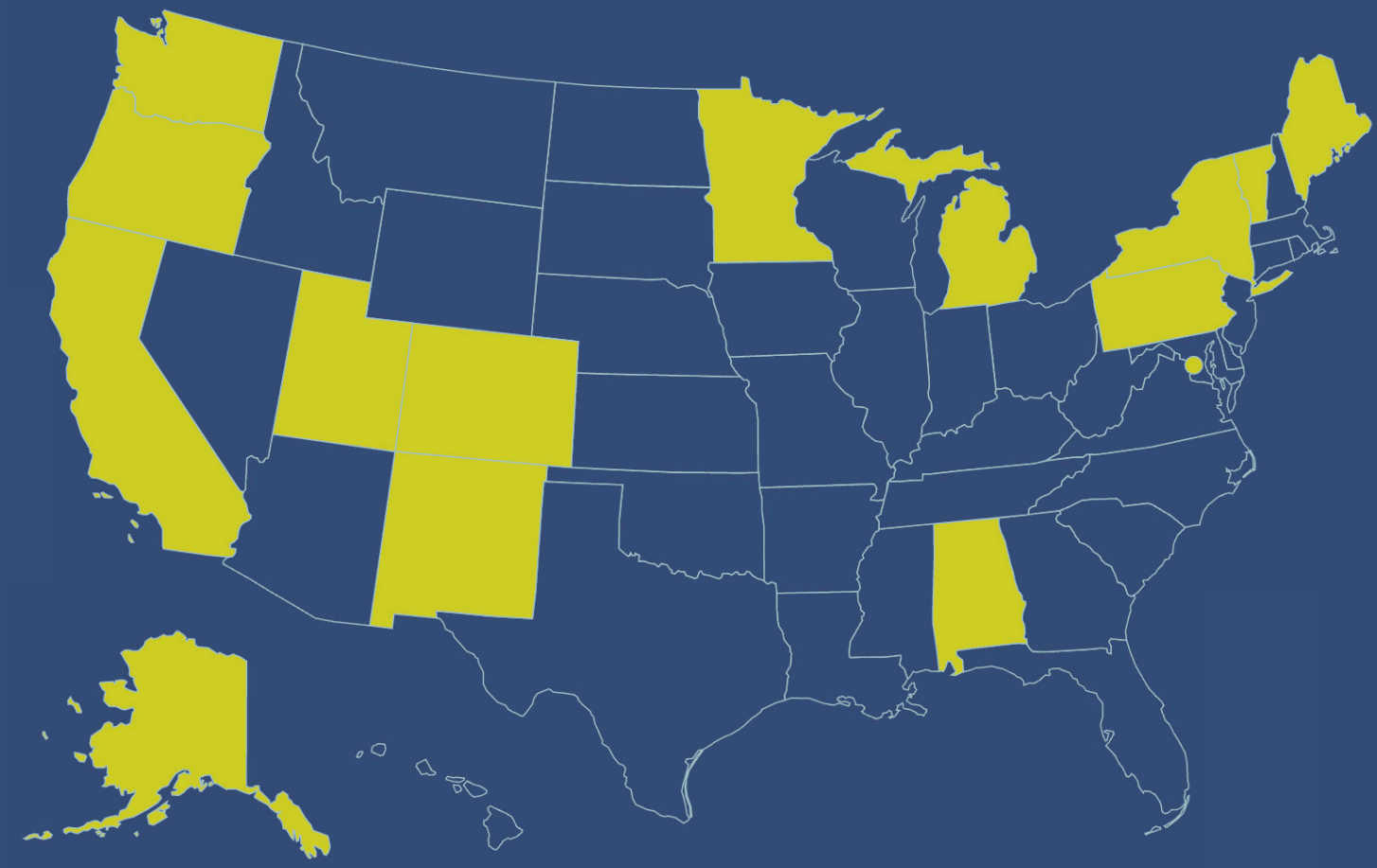
Statewide Farm to School Procurement Incentives:



Design Thinking & Analysis of the National Policy Landscape

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Abstract

Farm to School incentive policies strive to increase institutional local food purchasing by offsetting the cost of local ingredients through a monetary reimbursement. At least 15 states have adopted incentive programs in some form since 2001, with more than half established since 2018. States have tremendous flexibility in designing these policies, but little guidance on the range of models in which they can use to develop an incentive program. This report uses grounded theory design, informed by interviews and secondary sources, to describe and characterize the variation in 15 statewide Farm to School incentives with respect to their (a) design, (b) context, and (c) alignment to policy goals often attributed to Farm to School. The aggregated collection of experiences and classification schemes presented in this report will give advocates who wish to adopt similar incentive policies a way to identify program elements that are aligned with their specific vision, capacity, and regional context.

Acknowledgements

The idea for this research was based on my background at Cornell Cooperative Extension and my work in community food systems. I would not be where I am today without these relationships and experiences, and I thank my colleagues and community partners in Western New York who helped foster my personal growth and professional development.

Thank you to the many food system professionals throughout the United States who have expressed interest and support for research in this particular topic. The enthusiasm and encouragement from the Farm to School community was my greatest motivation, and I hope that this report can support their work in the future. Thank you in particular to Colleen Matts from the Michigan State University Center for Regional Food Systems for reviewing this work, providing thoughtful feedback, and sharing a commitment to pursue this research further.

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List of Acronyms

Acronym	Description
BIPOC	Black, Indigenous, and People of Color
CACFP	Child and Adult Care Food Program
CNP	Child Nutrition Program
DOD	Department of Defense
ECE	Early Childhood Education
FFA	Future Farmers of America
FSMC	Food Service Management Companies
FFVP	Fresh Fruit and Vegetable Program
FTE	Full Time Equivalent
NFSN	National Farm to School Network
NSLP	National School Lunch Program
RFA	Request for Applications
SFA	School Food Authorities
SFSP	Summer Food Service Program
SSO	Seamless Summer Option

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Part I
Introducing Farm to School Incentive Programs

Chapter 1. Introduction

Farm to School programs have been expanding over the last three decades, with an estimated annual $1.26 billion in local food sales and 60,000 schools participating in Farm to School activities in 2019 (Bobronnikov et al., 2021). Each of these programs are unique by design, yet are united by the shared mission to strengthen the local food system by leveraging institutional power. While there is no one particular formula or method for implementing a Farm to School program, according to the National Farm to School Network, they incorporate at least one of three core elements: (1) procurement, in which schools source and serve local food in the cafeteria, (2) education related to food, agriculture, and nutrition, and (3) school gardens (National Farm to School Network, 2020). Due to such a large collective purchasing power, local food procurement has potentially significant implications for both the local agricultural sector and students who are served by participating schools. Thus, institutional purchasing is viewed as a gateway to impacting social and ecological change by supporting alternative food models (Bagdonis et al., 2008; Bisceglia, et al., 2020; Long et al., 2021; Rains et al, 2019).

Despite the possible benefits of Farm to School programs on student health, economic development, and the environment, the implementation of local food procurement is not a simple feat for School Food Authorities (SFAs), nonprofit entities that operate school cafeterias. The prohibitive cost of local foods is a particularly ubiquitous challenge for SFAs (Bobronnikov et al., 2021; Colasanti et al., 2012; Levy & Ruiz-Ramón, 2020).

In response to appeals for more institutional support, state governments have made considerable efforts to promote Farm to School through policy intervention. These policies are steadily featuring provisions that aim to promote the local food procurement component of Farm to School programs. Researchers found that between 2002 and 2020, there were 546 Farm to School bills and resolutions, and of those, 240 bills had passed (NFSN, 2021, p. 15). Between 2019 and 2020, 73% of proposed Farm to School bills and resolutions related to procurement (NFSN, 2021). Moreover, more than half of these local procurement bills and resolutions that passed were backed with public funding.

One type of state policy that is gaining momentum is ***monetary local food incentive programs,*** in which state governments[1] provide SFAs a specific amount of additional funds to partially or completely offset the cost of local ingredients with the intention to increase local food procurement.[2]

My first-hand experience with local food incentive policies was the impetus for this report project. From 2017 to 2021, I was a Farm to School coordinator in a sparse, rural county in Western New York. As my position was beginning, New York's own

1 and the District of Columbia, which this report is referencing as a 'state' for simplicity

2 Depending on the state policy, other Child Nutrition Programs that are not explicitly operated by SFAs (such as Early Childhood Education and Child and Adult Care Food Program) can be eligible to participate in incentive programs discussed in this report. Some state policies are specific to districts, rather than SFAs. However, for simplicity, in this paper, I will use SFA as a general term to describe all child nutrition programs and applicants eligible for participation in the state programs.

local food incentive program, the 30% NYS Initiative, had just been established. This policy shift quickly focused the attention of my work on supporting my partner school districts to work toward qualifying for the program. Working within the nuances of the policy made my colleagues and I often wonder: ***How are other states achieving a similar goal?***

To date, there are at least 15 states that have established incentive-based programs. Though the majority of states have not yet adopted incentive policies, these programs are being adopted with more frequency. More than half (9) of all incentive-based policies have been established since 2018. States have tremendous flexibility in designing these policies, but little guidance on the range of models in which they can use to develop an incentive program. There are considerable variations in both the design, intentions, and implementation contexts of incentive programs. Research on existing incentive programs has shown evidence of both successes and challenges associated with how the programs were designed (Levy & Ruiz-Ramón, 2020; Matts et al., 2020; Giombi et al., 2020).

While several publications discuss several incentive programs simultaneously (NFSN, 2021; Massachusetts Farm to School, 2019), to date, these policies have been examined in relative isolation. This is due, in part, to the great variations among the programs and the different evaluation methods used from state to state. Yet, there is much to learn from other regional approaches. Giombi et al. (2020) suggest future research that compares policy models and impacts across states. This report seeks to respond to this call.

My guiding research question is:

How do statewide Farm to School incentive programs vary with respect to (a) program design (b) context (c) and alignment to existing Farm to School policy goals?

This report describes and characterizes the variation in 15 incentive-based Farm to School policy designs. It aggregates insights and common themes from implementation and analyzes how statewide programs are in alignment with five policy goals often attributed to Farm to School (economic development, education, environment, equity and community engagement, and public health). I used a grounded theory design to classify the programs and synthesize emerging and diverging themes among the programs that present themselves within each of these categories.

This report adds to the Farm to School incentive discourse by observing variations within a united national Farm to School movement, rather than viewing the state programs as individual phenomena. There are several intended audiences for this research: (1) policymakers and practitioners who wish to implement Farm to School local food incentive programs, (2) current practitioners of Farm to School incentive programs who are looking to build a community of practice, and (3) Farm to School researchers and nonprofit partners.

The classification schemes presented in the following chapters of this report will give advocates and statewide policymakers who wish to implement Farm to School local food incentive programs a way to identify the program elements that are aligned with their specific vision, capacity, and regional context. It will also provide this audience an aggregated collection of experiences and stakeholders to contact during the process of researching and designing (or redesigning) their programs, rather than recreating their programs from scratch. The value of this research exists in the detailed experiential evidence and knowledge that may help policymakers think through programmatic scenarios, circumvent future challenges, and avoid reducing policy designs to one dimension. These results can also open a door for current incentive practitioners to engage with their peers on topic-related issues. Practitioners can leverage this research to assess where they are in the incentive space, gather ideas from learning about alternative program components, and talk through similar issues facing multiple states. They can also facilitate the diffusion of innovation (Rogers, 2003) within Farm to School incentives.

Chapter 2 positions this work in the Farm to School discourse and provides the reader with a background on Farm to School and incentive-based policies. Chapter 3 describes the research framework, data collection methodology, and analysis strategy employed for this report.

Part II, Analyzing the Incentives, classifies and compares the programs. Chapter 4, the largest chapter, presents a classification system that represents the current landscape of incentive policies and divides state programs into diverging categories. It also shares insights, rationale, and implementation experiences from states that have particular design elements. Chapter 5 portrays additional contextual background of the programs, including shared implementation challenges between three main actors: SFAs, producers, and state agencies. The second half of Chapter 5 recounts different support structures that states have built into their programs in order to contend with these challenges. Chapter 6 depicts how state programs are in explicit alignment with five Farm to School policy goals (economic development, education, environment, equity and community engagement, and public health), and how different aspects of their program designs are in alignment with these goals. The second half of Chapter 6 provides a list of ways in which state agencies describe indicators of "success" when discussing the desired goals of their incentive programs.

The concluding section of this report is Part III. Chapter 7 summarizes key findings and takeaways from this research process. Chapter 8 shares limitations and recommendations for two distinct groups: (1) researchers and nonprofit partners and (2) incentive-based program designers, policymakers, and program coordinators.

Supplemental products of this study are a Farm to School Incentive Program Compendium, which provides in-depth 3-4 page overviews of the incentive programs in each state, as well as links to each program's websites and supplemental sources, and (2) a Farm to School Incentive Program Toolkit with compiled practitioner documents such as Requests for Applications (RFAs), tracking spreadsheets, and evaluations.

Chapter 2. Literature Review

This chapter establishes the context of why characterizing the range of program designs is a vital next step in the Farm to School incentive space. It begins with a background on Farm to School programs more generally, followed by the benefits and barriers to local food procurement. Then, it presents a synopsis of Farm to School policies and policy trends over the last two decades. After, it dives into greater detail on the trends and current research of statewide local procurement incentive programs. Lastly, this chapter highlights gaps in knowledge from the existing literature and uplifts calls for future research into Farm to School incentive programs.

About Farm to School Programs

Farm to Institution programs are initiatives that aim to strengthen the local food system by targeting institutions that serve large numbers of individuals each day. Schools are among the most important types of institutions in this effort. The three core elements of Farm to School include: (1) procurement, in which schools source and serve local food in the cafeteria, (2) education related to food, agriculture, and nutrition, and (3) school gardens, (National Farm to School Network, 2020). There is no standard definition or method for implementing a Farm to School program. Therefore, the meaning of Farm to School varies substantially depending on school capacity and interests but typically incorporates at least one of the three core elements (NFSN, 2020). There is also no standard definition for the term local, and the term is often defined individually by stakeholders (Center for Agriculture and Food Systems at Vermont Law School, 2021).[3]

Farm to School programs formally emerged in the 1990s as a small, counterculture food movement set to improve the nutritional value and acceptance of school meals while supporting small-scale farmers (Feenstra & Ohmart, 2012). The once-obscure Farm to School movement has grown in popularity to be part of the canon of school administrators and school food professionals. In the four years between the 2015 and 2019 USDA Farm to School Census, the number of schools participating in Farm to School increased by 42%, today nearly two-thirds (65.4% or 60,000) of schools participate in at least some activities (Bobronnikov et al., 2021). The Farm to School movement has even grown beyond K-12 schools to Early Childcare Education centers (Bloom et al., 2022). In addition to the number of schools participating in Farm to School, local food purchases have also grown from $789 million to $1.26 billion in the same timeframe, an 12% increase per year (Bobronnikov et al., 2021). The USDA estimates that American schools spent approximately 20% of their budgets on local food during the 2018-2019 school year (Bobronnikov et al., 2021).

In the United States, school meals are supported by the National School Lunch Program (NSLP), which is administered by the Food and Nutrition Service of the

3 For example, "local" can be defined within a set distance (e.g., no more than 100 miles away), within a set boundary line (e.g., within the county or state), or within a region consisting of multiple states (e.g., the Northeast). For more information and analysis, The Center for Agriculture and Food Systems at Vermont Law School published a 2021 report Defining Local Food: An Analysis of State Approaches and Challenges.

United States Department of Agriculture. The NSLP was established in 1946 to simultaneously subsidize the nation's agribusinesses and feed malnourished children (Feenstra & Ohmart, 2012). The NSLP provides funding in the form of a per-meal reimbursement to School Food Authorities (hereby SFAs), who serve meals to students. In 2018, over 30 million students ate lunch served by SFAs each day (Ollinger, 2019). In many cases, state education departments also provide meal reimbursement funding to subsidize an SFA's operations (School Nutrition Association, 2017). Other than funding through reimbursement, the USDA also provides food directly to SFAs through programs such as the Commodity Supplemental Food Program and the United States Department of Agriculture (USDA) Department of Defense (DoD) Fresh Fruit and Vegetable Program (commonly known as "entitlement" "brown box," or "commodities"). To accept support from the state or federal government, SFAs must comply with nutritional standards, meal pattern requirements, and procurement regulations (Food and Nutrition Service, USDA, 2017). SFAs are typically managed by a Food Service Director. On a local level, Food Service Directors and SFAs are also supervised by their respective school district administrations (superintendent, local board of education, health committees, and business administrators).

Benefits of Farm to School

Schools have an enormous impact on the local agricultural sector due to their collective purchasing power. Thus, institutional purchasing is viewed as a gateway to impacting social and ecological change by supporting alternative food models (Bagdonis et al., 2008; Bisceglia, et al., 2020; Long et al., 2021; Rains et al, 2019). The benefits of Farm to School programs have been studied at length by health advocates, environmentalists, economists, and other social scientists. The National Farm to School Network sorts the benefits of Farm to School into five categories: economic development, education, environment, equity and community engagement, and public health (NFSN, 2020).

Economic Development: Local food procurement has been shown to increase farm sales, diversify revenue streams for small to mid-sized producers, and create an economic multiplier output of 1.03-2.4 (Becot et al, 2017; Christensen et al., 2018; Roche & Kolodinsky, 2011). Farm to School can increase school meal participation, making SFAs more financially viable (Bontrager Yoder et al., 2014; Izumi et al., 2008). Other scholars have studied the adoption and impacts of these programs from the perspective of producers (Lehnerd et al., 2018).

