2021 National Farm to Early Care and Education Survey

Farm to Early Care and Education Continues to Foster Bright Futures for Children and Communities

National Farm to School Network
Michigan State University Center for Regional Food Systems
Summary of Practice and Policy Recommendations

Partnership and Network Building

• Partner with and uplift organizations working to support Black families.
• Build and expand systems to connect providers to existing resources and support organizations through models such as state and regional farm to ECE networks, hubs, and communities of practice.
• Include a focus on site administrators and decision makers in farm to ECE promotion and collaborative efforts.
• Increase knowledge about local food purchasing and decrease barriers to availability by providing local purchasing guidance and identifying ways to introduce providers to farmers through strategies such as directories, matchmaking, networking events, and regional hubs.

Integrating Farm to ECE Into Existing Systems

• Integrate farm to ECE opportunities into the Child and Adult Care Food Program that reach high proportions of children eligible for free/reduced price meals.
• Promote CACFP participation and address CACFP barriers to ensure equitable reach.
• Utilize CACFP participation as a pathway to farm to ECE. Integrate farm to ECE into CACFP “train the trainer” and professional development practices, highlighting CACFP and farm to ECE crossover, especially within QRIS systems and local food reimbursement.
• Build farm to ECE into CACFP systems by integrating farm to ECE in CACFP administrative roles and include CACFP in local food incentive programs.
• Spread awareness of farm to ECE and leverage farm to ECE’s contribution to high quality ECE settings by:
  • Including farm to ECE language into Quality Rating and Improvement Systems (QRIS), licensing standards, and CACFP trainings and communications.
  • Including farm to ECE trainings in continuing education systems and build farm to ECE trainings for coaches to further promote implementation and reduce knowledge barriers.
**Policy & Funding**

- Ensure funding is specifically available for and accessible to ece sites serving Black children and families.
- Create pathways for leadership in ECE and food systems for Black providers.
- Dedicate funding for grant programs that include technical assistance and shared learning opportunities.
- Prioritize improved access to funding with limited constraints. Technical assistance, policy efforts, and networking opportunities should emphasize improving pathways for securing funding and growing programs over time for sustainability.
- Leverage farm to ECE as a strategy to increase healthy food access, increase ECE quality, and support local farmers and the local economy. Uplift farm to ECE's alignment with these goals to increase access to diverse funding streams and improve collaboration across sectors.
- Reduce financial barriers to local purchasing through messaging, programs, and policy such as local incentive programs. Infrastructure barriers can be addressed through increasing visibility of and developing funding that can be used for kitchen supplies, storage, and appliances.
- Support CACFP flexibilities and expanded eligibility through Child Nutrition Reauthorization to expand CACFP participation, equity, and food access.
- Support funding for farm to institution as an avenue for supply chain resiliency.

**Programming & Resource Development**

- Ensure educational resources and food choices/activity honor food culture and preferences.
- Align farm to ECE promotion with top provider motivations, which include: improving children’s health, providing children with experiential learning, improving access to high-quality food, supporting local farmers and the local economy.
- Build and expand systems to connect providers to existing resources and support organizations through models such as farm to ECE institutes.
- Equip providers with the appropriate tools to gain buy-in from key decision makers at their site and empower them as leaders in farm to ECE.
- Develop support structures/systems and provide technical assistance to increase awareness of and assist in the adaptation of evidence-based curricula and resources.
- Highlight strategies to purchase local within current practices, such as requesting local foods from vendors and shopping at co-ops and highlighting local produce at grocery stores, while creating avenues for and promoting more direct purchasing strategies.
- Use of virtual spaces to reduce barriers to ECE provider trainings and professional development opportunities, as well as farm to ECE family engagement, should be considered for continuation past the pandemic.
- Sustain and expand virtual platforms for local purchasing past COVID-19 as a strategy to reduce barriers to local purchasing.
Farm to early care and education (ECE) promotes child health and well-being and increases access to healthy foods through a collection of strategies that are centered in experiential learning and family and community engagement. Farm to ECE brings three core elements — gardening, food and agriculture education, and local food purchasing — into every type of ECE setting. This includes family child care homes, child care centers, Head Start, and preschools in K-12 districts.

In 2021, National Farm to School Network (NFSN) partnered with Michigan State University Center for Regional Food Systems (CRFS) to launch a fourth iteration of the National Farm to ECE Survey, intended to add knowledge to the three previous surveys. The survey series completed by NFSN and CRFS in 2012¹, 2015², 2018³, and now 2021 is the only national farm to ECE–specific assessment of activity reach and participation. In this document, we share the purpose, methods used, and considerations from the 2021 National Farm to ECE Survey.

Survey Objectives

Similar to previous versions, the primary goals of the 2021 survey were to estimate national reach of farm to ECE and to learn about farm to ECE activities, including:

- Implementation of activities, including the where and what of activities;
- Motivations for implementing farm to ECE activities;
- Existing barriers to implementation of farm to ECE activities; and
- Program and Policy supports needed for growth of farm to ECE.

In the context of the pandemic, COVID-19 specific questions were added to this survey iteration to gain a better understanding of its effect on farm to ECE.

Survey Sampling

While the 2012 and 2015 surveys used the snowball sampling method, the 2018 and 2021 surveys used purposive sampling in order to obtain a representative sample of diverse ECE settings and reduce response bias. Using the seven USDA regions⁴ as a guide, 28 states were chosen, with four from each region. States were chosen based on:

Farm to ECE Infrastructure

The state had established external farm to ECE funding, a farm to ECE network, and/or a paid positions at state agencies, extension, or state level non-profit in support of farm to ECE. Farm to ECE infrastructure was selected as a key indicator for consideration to potentially examine the impact of state investments on farm to ECE participation.
Proportion of Racialized Peoples

Proportion of individuals who identify as Black/African American, American Indian/Alaska Native, Asian, Native Hawaiian/Pacific Islander, two or more races, or hispanic/Latinx. Proportion of racialized peoples was selected to ensure representation from historically marginalized communities to examine potential inequities in reach, participation, and resources related to farm to ECE. Within each region, one state was chosen that was considered to be:

- High in farm to ECE infrastructure and high proportion of racialized peoples
- High in farm to ECE infrastructure and low proportion of racialized peoples
- Low in farm to ECE infrastructure and high proportion of racialized peoples
- Low in farm to ECE infrastructure and low proportion of racialized peoples

Alternate states were identified if participants could not be reached.

Survey Development

Priority topics were chosen for the survey questions based on the previously stated goals. A total of 53 questions were incorporated, including:

- 10 questions addressing demographics;
- Seven questions addressing farm to ECE activity engagement and practices;
- Four questions addressing motivations, barriers, and community responses;
- 17 questions addressing food practices and funding, including local food purchasing;
- Five questions addressing COVID-19’s impact on ECE practices and funding; and
- Three questions addressing additional funding opportunities and use.

Table 1. State Configurations

<table>
<thead>
<tr>
<th>Configuration</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Farm to ECE Infrastructure/High Proportion of Racialized Peoples</td>
<td>Connecticut Arizona Georgia Washington D.C. Michigan Colorado California</td>
</tr>
<tr>
<td>High Farm to ECE Infrastructure/Low Proportion of Racialized Peoples</td>
<td>Vermont Arkansas North Carolina Pennsylvania Wisconsin Missouri Washington</td>
</tr>
<tr>
<td>Low Farm to ECE Infrastructure/High Proportion of Racialized Peoples</td>
<td>New York New Mexico Florida Maryland Kansas Hawaii</td>
</tr>
<tr>
<td>Low Farm to ECE Infrastructure/Low Proportion of Racialized Peoples</td>
<td>Maine Utah South Carolina West Virginia Indiana South Dakota</td>
</tr>
</tbody>
</table>
Of the questions included, four were open ended and 49 were multiple choice. The survey was designed to take 20 minutes to complete. A pre-survey worksheet was also provided to assist participants in gathering necessary information to complete the survey.

Prior to contacting participants:

- The **study protocol was approved** by the MSU Institutional Review Board for research on human subjects;
- The **survey was vetted by experts** in farm to early care and education with specific attention to reducing survey questions and overall length, noting the addition of COVID-19 specific questions; and
- The **survey was piloted in a state** known from previous surveys to have a large response rate with data collection occurring over a 2-week period to identify any issues prior to full dissemination.

**Figure 1. Survey Dissemination by State**

<table>
<thead>
<tr>
<th>State Dissemination Method</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct dissemination to all programs</td>
<td>18</td>
</tr>
<tr>
<td>Direct dissemination to licensed centers</td>
<td>2</td>
</tr>
<tr>
<td>Survey sent through CCR&amp;R</td>
<td>5</td>
</tr>
<tr>
<td>Not reached</td>
<td>2</td>
</tr>
</tbody>
</table>

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### Reaching Participants

For each state identified, a request was made to the state agency for lists of providers’ emails in licensed and licensed-exempt child care, including providers in center-based and family child care, Head Start, Early Head Start, public and private preschools, preschool and child care within K-12 school districts, and tribal child care. Of the states chosen:

- **18 states** provided contact information of all programs for direct dissemination of the survey via Qualtrics;
- **Two states** provided contact information of all licensed centers for direct dissemination of the survey via Qualtrics (omitting family child care);
- **Five states** sent the survey link directly to providers using email addresses through CCR&R and/or other state agency collaboration offices; and
- **Two states** were not reached as the research team was unable to obtain lists or an alternate distribution mechanism and did not have alternate states in those regions.

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*Regions are delineated using the USDA Food and Nutrition Services Regional Office Map available at https://www.fns.usda.gov/fns-regional-office*
The survey was sent directly to participants using the email lists provided, as described above. The link was distributed through state distribution channels in the other five states beginning September 8, 2021. Reminders were sent via Qualtrics on September 15 and September 22 with the survey closing on September 29.

Participants indicated consent for participation after reading about the purpose of the survey, with an option to discontinue participation at any time and to complete questions in the survey as desired. Similar to the 2018 version, the 2021 survey offered an incentive to all participants, regardless of survey completion. Incentives were offered to the first five participants to submit a response within the first two days of the survey opening. At the close of the data collection period, all responses were cleaned to eliminate duplicates, remove partial or invalid responses, and analyzed using SPSS Statistics software.

Considerations

Though both the 2018 and 2021 surveys employed purposive sampling, the 2021 survey used a different method of purposive sampling. In 2018, the survey was sent directly to provider emails in every state and U.S. territory, while the 2021 survey used stratification sampling based on USDA region, state farm to ECE infrastructure and demographic characteristics.

The 2021 method was employed in an attempt to:

- Obtain a representative sample of providers;
- Increase the return rate; and
- Gain a better understanding of the national landscape of farm to ECE, including activities, motivations for implementation of activities, and barriers to farm to ECE.

However, it is recognized that using this new method created limitations in comparing interpreted survey results with previous years’ results.

The research team delayed the distribution of the survey due to the pandemic, hypothesizing a decreased response rate as early care and education sites closed or experienced reduced staff capacity. Although a direct comparison from 2021 to 2018 cannot be made due to different methodologies in survey dissemination, the reduced response rate may offer confirmation of the decreased response rate.

The ongoing pandemic and associated challenges are an important consideration in interpreting the results. Additionally, the previously discussed stratification, which differs from the 2018 version, makes comparisons with earlier versions difficult. Despite these challenges, findings and discussions of the farm to ECE activities, motivations, challenges and barriers, and opportunities are presented as the most current national perspective on farm to ECE.

