

Hawaii Farm to Early Care & Education Statewide Survey Results



Conducted by Farm to Keiki
Report by Jessamyn Wead, MPH, Farm to Keiki Operations Director
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Introduction

In August 2019, Farm to Keiki conducted the first statewide Farm to Early Care & Education (ECE) survey in Hawaii. Farm to Early Care & Education offers increased access to local foods, gardening, hands-on learning, and family engagement opportunities to children, families and providers in the early care setting. These activities support the health and education experiences of children aged 0-5 in all types of ECE settings including preschools, childcare centers, family child care homes, Head Start/Early Head Start and 4K programs in K-12 school districts. The goals of the survey were to:

- Establish baseline data for farm to ECE participation in the state
- Learn about existing farm to ECE activities taking place on sites across the state
- Assess challenges and successes in starting and implementing farm to ECE activities
- Determine trainings, resources, and networking tools to help providers start or grow farm to ECE activities, with a goal of making farm to ECE accessible to all children in Hawaii

This project was funded by USDA's Supplemental and Nutrition Assistance Program, from the Hawaii State Department of Health and support from the Hawaii Farm to Early Care and Education Hui. This report has been modeled with permission after the *Results of the First Wisconsin Farm to Early Care and Education Provider Survey* report conducted by the University of Wisconsin, Madison¹.

Survey Methods

The Hawaii Farm to ECE Statewide Survey drew from various other Farm to ECE state surveys provided by the National Farm to School Network, and was designed to be applicable to the unique environment and culture of Hawaii. It was structured to collect specific information on the following four focus areas of Farm to ECE: gardening, local food procurement, nutrition-based education, and parent or caregiver engagement. Additional questions were added to determine the participants' interest in potential resources and trainings to support the implementation of Farm to ECE efforts at their early care site.

The survey was disseminated via email through various farm to school channels in Hawaii, including the Farm to Keiki mailing list and the mailing lists of members from the Hawaii Farm to ECE Hui. The survey was distributed and available during the month of August 2019. To incentivize participation, respondents who completed the survey were eligible to receive a free Farm to Keiki curriculum book (retail value: \$35).

Summary of Survey Findings

Survey Response & Demographic Information

This Hawaii Farm to ECE Statewide Survey summary includes results from 127 qualified respondents. Responses were received from across the state, with representation from 6 islands including Oahu (61.8%), Hawaii (15.4%), Maui (12.2%), Kauai (8.1%), Molokai (1.6%) and Lanai (0.8%).

Survey responses were received from a wide range of sites and centers representing different program models. Tuition-based or family-funded private preschools represent the largest group of respondents (56.3%). Licensed family homes (15.9%), Head Start and/or Early Start Centers (6.3%), Infant/Toddler Centers (6.3%), Family Child Interactive Learning (6.3%), and child care operated by a school district (3.2%) were also represented in the survey results.

Of the various sites and centers represented in this survey, approximately 94.1% were providing care to preschoolers (3 to 6 years old), 48.3% were providing care for toddlers (13 months to 36

¹ Center for Integrated Agricultural Systems. *Results of the First Wisconsin Farm to Early Care and Education Provider Survey*. University of Wisconsin Madison; 2018.

months), and 23.7% were providing care for infants (birth to 12 months). The majority of respondents were Directors of their site (36.2%), followed by those who indicated they are teachers (22%), Family/Home childcare provider (14.2%), and teacher assistants or teacher aides (8.7%). Other staff or administrative positions were listed less than 1% each.

Participation in Farm to ECE Activities

What is Hawaii Farm to Early Care and Education?

Hawaii Farm to Early Care and Education (HI Farm to ECE) increases access to local foods and enhances the quality of education in all ECE settings through a variety of activities including:

- *Building on-site gardens,*
- *Buying, preparing, and serving local foods in meals and snacks,*
- *Facilitating hands-on learning and play in food, nutrition, and agriculture, and*
- *Engaging families in health and wellness.*

One of the main functions of the survey was to determine how many ECE sites in Hawaii currently engage in farm to ECE activities, or are interested in doing so. Survey respondents were asked numerous questions pertaining to their participation in farm to ECE activities as described in the box above.

School Gardens

Gardens are a favorite farm to ECE activity as they offer a setting for hands-on nutrition education, experiential education, access to fresh produce, and opportunities for family engagement. Whether on a window sill in the classroom or in a raised bed outside, gardens help shape the nutrition environment of early care and education sites around Hawaii. Even better, fruits and veggies from the garden are great for use in meals and snacks too.