Education: Farm to School programs can increase student engagement by providing a hands-on platform in which to learn STEAM (science, technology, math, art, and engineering) concepts (Williams & Dixon, 2013), and build important life skills (Lohr et al., 2021). Beyond the classroom, education to food service staff through culinary training can improve confidence to process and promote local produce options on the lunch line (Stokes & Spruance, 2020).

Environment: Farm to School programs have been shown to reduce food waste (Prescott et al., 2019; Kropp, 2018), and SFAs can purchase from farms that implement sustainable or climate-friendly growing practices.

Equity and Community Engagement: Farm to School activities can inform students about diverse cultures, provide a platform to learn about environmental justice (Bisceglia et al., 2020), and reduce inequities in low-income communities and communities of color (both in the cafeteria and classroom) by providing fresh, high-quality produce to students who otherwise may not have access (Greer et al., 2018; Rains et al., 2019).

Public Health: Farm to School programs can improve student food and nutrition knowledge (Ignasiak & Peterson, 2020), improve attitudes and preferences for healthy foods (Rains et al., 2019), and increase student meal participation among students with a previously low intake (Kropp, 2018; Bontrager Yoder et al., 2014).

While there is still debate on the extent to which Farm to School programs provide these benefits, (Prescott et al., 2020; Bisceglia, et al., 2020; Best & Kerstetter, 2020; Taylor & Johnson 2013), the long-lasting impacts of these five main benefits are often cited by Farm to School stakeholders as reasons to implement Farm to School programs (Colasanti et al., 2012; Izumi et al., 2010; Bobronnikov et al., 2021).

Barriers to Local Food Procurement

Despite the aforementioned benefits of Farm to School programs, the implementation of such activities is not a simple feat for SFAs. Several commonly noted barriers to local food procurement include the high cost of local ingredients and the prevalence of strict procurement laws that deter local food purchasing (Joshi et al., 2008; Izumi et al., 2009; Izumi et al., 2010; Roche & Kolodinsky, 2011; Colasanti et al., 2012; Lee et al., 2019; Bobronnikov et al., 2021). Much innovation and guidance provided has been provided to SFAs throughout the last decade to mitigate procurement laws as a percieved barrier such as implementing geographic preference and increasing small purchase thresholds. Other barriers emphasize a lack of capacity, such as a lack of food supply chain development, a lack of equipment to process fresh, locally available ingredients, and a lack of staff time for sourcing and cooking local ingredients. Often, a combination of barriers at varying levels of intensity creates an environment that makes local food procurement infeasible for SFAs.

The prohibitive cost of local foods is a particularly ubiquitous challenge for SFAs. According to the 2019 USDA Farm to School Census, 33% of SFAs cited cost as a perceived challenge (Bobronnikov et al., 2021). Additional research has found this challenge is even more pervasive. For example, 89% of 250 Food Service Directors in Michigan cited 'cost' as a concern and 75% cited 'budget' as a barrier (Colasanti et al., 2012). Cost was cited as the top barrier in a survey of 105 Food Service Directors in New York (Levy & Ruiz-Ramón, 2020). While cost is perceived as a top barrier among many SFAs, Izumi et al. point out in their 2010 study that local food is often priced competitively with conventional produce and may be offered at a lower cost if in season. Having close relationships with food producers may even lead to discounted products if SFAs are able to purchase surplus items (Izumi et al., 2010).

Even at a comparable cost, purchasing local food often requires additional staff time to find and make nontraditional food orders. Serving local food may be important to Food Service Directors, but it may not

always take priority when resources are routinely stretched in school food service operations (Izumi et al., 2010). Therefore, many advocates have turned to policy intervention to mitigate the barriers SFAs face when trying to purchase locally.

Farm to School Policies

Three separate studies have been conducted to determine whether the existence of Farm to School laws increases Farm to School Programs and/or fruit and vegetable consumption among students (Schneider et al., 2012; Nicholson et al., 2014; McCarthy et al., 2017). There was consensus among all scholars that there is a correlation between the enactment of a specific state or local law that focuses on local food procurement and the presence of Farm to School programs. It is logical to assume that Farm to School laws (and more specifically, funded policies) are crucial components to reducing barriers and promoting Farm to School activities. In light of this research, policymakers are responding to calls for more Farm to School policies.

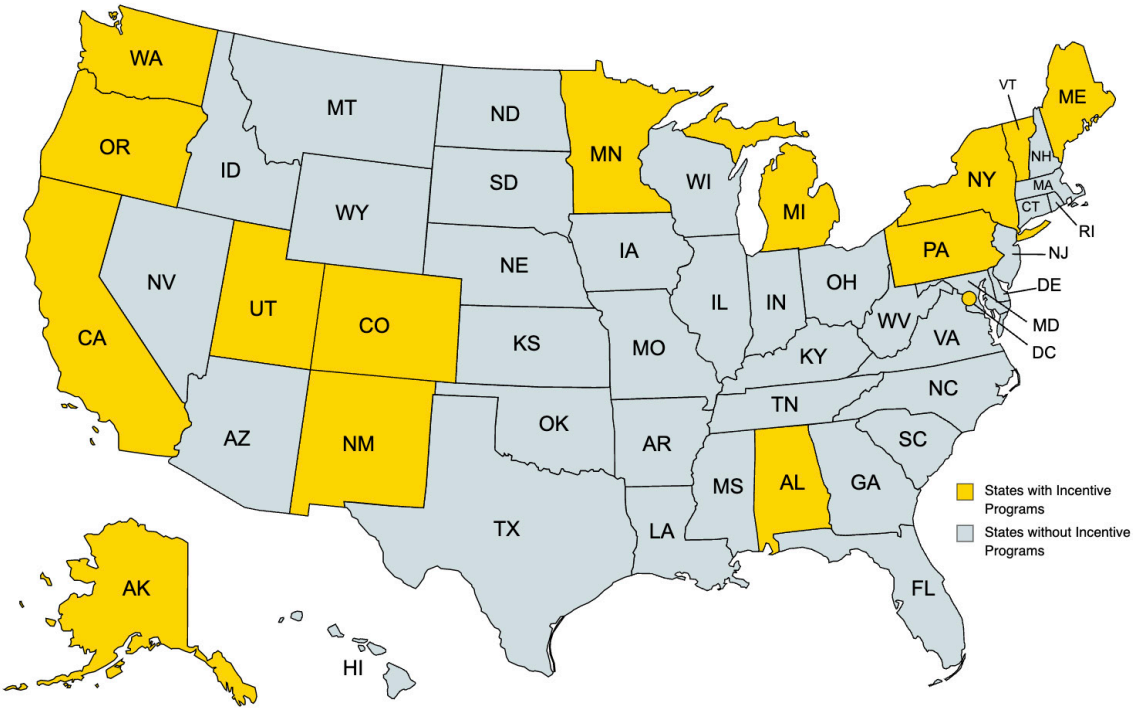
While a vast majority of stakeholders, experts, and policymakers advocate for broadening the greater Farm to School movement, their approaches to doing so vary significantly (National Farm to School Network, 2021). This is because the deliberate premise of Farm to School programs is that each instance is unique (Bontrager Yoder et al., 2017). Each school district will find itself with different food service directors, distributors, cafeteria staff, local farms, local products, equipment, funding levels, and overall capacity and desire to implement such programs. Because of this, it is difficult to assess a one-size-fits-all intervention to promote local food procurement and remove these situationally-based barriers. Examples of policies include (NFSN, 2021):

- Passing proclamations or resolutions designating a day, week, or month for either Farm to School specific components such as school gardens or local food, or more generally
- Developing food policy councils or Farm to School task forces
- Developing databases for schools to find local food products and producers
- Funding or mandating training sessions for school food professionals and food producers
- Establishing or amending food procurement laws that allow preference for locally grown or produced foods
- Funding research studies to assess, analyze, and promote Farm to School (these typically focus on local food chain development and food systems feasibility analysis)
- Funding statewide grant programs
- Funding Farm to School Coordinator positions, typically at the state level
- Establishing monetary incentives or reimbursement programs that help offset the cost of local foods

Trends in Farm to School Legislation

Acknowledging these potential benefits and apparent barriers, state governments have made considerable efforts to promote Farm to School. Policies to support Farm to School have been expanding in both number and scope over the last several decades. In July 2021, the National Farm to School Network, the Center for Agriculture and Food Systems at Vermont Law School in partnership with the United States Department of Agriculture released the State Farm to School Policy Handbook: 2002–2020, which functions as a tool for advocates of Farm to School (NFSN, 2021). The publication provides a summary of all state policies regarding Farm to School

Figure 1. Map of States with Incentive Programs



Source: Figure created by author using MapChart software in July 2022. Data sources listed in Appendix C.

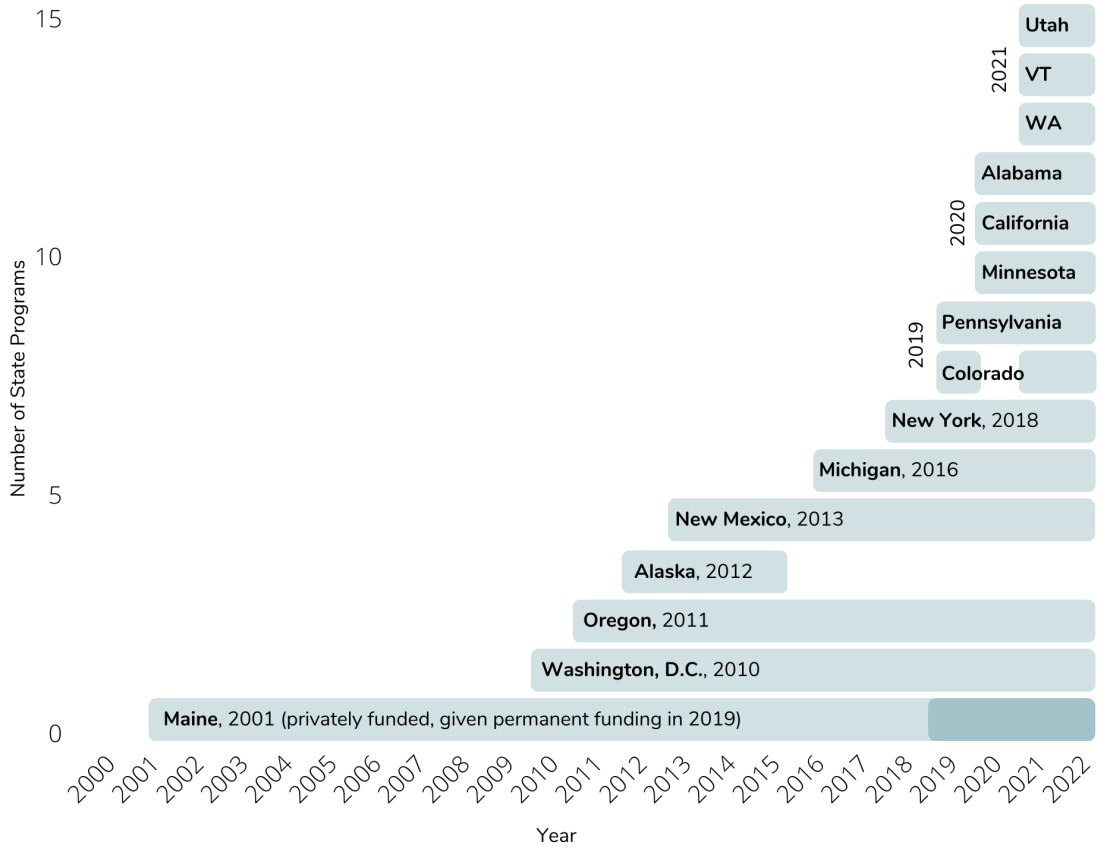
activities, an analysis of policy trends over time, several case studies of legislation in action, and additional resources that may help propel the movement forward. Researchers found that between 2002 and 2020, 46 states, the District of Columbia, and one US Territory introduced 546 bills and resolutions that involved Farm to School. Of those, 240 bills had passed, 170 bills were enacted, and 70 resolutions were adopted (NFSN, 2021, p. 15). Many of these bills and resolutions (17%, 91) were introduced in two recent years (2019 & 2020) by more than half (26) individual states in the US. Of the 91 Farm to School bills or resolutions introduced, one-third (30) passed (NFSN, 2021, p. 17).

Farm to School policies are steadily favoring one of the three core elements of Farm to School in particular: local food procurement. Between 2019 and 2020, 73% of proposed Farm to School bills and resolutions related to procurement (NFSN, 2021, p. 16). Further, of the local procurement bills and resolutions that passed, more than half were backed with funding (NFSN, 2021, p. 16). State governments are providing the financial support that is necessary to seed, grow, and sustain Farm to School programs in their communities.

State Farm to School Incentive Policies

This report focuses on local food procurement incentive programs within US statewide Farm to School policy. These

Figure 2. Statewide Farm to School Incentive Program Adoption Timeline



Source: Figure created by author in July 2022. Data sources listed in Appendix C.

programs work to promote local food procurement by reducing cost barriers through a direct monetary incentive. **Put simply, state governments provide SFAs (and other child nutrition programs) with a specific amount of funds to offset the cost of local ingredients partially or completely with the explicit intention of increasing local food procurement.** These funds are in addition to the existing federal (and often state) funding structures mentioned above. These policies are funded, as opposed to unfunded bills such as proclamations, creating task forces, and reforming procurement laws. Therefore, they present as powerful mechanisms to influence purchasing behavior among SFAs and increase local food purchasing from farms in their respective communities.

The underlying assumption of Farm to School incentives is that Food Service Directors want to serve local food and would procure it more often if the cost barrier was reduced. The theory of change is, that with an additional monetary incentive, SFAs will be able to procure local food that is typically more expensive than cafeterias historically pay for ingredients. This funding can also be used as a motivational device to encourage SFAs who had not previously considered serving local food to do so.

To date, at least 15 states have implemented local food incentives (sometimes referred to as reimbursement programs) at some point in time. One of the first Farm to School procurement

incentive programs was established in Maine in 2001. However, this program was not routinely or substantially funded (Hartman et al., 2019). One of the first bills to regularly fund an incentive program was introduced in Oregon in 2007 (Giombi et al., 2020). While this legislation eventually did not pass, the District of Columbia enacted The Healthy Schools Act of 2010 (DC Official Code § 38-821.01), which established the Healthy Schools Fund. This fund provides an additional five cents per lunch meal reimbursement to SFAs if they incorporate at least one local component in their lunch or breakfast meals. Since then, the introduction of Farm to School incentive programs has grown dramatically. The states that followed include Oregon (2011), Alaska (2012), New Mexico (2013), Michigan (2016), New York (2018), Colorado (2019), Pennsylvania (2019), Minnesota (2020), California (2020), Utah (2021), Vermont (2021), and Washington (2021). This momentum has accelerated in more recent history. In 2019 and 2020, 22 bills with reimbursement programs were introduced and five passed (NFSN, 2021). In 2021, an additional three states implemented funded incentives. Figure 2 below is the most comprehensive timeline to-date of incentive-based programs in the United States.

Though many states still have yet to adopt incentive policies, the growing trend shows a clear interest from policymakers to support their community's students and farmers through this particular policy instrument. More than thirty million dollars were allocated for these incentive programs in 2021. As this report was being written, New Hampshire introduced House Bill 1657, which would create an incentive policy of its own (NOFA-NH, n.d.). Several other states, such as Pennsylvania and Nevada, are discussing or designing pilot programs to implement in the near future. While many states have yet to adopt similar policies, the growing trend shows a clear interest in this local food promotion strategy to help benefit students, farmers, and communities.

Outcomes and Impacts from Farm to School Incentives

The research that analyzes the impacts of Farm to School incentive policies is limited due to their recent adoption and the significant planning, resources, and partnerships required for program evaluation. There are less than a handful of peer-reviewed journal articles that research the impact of state Farm to School procurement incentives on purchasing decisions. Most reporting on the impacts of Farm to School incentive programs comes from nonprofit partner organizations or state agencies. These reports predominantly support the narrative that government funding for incentive programs benefits students, farmers, and communities. To support evaluation, the National Farm to School Network created a technical report that provides a framework for measuring Farm to School program success (Ratcliffe et al., 2014).

Preliminary Research on Incentive Programs

Researchers in New York and Oregon examined the potential impact of what increased local food procurement could have on their communities. In 2008, Ecotrust piloted a one-year incentive program in Oregon that expanded the number of varieties of local produce served and created an economic multiplier of 1.86 (Kruse et al., 2011). The New York Academy

of Medicine and American Farmland Trust estimated that if all public institutions sourced 25% of their ingredients locally, this shift would increase spending on New York farms by $143.7 million annually and benefit the 6.6 million residents who eat at public institutions regularly (Libman et al., 2017). While this report did not investigate the potential impacts of a local food incentive, Libman et al. recommended that incentives in the form of increased reimbursement rates would help New York achieve this goal. In both states, these preliminary studies helped show proof of concept for the ultimate adoption of their respective incentive programs.

