IOWA FARM TO EARLY CARE AND EDUCATION SUPPORTS CHILD NUTRITION AND HEALTH: RESULTS FROM A STATEWIDE SURVEY

2020 RESULTS
BY ARLENE ENDERTON, IOWA STATE UNIVERSITY EXTENSION AND OUTREACH FARM, FOOD AND ENTERPRISE DEVELOPMENT PROGRAM
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Photo credit for front page photo: Children learn how foods grow at Northeast Iowa Community Action Head Start.
EXECUTIVE SUMMARY

Farm to Early Care and Education (F2ECE) introduces young children to healthy foods from local farms between the ages of birth and five, when their taste preferences are developing. F2ECE involves a set of strategies that help children develop healthy habits at a young age, support local food and farm businesses, and contribute to developing a more equitable food system.

F2ECE strategies include:

1. Procuring food grown on local farms to feed young children;
2. Professional development for early care and education providers to implement F2ECE;
3. Child education, which includes learning about food and farming, hands on gardening, and nutrition education;
4. Activities to help families make better nutritional choices; and
5. Gardening, to feed and educate children and to share what is grown with families.

To better understand how F2ECE strategies were being implemented across Iowa, the Iowa Farm to School and Early Care Coalition conducted a statewide survey in the spring of 2020 to better understand the prevalence of F2ECE activities across the state, the perceived benefits of F2ECE, and barriers that make the implementation of F2ECE activities more difficult.

METHODS

From March 2 to April 26, 2020, a statewide survey of early care and education providers was fielded. While participation was voluntary, 834 individuals\(^1\) from 95 of Iowa’s 99 counties who work at early care and education programs responded to the survey.\(^2\) The sample of respondents provided a good representation across all early care and education settings. Most respondents worked at in-home daycare (which includes child development homes, registered with the Iowa Department of Human Services, and child care homes, which are not registered, 300 respondents), followed by licensed centers (211 respondents), public preschool programs (163 respondents), and Head Start/Early Head Start (154 respondents). Five respondents who responded “other” to the question about where they worked also completed the survey. Survey results indicate that licensed centers care for the most children per site, on average 45 children, and reach the most children statewide when compared with other types of providers. Head Start/Early Head Start and the statewide voluntary preschool program (SWVPP) reach a higher percentage of low-income children, on average, than in-home care providers and licensed centers not receiving Head Start or SWVPP funding.

FINDINGS

Overall, survey respondents expressed interest and excitement about F2ECE. Specific findings include:

F2ECE implementation

Respondents were asked to identify the F2ECE activities they had implemented in the past year along with plans to conduct such activities in the future. Findings related to the implementation of F2ECE include:

- Seventy percent (565 of 802) of respondents to the Iowa F2ECE Survey had implemented at least one F2ECE activity in the past year.
- In-home care providers implemented F2ECE strategies at the highest rate (76 percent) when compared with other types of providers. Licensed centers implemented F2ECE strategies at a slightly lower level, with 72 percent implementing at least one type of F2ECE activity. Public preschool and Head Start programs implemented F2ECE at the lowest level (66 percent and 62 percent, respectively). These findings are important because the providers that serve the most children in the state and the most vulnerable children implement F2ECE at lower rates.
- The most implemented F2ECE activities were gardening, local food education, and serving locally grown food in meals, snacks, or taste tests.

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\(^1\)In order to be considered a respondent, individuals had to complete at least one of the three priority questions.

\(^2\)Since survey respondents were self-selected, it is likely that respondents with an interest in F2ECE may have responded to the survey in higher numbers than those without an interest.
Thirty-two percent of respondents have an edible garden at their site and 28 percent have container gardens. When these are combined, 45 percent of respondents have some sort of garden (15 percent have both a container garden and a traditional garden).

Forty-two percent of respondents have educated children about locally grown food, how food grows, and/or where it comes from. Nearly as many (41 percent) have served locally grown food in meals, snacks, or taste tests.

Forty-four percent of respondents have implemented three or more types of F2ECE activities in the last year. This may be a better estimate of the proportion of respondents who have a comprehensive F2ECE strategy, because they are implementing more than two activities.

In-home care providers were implementing a comprehensive F2ECE strategy more commonly than other types of providers, with 53 percent implementing three or more F2ECE activities in the past year. This was followed by public preschool programs (43 percent), licensed centers (39 percent), and Head Start/Early Head Start programs (34 percent).

**Figure ES1:** In-home care providers implemented F2ECE more commonly than other types of providers.

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>Implementing F2ECE</th>
<th>Intend to Start</th>
<th>Do not Intend to Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-home care (294 respondents)</td>
<td>76%</td>
<td>17%</td>
<td>7%</td>
</tr>
<tr>
<td>Licensed center (200)</td>
<td>72%</td>
<td>19%</td>
<td>10%</td>
</tr>
<tr>
<td>Public PreK (156)</td>
<td>66%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Head Start/Early H.S. (147)</td>
<td>62%</td>
<td>33%</td>
<td>5%</td>
</tr>
</tbody>
</table>

*Some lines do not add to 100% due to rounding.

**Benefits of F2ECE**

The survey provided a list of 13 potential benefits of F2ECE. Findings related to the benefits of F2ECE include:

- Respondents chose an average of 7.09 benefits (out of 13 possible), demonstrating they believe F2ECE creates numerous benefits.
- Nearly all respondents agreed F2ECE teaches children where food comes from and how it is grown (90 percent) and improves children's nutrition and health (82 percent), making these the most commonly identified benefits.
- In-home providers were more likely than other types of providers to perceive lower meal cost as a benefit of F2ECE. Public preschool program respondents were more likely than other respondents to perceive teaching children where food comes from/how it is grown as a benefit. Head Start respondents stood out by being more likely than other respondents to perceive engaging parents and families, enhancing public relations, and meeting learning, licensing, and programmatic standards as benefits of F2ECE, all of which related to overarching Head Start goals.

**Barriers to F2ECE**

The survey asked respondents to select from a list of 15 barriers to starting or expanding F2ECE activities. Findings related to the barriers to F2ECE include:

- The top barriers identified by respondents were lack of funding, space, and time, and not knowing about F2ECE strategies.
- A surprising number of respondents (151) indicated they had implemented at least one F2ECE activity in the last year, but did not know that the activity was part of a larger F2ECE concept. This indicates they were implementing these activities.
without an awareness of the F2ECE movement in Iowa or the available resources. It also demonstrates that respondents see value in F2ECE activities even if they have not been introduced to the larger concept and may be receptive to implementing a more comprehensive F2ECE strategy.

- On average, in-home providers identified the fewest barriers (2.18 barriers) and public preschool teachers identified the most (3.26). Licensed center respondents were more likely than other types of providers to experience lack of funding as a barrier to F2ECE. Head Start respondents were more likely to identify lack of space for a garden as a barrier, and public preschool program respondents were more likely to not know about F2ECE.

**Figure ES2:** Lack of funding, space and time are the greatest barriers to implementing F2ECE.

<table>
<thead>
<tr>
<th>Barriers</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low/no funding to implement new activities</td>
<td>40%</td>
</tr>
<tr>
<td>No/limited space for gardens or activities</td>
<td>39%</td>
</tr>
<tr>
<td>Lack of staff time or capacity</td>
<td>37%</td>
</tr>
<tr>
<td>Did not know F2ECE activities are an option</td>
<td>36%</td>
</tr>
<tr>
<td>Lack of knowledge of gardening, local foods, culinary skills, etc.</td>
<td>21%</td>
</tr>
<tr>
<td>Limited parent or caregiver interest</td>
<td>18%</td>
</tr>
<tr>
<td>Limited understanding of using CACFP for local food and/or F2ECE</td>
<td>17%</td>
</tr>
<tr>
<td>Insufficient kitchen equipment to prepare local foods</td>
<td>15%</td>
</tr>
<tr>
<td>Unsure how to manage children in F2ECE activities</td>
<td>14%</td>
</tr>
<tr>
<td>Liability or food safety concerns</td>
<td>13%</td>
</tr>
<tr>
<td>Lack of curriculum guides</td>
<td>13%</td>
</tr>
<tr>
<td>Unsure how to find, buy, or prepare local foods</td>
<td>10%</td>
</tr>
<tr>
<td>Unsure how to align activities to learning standards</td>
<td>8%</td>
</tr>
<tr>
<td>Other*</td>
<td>7%</td>
</tr>
<tr>
<td>Lack of support from site decision-makers or admin.</td>
<td>7%</td>
</tr>
<tr>
<td>Language or cultural barriers with parents or caregivers</td>
<td>5%</td>
</tr>
</tbody>
</table>

*children not in childcare in summer (9), no barriers (6), transportation (5), access to local food (5), garden situations (4), childcare setting just starting (3), policy barriers (3), lack of agency to make changes (3), not age appropriate (2), scheduling around school schedule (1), lack of knowledge regarding support available (1), community focus on commodity rather than food production (1), lack of storage (1), three hour program only provides snacks (1)

**DIFFERENCES BY PROVIDER TYPE**
The survey showed differences between various types of early care providers (See Table ES.1). While in-home care providers implement F2ECE more commonly and implement more types of activities on average than other types of providers, they also care for fewer children. Hence, while it may be easiest to implement F2ECE in the in-home setting due to fewer barriers, it impacts fewer children. Licensed centers, on the other hand, serve the most children in Iowa, but face slightly more barriers to implementing F2ECE than the average in-home provider.
Table ES.1: Key differences in F2ECE experiences between four types of early childhood providers

<table>
<thead>
<tr>
<th></th>
<th>In-home</th>
<th>Licensed center</th>
<th>Public preschool</th>
<th>Head Start</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Respondents</td>
<td>300</td>
<td>211</td>
<td>163</td>
<td>154</td>
</tr>
<tr>
<td>% implementing F2ECE</td>
<td>76%</td>
<td>72%</td>
<td>66%</td>
<td>62%</td>
</tr>
<tr>
<td>Most common F2ECE activity</td>
<td>Local food education</td>
<td>Gardens</td>
<td>Field trips and gardens</td>
<td>Field trips</td>
</tr>
<tr>
<td>Most common benefit of F2ECE</td>
<td>Food education</td>
<td>Food education</td>
<td>Food education</td>
<td>Food education</td>
</tr>
<tr>
<td>Biggest barrier to F2ECE</td>
<td>Low/no funding to implement new activities</td>
<td>Low/no funding to implement new activities</td>
<td>Did not know F2ECE activities are an option</td>
<td>No/limited space for gardens or activities</td>
</tr>
</tbody>
</table>

Public preschool teachers and Head Start/Early Head Start teachers reported facing the most barriers in implementing F2ECE, possibly because they may need to make institutional level changes to be able to implement F2ECE or staff is stretched thin meeting the many federal and state requirements of these programs. Public preschool program teachers were the least likely to have prior knowledge of F2ECE, which may indicate the need for increased public outreach and marketing strategies through the Iowa Farm to School and Early Care Coalition (F2SEC). Despite these challenges, public preschool programs and Head Start/Early Head Start serve a high percentage of low-income children, making these strategic locations for reaching Iowa’s most vulnerable kids. In addition, a large proportion of Head Start/Early Head Start providers indicated they have not yet implemented F2ECE but intend to start, pointing to an opportunity to target outreach to these providers.