Of the 127 respondents, 77 (60.6%) indicated there is a school garden currently at their ECE site. There were 30 respondents (23.6%) who indicated they do not currently have a garden, but had one in the past; and 20 (15.7%) who indicated they do not currently have a garden and to their knowledge have never had one.

Of the ECE sites that currently have a garden, the number of children using the garden at each site ranges from 0 - 300. The most frequent response was 9 respondents indicating 6 children at their site use the garden regularly, followed by 8 respondents indicating 20 children and 7 respondents indicating 40 children use the garden regularly. Approximately 17% of respondents indicated just one teacher at their site uses the garden with the children, whereas 14.5% indicated two teachers, 15.8% indicated three teachers, 11.8% indicated four teachers, and the remainder indicated a varying number of teachers at a frequency of less than 10%.

The majority of food being grown in the garden is used for educational activities and taste tests as indicated by 62.3% and 58.4% of the respondents respectively. Snacks (33.8%) and meals (16.9%) were also indicated as uses for food grown in the school garden. Approximately 39% of the respondents indicated that the children at their ECE site take some of the food home with them.

Respondents most frequently indicated that the school garden is used primarily on a weekly basis to teach garden activities (38.2%), with less frequent responses indicating daily (14.5%), monthly (19.7%) or a few times per year (21.1%). Approximately 80% of respondents who do not have a school garden indicated they are interested in starting one in the coming year.

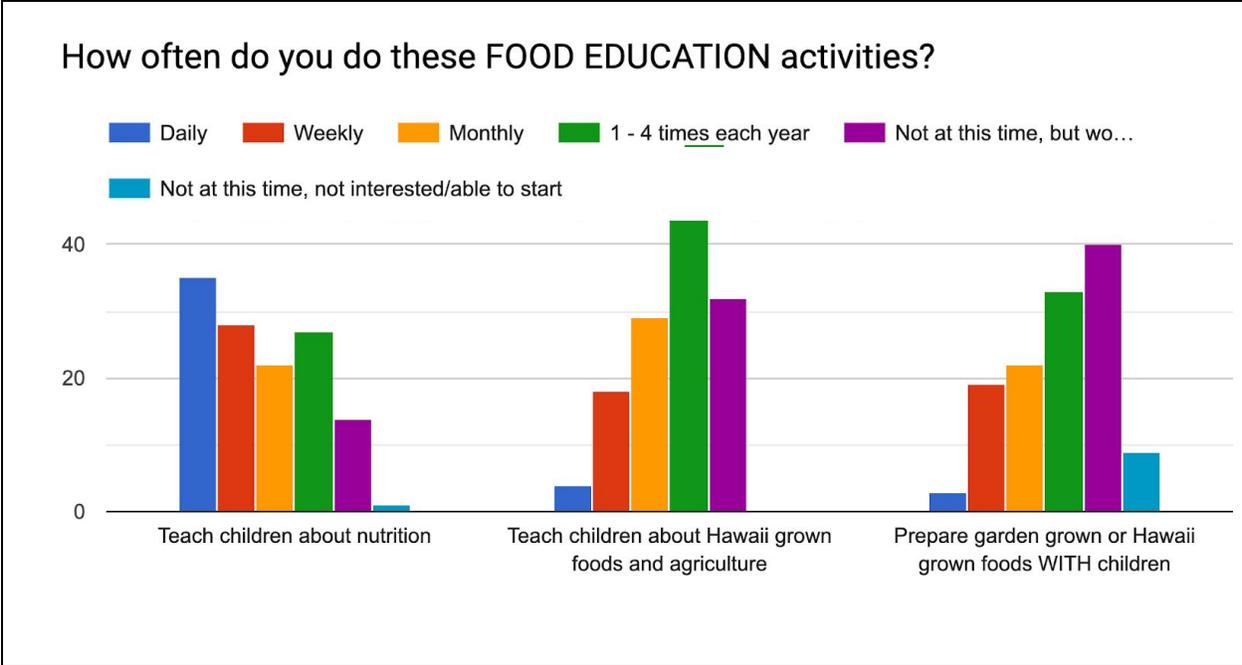
Farm to ECE Curriculum

Farm to ECE offers abundant opportunities for hands-on learning in food, nutrition, and agriculture, and can be included in almost every part of a child's day. This includes teaching children about where food comes from and how it is grown through books, dramatic play, or song. It may also include field trips to farms, farmers' markets, or gardens outside of the early care site setting. The addition of cooking, gardening, or food-related items to a sensory table provides additional opportunities for learning. Farm to ECE offers children practice using gross motor skills through activities like pushing a wheelbarrow in the garden, or fine motor skills by using a magnifying glass to observe a seed sprout. Be it through the use of a formal curriculum guide, lesson plans found on Pinterest, or impromptu seasonal experiments, there are a variety of ways to integrate farm to ECE into the learning day.