Measuring Incentive Program Outputs

The direct results from incentive program activities (outputs) can be measured quantitatively, with metrics stemming from sales records. The outputs can also be qualitative, resulting from surveys given to stakeholders. These reported outputs are typically compared to the previous year's data from the same SFA or group of SFAs. As seen in recent examples of these reports, direct outputs of incentive policies include: local food purchases ($); increased sales to food vendors (%); increased local food purchases (%); varieties of foods (especially fruit and vegetables) served (#); new foods served (#); new recipes that incorporate local foods (#); increased availability of local foods (%); increased student consumption of local foods (% or #); farms and food vendors involved (% or #); children served local foods (#); storytelling techniques: testimonials, videos, and images (Levy & Ruiz-Ramón, 2020; Matts et al., 2020).

Measuring SFA Behavioral Change

If a reimbursement scheme is put in place to encourage new local food procurement, but indeed is just subsidizing existing local food purchases, is the program effective? Another way to examine the efficacy of an incentive program is to see how SFA purchasing behavior changed because of program implementation. Defining this change can help policymakers decide whether a program is efficiently using government dollars and encouraging new economic development. However, finding a baseline to observe this change pre- and post-program is difficult to track quantitatively. Some evaluations have relied on surveys or interviews from SFAs to find how purchases changed due to an incentive program (Matts et al., 2020) whereas others have relied solely on procurement data (Long et al., 2021). Researchers at Cornell Cooperative Extension used both procurement data and surveys to estimate that most SFAs increased their lunch budgets from 20% local ingredients to 30% local ingredients to qualify for New York's local food incentive program in school year 2019-2020 (Bilinski et al., 2022).

In 2021, researchers from Colorado State University studied fresh fruit and vegetable purchases served in salad bars from three urban-suburban school districts in Northern Colorado (Long et al., 2021). They concluded that a five-cent per meal reimbursement would reduce costs of local produce to make it price-competitive with similar non-local items. This would increase fresh fruit and vegetables by 11-12% during the growing season (August to October) but would only increase targeted local procurement by 0-1% during November and December.

Another group of researchers used the USDA Farm to School Census to measure the effectiveness of local food incentive policies. Wen and Connolly (2022) followed the trajectory of SFAs that stated they were interested in starting Farm to School programs. By observing those SFAs through three waves of the census, researchers concluded that funded policies at the state level did not actually increase the likelihood of a school following through on their previously stated intention to begin a Farm to School program (Wen & Connolly, 2022). "State-level funded policies" include budget appropriations, incentive policies, and grant programs. Researchers broke their data down further to identify if incentive policies had an influence on whether an SFA would follow through on their intention, and found they did not. The researchers stated that this disconnect between the prevalence of a policy and follow-through on intention may not be because of the presence of the policy itself, but the low uptake of the incentive program among SFAs within the state.

Design Thinking

Incentive programs have demonstrated benefits, but they also have unintended consequences. In several states, incentive programs tended to favor whiter, wealthier districts, and part of this is because of the way the policies were designed (Matts et al., 2020; Bilinski et al, 2022).[4] Giombi et al. (2020) explored what happened when the Oregon Department of Education changed the state's local food incentive program structure from a competitive to a universal eligibility structure by adding a noncompetitive component. They found that changing to a universal eligibility structure increased the amount of BIPOC and low-income students that benefitted from local food and increased the average amount of fruit and vegetables purchased from low-income schools. Evolving programs within states provide valuable insight into how incentive program design influences SFA participation and procurement outcomes among the same group of regional stakeholders.

This research is ostensibly focused on local food systems policy and Farm to School promotion programs, but it is also an exercise in policy design. While developing a realistic causal theory between a policy's design and its specific outcomes is challenging (if not impossible), scholars acknowledge that using an ill-fitting policy instrument can have detrimental effects (Linder & Peters, 1984). Further, a particular policy can produce intended outcomes in one respect but also cause counterproductive and harmful unintended consequences. To reduce the likelihood of these errors, policy design scholars question how policy interventions could be designed to be the most efficient and effective (Linder & Peters, 1984). ""Policy design" implies a knowledge-based process in which the choice of means or mechanisms through which policy goals are given effect follows a logical process of inference from known or learned relationships between means and outcomes" (Howlett, & Mukherjee, 2014, p. 57). By placing the design of policies at the center of analysis, scholars can attain deeper insight into which government intervention strategies might work for a particular problem (and why?) to adopt a coherent approach to tackling future societal problems (Linder & Peters, 1984).

4 Michigan's incentive was introduced in 2016 as a pilot that was limited to a geographic area within the state, which is in-part why the program favored whiter, wealthier communities. However, when the program expanded statewide for the 2021-21 SY, 10 Cents grantees as a group appeared to serve a higher percentage of schoolchildren eligible for free and reduced-price meals and schoolchildren of color.

A Need for Future Analysis of Local Food Incentive Programs

All states that have implemented local food incentive programs incorporate a reimbursement element, in which SFAs are given specified funds for the purpose of reimbursing local food purchases. However, the states' approaches to the design and implementation of their programs vary considerably with respect to the goals emphasized, and programmatic elements, such as the definition of local and their scale and scope. To date, there has been no comprehensive compilation of incentive programs or comparisons that synthesizes the models and shares insights from research and stakeholders about implementation. The research on Farm to School impacts is not in itself sufficient to guide state level policymakers to design programs that will be successfully adopted and implemented.

Massachusetts Farm to School (2019) released a report that summarizes statewide Farm to School incentive programs. This publication did not include a comprehensive list of programs, which this research strives to do. Further, it failed to distinguish between grant programs that do and do not fund local food, and this research is solely dedicated to policies that reimburse local food purchases. Lastly, the report did not characterize the kinds of policy designs. With respect to incentive policy, the Policy Handbook provides crucial insight that shows the number of local procurement incentives bills over time, includes a three-page section on incentive programs and policy considerations recommended by practitioners, and provides two case studies (New Mexico and Michigan) that go further in depth on the evolution of the states' policies (NFSN, 2021). However, the Policy Handbook identifies only nine of the fifteen incentive programs and does not provide a robust or comprehensive resource for understanding incentive policy design.

Giombi et al. (2020) call for future research that compares incentive models and impacts across states. Indeed, there is a gap in knowledge about the collective Farm to School incentive policy landscape. Despite unanswered questions, local food incentive programs continue to rise in popularity. It is logical to assume that more states, and even the USDA, may look to implement similar program models. Since there is tremendous flexibility in designing an incentive program at the state level, policymakers and state agencies would benefit from guidance about the range of available design options. An investigation of the program models can also help support future research that compares incentive impacts across states.

Without understanding the landscape, future policies may be developed, not through extensive research into different existing modules and their outcomes, but by satisficing and availability heuristics, leading to potential unintended consequences. This report seeks to respond to these limitations by exploring how statewide Farm to School incentive programs vary with respect to (a) program design elements, (b) context, (c) and alignment to existing policy goals. Beyond isolated case-based study, it is important to start treating the existing incentive efforts as parts of a larger movement rather than disparate policies. Such an approach may help to synthesize reported best practices, fill knowledge gaps, and facilitate enduring success. The following chapters share a comprehensive database of program descriptions and craft a framework for classifying them that aims to support further research and program design. Future analyses and evaluations can take advantage of the framework presented here.

Chapter 3. Methods

This report uses a mixed-method approach to identify, describe, and compare specific characteristics of statewide Farm to School local food incentive programs in the United States. The framework for this analysis was informed by a review of the published literature as well as a "grounded theory" design (Strauss & Corbin, 1990) to discern common and divergent themes between the programs, iteratively code the data into categories, and create a taxonomy for the program attributes. Using the constant comparative method developed by Glaser and Strauss (1967) across multiple cases allows me to mobilize knowledge from the 15 programs while presenting examples, providing context to each case, and making explicit connections between the programs to produce new knowledge.

My data collection strategy employs a three-part methodology: a) identifying which states had incentive-based programs, b) reviewing existing secondary sources of these statewide incentive programs, and c) conducting interviews with key stakeholders. My data analysis strategy is twofold: a) characterization and classification of the programs, and b) synthesis of emerging and diverging themes among state programs that presented themselves within each of these categories.

Data Collection Strategy

Identifying Statewide Incentive Programs

To find which states had implemented incentive-based policies, I first used The State Farm to School Policy Handbook produced by the National Farm to School Network, USDA, and Vermont Law School, which provides a comprehensive list of Farm to School bills and analysis of trends from 2002-2020. I found additional information about programs not covered in the handbook and literature review process from press releases and state agency websites. Two additional state programs were identified by informants that requested to view my list of states with incentive programs and shared that they knew of other active or burgeoning programs.

Reviewing Existing Secondary Sources of Farm to School and the Statewide Incentive Programs

To gain more information about each incentive program, I used secondary sources that were either publicly available on the internet or provided to me by state department officials and informants.

Database Searches: Both the literature review chapter and the information on state incentive programs were informed by a combination of academic articles, reports, and web materials. Search terms used to find existing information on this topic (e.g. "Farm to School," "Farm-to-School," "incentive,""reimbursements," "policy," "promotion program," "impacts," and "reimbursements") in addition to the names of each state with an incentive policy (i.e., "Alabama") were entered into Tufts University's JumboSearch database.

The JumboSearch tool enables articles in multiple scholarly databases (Web of Science, EBSCO Information Services, ScienceDirect) to be identified through one search interface. This engine included information from newspaper articles, dissertations, and peer-reviewed journals. Journals that are relevant to public policy, local food systems, and public health fields were chosen for this analysis. I also repeated this search strategy on the AgEcon Search database. Several sources were sent to me by colleagues and supporters of this research. Other resources include government or nonprofit evaluations, and supporting publications. They were identified by reading content on the "content" or "policy" sections of the National Farm to School Network website and using supplemental web searches to link to relevant sources.

Official Program Web Pages: Every program had at least one web page that acted as a loading dock for information on their state department's respective website. I read through the web pages, as well as any hyperlinks to additional sources stemming from the website. These materials included items such as the bills that established the program, posters to the public advertising the program, informational webinars, FAQs, evaluative reports, evaluations, maps of participating districts, grant Requests for Application (RFAs), sample tracking sheets, links to partner organizations, and information about relevant other programs available through the authorizing agency or their partners. Often, I used the program's main web page as an entryway and searched for additional sources if they were mentioned in the original web page materials.

During this process, I saved local food tracking sheets and grant RFAs from each state where available to create a resource toolkit for interested practicioners.

Internet Searches: In addition to reviewing each department's official web page, I used general internet search terms to find secondary sources that may be relevant to each state's program. These search terms included: State name of program OR State name and "incentive program" or "reimbursement program" and "Farm to School" OR "local food" and "evaluation" OR "report." In addition to using these search terms on documents, I also searched news articles and videos on Google to see if there were relevant videos or press releases that could lead to more information about the program.

*Notes on Evaluations: Some state programs are newly implemented and therefore do not have outcomes to report. It is important to note that very few state programs, much less than anticipated, had thorough evaluations performed for their programs. I found evaluations from Oregon, Michigan, New York, and Washington. D.C. (Washington, D.C.'s program was focused on ECE participants only). Evaluations were even absent in those programs which are well established. Many states had formative or summative "evaluative materials," a term I use throughout this paper to describe the variety of documents that share outputs or outcomes of a program. These materials come in the form of spreadsheets, marketing materials, videos, short sections in legislative reports, and other short documents.

If I could not find any evaluative materials on a state program's website, I asked department officials from each state with an incentive program to share evaluations or other evaluative materials describing their programs. Personnel in each of the

15 states with incentive programs provided additional information to me during this process, either through interviews, email communication, or both. In total, I found roughly 10-15 references per state that provided information about their program, which are listed in Appendix C.

Interviews with Key Stakeholders

The first-hand perspectives of informants have been instrumental to fill gaps from the secondary sources. After reviewing publicly available sources, I contacted each of the 15 states with an incentive program to ask for an interview and/or additional resources about their program. To find the appropriate stakeholders to contact, I searched for available contact information on each program's web page and either contacted specific personnel listed on their web page, generic department email addresses, or both. In the case of Alaska, whose program is defunct, I also unsuccessfully attempted to make contact with the previous coordinator of the program through LinkedIn and Twitter. However, the Alaskan Division of Community and Regional Affairs provided me with a report from 2014. Partner nonprofit staff members were included only if they were recommended by the state official.

I interviewed 19 individuals from 14 states with incentive programs (Alaska not included). A list of the informants can be found in Appendix B. These interviews ranged from 45-90 minutes. Several individuals asked to remain anonymous, which was an option presented to them at the beginning of the interview process. During the interviews, I asked open-ended questions about implementation challenges and what they did to contend with them, perspectives on critical design elements and other considerations, any updates on program outputs and outcomes, policy implications, unintended consequences, and attitudes towards existing incentive programs. If a state had an extensive evaluation or reporting material, I spent time diving deeper into aspects that were not covered by publicly available sources during the interview. A list of the standard interview questions is listed in Appendix A. Other forms of contact with stakeholders included programmatic clarification questions in emails or short phone conversations about program attributes or requests for additional documents about their program. For interviewees, I often asked follow-up or clarifying questions via email. I sent excerpts from this report as well as draft pages from the State Program Compendium to 12 of the 15 state informants and solicited feedback for accuracy. Eight representatives of the 12 states responded to this request within a two-week timeframe.

Data Analysis Strategy

My data analysis strategy is based on the constant comparison method (Glaser and Strauss, 1967) and is twofold. First, I characterized and classified the 15 programs into themes based on each program's (1) implementation context, (2) design components, (3) alignment to Farm to School Policy goals, and (4) experiences in implementation. The open coding rationale for each of these four themes is identified below in Figure 3, but either stems from (1) common themes identified in literature review and review of reports from incentive programs, (2) the process of analyzing programs based on their websites and other publicly available information, (3) a combination of both 1 & 2, or (4) by categories presented in the National Farm to School Network's Benefit Facts Sheet

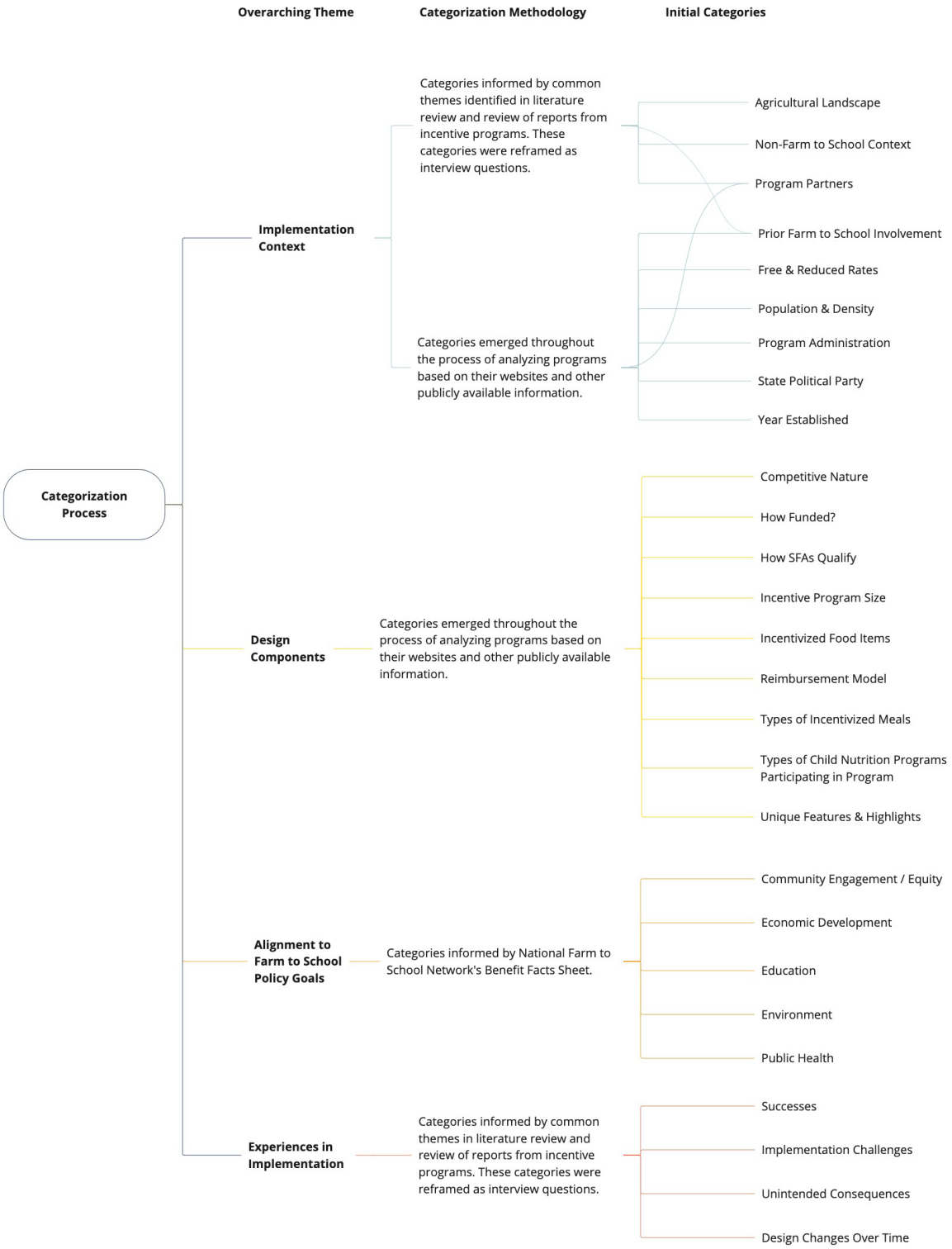
(NFSN, 2020). After this initial process, I used an axial coding method to synthesize emerging and diverging themes among state programs that presented themselves within each of these categories. I did this by grouping the coded interview notes and/or the transcripts from interviews into different sub-themes presented on the original four components.