What to Expect

This is the first in a series of briefs on the methodology, findings from, and discussion of the 2021 Farm to ECE National Survey. Subsequent briefs include information on:

- **Farm to ECE Reach**
  
  Findings on farm to ECE participation across states and regions.

- **Participation and Practices**
  
  How providers are engaging in farm to ECE.

- **Why Farm to ECE**
  
  Motivations and barriers for implementing farm to ECE and community responses.

- **Local Purchasing**
  
  Frequency and types of local foods served, local food sourcing practices, and relationships between local food purchasing practices and CACFP funding and participation.
COVID-19 and Farm to ECE
COVID-19’s impact on farm to ECE practices and funding opportunities.

Explore more farm to ECE resources, learn how to get involved, and connect with partners in your state by exploring the National Farm to School Network site at www.farmtoschool.org/ECE. Visit www.foodsystems.msu.edu to find resources and research on regional food systems from Michigan State University Center for Regional Food Systems.

References


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Farm to early care and education (ECE) promotes child health and increases access to healthy foods through a collection of strategies that are centered in experiential learning and family and community engagement. Farm to ECE brings three core elements—gardening, food and agriculture education, and local food purchasing—into every type of ECE setting. These include family child care homes, child care centers, Head Start, and preschools in K-12 districts.

In its fourth iteration, intended to add to the knowledge of the previous three surveys, National Farm to School Network (NFSN) partnered with Michigan State University Center for Regional Food Systems (CRFS) to implement the 2021 version of the National Farm to Early Care and Education Survey. The survey series completed by NFSN and CRFS in 2012\(^1\), 2015\(^2\), 2018\(^3\), and now 2021, is the only national farm to ECE–specific assessment of activity reach and participation. Information on the background and methodology of the 2021 National Farm to Early Care and Education Survey can be found in the “Background and Methods” 2021 survey brief\(^4\). This brief aims to explore who is and is not participating in farm to ECE.

### Key Findings

- Of the 2,914 survey respondents, 82% indicated that they participate in farm to ECE and 14% plan to start in the future.
- The percentage of Black/African American enrollees was statistically significantly higher in sites not participating in farm to ECE than in those participating in farm to ECE. Additionally, the percentage of white enrollees was statistically significantly higher in participating sites than in non-participating sites.
- At sites where children were not eligible for free and reduced-priced meals, 87% participated in farm to ECE, while 86% of sites where 25 to 49% of enrolled children eligible for free and reduced-priced meals participated in farm to ECE. Sites where 75 to 99% of enrolled children were eligible for free and reduced-priced meals had the lowest number of farm to ECE participating respondents at 79%.
Farm to ECE Reach

A total of 95,149 emails were distributed across 25 states with a response rate of 3.1%. There were 2,914 total survey respondents with 2,397 (82%) indicating they participated in farm to ECE and 14% planning to start in the future.

Using a Chi-square test, researchers found statistically significant associations between farm to ECE participation and region, geography (e.g., urban, rural, etc), state configuration, model type (e.g., child care center, family child care, etc.), and percentage of enrollees eligible for free and reduced meals.

State and Region

The highest amount of farm to ECE participation was found in the midwest (20%), followed by the Southeast (19%), the Northeast (18%), the Mid Atlantic (16%), and the Mountain Plains region (13%). The lowest amount of participation was found in the Western (10%) and Southwestern (5%) regions. It should be noted that three states were surveyed in the Western and Midwestern region while four states were surveyed in the other regions. The states with the highest number of Farm to ECE participating respondents were both in the Midwest region, as shown in Table 1.

The states with the highest internal farm to ECE participation rates among respondents were South Dakota (100%), Vermont (97%), Utah and Indiana (94%), and Hawaii (90%). It should be noted that the number of participants from some states were relatively small, resulting in higher percentages.

Practice and Policy Recommendations

- Integrate farm to ECE opportunities into the Child and Adult Care Food Program that reach high proportions of children eligible for free/reduced price meals. Promote CACFP participation and address CACFP barriers to ensure equitable reach.
- Ensure funding is specifically available for and accessible to ECE sites serving Black children and families.
- Partner with and uplift organizations working to support Black families.
- Create pathways for leadership in ECE and food systems for Black providers.
- Ensure educational resources and food choices/activity honor food culture and preferences.
<table>
<thead>
<tr>
<th>Region</th>
<th>State</th>
<th>Frequency of Total Respondents</th>
<th>Percentage of Total Respondents</th>
<th>Frequency of Farm to ECE Respondents</th>
<th>Percentage of Total Farm to ECE Respondents</th>
<th>Percentage Reporting Farm to ECE Within State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>New York</td>
<td>292</td>
<td>10%</td>
<td>226</td>
<td>9%</td>
<td>77%</td>
</tr>
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<td></td>
<td>Connecticut</td>
<td>107</td>
<td>4%</td>
<td>91</td>
<td>4%</td>
<td>85%</td>
</tr>
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<td></td>
<td>Maine</td>
<td>74</td>
<td>3%</td>
<td>68</td>
<td>3%</td>
<td>92%</td>
</tr>
<tr>
<td></td>
<td>Vermont</td>
<td>39</td>
<td>1%</td>
<td>38</td>
<td>2%</td>
<td>97%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>512</strong></td>
<td><strong>18%</strong></td>
<td><strong>423</strong></td>
<td><strong>18%</strong></td>
<td></td>
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<tr>
<td>Southwest</td>
<td>Arizona</td>
<td>47</td>
<td>2%</td>
<td>39</td>
<td>2%</td>
<td>83%</td>
</tr>
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<td></td>
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<td>26</td>
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<td>30</td>
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<td></td>
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<td>1%</td>
<td>15</td>
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</tr>
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<td><strong>Total</strong></td>
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<td><strong>110</strong></td>
<td><strong>5%</strong></td>
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<td>Southeast</td>
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<td>168</td>
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<td>124</td>
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<td></td>
<td>North Carolina</td>
<td>142</td>
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<td>113</td>
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<tr>
<td></td>
<td>Georgia</td>
<td>141</td>
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<td>115</td>
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<td>82%</td>
</tr>
<tr>
<td></td>
<td>Florida</td>
<td>130</td>
<td>4%</td>
<td>96</td>
<td>4%</td>
<td>74%</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>581</strong></td>
<td><strong>20%</strong></td>
<td><strong>449</strong></td>
<td><strong>19%</strong></td>
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<td>Mid-Atlantic</td>
<td>Pennsylvania</td>
<td>207</td>
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<td>173</td>
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<td>Maryland</td>
<td>205</td>
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<td>173</td>
<td>7%</td>
<td>84%</td>
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<tr>
<td></td>
<td>West Virginia</td>
<td>34</td>
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<td>26</td>
<td>1%</td>
<td>76%</td>
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<td>Washington D.C.</td>
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<td>1%</td>
<td>18</td>
<td>1%</td>
<td>82%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>468</strong></td>
<td><strong>16%</strong></td>
<td><strong>390</strong></td>
<td><strong>16%</strong></td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>Michigan</td>
<td>288</td>
<td>10%</td>
<td>233</td>
<td>10%</td>
<td>81%</td>
</tr>
<tr>
<td></td>
<td>Wisconsin</td>
<td>271</td>
<td>9%</td>
<td>233</td>
<td>10%</td>
<td>86%</td>
</tr>
<tr>
<td></td>
<td>Indiana</td>
<td>16</td>
<td>1%</td>
<td>15</td>
<td>1%</td>
<td>94%</td>
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<tr>
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<td><strong>Total</strong></td>
<td><strong>575</strong></td>
<td><strong>20%</strong></td>
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<td><strong>20%</strong></td>
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<tr>
<td>Mountain Plains</td>
<td>Colorado</td>
<td>222</td>
<td>8%</td>
<td>189</td>
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<td>85%</td>
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<td></td>
<td>Missouri</td>
<td>113</td>
<td>4%</td>
<td>97</td>
<td>4%</td>
<td>86%</td>
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<td></td>
<td>Kansas</td>
<td>25</td>
<td>1%</td>
<td>20</td>
<td>1%</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>South Dakota</td>
<td>5</td>
<td>0%</td>
<td>5</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>365</strong></td>
<td><strong>13%</strong></td>
<td><strong>311</strong></td>
<td><strong>13%</strong></td>
<td></td>
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<tr>
<td>Western</td>
<td>California</td>
<td>190</td>
<td>7%</td>
<td>161</td>
<td>7%</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>Washington</td>
<td>50</td>
<td>2%</td>
<td>46</td>
<td>2%</td>
<td>92%</td>
</tr>
<tr>
<td></td>
<td>Hawaii</td>
<td>29</td>
<td>1%</td>
<td>26</td>
<td>1%</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>269</strong></td>
<td><strong>9%</strong></td>
<td><strong>233</strong></td>
<td><strong>10%</strong></td>
<td></td>
</tr>
</tbody>
</table>

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a Regions are delineated using the USDA Food and Nutrition Services Regional Office Map available at https://www.fns.usda.gov/fns-regional-office
b N=2914 total respondents
c N=2397 farm to ECE participants
d Due to rounding, percentages do not add up to 100%
Geographic Area

Rural areas had the highest percentage of farm to ECE participating sites (86%), followed by urban areas (82%), suburban/urban cluster areas (82%), and Tribal areas (71%).

Figure 1. Percentage of Farm to ECE Respondents Within Each Geographic Region (Self Reported) a

- Rural
- Suburban/urban cluster
- Urban
- Tribal
- Unknown
- Other
- Missing

a N=2397
Program Characteristics

Multi-sites had the highest percentage of farm to ECE respondents (88%) as well as licensed sites (82%). The program model with the most respondents participating in farm to ECE were Tribal sites (100%), followed by private preschools (86%), Head Starts and/or Early Head Starts (85%), family child care (83%), child care centers (80%), preschools (77%), and state preschools (73%), as shown in Table 2. Farm to ECE participating sites served an average of 79 children full-time and 14 children part-time. The number of children enrolled ranged from 0-100,000.

Table 2. Farm to ECE Respondents by Operation Type, Program Type, and Program Model

<table>
<thead>
<tr>
<th>Operation Type</th>
<th>Frequency of Total Respondents</th>
<th>Frequency of Farm to ECE Respondents</th>
<th>Percentage of Farm to ECE Respondents Within Each Type or Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual site</td>
<td>2582</td>
<td>2117</td>
<td>82%</td>
</tr>
<tr>
<td>Multi-site</td>
<td>306</td>
<td>259</td>
<td>85%</td>
</tr>
<tr>
<td>Missing</td>
<td>26</td>
<td>21</td>
<td>81%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Frequency of Total Respondents</th>
<th>Frequency of Farm to ECE Respondents</th>
<th>Percentage of Farm to ECE Respondents Within Each Type or Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensed</td>
<td>2821</td>
<td>2327</td>
<td>82%</td>
</tr>
<tr>
<td>Licensed-exempt</td>
<td>75</td>
<td>56</td>
<td>75%</td>
</tr>
<tr>
<td>Missing</td>
<td>18</td>
<td>14</td>
<td>78%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program Model</th>
<th>Frequency of Total Respondents</th>
<th>Frequency of Farm to ECE Respondents</th>
<th>Percentage of Farm to ECE Respondents Within Each Type or Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family child care</td>
<td>1121</td>
<td>939</td>
<td>83%</td>
</tr>
<tr>
<td>Child care center</td>
<td>1091</td>
<td>869</td>
<td>80%</td>
</tr>
<tr>
<td>Private preschool</td>
<td>353</td>
<td>305</td>
<td>86%</td>
</tr>
<tr>
<td>Head start and/or early head start</td>
<td>85</td>
<td>72</td>
<td>85%</td>
</tr>
<tr>
<td>Preschool or childcare through K–12 school district</td>
<td>64</td>
<td>49</td>
<td>77%</td>
</tr>
<tr>
<td>State preschool</td>
<td>37</td>
<td>27</td>
<td>73%</td>
</tr>
<tr>
<td>Tribal</td>
<td>2</td>
<td>2</td>
<td>100%</td>
</tr>
<tr>
<td>Other</td>
<td>158</td>
<td>131</td>
<td>83%</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>3</td>
<td>100%</td>
</tr>
</tbody>
</table>

N=2397
Child Data

Of respondents participating in farm to ECE, 1538 (64%) serve infants, 1988 (83%) serve children aged 13 to 36 months, and 2284 (95%) of participants serve preschool-aged children (3 to 5 years old). At sites where children were not eligible for free and reduced-priced meals 87% participated in farm to ECE, while 86% of sites where 25 to 49% of enrolled children eligible for free and reduced-priced meals participated in farm to ECE. Sites where 75 to 99% of enrolled children were eligible for free and reduced-priced meals had the lowest number of farm to ECE participating respondents at 79%.