RECOMMENDATIONS

Based on the findings of the Iowa Farm to ECE survey, there are a number of steps that can be taken to address the systemic barriers faced by ECE providers when implementing F2ECE. Iowa policymakers can consider the following four recommendations:

Policy recommendations

- **Provide funding to ECE providers to support and incentivize F2ECE**: A lack of funding for F2ECE activities was identified by ECE providers as the top barrier to implementation. ECE providers lack incentives to source products locally and often lack adequate food budgets to purchase locally grown products that ensures farmers a fair price or to start gardens to produce their own food. The state can explore additional funding opportunities that have been successful in other states, including a purchasing incentive through the Child and Adult Care Food Program (CACFP) of an additional 10 cents for meals prepared with locally grown products.

- **Support the network of local food coordinators**: Lack of staff time and capacity was a common barrier identified by ECE providers. Iowa has a network of local food coordinators, FoodCorps members, and partners who can help ECE sites procure local food, arrange farm field trips or farmer visits, and provide classroom lessons. However, these positions often need financial support. The state can fund local food coordinators working for ISU Extension and Outreach, Resource Conservation and Development, and non-profit organizations through direct assistance or grants and by funding the Regional Food Systems Working Group to coordinate efforts.
• **Incorporate F2ECE into the state’s technical assistance and training infrastructure:** Some providers surveyed noted that they needed more information on F2ECE strategies, while others were completely unaware of F2ECE. To equip ECE staff with the proper tools and knowledge to identify local food producers and incorporate F2ECE into curriculum, the state can infuse training and technical assistance on local food purchasing, gardening, and local food education into Iowa’s existing training infrastructure (e.g., CACFP trainings, licensing consultants, community college ECE degree programs).

• **Develop a statewide communication plan for increased awareness of F2ECE:** To address lack of awareness around the benefits of F2ECE, Iowa can launch a statewide education initiative and marketing plan to teach communities about the importance of buying and consuming locally grown products. This initiative can include best practices from other states, including the promotion of a statewide “Harvest of the Month” calendar to support nutrition education in the classroom, a statewide award/recognition program to showcase exemplary Farm to ECE/School programs in communities, as well as an interactive website for farmers to connect with other producers and potential ECE providers interested in purchasing locally sourced food.

In addition to state policymakers, the Farm to School and Early Care Coalition (F2SEC) plays a significant role in creating a supportive statewide system that can promote the equitable expansion of F2ECE across Iowa. The F2SEC can consider the following five recommendations:

**Farm to School and Early Care Coalition recommendations**

• **Continue to build cross-sector statewide system change for F2ECE:** A focus on systems change to support F2ECE should be a key priority of the Iowa F2SEC. The survey indicated the top barriers faced by ECE providers were a lack of funds, time, and space, factors that are mostly out of the control of individual providers but that can be mitigated through system-level improvements.

• **Enhance communication to ECE providers about F2ECE:** Intentionally raise awareness about F2ECE among public preschool providers, as they were the most likely to indicate they were unaware of F2ECE. Along with Head Start, public preschools are a strategic setting for reaching vulnerable children. Specifically, there is a need to elevate the ways that F2ECE strategies naturally align with Head Start and Early Head Start’s priorities of family and community engagement, learning standards, and health and development standards to reach children most impacted by health and education disparities.

• **Expand F2ECE professional development opportunities:** Continue to offer and expand professional development related to F2ECE because 21 percent of respondents identified a lack of knowledge of gardening, local foods, and cooking as a challenge to implementation. Specifically, there is a need to connect with and offer guidance to ECE providers participating in the Child and Adult Care Food Program about which home-preserved foods may be served to children.

• **Identify funding opportunities for F2ECE activities:** Share information about various funding opportunities, including garden grants, through the Iowa F2SEC Coalition newsletter. Funding was a top barrier to implementing F2ECE and comments suggest that early care sites specifically need funding for gardens.

• **Incorporate a racial equity lens across statewide F2ECE efforts, including research and evaluation:** Should resources be available to conduct future studies of F2ECE in Iowa, gather further information about the race of children reached through F2ECE activities to have disaggregated data inform the recommendations and help ensure F2ECE is accessible to all children and is contributing to a more equitable Iowa.
INTRODUCTION

People may be familiar with Farm to School activities, which introduce children to healthy, locally grown food through classroom education; gardening; and procuring local food for meals, snacks, and taste tests. However, fewer may be aware that the same type of program can be implemented in early childhood settings. Farm to Early Care and Education (F2ECE) introduces young children to healthy foods when their taste preferences are developing. Benefits of F2ECE include teaching children where food comes from, instilling lifelong health habits in children, supporting local farmers, and building community connections.

The Iowa Farm to Early Care and Education Coalition formed in 2016 when the Iowa Association for the Education of Young Children (AEYC) received funding from the W.K. Kellogg Foundation to expand Farm to Early Care and Education (F2ECE) in Iowa. The Coalition was formed primarily of partners working for state agencies and nonprofit organizations working at a state level. In January 2020, the coalition merged with the Iowa Farm to School Network to form the Iowa Farm to School and Early Care Coalition. The initial goal of the Early Care and Education Coalition was to implement a F2ECE model started by the Northeast Iowa Food and Fitness Initiative that included professional development for early care providers, nutrition education for children (including gardening and classroom lessons), and local food procurement. The Iowa Farmers Union more recently received W.K. Kellogg Foundation funding to develop policy recommendations and connections for local food procurement.

In 2019, the Coalition collectively identified how to measure their success. They agreed that measuring the percent of early childhood providers who are implementing F2ECE would be the best measure of their work. After reviewing the available data, the Coalition determined that conducting a survey to collect data themselves was the best option.

The Coalition conducted a statewide survey of early care providers from March 2 to April 26, 2020. Most responses were received prior to the state closing schools on March 16 due to the COVID-19 pandemic. This report summarizes the results of the survey. It also includes four short case studies to illustrate the differences in F2ECE implementation between various types of early childhood providers.
METHODS

Survey development drew heavily upon priority questions that were identified by the National Farm to School Network’s F2ECE research and evaluation subgroup and a similar survey conducted at the same time by a W.K. Kellogg grantee in Wisconsin. The national research and evaluation group identified three questions that they believed any statewide survey regarding F2ECE should include. The Iowa group chose to use these three questions as well as a question from the Wisconsin survey. In addition, they added a few questions that were unique to the Iowa survey. The survey instrument (Appendix A) was reviewed by Policy Equity Group and National Farm to School Network. Edits were made to the survey based on their suggestions.

The survey was conducted electronically using Qualtrics™. Several coalition partners sent electronic invitations to their email contact lists beginning on March 2, which included stakeholders associated with Iowa AEYC, Child Care Resource and Referral, Northeast Iowa Food and Fitness, Head Start, and voluntary preschool.

Originally the group intended to close the survey on April 1. However, Iowa Governor Kim Reynolds recommended that all schools in Iowa close on March 16 due to the coronavirus, causing an upheaval in child care arrangements. Following school closures, one of the primary partners involved in disseminating the survey, Iowa Child Care Resource and Referral, was not able to send additional reminders to take the survey. The survey field period was kept open until April 16 in order to allow more time to respond given the new COVID-19 context.

Because the survey distribution method allowed respondents to self-select, it is possible that those who were implementing F2ECE or who had an interest in F2ECE were more likely to respond to the survey than those not interested in F2ECE. The survey invitation encouraged potential respondents to take the survey whether or not they were familiar with F2ECE concepts.

The data was cleaned to remove any respondents who did not complete any of the three priority questions. Nine hundred eighty-five people responded, and 834 responses met the inclusion criteria and were included in the analysis. Data was analyzed using
SPSS (version 26), and included cross tabs, descriptive statistics, and t-tests. In some cases, two or more people from the same program completed the survey. Duplicate responses were removed from the analysis for three questions: (1) number of students enrolled, (2) number participating in Child Care Assistance (meaning their family is income-eligible and receives public assistance from the Iowa Department of Human Services to pay for child care so they can attend work or school), and (3) number of students of color.

Free and reduced lunch rates available from the Iowa Department of Education website were used to estimate the number of children from low-income households served by respondents who participate in the SWVPP. Minority student enrollment, also available from the Department of Education website, was used to estimate the number of children of color participating in public preschool programs. The Department of Education data set includes the following in minority student counts: Hispanic of any race, Native American, Asian, Black, and Pacific Islander.

It is likely that the contact lists used from multiple organizations included some of the same contacts. Thus, calculating a response rate based on the number of email addresses contacted would not be accurate. The exact number of early childhood settings in Iowa is unknown, making it difficult to estimate the response rate of the survey based on total number of providers. However, Table 1 shows an estimated response rate for each type of early childhood setting. The response rate ranged from 2 percent (Child Care Homes) to 28 percent (Head Start and Early Head Start). The response rate from Child Care Homes was likely low, because they are likely less represented on the contact lists used to distribute the survey.

Table 1: The response rate for most early childhood settings ranged from 2 to 28 percent.

<table>
<thead>
<tr>
<th># of programs or classrooms</th>
<th>Survey response #</th>
<th>Response rate</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Development Homes (registered with Iowa DHS)</td>
<td>2,533</td>
<td>286</td>
<td>11%</td>
</tr>
<tr>
<td>Child Care Homes (not licensed)</td>
<td>814</td>
<td>13</td>
<td>2%</td>
</tr>
<tr>
<td>Licensed centers/preschools</td>
<td>1,507</td>
<td>210</td>
<td>14%</td>
</tr>
<tr>
<td>Public preschool programs</td>
<td>1,023*</td>
<td>163</td>
<td>16%</td>
</tr>
<tr>
<td>Head Start/Early Head Start</td>
<td>543</td>
<td>154</td>
<td>28%</td>
</tr>
</tbody>
</table>

* According to Iowa CCR&R, the number of public preschool programs in Iowa is 396. However, the contact list used for the survey included 1,023 classroom teachers, so this is the number used to calculate the response rate.