The majority of respondents (65.1%) indicated they create their own curriculum for teaching farm to ECE activities, while 23% indicated that they do not use any curriculum and 18.3% indicated using the Farm to Keiki curriculum. A few other curriculums such as the Hawaii School Garden Curriculum Map were indicated by less than 5% of respondents.

The survey asked about three different food education activities performed at the respondent's ECE site. The responses to this question are below in Figure 1. As indicated, nearly half of childcare providers are teaching children about nutrition on a daily or weekly basis (47.6%). Education about local Hawaiian-grown foods appears to be taking place less frequently with the most common response indicating 1 - 4 times per year (34.6%). Food preparation activities with children are the least frequent with the most common response indicating it does not occur at all (38.3%), however the vast majority of these respondents indicated their interest in incorporating these activities into their curriculum.

Figure 1: Responses to question regarding the frequency of farm to ECE food education activities occurring at the childcare site.



Use of Locally-Grown Foods

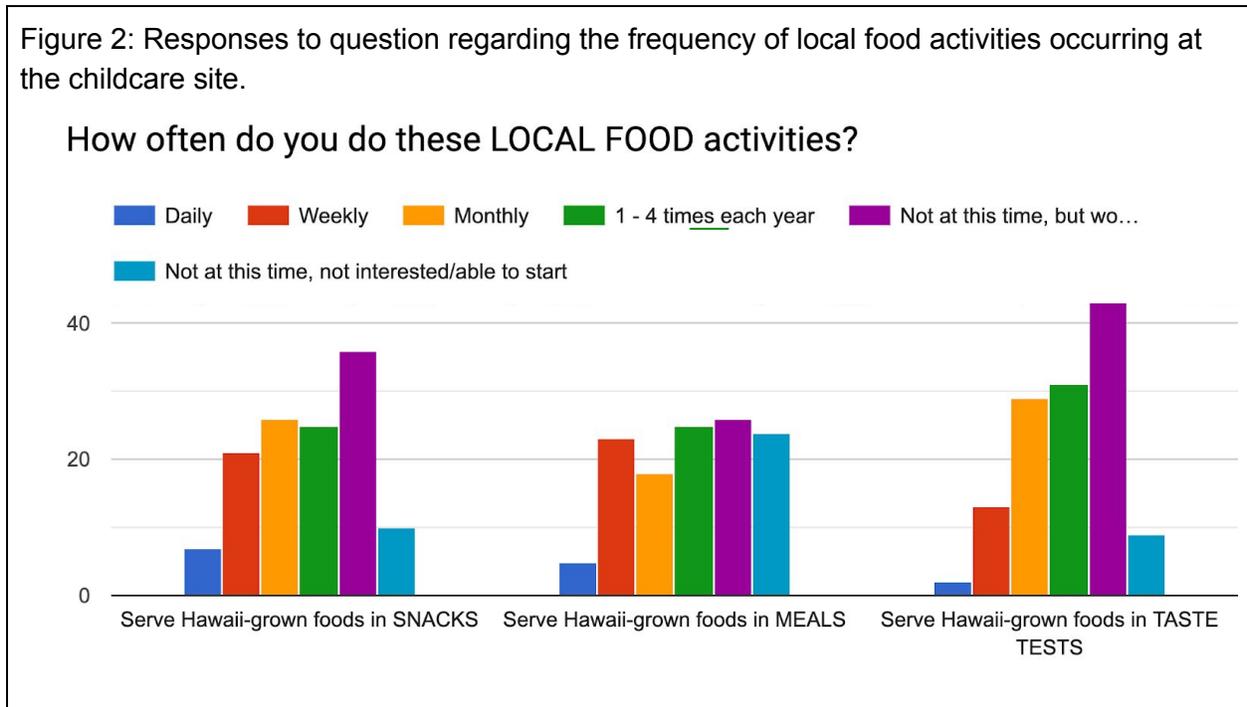
Buying, preparing, and serving local foods in meals, snacks, and taste tests is a core farm to ECE activity. Early care sites have the opportunity to fill meals and snacks with a wide variety of Hawaii-grown fruits, vegetables, dairy products, and proteins to benefit child health and support Hawaii’s farmers. Local foods can be purchased in a wide variety of ways, such as from local farmers, farm stands, farmers’ markets, grocery stores, through distributors, or in a weekly produce box through a Community Supported Agriculture program. Even if preparing meals and snacks is not an option at a site, caregivers can engage children in seasonal food taste tests, which is a great way for children to try new foods.