Table 3. Farm to ECE Respondents by Enrolled Children Eligible For Free and Reduced-Priced Meals^a

<table>
<thead>
<tr>
<th>Percent of Enrolled Children Eligible</th>
<th>Frequency of Total Respondents</th>
<th>Frequency of Farm to ECE Respondents</th>
<th>Percentage of Farm to ECE Respondents Within Each Percentage Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>534</td>
<td>463</td>
<td>87%</td>
</tr>
<tr>
<td>1-9%</td>
<td>416</td>
<td>343</td>
<td>82%</td>
</tr>
<tr>
<td>10-24%</td>
<td>300</td>
<td>252</td>
<td>84%</td>
</tr>
<tr>
<td>25-49%</td>
<td>283</td>
<td>242</td>
<td>86%</td>
</tr>
<tr>
<td>50-74%</td>
<td>279</td>
<td>232</td>
<td>83%</td>
</tr>
<tr>
<td>75-99%</td>
<td>351</td>
<td>277</td>
<td>79%</td>
</tr>
<tr>
<td>100%</td>
<td>334</td>
<td>274</td>
<td>82%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>412</td>
<td>309</td>
<td>75%</td>
</tr>
<tr>
<td>Missing</td>
<td>5</td>
<td>5</td>
<td>100%</td>
</tr>
</tbody>
</table>

^a N=2397
Farm to ECE respondents also provided data regarding the race/ethnicity of the children for whom they were providing care, indicating that the majority of children in their care were White (62%). Other races/ethnicities indicated were Black/African American (20%), Hispanic (14%), multiple races (10%), other (3.0%), Asian (3.0%), American Indian/Alaska Native (1.0%), and Native Hawaiian/Other Pacific Islander (1.0%).

Using a Mann-Whitney U Test, researchers found that the percentage of Black/African American enrollees was statistically significantly higher in sites not participating in farm to ECE than in those participating in farm to ECE. Additionally, the percentage of white enrollees was statistically significantly higher in participating sites than in non-participating sites. Differences between enrollment in participating and non-participating sites for children of other races was not statistically significant.

Table 4. Race/Ethnicity of Children in Care of Respondents$^a,b$

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Average Percentage of Total Respondents</th>
<th>Average Percentage of Farm to ECE Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Not Hispanic</td>
<td>86%</td>
<td>86%</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>60%</td>
<td>62%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>21%</td>
<td>20%</td>
</tr>
<tr>
<td>Asian</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Native Hawaiian/Other Pacific Islander</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Multiple races</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Missing</td>
<td>3%</td>
<td>3%</td>
</tr>
</tbody>
</table>

$^a$ N=2914 total respondents
$^b$ N=2397 farm to ECE participating respondents
Practice and Policy Recommendations

With a promising 82% of respondents already participating in farm to ECE and 14% planning to start in the future, farm to ECE has steadily gained favor in the ECE community. Farm to ECE is reaching a wide range of ECE settings and children of diverse racial/ethnic and socioeconomic backgrounds. However, racial and social inequity in farm to ECE accessibility still exists and must be addressed. The percentage of Black/African American enrollees was statistically significantly higher in sites not participating in farm to ECE than in those participating in farm to ECE and the percentage of white enrollees was statistically significantly higher in participating sites than in non-participating sites. Additionally, farm to ECE participation rates were lowest at sites with the highest amount of free and reduced-price meal participation. These findings reflect historic inequities due to structural and systemic racism and provide potential directions and focus for the future of farm to ECE.

Farm to ECE is a valuable tool to address concerns stemming from inequity and can be an avenue to support food access for staff, families, and the community while improving ECE quality. To ensure every community has access to the potential benefits of farm to ECE and high quality ECE settings in general, addressing financial barriers is a critical step. One strategy to reach sites with high proportions of children eligible for free and reduced-price meals is to integrate farm to ECE opportunities into the Child and Adult Care Food Program (CACFP). CACFP and farm to ECE have many opportunities for alignment, including farm to ECE related grant opportunities offered to CACFP participating programs, using CACFP funds to reimburse garden grown foods and gardening supplies, using farm to ECE activities to meet CACFP meal patterns and best practices, and creating farm to ECE positions at Departments of Education or integrating farm to ECE into the job descriptions of existing CACFP-related positions. To ensure reach to programs that do not participate in CACFP but still serve high proportions of children eligible for free and reduced-price meals, efforts should be made to promote CACFP while reducing barriers to participation and extending accessible farm to ECE funding opportunities to sites not participating in CACFP.

Black, Indigenous, and People of Color (BIPOC) communities face inequities in childcare affordability, access, and availability, with childcare being least affordable for Black and Latinx families with low incomes. Communities of color are disproportionately impacted by the pre-existing quality and staff compensation concerns in ECE systems, creating a need for investments in BIPOC ECEs, providers, and communities. In order to address barriers due to historic inequities, funding should be available and accessible specifically for ECE sites serving black children and families. To meet the needs of families and ECE programs, investments that prioritize equitable access and enhance job quality and compensation must be made in the Black community. Partnerships with organizations working to support Black families such as the National Black Child Development Institute (NBCDI) should be prioritized in these efforts. Supporting black-run and operated organizations can help ensure efforts better reflect community voice while uplifting the black community as a whole.

The path towards equity in farm to ECE includes pathways for leadership and employment opportunities for BIPOC providers. Supporting professional development opportunities, creation of career pathways that allow professional certifications to contribute to degrees, and providing scholarships to help ECE workers advance their education or qualifications are all
important strategies to support an equitable ECE workforce. This strategy is especially imperative as the ECE workforce is predominantly composed of people of color, primarily females, who are not adequately paid and are often understaffed\(^8,9\). They are also more than twice as likely to participate in public support programs than K-12 staff\(^8\). Additionally, Black providers are paid on average $0.78 less per hour than their White peers and are more likely to hold lower-level positions within child care programs\(^8,9,10\). Supporting leadership opportunities can also help recruit and retain Black educators, which can help Black children thrive, as research shows that Black students perform better academically, socially, and emotionally with Black teachers\(^7\). Leadership opportunities will not only help children perform and ECE staff, namely black women, move towards economic viability, but will support the BIPOC community at large. Additionally, educator knowledge and training are directly linked to ECE program quality. Strengthening the workforce is an important step in creating viable careers in ECE and making quality ECE programming, such as farm to ECE, more accessible in BIPOC communities.

Finally, to make farm to ECE more accessible to diverse communities and encourage participation, farm to ECE activities and resources should honor childrens’ home culture, language, traditions, and lived experiences. Culturally relevant programming can serve as a platform for cultural education, bring pride and validation to students’ backgrounds, increase excitement and participation around meals, and encourage community and family participation. When farm to ECE reflects the community, it can be a powerful learning tool and help build a welcoming space for children impacted by racial trauma. States and farm to ECE supportive organizations can ensure access to culturally adapted activities and culturally informed resources in the language spoken by families, children and staff.

Explore more farm to ECE resources, learn how to get involved, and connect with partners in your state by exploring the National Farm to School Network site at www.farmtoschool.org/ECE. Visit www.foodsystems.msu.edu to find resources and research on regional food systems from Michigan State University Center for Regional Food Systems.

References


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Farm to early care and education (ECE) promotes child health and increases access to healthy foods through a collection of strategies that are centered in experiential learning and family and community engagement. Farm to ECE brings three core elements—gardening, food and agriculture education, and local food purchasing—into every type of ECE setting. These include family child care homes, child care centers, Head Start, and preschools in K-12 districts.

In its fourth iteration, intended to add to the knowledge of the previous three surveys, National Farm to School Network (NFSN) partnered with Michigan State University Center for Regional Food Systems (CRFS) to implement the 2021 version of the National Farm to Early Care and Education Survey. The survey series completed by NFSN and CRFS in 2012, 2015, 2018, and now 2021, is the only national farm to ECE–specific assessment of activity reach and participation. Information on the background and methodology of the 2021 National Farm to Early Care and Education Survey can be found in the “Background and Methods” 2021 survey brief. This brief aims to explore the facilitators of farm to ECE participation and how respondents are participating in farm to ECE.

Key Findings

• The number of activities sites participated in ranged between zero and 15, with an average of three activities.

• The most common curriculum used was one developed by the ECE site themselves (41%), followed by United States Department of Agriculture’s (USDA) “Grow It, Try It, Like It!” (14%) and curriculum developed by the respondent’s state (9%).

• Most respondents participating in farm to ECE have not received external funding for their farm to ECE activities (82%). However, of the 11% who did receive external funding, 31% received funding from the state and 13% from federal sources.

• Sites that either used a self-developed curriculum or a curriculum not listed in the survey, received funding from state sources, or have been engaged in Farm to ECE activities for 3 to 5 years, participated in approximately one more activity on average than other participants, holding all other variables constant.

• The most frequent activity farm to ECE participants engaged in was educating children about locally grown food, how food grows, and/or where food comes from (71%). The next most common activities were planting a garden or working with children in an edible garden on-site (65%) and serving locally grown food in meals, snacks, or taste tests (65%).
### Practice and Policy Recommendations

- Develop support structures/systems and provide technical assistance to increase awareness of and assist in the adaptation of evidence-based curricula and resources.
- Prioritize improved access to funding with limited constraints. Technical assistance, policy efforts, and networking opportunities should emphasize improving pathways for securing funding and growing programs over time for sustainability.
- Leverage farm to ECE as a strategy to increase healthy food access, increase ECE quality, and support local farmers and the local economy. Uplift farm to ECE’s alignment with these goals to increase access to diverse funding streams and improve collaboration across sectors.

### Farm to ECE Participation

#### Duration and Frequency of Farm to ECE Activities

The 2021 survey indicated that 81% of ECE sites participated in at least one farm to ECE activity within the last year. Additionally, 14% of sites are planning to start activities in the future. One third (33%) of respondents have been participating in farm to ECE for more than 5 years while a quarter (25%) have been participating between one and three years, 18% have been participating for less than one year, and 11% between three and five years (Table 1).