Another method of considering response rate is to compare the number of providers who accept Child Care Assistance in our sample with the total number in the state. Two hundred ninety-five unique respondents to the survey accept CCA, compared with 3,521 providers statewide (as of July 27, 2020, Department of Human Services), which means 8 percent of CCA participating sites responded to our survey.

How representative are the respondents to the survey of all early childhood providers?

In terms of CACFP participation, it appears licensed center respondents are representative of the population. In-home providers who participate in CACFP are overrepresented in the sample.

The response rate of providers who participate in CACFP can be used to better understand whether respondents to the Iowa F2ECE Survey were representative of early childhood providers in the state. Table 2 shows the percent of providers registered with Iowa CCR&R who participate in CACFP as well as the percent of survey respondents who participate in CACFP. (All providers who participate in CACFP are listed with Iowa CCR&R, making this comparison possible.)
The table shows that the percent of licensed centers registered with Iowa CCR&R and participating in CACFP (45 percent) is comparable with the percent of survey respondents who participate in CACFP (48 percent). This may indicate that the respondents from licensed centers who responded to our survey are representative of the population in terms of CACFP participation. However, the percentage of in-home providers registered with Iowa CCR&R who participate in CACFP (47 percent) is lower than the percentage of in-home provider survey respondents who participate in CACFP (78 percent). This indicates that in-home providers who participate in CACFP are overrepresented in our sample. This might be explained by CACFP participants being on more of the distribution lists used to disseminate the survey.

Table 2: Comparison of CACFP participation among survey respondents and statewide

<table>
<thead>
<tr>
<th></th>
<th>Total listed with Iowa CCR&amp;R</th>
<th>Total in CACFP</th>
<th>% of those listed with CCR&amp;R who participate in CACFP</th>
<th>% of survey respondents who participate in CACFP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensed centers</td>
<td>1,507</td>
<td>675</td>
<td>45%</td>
<td>48%</td>
</tr>
<tr>
<td>In-home providers</td>
<td>3,347</td>
<td>1,575</td>
<td>47%</td>
<td>78%</td>
</tr>
</tbody>
</table>

What other data sources do we compare our results with?

The 2018 National Farm to Early Care and Education Survey

The National Farm to School Network and Michigan State University Center for Regional Food Systems conducted the National Farm to Early Care and Education Survey in 2018. They received 167 responses from Iowa. Where applicable, the author shares comparisons and contrasts between the results of the Iowa F2ECE Survey and the Iowa responses to the 2018 National F2ECE Survey.

RESULTS

1. RESPONDENT CHARACTERISTICS

Where were respondents from?

ECE providers from 95 of Iowa’s 99 counties responded to the survey.

Figure 1 shows where respondents’ early care settings were located. Seventy-five people responded from Polk County, 56 from Black Hawk County, and 38 from Linn County, making these counties the most commonly represented on the survey. These counties are among the five most populous in Iowa.

At least one person from every county in Iowa except Davis, Grundy, Keokuk, and Van Buren responded to the survey.

Figure 1: Nearly every county in Iowa is represented in the F2ECE survey data.

What types of early care settings are represented by respondents?

Respondents most commonly worked at child development homes and licensed centers.

The survey asked respondents to identify the type of child care setting for which they were reporting from a list of seven types, with the option to write in their type if not listed. The analyst recategorized the early care settings represented by respondents into four categories, because they showed similar patterns in their answers:

1. In-home care, which includes:
   a. Child Development Homes, which are licensed with the Iowa Department of Human Services, and
   b. Child Care Homes, which are not licensed, care for five children or fewer, may have a Child Care Assistance (CCA) provider agreement, and may participate in the Child and Adults Care Food Program (CACFP) if they have a CCA provider agreement;
2. Licensed centers, which include daycares and preschools not funded by Head Start or the statewide voluntary preschool program;
3. Public preschool programs, which include:
   a. Iowa’s Statewide Voluntary Preschool Program (SWVPP),
   b. Shared Visions preschool,
   c. Transitional kindergarten,
   d. Three-year-old preschool programs,
   e. and other preschool programs based in public schools; and


Figure 2 shows how many respondents were in each category after categories were combined. These categories are used in several analyses. “Other” respondents are removed from most comparisons between providers because of the low number of respondents (5).

**Figure 2:** Early care settings fall into five categories.

<table>
<thead>
<tr>
<th>Category</th>
<th># of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-home care</td>
<td>300</td>
</tr>
<tr>
<td>Licensed center</td>
<td>211</td>
</tr>
<tr>
<td>Public PreK</td>
<td>163</td>
</tr>
<tr>
<td>Head Start/Early H.S.</td>
<td>154</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
</tbody>
</table>

**How many respondents participate in CACFP?**

504 (63 percent) of respondents indicated their early care setting participates in the Child and Adult Care Food Program (CACFP).

If we remove respondents who work at the same site, 465 of 745 (62 percent) unique respondents indicated they participate in CACFP. According to the Iowa Department of Education, 675 child care center sites and 1,575 child care homes in Iowa were participating in CACFP as of June 1, 2020 for a total of 2,250. Therefore, an estimated 21 percent (465 of 2,250) of programs participating in CACFP responded to the survey.

**How many children do respondents care for?**

Respondents care for and/or educate an estimated 22,954 children.

In-home care providers serve the fewest children, on average, and licensed centers the most.

After removing duplicates, the analyst estimated that respondents serve a total of 22,954 children. Table 3 shows the median number of children cared for or educated in each type of child care setting. It shows that in-home care providers serve the fewest children, with a median of eight. In contrast, licensed centers serve a median of 45 children.
In which setting could the most children be reached with F2ECE?

Licensed centers could collectively reach the most children.

Table 3 also shows the total number of children served statewide by the four types of providers, using secondary data (center column). It shows that licensed centers care for the most children (124,337). Therefore, F2ECE can reach the most children through licensed centers. The statewide data also shows that over 32,000 children are cared for in in-home settings. However, this estimate is likely low, because some in-home care providers are likely not listed with Iowa CCR&R, the source of the data. Hence, many children can also be reached through in-home providers, but these providers may be more difficult to reach because of their sheer number and the fact that they are only loosely organized.

Table 3: Licensed centers care for the most children, on average, and reach the most children statewide when compared with other types of providers.

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>Median # children served by survey respondents</th>
<th>Total # children served statewide</th>
<th># of providers or classrooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensed center</td>
<td>45</td>
<td>124,337&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1,507&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Public PreK</td>
<td>22</td>
<td>13,558&lt;sup&gt;a&lt;/sup&gt;</td>
<td>396&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Head Start/Early H.S.</td>
<td>16</td>
<td>7,264&lt;sup&gt;b&lt;/sup&gt;</td>
<td>543&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>In-home care</td>
<td>8</td>
<td>32,050&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3,358&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup> Source: Iowa Child Care Resource & Referral
<sup>b</sup> Source: Iowa Head Start Association

How many of children cared for by respondents are from low-income families?

An estimated 8,509 of children cared for or educated by respondents are from low-income households.

The number of children from low-income households was estimated using a variety of data sources, each with their own criteria or definition of low-income. The Office of Head Start Program Information Report was used to estimate that 94 percent of children participating in Head Start or Early Head Start are from low-income households.<sup>4</sup> The number of children participating in Child Care Assistance (CCA), reported on the survey, was used to estimate the number of children from low-income households at licensed centers (2,571) and in-home care (574). Free and reduced lunch rates available from the Iowa Department of Education website were used to estimate the number of low-income children participating in public preschool programs that responded to the survey (2,005). (Other respondents serve another 17 children who receive CCA.)

Table 4 shows that respondents from public preschool programs (such as the statewide voluntary preschool program) and Head Start reach a higher percentage of children from low-income households than other providers. The estimate for licensed centers and in-home care is based on self-reported CCA participation on the survey. Some of these providers may not accept CCA, so they reported a CCA participation of zero. However, they may care for low-income children whose guardians pay the regular rate. Hence, the estimated number children receiving CCA at licensed centers and in-home providers who responded to the survey may be lower than the actual number of children served from low-income households.

<sup>4</sup>Low-income defined as below 100 percent of federal poverty line, between 100 and 130 percent of the federal poverty line, participating in Temporary Assistance for Needy Families or Supplementary Security Income, status as a foster child, or status as homeless.
Table 4: Number of children cared for or educated by respondents

<table>
<thead>
<tr>
<th></th>
<th>Estimated # children from low-income households reached</th>
<th>Total # children reached</th>
<th>% of children reached from low-income households</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-home care</td>
<td>574</td>
<td>2,663</td>
<td>22%</td>
</tr>
<tr>
<td>Licensed center</td>
<td>2,571</td>
<td>12,167</td>
<td>21%</td>
</tr>
<tr>
<td>Public PreK</td>
<td>2,005</td>
<td>4,606</td>
<td>44%</td>
</tr>
<tr>
<td>Head Start/Early H.S.</td>
<td>3,149</td>
<td>3,342</td>
<td>94%*</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>176</td>
<td>10%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8,316</td>
<td>22,954</td>
<td>36%</td>
</tr>
</tbody>
</table>

*Calculated from data in the Office of Head Start Program Information Report, children in foster care or experiencing homelessness were included in the calculation as from households receiving low-income.

How many children of color do respondents serve?

The public preschool teachers who responded to our survey serve an estimated 733 children of color (16 percent of all children they serve).

The analyst also used Department of Education data at the school level to estimate the number of children of color served by the public preschool teachers who responded to our survey. She estimated they serve a total of 733 children of color (including children who are Latino or Hispanic), which is 16 percent of the total number of children they serve.

In contrast, 25.5 percent of all children who attend Iowa public schools (grades preschool through 12) are children of color (including children who are Latino or Hispanic). This may indicate that public preschool teachers who care for a higher percentage of white children were more likely to respond to the survey.

A t-test was performed to determine if the number of children of color served by public preschool teachers responding to the survey differs by whether the teacher is implementing F2ECE. On average, those implementing F2ECE teach classrooms with 17 percent children of color, whereas those not implementing F2ECE have classrooms with 15 percent minority. However, the difference in the average percent children of color is not statistically significant (p = 0.488).