This survey inquired about the source of food being served at childcare sites in order to understand who/which entity is providing the children with their meals and snacks. The respondents indicated that most meals (breakfast & lunch) and snacks are provided by the site itself, with children also receiving a lot of their food for lunch from their parent or family (32.6%). Only about half (54.5%) of respondents indicated they are satisfied with the nutritional quality of the food that is served to the children at their site, whereas 30.9% indicated dissatisfaction. The other 14.6% wrote in responses that included a mixed level of satisfaction, many indicating that not all students receive equally nutritious meals.

73% of respondents said they would like to see more Hawaii-grown food served to children at their site. 26.2% indicated they are interested in serving more locally-grown food but would like

more information about it, and one respondent indicated no interest in serving more locally grown food. The desire for more information about serving locally-grown food is reflective of the infrequency of serving these foods in meals, snacks and taste tests compared to other farm to ECE activities described previously. The graph in Figure 2 indicates that when local foods are being served, it occurs most often in snacks (63.2% indicated local foods served in snacks compared to 58.7% in meals and 54% in taste tests), however there are more responses in each category indicating that this activity is not occurring on a regular basis.

Figure 2: Responses to question regarding the frequency of local food activities occurring at the childcare site.

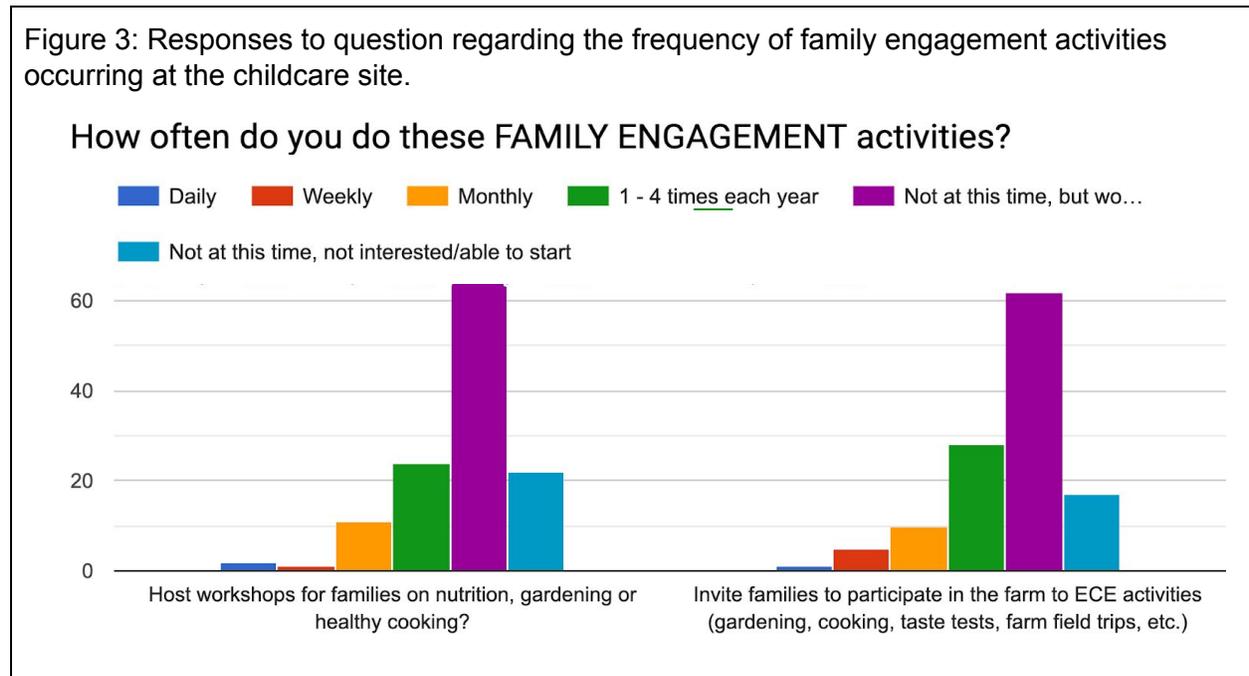


Family Engagement

