One Time Costs	Estimated 5 volunteers at once 5* (¥1,500 + ¥2,000 + ¥500) = ¥20,000	N/A
Volunteer Half Day	Estimated 10 visitors a month 10 * 12 * (¥1,500 - ¥500) = ¥120,000	48 hours
Volunteer Full Day	Estimated 5 visitors a month 5 * 12 * (¥2,500 - ¥500) = ¥120.000	48 hours
Yearly Total	¥220,000	96 hours

Figure 28. *Estimated yearly profit and time for a university to farm program*

Kyoto University	075-753-7531 ku-info@mail2.adm.kyoto-u.ac.jp	Japan
Doshisha University	+81-75-251-3110 ji-shomu@mail.doshisha.ac.jp	Japan

Figure 29. *Contacts and locations of universities for a university to farm program*

How to start University to Farm:

- Start with farm to university to make connections with universities
- Determine the scope of the program (length, distance, etc.)
- Get in contact with universities as seen in Figure 29
- Learn about what they would be interested in for a trip
- Create a day plan for a small visit
- Adjust and grow the program's scale over time as needed

The ideal user for a university to farm program would be a small group of students around the ages of 18-25.

Figure 30. *Image of volunteers working at an organic rice farm from Transitions Abroad 'Volunteer in Japan on Organic Farms with WWOOF'*

A university to farm program would begin with the farm creating a connection to the institution, either through a professor or a club. The connection to a professor could stem from them becoming a stakeholder in the farm, motivating them to promote a visit to the farm to their students. Alternatively, the farm could connect with a university club or even sponsor the creation of one themselves. Through either of these methods, the farm would have a way for university students to learn about a day visit to the farm.

The farm could offer specific days of the week, most likely on the weekends, for university students to visit. Students could send an email to the farm or reserve a spot on a visiting day in order to give the farmers a heads up on how many people would be attending for the day. If no spots are filled, the farm chores would be done without any assistance.

When the students arrive in the morning, they will hear about what tasks will be done that day and basic safety procedures. Once they're ready, they will begin the day's activities. They may prepare seeds, till the fields, water crops, harvest vegetables, cook meals, feed animals, and more. Depending on the size of the group, the students may be able to choose which chores they wish to participate in.

After completing the work for the day, the students would be welcomed into the farmhouse for a meal and time to rest and relax after the work they have done. While they eat, the students could have a conversation with the farmers about the experience the students just had or general questions about farming as a profession. When they finish their meals, the students would say goodbye and head back to campus.

Retirement Home to Farm

A retirement home to farm program invites elderly citizens to come visit the farms for various workshops and experiential lessons. This program allows the elderly population to experience farming culture.

Inviting retirement homes to workshops can be spanned throughout the week or devoted to a weekend. Workshops can be set throughout the farms for the elderly to have access and have the freedom to choose an activity that best interests them.

When working with retirement homes, the caretakers and administrators will handle transportation of the elderly to the farms as well as costs. Fees for this program follow a "pay-as-you-can" system similar to the ones referred to the Maine Farmland Trust, which gave a range of fees from ¥2,500 to ¥50,000. The ideal pricing for each retiree can be ¥1,000 as these workshops tend to run for a day or a weekend. More details of the costs and fees for this program can be found in Figure 31, and the estimated yearly profits in Figure 32.

The elderly from retirement homes will have a chance to go outside and be active in unique ways. Some elderly may have grandchildren as well to retell of their moments at the workshop, which bridges the connection between retirement homes, children, and farms.

Costs		Fees		Time Commitment	
Seeds	~¥144	Admission	¥1,000	Workshop	4 hours
Gardening tools	~¥5,500			Lunch	1 hour
Cooking Utensils	~¥3,999			Free Time	2 hours

Figure 31. *Cost, fees, and time commitment of a retirement home to farm program*

Fees - Cost		Time
One Time Costs	¥5,500 + (¥144*20) + ¥3,999 = ¥12,379	N/A
Retirement Home Fees	Est. 3 homes w/ 20 retirees each ¥1,000 * 20 retirees = ¥20,000 ¥20,000 * 3 = ¥60,000	7 hours / day
Yearly Totals	¥47,621	7 hours / day

Figure 32. *Estimated yearly profit and time for a retirement home to farm program*

Casa Kyoto Nishinoyama	075-583-5622; katsura-office@npo-human.jp
Gakusai	075-494-0318 https://gakusai-rouken.net/inquiry.html
Sa Takasumi	072-856-2001 N/A

Figure 33. *Contacts of retirement homes for a retirement home to farm program*

How to start Retirement Home to Farm:

- Contact local retirement homes, such as those listed in Figure 33
- Ensure their elderly are able to and are interested in leaving
- Create a collection of activities
- Provide the collection to residents to showcase what the program may provide

Figure 34. *Image of Nagano elderly outdoors from AARP "Secrets From The Longest Living Place on Earth"*

Retirement homes follow a certain schedule laid out by caretakers. The schedule includes giving the residents their timely medication, offering exercises to keep them active, and offering small activities such as chess tournaments or bingo matches. The issue that is found within these homes lies within this routine. It can be very redundant and at times be very lonely. With a lot of free time on their hands, they may find themselves sitting alone with little interactions or physical activity.

Offering new experiences, farm programs range from learning how to garden, harvesting some crops, or even just enjoying the scenery that the farm has to offer. These workshops provide the opportunity to come out and enjoy the outdoors that they rarely experience at the retirement homes.

Once the elderly have viewed the workshops offered, they now have a sense of what the program is going to be like and what they will engage in. When they arrive, the farmers will provide them with a tour or a pamphlet going into detail of the workshops offered that day with a map locating each one. The ambience of the program would have a large crowd of eager elders wanting to learn different farming techniques and make something worth taking home to show their grandchildren. By the end of the day's program, the elderly would have left with a good impression laid down by the farm that will want them to return either alone or with their families.