At the state level, 54 percent of children enrolled in Head Start in 2019 were children of color and/or of Latino or Hispanic origin. This cannot be compared with children served by survey respondents, because the Head Start data is not available at the site level and the survey did not include a question regarding the race or ethnicity of children to protect the anonymity of children served by respondents’ programs. This may be a question to consider adding in the future.
When Anita Schuckert, who has operated an in-home child care for 25 years, joined a Farm to Early Care and Education (F2ECE) training piloted by the Iowa Association for the Education of Young Children (AEYC) in 2017, in her own words, she “really jumped into it.”

She and her husband had a garden at their home until they became busy with their own children. She joined the F2ECE pilot program and read a book called Early Sprouts and was incredibly inspired to start. What was going to be one garden in the first year turned into two. In the second year, they decided to start their own plants from seed rather than purchase plants. They grow the plants in a small indoor greenhouse until they transplant them to the outdoors. Because children always want to plant the entire packet of seeds, they usually have extra seedlings to share with child care families and neighbors. Most of the child care families now have gardens of their own.

Schuckert and the children transplant their plants into pots and grow bags, as opposed to a traditional garden. Schuckert prefers this, because she can move the pots to get more sun. It is also easier for small children because they can't step on the plants and pots require less weeding (but more watering) than a traditional garden. The children can find food growing almost anywhere in the yard. They have strawberries growing in a kiddie pool, vegetable plants in the flower beds around the house, “risers” where they plant vining plants, such as peas and pole beans, and potted plants on the deck.

Schuckert finds a lot of joy in introducing children to where food comes from. She remembers one time when all the kids helped shuck sweetcorn. A two-year-old worked hard to shuck an ear. When he finally got it shucked, he exclaimed, “Hey, there is corn in here!”

Schuckert has introduced child care families to gardening, cooking, and preserving food. She sends recipe bags home with the children, which include the ingredients to make the recipes. Each child also has a binder cookbook where they keep the recipes they have made at child care and take them home to make again. On two occasions Schuckert organized families to make freezer meals on weekends, when they cooked enough food for several meals.

To share her experience with other child care providers, Schuckert has taught classes about gardening and cooking with the kids organized by Iowa AEYC and Iowa Child Care Resource and Referral. She recently gave a presentation for the Iowa Farm to School and Early Care Conference about incorporating F2ECE with literature.

It can be hard to fit in F2ECE at an in-home child care, because children arrive and leave at different times and may need naps. Some years have been easier for Schuckert than others. For example, last summer was easy, because none of the children needed a morning nap. Therefore, they spent most mornings outdoors. “We wouldn’t garden all the time, but play and garden.” This summer is harder, because some children leave at 3:30 in the afternoon and she needs to have the children ready to go before their parents arrive. Because of the coronavirus, parent must wait outside for their children.
2. FARM TO EARLY CARE AND EDUCATION IMPLEMENTATION

How many respondents have implemented some element of F2ECE?

565 (70 percent) of respondents have implemented at least one F2ECE activity in the last year.

352 (44 percent) of respondents have implemented three F2ECE activities or more in the last year.

Seventy percent of respondents to the 2020 Iowa F2ECE Survey had implemented at least one type of F2ECE activity in the past year (all activity types are listed in Figure 4). In contrast, 51.5 percent of Iowa respondents to the National F2ECE Survey in 2018 reported implementing at least one type of F2ECE activity. Assuming the samples collected on each survey were representative of the population, one might conclude that the prevalence of F2ECE in Iowa has increased from 2018 to 2020. However, it is not clear if either the 2018 survey or the 2020 Iowa F2ECE Survey was representative, because those who are implementing F2ECE or interested in F2ECE may have been more likely to respond. Therefore, it might be more accurate to conclude that the actual percent of early care providers in Iowa implementing F2ECE lies somewhere between 51.5 and 70 percent.

Forty-four percent of respondents have implemented three types of F2ECE activities or more in the last year.

How many children do respondents reach with F2ECE?

Respondents who indicated they are implementing at least one element of F2ECE educate or care for 15,824 children.

The 146 respondents who indicated they have not implemented F2ECE, but plan to start in the future, care for a total of 4,081 children. Seventy-one respondents who have not implemented F2ECE and do not plan to start care for 1,900 children (Table 5).

Table 5: 15,824 children were served by respondents who had implemented F2ECE.

<table>
<thead>
<tr>
<th># of respondents</th>
<th>Total # of children served</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementing at least one F2ECE strategy</td>
<td>525</td>
</tr>
<tr>
<td>Not implementing, plan to start</td>
<td>146</td>
</tr>
<tr>
<td>Not implementing, do NOT plan to start</td>
<td>71</td>
</tr>
</tbody>
</table>

What types of F2ECE activities have respondents implemented?

Food education, serving local food, and gardening are the most common F2ECE activities.

Respondents most commonly (42 percent) have educated children about locally grown food, how food grows, and/or where it comes from. Nearly as many (41 percent) have served locally grown food in meals, snacks, or taste tests.

Figure 5 shows that 32 percent of respondents have an edible garden at their site and 28 percent have container gardens. When these are combined, 45 percent of respondents have some sort of garden (15 percent have both a container garden and a traditional garden).

Figure 4 also shows a comparison with data collected from early care providers in Iowa in 2018 by the NFSN. The 2018 survey showed a higher percentage of respondents held taste tests and/or cooking demonstrations of garden-grown food (32 percent) than the 2020 Iowa F2ECE survey respondents (22 percent). It also showed that a much higher percent of respondents to the 2018 survey have not conducted any F2ECE activities and did not plan to start (22 percent) than the Iowa survey (9 percent).
**Figure 4:** Local food education was the most common F2ECE activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>2020 Iowa F2ECE Survey</th>
<th>Iowa sub-sample to the 2018 F2ECE Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educated children about locally grown food, how food grows and/or where it comes from</td>
<td>42%</td>
<td>38%</td>
</tr>
<tr>
<td>Served locally grown food in meals, snacks or taste tests</td>
<td>41%</td>
<td>42%</td>
</tr>
<tr>
<td>Planted or worked with children in an edible garden at your site</td>
<td>32%</td>
<td>38%</td>
</tr>
<tr>
<td>Container gardening (growing fruits or vegetables in pots)*</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>Conducted field trips to farms, gardens, and/or farmers markets</td>
<td>23%</td>
<td>25%</td>
</tr>
<tr>
<td>Held taste tests and/or cooking demonstrations of garden grown food</td>
<td>22%</td>
<td>32%</td>
</tr>
<tr>
<td>Held taste tests and/or cooking demonstrations of locally produced foods</td>
<td>17%</td>
<td>22%</td>
</tr>
<tr>
<td>Promoted locally produced foods in general at the site (e.g., via signs, posters)</td>
<td>13%</td>
<td>6%</td>
</tr>
<tr>
<td>Hosted a special event or day related to food and farms</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>Hosted a farmer visit</td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>Facilitated children’s families access to locally grown foods at home</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Celebrated National Farm to School Month (October)</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Worked with local producers/producers to develop a local food product for your site</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Hosted F2ECE related community events (including parents)</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Hosted a chef visit</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>We haven’t conducted any of these activities but plan to start in the future</td>
<td>20%</td>
<td>26%</td>
</tr>
<tr>
<td>We haven’t conducted any of these activities and do NOT plan to start in the future</td>
<td>9%</td>
<td>22%</td>
</tr>
</tbody>
</table>

*Not included in 2018 survey

# of respondents (of 802)  # of respondents (of 167)
How does CACFP participation relate to F2ECE implementation?

CACFP participants were more likely than non-participants to have implemented nine types of F2ECE activities.

Figure 5 shows nine activities that Iowa respondents who participate in CACFP implemented at a higher rate than non-participants. This may mean that CACFP participation facilitates F2ECE implementation, perhaps because of information shared with CACFP participants or because the program encourages providers to give nutrition and food education. Conversely, higher-capacity programs may be more likely to participate in CACFP than lower-capacity programs because of the administrative responsibilities of CACFP. These same high-capacity programs may have greater ability to implement F2ECE. Programs that participate in CACFP are more likely to have a garden, provide local food education, serve local food, hold taste tests or cooking demonstrations, promote locally grown foods, facilitate families’ access to local food, celebrate National Farm to School Month, work with local producers/processors to develop a specific food product using local food, and host F2ECE-related community events.

**Figure 5:** CACFP participants are more likely to have implemented nine types of F2ECE activities than non-participants.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Participates in CACFP (%)</th>
<th>Does NOT Participate or is unsure (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional and/or container garden*</td>
<td>49%</td>
<td>39%</td>
</tr>
<tr>
<td>Educated children about locally grown food, how food grows and/or where it comes from**</td>
<td>47%</td>
<td>34%</td>
</tr>
<tr>
<td>Served locally grown food in meals, snacks or taste tests**</td>
<td>49%</td>
<td>29%</td>
</tr>
<tr>
<td>Held taste tests and/or cooking demonstrations of locally produced foods*</td>
<td>20%</td>
<td>12%</td>
</tr>
<tr>
<td>Promoted locally produced foods in general at the site (e.g., via signs, posters)**</td>
<td>16%</td>
<td>8%</td>
</tr>
<tr>
<td>Facilitated children’s families access to locally grown foods at home**</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>Celebrated National Farm to School Month (October)*</td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>Worked with local producers/processors to develop a specific food product using local food*</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>Hosted F2ECE related community events (including parents)*</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>We haven’t conducted any of these activities and do NOT plan to start in the future**</td>
<td>5%</td>
<td>15%</td>
</tr>
</tbody>
</table>

*Statistically significant difference α=0.05
** Statistically significant difference α=0.001
Participants in CACFP implemented the following F2ECE activities at roughly the same rate as non-participants:

- Hosted a chef visit
- Hosted a special event or day related to food and farms
- Conducted field trips to farms, gardens, and/or farmers markets
- Held taste tests and/or cooking demonstrations of garden-grown food
- Hosted a farmer visit
- Have not conducted any of these activities but plan to start in the future.

**How is F2ECE implemented by different types of providers?**

**In-home providers were more likely to implement F2ECE than other types of providers and implemented more types of F2ECE activities than other providers, on average.**

Seventy-six percent of in-home care providers implemented at least one type of F2ECE activity (Figure 6). Licensed centers implemented F2ECE at a slightly lower level, with 72 percent implementing at least one type of F2ECE activity. Public preschools and Head Start programs implemented F2ECE at the lowest level (66 percent and 62 percent, respectively).