Family engagement is central to early care and education quality. When families are involved in education, everyone including the children, the program and the families themselves benefit. Early childhood sites can foster strong partnerships with family and caregivers through farm to ECE activities. With the emphasis on health, community connections, local food, hands-on learning, and diversity, farm to ECE programs can also: promote social and racial equity; inspire parent-child activities; and help sites collaborate with families to determine their needs, interests, strengths, and goals.

Despite the importance and value of this farm to ECE activity area, survey responses indicate providers participate the least in this area, with approximately 69% of farm to ECE practitioners indicating no parent engagement activities as evidenced in the purple and light blue bars in

Figure 3 below. However, the respondents in purple (approximately 50%) indicate that they are interested in incorporating more parent engagement in to their farm to ECE activities.

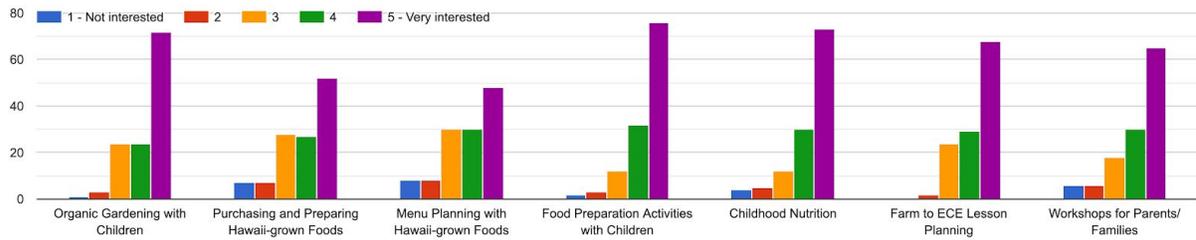


Support Needed for Farm to ECE

Respondents were asked a series of questions about activities and farm to ECE subjects they are most interested in, barriers faced during/preventing implementation, and needed resources to move forward with farm to ECE. The topics respondents are most interested in learning more about are spread across all four farm to ECE activity areas, with an emphasis on food activities, gardening and family engagement. The topics that received the highest interest ranking (receiving the most 4's and 5's) were food preparation activities with children (87%), childhood nutrition (83%) and farm to ECE lesson planning (79%). Organic gardening with children (77%) and workshops for parents and families (76%) also received a high level of interest among the survey participants, as seen in Figure 4 below.

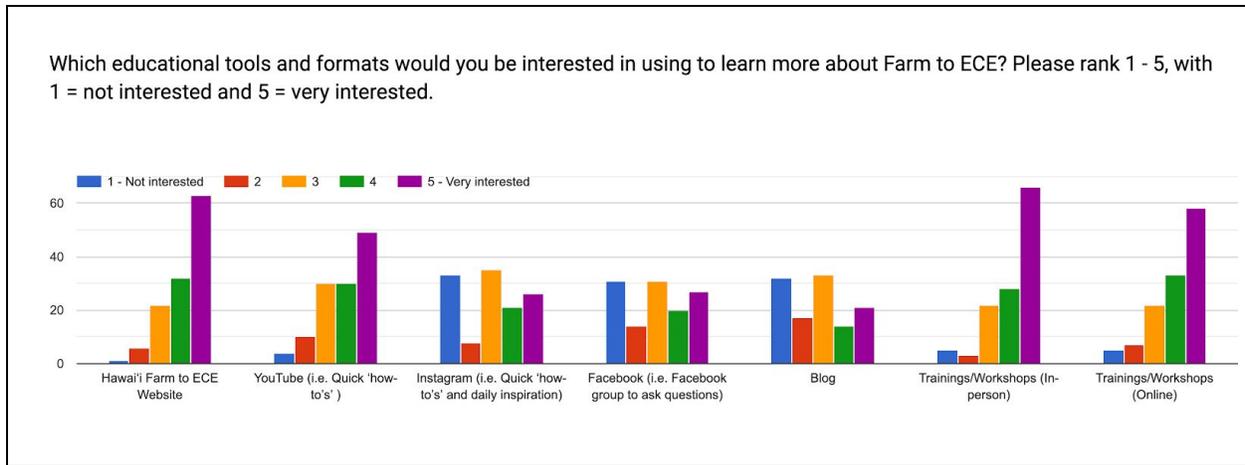
Figure 4: Responses to question regarding the interest level in learning about different farm to ECE topics.