Cooking Classes to Farm

An opportunity for farm education could be cooking events on the farm. The purpose of the event would be to show people how their food gets to them from a farm, and it would provide them with a meal at the end of their day.

The farm would be able to benefit from this type of program, as the guests would help harvest their crops when they are fully grown. Additionally, the guests and chefs would be coming to the location for the day, negating transportation as a concern for the farm.

The cooking event would require making connections with chefs, as having the guests cook for themselves would be a liability for the farm. Figures 35 and 36 show that this type of program can be expensive, meaning fees would need to be higher for guests in order to make a profit.

Costs		Fees		Time Commitment	
Chef	~¥4,000/person	Full Event	¥4,000	Harvesting	1.5 hours
Kitchen Supplies	~¥5,000			Replanting	2 hours
Extra Food	~¥2,500	Preparing and Dinner	¥3,000	Preparing	1 hour
Chairs	~¥800/person			Set Up	1.5 hours
Tables	~¥3,500/table	Dinner Only	¥2,000	Dinner	2 hours
Tent	~¥10,000/tent			Clean Up	1 hour

Figure 35. *Cost, fees, and time commitment of a cooking class to farm program*

Fees - Cost		Time
One Time Costs	Estimated 30 people at once (¥800*30) + (¥3,500*5) + (¥10,000*3) + ¥5,000 = ¥76,500	N/A
Event Day	Estimated 6 events per year 30 people at each 6 * (30 * (¥5,000-¥4,000) -¥2,500) = ¥165,000	54 hours
Yearly Totals	¥88,500	54 hours

Figure 36. *Estimated yearly profit and time for a cooking class to farm program*

Hasegawa	+81740382132
Hira-sansou	+81775992058 http://www.hirasansou.com/
Yuge	+81758540019

Figure 37. *Contacts of restaurants for a cooking classes to farm program*

How to start Cooking Classes to Farm:

- Contact local chefs or restaurants as seen in Figure 37 and ask about hiring for a night
- Coordinate dinner nights with days for when certain crops are going to be harvested
- Promote the event through website, social media, and the restaurant based on what crop will be cooked

The ideal users of this type of programs would be families or groups of young adult friends.

Figure 38. *Image of a chef cooking from Edible East Bay "From Farm to Table in Rural Japan"*

The day would begin in the morning, where the guests who had signed up for the full experience would come out to the farm. From there, they would be informed of what they will be doing for the day. The group will then be shown a demonstration on how to pick the vegetables before going out onto the field to begin harvesting the day's crops. Once all the crops have been picked, the group will replant the seeds in the fields.

After the harvesting and replanting has finished, those who have signed up for the preparing and dinner event will join the group at the farm. The guests and farmers would bring the crops inside the farmhouse for washing, peeling, or cutting so they can be used as ingredients that night. They may also prepare and have lunch at this time depending on how long they have been working with the farm.

Once all the ingredients have been prepared accordingly, the guests will help the farmers set up for the dinner that night. They will bring out chairs, tables, and may even pitch tents depending on the weather for the night. The chef will arrive and guests will be seated for the night, including those who paid to only attend the dinner. Their dinner will be prepared with the food harvested by the group earlier in the day, showing the guests how their food gets from a farm to their plates.

After their meal, they can help the farmers clean up the event by putting away the chairs, tables, and tents. Guests will have had an authentic farm working experience and helped to make their dinner from fresh farm ingredients.

Independent Visits

The most important starting point should be the educational farm's mission, according to interviews with The Farm School in Athol. The mission defines what the educators want students to get out of the experience, and thus plays a vital role in the construction of curriculum in order to meet those goals. Once the mission is established, curriculum preparations can begin. Independent programs can take the form of either single-day lessons or a multi-day experience.

For single day programs, the most effective formats are either an entire day on the farm, or a shorter program for only a couple hours per day that focuses on a single lesson. The length of the class period should account for the age demographics being targeted. According to Island Grown Initiative, for every class, there should be pre-composed material, with flexibility to accommodate student interests, that aligns with the mission of Midori Farm. They believe that students feel more satisfaction when they have something to show. Lessons should be catered to general broad age groups or particular demographics, and can be advertised accordingly, as not all age groups have the same capabilities or engagement according to Natick Community Organic Farms. While Mr. Kayser was willing to accommodate children as young as 3, students of that age would need to be accompanied by a parent or guardian, and the youngest accepted without parental care would be 6 years old. There is no maximum age. Recommended youth age groups, as per Chris Irwin, are 8-10 year olds who benefit from structure and play, and university students who are looking for new experiences. The Farm School found 6-8 year olds are the most excited, where 11-14 year olds are the most productive, but engagement depends on the individual. Island Grown Initiative found that younger students were often more vivacious on the farm but older students were more connected to the community and important to reach out to.

A multi-day program would have groups of visitors staying at or near the farm overnight in order to get a longer-term farming experience. This is also an excellent chance to draw on foreign groups, like university trips, to combine with the university to farm model. Additionally, both farm locations are rather far away and inaccessible through public transportation. By increasing the stay to multiple days, the value they get out of making the trip increases. Aside from accounting for room and board costs and preparing multiple days of programming, the structure of each day on the farm will likely take a similar form to those of the single day trips, with students doing work in the morning for a farm day, then having free time during the afternoons and evenings to explore other local destinations. This program would promise a getaway from city life, giving people a cozy rural experience while they learn about sustainable farming practices. This format may also attract international participants, meaning that the language learning aspect may not be relevant to all visitors. Therefore, it might be best to separate groups into those interested in language learning and those not interested to ensure an optimal experience for both.