Although Head Start and Early Head Start providers indicated they were implementing F2ECE at the lowest level, 33 percent indicated they intend to begin implementing F2ECE. This points to an opportunity to engage Head Start.

**Figure 6:** In-home care providers implemented F2ECE more commonly than other types of providers.

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>Implementing F2ECE</th>
<th>Intend to Start</th>
<th>Do Not Intend to Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-home care (294)</td>
<td>76%</td>
<td>17%</td>
<td>7%</td>
</tr>
<tr>
<td>Licensed center (200)</td>
<td>72%</td>
<td>19%</td>
<td>10%</td>
</tr>
<tr>
<td>Public PreK (156)</td>
<td>66%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Head Start/Early H.S. (147)</td>
<td>62%</td>
<td>33%</td>
<td>5%</td>
</tr>
</tbody>
</table>

% of respondents*

*Some lines do not add to 100% due to rounding.

Results from the Iowa subsample of the 2018 F2ECE survey conducted by the NFSN showed a lower percentage of providers are implementing F2ECE, but showed a similar trend, with in-home care providers implementing F2ECE at the highest rate (54 percent) and Head Start implementing at the lowest rate (25 percent, Figure 7).

**Figure 7:** 2018 National F2ECE survey data from Iowa shows similar trends as the 2020 Iowa F2ECE Survey.

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>Percent Implementing F2ECE</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-home care (106)</td>
<td>54%</td>
</tr>
<tr>
<td>Licensed center (56)</td>
<td>50%</td>
</tr>
<tr>
<td>Public PreK (13)</td>
<td>46%</td>
</tr>
<tr>
<td>Head Start/Early H.S. (8)</td>
<td>25%</td>
</tr>
</tbody>
</table>
Similarly, in-home care providers from the 2020 Iowa survey were more likely than other types of providers to have implemented a comprehensive F2ECE strategy in the past year. Figure 8 shows that 53 percent of in-home care providers implemented three or more F2ECE activities in the past year, which indicates they were implementing a comprehensive strategy. This was followed by public preschool program respondents, of whom 43 percent were implementing a comprehensive F2ECE strategy.

The survey identified which F2ECE activities were implemented at a statistically significant ($\alpha = 0.05$) higher rate by some types of providers than others. For example, 61 percent of in-home care providers have a traditional or container garden, whereas only 27 percent of Head Start or Early Head Start providers have some type of garden (Figure 9).

Licensed centers and preschools were more likely to take children on field trips (31 percent and 29 percent, respectively) than in-home providers (20 percent) and Head Start (14 percent). Comments shared through the survey indicate this may be due to differences in access to transportation.

**Figure 8:** In-home providers are more likely to have a comprehensive F2ECE strategy than other types of EC providers.

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>% Implementing 3 or More F2ECE Activities in Past Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-home care (294 respondents)</td>
<td>53%</td>
</tr>
<tr>
<td>Licensed center (200)</td>
<td>39%</td>
</tr>
<tr>
<td>Public PreK (156)</td>
<td>43%</td>
</tr>
<tr>
<td>Head Start/Early H.S. (147)</td>
<td>34%</td>
</tr>
</tbody>
</table>

Head Start respondents were more likely than others to host family or community events related to local food and to promote local food. This aligns with Head Start’s standards related to family and community engagement. Hence, these results provide evidence that aligning program or learning standards with F2ECE or showing providers how F2ECE can align with existing standards could increase implementation.

Early care providers of all types implemented the following activities at relatively the same frequency:

- Educating children about locally grown food, how food grows, and/or where it comes from,
- Holding taste tests and/or cooking demonstrations of garden-grown food,
- Holding taste tests and/or cooking demonstrations of locally produced foods,
- Celebrating National Farm to School Month (October), and
- Working with local producers/processors to develop a specific food using local food for their site.
Figure 9: Different Types of Providers Implemented Different Types of Farm to ECE Activities

- **Traditional and/or container garden**:
  - In-home care: 47%
  - Licensed center: 29%
  - Public PreK: 27%

- **Served locally grown food in meals, snacks or taste tests**:
  - In-home care: 34%
  - Licensed center: 24%
  - Public PreK: 24%

- **Conducted field trips to farms, gardens, and/or farmers markets**:
  - In-home care: 31%
  - Licensed center: 29%
  - Public PreK: 29%

- **Promoted locally produced foods in general at the site (e.g. via signs, posters)**:
  - In-home care: 13%
  - Licensed center: 14%
  - Public PreK: 14%

- **Hosted a special event or day related to food and farms**:
  - In-home care: 6%
  - Licensed center: 15%
  - Public PreK: 8%

- **Hosted a farmer visit**:
  - In-home care: 4%
  - Licensed center: 9%
  - Public PreK: 14%

- **Facilitated children’s families access to locally grown foods at home**:
  - In-home care: 7%
  - Licensed center: 5%
  - Public PreK: 5%

- **Hosted F2ECE related community events (including parents)**:
  - In-home care: 0%
  - Licensed center: 3%
  - Public PreK: 3%

- **Hosted a chef visit**:
  - In-home care: 0%
  - Licensed center: 5%
  - Public PreK: 3%


*α<0.05, **α<0.001
AlRazi Academy’s Farm to Early Care and Education program strives to introduce young children to healthy food choices. AlRazi is the Islamic School of Greater Des Moines, and the early childhood center is secular. Both the academy and the early childhood center are open to people of any faith and serve many immigrant and refugee families. “Most families are from all over Des Moines and from different cultures, backgrounds, and languages,” says Ihsan Yaseen, the school principal. “At least ten languages are spoken in our building.”

While the Academy started in 2004, the preschool was added in 2008 and ages birth to three shortly after. They started the early childhood center in response to families who expressed a need for early childhood services. They needed a place to send their children where the parents could communicate freely with their providers and that could serve as a bridge into school. While some preschool children continue their kindergarten through eighth grade education at the AlRazi Academy, some enter the public school. For those entering the public school, AlRazi’s preschool serves as a bridge, introducing them to how school works and building their English language skills so they can be successful when they begin school.

Yaseen says they were considering adding a garden at the Academy before they heard of F2ECE to give the children hands-on experience with healthy food. They observed that some of their children did not have adequate access to good food, especially given that many are from families that experience low income. “Our goal was to make sure kiddos get the healthy meals they deserve. Healthy body equals healthy minds, so it helps them learn and be successful,” says Yaseen. “We want them to recognize what is healthy and not go for junk food, ready-to-eat meals, or rice and noodles.”

However, Yaseen and her staff didn’t have any gardening experience or funds to begin a garden. That changed when the Iowa Association for the Education of Young Children approached Yaseen to join a F2ECE training. Through the training Yaseen came to understand that F2ECE is more than gardening and can be incorporated into their curriculum, especially science, and it fits in well with the academy’s goal of facilitating experiential learning. Through the training, Yaseen connected with other early care providers who are implementing F2ECE, and they share successes and help one another troubleshoot. Yaseen recently posted to the Iowa F2ECE Facebook page looking for help with insects that are eating their cauliflower.

As part of the training, AlRazi also received a F2ECE mini-grant, which was much appreciated because the school’s greatest barrier to implementing F2ECE was lack of funds to start a garden. They also received a grant from United Way for F2ECE.

Yaseen has enjoyed watching the kids explore in the garden. She recently had a laugh when they took the children out to the garden and told them they could pick whatever they wanted. Many of the children chose to pick green tomatoes. Yaseen believes that they had probably only seen red tomatoes in the past and found the green tomatoes to be a novelty. Another child wanted to pick lettuce and tried to pull out the entire plant from the ground. The teachers were busy helping other students and did not realize that she was struggling to pull out the lettuce. Eventually she succeeded, leaving a small hole in the ground where the plant had been. “What I liked is the excitement you see with these activities,” says Yaseen. “The kids never saw anything like this before.”
3. BENEFITS OF F2ECE

What types of benefits do respondents believe F2ECE offers?

Respondents most commonly believed farm to early care and education teaches children where food comes from and how it is grown.

The survey asked respondents to identify benefits they believe F2ECE contributes to. Respondents chose an average of 7.09 benefits (out of 13 possible), demonstrating they believe F2ECE confers numerous benefits. Nearly all respondents agreed F2ECE teaches children where food comes from and how it is grown (90 percent) and improves children's nutrition and health (82 percent, Figure 10).

Respondents agreed to a lesser extent that F2ECE helps them meet learning, licensing, and programmatic standards (28 percent of respondents). This may indicate that they need information or examples of how F2ECE can be integrated into curriculum, meal requirements, etc. Technical assistance could fill this need.

They also were less likely to agree that F2ECE contributes to more positive public relationships (29 percent).

The 2018 National F2ECE Survey asked a similar question. However, rather than selecting the benefits which respondents believed F2ECE led to, they ranked the benefits as very important, somewhat important, slightly important, or not important. Figure 11 shows the percentage of Iowa respondents who ranked each benefit as very important. As in the 2020 Iowa survey, teaching
children where food comes from and how it is grown and improving children’s nutrition and health were the two benefits perceived as very important by the most respondents. For the most part, the national survey results from Iowa respondents are like those of the 2020 Iowa survey with a few variations.

Figure 11: Iowa responses to the national survey showed similar perceptions of the benefits of F2ECE.

<table>
<thead>
<tr>
<th>Benefit</th>
<th>% Very important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching children where food comes from/how it is grown</td>
<td>92%</td>
</tr>
<tr>
<td>Improving children’s nutrition and health</td>
<td>91%</td>
</tr>
<tr>
<td>Support local farmers</td>
<td>66%</td>
</tr>
<tr>
<td>Access to fresher or higher-quality food</td>
<td>73%</td>
</tr>
<tr>
<td>Providing children with experiential learning</td>
<td>88%</td>
</tr>
<tr>
<td>Support local economy and community</td>
<td>57%</td>
</tr>
<tr>
<td>Stronger community connections/relationships*</td>
<td></td>
</tr>
<tr>
<td>Engaging parents and families</td>
<td>55%</td>
</tr>
<tr>
<td>Improving staff nutrition and health*</td>
<td></td>
</tr>
<tr>
<td>Lower meal costs for site</td>
<td>58%</td>
</tr>
<tr>
<td>Enhance public relations</td>
<td>34%</td>
</tr>
<tr>
<td>Meeting learning, licensing, and programmatic standards</td>
<td>44%</td>
</tr>
</tbody>
</table>

*stronger community connections/relationships and improving staff nutrition and health not included in 2018 survey.