Additionally, if I found information related to the categories I was observing through public sources, I recorded this in my research notes for each state's program.

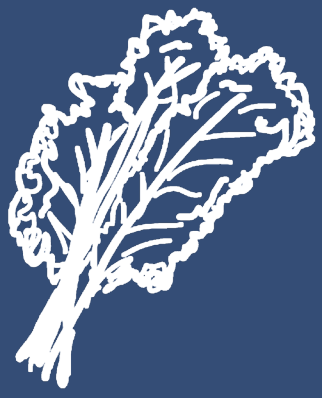
The outputs of this analysis take the form of tables and figures within the following chapters. Narratively, this synthesis is shown through quotes, bullets, and descriptive paragraphs, which highlight examples about a particular theme or concept. The text boxes are intended to give voice to those that are involved in this work on the state-level. All quotes in this report were made by informants during the interview process by informants unless otherwise specified. With few exceptions, the quotes are not attributed to specific actors because of agreements about anonymity.

Supplemental products of this study are a Farm to School Incentive Program Compendium, which provides 3-4 page overviews of the incentive programs in each state, as well as links to each program's websites and supplemental sources, and (2) a Farm to School Incentive Toolkit with compiled practitioner documents such as RFAs, tracking spreadsheets, and evaluations.

Figure 3: Initial Categorization Methodology



Source: Figure created by author using Miro software in July 2022.



Part II
Analyzing the Incentives

Chapter 4. Design Elements & Program Components

No two programs are identical, and there is great diversity among incentive program designs. The following chapter shares a classification system that characterizes and describes seven main incentivize design categories:

1. Eligibility
2. Reimbursement determination
3. Program funding
4. Incentivized purchases
5. Incentivized meal types
6. Incentivized child nutrition programs
7. Program size

These components, however seemingly small or nuanced, impact how (1) accessible a program is for SFAs, (2) how much capacity is required for SFAs, department officials, and producers to participate in and coordinate these programs, and (3) to what extent the programs promote local food purchases among various agricultural sectors.

In addition to a categorization structure, this chapter bolsters the design elements with insight into motivations, challenges, unintended consequences, design changes over time, and lessons learned from implementation. The information presented below was gleaned both from interviews with statewide program officials and nonprofit partners as well as secondary sources. Lists or examples of states with design elements are not intended to be exhaustive. With the understanding that every context, design, and implementation of each program is unique, these stories can provide important insight for Farm to School incentive program designers and authorizing agencies of Farm to School incentives who may look for models to adapt to their contexts. Please note that the COVID-19 pandemic caused disruptions in every state's incentive program. Therefore, current information on program outcomes, especially in newer programs, should be considered with these caveats.

Figure 4 characterizes each state's incentive policy in relation to three key design attributes. These include how SFAs become eligible for the subsidy, the reimbursement determination each state is using, and how the programs are funded.

Eligibility

Eligibility describes how SFAs can participate in their state's incentive program. Column 1 of Figure 4 illustrates three main categories of eligibility: grant application, universal eligibility, and performance-based. Of the 15 states with incentive programs, 47% have grant applications, 33% have universal eligibility, and only 20% are performance-based.

1. Grant Applications

Grant applications are the most popular method for eligibility determination. In this system, SFAs must first submit an application demonstrating their intent to participate in the program to be considered for funding. This is typically accompanied by a proposal or other narrative. The level of competitiveness among grant applicants depends on the number of applicants and the available funding. Some states have grant applications as smaller subsets of their overall programs. For example, Oregon has both competitive and non-

Figure 4. Overview of Program Design Components

State	Eligibility				Reimbursement Determination					Funded	
	Competitive Grant	Universal Eligibility	Performance -based	Comment	Lump-sum (per-meal formula)	Lump-sum (NOT per-meal formula)	Per-meal Reimbursement	Matching	Other	General Fund / Appropriations	Other
Alabama		✓					$0.20		Per component, not meal	✓	
Alaska		✓				✓			Based on ADP and a "cost factor," about $0.14 per meal	✓	
California	✓				$10				Based on per student enrolled, not meal count	✓	
Colorado	✓				$0.05				Based on lunches served in a specific previous year	✓	
District of Columbia		✓					$0.05		Per day, if either lunch or breakfast feature a local component	✓	Previously funded with bag tax
Maine		✓						1:3	Capped at $5,000 per SFA ($5,500 with training)	✓	
Michigan	✓				$0.10		$0.10	1:1	Reimbursed up to $0.10 per meal but must provide a match, up to the cap of their grant award	✓	Combination with school aid
Minnesota	✓				$0.10			1:1	Based on previous breakfast and lunch meals served in set month	✓	Part of AGRI (general funds)
New Mexico	✓					✓			Reimbursed for purchases up to this amount	✓	
New York			✓				$0.19		Must reach 30% local procurement	✓	
Oregon	✓*	✓		* Competitive grant once CNPs spend original funds	$0.08					✓	
Pennsylvania	✓					✓			Grant awards are up to $15,000 per applicant	✓	Part of PA Farm Bill
Utah			✓		N/A				Depending on their local %, SFAs are reimbursed for each lunch meal served during the previous SY		Liquor tax
Vermont		✓*	✓	* Baseline grant only	$0.15-$0.25				Depending on their local %, SFAs are reimbursed for each lunch meal served during the previous SY	✓	
Washington	✓				$0.12*				* Applicants can request $20,000 if formula is under this amount		COVID-19 Relief funds

Source: Figure created by author in July 2022. Sources listed in Appendix C.

competitive programs, in which all SFAs qualify for the incentive, but if they exhaust their original allocation, they can apply through a competitive grant process for additional funds.

Most state grant programs are offered for one-year terms. However, California and Oregon both offer their grant reimbursements in two-year cycles. This allows grantees more time to develop Farm to School programs, forge relationships with producers, and appropriately spend grant funds. Oregon and California also have multiple grant tracks that award applicants funding for different purposes that all promote Farm to School. Oregon's program has five grant tracks: (1) a noncompetitive procurement program, (2) a competitive procurement program, (3) an educational program (competitive), (4) a technical assistance program (competitive), and (5) Farm to CNP evaluation program. California's program has four tracks: (1) a K-12 procurement and education grant, (2) a partnership grant, (3) an early care and education grant, and (4) a producer grant. These states established multiple tracks as they recognized that their applicants had divergent needs to strengthen their Farm to School programs, and wanted to earmark specific buckets of funding for these various needs.

Several states, including California, have chosen a competitive application process simply because their program does not have enough funding for all students in their state, and they want their funding to be impactful for a smaller subset of SFAs. Others, such as Minnesota, believe that the grant applications process increases the quality and scope of their funded projects. One benefit to incorporating a grant program is that there is a set process in which applicants read RFAs, engage with the program as interested participants, and sign contracts understanding the requirements of a program. Grant applications can encourage (or even require, such as California, Pennsylvania, New Mexico, Vermont, and Washington) SFAs to develop procurement plans. Informants from some of these states believe these measures may reduce confusion among participants throughout their participation in the program. Other informants view the procurement plans perfunctorily, or simply as budgets that are traditionally required in state grant application processes.

> *"Knowing that we have X amount of dollars and you need to have a fairly decent proposal submitted in order to get these funds... It makes our jobs easier, knowing that we're going to be working with grantees who have a well-designed plan or good intentions, at least."*

A major benefit of a grant program mechanism is that states can list program goals and create scoring preferences that can prioritize applicants whose requests align with those goals. Grant programs have aligned with common Farm to School goals in the following ways.

Economic Development

Prioritizing high-impact projects

Pennsylvania gives preference in scoring criteria to applicants that have larger enrollment and applicants who have a high potential to increase markets for producers.

Washington gives preference to applicants new to purchasing local foods and applicants that are specific about activities they will use to incorporate new local foods.

Education

Including education in scoring criteria

10% of grant scoring criteria in California's grant program include effective strong partnerships with a focus on in-school partnerships - culinary programs, school gardens, and Future Farmers of America (FFA) clubs. Colorado, Minnesota, New Mexico, Pennsylvania, and Washington ask SFAs to explain how they propose to promote local food and participate in educational activities, and score applications accordingly.

Environment

Prioritizing environmentally-friendly agricultural practices

California gives preference points when scoring grant proposals to applicants that have plans to purchase from producers that have climate-smart agricultural practices, as defined by the USDA and California Department of Food and Agriculture. This can include producers that are certified organic or transitioning to certified organic.

Equity & Community Engagement

Prioritizing high-need communities

Several states such as California, Colorado, Washington, Pennsylvania, and New Mexico prioritize communities with higher needs in their grant scoring criteria. These needs may include qualitative measures such as the scarcity of fresh produce or quantitative indicators such as a high percentage of students eligible for free and reduced-price meals. California considers whether a community is vulnerable to the impacts of climate change when assessing needs. Colorado's program works to ensure diversity in geographic location and district pupil count.

Prioritizing cultural foods

Washington and California provide higher scores to applicants who share their plans to incorporate culturally relevant foods.

Prioritizing high-need farmers

States such as California, Minnesota, Washington, and Oregon (in their competitive grant program) give priority to applicants that pledge to purchase from producers from historically underserved communities including groups such as women, veterans, persons with disabilities, Native American/Alaskan Native, communities of color, young and beginning farmers, and LGBTQ+ farmers.

Prioritizing applicants that are engaged in their communities

California gives a high preference to applicants that show evidence of strong, effective partnerships. Minnesota requires at least one letter from a producer and/or distributor and up to two letters from community partners in their grant application. Their application form also asks how the applicant has engaged the community in developing their Farm to School program.

Public Health

Including nutritional activities and promotion in scoring criteria

Colorado's grant application asks SFAs to explain how they promote local food and participate in nutritional activities. New Mexico's grant application form asks how local food procurement is adopted into each sponsor's wellness policy. Pennsylvania's scoring criteria prioritize applicants who have more potential to increase nutritional knowledge among students.

Placing priority on unprocessed and minimally processed foods

Though Colorado allows processed foods as allowable costs, there is a cap (25%) on how much of an SFA's grant award can be spent on processed products. Applicants in Minnesota are encouraged to consider a wide range of Minnesota food and agricultural products for procurement under this grant. Minnesota places priority on reimbursements for products that are unprocessed or minimally processed and retain their inherent character.

Challenges with Grant Programs

Grant applications can present equity issues, as under-resourced SFAs may not have the additional capacity needed to apply for grants. Additionally, a grant structure may require more administrative oversight as requesting grant reimbursement is typically a different process from an SFA's regular meal claim reimbursement. Coordinators in Oregon shared that the application timeline for their grant did not allow applicants from tribal nations adequate time to get approval from their councils to apply.

Some states, such as California and Michigan, have a short word count in application materials that is intended to be helpful for under-resourced schools. As mentioned above, states have also attempted to remedy these concerns by incorporating equity into scoring criteria. Other states, such as Michigan, are adamant in their messaging that there are no negative repercussions for SFAs that are awarded funding but do not spend their entire awards. Pennsylvania's scoring criteria (which were written in their establishing legislation) required the department to prioritize applicants that have already been awarded their Farm to School grant. Recognizing the equity issues in this particular criteria, department officials have given this required criteria a small percentage (2% weight) in their overall scorecard so as not to exclude new applicants.

> *"[Grant programs are] definitely inequitable. So then it goes to the scorecard. How can you create a scorecard that brings equity back into it? If 70% of the points are based on equity measures, basically, then we're still going to have a more equitable outcome. It still doesn't ease the access to apply and expertise that it takes to write a grant... but at least we're scoring those things in prioritizing those."*

Non-compliance

If grant awards are distributed in full up-front, rather than as a reimbursement for purchases, it is more difficult to ensure compliance among grantees. Grant awards typically represent the maximum amount that an SFA will be reimbursed for local food after it has been purchased. However, Colorado's grant program provides the total grant award to SFAs in one transaction before any purchases are made. At the time of the writing of this document, several grantees were struggling to understand the allowable costs of the program and were not submitting proper documentation to be in compliance with their grant contract.

Once grantees were given technical assistance on what products meet Colorado grown, value-added and minimally processed, they were able to successfully spend their grant funds and meet grant requirements.

Awkward timing

Several states with grant programs expressed confusion about what would be an ideal timeline for their grant programs. For example, the question of when to release their RFA such that it gives SFAs adequate time to prepare for and plan their Farm to School programs. Appropriately timed grant programs can allow SFAs to create forward contracts with producers. Some grant programs are dependent on when their programs are awarded funding, which can shift grant cycle timelines, making them less ideal.

> *"So the other major thing that we're looking for is right now the funding is only available so that when you get the award you only have that fiscal year to use the money. That's super problematic because you're dealing with the school year and the way that really works and the growing season, which is contrary to the school year, and our fiscal year goes from July 1 to June 30."*

2. Universal Eligibility

The second most popular eligibility category is universal eligibility, in which every SFA will receive funding as long as they follow the program's structure for reimbursement. For example, all SFAs in Alaska were emailed their lump-sum awards at the beginning of each school year. SFAs in Maine can simply fill out a form with additional documentation to receive reimbursement, up to a set cap amount. SFAs in Vermont must demonstrate an interest in the program by submitting an application, though the intention is that all who apply for the program will be awarded funds. Oregon automatically enrolls SFAs into its grant program.

Allowing all schools to receive reimbursement is a mechanism intended to reduce barriers to participation and increase the likelihood that SFAs in underserved communities will serve local food in their cafeterias. Giombi et al. (2020) explored what happened when the Oregon Department of Education changed the state's local food incentive program structure and added a noncompetitive component. They found that changing to a universal eligibility scheme increased the amount of BIPOC and low-income students that benefitted from local food and increased the average amount of fruit and vegetables purchased from low-income schools.

Several states with universal eligibility reported that SFAs in their state required extensive education about the program and often were confused about what products were eligible for reimbursement. This may be a factor in allowing all SFAs to participate in a program, whereas in a grant program, SFAs must go through an additional education and application process before participation.

3. Performance-Based Programs

The least common eligibility scheme is a performance-based system in which SFAs will receive funding retroactively only if they achieve a specific criterion. For example, SFAs in New York will receive funding only if they reach a certain percentage (30%) of local food procurement in the previous school year. The benefits of incorporating a performance-based scheme are that they allow states to easily brand and market the impact that their program has on the agricultural sector.

A performance-based sliding scale

Utah and Vermont have attempted to create pathways to enter their programs with low or no risk by incorporating a sliding scale version of performance-baed eligibility. For example, Vermont gives an additional 15 cent per-meal subsidy to SFAs that purchase between 15-19.99% local food, 20 cents to SFAs that purchase 20-24.99% local food, and 25 cents to SFAs that purchase more than 25% local food. The sliding scale mechanism also aims to encourage SFAs to extend purchases beyond a particular baseline percentage of local food procurement. Vermont and Utah's programs were implemented in the past year, and it is unclear if the subsidy given to the SFAs is equal to the additional local food purchases they inspired. However, the sentiment of encouraging more local purchases is embedded in the program design.

In reference to a sliding scale:
"We wanted everybody to have the motivation to do more, so that they can increase what they're doing year over year."

Potential equity issues with performance-based programs

The concept of providing an incentive program that awards schools for their successes rather than providing adequate funding to under-resourced districts poses an equity issue within the public school sector. Performance-based programs retroactively reimburse SFAs one year after they purchase local foods, which means that not all SFAs have the ability to spend additional funds on more expensive local products if they did not have cash-on-hand. Logically, this incentive design will tend to work in districts that have existing resources (administrative, excess funds, etc.), as participants need to front the costs and other resources without the guarantee of being reimbursed. While students in New York who benefitted from the program were lower-income than the state average, 83% of the districts that qualified for the program had a student population that was over 90% white (Bilinski et al., 2022). This was incongruent with the demographics of New York State as a whole. Of the 144,447 students enrolled in the qualifying districts, 77% were white, but 43% of all New York State students identify as white.

Additionally, these programs present even greater equity issues for schools that do not reach the local food incentive threshold. If an SFA in New York spends 29% of their lunch budget on local food

but does not reach the 30% benchmark, they will not be reimbursed at all for their local food purchases. Some SFAs cannot take the financial risk to participate in the program and this high threshold may disincentivize SFAs in lower-income areas from purchasing local food. Vermont and Utah both have incorporated a sliding scale structure that may work to remedy these concerns. The sliding scale method can attempt to build equity back into the design, as beginner SFAs with less capacity or experience can enter the program and are given reimbursement at a lower local food percentage threshold. Sliding scale programs are not "all or nothing."

Reimbursement Determination

The 15 state policies vary regarding how qualifying SFAs are reimbursed for program-related expenditures. Column 2 in Figure 4 illustrates four categories of reimbursement: a lump-sum award derived from a per-meal formula, a lump-sum award not derived from a per-meal formula, a per-meal reimbursement, and matching.