Farm Lesson

Farm lessons would be a model for regular programs not in connection with an outside entity. Individual students would come out for a day of activities, during which time they would learn about select farming related topics to fit with the farm's mission of profit, language, and sustainability education.

The program would be recurring, with pre-specified dates that customers can sign up for in advance. Each of these daily classes would be targeted towards either children or adults to avoid having overly disparate ability levels. Lessons would be planned in advance, so that any necessary supplies can be purchased or brought by students. To create additional promotion, days can be themed as specific "crop days." For example, a "squash day" where students plant, harvest, and cook squash.

Costs		Fees		Time	
Food/Meals	~¥200/person	Class Fee	¥1,000-1,500 /person	Prep	1-4 hr
Tools	~¥1,500/tool			Lesson	2-6 hr

Figure 39. *Cost, fees, and time commitment of a farm lesson program*

Fees - Cost		Time
Promotion	Website Maintenance = ¥5,000	2 hours
Lessons	Estimating 15 visitors/two weeks 24 * 15 * (¥1,200 - ¥200) = ¥360,000	**72**-240 hours
Yearly Totals	¥355,000	**74**-242 hours

Figure 40. *Estimated yearly profit and time of a farm lesson program*

Japan Fund for Global Environment	NGO
United States-Japan Foundation	NGO
The Japan Foundation Center	NPO
Sumitomo Foundation	NPO
Grants.gov	Government

Figure 41. *Grants and sponsors for a farm lesson program*

How to start Farm Lessons:

- Apply for grants and find sponsors for initial funding such as those found in Figure 41
- Develop lesson plans about sustainability with English vocabulary that can be adapted for age ranges
- Adapt a consent form for people coming to the farm
- Create a calendar of dates, age range, location, as well as the fee for classes (See Figures 39 and 40)
- Promote these classes via website and social media

A Farm Lesson program would be scheduled for a specific date and location and listed on the calendar, along with the age range and skill level it is targeted towards and any supplies they need to bring. Guests reserve their spots online and fill out the appropriate consent form prior to arrival on the farm. Once there, they will be guided through a lesson involving sustainability and farming, as well as any English vocabulary relevant to the lesson. Younger students will be afforded time for free play. To close out, students will cook together to further the sense of community.

Seeding Kits

Seeding kit lessons would be a s version of the Farm Lesson model. These lessons would involve students signing up for a class and learning how to plant and care for the seeds in their kit. The lessons could be conducted either virtually or on the farm as outlined in Figures 42 and 44.

This seminar would involve the creation of seeding kits based on the number of sign-ups and would need to be distributed prior to the start of the class. For online lessons, this would include a day of padding to ensure proper material distribution. Lessons would be planned in advance to suit the particular seeding kit and age demographic. Online lessons should use potting kits for accessibility between different levels of gardening space.

Costs		Fees		Time	
Food/Meals	~¥200/person	In Person Class Fee	¥2,000-3,000/ person	Prep	1-4 hr
Pots	~¥33/person			Packing	0.5-2 hr
Soil	~¥150/person	**Virtual Class Fee	¥3,000-5,000/ person	Shipping*	2-4 hr
Seeds	~¥50/person			Dispersal*	1 day
Spoon/Shovel	¥19/person			Lesson	1-4 hr

Figure 42. *Cost, fees, and time commitment of a seeding kit program*

Shipping	Local: ~¥1,000-2,000/person	Overseas: ~¥3,000-9,000/person
Packaging	~¥500-1,000/person	

Figure 43. *Logistics of shipping for a seeding kit program*

Fees - Cost		Time
In Person	Estimating 15 customers/month 12 * 15 * (¥2,500 - ¥950) = ¥279,000	**73**-122 hours
Virtual	Estimating 30 Japanese customers/month 12 * 30 * (¥4,000 - ¥2,500) = ¥540,000	**98**-192 hours
Yearly Totals	¥279,000 to ¥540,000	73-192 hours

Figure 44. *Estimated yearly profit and time of a seeding kit program*

How to start Seeding Kits:

- Locate suppliers for seeding kit materials. Create a partnership if possible
- Assemble and package kits
- Online: Distribute kits before class or give instructions. Delivery costs estimated are outlined in Figure 43
- Adjust normal farm lesson class prices to account for the increased value of a product to keep (See Figure 42)
- Expand promotional network to people who can only access it via online lessons

A Seeding Kit program would be scheduled for a specific date and location and listed on the calendar, along with the age range and skill level it is targeted towards and any supplies they need to bring. Seeding kit classes would include the added information of whether they are in person or online. Once the lessons begin, students will be guided through how to plant their seeds, with additional teaching about sustainability. Students will also be given information about how to care for their seeds once planted. In person lessons can also be concluded with communal meal preparation.

Window Gardening

Window Gardening is a program that could bring an element of farming to any establishment. Reaching out to high traffic institutions such as schools, cafes, or restaurants and offering to build window gardens would help with building connections and outreach.

This could be turned into a workshop where people visit the Farm and learn to create window gardens. Visitors would sign up and pay a fee to learn how to make their own window garden on the farm. Figure 45 shows the costs of hosting such a program, and Figure 46 is a yearly profit estimate for window gardening.