Table 1. Duration of Farm to ECE Activity Participation

<table>
<thead>
<tr>
<th>Duration</th>
<th>Percent</th>
<th>Predicted Number of Activities More Than Those Not Participating in Farm to ECE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>18%</td>
<td>2.1 more activities</td>
</tr>
<tr>
<td>Between 1 and 3 years</td>
<td>25%</td>
<td>3 more activities</td>
</tr>
<tr>
<td>Between 3 and 5 years</td>
<td>11%</td>
<td>3.4 more activities</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>33%</td>
<td>3.5 more activities</td>
</tr>
<tr>
<td>Don’t know</td>
<td>12%</td>
<td>1.8 more activities</td>
</tr>
<tr>
<td>Missing</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

* N=2397

The number of activities sites participated in ranged between zero and 15, with an average of three activities. Based on multiple regression analysis, researchers found that sites that used a self-developed or a curriculum not listed in the survey, received funding from state sources, or have been engaged in farm to ECE activities for 3 to 5 years participated in approximately one more activity, holding all other variables constant.
Respondents engaged in farm to ECE shared the types of farm to ECE activities in which they were engaged. The most frequently shared activities were educating children about locally grown food (71%) and how food grows and/or where food comes from (71%). The next most common activities were planting a garden or working with children in an edible garden on-site (65%) and serving locally grown food in meals, snacks, or taste tests (65%).

**Figure 1. Farm to ECE Activities Conducted by Providers**

Educated children about locally grown food, how food grows and/or where it comes from
Served locally grown food in meals, snacks or taste tests
Planted or worked with children in an edible garden at your site
Held taste tests and/or cooking demonstrations of garden grown food
Held taste tests and/or cooking demonstrations of locally produced foods
Conducted field trips to farms, gardens, and/or farmers markets
Promoted locally produced foods in general at the site (e.g., via signs, posters)
Facilitated children’s families access to locally grown foods at home
Hosted a special event or day related to food and farms
Celebrated National Farm to School Month (October)
Hosted a farmer visit
Other farm to ECE activity
Hosted a chef visit
Hosted farm to ECE related community events (including families)
Worked with local producers/processors to develop a specific food product using local food for your site

**Missing**
Nutrition Education

A large majority of surveyed providers engaged in nutrition education activities at least monthly (77%), with 39% engaging in nutrition education at least weekly.

Figure 2. Frequency of Nutrition Education Activities

Respondents used a variety of curricula for their farm to ECE activities. The most common curriculum used was one developed by the ECE site themselves (41%), followed by published curricula such as United States Department of Agriculture’s (USDA) “Grow It, Try It, Like It!” (14%), curricula developed by the respondent’s state (9%), and Urban and Environmental Policy Institute’s Farm to Preschool Harvest of the Month (2%). Nearly one-third of respondents did not use any curriculum (30%).

Based on a multiple regression analysis, the curriculum used statistically significantly predicted the number of activities a site participated in, as shown in Table 2.

Table 2. Four Most Commonly Used Farm to ECE Curricula

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Frequency</th>
<th>Percent</th>
<th>Predicted Number of Activities More Than Those Not Participating in Farm to ECE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum/materials developed ourselves</td>
<td>989</td>
<td>41%</td>
<td>.8 more activities</td>
</tr>
<tr>
<td>Grow It, Try It, Like It! - USDA</td>
<td>343</td>
<td>14%</td>
<td>.7 more activities</td>
</tr>
<tr>
<td>Curricula/materials developed by our state</td>
<td>215</td>
<td>9%</td>
<td>.9 more activities</td>
</tr>
<tr>
<td>Farm to Preschool Harvest of the Month - Urban and Environmental Policy Institute</td>
<td>44</td>
<td>2%</td>
<td>1.5 more activities</td>
</tr>
</tbody>
</table>

* N=1591
Gardening
Of farm to ECE participating sites, 50% reported that they currently had an on-site edible garden (1204) and 19% respondents (456) reported that they previously had one. More than a quarter (633 or 27%) had never had an on-site garden, with 22% (522) of those respondents indicating that they were interested in starting one and 5% (111) not interested in starting one at the time. The top use for gardens was taste testing (81%), followed by classroom lessons/curricula (76%), as shown in figure 3.

Figure 3. Garden Uses

Farm to ECE Funding
Most respondents participating in farm to ECE have not received external funding for their farm to ECE activities (82%). Of the 11% who did receive external funding, 31% received funding from the state and in the form of in-kind donations, 30% from private sources, and 27% from local sources. Respondents received an average of $2,917 in external funding specifically for farm to ECE, with a median of $300. Funding amounts ranged from $0 to $100,000.

Using multiple regression analysis, funding sources statistically significantly predicted the number of activities a site participated in, as shown in Table 3.

Table 3. External Funding for Farm to ECE Used by Providersa,b

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Frequency</th>
<th>Percent</th>
<th>Predicted Number of Activities More Than Those Not Participating in Farm to ECE</th>
</tr>
</thead>
<tbody>
<tr>
<td>State sources</td>
<td>80</td>
<td>31%</td>
<td>.8 more activities</td>
</tr>
<tr>
<td>In-kind donations</td>
<td>80</td>
<td>31%</td>
<td>.7 more activities</td>
</tr>
<tr>
<td>Private sources</td>
<td>77</td>
<td>30%</td>
<td>.8 more activities</td>
</tr>
<tr>
<td>Local sources</td>
<td>68</td>
<td>27%</td>
<td>.4 more activities</td>
</tr>
<tr>
<td>Federal sources</td>
<td>32</td>
<td>13%</td>
<td>.8 less activities</td>
</tr>
<tr>
<td>Other</td>
<td>48</td>
<td>19%</td>
<td>.4 less activities</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>

a N=255
b Percentages total more than 100 and counts total more than the number of responses because more than one choice could be selected.
Practice and Policy Recommendations

With a third of farm to ECE participants engaging in farm to ECE for more than five years and 43% participating for less than three years, farm to ECE is not only gaining popularity but is proving sustainable for many providers. Additionally, the longer providers engage in farm to ECE, the larger the predicted number of activities. This means farm to ECE programs can become more comprehensive with time. Half of participants reported that they had an on-site edible garden. Those with gardens used them to introduce and increase access to high-quality foods for children and families. Farm to ECE focused technical assistance and policy opportunities can leverage farm to ECE as a strategy to increase healthy food access, increase ECE quality, and support local farmers and the local economy. Uplifting farm to ECE’s alignment with these goals can increase access to diverse funding streams and improve collaboration across sectors. Emphasis should be on practices that facilitate higher engagement, such as starting slow and building over time for sustainability, using a curriculum, and securing donations and funding.

A variety of curricula and educational activities exist to support providers in using gardening and food-related education to reach early learning standards. However, a large percentage (41%) of those engaging in farm to ECE built their own curriculum. Communication with providers is needed to understand why they are using their own curricula and what barriers are inhibiting use of pre-made curricula, which may include limited knowledge of available curricula or curricula’s misalignment with providers’ pedagogical approaches, motivations, and available resources. Stronger supports are needed to assist providers in reaching existing resources and reducing potential capacity or knowledge-related barriers to beginning or expanding farm to ECE participation. Promoting and providing technical assistance around the use and adaptation of evidence-based curricula to align with their sites’ resources and cultural makeup is a priority, as curricula can highlight farm to ECE alignment with standards and with provider motivations. Culturally adapting curricula can also be a strategy to advance equity within farm to ECE, as outlined in the “Farm to ECE Reach” brief. Additionally, pre-made curricula can increase provider capacity, reducing barriers to participation. This recommendation is supported by the finding that providers using a curriculum engaged in a greater number of farm to ECE activities.

The need for stronger support and infrastructure is furthered by the finding that most respondents participating in farm to ECE have not received external funding for their farm to ECE activities (82%). However, of the 11% who did receive external funding, 31% received funding from the state and 13% from federal sources, showing the encouraging rise in farm to ECE prioritization. Those receiving funding from federal sources participated in .8 less farm to ECE activities than those who did not receive funding. One possible reason for this finding is the constraints on funding requirements. With ECEs already working within limited capacity, it is important to address possible barriers that can make utilizing funding not only time consuming but inequitable. Access to funding is imperative to the equitable growth of farm to ECE, but if accessing funding requires technical skills and equipment or large reporting requirements, it runs the risk of both inhibiting the work the funding intends to assist with and reducing accessibility to those without the necessary resources and skills required. This need is further suggested by the finding that child care centers and preschool or child care through a K-12 school district are predictors of Farm to ECE participation, found within the ‘2021 National Farm to Early Care and Education Survey: Farm to ECE Reach’ brief. One reason for this may be because centers and child care through K-12 districts can...
have more staff, capacity, and/or infrastructure than family child care or private preschools. This can make seeking funding for and facilitating farm to ECE activities more realistic. Addressing barriers to funding can help smaller and lower capacity child care programs better access opportunities to initiate and expand farm to ECE programming.

Providers who received state, in-kind, and private source donations increased the predicted number of farm to ECE activities, allowing for more comprehensive and possibly more impactful programming. Additionally, sites who received funding from state sources or have been engaged in Farm to ECE activities for three to five years participated in approximately one more activity. State supports such as resource development and promotion, training and technical assistance, financial support, and policy can help sites initiate and sustain their farm to ECE practices. Motivations for farm to ECE and farm to ECE facilitators found in the “2021 National Farm to Early Care and Education Survey: Why Farm to ECE” brief can inform technical assistance and training development. As awareness of and interest in farm to ECE increases, so does the need for these supports.

State and national networks such as NFSN are also key to increasing access to resources, technical assistance and financial supports. Networks can create platforms for shared learning among providers and create avenues for connection to stakeholders such as local organizations who may be able to support sites’ efforts. Providing the level of support needed to institutionalize farm to ECE will necessitate systems level strategy, state level networks, cross-sector coalitions and other collaborative platforms.

Explore more farm to ECE resources, learn how to get involved, and connect with partners in your state by exploring the National Farm to School Network site at www.farmtoschool.org/ECE. Visit www.foodsystems.msu.edu to find resources and research on regional food systems from Michigan State University Center for Regional Food Systems.

References


5. Riemer Bopp, S., Shedd, M.K., & Stephens, L. (2022). Farm to Early Care and Education Continues to Foster Bright Futures for Children and Communities: 2021 National Farm to Early Care and Education Survey Farm to ECE Reach. National Farm to School Network. Farmtoschool.org
6. Riemer Bopp, S., Shedd, M.K., & Stephens, L. (2022). Farm to Early Care and Education Continues to Foster Bright Futures for Children and Communities: 2021 National Farm to Early Care and Education Survey Why Farm to ECE. National Farm to School Network. Farmtoschool.org

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Farm to early care and education (ECE) promotes child health and increases access to healthy foods through a collection of strategies that are centered in experiential learning and family and community engagement. Farm to ECE brings three core elements—gardening, food and agriculture education, and local food purchasing—into every type of ECE setting. These include family child care homes, child care centers, Head Start, and preschools in K-12 districts.

Although research on farm to ECE is limited, studies indicate that participation in farm to ECE contributes to an increased willingness to try and reported liking of fruits and vegetables\(^1,2\) and increased fruit and vegetable consumption\(^3,4\). Family involvement also tends to be strongest during the early childhood years. Studies have shown positive reactions to farm to ECE activities from parents\(^1,4,5\) and farm to ECE encourages family involvement through family-based and take-home activities. Children’s excitement towards farm to ECE and family activities influence family food choices, as studies have shown an increase in local foods served in the homes of participating families\(^6\). Additionally, farm to ECE benefits the entire community: Purchasing local products creates market opportunities for farmers and supports local and regional food systems\(^7\). Overall, farm to ECE creates opportunities to influence the eating habits of children at a critical time in development by encouraging children to eat fresh, wholesome foods. Additionally, when approached equitably, it has the potential to reduce health and education inequities, improve household food security and food access, and support community food systems.