1. Lump-sum awards that are derived from a per-meal formula

This is the most common reimbursement model employed by states. In this model, SFAs are notified that they are entitled to a maximum award amount before they make local food purchases. This award is calculated by multiplying a predetermined number of meals (either meals SFAs served in a designated time frame, average daily participation in school lunch (or breakfast), or student enrollment) by a specific dollar amount set by the regulating authority. Typically, throughout the year, SFAs purchase eligible local products and submit invoices periodically for reimbursement. According to one informant, the benefit of providing lump-sum awards based on a per-meal formula is that this method is simply calculated and scalable, increasing with the size of the SFA. Another informant expressed that per-meal formulas provide an incentive for SFAs to increase meal participation in order to increase their total incentive award size.

> *"It helps them with their planning... To figure out like, 'oh we're eligible for $20,000. So what can we do with what we were awarded?'"*

A challenge with this reimbursement determination method is that it may disincentivize small SFAs from participating. To circumvent this challenge, several states such as California and Washington have created artificial minimums for applicants. For example, Washington calculates its per-meal formula based on the number of lunches served in a particular month, and multiplies that number by 12 cents a meal and again by nine months. However, applicants in Washington that served less than 10,000 lunches in that month can request up to $20,000 in funding regardless of the number produced using this per-meal formula.

> *"It wasn't [enough] money to make it worth it to apply. If you're going to spend the time it takes to fill out a grant application, the time it takes to manage a grant application to do the reporting and all the administrative work that comes with it."*

2. Lump-sum awards not derived from a per-meal formula

Alaska, New Mexico, and Pennsylvania are examples of states that provide incentives without strictly adhering to a per-meal or enrollment formula. Alaska calculates its reimbursement amount on both enrollment and a "cost factor," which likely means an adjusted rate to offset how expensive food is in different parts of Alaska. Grant awards in New Mexico are based on three factors: enrollment size, whether the applicant has participated in the past, and if they have participated, their track record for utilizing their grant award. New Mexico adopted an allocation system based on the three criteria after they found that applicants consistently overestimated and underused their awards. Pennsylvania's incentive program is another outlier as it functionally combines a general capacity-building grant program for Farm to School while encouraging grant funds to be spent on local ingredients. Pennsylvania allows applicants to request grant funds up to $15,000 annually, regardless of their enrollment or lunch participation. The benefit of providing lump-sum awards without a per-meal formula is that they do not constrain SFAs who may have visions for larger, more transformative projects, even if they are smaller-sized applicants.

> *"We're tired of nickel-and-diming Farm to School. Because everyone asks 'well, how much does it cost?' If you give one district five cents 4,000 times that doesn't actually tell you how much [running a program] costs, it just tells you how much you could do with that small budget."*

Several informants expressed that they prefer the lump-sum model (either based on a per-meal formula or not based on a per-meal formula) to a per-meal reimbursement model (mentioned below) because they believe that reimbursing dollar amounts from invoices up to a predetermined maximum amount is easier than counting meals or tracking reimbursable components.

3. Per-meal reimbursement

SFAs are reimbursed based on the number of meals they serve in a per-meal model. This model is used in Alabama, New York, Washington, D.C., and Michigan, and was less prevalent than lump-sum awards. For example, SFAs in New York and Washington, D.C. are reimbursed through their regular claims process and there is no cap on how much they can get reimbursed. SFAs in Alabama are capped at a predetermined amount (more detail in the "Program Size" section below). A per-meal reimbursement structure encourages applicants to serve more meals to receive additional reimbursement.

Per-meal components vs. per-meal

Washington, D.C. reimburses SFAs per day if either a lunch or breakfast meal featured a local food component, rather than per meal. Alabama reimburses SFAs per meal component, rather than per meal. In its first year, an SFA in Alabama used a small amount of local food in a meal and got a full reimbursement for it. Programs have circumvented this by requiring an entire food component be locally produced, rather than have any amount of local food in a meal served. These two states made this decision because they wanted to ensure that, if they were reimbursing an SFA on a per-meal basis, the applicant had to be featuring local food on their lunch tray, rather than including it as a garnish.

4. Matching

Matching reimbursement models were the least prevalent among states. They require SFAs to purchase a specific amount of local food from their budgets as a precondition for receiving state funding. Michigan and Minnesota require a 1:1 match, whereas Maine employs a 1:3 matching scheme. Minnesota and Maine's structures are framed as less of a match and more of a ***rebate***, in which SFAs submit receipts of payment and are reimbursed for 33% (Maine) or 50% (Minnesota) of the cost of the purchase. All matching state programs have a designated annual cap for total reimbursements. New Mexico does not require a match, but applicants who pledge a match in their application are prioritized in the selection process. While not included as part of this dataset, New Hampshire, which is not one of the programs included in the study as its program is not yet established, has introduced a bill that would create an incentive program with a sliding match structure. SFAs in New Hampshire would be reimbursed with a higher match amount for food produced more locally. For more information, see the "Defining Local" section.

> *"We don't keep track of any meal count... We have a summary page that they submit with their receipts that shows that total purchases total purchase amount and then divide by three and then that's the total. It's really that simple, thankfully."*

Economic development potential

One easy way to frame the economic development value of a program is to state affirmatively that the investment in a program measurably increases purchases from local farms. Michigan, Minnesota, and Maine's programs can prove that schools are spending more money on local food than they are receiving in subsidies. While this rhetoric may imply economic development, a matching structure without additional measures may simply subsidize current local procurement, rather than inspire new local food purchases.

Potential equity issues

Matching schemes may also raise questions of equity based on district income level; Only districts with the means to provide a match can participate.

> *"Some [schools] look at a grant that requires matching funds and just close the door... They're like, 'we don't have cash.'"*

Reimbursement Determination Variations

Often, states employ slight variations to these categories, which are denoted in the "other" column in Figure 4. For example, Minnesota employs both a lump-sum grant award based on meal count and matching, in which SFAs were entitled to funds up to their award, but also must match their award with additional local food purchased from their nonprofit budget accounts. Michigan is another outlier in this category, as the state takes multiple approaches to reimburse SFAs. Applicants in Michigan must apply for the grant opportunity

to demonstrate interest. Applicants in Michigan are asked how much they would like to receive in funding, and grant awards are made with consideration to the amount requested by the applying SFA. However, all grant awards in Michigan use a per-meal calculation to determine the maximum grant an applicant can receive. Once awarded, grantees purchase Michigan-grown fruits, vegetables, and legumes and are awarded up to 10 cents per meal. They also must submit meal count data and demonstrate that they mirrored their per-meal reimbursement with a 1:1 match from purchases on qualifying local ingredients.

Program Funding

More than 70% of these programs are funded through general budget appropriations from the state legislature. However, there were some unique avenues used to fund these programs. Utah's program is funded by a 10% tax on liquor that creates a large pool of continuous funds for their education department. Michigan's program is funded both by general funds and funds specific to school aid. Washington's program was initially funded by a federal COVID-19 relief package, but will continue to be funded by the state in future years. Two states, Pennsylvania and Minnesota, had programs that were established and funded as smaller parts of larger agricultural development efforts. Representatives from these two states felt that their incentives were more easily established in the context of these larger agricultural programs.

Many informants focused on challenges due to the temporal nature of their program's funding, rather than the source of its funding. A majority of programs were either established as pilot programs or established with one-time appropriations. Often these programs would are renewed through their state's annual or biennial budget cycles. The lack of permanence has disincentivized some producers and SFAs to participate in the program. SFAs are reluctant to forge new relationships with producers, learn new procurement techniques, and dramatically shift their procurement practices for a program that will only last one to two years.

"Extreme episodic programs are so challenging for schools. It minimizes the overall impact you can have."

"Right now, we have received one-time funding… So this is a question that needs to get voted on each year, right now, which advocates are hoping to change. For schools, it's very difficult to start these types of programs. It's a big shift in processing and purchasing. It's just a lot of energy to move that ship into a different direction, and without guaranteed funding, [this program] is a tough sell for some schools."

Figure 5: Overview of Incentivized Purchases

State	Incentivized Purchases										
	Primary Categories							Secondary Categories			Comment
	Fresh Fruits & Vegetables	Proteins	Grains	Minimally Processed Items	Processed Items	Fluid Milk	Value-added Dairy	School garden produce	Non-food items	DoD / FFVP / PILOT	
Alabama	✓	✓	✓	✓	✓	✓	✓	✓			Processed items must consist of 51% local products.
Alaska	✓	✓	✓	✓	✓	✓	✓	N/A	✓		Minimally processed items may be processed out of state. Transportation vendors are allowed costs.
California	✓	✓	✓	✓	✓*		✓	✓	✓		*Only whole grain products that are 100% grown, milled, processed, and manufactured in CA are allowed. Awards can be used for education, labor, infrastructure, equipment, etc.
Colorado	✓	✓	✓	✓	✓		✓	✓	✓		Processed items qualify if they are Colorado Grown or meet the designation. Delivery / transportation costs are also allowed.
District of Columbia	✓	✓	✓	✓			✓	✓			Takes a regional approach to local. *Bread is eligible for reimbursement if assembled in local zone.
Maine	✓	✓	✓	✓			✓	✓			
Michigan	✓			✓				✓		✓	Includes dried beans. Local items purchased through federal programs count as match.
Minnesota	✓	✓	✓	✓			✓		✓		Can request up to $25,000 for equipment, but must provide match for purchases.
New Mexico	✓		✓	✓				✓			
New York	✓	✓	✓	✓	✓	✓	✓	✓	*		Processed items be 51% local products. *Performance-based: incentive reward can be spent on any SFA expense.
Oregon	✓	✓	✓	✓	✓		✓	✓	✓		Up to 25% of funds can be used on non-food items. There is no local ingredient threshold requirement for processed foods.
Pennsylvania	✓	✓	✓	✓	N/A*	✓	✓	✓	✓		* The Dept. has not yet placed any limitation on how foods can be used.
Utah	✓	✓	✓	✓		✓	✓	✓	*		*Performance-based: incentive reward can be spent on any SFA expense.
Vermont	✓	✓	✓	✓	✓		✓		*		Uses state established definition of local. *Performance-based: incentive reward can be spent on any SFA expense.
Washington	✓	✓	✓	✓	✓		✓	✓	✓		Processed items must consist of 51% local products by weight or volume. Up to 25% of funds can be non-food costs.

✓ Color denotes products that have a nuanced local definition or do not have a required local ingredient threshold.

Source: Figure created by author in July 2022.
Data sources listed in Appendix C.

Incentivized Purchases

A major difference between programs can be found in what they do or do not incentivize with taxpayer dollars. Figure 5 displays a breakdown of which foods were incentivized in the 15 state incentives. This is particularly important because these decisions dictate which parts of the agricultural sector are or are not benefiting from this program. These decisions impact the ease with which SFAs can participate in the program due to seasonality or availability of local products. The primary categories of local food in this study include fresh fruits and vegetables, proteins (both animal and plant-based), grains, minimally processed items, processed items, fluid milk; and value-added dairy. However, other "secondary categories" are also incentivized by some of these programs. These include non-food items (such as equipment, staff time, transportation, and labor); school garden produce; produce offered through federal programs such as the DoD Fruit and Vegetable Program or the USDA Unprocessed Fruit and Vegetable Pilot Program to qualify for their incentive.

Fresh and minimally processed fruits and vegetables are incentivized by all the incentive programs. Grains are another largely popular incentivized food among the programs, with all but one state incentivizing grain. All but two states (87%) incentivize value-added dairy (including items such as cheese, sour cream, and yogurt) and local proteins. The items least likely to be incentivized by these programs were processed items (8 states, 53%) and fluid milk (5 states, 33%). Michigan and New Mexico have the most restrictive state programs in regard to the primary categories and do not subsidize purchases of dairy, proteins, or processed products. Both states are having early discussions about expanding into more food groups.

Defining "Local" - It's Complicated

States made varying decisions on what counts as "local" (see the Farm to School State Incentive Program Compendium for more details). As a general rule, all states that unprocessed or minimally processed products are grown in their state. Washington, D.C. is an outlier and uses a regional approach to define "local" because of its small geographic area, large population, and the small number of farms housed within the District of Columbia's boundaries. New Hampshire recently introduced a bill to initiate an incentive program that would employ a regional approach to local, giving more of an incentive to New Hampshire products (a 1:3 match), but still giving some incentive for products purchased in New England (a 1:6 match) (NOFA-NH, n.d.).

Defining locally processed products

There is much variation between states with respect to how they define locally processed products. For some states such as Alabama, New York, and Washington, processed products must contain 51% ingredients that were grown, harvested, or raised in their state. Colorado, Oregon, and Vermont incentivize processed products that do not have a required local ingredient threshold to qualify for the subsidy. Washington, D.C. allows bread in which the dough was assembled, proofed, and baked at a bakery in participating states, and California allows only majority-whole grain products that are 100% grown, milled, processed, and manufactured in California. Notably, SFAs in Alaska's now defunct incentive program requested that bottled water be an eligible cost because of consistent flooding, lack of potable water, and the fact that they were required to provide water as part of a reimbursable meal. Bottled water, however, was never incentivized by the authorizing department.

Using pre-existing definitions for locally processed products

Several states base their definition of local from another source or piggyback on local promotion programs. For example, Vermont uses the local-to-Vermont definition prescribed by the legislature: Raw products must come from VT; Processed foods must contain at least 50% Vermont raw products and be processed in VT; processed products that have ingredients that are hard to produce in VT must be manufactured by a company that is headquartered in VT. Colorado's authorizing legislation states that minimally processed products or value-added processed products must meet the standards for the Colorado Proud designation, established by the Department of Agriculture, even if the product is not designated Colorado Proud. This has strengthened interagency partnerships and provided additional support structures for SFAs (see Chapter 5). However, incorporating these definitions has created issues with enforcement.

Colorado: Colorado's bill specified that it must use the Colorado Proud definition of local, even though there is not a clear definition of what kinds of products receive that designation. This made it possible for SFAs to purchase Frito-Lay chips because the company has manufacturing plants in the state and has registered in the Colorado Proud program.

New York: New York's NY Grown & Certified program was designed for producers to sell to retail markets, and is not product-specific. Therefore, producers had to identify which products they were selling were local, as not all of their products may be made from 51% local ingredients. Additional education had to be given to SFAs in New York to check if their specific product was approved for the program, rather than just the company.

Vermont: Vermont used the legislative definition of local, which has a subjective definition of what foods can be "not available" or "not regularly produced" in the state in order to qualify under the "unique food" category. The Education Department does not want responsibility for determining what foods fall into this legislative definition.

Defining local can disincentivize existing, local purchases

Some programs disincentivized existing local purchases and relationships with farms in neighboring states among border communities because they limited their definition of "local" to within their state's borders. This issue is occasionally present in at least a third of states including but not limited to Minnesota, Utah, Vermont, and Washington.

> *"I think it makes sense to support the regional foodshed. If we're not going to reimburse you because the farm was located 10 miles from [our border], but we are going to reimburse you for products that are grown 500 miles away in another corner of [the] state, that does not really make sense from a local food systems perspective."*

> *"Obviously there are a lot of schools located near the border… They think they're purchasing local products from the local farmers market without realizing that that grower actually their farm is across the river [the next state]… There have been a few instances where … we can't reimburse [a claim] for them."*

Factors to consider about allowable food types

Informants described factors to consider when discussing how their allowable costs and definition of local impacts their programs. These factors are mentioned below.

Prioritizing healthy eating

The decision to limit incentivized food to only fresh and unprocessed categories can signal a state's priority to promote healthier, fresh, or more nutritious foods.

> *"I don't think anybody wants [processed foods to be included]… I think we're trying to figure out where the line is on minimally processed foods… We want nutrient-dense foods for kids and we want to encourage scratch cooking in schools, but we don't expect schools to be making their own mozzarella."*

Prioritizing the local economy

States such as Alabama and New York incentivize all food types in the primary food category. States may make this decision as a means to grow the local agribusiness economy. For example, this decision may allow SFAs in Oregon to purchase products produced by food manufacturers that create jobs in their area.

> *"[This program has] been successful because [we] have a big tent… The [openness] is the economic component. We have partners in [our state] who are packaging those foods. The economic piece of this program is substantial. If [SFAs]are buying tortilla chips from other states and have switched over to [a local manufacturer in our state], that is a plus."*

Prioritizing small and mid-sized producers

Several informants shared a publicly unnamed intention for their incentive program to prioritize purchases from small and mid-sized farms. This was coupled with a fear that program funds would be used towards corporate producers and broad-line distributors. Informants with this fear felt that restricting their programs to not allow processed products would keep their program from mainly benefiting corporations in their state. Thus far, there have been no reports or materials on what kind of producers are benefitting from

incentive programs. At least two states have prioritized small producers explicitly in their program's designs. Washington placed priority on proposals that benefit small and mid-sized producers in their grant scoring criteria. Maine originally limited all purchases to be made directly from farmers, though this requirement has recently changed because it was too limiting.

> *"...We're trying to really ask people to advance and diversify, so we want to see people not only purchase more food, like more quantity, but also from a more diverse set of producers and a more diverse set of products. [That has] been some of our main focus, is trying to get those small farmers uplifted in the system."*

Subsidizing unhealthy foods

One potential downside to allowing processed items to be part of an incentive program is that this decision can lead to subsidizing unhealthy foods. For example, food items traditionally viewed as "junk foods" such as hot dogs, ice cream, potato chips, and french fries were also subsidized by New York's local food incentive program (Bilinski et al., 2022) and Frito-Lay chips are being subsidized by Colorado's incentive program.