Costs		Fees		Time Commitment
Wood	~¥349 / 8ft 1”x4”	Event Fee	¥6,000/ garden	4 hours to create and distribute each promotional garden
Primer	~ ¥1,250 / gallon			
Paint	~¥3,000/gallon			
Finish	~¥3,000/gallon			
Nails	~ ¥800 / 100 nails			3-4 hour monthly workshop
Soil	~¥300/bag			
Seeds	~¥1,000/bag			
Est. Total Cost	~¥2,000/Garden			

Figure 45. *Costs, fees, and time commitment of a window gardening program*

Fees - Cost		Time
Promotion	5 Gardens = ¥10,000	20 hours
Workshops	Estimating 10 visitors/month 12 * 10 * (¥6000 - ¥2000) = ¥480,000	48 hours
Yearly Totals	¥470,000	68 hours

Figure 46. *Estimated yearly profit and time of a window gardening program*

How to start Window Gardening:

- Create a simple assembly process for a window garden
- Gather resources to build window gardens
- Reach out to businesses such as cafes, restaurants, and storefronts offering window gardens for their establishment free of cost
- Schedule workshops for visitors to come in and build their own window gardens

The program can take the form of a day-long workshop where visitors that sign up arrive at the farm and receive the materials they need to create a window garden. They will build the garden step by step, and then get the opportunity to decorate it. Depending on how long they are there. Food could be provided, or the event could be combined with a cookout to increase the value for the consumer. In the end the participants can have a choice of seeds to plant or in their garden and are given instructions to care for their plants. When finished, the participants take their custom handmade window garden home.

Pottery

Pottery would be another specialty class involving partnering with Potkishima to combine a traditional farming class with an artistic element. Lesson plans and customer sign-ups would happen in advance in coordination with Potkishima, after which proper supplies can be purchased for expected attendance. Since these lessons would be done with Potkishima, costs and profits would be split. Involvement of the potters in the teaching of the class should also be discussed before any advertisement goes out. Pottery from Potkishima, pictured in Figure 47, can be included in the kit program to bring the artistic angle to online lessons.

Figure 47. *Image of Potkishima Pottery from Midori Farm's photo folder*

Costs		Fees		Time	
Pots/clay	~¥2,000-7,000/person	Single Class Fee	¥3,000 -3,500/ person	Partner Negotiation	1-4 hr
Decorating	~¥1,000-5,000/class				
Soil	~¥150/person	Multi-Class Fee	¥6,000 -7,000/ person	Prep/lesson	2-5 hr
Seeds	~¥50/person			Setup/lesson	1-2 hr
Spoon/Shovel	¥19/person			Lesson	3-6 hr

Figure 48. *Cost, fees, and time commitment of a pottery program*

Fees - Cost		Time
Single Day	Estimating 10 visitors/month 12 * (10 * (¥3,000 - ¥220) - ¥3,000) = ¥297,600	**73**-160 hours
Multi-Day	Estimating 10 visitors/month 12 * (10 * (¥6,000 - ¥220) - ¥12,000) = ¥549,600	**83**-180 hours
Yearly Total	¥297,600 to ¥549,600 split profits	73-180 hours

Figure 49. *Estimated yearly profit and time of a pottery program*

How to start Pottery:

- Collaborate with Potkishima on cost and price splitting, as well as their involvement in teaching
- Gather the necessary supplies
- Adjust prices to accommodate product and partnership (see Figures 48 and 49)
- Expand promotion to advertise the program

The program can be done in a single-lesson or multi-lesson

Single Lesson: Students come to the farm and work to paint and decorate a piece of pottery while learning about sustainability and planting things in their pot. If firing or quick dry paint is involved, students can also plant things in their customized pot during lesson time.

Multi-Lesson: If students sign up for multiple consecutive lessons, they can work with the potters to create a piece of pottery on their own, which they will leave to cure. During consecutive lessons, they will be able to decorate their creations, and then plant something in them.

On Site Housing

A multi-day program would have groups of visitors staying at the farm overnight in order to get a longer-term farming experience. The program would promise an escape from urban life, and an opportunity to explore rural Japan.

The primary challenge of this program is housing. The farm would have to invest in beds, bedding, etc to accommodate people comfortably at the farm. The program would also require someone working at the farm to stay overnight with guests, which may make it infeasible until more staff can be hired. However, once the farm is ready, the opportunity for profit is great. The value of traveling the long distance to the farm is greatly increased if the stay is longer, and people will be willing to pay a much higher fee to stay overnight.

The choice of location is very important when considering housing. The Kutsuki location, while beautiful, is much smaller, and currently is estimated to only have space for about 6 people overnight. The Keihoku location, on the other hand, is estimated to be capable of housing up to 30 people overnight. The Kutsuki location may not be able to house a large enough group to make the effort worth it, making the Keihoku location the obvious choice for on-site housing. Both locations, however, currently lack the bedding to accommodate overnight guests. This is where the primary expense for getting on-site housing started lies. An estimate for the cost of a bedding set, as well as a recommended price which will see profit within 3 overnight night visits, is included in Figure 50.

Costs		Fees	
Futon	~¥16000/bed	Nightly Fee	~¥8000/ night
Comforter	~¥4000/bed		
Pillow	~¥1000/bed		
Total Bed Set	~¥21000/bed		

Figure 50. *Cost and fees of on site housing*

How to start On Site Housing:

- Invest in bedding, staff, etc. to accommodate 15-20 people staying on the farm overnight
- Connect with university contact, foreign and local, to gauge interest in study away programs
- Create promotional material for the farm location
- Get on travel directories, such as TripAdvisor or Yelp
- Charge a flat fee based on the length of the stay

A crowd of families and tourists, amounting to about 15 people, scheduled a weekend visit to the farm. They are given a chance to get settled in the bunkhouse before getting a tour of the farm. They are then engaged with farm tasks as well as planned activities and games throughout the day. Food could be provided through group cooking sessions with farm fresh ingredients or through planned cookouts. When the day is over, visitors are given free time to peruse the farm and go to bed at their own leisure. This repeats with different activities until they go home on the third day.

Off Site Housing

A more immediate way to implement a multi-day program is by having visitors stay at a nearby cabin or hotel. By doing this, there is no longer a need to invest in the farm or staff to accommodate guests. This also allows for more freedom for the farmer as they no longer need to be on the farms overnight themselves.