Which Farm to ECE topics are you interested in learning more about? Please rank the following topics 1 - 5, with 1 = not interested and 5 = very interested.



In an effort to better understand which formats the respondents prefer to get more information and/or training on the farm to ECE topics they're interested in, the survey listed a variety of educational platforms and tools and asked respondents to rank their preference. The three most popular options as shown in Figure 5 below were a Hawaii farm to ECE website (76.6% ranked with a 4 or 5), in-person trainings/workshops (75.8% ranked with a 4 or 5), and online trainings/workshops (72.8% ranked with a 4 or 5). YouTube tutorials had moderate to high interest (64.2% ranked with a 4 or 5), while Instagram, Facebook and blog posts garnered the least interest.

Figure 5: Responses to question regarding the interest level different farm to ECE learning platforms.



A section in the survey on perceived barriers to starting or expanding farm to ECE activities at the respondent's childcare site indicated the greatest perceived barrier was a lack of time for staff to engage in these activities (47.5% of respondents to this question indicated a lack of staff time was a major barrier and 40.3% said it was a minor barrier). There were predominantly more minor barriers indicated than major barriers. Among them, most frequently indicated were a lack of familiarity with farm to ECE (71% indicated it as minor or major barrier), lack of sufficient space for garden or farm to ECE activities (68% indicated it as minor or major barrier), and lack of familiarity with locally grown Hawaiian food (58% indicated it as minor or major barrier). The table in Figure 6 shows the number of responses for the potential barriers listed in the survey.

Figure 6: Number of responses to a list of potential barriers to starting or expanding farm to ECE activities at the childcare site.

	Not a barrier	Minor barrier	Major barrier
Not enough space (for garden or activities)	39	66	19
Limited staff time	15	50	59
Limited staff interest and engagement	44	53	27
Lack of support from site decision-makers or program administration	78	32	14
School regulations/restrictions	72	31	20
Not familiar with Farm to ECE	35	63	25
Unaware of appropriate curriculum	45	59	19
Insufficient kitchen equipment to prepare fresh foods	47	43	30
Not familiar with Hawaii-grown foods	51	61	10

Discussion

The primary goals of the inaugural Hawaii Farm to Early Care and Education survey were to 1) establish a state-level baseline of farm to ECE implementation and 2) assess the tools and resources most needed to expand and strengthen the reach of these activities. Survey participation rates and results show an enthusiastic foundation for farm to ECE in Hawaii.

Survey Reach & Participation

The function of this survey was to establish a baseline of existing farm to ECE participation in the state. There is existing data from the results of the 2018 National Survey of Early Care and Education Providers (NFSN, 2018) which includes 21 Hawaii survey responses. This new statewide survey conducted by Farm to Keiki gathered responses from 127 Hawaii early care providers, garnering a higher response rate than expected. Both the survey participation rate and results indicate a good foundation of farm to early care activities in the state of Hawaii. In general, survey respondents indicated a varied level of participation in farm to ECE activities and showed enthusiasm for farm to ECE regardless of their current participation level.

Participation in the survey was incentivized by the opportunity to win a free Farm to Keiki curriculum book, which may have played a role in the higher-than expected response rate. As an opt-in survey, it is likely providers familiar with or supportive of farm to ECE were more likely to respond. Further, because the survey was only distributed through email networks, and not through an exhaustive list of all ECE sites in the state, it is very likely a high number of Hawaii sites did not receive the opportunity to complete the survey. Due to these sampling limitations, the survey results do not represent the full spectrum of ECE providers in the state. In the future, a more equitable approach to survey distribution may not only yield a more representative sample, but could yield useful insights from providers less familiar with farm to ECE that impact resource development and trainings.

Challenges & Barriers

Of the 127 survey respondents engaged in farm to ECE activities, there are common themes about the barriers and challenges faced in starting or increasing activities across the four farm to ECE activity areas. Primarily, lack of staff time or interest ranks highest among the major barriers. Barriers relating to lack of garden space and familiarity with farm to ECE curriculum also rank within the top barriers. These challenges could be improved through farm to ECE education for teachers indicating a need for training and outreach.