> *"If you start prescribing who can play and who can't... then you decide who is a winner and who is a loser. Who is going to be the food sheriff? Who is going to draw the line? You have to be broad... you have to take the bad with the good... you can't be prescriptive."*

The debate over fluid milk

Very few states incentivize local procurement of fluid milk. Most states did not include fluid milk in their programs because they believed their schools were already regularly serving locally produced fluid milk. They deduced that including fluid milk purchases would likely not increase revenue for their agricultural sector, and rather, would subsidize purchases that were already being made. This is not an issue in Alabama, as there is very little milk production in the state. States that include fluid milk are Alabama, Alaska, New York, Pennsylvania, and Utah.

> *"Because [we are] such a strong dairy state, most schools are purchasing [milk] local. [Our program is] an incentive to purchase other local items. So [value-added] dairy products are eligible, but almost all of the milk that is purchased for school programs is local already."*

Utah's program, such as New York's, is based on achieving a specific percentage of funds spent on local food. SFAs who qualified for New York's program in SY 19-20 spent 48% of their total local purchases on fluid milk, and only SFAs that procured local fluid milk were able to reach the 30% threshold in order to receive the additional subsidy (Bilinski et al., 2022). Utah decided to include fluid milk as an incentivized purchase to make reporting easier for SFAs. This way, SFAs would not need to total their fluid milk purchases and subtract them from their total food purchases to determine their local purchasing threshold. However, Utah's program incorporates a sliding scale threshold for reimbursement, and their coordinator believes they can set the reimbursement threshold and sliding scale funds to incentivize SFAs to purchase beyond the status quo.

Prioritizing ease of SFA procurement

Some informants explained their state's decision to limit or expand the types of allowable costs based on the perceived ease with which SFAs could procure local products. Seasonality is one particular challenge for SFAs, as noted in the literature review. However, all states allow minimally processed fruits and vegetables, which can allow for purchases of frozen items.

Procurement: Maine's Local Foods Fund was historically underutilized by SFAs. The results from a recent SFA survey conducted by a partner nonprofit organization, Full Plates Full Potential, provided specific recommendations for the Education Department, which then made drastic changes to the program's design. The Department expanded the kinds of local ingredients that qualify (formerly only produce and minimally processed produce), where schools can purchase local products (formerly direct from a farmer, a farmers' cooperative, or a local food hub and now adding a local food processor or food service distributor in the state), and the definition of "minimally processed foods" to include refrigerating and freezing items. While these changes were implemented for the 21-22 SY, Maine's program coordinator reported that these changes, in addition to growing momentum and the support of a dedicated full-time coordinator at the state level, have significantly increased SFA participation in the program.

SFA understanding of allowable purchases: A common challenge is that SFAs are often confused at what products fit the requirements set forth by the state. Multiple informants believe that limiting the kinds of available foods that qualify in their program helps reduce confusion among SFAs. For example, it is easier to understand whether a tomato is local, but harder for SFAs to verify if tomato sauce made in their state was produced in accordance to their state's ingredient thresholds for local products. Other informants believe that having a larger scope for product eligibility and not providing a required local-ingredient threshold on processed products minimizes confusion among SFAs.

> *"We have a lot of food-based businesses and big corporations based out of [out state]. For example, we have run into this with Gold Medal flours. The [SFAs] think they are purchasing a local product because it's [based in our state], but actually they're not purchasing grains that were grown [here] to make that flour."*

Verification of purchases: The way states verify local purchases varies greatly. The methods ranged from not verifying purchases at all, to having the state name next to the product, to requiring farm-level data for reimbursement. For processed products, many states require either a product formulation statement or other attestation from the manufacturer that states the products are local. Multiple informants shared that they believed limiting the kinds of foods incentivized by their program helped minimize confusion and paperwork on both the SFA and state agency side.

Secondary Categories

Most state incentives allow nontraditional purchases beyond foods procured by vendors as part of their programs. Secondary categories observed during this process include school garden produce, non-food items (such as equipment, staff time, transportation, and labor); and produce offered through federal programs. Allowing school garden purchases can align with education: A vast majority of states (12 of 14 for which there are data) allow school garden produce to be purchased for their programs. When SFAs purchase produce from a school garden, this generates revenue that can help offset the cost of operating a school garden, thus making garden-based education more economically sustainable. Incentivizing SFAs to procure products from a school garden can also strengthen connections between the classroom and cafeteria.

> *"They can [buy school garden produce with the funds]. It's for the program's sustainability, which is why the answer is yes. [We want them to] grow enough to pay for that teacher, so they don't have to do a fundraiser."*

Federally-subsidized Foods

Only one state, Michigan, allows local foods "purchased" through federally funded programs such as the DoD Fruit and Vegetable Program or the USDA Unprocessed Fruit and Vegetable Pilot Program to qualify for their incentive. When I asked other states why they do not allow these government-subsidized foods in their program, they cited that their issue is that the use of both programs would be "double dipping" by using both federal and state programs to subsidize local food purchases. The retail value of federally subsidized food items can be used as a "match," as in Michigan's match-based program. Therefore, SFAs are not getting federally subsidized foods that are also reimbursed by state funding. For Michigan, this match-style program circumvents the "double dipping" concern and still provides local producers with additional institutional demand.

> *"[The food products] that they're using comes from Michigan so it... made sense to include that. We like keeping the federal money in the state and we like having a multiplier effect based on the federal money."* - Nathan Medina, former Policy Specialist, Groundwork Center for Resilient Communities

Non-Food Items

As mentioned in the literature review, SFAs face a multitude of barriers in addition to cost when they are trying to procure local food. Allowing non-food items allows applicants to build their capacity to implement a successful Farm to School program. More than a third of states allow SFAs to use their funds to purchase non-food items. Minnesota limits non-food item purchases to purchases specifically for equipment. Other states allow SFAs to purchase anything necessary including (but not limited to) labor for administration and processing, equipment, construction costs, marketing materials, and transportation.

Non-food costs were present among programs in all three categories of eligibility (grant application, universal eligibility, and performance-based), but most of the programs that allow these costs have grant program eligibility. States that have implemented a performance-based eligibility scheme also technically fall into this category simply because of the unique structure of this model. SFAs in states with performance-based programs receive the funds by reaching a percentage threshold of local food (for example, minimum 15% local in Vermont). Thus, they can use their retroactive rewards for any expenses (food or non-food) in their nonprofit account.

> *"Farm to school is not just the cafeteria. Kids don't care if it's local broccoli. They don't. They care if it's delicious. They'll care if they grew it, if they saw it in their classroom, or if they're in - if they're engaged in it in some way. Just telling them 'It's [local] broccoli, you should eat it' is not going to do it to a kid that isn't "in." So what we wanted to do was make sure that we're building integrated Farm to School programs."*

One informant whose program allowed non-food costs noted that an applicant in their program applied with the intention to purchase new equipment, and not to procure more local food, which is the original intent of the program. Grant reviewers are able to see this and give lower scores during the competitive application review process. Some states, such as Washington, have a capped percentage of each grant award that applicants can ask for non-food costs. Others, such as Pennsylvania, do not have a capped percentage, as their program is structured as a more general capacity-building Farm to School grant. However, roughly half of all grantee expenses are used to purchase local food items.

"School kitchens are not necessarily equipped to handle 80 pounds of carrots in their raw form. So [we provide] some sort of support for purchasing equipment in some capacity, and I think that that works out well with our current program. We can help schools both purchase the food and get the necessary equipment [to cook it]."

Education

SFAs may also want to use their incentives to purchase educational materials that can create a holistic Farm to School program. California's Track 1 grant can be used for both educational and procurement purposes. Originally, there was a percentage of Oregon's and California's grants that must be used for education and procurement, but this cap has since been dropped. Department officials in California realized that they did not want to be prescriptive about how schools should spend their awards, as some schools have robust agricultural education departments and want to use their awards on local procurement (or vice versa). Oregon also used to have a similar percentage rule on educational expenses but has since created a separate grant track apart from procurement that strictly funds education. For Oregon's 2019-20 and 2020-21 biennial grant cycle, they had 396 reimbursement grant participants and 56 participants for their education track. Minnesota, a state that allows equipment to be purchased as part of its grant program, does not allow marketing and promotional items associated with Farm to School as eligible expenses.

"We wanted to connect the cafeteria to the classroom, especially for experiential learning. So we wanted to create a grant that made sure those connections were happening."

"Don't even do Farm to School if you don't do it right and don't educate."

"[The applicants] have said, 'well, we actually want to spend more on [education] or we're already doing a bunch of procurement, we don't want to expand our procurement right now, but we do want to get our education up to match the level of procurement we're doing.' So we wanted to have more flexibility for that so that schools can do it, which is why we removed those caps."

Incentivized Meals and Child Nutrition Programs

Types of Incentivized Meals

States used their incentive-based programs to subsidize local food purchases served for school lunch, breakfast, after-school snack, supper/dinner service, a la carte, and adult (faculty and staff) meals. Figure 6 illustrates which state programs allow what kinds of meals and meal programs to qualify for their programs. This detail is important; defining which kinds of meals are allowable to qualify determines who will most benefit from the program, and may be a variable in how labor-intensive the reporting requirements are for participating SFAs. A vast majority of programs (80%, not including Alaska due to lack of data) help subsidize local food purchases that are served in all NSLP reimbursable meals (lunch, breakfast, after-school snack, supper/dinner). Minnesota and Washington, D.C. incentivize only breakfast and lunch, and New York only accepts local purchases that were used as part of a reimbursable lunch to count towards an SFAs local food percentage.

There is not necessarily a connection between the kinds of meals incentivized by the program and how award amounts are calculated. Some states, such as Colorado, Washington, D.C., and Washington, base award amounts on meal counts for lunch or lunch and breakfast, but allow SFAs to purchase local items that are served in other meals, such as in after-school snacks or for dinner. This technique allows authorizing agencies to scale award amounts in proportion to SFA enrollment or average daily participation size while allowing SFAs the freedom to serve local food in meals as they see fit. For example, SFAs in Colorado are awarded five cents per lunch served in a specific previous school year but, once awarded, can spend their grant funds on ingredients that are served in any school meal.

> *"[Their] actual reimbursement amount they get is tied to their lunch counts, but they can use [it wherever]. We don't care how they use the local food... It's just not practical to split those things up... It's an honor system."*

The most restrictive program in this category, New York, incentivizes local food in lunch purchases because SFAs only receive an additional subsidy if they procure 30% local ingredients for school lunch. This has created challenges in reporting for SFAs, who typically don't separate purchases made for their school meals. For example, SFAs purchase a case of local apples and serve it both at lunch and breakfast. SFAs in New York's program must detail and track how they are ensuring the local food is served at lunch, rather than in other meals. This restriction ultimately disincentivized some SFAs from serving any local food at meals other than lunch to make tracking simpler, even if they were serving local food in these meals prior to participating in the incentive (Levy & Ruiz-Ramón, 2020).

Figure 6. Overview of Types of Incentivized Meals and Child Nutrition Programs Included in Incentives

State	Types of Incentivized Meals							Types of Child Nutrition Programs					
	Lunch	Breakfast	After School Snack	Supper/Dinner service	A la carte	Adult meals	Comment	NSLP	CACFP	SFSP	SSO	ECE / non-school	Comment
Alabama	✓	✓	✓	✓				✓	✓				
Alaska	✓	N/A	✓	N/A	N/A	N/A		✓	N/A	N/A	N/A	N/A	
California	✓	✓	✓	✓				✓	✓	✓	✓	✓*	*Ran through another grant track
Colorado	✓	✓	✓	✓	✓	✓		✓		✓	✓		
District of Columbia	✓	✓						✓	✓			✓*	*Established under Healthy Tots Act
Maine	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		
Michigan	✓	✓	✓	✓				✓	✓	✓	✓	✓	
Minnesota	✓	✓						✓					
New Mexico	✓	✓	✓	✓				✓	✓		✓	✓*	*Seniors & ECE. Ran through another program.
New York	✓						% local tracked from only lunch purchases	✓			✓		
Oregon	✓	✓	✓	✓				✓	✓	✓	✓	✓	
Pennsylvania	✓	✓	✓	✓	✓	✓	The Dept. has not yet placed any limitation on how foods can be used.	✓	✓	✓	✓	✓*	*No family-based ECE sites at this point
Utah	✓	✓	✓	✓	✓*	✓	* Items purchased specifically for a la carte are not allowed.	✓			✓		Does not have SFSP
Vermont	✓	✓	✓	✓				✓	✓	✓			Not available to independent schools.
Washington	✓	✓	✓	✓				✓	✓		✓	✓	No SFSP because of funding cycle ending in summer.

Source: Figure created by author in July 2022. Data sources listed in Appendix C.

A la carte & Adult Meals

Most state programs do not subsidize a la carte and adult meals. Several informants stated that they did not include these meals in their programs because they wanted to use taxpayer dollars to improve only meals regulated through NSLP. Typically, a la carte foods and adult meals (usually purchased by school staff) are non-essential, non-subsidized meals and SFAs charge higher prices for these meals. One informant cited equity as a reason for not including these meals in the incentive program:

> *"Our intention is that we want to get as much local food as possible onto the plate that's accessible for everyone, which is why we're leaving things [out] like catering and a la carte."*

Several states, such as Colorado, Maine, and Utah, subsidize purchases of foods served in any meal, including a la carte foods and adult (staff) meals. Informants from these states indicated their rationale for the inclusion of these meals was to incentivize serving local food, which would result in increased sales for local producers. Another reason was that including these meals made it easier for SFAs to track how much they spent on local items. One informant pointed out that their agency simply couldn't police where local foods are being served, and thus did not try to regulate it in their program.

Types of Child Nutrition Programs

The decision of which type of child nutrition programs can participate in an incentive will dictate when local food can be purchased (only during the school year vs. summer), and who in the community can participate in the program (K-12 students, pre-K children, and/or adults). All 15 states incentivize reimbursable lunch meals served through NSLP. Child nutrition programs such as Child and Adult Care Food Program (71%), Seamless Summer Operation (71%), and Summer Food Service Program were less likely to be included in these incentive programs. Pennsylvania's grant program is an outlier; While the program will reimburse food purchases made through NSLP, the grant is specific to food purchased for K-5 grade levels.

Expansion to Early Childcare Education

There is a growing effort from states to expand their incentive programs into other sites outside of school to reach a larger and more diverse subset of the population. More than a third of states expanded programs to encompass Early Childcare Education or eldercare feeding sites in addition to K-12 schools. Please note that while ECE and non-school partners may be using CACFP to fund their program, the two categories are separate in Figure 6 because CACFP can also be implemented for school audiences. The separate column is intended to highlight states with programs intentionally benefiting ECE and non-school audiences.

The states that work with these target populations had challenges reaching these participants, and saw that ECE sites had a different set of implementation challenges

than SFAs because of their typical small size and minimal administrative support structure.

"There's just so much variation in ECE. It [can be a] single in-home care with five or ten kids and then there are the multi-site chains."

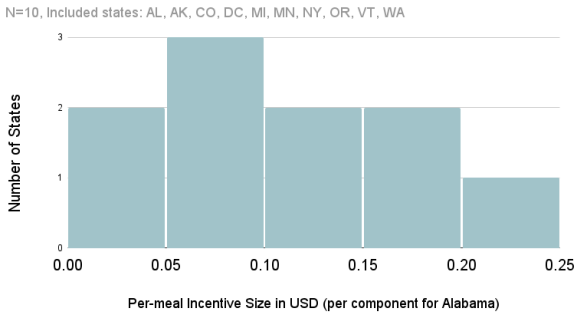
"I think we're still figuring out how to design a program that is accessible to both types of food service operations and child nutrition programs because they can look really, really different."

"They don't have the robust administration that a public school district has. They don't have a business manager, they don't have a superintendent. Some school districts even have a grant writer. ECE does not have this [kind of] administration to turn to support the grant writing process."

Program Size

The state programs vary greatly in the reimbursement or incentive rates they provide to SFAs and their overall budget for the program. These two items may factor into how accessible and desirable an incentive is for an SFA.

Figure 7. Histogram of Per-Meal Incentive Rate



Source: Figure created by author. Data sources listed in Appendix C.

Incentive Rates

Informants often looked to other states to gauge how large they should make their incentive rate. The rate of the per-meal allotment ranged from 5 cents (both Colorado and Washington, D.C.) to 25 cents, which is the top threshold for Vermont's sliding scale program. More than two-thirds (7 of the 10 in this category) provide an additional $0.14 or less per meal and half (5 of the 10 in this category) provide $.10 or less per meal. Figure 7 above represents a histogram of per-meal program rates for 10 states. Additionally, Alabama's program is per-component, rather than per-meal, as discussed above. Utah is not represented on this figure because rates for its program will be decided after its first year of implementation (SY21-22). The remaining four states are not represented in this figure

because they provide awards not based on a per-meal formula or provide a different reimbursement structure, such as California providing $10 per enrolled student.