In its fourth iteration, intended to add to the knowledge of the previous three surveys, National Farm to School Network (NFSN) partnered with Michigan State University Center for Regional Food Systems (CRFS) to implement the 2021 version of the National Farm to Early Care and Education Survey. The survey series completed by NFSN and CRFS in 2012\(^8\), 2015\(^9\), 2018\(^10\), and now 2021, is the only national farm to ECE–specific assessment of activity reach and participation. Information on the background and methodology of the 2021 National Farm to Early Care and Education Survey can be found in the “Background and Methods” 2021 survey brief. This brief explores participants’ motivations for farm to ECE and the community’s response to programming\(^11\).
Key Findings

- Top motivations for both starting and continuing engagement in farm to ECE included improving children’s health (97% and 96%), providing children with experiential learning (97% and 96%), supporting local farmers and local economy (97% and 94%), and teaching children where food comes from and how it’s grown (96%).

- Limited funding for supplies was the top barrier to both starting (71%) and continuing (59%) farm to ECE activities. Other barriers to both starting and continuing farm to ECE activities included limited staff knowledge on local foods (64% and 46%), limited access to appropriate curriculum or lesson plans (61% and 49%), and limited staff knowledge of gardening (66% and 49%).

- Respondents reported positive feedback from various stakeholders, including positive or very positive feedback from children (74%), from families (66%), and from ECE staff (54%).

Practice and Policy Recommendations

Spread awareness of farm to ECE and leverage farm to ECE’s contribution to high quality ECE settings by:

- Including farm to ECE language into Quality Rating and Improvement Systems (QRIS), licensing standards, and CACFP trainings and communications.

- Including farm to ECE trainings in continuing education systems and build farm to ECE trainings for coaches to further promote implementation and reduce knowledge barriers.

Align farm to ECE promotion with top provider motivations, which include:

- Improving children’s health
- Providing children with experiential learning
- Improving access to high-quality food
- Supporting local farmers and the local economy.

Build and expand systems to connect providers to existing resources and support organizations through models such as:

- Farm to ECE institutes
- State and regional farm to ECE networks, hubs, and communities of practice
- Dedicated funding for grant programs that include technical assistance and shared learning opportunities.

Include a focus on site administrators and decision makers in farm to ECE promotion and collaborative efforts. Equip providers with the appropriate tools to gain buy-in from key decision makers at their site and empower them as leaders in farm to ECE.
The survey asked respondents who intended to start farm to ECE activities to share factors affecting their decision to start. When combining responses for “very important” and “somewhat important,” the factors “improving children’s health” (97%) and “providing children with experiential learning” (97%) emerged as the most important, followed by “access to fresher or higher-quality food” (96%), “support local farmers and local economy” (97%), and “teaching children where food comes from and how it’s grown” (96%) as the top factors affecting why sites wanted to start farm to ECE in their settings (Figure 1).

**Figure 1. Motivations to Start Farm to ECE Activities**

- Improving children’s health: Very important (97%), Somewhat important (25%)
- Providing children with experiential learning: Very important (97%), Somewhat important (25%)
- Access to fresher or higher-quality food: Very important (97%), Somewhat important (25%)
- Support local farmers and local economy: Very important (97%), Somewhat important (25%)
- Teaching children where food comes from and how it’s grown: Very important (97%), Somewhat important (25%)
- Engaging parents and families: Very important (97%), Somewhat important (25%)
- Lower meal cost: Very important (97%), Somewhat important (25%)
- Meeting learning and programmatic standards: Very important (97%), Somewhat important (25%)
- Engaging and motivating staff: Very important (97%), Somewhat important (25%)
- Appeal to new/potential families: Very important (97%), Somewhat important (25%)
- Other: Very important (25%), Somewhat important (25%)
- Missing: Very important (0%), Somewhat important (0%)
Participants who intended to start farm to ECE activities were also asked about potential barriers to engaging in farm to ECE. When combining responses for "very important" and "somewhat important," respondents shared limited funding for supplies (71%) as the primary reason for not implementing farm to ECE activities. Limited staff knowledge of gardening (66%), limited staff knowledge on local foods (64%), limited access to appropriate curriculum or lesson plans (61%), and limited staff knowledge about nutrition education (61%) were the next most frequently cited major and minor barriers to implementation.

Figure 2. Barriers to Starting Farm to ECE Activities

- Limited funding for supplies
- Limited staff knowledge of gardening
- Limited staff knowledge on local foods
- Limited staff knowledge about nutrition education
- Limited access to appropriate curriculum or lesson plans
- Limited staff time to develop and implement lessons
- Limited family interest and engagement
- Lack of outdoor space
- Limited staff interest and engagement
- Local or state policy restrictions
- Programmatic restrictions
- Other
Respondents who already engaged in farm to ECE activities also shared their motivations for participating in farm to ECE activities. Improving children’s health, providing fresher or higher-quality food to children, teaching children about where food comes from and how it is grown, and providing children with experiential learning were reported as “very important” or “somewhat important” motivations by 96% of respondents. Other top reasons included supporting local farmers and the local economy (94%) and engaging parents and families (93%).

**Figure 3. Motivations for Engaging in Farm to ECE Activities**
When asked about barriers to farm to ECE activities such as on-site gardens and local food, agriculture, and nutrition education, respondents already participating in farm to ECE most often reported limited funding for supplies (59%). Nearly half of respondents indicated limited staff time to develop and implement lessons (49%) and limited staff knowledge of gardening (49%) as barriers. Limited staff knowledge on local foods (46%) and limited access to appropriate curriculum or lesson plans (45%) were also common barriers.

**Figure 4. Barriers to Engaging in Farm to ECE Activities**

- Limited funding for supplies
- Limited staff time to develop and implement lessons
- Limited staff knowledge of gardening
- Limited staff knowledge on local foods
- Limited access to appropriate curriculum or lesson plans
- Limited staff knowledge about nutrition education
- Limited family interest and engagement
- Lack of outdoor space
- Limited staff interest and engagement
- Programmatic restrictions
- Local or state policy restrictions
- Other

Major barrier
Minor barrier
Community Response

Respondents engaging in farm to ECE were asked about community feedback in response to their farm to ECE activities. They reported that they received positive feedback from various stakeholders (see Table 1), including positive or very positive feedback from children (74%), from families (66%), and from ECE staff (54%). Respondents reported that ECE administration also provided positive or very positive feedback to a lesser extent (49%), with community members (31%) and farmers/producers (25%) also sharing feedback. No respondents reported negative feedback from any stakeholders.

Table 1. Reported Stakeholder Feedback on Farm to ECE Activities

<table>
<thead>
<tr>
<th></th>
<th>Frequency Reporting Positive or Very Positive Feedback</th>
<th>Percent Reporting Positive or Very Positive Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children</td>
<td>1771</td>
<td>74</td>
</tr>
<tr>
<td>Families</td>
<td>1591</td>
<td>66</td>
</tr>
<tr>
<td>ECE Staff</td>
<td>1305</td>
<td>54</td>
</tr>
<tr>
<td>ECE Administration</td>
<td>1188</td>
<td>49</td>
</tr>
<tr>
<td>Community Members</td>
<td>744</td>
<td>31</td>
</tr>
<tr>
<td>Farmers/Producers</td>
<td>613</td>
<td>25</td>
</tr>
</tbody>
</table>

Out of the 482 responses, major themes included comments related to respondents’ questions and requests for more information (181), respondents sharing experiences and gratitude (134), and barriers to implementing farm to ECE (88 responses). Of responses categorized as barriers to farm to ECE, 16 responses referenced funding.

In Their Own Words

“There were many comments about farm to ECE, including positive feedback from children (74%), from families (66%), and from ECE staff (54%). Respondents reported that ECE administration also provided positive or very positive feedback to a lesser extent (49%), with community members (31%) and farmers/producers (25%) also sharing feedback. No respondents reported negative feedback from any stakeholders.

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</table>

Additional Feedback From Respondents

Respondents were asked to share their thoughts on farm to ECE through open response. Many of the comments were positive about farm to ECE or displayed interest in learning more, sharing success stories and benefits they’ve seen. Many had not heard of farm to ECE before receiving the survey.

“As a Family Child Care Center—it is often an issue of not having enough hands or time to do everything as the only adult [working] in the program. It is also a financial stretch—especially during Covid. We do the best we can with limited time and resources, and my whole family pitches in on weekends.”

“I love gardening but am a terrible gardener—mostly due to lack of time but partly also due to lack of knowledge. I work 50 hours/week directly with children and another 10-15 hours cleaning, doing prep, etc. Sometimes I’m just too tired to work in the garden.”

“I wish it was easier to do and was laid out for the “newbies” like myself. I think it is a wonderful concept, but without help, guidance, and support it is easy to get discouraged.”

Out of the 482 responses, major themes included comments related to respondents’ questions and requests for more information (181), respondents sharing experiences and gratitude (134), and barriers to implementing farm to ECE (88 responses). Of responses categorized as barriers to farm to ECE, 16 responses referenced funding.

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“I wish it was easier to do and was laid out for the “newbies” like myself. I think it is a wonderful concept, but without help, guidance, and support it is easy to get discouraged.”

Other common themes included respondents’ experiences with gardening and/or providing opportunities for children to learn where food comes from (31 responses); experiences with and/
or the importance of family engagement in farm to ECE programming (10 responses); the importance of nutrition education and/or respondents’ experience providing nutrition education (9 responses); interest in, experiences with, or barriers to using a curriculum (8 responses); farm to ECE’s ties to children’s social and emotional health (2 responses); respondents’ motivations for starting or continuing engagement in farm to ECE (1 response). 25 total responses referenced funding.

In Their Own Words

“I believe that giving children the opportunity to plant, care for, harvest and eat the food they have grown in their own garden is not only tremendously educational, but deeply satisfying and contributes to well being on so many levels—physically, mentally, and emotionally.”

“I have found that the children really enjoy learning about where their food comes from and they are less inhibited about trying new foods when it is attached to the curriculum, so we love including this type of education into our curriculum.”

“Children dealing with trauma (foster children, reunified children, special circumstance children) Need activities like learning to care for a garden to help them as a therapeutic tool.”

Practice and Policy Recommendations

Respondents’ motivations for farm to ECE engagement align with ECE priority areas and reflect the three core elements of farm to ECE: food education, gardening, and the purchasing and serving of local foods. Improving children’s health, providing fresher and higher quality foods, providing meaningful experiential education opportunities, and food education are top motivations for beginning and sustaining farm to ECE as well as pathways to high quality ECE settings and the development of healthy habits.

As found in open-ended responses, many respondents had not heard of farm to ECE before this survey, but were very interested in learning more. States can spread awareness of farm to ECE and leverage farm to ECE’s contribution to high quality ECE settings by including farm to ECE language into Quality Rating and Improvement Systems (QRIS), licensing standards, and CACFP trainings and communications. Farm to ECE activities can help ECEs meet QRIS standards through multiple common domains, such as professional development, family engagement and community partnerships, and learning environment. Including farm to ECE activities such as gardening and taste tests in QRIS both incentivizes and promotes farm to ECE participation. States can also choose to build farm to ECE continuing education trainings and trainings for coaches, further systematizing farm to ECE related technical assistance.