In the 2020 survey, early childhood providers from all settings identified the following benefits at approximately the same frequency:

- Improving children’s nutrition and health, and
- Supporting the local economy and community.

The evaluator identified statistically significant differences (α = 0.05) in perceived benefits between different types of providers for 10 benefits, shown in Figure 12, using t-tests. For example, 97 percent of public preschool providers saw teaching children where food comes from or how it is grown as a benefit of F2ECE, whereas fewer (86 percent) in-home care providers perceive that as a benefit. Forty-one percent of Head Start respondents believe that meeting learning, licensing, and program standards is a benefit of F2ECE, whereas approximately 25 percent of all other respondents identified this as a benefit. Head Start respondents (74 percent) were also more likely than other types of providers to identify engaging parents and families as a benefit of F2ECE. This type of engagement is a high priority for Head Start and drawing attention to how F2ECE aligns with community and parent engagement may improve willingness of program staff and administrators to prioritize F2ECE.
**Figure 12:** Ten benefits are experienced by some providers at higher rates than others.

- **Teaching children** where food comes from/how it is grown
  - In-home care (150 respondents): 90%
  - Licensed center (199): 97%
  - Public PreK (156): 82%
  - Head Start/Early H.S. (150): 92%

- **Support local farmers**
  - In-home care: 72%
  - Licensed center: 80%
  - Public PreK: 81%
  - Head Start/Early H.S.: 92%

- **Access** to fresher or higher-quality food
  - In-home care: 70%
  - Licensed center: 74%
  - Public PreK: 74%
  - Head Start/Early H.S.: 84%

- **Providing children with experiential learning**
  - In-home care: 69%
  - Licensed center: 82%
  - Public PreK: 81%
  - Head Start/Early H.S.: 74%

- **Stronger community connections/relationships**
  - In-home care: 50%
  - Licensed center: 63%
  - Public PreK: 70%
  - Head Start/Early H.S.: 74%

- **Engaging parents and families**
  - In-home care: 40%
  - Licensed center: 56%
  - Public PreK: 61%
  - Head Start/Early H.S.: 74%

- **Improving staff nutrition and health**
  - In-home care: 36%
  - Licensed center: 36%
  - Public PreK: 59%
  - Head Start/Early H.S.: 57%

- **Lower meal costs for site**
  - In-home care: 21%
  - Licensed center: 36%
  - Public PreK: 39%
  - Head Start/Early H.S.: 56%

- **Enhance public relations**
  - In-home care: 23%
  - Licensed center: 26%
  - Public PreK: 32%
  - Head Start/Early H.S.: 39%

- **Meeting learning, licensing, and programmatic standards**
  - In-home care: 24%
  - Licensed center: 25%
  - Public PreK: 24%
  - Head Start/Early H.S.: 41%

Statistically significant difference between:
- A: in-home care and licensed centers
- B: in-home care and public preschool programs
- C: in-home care and Head Start/Early Head Start
- D: licensed centers and public preschool programs
- E: Head Start/Early Head Start and licensed centers
- F: Head Start/Early Head Start and public preschool programs

*α<0.05, **α<0.001
Turkey Valley Elementary School in Jackson Junction, Iowa, has a comprehensive farm to school and early care program that begins with the youngest students.

Sara Converse teaches Farm to Early Care and Education (F2ECE) to her combined 3 and 4-year-old class. Converse was first introduced to F2ECE when she was a teacher at Head Start in 2013 when all the Head Start classrooms in Northeast Iowa began implementing F2ECE. The Northeast Iowa Food and Fitness Initiative developed a F2ECE curriculum building upon what was piloted with Head Start. Converse continues to use the curriculum at Turkey Valley. The curriculum features a different locally grown food each month. “I try to use the food of the month in all curricular areas,” says Converse. “Whatever food we study for the month I tie into math, literacy, science, and so on.” She uses the curriculum website to get ideas and access the parent information sheets.

The curriculum encourages cooking once a month, but Converse’s students cook more often. For example, when they studied peppers, they added them to a salad, made stuffed peppers, and made pepper jelly. “I try to teach them all kinds of ways to prepare food,” says Converse, adding, “It’s something to use later in life.”

During the 2019-20 school year, Converse started to receive teacher boxes from the Iowa Food Hub. Each box includes the food of the month from a local farm, a recipe using that food, and instructions for a classroom lesson. The school nurse also receives the teacher box and uses it with cross-age teaching, where high school students teach local food lessons to elementary students.

Turkey Valley preschool students get lots of hands-on F2ECE learning. While Converse was teaching at Head Start, her students were able to visit Country View Dairy near Hawkeye, Iowa, where they saw the cows get milked and learned how to transform milk into yogurt. They also visited a local grocery store where they saw the yogurt on the shelf. This is something Converse hopes to share with Turkey Valley students as well.

The preschool is also involved in Turkey Valley’s garden. The fourth grade takes the lead in planning the garden each year, but every grade, including preschool, helps. Each class plants seeds into milk cartons, which are saved from lunch, and puts its cartons in a room with grow lights. Once the plants are big enough, the fourth-grade students transplant them to the garden. Everyone enjoys the harvest in their school lunches in the fall.

One of Converse’s best garden memories was from a pumpkin left in the classroom from a field trip to a local pumpkin patch, which started to rot. The students asked what would happen if they planted it. They planted the entire pumpkin in a pot and waited to see what would happen. Many of the seeds sprouted. They transplanted five of the seedlings to the school garden. The plants survived and produced pumpkins in the fall, and the cycle started again. They kept the cycle going over several years. They cooked with the pumpkins.

Converse is not just a teacher but also a farmer, so F2ECE combines Converse’s passion of farming, locally grown food, and education. Converse and her family own and operate a diversified farm where they raise cattle, corn, soybeans, hay, and have a garden. “I was able to run with [farm to early care and education], because it was part of my life on a daily basis,” says Converse.
4. BARRIERS TO F2ECE

What barriers do child care providers face in implementing F2ECE?

The top barriers identified by respondents were lack of funding, space, and time, and not knowing about F2ECE strategies.

The top barriers to implementing F2ECE related to resources (funding and time) and infrastructure (space), followed by not knowing that F2ECE is an option (Figure 13). Therefore, a focus on systems change to support F2ECE should be a top priority of the Iowa Farm to School and Early Care Coalition, along with raising awareness of F2ECE. Professional development is needed as well, because 21 percent of respondents identified a lack of knowledge of gardening, local foods, culinary skills, etc. as a barrier.

Lack of support from site decision-makers or administration was not a common barrier (7 percent of respondents chose this option). This indicates that most respondents are encouraged by their administration to implement F2ECE strategies or are at least not discouraged.

Knowing how to find, buy, and prepare local foods was not experienced by many respondents (10 percent) either. Yet fewer than half (41 percent) of respondents are serving local foods. This may indicate that not purchasing local foods is more related to systems-level barriers, like lack of funding or limited local foods distribution capacity, rather than a lack of knowledge on the part of providers. This may indicate that professional development aimed at increasing provider knowledge will have only a limited impact unless systemic changes to facilitate local food purchasing are made.

Figure 13: Lack of funding, space, and time are the greatest barriers to implementing F2ECE.

<table>
<thead>
<tr>
<th>Barriers</th>
<th>% of respondents (of 741)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low/no funding to implement new activities</td>
<td>40%</td>
</tr>
<tr>
<td>No/limited space for gardens or activities</td>
<td>39%</td>
</tr>
<tr>
<td>Lack of staff time or capacity</td>
<td>37%</td>
</tr>
<tr>
<td>Did not know F2ECE activities are an option</td>
<td>36%</td>
</tr>
<tr>
<td>Lack of knowledge of gardening, local foods, culinary skills, etc.</td>
<td>21%</td>
</tr>
<tr>
<td>Limited parent or caregiver interest</td>
<td>18%</td>
</tr>
<tr>
<td>Limited understanding of using CACFP for local food and/or F2ECE</td>
<td>17%</td>
</tr>
<tr>
<td>Insufficient kitchen equipment to prepare local foods</td>
<td>15%</td>
</tr>
<tr>
<td>Unsure how to manage children in F2ECE activities</td>
<td>14%</td>
</tr>
<tr>
<td>Liability or food safety concerns</td>
<td>13%</td>
</tr>
<tr>
<td>Lack of curriculum guides</td>
<td>13%</td>
</tr>
<tr>
<td>Unsure how to find, buy, or prepare local foods</td>
<td>10%</td>
</tr>
<tr>
<td>Unsure how to align activities to learning standards</td>
<td>8%</td>
</tr>
<tr>
<td>Other*</td>
<td>7%</td>
</tr>
<tr>
<td>Lack of support from site decision-makers or admin.</td>
<td>7%</td>
</tr>
<tr>
<td>Language or cultural barriers with parents or caregivers</td>
<td>5%</td>
</tr>
</tbody>
</table>

*children not in childcare in summer (9), no barriers (6), transportation (5), access to local food (5), garden situations (4), childcare setting just starting (3), policy barriers (3), lack of agency to make changes (3), not age appropriate (2), scheduling around school schedule (1), lack of knowledge regarding support available (1), community focus on commodity rather than food production (1), lack of storage (1), three hour program only provides snacks (1)
Seventeen percent of all respondents indicated their understanding of using CACFP for local food and/or F2ECE was a barrier. However, of those who participate in CACFP, only 12 percent indicated that their understanding of using CACFP was a barrier to purchasing local food (Figure 14). Therefore, those who do not participate in CACFP or who are unsure were more likely to identify their lack of knowledge of using local foods in the CACFP as a barrier (19 percent and 30 percent, respectively). This shows that participating in CACFP may clear up misunderstandings regarding how the program works. It may also indicate that those who do not participate in CACFP are held back by lack of information or a belief that it is complicated.

Figure 14: Those who participate in CACFP were less likely to indicate understanding of CACFP was a barrier to implementing F2ECE.

Does your EC setting participate in CACFP?

<table>
<thead>
<tr>
<th>Option</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>12%</td>
</tr>
<tr>
<td>No</td>
<td>19%</td>
</tr>
<tr>
<td>Unsure</td>
<td>30%</td>
</tr>
</tbody>
</table>

% who identified understanding of CACFP as a barrier

How did barriers differ by provider type?

The average number of barriers identified by respondents ranged from 2.18 barriers identified by in-home care providers to 3.26 barriers identified by public preschool respondents.