The farm could either try to collaborate to create living arrangements at a local cabin or put that responsibility entirely on the visitors. Regardless, most nearby cabins are a short drive away and transportation would have to be provided for a convenient experience, as public transportation is largely unavailable in the rural farm locations.

Off-site housing also provides an opportunity for overnight visits at the scenic Kutsuki location, which would otherwise be too small to house a large group of visitors.

While this program would be cheaper to start, the profits may take a significant hit with this approach. Lodging is expensive, meaning the visitor needs to pay more and the farm cannot charge more for housing.

Name	Address	Farm Location
Shakunage -Sansou	61-1 Katsuragawaumenokicho, Otsu, Shiga 520-0473, Japan	Kutsuki
Minshuku Hisanoya	229 Kutashimonocho, Sakyo Ward, Kyoto, 520-0462, Japan	Kutsuki
Tokuheian	Danjo-4 Keihokukamiyugecho, Ukyo Ward, Kyoto, 601-0531, Japan	Keihoku
Erba Pizza & Coffee	Hazamadani-31-9 Keihokushimoyugecho, Ukyo Ward, Kyoto, 601-0534, Japan	Keihoku

Figure 51. *Contacts, locations, and addresses of cabins and hotels for off site housing*

How to start On Site Housing

- Find nearby cabins and hotels to suggest to visitors, such as those in Figure 51
- Arrange method of transportation from housing to the farm and back
- Connect with university contact, foreign and local, to gauge interest in study away programs
- Create promotional material to market farm as a tourist location
- Get on travel directories, such as TripAdvisor or Yelp
- Plan group visit with students or tourists, charge a flat fee

Recommendations

Our findings show that there is plenty of potential for Midori Farm to create educational programs. With the limited resources available, it is important to grow into these programs gradually in order to avoid hindering current farm operations. The following is a guideline for how we recommend Midori Farm implement these programs.

Locations

Of the two Midori Farm locations, the Keihoku farm seems to be the most promising to start with. It is closer to Kyoto city, and has much more around it in terms of restaurants, hotels, activities, and schools to partner with. It is also significantly larger with more infrastructure to handle large groups of visitors. While the Kusuki location is more scenic and may leave a better impression on visitors, it will be a harder sell to get people out to a farm so out of their way.

Reach out to Institutions

The best way to start is to reach out to institutions to build a good reputation for the farm. Schools and universities are the most obvious and viable candidates for partnership. A good start would be to reach out to any known teachers directly to assess how farm education can be incorporated into their classrooms. Otherwise, reaching out to the schools outlined in Figures 9, 12, 25, and 29 would be a good first step, as well as the other institutions outlined in Figures 16, 20, 33, and 37.

Farm to Institution Activities

Without an established connection, institutions are unlikely to provide the resources to bring people to the farm. Bringing farm activities to institutions will display the value of farm education with little commitment required from the institution. These programs can take the form of lesson activities, guest speaking, or a community garden. Institutions may be hesitant to fund these programs at first, so it would be best to have grant funding to make the best possible value proposition for the institution. Resources to find grants can be found on Figure 41. A farm to institution program should involve frequent visits to the institution by the farm to maintain the relationship. The farm should hold events or visits at the institution at least once every two weeks.

Institution to Farm Activities

Once a reputation is built with an institution, they will be more willing to give a trip to the farm. When starting out, it must be ensured that there will be enough teachers and chaperones to handle the participant count. These programs should be more profitable and easier to implement for the farm. Our findings also show that there is a very high return rate for programs like this, as they provide valuable experiences for the participants. Institution to farm programs may be less frequent than farm to institution programs, as bringing a large group out to the farm is not a simple undertaking. The farm should have

one institution visit the farm every month, with the institution varying each time.

Expand Infrastructure and Program Line Up

As the farm generates revenue and gets more exposure through these programs with institutions, it can expand and implement more involved programs and experiences. Money made from these programs can be reinvested into creating the infrastructure necessary for overnight visits, or to creating independent programs that do not rely on institutions. One investment we would deem necessary for expansion is in staff. In our research, we have not found many educational programs that were run without a dedicated staff. If Midori Farm hopes to expand and accommodate larger groups for its educational programs, it should consider hiring staff to help out. With a larger staff and more programs, the farm can move into independent programs held at and promoted by the farm only. These events should be held once every other week, with frequency increasing over time as Midori Farm adjusts to running these programs.

Promotion

Midori Farm will need to spend time updating their promotional material for these new programs. First off, a new section in the website is needed to list these new programs, including a calendar of events. The website should also include a sign up for email newsletters for the farm, which would send information about the programs once or twice every month. The farm's social media sites should also be used to promote events as they are approaching. Putting flyers up in Kyoto Station that have the farm's locations, contact information, and programs listed would also help get the word out on individual programs.

Timeline

With our recommendations, we propose a timeline of establishing connections with institutions. This timeline, as shown in Figure 52, could be applied over multiple years, as the farm can always create more partnerships. We focused our timeline around creating and maintaining connections over winter and having events during spring, summer, and fall in order to correlate with the farming season.