As discussed in the literature review, purchasing local food is resource intensive. SFAs must fulfill requirements to participate in the program, find local producers and products, purchase ingredients, cook (depending on the food, it may be more resource intensive to prepare), serve local food to students, and comply with tracking requirements. When asked whether SFAs perceived their program as worthwhile to participate in, multiple informants (New York, Michigan, Minnesota, and Washington, D.C.) listed the rate of the incentive as a factor. New York informants listed their high per-meal additional reimbursement of $0.19 as a strength of their program, as it is a large motivational factor for SFAs to become involved. On the other end of the spectrum, small incentives are effective at altering purchasing behavior, but may not promote transformational change or allow for SFAs to serve more than one local meal component at a time. The informant from Washington, D.C. noted that SFAs were not purchasing local proteins because local proteins tended to cost far more than five additional cents per serving, making the incentive not financially feasible for SFAs.

Both Vermont and Michigan stated that they were not sure if SFAs thought that it was worthwhile to apply, but that SFAs participated because of other reasons. SFAs in Michigan may not view 10 cents per meal as enough to participate, but they wanted to be part of the 10 Cents a Meal movement and enjoy the other wraparound services such as networking and promotion that are provided to SFAs.

> *"There's sort of a fellowship that comes with being a 10 Cents a Meal grantee. We share stories...We can help with identifying procurement issues. We've got connections throughout the state, so we know best practices and we run trainings and there really is a community. I think that we want to get people involved and attached to the intangibles that the program has to offer."*
> - Nathan Medina, former Policy Specialist, Groundwork Center for Resilient Communities

Minimum awards for SFAs

As mentioned above, several states such as California and Washington have created artificial minimums for applicants. Applicants in Washington that served less than 10,000 lunches in the month in which the formula is based can request up to $20,000 in funding regardless of their per-meal formula, which is typically 12 cents a meal multiplied by 9 months. This helps make the program more worthwhile for small schools that want to participate.

> *"One of our districts got $400. What are they going to do with $400?"*

Maximum caps on programs

As discussed above in the "per-meal formula" section, many states implement a maximum grant award based on the enrollment or average meal participation of an SFA. States that base their awards on a per-meal formula may also institute a cap such that they have enough funds for multiple applicants. For example, California has a grant award cap of $1 million, which is less $5 million less than what the Los Angeles Unified School District's award would be if they used the per-meal formula. Several states who do not base their awards on a per-meal formula have also implemented maximum caps on their programs, such as $5,500 per SFA in Maine or $20,000 per SFA in Alabama. Without an annual program award cap, one SFA in Alabama claimed a single purchase that was larger than $30,000, which used a significant portion of the program's then $120,000 budget. After that incident, the state implemented the annual cap per SFA. These caps can ensure all SFAs have the opportunity to participate by spreading funding around to more districts and preventing higher-capacity districts from monopolizing program funding.

"[Larger districts] can spend $15,000 in a week, but for our smaller districts, that's more than enough for the school year."

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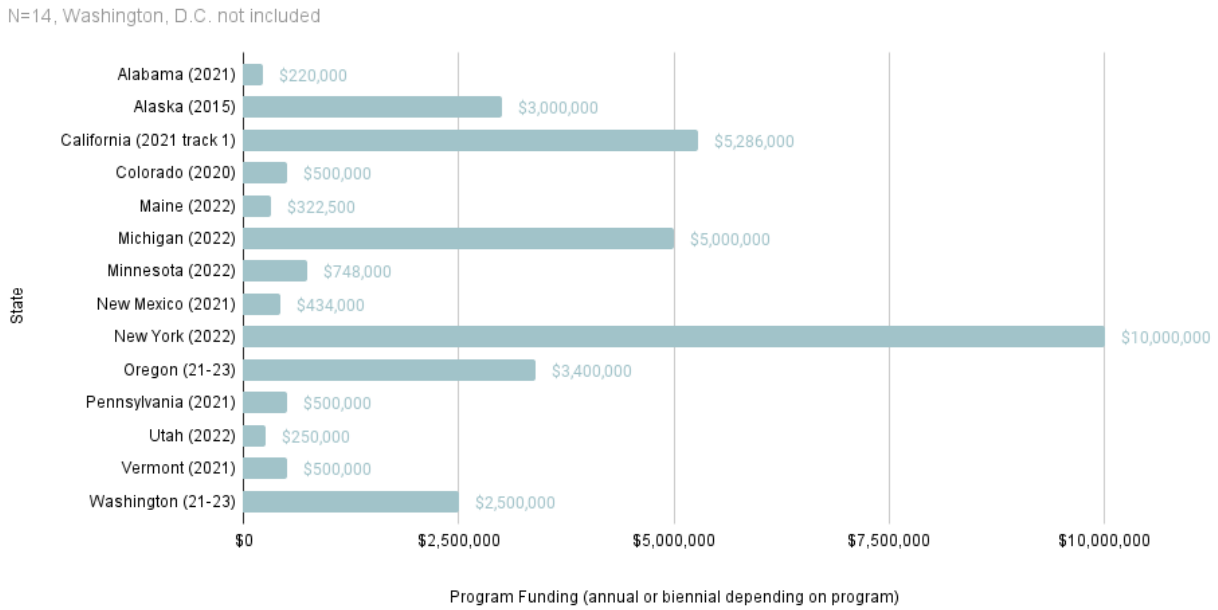
"The really, really large [school districts], if they [were unlimited], they would eat up the whole budget and allotment for the program."

While caps may have their merits, they have also disincentivized larger, more urban school districts from purchasing local foods. For example, the Portland (Maine) School District can easily spend $5,500 on qualifying products, and are no longer incentivized to purchase more products beyond their reimbursement cap. Similarly, Colorado's program limits eligible applicants to those that serve less than 2,150,000 lunch meals in the previous year. This means that larger school districts are not able to apply. Colorado's limitation appears in the legislation because this program was in a pilot stage. Nevertheless, it excluded schools from larger, urban areas such as Jefferson County School District or Denver Public Schools from applying to the program.

Figure 8. Incentive Program Budgets (amounts for last known award)



Source: Figure created by author in July 2022. Data sources listed in Appendix C. Oregon's amount is for noncompetitive track only.

Program Budget Size

The overall program budget funding ranged from $220,000 (Alabama) to $10,000,000 (New York). Figure 8 above demonstrates the funding allotment of 14 state programs with their last known funding amount. However, California's program was awarded $30 million for 2022 and $60 million for 2023. Their award amount of $5.3 million is listed in the chart because this is the last known amount for a reimbursement grant, and California offers other grant tracks. Washington, D.C. is not included as they do not have a specific budget for their program; It is treated as a state program similar to a lunch reimbursement. Slightly more than half of the programs had budgets of less than $1 million, whereas six states had program budgets over $1 million. More than $30 million was allocated for Farm to School procurement incentive programs in 2021. It is important to note that the budgets for these programs fluctuate drastically over a small period, especially when states transition from pilot to permanent programs. For example, Minnesota's program expanded nearly three-fold in its second year due to lobbying efforts and early signs of success. Oregon's program began in 2012 at $200,000 and has grown to $10.2 million for its most recent biennial cycle (2021-22 and 2022-23 SY). Michigan's program received $575,000 in SY 2019-20, but in less than a handful of years, secured $9.3 million for FY 2023.

> *"It was a big deal to get that [increase in] grant funds. It speaks to the success of the previous year's program and the various iterations of this Farm to School grant program in the state."*

While more than $30 million was allocated for these programs, not all of the funds were distributed. Roughly half of the state incentive programs had funds that were essentially fully utilized by eligible SFAs throughout the state. Full expenditure could indicate that the programs were popular and working well, or that the programs had small budgets that were easily spent by SFAs in the state. Other states had funds left over each year (Colorado, New York, Maine, Pennsylvania, and Alaska).

> *"Getting [this program] to be something that people apply for and want to apply for is a challenge because it is up to them. Just because you build it doesn't mean they will come."*

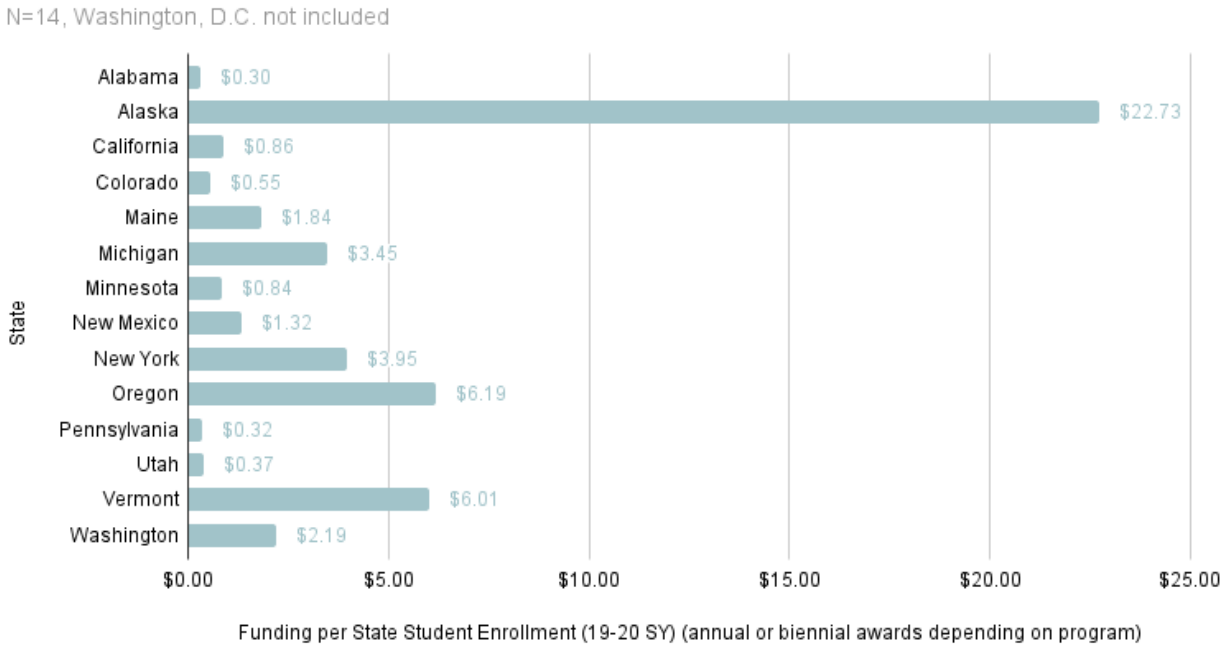
Reported under-spending could be due to cumbersome tracking requirements (New York), not incorporating a re-allocation element into the program to provide additional funds to active SFAs (Colorado), low incentive per-meal rates given to SFAs (Colorado), too restrictive purchasing requirements (Maine), or awkward timing for application cycles (Pennsylvania). Other reasons for low participation could be that the programs are new and unfamiliar to SFAs. Utah's program was recently implemented, and the coordinator understood that many SFAs would wait several years to apply for the program.

Though participation in the program is high in New Mexico, the state still has lower participation in rural areas. This is because they have less infrastructure in place in general, which hampers their capacity to purchase local foods.

> *"We have super teeny tiny rural districts with 150 people that aren't even being served by commodity vendors and USDA foods and things like that. So, when it comes to building out these local food supply chains, it takes so much more than just some [extra] purchasing dollars."*

Figure 9 represents the size of the program's funding in proportion to the number of students enrolled in the public school system in that state (SY 19-20). For example, Alaska's is calculated as $3 million / 131,981 students = $22.73. Using the number of students enrolled in the public school system to determine the size of the program is not the most accurate metric to use, as some states reach more students than are in the public school system such as students in ECE programs, independent tribal schools, or charter schools. Regardless, this comparison can be helpful to understand the proportion of this funding in relation to the state's student population.

Figure 9. Program Funding in Proportion to Student Population (Budget amounts for last known award)



Source: Figure created by author in July 2022. Data sources listed in Appendix C.

The amount of program funding per enrolled public school student ranged from $0.30 (Alabama) to $22.73 (Alaska). All but three states (Alaska, Oregon, and Vermont) allocated less than $5 per enrolled public school student for their incentive program, with the median amount just above $1.50. In many cases, especially in pilot projects, the overall budget for the incentive program was not sufficient to meet the needs of the state's population. For example, Alabama's program budget of $220,000 would only subsidize 1.1 million meal components, which is equivalent to less than two meal components per student per year.

Chapter 5. Context, Challenges, and Designs for Capacity Support

There is great diversity in states that have adopted incentive-based programs. This chapter seeks to (1) explain the range of contexts in which incentive programs have been established, (2) describe common implementation challenges gleaned from interviews and secondary sources, and (3) share several ways states have incorporated structures in their programs to ameliorate these issues.

Overview of States with Incentive Programs

At least fifteen states have established incentive programs between 2001 and 2021. The range in geographic region, political party, population, and socioeconomic status illuminate that an incentive program can be adopted and implemented throughout the US in a multitude of socioeconomic and political contexts. With few exceptions, specific program designs and goals do not appear to be correlated to the specific contextual factors listed above. These decisions have to do more with capacity, imagination, and political feasibility. More information about each state program can be found in the State Program Compendium and in Appendix C, which lists the sources used to create the program overviews.

Geographic Region

Incentive programs have been established in all regions of the United States. However, more programs have been established along the pacific coast (Alaska, California, Oregon, and Washington) and the Northeast (Maine, New York, Pennsylvania, and Vermont). There is another cluster of programs in the southwest (Colorado, New Mexico, and Utah), with the midwest and southeast having the least representation of incentive programs (respectively: Michigan and Minnesota; and Alabama and Washington, D.C.).

Political Party

Farm to School incentive policies cross partisan lines. While most incentive-based programs (8 of 15, 53%) have been established and implemented under Democratic governors, 27% (Alaska, Alabama, Utah, and Vermont) began under Republican governors. Three states, Michigan, Maine, and New Mexico, have had programs operate under both Republican and Democratic governors. One state official from Utah, a more conservative state, shared that garnering support to establish their incentive program was especially challenging. This is because Utah's culture prioritizes a small government and low government spending on social programs. However, once Utah's program was operating, it earned support from previously skeptical parties such as their local Farm Bureau chapter. Several state coordinators shared that these programs had bipartisan support from the legislature and were supported by both progressive and conservative advocacy groups. They believed that their programs were viewed favorably in their community because of their perceived ability to support economic growth, benefit the agricultural community, and improve school food for children.

> *"Everybody should be concerned about school nutrition... but that's not always the case. [Our] agriculture is so vast that it touches every county. It's [the] Farm Bureau and the agribusiness association and the various growers and associations that have a lot of impact and pull in the legislature, so I think, making sure that they find [our program] to be something that they want to advocate for has been helpful."*

Population & Density

Farm to School incentives were found in the second least populous state (Vermont, 650,000) and the most populous state (California, 39.2 million). The median population of the states with incentive programs was 4.25 million, which is similar to the median size of states in the US (4.5 million). The adoption of incentive programs appeared to transcend the density of states (persons per square mile) as well. The density of the states ranged from the least dense (1.3 in Alaska) to the densest state (11,280 in the District of Columbia).

Free & Reduced Rates

The economic status of states, as reflected in their percentage of public school students eligible for free or reduced-price lunch from the 2018-2019 school year, is similar to the US as a whole (NCES, n.d.). Free and reduced rates range from 32.9% at the lowest (Vermont) to 76.4% (District of Columbia). At the median, the free and reduced rate of states with incentive programs was 48.9% (average 50.3%). This is quite similar to the median of the US, which has 48.0% (average 52.3%) of all US public students eligible for free and reduced-price lunch, with a range of 27.0-76.4%.

Program Administration

More than a third of the states had at least one or multiple Full Time Equivalents (FTEs) to run their programs (California, Maine, Michigan, New Mexico, New York, Oregon, and Vermont), but several states dedicated less than one FTE to administer their program (Colorado, Minnesota, Pennsylvania and Washington, D.C.). A majority (53%) of statewide Farm to School Incentive programs are administered by their Departments of Education. Of the 15 states with incentives, eight are administered through the Department of Education, six through the Department of Agriculture, and one through the Department of Commerce, Community, and Economic Development (Alaska, now defunct). Several states are administered in partnership between two agencies, but typically one agency takes a leading role in implementing the program. New York is an interesting case in which the state government shifted the program administration of its incentive program from the Education Department to the Department of Agriculture and Markets. This change occurred in July 2022, over four years after the adoption of its incentive program. The New York legislature also shifted the administration of the NSLP from the Education Department to the Department of Agriculture and Markets. Reasons for this administration change were not provided to me by informants from New York.