A positive result was that “lack of support from site decision-makers or program administrators” was not indicated as a significant barrier to farm to ECE implementation, with the majority (approximately 63%) listing it as not a barrier. Similarly, “school regulations” was indicated as a very low ranking barrier.

Respondents also added barriers relating to funding in the comment section. One thing to keep in mind is that the type of greatest challenges listed— funding, time, and space—are likely common to the ECE environment in general, and may not be specific to implementing farm to ECE activities.

Notes by Activity Area

Gardens

The survey results demonstrate that farm to ECE providers are familiar with the concept of gardening or growing food with children and many engage frequently in activities in this area. However there is nearly a quarter of respondents who indicated that there currently is no garden in use at their site, whereas there was one previously. This could be attributed to the stated barrier of lack of teacher interest or lack of familiarity with farm to ECE topics, such as growing and maintaining a garden. This suggests that more information and training on gardening related topics could improve the rates of ECE providers utilizing workable garden space, and organic gardening with children was indicated by respondents as the top interest of further education. Another barrier limiting participation in gardens is “not enough space for gardening or activities”. This suggests new resources can work to broaden the definitions of ‘gardens’ to include smaller outdoor areas, indoor growing activities or field trips to off-site gardens that are beneficial for children.

Farm to ECE Curriculum

Many childcare providers currently include a variety of farm to ECE activities in their programs: from cooking activities to lessons in the school garden. However, with only half of the respondents reporting to teach children about healthy nutrition on a regular basis, there is a great need for further support and encouragement to vastly grow that number. The predominant barrier to these activities is finding appropriate curriculum or lesson ideas to implement, piggy-backing on the reported lack of familiarity with farm to ECE topics. This demonstrates the opportunity to highlight the existing curricula and resources specific to the early care setting to save providers time. As providers appear to have a high interest in gaining more information and training in farm to ECE, any opportunity to streamline access to appropriate curriculum materials and their connections to learning standards is beneficial.

Use of Locally-Grown Foods

Many providers indicate that they sometimes incorporate locally grown products into the food served to the children, especially in snacks (63%) but less so in meals (59%) or taste tests (54%). The predominant challenge associated with using local foods is the lack of familiarity with Hawaii-grown foods. This provides an excellent opportunity to provide education about local, seasonal food produced in the state and where it can be purchased. Currently, a large portion of meals are being provided by the children’s family. This suggests that there is also a

big opportunity to impact the use of local foods in meals by providing information and training to parents/families as well as the childcare providers.

Family Engagement

This activity area may be the most effective for extending the nutritional and educational benefits of farm to ECE beyond the childcare setting. However, family and caregiver engagement appears to be the least implemented strategy of the four activity areas. This may be simply because sites do not think of extending farm to ECE activities beyond the early care setting, or lack ideas or resources for family engagement. With 76% of respondents indicating high interest in learning more about how to incorporate family trainings and education in their ECE practice, there is great potential to grow the farm to ECE offering beyond the ECE setting and into children's homes.

Training and Resources

Survey respondents, regardless of current participation in farm to ECE, were queried about their preferred ways to learn about farm to ECE in Hawaii. The top two responses, a Hawaiian Farm to ECE website and in-person trainings, emphasize the need to provide flexible training opportunities and easy-access resources for busy providers. Responses support the build out of a robust and user-friendly website that can provide online tools to support in-person and online trainings. Web-based trainings also ranked highly as a preferred tool for learning about farm to ECE, likely for their ability to be archived and viewed at any time, while also providing professional development credits. Farm to Keiki currently offers monthly in-person trainings for farm to ECE, but this suggests targeted webinars for an ECE audience may be beneficial.

About Farm to Keiki

Farm to Keiki exists to support the Farm to Early Care and Education movement in Hawaii. Since its inception in 2010, Farm to Keki has developed curricula, spearheaded various pilot programs, trained teachers, presented at conferences and lobbied for Farm to School legislation. Farm to Keiki is a founding member of the Hawaii Farm to School Hui. Caring for the health and education of Hawaii's youngest children, while connecting them to the 'aina, will always be at the heart of what we do. Farm to Keiki is based on Kauai and led by Tiana Kamen.



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