In-home care providers identified fewer barriers, on average, than all other respondents. This may be because some of the barriers listed in the question do not apply to the in-home setting, such as lack of support from site decision-makers and program administrators (only six in-home respondents identified this as a barrier). This may also help explain why in-home providers implemented F2ECE more often than all other types of providers. However, that is not to say in-home providers do not face barriers. For example, through an open-ended comment one provider wrote, “I only provide child care during the school year which is limiting. Also being a single provider for 8 children of varying ages is very limiting to what activities we can work into our schedule.”

Those working for public preschools, primarily the statewide voluntary preschool program, identified the most challenges (an average of 3.26), followed by those who work at Head Start or Early Head Start (2.97, Figure 15). Licensed centers were in the middle, identifying on average 2.67 challenges. One respondent shared how barriers mount to make starting F2ECE difficult: “It’s a great idea but hard to start. Time, transportation issues, and liabilities.”

Figure 15: In-home care providers face the fewest barriers, on average, to implementing F2ECE.
Types of barriers experienced also varied according to type of child care setting. Figure 16 shows ten barriers that were identified using t-tests as more prevalent among certain types of providers than others (α = 0.05). For example, low or no funding to implement new activities was identified as a barrier by 46 percent of licensed center respondents, higher than for all other types of respondents (approximately 32 percent). In-home providers were much less likely to identify no or limited space for gardens or activities as a barrier (25 percent), whereas at least 39 percent of all other types of providers identified this barrier, which may indicate that in-home providers are willing and able to use their yards for garden space.

Respondents from public preschool programs were more likely than other providers to identify that they did not know F2ECE activities were an option (approximately 40 percent of providers). This may indicate that F2ECE could expand in Iowa by intentionally raising awareness among public preschool providers.
**Figure 16:** 12 barriers affected certain types of providers more than others.

<table>
<thead>
<tr>
<th>Barriers</th>
<th>In-home care (300 respondents)</th>
<th>Licensed center (211)</th>
<th>Public PreK (163)</th>
<th>Head Start/Early H.S. (154)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low/no funding to implement new activities</td>
<td>33%</td>
<td>31%</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>No/limited space for gardens or activities</td>
<td>25%</td>
<td>39%</td>
<td>39%</td>
<td></td>
</tr>
<tr>
<td>Lack of staff time or capacity</td>
<td>26%</td>
<td>41%</td>
<td>41%</td>
<td></td>
</tr>
<tr>
<td>Did not know F2ECE activities are an option</td>
<td>29%</td>
<td>23%</td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>Limited parent or caregiver interest</td>
<td>13%</td>
<td>14%</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>Limited understanding of using CACFP for local food and/or F2ECE</td>
<td>2%</td>
<td>13%</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>Insufficient kitchen equipment to prepare local foods</td>
<td>13%</td>
<td>29%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Liability or food safety concerns</td>
<td>9%</td>
<td>13%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Lack of curriculum guides</td>
<td>14%</td>
<td>6%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Unsure how to align activities to learning standards</td>
<td>5%</td>
<td>4%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Lack of support from site decision-makers or admin.</td>
<td>2%</td>
<td>6%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Language or cultural barriers with parents or caregivers</td>
<td>1%</td>
<td>2%</td>
<td>4%</td>
<td>16%</td>
</tr>
</tbody>
</table>


*α<0.05, **α<0.001
Northeast Iowa Community Action Corporation Head Start has implemented Farm to Early Care and Education (F2ECE) since 2013. “Before we had this program we talked a bit about foods, but we didn’t talk about where they are grown, where you get them, or why they are healthy. We skimmed the surface,” says Lisa Milder, center manager for three classrooms.

Today, every classroom offers lessons and activities at least weekly related to a local food of the month. Every teacher uses KWL charts to document what children learn. At the beginning of each month the teacher asks the students what they know (K) and what they would like to know (W) about the food and records children’s responses on the chart. At the end of the month the teacher asks what the children learned (L) about the food and records it on the chart. Throughout the month they integrate the food into classroom lessons and activities, like reading books, cooking, field trips, planting seeds, etc. Every classroom also holds a monthly celebration, to which parents are invited to try the food of the month and see what the children learned.

“We always talk about healthy choices,” says Dawanda Ryder, who was the lead Head Start teacher in West Union and recently became the lead teacher in Waukon, explaining that they incorporate healthy food into their lessons and informal conversations. One of her fondest memories is of a young boy who had never seen a beet before and was excited for an upcoming lesson. A few days after the lesson, the children were asked to draw whatever they wanted in their journals. The boy drew a purple beet. He explained to Ryder that beets grow under the ground. “He remembered so many details about beets,” says Ryder.

Farm to Early Care and Education fits in with Head Start’s focus on family engagement. They engage parents through celebrations, integrating healthy foods into family nights, and occasionally offering cooking classes or grocery store tours. “We want parents to be empowered to make healthy choices and know where to get healthy foods,” says Jada Bahls Kagalskiy, one of the health and development specialists.

Head Start requires parents to match federal Head Start funding by doing “in-kind” activities, which requires parents to volunteer their time, such as by reading to their children at home. Northeast Iowa Head Start parents can earn in-kind time by trying the food of the month at home. Each month parents complete a form indicating whether they tried the food. If they tried the food, the family is entered into a drawing to win a $30 grocery gift card, funded using a local grant.

Northeast Iowa Head Start teachers use the Together We Grow Healthy Kids curriculum and a resource showing how F2ECE can meet Creative Curriculum standards. Therefore, integrating F2ECE into the curriculum doesn’t take extra time beyond the lesson planning teachers already do. Head Start also meets its health and development standards using F2ECE. “Farm to Early Care and Education checks all the boxes for what we need [related to health and development] for Head Start,” says Bahls Kagalskiy.
DISCUSSION

Why is F2ECE more prevalent in in-home child care settings than in other settings?

In-home care providers may have a higher level of agency and fewer barriers, allowing them to implement F2ECE if they are interested.

One in-home care provider shared insight into why she was able to implement F2ECE on a deep level: “I have my own program, so it is easy for me to make changes.” In contrast, licensed centers, public preschool programs, and Head Start may need to make institutional-level changes to be able to implement F2ECE, such as receiving school board approval or making changes to wellness policies. When asked about barriers that they face, three respondents (one at a statewide voluntary preschool program and two from licensed centers) said that they do not have the power to make decisions regarding curriculum or activities, indicating they lack agency to make changes. One said, “I don’t make these decisions.” Another said, “I am unsure if we would be allowed to look into this program.”

Were respondents who are implementing at least one element of F2ECE actually familiar with F2ECE?

Interestingly, 151 respondents who indicated they have implemented at least one F2ECE activity in the last year also indicated they did not know about F2ECE (of 716 who answered both questions, 21 percent).

A surprising number of respondents (151) indicated they had implemented at least one F2ECE activity in the last year but were not aware that it was called F2ECE. This indicates they were implementing these activities without an awareness of the F2ECE movement and F2ECE resources.

This result is largely driven by respondents who have a garden and/or are teaching children about food, but did not know about F2ECE. Of the 151 respondents who implemented F2ECE but did not know about F2ECE, 40 had a garden, 34 taught children about locally grown food, how food grows, and/or where it comes from, and 50 did both. (The remaining 27 respondents who implemented F2ECE activities in the last year without knowing about F2ECE implemented some other type of F2ECE activity.) This points to an opportunity to help providers who are already gardening and giving food education activities see themselves as part of F2ECE and expand into F2ECE activities that they have not previously considered.
What else do early care providers want the Iowa F2SEC Coalition to know?

Respondents are very interested in learning more about F2ECE and the supports that may be available to them.

Four hundred seventy-four respondents provided their email address so they can be added to the Iowa F2SEC Coalition e-newsletter. This shows that approximately half of respondents would like more information about F2ECE.

Similarly, through open-ended comments, 36 respondents also indicated they like the idea of F2ECE and/or they wanted more information.

Fourteen respondents shared information about positive experiences they have had with F2ECE. For example, one said, “Teaching children how food is grown from start to finish is awesome. [It] brings the real farm feeling. Gardens, milk production and our table food. I am a firm believer!”

“We are very interested in incorporating this into our preschool program more. We would love to do a garden, visit a farm and work with local farmers.”

Twelve respondents indicated they had never heard of F2ECE, an indication that the Coalition can do more to raise awareness. Interestingly, several of those who said they had never heard of F2ECE indicated they were already implementing some aspects of it or had a personal interest in gardening, farming, or food. For example, one respondent said, “I have never heard of the program; but have been involving children in gardening.” This qualitative evidence supports the quantitative data showing that approximately 21 percent of respondents have implemented F2ECE activities without connecting it to the F2ECE concept. The use of the word “program” by respondents also shows they understand F2ECE to be a set program rather than a concept that can be implemented in a variety of ways.

Five respondents expressed that they face financial barriers specifically related to the cost of putting in a garden. Quantitative data showed no or low funding was the top barrier identified by respondents, with 40 percent identifying funding as a barrier, and the contents of these responses give evidence that funding specifically for gardens is lacking. While CACFP funds can be used for plants, seeds, and fertilizer, some providers may need to use these funds for food purchases, so they may require another source of funding for gardens. Related to funding, one provider shared that the Farm Bureau’s Ag in the Classroom program offers mini-grants to classroom teachers.

Two respondents mentioned preserving local food or garden food for winter. One indicated she preserves food from her own garden and believes F2ECE trainings should teach other providers this skill, whereas another believed CACFP will not allow a provider to serve foods that were canned or frozen at home. In actuality, CACFP allows foods frozen at home to be served, but not foods that are canned at home. Future provider trainings may need to clarify this.

Two respondents indicated they are limited in their ability to serve local food because they depend on others to provide food. In one case, parents provide snacks and the school provides lunch; in the other case a caterer provides lunch.

Other comments, shared by one respondent each, included: health and safety rules have prevented a teacher from implementing F2ECE activities like bringing baby animals to school or hatching eggs; F2ECE could fit in with current nutrition education, such as Dr. Yum; and the need for education about ways to access local food beyond farmers markets.