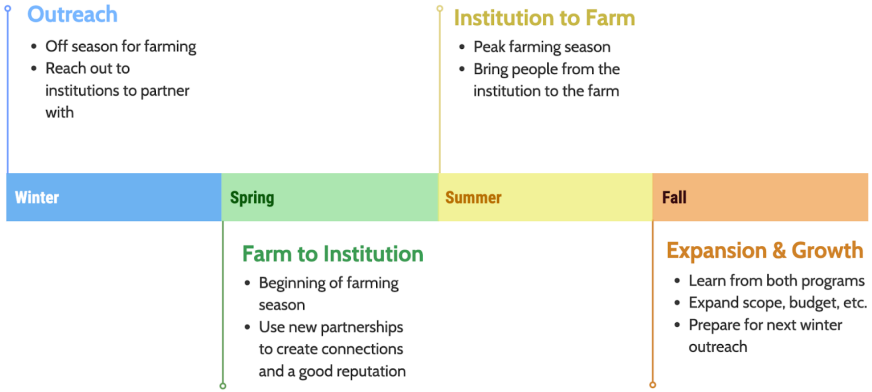

Figure 52. *Proposed timeline for Midori Farm's implementation of an educational farm*

Conclusion

Midori Farm hopes to spread the experience of organic farming and bring back Japan’s farming industry. As more of Japan's youth grows up in urban environments, they miss out on experiencing the profession that brought civilization to where it is today. It is vital that farms like Midori Farm make efforts to share the farming experience and remind people of the importance of responsible farming practices. By creating educational programs and opportunities to discover farming, participants will have a better understanding of farming and a few may even be inspired to pursue it as a profession. Incorporating English learning into the programs further increases the value for participants in a country with a very small number of English speakers. Using our recommendations and plans as a guide, Midori farm can implement these programs in a financially sustainable way and spread their message to a new audience.

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Appendices

Appendix A - Farm School Contacts

Farm	Address(es)	Contact Info	Interviewed?
American Farm School	Thermi, Thessaloniki, Greece	Contact Sheet on website	Yes
Appleton Farms Educations	200 High Street Boston, MA 02110	info@thetrustees.org (617) 542-7696	No
The Farm School	488 Moore Hill Rd., Athol, MA 01331	ayla@farmschool.org, patrick@farmschool.org (978) 249-9944	Yes
Groton Farm School	Luina Greine Farm School 65 Common Street Groton, MA 01450	holly@grotonfarmschool.org (978) 790-5286	No
Hillside School Farm	404 Robin Hill Street Marlborough, MA 01752	admissions@hillsideschool.net	No
Kindle Farm School	708 VT Route 30, Newfane, VT 05345	sellinger@kindlefarm.org	No
Many Hands Organic Farm	411 Sheldon Rd, Barre, MA 01005	farm@mhof.net (978) 355-2853; (978) 257-1192	Yes
Martha's Vineyard Farm-To-School Program	Island Grown Schools, P.O. Box 622, Vineyard Haven, MA 02568	noli@igimv.org 508.687.9062	Yes
Moku Moku Farms	12048 Yono-Yahara, Iga City, Mie Prefecture 518-1152 JAPAN 3609 Nishi-Yubune, Iga City, Mie Prefecture 518-1392 JAPAN	info@moku-moku.com	No
Natick Community Organic Farm	117 Eliot Street, Natick MA 01760	Info@natickfarm.org (508) 655-2204	Yes
Niijima Gakuen Junior and Senior High School	3702 Annaka, Annaka City, Gunma Prefecture 379-0116	office@mail.neesima.ac.jp 027-381-0240	No

Appendix B - Farm School Owner Interview Questions

1. What made you want to create a farm school?
2. How long have you been running a farm school?
3. At this moment, how do you weigh out the advantages and disadvantages in having a farm school on your farm and in the community?
    a. Has the farm school increased attendance to your farm?
4. Were there any steps that you took to implement
5. your farm school? What were they?
6. Do you regularly get visitors to attend the school?
7. How has the farm school changed since it was first started?
8. How frequent are classes?
9. How do students typically get to the farm school (in terms of transportation)?
10. Do you collaborate with any schools? For instance, having field trips or being a guest speaker?
11. Do you feel that the farm school has raised awareness of the farming lifestyle?
12. How have you promoted your farm school to students?
13. Would you be willing to let us interview some teachers at the farm school?

Appendix C - Personalized Farm School Interview Questions

Many Hands Organic Farms

1. Do you feel that some events (seed starting, mushroom growing, mulch and care practices for fruits) could lead to a full-time educational program as opposed to temporary?
2. How are the events advertised to the local communities?
3. Is there a fee needed to be paid or is it free admission?

The Farm School

1. Did you start as a farm before becoming a farm school? If so, how did you transition?
2. How do you reach out to schools to participate in visits such as the 3-Day program?
3. How do you reach out to children in general for your summer program?

Natick Community Organic Farm

1. What is taught in your Forest Gnome program? How is it more beneficial to students than regular kindergarten?
2. Does the 7:1 student to teacher ratio help or hinder the program? Why?
3. How does the school at the farm differ for each grade or age?
4. What impact does the apprenticeships and teen work crew have on its participants?

Martha's Vineyard Island Grown Farm to School

1. Could you give a rundown of how these programs work when collaborating with schools? Given that the programs work from K-12, do they serve as electives or are they incorporated in core classes?
2. K-12 Program/Curriculum:
    a. Where do lessons take place? How often do children visit the farm? How often do you visit schools?
    b. Do students typically stick with the program throughout their education?
    c. Which topics/lessons do you feel engage students best?
3. How do you organize field trips, what topics do you focus on in more limited time periods with students?
4. What age groups do you feel are most engaged with farming?

Appendix D - Additional Contact Interview Questions

Questions for a Former Eikaiwa Teacher

1. How long have you been teaching Eikaiwa?
    a. How did you learn about Eikaiwa? How did you become involved?
2. How is Eikaiwa learning structured?
3. How are classrooms structured in Eikaiwa? [e.g. are they divided by proficiency? Age? How are these distinctions determined?]
4. Do you have experience with other language/English learning models?
5. How does Eikaiwa differ from other language teaching models?
    a. How does teaching English to Japanese speakers differ from teaching Japanese to English speakers?
6. What is your opinion on combining Eikaiwa with a more hands-on learning model?