Common barriers to farm to ECE participation, further reflected in open-ended responses, centered around limited funding, staff time, staff knowledge, and access to curriculum. Improving pathways to funding is imperative, as lack of funding is not only the top barrier to participation, but acquiring funding is a facilitator for greater
levels of farm to ECE engagement, as outlined in the "2021 National Farm to Early Care and Education Survey: Participation and Practices" brief. Access to curriculum was also a major barrier. Pre-made curricula can increase provider capacity and knowledge around farm to ECE topics, reducing barriers to participation. Stronger supports are needed to assist providers in identifying existing curricula and other resources to reduce capacity or knowledge-related barriers. In addition to the train-the-trainer model, popular approaches to promoting existing resources and support organizations include farm to ECE institutes; state and regional farm to ECE networks, hubs, and communities of practice; and dedicated funding for grant programs that include technical assistance and shared learning opportunities. Examples include California’s Farm to School Incubator Grant Program and the Oregon Farm to School and School Garden Network’s regional hubs.

Provider capacity was also reported as a major barrier in farm to ECE participation. In addition, only around half of respondents reported positive feedback from ECE staff and ECE administration. Gaining staff and administrative support is key to building sustainable and comprehensive farm to ECE programming. With support from administrators, responsibilities can be shared, funding can be delegated or acquired, and implementation can be integrated into current practices more easily. Farm to ECE promotion and collaborative efforts should help empower providers as leaders in farm to ECE and include a focus on site administrators and decision makers. Training and resources should equip providers with the appropriate tools to gain buy-in from key decision makers at their site.

In addition to funding, technical assistance, and buy-in to assist with capacity limitations, larger structural changes within ECE systems are needed. Limited provider capacity is not unique to farm to ECE, but is a larger issue within ECE systems. As discussed in "2021 National Farm to Early Care and Education Survey: Farm to ECE Reach," investments that prioritize equitable compensation for providers and affordable childcare for families are needed to meet the needs of the ECE community and to ensure children receive equitable access to high quality ECE environments.

Explore more farm to ECE resources, learn how to get involved, and connect with partners in your state by exploring the National Farm to School Network site at www.farmtoschool.org/ECE. Visit www.foodsystems.msu.edu to find resources and research on regional food systems from Michigan State University Center for Regional Food Systems.

References


13. Riemer Bopp, S, Shedd, MK, Stephens, L. (2022). Farm to Early Care and Education Continues to Foster Bright Futures for Children and Communities: 2021 National Farm to Early Care and Education Survey Farm to ECE Reach. National Farm to School Network. Farmtoschool.org

Funding for this project was generously provided by the W.K. Kellogg Foundation.

Suggested citation: Riemer Bopp, S, Shedd, MK, & Stephens, L. (2022). Farm to Early Care and Education Continues to Foster Bright Futures for Children and Communities: 2021 National Farm to Early Care and Education Survey Farm to ECE Why Farm to ECE. National Farm to School Network. Farmtoschool.org
Farm to early care and education (ECE) promotes child health and increases access to healthy foods through a collection of strategies that are centered in experiential learning and family and community engagement. Farm to ECE brings three core elements—gardening, food and agriculture education, and local food purchasing—into every type of ECE setting. These include family child care homes, child care centers, Head Start, and preschools in K-12 districts. Local food purchasing can vary widely in ECE settings depending on site size, setting, and purchasing goals. Smaller sites that may require very small quantities of food often purchase local foods from a local grocery store, co-op, farmers market, or through a direct relationship with a local small farm. Larger centers or chains of centers that require larger food quantities can purchase local food through a broadline distributor, a food hub, or a larger local farm or farmer cooperative.

Local purchasing supports small farms while providing wholesome foods to children, staff, and families. In addition to the benefits of farm to ECE outlined in “Why Farm to Early Care and Education” 2021 survey brief, local foods can further promote fruit and vegetable consumption as local products are often fresher, of high quality, and described as better tasting than non-local foods. Farm to ECE, including local procurement, can benefit families by increasing families’ access to local foods. Engaging families can also increase their knowledge of local food sources and connect them with farmers and other local vendors. This also benefits farmers by helping them build their customer base.

In its fourth iteration, intended to add to the knowledge of the previous three surveys, National Farm to School Network (NFSN) partnered with Michigan State University Center for Regional Food Systems (CRFS) to implement the 2021 version of the National Farm to Early Care and Education Survey. The survey series completed by NFSN and CRFS in 2012, 2015, 2018, and now 2021, is the only national farm to ECE–specific assessment of activity reach and participation. Information on the background and methodology of the 2021 National Farm to Early Care and Education Survey can be found in the “Background and Methods” 2021 survey brief. This brief aims to explore the local purchasing and serving practices of participants, including barriers to local purchasing and financial support received.
Key Findings

- Of respondents participating in farm to ECE, 1,628 (68%) purchase and serve local foods for their site’s meals, snacks, or activities. Respondents estimated that an average of 30% of their total foods purchased were locally grown or produced.
- Top barriers to both starting and maintaining local purchasing were found to be: cost of items, knowing how to order local items, finding suppliers/farmers to supply local foods, and obtaining information about product availability.
- There is a statistically significant association between sites that received CACFP funding and sites that purchased and served local foods and percentage of local foods purchased.
- Only 47, or 2% of respondents participating in farm to ECE received reimbursement for locally sourced foods in addition to CACFP reimbursement, such as local food incentive or additional grant funding.

Practice and Policy Recommendations

- Utilize CACFP participation as a pathway to farm to ECE. Integrate farm to ECE into CACFP “train the trainer” and professional development practices, highlighting CACFP and farm to ECE crossover, especially within QRIS and local food reimbursement. Build farm to ECE into CACFP systems by integrating farm to ECE in CACFP administrative roles and include CACFP in local food incentive programs.
- Increase knowledge about local food purchasing and decrease barriers to availability by providing local purchasing guidance and identifying ways to introduce providers to farmers through strategies such as directories, matchmaking, networking events, and regional hubs. Reduce financial barriers through messaging, programs, and policy such as local incentive programs. Infrastructure barriers can be addressed through increasing visibility of and developing funding that can be used for kitchen supplies, storage, and appliances.
- Highlight strategies to purchase local within current practices while creating avenues for and promoting more direct purchasing options.
Sourcing Local Foods

Of the 2,397 farm to ECE participating respondents, 1,628 (68%) purchased and served local products at their sites during meals, snacks, or classroom activities (Table 1). Respondents serving local products indicated their definition of “local” from a selection of geographical choices. A third (33%) defined local as within the “same city/county” while 21% defined “local” as “produced within a 50 mile radius” and 14% reported that “local” meant “produced in the state” (Figure 1).

Table 1. Frequency of Local Food Purchasing

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1628</td>
<td>68%</td>
</tr>
<tr>
<td>No</td>
<td>487</td>
<td>20%</td>
</tr>
<tr>
<td>I Don’t Know</td>
<td>175</td>
<td>7%</td>
</tr>
<tr>
<td>Missing</td>
<td>107</td>
<td>4%</td>
</tr>
</tbody>
</table>

* N=2397

![Figure 1. Respondents’ Definition of Geographically “Local”](image-url)
Respondents were also asked about their local food sourcing practices including purchases from direct sources (Figure 2), such as individual farmers or producers, on-site or community gardens, farmers markets, or farm shares or community supported agriculture (CSA), as well as intermediate sources (Figure 3) such as distributors, grocery stores, or food hubs. Of respondents purchasing local (n=1628), 65% purchased from grocery stores and retail outlets. Other sources included direct from farmers markets (37%), on-site or from a community garden (28%), and direct from individual farmers or producers.

Figure 2. Sources for Purchasing Local Foods From Direct Sources

- Farmers Markets
- Individual Farmers/Producers
- Farmer, Rancher, or Fisher Cooperatives
- Farm Share or Community Supported Agriculture (CSA)
- On-Site or Community Garden
- Other

Figure 3. Sources for Purchasing Local Foods From Intermediate Sources

- Grocery Stores/Retail Outlets
- Distributors
- Food Bank
- Food Processors or Manufacturers
- Caterer
- Food Service Management Companies
- Food Buying Cooperative
- Food Hub
- Don’t Know
Purchasing Local Foods

Respondents’ total food purchases averaged $31,432 in the last 12 months, with an average of $16,697 (53%) of those purchases coming from local sources (Table 2). Respondents estimated that an average of 30% of their total foods purchased were locally grown or produced when asked. Of note, a wide range of amounts were reported when respondents were asked about the total amount spent on local food at their site, with a range of $0-22 million dollars, which may have affected the mean (Table 2).

The survey also asked about the frequency of serving local products at ECE sites (Figure 4). Respondents shared milk as the most frequently served local product, with 34% of respondents reporting that local milk was served daily. Fruit (27%) and vegetables (27%) were the next most frequently served food types, as reported by farm to ECE participating respondents (n=2397).

Table 2. Total Food and Local Food Purchased in the Last 12 Months by ECE Providers

<table>
<thead>
<tr>
<th>Food Purchases in the Last 12 Months</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Amount Spent on Food*</td>
<td>$31,432</td>
<td>$8,000</td>
</tr>
<tr>
<td>Amount Spent on Local Food*</td>
<td>$16,697</td>
<td>$1,000</td>
</tr>
<tr>
<td>Percentage of food purchasing dollars spent on local food</td>
<td>53%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

* N=1906  b N=1728

Figure 4. Serving Frequency of Types of Local Foods
Barriers to Local Purchasing

When responses naming major and minor barriers to beginning the purchasing of local products were combined, cost and knowing how to order local products emerged as the most frequently cited barriers (71%), as shown in Figure 5. Finding suppliers/farmers to provide local food (67%), followed by obtaining information about product availability (66%), reliability of local product supply (63%), and limited onsite storage (62%) were also frequently reported barriers.

Figure 5. Barriers to the Continuation of Local Product Purchasing for ECE Sites

- Knowing how to order local items
- Cost/price of items
- Finding suppliers/farmers to provide local food
- Obtaining information about product availability
- Reliability of local product supply
- Limited onsite storage
- Delivery challenges
- Seasonality of fruits and vegetables
- Challenges with payment arrangement
- Packaging/size of packaging
- Lack of staff time in preparing local foods
- Concerns about food quality
- Availability of processed/precut products
- Lack of skilled/trained staff to prepare local foods
- Lack of kitchen equipment to process/prepare local foods
- Concerns about food safety
- Lack of staff interest in preparing local foods
- State or local purchasing restrictions
- Unable to leverage CACFP or other funding for meals
- Other
Respondents were also asked about barriers to continuing the purchasing of local products. Cost was the most frequently cited barrier (61%), followed by finding suppliers/farmers to provide local food (52%), obtaining information about product availability (52%), knowing how to order local items (52%), and reliability of local product supply (51%).

Figure 6. Barriers to Purchasing Local Products for ECE Sites
Changes in Local Purchasing

Of respondents participating in farm to ECE, 53% anticipated increasing local food purchasing in the next 2 to 3 years (Figure 7).

Respondents purchasing local food were asked why they anticipated their local food purchases to increase, decrease, or stay the same through open response.

There were multiple common themes among the 1,004 responses to “why do you anticipate your local food purchases to increase?” The most common reason was provider, administrator, and/or family interest. Reasons for greater interest included supporting local farmers and increasing children’s access to fresh, healthy foods. Other common reasons for anticipated increases in local purchasing included new partnerships with farmers, greater access to other sources of local foods such as farmer’s markets, expansion of gardens and other farm to ECE programming, greater access to resources and funding, new strategic partnerships, and greater infrastructure and capacity. COVID-19 related reasons were also frequently mentioned, specifically increases in projected enrollment and supply chain issues such as reduced access to and increased price of grocery store items.