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5 The FNS Instruction 796-2, Revision 4, Financial Management of the CACFP, categorizes costs associated with growing food that will be used in the CACFP, either as part of the meal service or for activities related to nutrition education to food service staff, as allowable. These costs may include seeds, fertilizer, labor, plot rental, etc.
CONCLUSIONS AND RECOMMENDATIONS

The Iowa F2ECE Survey showed that 70 percent of respondents have implemented at least one F2ECE activity in the past year. This shows that F2ECE is quite prevalent in the state. However, 21 percent of those who have implemented F2ECE activities in the past year also indicated that a barrier to implementation was that “they did not know F2ECE activities were an option,” meaning they did not know that activity was part of a larger F2ECE movement. Therefore, a significant number of early care providers have implemented F2ECE activities but not as part of an intentional F2ECE strategy. Similarly, fewer than half (44 percent) of respondents have implemented three or more types of F2ECE activities in the last year. These respondents are more likely to be intentionally implementing F2ECE.

The top barriers to implementing F2ECE were related to lack of resources (funds, space, and time), followed by lack of knowledge regarding gardening, cooking, etc. among providers. This gives evidence that policy, systems, and environmental change is necessary to remove barriers to F2ECE in addition to professional development.

The survey also showed differences between various types of early care providers. While in-home care providers implement F2ECE more commonly and at a deeper level, on average, than other types of providers, they also care for fewer children. Hence, while it may be easier to implement F2ECE in the in-home setting due to lower barriers, it impacts fewer children. Licensed centers, on the other hand, serve the most children in Iowa, but face slightly more barriers to implementing F2ECE than the average in-home provider.

Public preschool teachers and Head Start teachers face the most barriers in implementing F2ECE, possibly because they may need to make institutional-level changes to be able to implement F2ECE or staff is stretched thin meeting the many requirements of these programs. Public preschool program teachers were the least likely to have heard of F2ECE, which may indicate the Iowa Farm to School and Early Care Coalition can work to raise awareness among them. Despite these challenges, public preschool programs and Head Start serve a high percentage of low-income children, making these strategic locations for reaching children from vulnerable households. In addition, a large proportion of Head Start/Early Head Start providers indicated they haven’t implemented F2ECE but intend to start, pointing to an opportunity.

Based on the findings of the Iowa Farm to ECE survey, there are a number of steps that can be taken to address the systemic barriers faced by ECE providers when implementing F2ECE. Iowa policymakers can consider the following four recommendations:

Policy recommendations

- **Provide funding to ECE providers to support and incentivize F2ECE:** A lack of funding for F2ECE activities was identified by ECE providers as the top barrier to implementation. ECE providers lack incentives to source products locally and often lack adequate food budgets to purchase locally grown products or to start gardens to produce their own food. The state can explore additional funding opportunities that have been successful in other states, including a purchasing incentive through the Child and Adult Care Food Program (CACFP) of an additional 10 cents for meals prepared with locally grown products.

- **Support the network of local food coordinators:** Lack of staff time and capacity was a common barrier identified by ECE providers. Iowa has a network of local food coordinators, FoodCorps members, and partners who can help ECE sites procure local food, arrange farm field trips or farmer visits, and provide classroom lessons. However, these positions often need financial support. The state can fund local food coordinators working for ISU Extension and Outreach, Resource Conservation and Development, and non-profit organizations through direct assistance or grants and by funding the Regional Food Systems Working Group to coordinate efforts.

- **Incorporate F2ECE into the state’s technical assistance and training infrastructure:** Some providers surveyed noted that they needed more information on F2ECE strategies, while others were completely unaware of F2ECE. To equip ECE staff with the proper tools and knowledge to identify local food producers and incorporate F2ECE into curriculum, the state can infuse training and technical assistance on local food purchasing, gardening, and local food education into Iowa’s existing training infrastructure (e.g., CACFP trainings, licensing consultants, community college ECE degree programs).
**IOWA FARM TO EARLY CARE AND EDUCATION SUPPORTS CHILD NUTRITION AND HEALTH: RESULTS FROM A STATEWIDE SURVEY**

- **Develop a statewide communication plan for increased awareness of F2ECE:** To address lack of awareness around the benefits of F2ECE, Iowa can launch a statewide education initiative and marketing plan to teach communities about the importance of buying and consuming locally grown products. This initiative can include best practices from other states, including the promotion of a statewide “Harvest of the Month” calendar to support nutrition education in the classroom, a statewide award/recognition program to showcase exemplary Farm to ECE/School programs in communities, as well as an interactive website for farmers to connect with other producers and potential ECE providers interested in purchasing locally sourced food.

In addition to state policymakers, the Farm to School and Early Care Coalition (F2SEC) plays a significant role in creating a supportive statewide system that can promote the equitable expansion of F2ECE across Iowa. The F2SEC can consider the following five recommendations:

**Farm to School and Early Care Coalition recommendations**

- **Continue to build cross-sector statewide system change for F2ECE:** A focus on systems change to support F2ECE should be a key priority of the Iowa F2SEC. The survey indicated the top barriers faced by ECE providers were a lack of funds, time, and space, factors that are mostly out of the control of individual providers but can be mitigated through system-level improvements.

- **Enhance communication to ECE providers about F2ECE:** Intentionally raise awareness about F2ECE among public preschool providers, as they were the most likely to indicate they were unaware of F2ECE. Along with Head Start, public preschools are a strategic setting for reaching vulnerable children. Specifically, there is a need to elevate the ways that F2ECE strategies naturally align with Head Start and Early Head Start’s priorities of family and community engagement, learning standards, and health and development standards to reach children most impacted by health and education disparities.

- **Expand F2ECE professional development opportunities:** Continue to offer and expand professional development related to F2ECE, because 21 percent of respondents identified a lack of knowledge of gardening, local foods, and cooking as a challenge to implementation. Specifically, there is a need to connect with and offer guidance to ECE providers participating in the Child and Adult Care Food Program about which home-preserved foods may be served to children.

- **Identify funding opportunities for F2ECE activities:** Share information about various funding opportunities, including garden grants, through the Iowa F2SEC Coalition newsletter. Funding was a top barrier to implementing F2ECE and comments suggest that early care sites specifically need funding for gardens.

- **Incorporate a racial equity lens across statewide F2ECE efforts, including research and evaluation:** Should resources be available to conduct future studies of F2ECE in Iowa, gather further information about the race of children reached through F2ECE activities to have disaggregated data inform the recommendations and help ensure F2ECE is accessible to all children and is contributing to a more equitable Iowa.
SURVEY INVITATION AND INSTRUMENT

Thank you for participating in the 2020 Iowa Farm to Early Care and Education survey.

Participation in this survey is voluntary, and you may skip any question you do not want to answer. Your name, your program name, and any other identifying information will not be used in any publications or reports without your permission.

If you are reporting for an early childhood setting with more than one early childhood classroom, please respond for only the classroom you work with, and invite colleagues from other classrooms to take the survey as well.

If you have any questions regarding this survey, please contact Arlene Enderton, one of the evaluators for the Iowa Farm to School and Early Care Coalition, via email at arlene@iastate.edu or by phone at 641.425.4948.

1. Please share your ECE program information here:
   Name of program: ____________________________________________________________
   Zip code: ___________________________________________________________________
   City: _______________________________________________________________________

2. In what county is your ECE program located? (drop down list)

3. What type of early care and education learning environment is this?
   - [ ] Child development homes (registered)
   - [ ] Child care home (unregistered, 5 or fewer children)
   - [ ] Head Start Center
   - [ ] Early Head Start Center
   - [ ] Statewide Voluntary Preschool
   - [ ] Licensed center
   - [ ] Tribal
   - [ ] Other (please specify) ___________________________________________________

4. How many children are under your direct care or instruction?____________________

5. Of the children in your care, how many receive Child Care Assistance? (If none or if not applicable, please enter “0.”) __________________________

6. Does your child care setting participate in the Child and Adult Care Food Program (CACFP)?
   - [ ] Yes
   - [ ] No
   - [ ] Unsure
   - [ ] Not applicable
7. Which of the following activities, generally known as farm to early care and education activities, has your site participated in in the past year? (Mark all that apply.)

**Serving or promoting local food products**
- □ Served locally grown food in meals, snacks, or taste tests
- □ Worked with local producers/processors to develop a specific food product using local food for your site
- □ Promoted locally produced foods in general at the site (e.g., via signs, posters)
- □ Hosted a special event or day related to food and farms
- □ Facilitated children’s families’ access to locally grown foods at home

**Conducting educational activities related to local foods**
- □ Conducted field trips to farms, gardens, and/or farmers markets
- □ Hosted a farmer visit
- □ Hosted a chef visit
- □ Held taste tests and/or cooking demonstrations of locally produced foods
- □ Held taste tests and/or cooking demonstrations of garden-grown food
- □ Celebrated National Farm to School Month (October)
- □ Hosted F2ECE related community events (including parents)
- □ Educated children about locally grown food, how food grows, and/or where it comes from

**Growing fruits or vegetables**
- □ Planted or worked with children in an edible garden at your site
- □ Container gardening (growing fruits or vegetables in pots)

**None**
- □ We haven’t conducted any of these activities but plan to start in the future.
- □ We haven’t conducted any of these activities and do not plan to start in the future.

8. What do you see as the benefits of participating in farm to early care and education activities - including local food purchasing/procurement, gardening, and local food related educational activities? (Mark all that apply.)

- □ Access to fresher or higher-quality food
- □ Support local economy and community
- □ Support local farmers
- □ Stronger community connections/relationships
- □ Lower meal costs for site
- □ Teaching children about where food comes from and how it is grown
- □ Improving children’s nutrition and health
- □ Improving staff nutrition and health
- □ Enhance public relations
- □ Engaging parents and families
9. What do you see as barriers to starting or expanding farm to early care and education activities? (Mark all that apply.)

- Did not know F2ECE activities are an option
- Lack of staff time or capacity
- Lack of support from site decision-makers or program administration
- No/limited space for gardens or activities
- Lack of knowledge about gardening, local foods, culinary skills, etc.
- Low/no funding to implement new activities
- Liability or food safety concerns
- Unsure how to manage children in F2ECE activities
- Unsure how to find, buy, or prepare local foods
- No/limited understanding of how to use CACFP for local food and/or F2ECE
- Insufficient kitchen equipment to prepare local foods
- Unsure how to align activities to learning standards
- Lack of curriculum guides
- Limited parent or caregiver interest
- Language or cultural barriers with parents or caregivers
- Other (please specify) _____________________________

10. Comments:

11. If you would like to be on the Iowa Farm to School and Early Care Coalition email list, please share your email below:

   Email: __________________________________________________
   Verify email: _____________________________________________

Thank you for completing this survey. If you would like to be entered into a drawing for a chance to win one of 20 grocery gift cards (value $25) please follow this link: [link no longer active]