Questions for a Former Farm School Student

1. How long did you attend a farm school?
2. How did you learn about the farm school before going?
3. How often did you go to farm school?
4. What did you enjoy about going to Farm School?
5. When you were at the farm school, what did you learn about?
6. What kind of activities have you done in a farm school?
7. Can you describe a typical day at the farm school?
8. Was this your first time learning about what it is like to be on a farm?
9. What did you enjoy about the environment? Do you think being on a farm enhanced your learning experience?
10. Was there anything you did not enjoy about the farm environment?
11. Do you feel your views on environmental sustainability would be the same had you not attended the farm school? Why?
12. Are there things you wished you learned on the farm but did not? What were they?

Questions for a Current Elementary School and University Teacher

1. How old are the students that you teach, both in elementary school and university?

2. How does teaching younger students differ from teaching older students?
3. What are the advantages and disadvantages of teaching younger students?
4. What are the advantages and disadvantages of teaching older students?
5. How are you able to keep your students engaged in their education?
    a. How does it differ for different ages?
6. What activities, if any, do students enjoy most when learning new material?
7. How would you incorporate a field trip to a farm school for your elementary school students?
8. Would you do a farm school trip with college students? What would it look like?
9. How much authority do you have as a teacher/professor to decide field trips for your students?
10. What program offerings would draw you in for a field trip?

Questions for an Urban Gardener

1. Can you tell us a little bit about your [urban farming] program?
2. What do you offer to schools and teachers?
3. How did you create and maintain your relationships with businesses/schools/people?
4. How do you fund or monetize your program?
5. What sort of advertising do you do for your program?
6. What's your overall strategy to spread urban farming skills?
7. Do you have social media? Who runs it?
8. Would indoor farming be something to do in the off-season? Can elaborate about indoor farming for us?

Appendix E - Experience at Many Hands Organic Farm

Many Hands Organic Farm Visit Timeline:

We arrived at Many Hands Organic Farm at around 8am, and upon getting out of the car we were greeted by three dogs and a cat, all of whom were very friendly. We were asked to leave the animals outside when we came in, at which point we were introduced to all of the volunteers who would be working with us, offered breakfast, and immediately tasked with joining the group of people who were opening garlic cloves for replanting. While none of us chose to partake in breakfast, we sat with the others and engaged in lively conversation while they ate theirs, during which time we continued to peel and separate garlic. At this point, we were asked to split up as a second task was proposed, with one member of our group going off to feed the livestock while the rest continued to separate garlic cloves. After feeding the turkeys and pigs, and peeling nearly two full baskets of garlic, the two groups reunited to begin planting the garlic where the farmers had previously left off. During this time, we rotated between peeling the rest of the garlic, tilling the field in preparation, and planting rows of garlic bulbs, all the while having discussions with the other volunteers and workers. Once all of the garlic was planted (right as we got hit with the rainstorm the weather had predicted), we fed the chickens and then headed inside. When inside, we were assigned a variety of tasks again, this time moving between organizing containers and lids meant for storing broth, cutting up vegetables for lunch, and cleaning additional containers. During this time, one of our group members separated to talk to one of the farm owners about games, his former industry. When we finished organizing and cleaning, we gradually transitioned into making lunch from vegetables from the farm, which we did while continuing to converse. This conversation carried over as we sat down to eat the food we had prepared together. We ate several dishes and tried a new fruit as well. Once we were done with our meal, we gathered our things and left, all commenting that we had such a great time and ought to return when we could.

A collection of our thoughts about our experience visiting and working at Many Hands Organic Farm:

Liv Bell:

When I was young, my next door neighbors were ranchers with no children. As such, I spent a lot of time on the ranch, helping with chores when they asked, running around the area and discovering new exciting details about the environment, and laughing as we all made pizza in their homemade wood fired oven. So when we arrived at Many Hands, I immediately remembered my time on the ranch. It felt a bit like coming home. The chores went as I expected, following fast paced but simple instructions one step at a time, getting our hands dirty peeling/planting garlic and feeding animals. However, something I had forgotten from my childhood was the community that farmwork builds. I’m not the kind of person who can blend seamlessly into new environments, it usually takes time

learning my surroundings and the people I am with before I can feel comfortable. That wasn't the case at all at Many Hands. As soon as we entered the house we were welcomed like long lost friends, given work like trusted colleagues, and offered food like family. As we worked, we all talked, sometimes about broader academic interests, sometimes about ourselves; the farmers and volunteers asked us as many questions as we had prepared to ask them. It was extremely fulfilling, and I felt very valuable doing every task they handed us. By the time we left, we all were making plans to see when we could come back for another CSA day. Even soaked in rain and covered in dirt, I can't remember a moment at Many Hands where I wasn't smiling or laughing.

David Danielian:

Prior to Many Hands, I had no farm experience beside gardens in my backyard. I was expecting to get my hands dirty and was prepared to perform laborious tasks. When we got to the farm, we were welcomed kindly by the farmers and put straight to work, our first task being splitting garlic heads into cloves for planting. This required some arm strength, but we were also given a butter knife and shown how to do it an easier way. After this, we went off to the field to plant the garlic. We were shown how to plant the garlic. The first few cloves I planted my spacing was off, but the mistake was caught early and I was able to continue successfully. Overall, the tasks were not as physically demanding as I thought they would be. Though repetitive, the tasks were fulfilling and friendly banter with the farmers made the experience fun. Next we helped the folks at Many Hands prepare lunch. This was a very fun part of the experience. It was incredible to see all the delicious food that we could make with the food grown directly on the farm. Overall I am very thankful for the people at Many Hands, the experience was fantastic and the people were phenomenal, and I hope to go back one day for more.