“Our Staff and Administration have expressed interest in incorporating local food purchases into our snack program.”

“I am learning about local options that are approved by the state to use in the childcare center.”

“As the pandemic constraints lessen we will be able to have more meal-sharing and food preparation activities”
Major themes among the 299 respondents that responded to the question “why do you anticipate your local food purchases to stay the same?” included product availability, enrollment number maintenance, cost of local products, gardening as a substitute for local purchasing, and lack of knowledge, access, staff capacity, and resources. Respondents also cited current purchasing logistics as barriers to increased local purchasing, such as having parents bring in meals and snacks and using vendors, caterers, and wholesale grocers that do not offer local products. Respondents also mentioned lack of administrative and staff support and CACFP regulations as barriers to local purchasing.

“We have to follow CACFP regulations”

“The main director in charge does not always support changing the way to shop or serve food and does not see the importance of overall health over cost.”

“As part of the food program I need itemized receipts and I don’t think I can get those at farmers markets and things like that.”

“Food service company dictates the preferred vendors”

Only 50 respondents responded to the question “why do you anticipate your local food purchases to decrease?” The most common reasons included cost of local foods, lost funding, and limited availability. It should be noted that many respondents misinterpreted the question’s time frame (i.e., decreased purchasing over the next few months instead of decreased purchasing over the next 2-3 years), citing the oncoming cold season as a reason for reduced purchasing.

“We don’t have the availability or resources.”

“Our local farm is closing and we will need to find a new source.”
Food Preparation

Respondents were asked to estimate the total number of snacks and meals they provide for children at their site. On average, farm to ECE respondents serve 83 snacks and 109 meals per day. Respondents were also asked to report the frequency with which they served food prepared from scratch at their site (see Table 3). The frequency at which farm to ECE participating respondents serve local foods is slightly higher than for all respondents, with 30% of farm to ECE respondents preparing food from scratch daily, and 59% preparing food from scratch at least once per week. However, there are sites that do not have on-site preparation of food (8%) or never serve food prepared from scratch (8%).

Table 3. Frequency of Preparing Food From Scratch\textsuperscript{a,b}

<table>
<thead>
<tr>
<th>How Often</th>
<th>All Respondents\textsuperscript{a}</th>
<th>Farm to ECE Respondents\textsuperscript{b}</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Daily</td>
<td>844</td>
<td>29%</td>
</tr>
<tr>
<td>A few times per week</td>
<td>653</td>
<td>22%</td>
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<tr>
<td>Once per week</td>
<td>182</td>
<td>6%</td>
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<td>Once per month</td>
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<td>7%</td>
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<tr>
<td>Never</td>
<td>261</td>
<td>9%</td>
</tr>
<tr>
<td>We have no on-site preparation of food</td>
<td>251</td>
<td>9%</td>
</tr>
<tr>
<td>I don’t know</td>
<td>107</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>82</td>
<td>3%</td>
</tr>
<tr>
<td>No response</td>
<td>332</td>
<td>11%</td>
</tr>
<tr>
<td>Total responses</td>
<td>2582</td>
<td>89%</td>
</tr>
</tbody>
</table>

\textsuperscript{a} N=2914 \hspace{1cm} \textsuperscript{b} N=2397

Funding for Local Purchasing

Researchers found a statistically significant association between sites that received Child and Adult Care Food Program (CACFP) funding and sites that purchased and served local foods. There is also a statistically significant association between sites that received CACFP funding and percentage of local foods purchased. Of respondents participating in farm to ECE, 47% received CACFP funding, while 46% of total respondents received CACFP funding (Table 4). Respondents were also asked if they received additional reimbursement for locally sourced items. Of those partaking in farm to ECE, only 47 (2%) reported receiving additional reimbursement in addition to CACFP reimbursement, such as local food incentive or additional grant funding.
Table 4. Frequency of CACFP Participation$^a,b$

<table>
<thead>
<tr>
<th></th>
<th>All Respondents$^a$</th>
<th>Farm to ECE Respondents$^b$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Yes</td>
<td>1353</td>
<td>46%</td>
</tr>
<tr>
<td>No</td>
<td>1171</td>
<td>40%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>55</td>
<td>2%</td>
</tr>
<tr>
<td>Missing</td>
<td>335</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td>2579</td>
<td>88%</td>
</tr>
</tbody>
</table>

$^a$ N=2914 $^b$ N=2397

Policy Opportunities & Recommendations

CACFP is an important lever for farm to ECE implementation. This is seen in the statistically significant association between sites that received CACFP funding and sites that purchased and served local foods, as well as a statistically significant association between sites that received CACFP funding and the percentage of local foods purchased. It is also important to note that only 46% of respondents received CACFP funding. Considering the important role of CACFP not only in farm to ECE promotion and implementation, but also in overall access to healthy foods, it is imperative to focus efforts on increasing CACFP participation$^5,6$. CACFP funding can mitigate the cost of local foods and gardening activities and serve as a channel for targeted farm to ECE funding and coaching. However, as seen in open responses, CACFP can be seen as a barrier to farm to ECE participation due to fear of non-compliance with CACFP. Building awareness of the alignment between CACFP and farm to ECE through existing structures such as CACFP specialist trainings and professional development opportunities can incentivize both farm to ECE and CACFP participation among sites. States can also create strong connections between CACFP and farm to ECE within systems by integrating farm to ECE within CACFP position descriptions and building farm to CACFP programming. This can be especially impactful within states that require sites to follow CACFP guidelines regardless of CACFP participation, as farm to ECE can help sites meet these guidelines.

Another approach to leverage farm to ECE through CACFP is incentive programs, such as the Washington, D.C. Healthy Tots Act (HTA) that offers increased reimbursement for each meal served (10 cents per meal) in addition to higher reimbursement for local foods served in CACFP meals (“Local5” reimbursement) and grant opportunities for gardening and nutrition education activities$^7$. Local food incentive grant programs and farm to school and ECE grant programs, such as HTA, are gaining popularity and can be found in many states including Iowa, Michigan, California, and Washington State. Comprehensive incentive programs can help incentivize both CACFP and farm to ECE, while advancing health, educational, and economic equity. Farm to ECE can also be integrated into CACFP and ECE systems through QRIS. As previously noted in the “Why Farm to Early Care and Education” 2021 survey brief$^8$, including farm to ECE activities such as gardening and taste tests in QRIS both incentivize and promote farm to ECE participation. Many states currently award QRIS points for participating in CACFP if eligible, and/or following CACFP meal patterns$^9$. This opportunity can be used to demonstrate linkages between farm to ECE and meeting CACFP meal patterns while earning QRIS points.
Frequently reported barriers to both starting and sustaining local purchasing included the cost of items, not knowing how to order local items, finding suppliers/farmers to supply local foods, and difficulty obtaining information about product availability. Barriers related to lack of knowledge around purchasing logistics can be addressed through local technical assistance and education. Technical assistance providers can assist sites with identifying food suppliers and/or farmers in the area who may be interested in marketing their products to ECE sites and helping them navigate processes for procuring and ordering local foods. Utilizing existing state and regional networks and developing new networks can help providers and farmers connect and help providers reach resources and technical assistance on the purchasing process. Innovative systems have been developed to help providers and farmers connect, including matchmaking services, networking events, and local food mapping projects.

Cost is a consistent barrier to local purchasing that can be addressed through programs, policy, and messaging. These programs can not only reduce the cost of local foods, but can provide avenues for support and growth of farm to ECE programming. Messaging around cost-saving strategies when purchasing local food can also be emphasized, such as the reduced chance of spoilage due to the longer shelf life if they arrive soon after harvest, gardening as a strategy to lower food cost, and using geographic preference when using informal and formal bidding processes. As previously mentioned, networks can help providers build relationships with supportive stakeholders that may introduce them to resources, grant opportunities, or provide direct support to alleviate the cost burden of local purchasing and farm to ECE.

Survey results indicate that the majority of respondents purchasing local foods sourced their local products from grocery stores and other retail outlets (65%). In addition, many respondents in the open response cited inflexibility in current purchasing practices as a reason for maintaining instead of expanding their local purchasing. ECE capacity is a known issue, so highlighting avenues for local purchasing that don’t require large changes in current practices can be beneficial for many sites. Additionally, although it is important to meet providers where they are at in terms of capacity and feasibility, it is important to create avenues to promote more direct purchasing strategies while still making local purchasing easy for providers. ECEs with low volume needs that may be currently purchasing local foods from grocery stores offer a unique opportunity for small and beginning farmers. Smaller sites may also be a good fit for CSA or farm share membership, especially as CSAs don’t require a large amount of extra effort to acquire. Larger and multi-site centers who currently purchase from vendors and caterers can be educated on their ability to request local products, or work towards gaining administrative support to change to vendors that do offer local products. For those who find consistency, sourcing, and availability a barrier, food hubs may be a good option. Though they are less common than farmer’s markets, food hubs provide much of the convenience of a grocery store while still assuring more of the dollar spent makes it directly to the farmer. Working with one vendor keeps administrative burden low, while still providing clients access to a diverse range of products aggregated from various farms. Additionally, some level of frozen local foods and/or stored products are often available year-round. In addition to promoting existing food hubs, efforts can be made to expand businesses that support local food and farmers through grants such as USDA’s Local Food Promotion Program or to allocate state funding towards development of intermediaries such as food hubs. In the goal of increasing local purchasing, training on the value of serving local foods and how to prepare them
(including scratch preparation) should be made available to ECE staff to contribute to a longer-term culture shift.

Explore more farm to ECE resources, learn how to get involved, and connect with partners in your state by exploring the National Farm to School Network site at www.farmtoschool.org/ECE. Visit www.foodsystems.msu.edu to find resources and research on regional food systems from Michigan State University Center for Regional Food Systems.

References


8. Riemer Bopp, S., Shedd, M.K., & Stephens, L. (2022). Farm to Early Care and Education Continues to Foster Bright Futures for Children and Communities: 2021 National Farm to Early Care and Education Survey Why Farm to ECE. National Farm to School Network. Farmtoschool.org


Funding for this project was generously provided by the W.K. Kellogg Foundation.

Suggested Citation: Riemer Bopp, S., Shedd, M.K., & Stephens, L. (2022). Farm to Early Care and Education Continues to Foster Bright Futures for Children and Communities: 2021 National Farm to Early Care and Education Survey Local Purchasing. National Farm to School Network. Farmtoschool.org
Farm to early care and education (ECE) promotes child health and increases access to healthy foods through a collection of strategies that are centered in experiential learning and family and community engagement. Farm to ECE brings three core elements—gardening, food and agriculture education, and local food purchasing—into every type of ECE setting. These include family child care homes, child care centers, Head Start, and preschools in K-12 districts.

Not only does farm to ECE hold many benefits for children and families, child care sites, and farmers, but it has also been used as a strategy to mitigate the challenges faced during the COVID-19 pandemic. Many providers, farm to ECE supportive organizations, and government agencies have seen the opportunity to improve food access for families, communities, and ECE staff impacted by the pandemic while simultaneously supporting local farmers and vendors struggling under the strained supply chain. This has been achieved by building capacity and infrastructure for local purchasing and other farm to ECE activities. In addition, many organizations took advantage of the flexibilities offered to them by changes in federal policy, leveraging the adaptability of farm to ECE and propelling the movement forward.