Jonathan Nguyen:

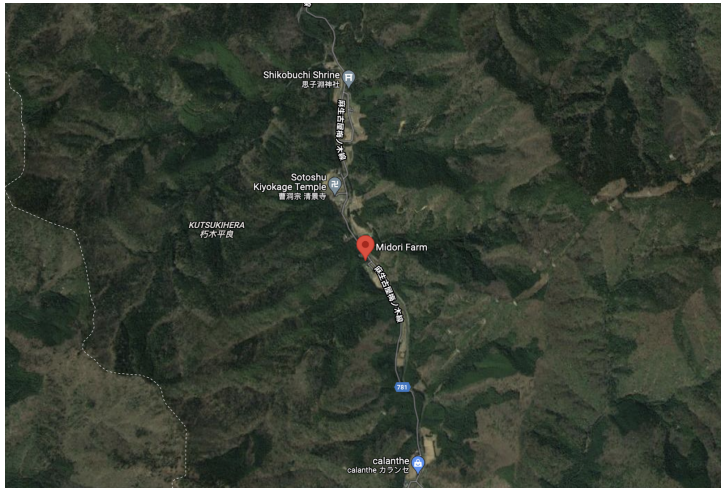
I have never been to any farms nor experienced farm living ever in my life. I was a little anxious at how the day would pan out as I myself am not a very active person nor do I participate in laborious activities. I wondered if I could be of any help to the owner and the volunteers. When we arrived at Many Hands, we were greeted by three dogs and a cat which I found to be very wholesome. They weren't intimidating and let us pet them - it relieved any anxiety or stress I had before arriving onsite. The owner let us in and introduced us to many different volunteers of different ages. Since that day was a CSA day, we went straight to work peeling out cloves of garlic. This task was very simple and the volunteers showed us different techniques that were efficient. There were lots to do that morning, at one point we were separated with some of us peeling garlic while the others tended to the turkeys. Once those tasks were completed, we began the process of planting the garlic. Similarly to the previous tasks, we were separated into two groups: one tilling the land, the other planting the garlic. One of the volunteers also took us to feed the chickens (we even got pictures with the

chickens!). That just about wrapped up the tasks assigned for the day, so the owner invited us in for lunch that we helped cook. It was quite delicious and the ambience was very lively, everyone engaging in conversation. It felt very communal and as if I had known them for many years. Before we left, the owner invited us to come back anytime we'd like. The farm experience at Many Hands was like no other, everyone was nurturing and welcoming. As educational as it should have been, it was pretty fun too being there with my team and everyone who was working on the farm.

Kirsten Roethel:

Before going to Many Hands, the only farm experiences I had were agritourism farms as a child. When we were preparing to visit them for the experience, I expected us to walk around the fields while they explained what they do at the farm and how they do it. I assumed we'd ask questions, learn about how a farm functions, and maybe get to pull some crops. What I was not expecting was to be greeted by the farmers almost as one would greet family, then being led into the kitchen to immediately start the chores for the day. We separated cloves of garlic to be planted, filling up buckets worth of them, all while conversing with the farmers and CSA visitors. As soon as we finished, we went out to till the ground and plant the cloves. It was an active day, much more active than I had anticipated. The environment was also very welcoming, as they let us stay for lunch as well. When it was finally time to leave, all of us expressed how great of an experience it was, how much we'd love to go back, and how we'd recommend visiting the farm to our friends. Going to Many Hands Organic Farm gave us some much needed perspective on what farm education can look like.

Appendix F - Additional Map Views and Farm Images



Satellite and street views of both Midori Farm locations: Kutsuki (Top) and Keihoku (Bottom)

Appendix G - Resources from an Urban Gardener

Presentation about Urban Farming
Urban Farming – First Taste! presentation.

Lessons
Beginners' urban farming lessons
Advanced urban farming lessons
Online customized urban farming workshops

Online Lesson Resources
Urban Farming Essentials
Balcony and vertical farming
Eco-friendly gardening
Kids gardening projects
Keeping your garden alive over summer

Urban farming workshops, lectures, seminars, and team-building programs.

Gardening Programs
School Urban Farming Options brochure
Urban Farming Quick Start Pack
Beginners Food Growing Pack
Garden Installation Service
Urban Farming Resources: How-to guides, Articles, InfoPaks,

Additional Articles and Resources
Aoba-Japan Salad Breakfast and Aoba-Japan Food Donation & Food Bank Tour
Grow For Good, Food Havens Tokyo, How to grow healthy food in the city

Appendix H - Chris Irwin's Class Experience

After conducting an activity with his university class, Chris Irwin was kind enough to share his experience with experiential/authentic learning vs. static research based methods.The activity assigned to his students was to do research on the topic of sustainability, form complex questions to ask to two guest speakers (one of whom was Chuck Kayser), conduct an interview lead by a designated leader with each of the guests, and then apply the knowledge they had gained to a research project about sustainability in other countries as compared to Japan.

During the process of implementing these lessons, we conducted our interview with Mr. Irwin about how to engage different age demographics. Whilst he answered our questions, he asked how we would engage Japanese university students based on the other research we had conducted. Given the farm schools we had already talked to and the information they provided, our answer was to attempt to draw them into conversation naturally by asking the guest interviewees to ask the students questions in return. That way the conversation would feel more authentic instead of a bland question-answer format, building off the idea that authenticity breeds satisfaction that several farm education programs noted.

After all of the steps of the activity had been completed, Mr. Irwin returned to us with feedback on how his class had responded. He said that he was overwhelmingly pleased with the outcome, finding that there had been very little copying between students and that the reports had improved a very significant amount since their initial assignments. Not only was he pleased with this growth, but he wanted us to know that he found the improvements were further along than he had anticipated, and that involving guests in the process was what he anticipated had been the main reason for that. Because of their ability to engage with real people on a real topic that connects to their own lives, the students were more engaged in the material and produced better results.

The major takeaway of this that he wanted to convey was the importance of bringing authenticity to traditional learning the way that it is incorporated into farm education. Mr. Irwin said that he was very pleased with the results and plans to conduct a similar project again, demonstrating the effectiveness of farm and institution partnerships.