In its fourth iteration, intended to add to the knowledge of the previous three surveys, National Farm to School Network (NFSN) partnered with Michigan State University Center for Regional Food Systems (CRFS) to implement the 2021 version of the National Farm to Early Care and Education Survey. The survey series completed by NFSN and CRFS in 2012, 2015, 2018, and now 2021, is the only national farm to ECE–specific assessment of activity reach and participation. Information on the background and methodology of the 2021 National Farm to Early Care and Education Survey can be found in the “Background and Methods” survey brief. This brief aims to explore ramifications of the COVID-19 pandemic in terms of local purchasing practices, financial support received, and ECE programming.
Key Findings

- Approximately one quarter (26%) of respondents participating in farm to ECE increased their local purchasing due to COVID-19, while 26% decreased their local purchasing, and 25% reported no change.
- The most frequently reported reasons for changes in local purchasing practices due to COVID-19 were the cost of items, reliability of product supply, the seasonality of fruits and vegetables (30%), and delivery changes and limitations (26%).
- The most frequently reported strategies used to connect children and families to meals during COVID-19 were providing recommendations for community food sources (26%), distributing food boxes (13%), and offering grab and go (13%), followed by providing food from an onsite garden for families (9%).

Practice and Policy Recommendations

- Consider continuation of virtual opportunities for enhanced family engagement and to reduce barriers to ECE provider trainings and professional development opportunities.
- Support CACFP flexibilities and expanded eligibility through Child Nutrition Reauthorization to increase CACFP participation, equity, and food access.
- Support funding for farm to institution as an avenue for supply chain resiliency.
- Sustain and expand virtual platforms for local purchasing past COVID-19 as a strategy to reduce barriers to local purchasing.
Respondents were asked whether their local purchasing practices were affected by COVID-19. Of those participating in farm to ECE, 26% reported their local purchasing had increased greatly or increased some. Similarly, 26% reported their local purchasing had either decreased greatly or decreased some. A quarter (25%) of respondents reported no change in their local purchasing due to COVID-19 (Table 1).

### Table 1. Change in Local Purchasing Among Farm to ECE Respondents Due to COVID-19

<table>
<thead>
<tr>
<th>Change in Purchasing</th>
<th>Percentage of Farm to ECE Respondents</th>
<th>Frequency of Farm to ECE Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Greatly</td>
<td>12%</td>
<td>297</td>
</tr>
<tr>
<td>Increased Some</td>
<td>14%</td>
<td>326</td>
</tr>
<tr>
<td>Decreased Some</td>
<td>16%</td>
<td>394</td>
</tr>
<tr>
<td>Decreased Greatly</td>
<td>10%</td>
<td>242</td>
</tr>
<tr>
<td>Stayed the Same</td>
<td>25%</td>
<td>601</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>6%</td>
<td>146</td>
</tr>
<tr>
<td>Missing</td>
<td>16%</td>
<td>391</td>
</tr>
</tbody>
</table>

* N=2397 farm to ECE respondents
Those who reported changes in their local purchasing practices were also asked why their local purchasing practices had changed due to COVID-19. The most frequently reported reason among farm to ECE participants was the cost of items (52%), followed by reliability of product supply (34%), the seasonality of fruits and vegetables (30%), delivery changes and limitations (26%), and finding suppliers and farmers to provide local products (18%). The reported reasons influenced either increases in local purchasing or posed challenges for those who decreased their local purchasing.

Figure 1. Reported Reasons For Changes in Local Food Purchasing Due to COVID-19 in Farm to ECE Participants

- Cost/price of items
- Reliability of product supply
- Seasonality of fruits and vegetables
- Delivery challenges/limitations
- Finding suppliers/farmers to provide local food
- Food quality
- Onsite storage
- Knowing how to order local items
- Food safety
- Staff labor concerns
- Availability of processed/precut products
- Obtaining information about product availability
- Packaging of items
- Payment arrangement
- Lack of staff knowledge and enthusiasm
- Access to kitchen equipment to prepare the local foods
- Processing requirements
- State or local purchasing restrictions
- Other

* N=1437 farm to ECE participants
Respondents shared approaches they’ve used to connect children and families to meals during the COVID-19 pandemic. The most frequently reported strategy was providing recommendations for community food sources (26%). The next most common strategies were distributing food boxes (13%) and offering grab and go (13%), followed by providing food from an onsite garden for families (9%), and offering meal delivery (6%).

Table 2. Approaches Used by Respondents to Connect Children and Families to Meals During COVID-19

<table>
<thead>
<tr>
<th>Approach</th>
<th>Percentage of All Respondents</th>
<th>Percentage of Farm to ECE Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offered grab and go</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Offered meal delivery</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Distributed food boxes to families</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Provided food from an onsite garden for families</td>
<td>7%</td>
<td>9%</td>
</tr>
<tr>
<td>Provided recommendations for community food resources</td>
<td>24%</td>
<td>26%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>None of the above</td>
<td>33%</td>
<td>32%</td>
</tr>
<tr>
<td>Missing</td>
<td>29%</td>
<td>28%</td>
</tr>
</tbody>
</table>

* N=2914 total respondents  
* N=2397 farm to ECE respondents

**COVID-19 Support**

A majority of farm to ECE participants (60%) received additional COVID-19 support, while only 16% did not (Figure 2).

Figure 2. Percentage of Respondents Who Received Additional COVID-19 Support
Effect of COVID-19 on ECE Programming

Respondents were asked how their programs changed due to COVID-19, outside of closures. Of those participating in farm to ECE, 40% limited the number of children they served, 32% reduced the number of hours or days open, 31% offered virtual education for children and families, and 19% limited services to children of essential workers.

Figure 3. Reported Changes Made to Respondents’ ECE Programs During COVID-19

Policy Opportunities & Recommendations

The COVID-19 pandemic and the accompanying public health measures have significantly affected multiple sectors, including ECEs. Closures and other strategies to reduce the risk of infection have dramatically impacted the sustainability of the ECE system. This can be seen in 39% of respondents who reported limiting the number of children served during COVID-19, while 31% reduced hours or days open. Historically inadequate funding and the underpayment and undervaluing of the ECE workforce has only exacerbated the issues caused by the pandemic. However, the pandemic has also accelerated the use of technology for farm to ECE and ECE systems, as seen in the 30% of respondents who offered virtual education for children and families. This shift to online learning brought farm to ECE to the family home, increasing engagement with caregivers. While this online approach must be included within recommended age-appropriate screen time and may not be a viable option for home-based providers or those with technology barriers, it does offer an avenue to increase family engagement, expanding the benefits of farm to ECE programming and increasing capacity for farm to ECE. In addition to farm to ECE activities, ECE trainings and professional development opportunities were also moved to virtual platforms, increasing participation in workshops and trainings. The use of virtual spaces as a strategy to reduce barriers to ECE provider trainings, professional development opportunities and farm to ECE family engagement should be considered for continuation past the pandemic. This is supported by the discussion in the 2021 “Farm to ECE Reach” brief on the importance of professional development in the ECE workforce.
A slight majority (60%) of farm to ECE survey respondents received funding to support and mitigate the effects of COVID-19 on ECEs, drawn from multiple federal funding streams. Many Child Care and Development Blog Grant (CCDBG) funding requirements were waived through the CARES Act, with continuation through the Coronavirus Response and Relief Supplemental Appropriations (CRRSA) Act and the American Rescue Plan (ARP) Act. This funding helped with basic operations through closures and participation reductions. Additionally, federal waivers for Child Nutrition Programs helped children access meals even when ECE sites were closed. Waivers included provisions to allow parents and guardians to pick-up meals, allowed for non-congregate feeding and flexibility to meal patterns, and gave area eligibility for at-risk afterschool and family home daycare providers. This allowed all children to have access to healthy meals, reducing stigma for children and families while reducing administrative burden for overwhelmed programs7. ECEs as access points for meals has been vital to supporting food security during the pandemic, as seen by the quarter (26%) of farm to ECE respondents who provided recommendations for community food resources and the 13% who offered grab and go meals and food box deliveries to families. Efforts are currently being made through the Healthy Meals, Healthy Kids Act, a draft of Child Nutrition Reauthorization, to revise area eligibility requirements in order to reduce administrative burden and increase accessibility to the program. Reauthorization has the potential to streamline access for parents and providers. It can achieve this by improving the use of technology through increasing the use of CACFP direct certification, improving the area eligibility test to reach family child care providers in rural and other low-income areas, and increasing reimbursements for CACFP providers and sponsors8. This comprehensive legislation champions many key priorities for farm to school and farm to ECE, and also outlines expanded investments in school meals and CACFP to support the whole of child nutrition, including expansion of the USDA Farm to School Grant Program. Considering the findings in the 2021 survey brief “Local Purchasing” that there is a statistically significant association between sites that received CACFP funding and sites that purchased and served local foods9. Considering that only 46% of respondents received CACFP funding, reauthorization can both reduce barriers to CACFP Participation and improve healthy food access for children.

Approximately one quarter (26%) of respondents participating in farm to ECE increased their local purchasing due to COVID-19, while 26% decreased their local purchasing. One of the key arguments for farm to school and ECE is that it can support the survival of local farms and vendors, and COVID-19 related supply chain disruptions have highlighted the importance of local farms and their contributions to robust, diverse food systems. When respondents were asked why their local purchasing changed as a result of COVID-19, more than half (54%) said the change was due to cost of items, about one-third (34%) said it was due to the reliability of product supply, and 25% said they experienced delivery challenges or limitations. Open responses described in the 2021 Survey brief “Local Purchasing” further support the fact that supply chain issues led many sites to increase their local purchasing due to reduced access to and increased pricing of grocery store items9. Open responses also showed how the pandemic increased interest in local purchasing from site administrators, providers, and families. This support for local farms and farm to school and ECE has been translated into increased USDA support for farm to institution funding through grants such as the Local Agriculture Market Program (LAMP), Regional Food System Partnerships (RFSP) program, the Specialty Crop Block Grant Program (SCBGP), and increased Farm to School Grant funding.
Momentum should continue for farm to institution, and specifically farm to ECE, as an avenue for supply chain resiliency.

As previously mentioned, 25% of respondents saw a reduction in local purchasing. This could be due to a host of reasons, but aside from common barriers to local purchasing seen outside of COVID-19, causes could be due to delivery challenges/limitations (26%) and/or finding suppliers/farmers to provide local food (18%). Both of these issues have been addressed through innovative strategies on the part of producers and producer support organizations who had to find new ways to get products to consumers during the pandemic. For example, the use of online platforms for aggregating and selling local foods through “virtual farm stands” was a strategy seen in Iowa². Other strategies include using online platforms to facilitate pick-up and delivery from producers and farmers markets. The strategies have not only mitigated COVID-19 related barriers to local purchasing, but also reduced barriers consistently seen within farm to ECE, such as providers’ lack of time to navigate local purchasing and lack of access to local foods. Sustaining and expanding virtual platforms for local purchasing past COVID-19 can be an important strategy to reduce barriers to local foods for ECEs. However, it is important to note that producers and consumers (including ECE sites and providers) with limited technology access and capacity limit the benefits of this strategy.

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References


5. Riemer Bopp, S., Shedd, M.K., & Stephens, L. (2022). Farm to Early Care and Education Continues to Foster Bright Futures for Children and Communities: 2021 National Farm to Early Care and Education Survey Background and Methods. National Farm to School Network. Farmtoschool.org
6. Riemer Bopp, S., Shedd, M.K., & Stephens, L. (2022). Farm to Early Care and Education Continues to Foster Bright Futures for Children and Communities: 2021 National Farm to Early Care and Education Survey Farm to ECE Reach. National Farm to School Network. Farmtoschool.org


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