There are several advantages to having a program operate under a Department of Agriculture and other advantages that are offered by the Department of Education. For example, an Education Department may be able to more seamlessly work with SFAs during the reporting and reimbursement process. An Agricultural Department

Figure 10: State Incentive Program Implementation Context

State Name	Year Established	Governing Agency	Population (2021)	Density (2010)	Free and Reduced Rates (%, 2018-2019)	Governor Political Party (During program)	Value of Agricultural Sector ($1,000s) (2020)	Value of Agricultural Sector per capita	% Landmass as Farmland (2020)	% Rural Population (2020)
Alabama	2020	Agriculture	5,039,877	93.8	55.2	Republican	5,469,640	$7,465.32	26.5%	22.8%
Alaska	2012	Commerce	732,673	1.3	48	Republican	49,386	$9.80	0.2%	32.6%
California	2020	Agriculture	39,237,836	253.7	59.4	Democrat	52,281,822	$1,332.43	24.6%	2.1%
Colorado	2019	Education	5,812,069	55.7	40.8	Democrat	8,396,316	$1,444.63	48.0%	12.3%
District of Columbia	2010	Education	670,050	11,280	76.4	Democrat	N/A	N/A	N/A	0.0%
Maine	2001	Education	1,372,247	44.1	44.1	Both	375,784	$273.85	6.6%	40.1%
Michigan	2016	Education	10,050,811	178	50	Both	8,849,987	$880.52	27.0%	17.9%
Minnesota	2021	Agriculture	5,707,390	71.7	36.4	Democrat	18,903,010	$3,312.02	50.1%	22.0%
New Mexico	2013	Education	2,115,877	17.5	72.3	Both	3,347,299	$168.75	52.4%	33.3%
New York	2018	Agriculture (prev. Educ.)	19,835,913	428.7	53.9	Democrat	5,802,428	$2,742.33	22.8%	6.8%
Oregon	2011	Education	4,246,155	44.1	48.9	Democrat	5,858,742	$1,379.78	26.0%	16.3%
Pennsylvania	2019	Agriculture	12,964,056	283.9	50.9	Democrat	7,704,279	$0.59	25.4	11.10%
Utah	2021	Education	3,337,975	39.7	32.9	Republican	2,099,218	$628.89	20.6%	10.2%
Vermont	2021	Education	645,570	69.8	36.4	Republican	812340	$1,258.33	20.2%	64.9%
Washington	2021	Agriculture	7,738,692	101.2	43	Democrat	10,978,484	$1,418.65	34.5%	9.90%

Source: Figure created by author in July 2022. Data sources listed in Appendix C.

may be able to better connect SFAs to and facilitate transactions with local agribusinesses. California's state incentive has particular elements that prioritize BIPOC farmers and producers with climate-friendly growing practices. The coordinator of California's program shared that the ability to prioritize these producers is easier because their program is held under the Department of Agriculture, rather than the Education Department.

> *"We have a different lens. It's less about keeping everyone involved because we're here to support every school district. It's more about supporting the schools that are committed to California farmers and a healthy equitable food system. So that's how we got to add those things into the RFA."*

Policy Initiation

More than half of the policies were initiated by Farm to School advocacy groups that partnered with state legislators. Many of these advocacy groups and legislators were also responsible for designing these policies, some of which consulted with the regulating authority to determine feasibility and obtain fiscal information. However, there were at least four states (California, Alabama, Utah, and Washington) whose authorizing departments took the lead in designing and/or advocating for funding for their incentive programs. Many individuals involved in the program design and advocacy of an incentive policy met with coordinators or partners in states with established or notable programs such as Michigan, New York, Oregon, and Washington, D.C., to discuss the designs of their incentives. One state looked to the USDA Local Food Promotion Program grant to inform the design of their program. Another handful of state program officials had recently entered their positions and could not speak to how their programs were designed, which occurred prior to their employment.

> *"We talked to folks from Michigan, Oregon, and New York a lot because they've been doing this for a while. Every time somebody said something was hard, we looked at if we could not do that."*

Program Partners

One unifying characteristic among states was the presence of strong partnerships with businesses, nonprofits, anchor institutions, or government agencies for the establishment and promotion of their incentive-based programs.

Most commonly, intrastate agency partnerships occurred between Departments of Agriculture and departments of Education but also included the Department of Health. Agencies collaborated on SFA training in Alabama and Maine and technical assistance in Minnesota. Partner agencies in New Mexico provided similar Farm to Institution incentive programs such as Farm to eldercare and Farm to ECE. In

this instance, the partner agencies worked with their colleagues to establish best practices and learn from each other's experiences. Other examples of agency partnerships developed because these partners offered synergistic programs to SFAs, such as kitchen equipment grants in New York or school garden grants in Vermont. Several states with Department of Agriculture partners utilized local food promotional programs, such as the NY Grown & Certified program, Alaska Grown, or Colorado Proud to support procurement efforts. Some incentive-based programs were influenced by their state's food system policy advisory councils or working groups. For example, Utah and Colorado both had advisory councils which developed strategic action plans that laid the groundwork for the adoption of that state's incentive program. These partner agencies worked to gain the momentum of Farm to School in the state and advocate for policy solutions.

All states also relied on nonprofit partners to varying degrees. These organizations provided a wide range of services, some of which are outlined in Figure 11. These partners were often statewide Farm to School networks, with Farm to School programs starting as grassroots projects before they were adopted at that state level. States such as Alaska, California, Colorado, New York, Michigan, Minnesota, and Oregon also received support from universities and colleges. Of the partner universities, most were land grant institutions whose cooperative extension offices were involved at either the state level, the county level, or both. Some newer programs, such as Alabama, did not have extensive support from extension offices initially, but the support has grown over time.

"We have a really robust statewide partnership that offers a lot of technical assistance and support to grantees. I think that makes this program successful. It generates a network for the grantees to work with to find farmers, to figure out how one school is preparing this food, or how they're featuring menu items. I think that's what leads to a lot of the success of this program."

Less common forms of partnerships involved state program offices and agribusinesses, which were both for-profit and nonprofit corporations. Agribusinesses such as food hubs and distributors worked to strengthen the local food supply chain, and food manufacturers worked to develop specific products for schools. For example, The Alaska Flour Company developed two new products (pancake mix and cereal) for schools in partnership with the department.

Figure 11: Kinds of Assistance Provided from Partner Organizations and Agencies

Description of Assistance	**Examples of States** *(not an exhaustive list)*
Network Building	
Held quarterly networking sessions for SFAs	CA, MI
Creation of a food hub network	MI, WA
Building a statewide network for Farm to School	CA, DC, PA, MI, MN, WA
Advocacy, Outreach, & Financial Support	
Wrote bill language and/or advocated for the adoption of a coordinator position or incentive program	AL, CA, CO, ME, MN
Developing statewide Farm to School strategic plans, established with long term food system goals	AL, CA, DC, PA, VT
Philanthropic organizations and government agencies provided additional grant funding for Farm to School activities	AL, NY
Developed promotional campaigns to promote the incentive program	AL, MI, PA
Evaluation & Research	
Conducted research or evaluations about program	AL, CA, CO, MI, ME, NY, OR, WA
Help score grant applications	CA, PA, WA
Technical Assistance & Education	
Developed promotional campaigns to promote Farm to School	AL, MI, NM
Provided supplemental nutrition or school garden education assistance (includes extension offices, Ag in the Classroom, and Foodcorps)	AL, CA, DC, MI, MN, NM, NY
Pre-reviewed grants for SFAs prior to submission	MN, CA
Provided technical assistance for SFAs to navigate program	AL, CA, CO, DC, MN, MI, NY, OR
Created Farm to School recipes	AL, AK, CO, VT
Provided culinary training for SFAs	CO, NY, VT
Connected food producers with SFAs	AL, CA, CO, MI, MN, NY
Working with producers to develop specific Farm to School food products	AK, CA, CO, NM

Source: Figure created by author in July 2022. Data sources listed in Appendix C.

State Agency Implementation Challenges

Many state agencies faced the same implementation challenges, regardless of context or design elements. These implementation challenges arose from the lack of capacity of the regulatory agency to fully develop and manage the incentive program, or directly resulted from the designs of the incentives. Examples of state agency implementation challenges are below.

> *"Administering this grant program is not like any other grant program we have... Overseeing just this program could be a job in and of itself.... I see a lot of work that still needs to be done to ensure this program achieves its full potential." (Kruse, 2014)*

Navigating strict or flawed legislation

Though the design of each program was not always curated by each state's authorizing agency, each was responsible for implementing its respective programs. One common implementation challenge stemmed from the limitations set forth in a program's establishing legislation. For example, Colorado's bill specified that it must use the Colorado Proud definition of local, even though there is not a clear definition how products must receive that designation (see the "Defining Local" section). Colorado's legislation also stipulated that the incentive be five cents per meal. Since not enough SFAs applied for Colorado's incentive grant program to fully exhaust the original program budget, the agency had to leave its funding unspent. Agency officials wanted to reallocate those funds to either increase the incentive amount or use the funds for technical assistance and capacity building, but were denied by the attorney general when they asked for a technical change.

Pennsylvania has requested multiple legislative amendments due to the specific language in its program. For example, the legislation stipulates specific scoring criteria that the department feels is inequitable. The legislation also originally dictated that grant awards must be spent the fiscal year in which SFAs were awarded. This grant cycle timeline was not conducive for SFAs who were looking to plan their local food procurement and create forward contracts with producers. Additionally, Pennsylvania's legislation stipulated that the funds only be available for applicants serving students from grade levels K-5, but the department wishes to expand its project scope to include more grade levels.

> *"Our hands are tied in the sense of how the bill is introduced and written. We stayed pretty neutral about it, but then that implementation came back on us... The language itself... bound us to some things that really need a technical change or clarification with the legislature... Figuring out how to implement this piece of legislation with very specific things that made it kind of difficult to work with, and it really came down to [specific] wording."*

Developing administrative systems

Informants from newer incentive programs shared challenges of developing a new program. This includes creating and filling out programmatic templates such as RFAs, tracking sheets, documentation protocol, and press releases.

> *"Creating all the templates and revising them and refining them for easy reporting is awful... Imagine creating - not only filling out - paperwork, but creating paperwork. That's what we're doing."*
>
> ———
>
> *"I think, maybe once the systems are created and [we have SFAs] that are committed to [the program] I don't think it will always be a huge headache. I think right now [creating systems is] a pretty big hurdle."*

Staff turnover

Staff turnover also poses challenges such as a lack of institutional knowledge about the program. New Mexico's long-term coordinator recently transitioned into a new position, leaving officials at the Department of Education understanding that they needed to embed more regulatory and administrative systems into their program.

Connecting SFAs with producers

Many coordinators had challenges connecting participating SFAs with local producers due to a lack of staff time or lack of knowledge of producers throughout the state. These coordinators have an interest in creating maps, lists, and databases that can further support SFAs. Typically, nonprofit partners step in to provide these supplemental services to SFAs.

> *"I'm kind of there to provide that broad support, but if a school reached out and said, 'We need help finding more local food, and we want to get local pancakes and local beef'... I can't [help]. I don't have the knowledge or the capacity to support them at that level. In which case, it goes into that strong network of nonprofit partners with the statewide organization and if there's anyone operating locally in their region as well."*

Reviewing grant applications

Recruiting reviewers for grant programs can be challenging. Some states review their grant proposals in-house, while others do not have the capacity to evaluate proposals because of a lack of staff time. Several states such as California and Pennsylvania rely on their state's Farm to School Network or outsource this role to volunteers.

Tracking expenditures

All but one state used spreadsheets in their programs for tracking local purchases. Many coordinators expressed discontent with how they were tracking and verifying local purchases, claiming that it was inefficient and time-consuming.

> *"Tracking is the thing that seems no one really wants to talk about. No one wants to share what they have. I want [other states] to share what they do, even if it's not the right thing. I think that's where I have to encourage people. to be willing to share things that aren't what they want them to be, to talk about what they would be, and what the challenges are. That would be helpful in and of itself."*

> *"I'd love to talk with other states and ask, 'how do you track purchases?' Because sometimes zooming in on these Xerox receipts and it feels a little insane."*

Collecting data & reporting their programs

Reporting requirements for programs are often included in bill language. Many states want to evaluate their incentive programs but are constrained by either time or funding to outsource evaluation services. States such as Oregon, Michigan, and New York have relied on outside nonprofit partners, typically through universities, that can evaluate their programs.

Conducting ongoing technical assistance for SFAs

There is an ongoing need for training and education for both participating producers and SFAs. This is because many incentive programs are expanding in scope, growing more interest from SFAs and producers. Second, there is high staff turnover within SFAs. Several states have standardized ongoing education by presenting at annual nutritional association conferences, annual business official meetings, combining outreach during an SFAs annual review process, or relying on partners for technical assistance and promotion of the program to SFAs. California hosts weekly webinars during its grant application period to respond to potential applicant questions.

While all states provided technical assistance, the mode and extent to which this was provided varied greatly. Some states such as Alabama, Washington, D.C., Maine, and Utah have a very small staff and nearly all technical assistance for their programs is provided entirely in-house. Minnesota and Utah have designated office hours for one-on-one technical assistance and training, while Pennsylvania has released grant-writing training for interested applicants. Informants in Michigan and Oregon noticed that SFAs new to local food procurement and those that have participated in their programs for several

years have different types of problems. The informants discussed adopting a "tiered" system in which training is customized to the distinctive needs of SFAs.

Several states have adopted a hub or regional model for providing technical assistance. There are more than a dozen dedicated staff in California that provide technical assistance to grantees - 16 staff in 8 regions, with several more that have a statewide scope. State departments in California, Michigan, and Oregon have also adopted a hub / regional model, in which all regions of the state are assigned a local partner that can provide technical assistance. Cornell Cooperative Extension in New York follows a similar model with both extension and non-extension nonprofit partners housed in regions throughout the state.

> *"I would say we're trying to get our extension educators more built into that fold. So, as the program grows, we need more support everywhere. Extension is the right place for that on a couple of levels, [but they also have] capacity issues at the moment."*

SFA Capacity and Challenges

Prior experience in Farm to School varies both among SFAs within a state and varies when comparing states. SFAs within one state have very different experience, interest, and capacity for implementing Farm to School programs. I reviewed sources and asked informants about what supporting Farm to School policies or programs are in place in addition to their incentive programs. I also asked about the level of Farm to School activities that were already occurring in schools prior to their program's establishment. As these responses were either limited to secondary sources or provided from the perspective of a few individuals on behalf of SFAs in the entire state, the information below is inherently limited. However, the perceptions from the informants may allow us to understand how Farm to School involvement can relate to implementation challenges and what kinds of programs and policies are prevalent among states to support incentive programs.

While most coordinators reported that there was a medium to a high level of Farm to School participation before the establishment of the program, several states such as Alabama and Utah reported low prior Farm to School involvement. There were some SFA champions in Utah prior to their incentive program, but there were few if any other policies relating to Farm to School or coordinators outside of Department of Education personnel.

Many Farm to School activities were one-time events, rather than long-term initiatives. Utah estimates that the local food percentage before incentive adoption was 15% based on the USDA Farm to School census, which uses self-reported data. On the other end of the spectrum is

Vermont, which has a robust culture that is engrained in Farm to School programming and local agriculture. This can be seen in the multitude of organizations that are working to advance Farm to School, such as Shelburne Farms, Vermont FEED, Vermont Farm to Plate, Food Connects, and the Vermont Farm to School Network. In Vermont, there are many Farm to School coordinators, school gardens, and other educational activities. Researchers estimate that Vermont schools spent 5.6% ($915,000) of their budget on local foods during SY 2013-14 (Roche et al., 2016).

Like Vermont, many states already had developed a culture of Farm to School in place before the initiative. These states included California, Washington, New York, and Michigan. The adoption of an incentive occurred only after the state had built some capacity for local food procurement. Other states reported having some Farm to School activity but indicated that the incentive program was the catalyst that finally solidified Farm to School as a larger movement within the state. These include: Colorado, which had some champions, but SFAs were relatively new to local food procurement; Maine, which had many Farm to School activities, some advocacy, and several champions; and Minnesota, which already had many partnerships, a Farm to School leadership team, and several SFA champions.

Figure 12: Examples of Synergistic Policies and Programs to Support Farm to School Incentives

Description of Program or Policy	**Examples of States** *(not an exhaustive list)*
Statewide coordinator roles	AL, AK, CA, ME, NY, VT
Local food branding membership campaigns	AL, AK, CO, MI, NY
Local producer map or database for SFAs	AL, CA, CO, NM, NY
Increased small purchase threshold	AL
Mini grant programs	AK, CO, MN
Statewide geographic preference policy	AK, CA
Farm to School grants (not specific to procurement) to districts	CA, CO, DC, NY, VT, MI, MN
Trainings or Institutes on scratch cooking for SFAs	CO, MI, VT, WA
Harvest of the Month or promotional programs (Days, Weeks, etc).	AL, ME, MI, NM, NY, VT
Buyer Grower Meetings	AL, CA, MI, NM
Federal assistance with USDA grant to support statewide Farm to School adoption	AL, CA, DC, WA

Source: Figure created by author in July 2022. Data sources listed in Appendix C.

Every state has at least one additional program or policy that helps bolster Farm to School programming and support SFAs in the implementation of the program. These may have been adopted before or after the establishment of the incentive. Figure 12 shares examples of synergistic policies and programs to support Farm to School incentives.

SFA Challenges

While states vary in their levels of Farm to School involvement, informants in nearly all states reported that their SFA stakeholders faced similar challenges during the implementation of their program. These include typical barriers to Farm to School mentioned in the literature review such as finding local producers, staff turnover and labor shortage, and restricted budgets, even with the financial support of the incentive. These challenges were not necessarily tied to overarching design components, such as the ones mentioned in Chapter 4. Examples of challenges are as follows.

Not understanding program regulation

SFAs in multiple states reportedly had trouble understanding how to navigate the state incentive programs. These issues tend to be less prevalent with programs that have been well-established, programs that have more strict allowable costs, and in programs where the reimbursement determination is simple, such as in a more traditional grant program or matching structure.

Verification & documentation of local products

More information on these challenges can be found in the "Defining Local" section.

> *"So I think overall [our program] is positive. But when I'm reading through the guidance, I'm like 'man, this is confusing.' And I'm the one who wrote it. We are [trying to simplify] this as much as possible."*

Restrictive bill language

Washington, D.C. and New York's programs originally did not mention how their incentive incorporates schools that contract with food service companies (FSMC). In New York, this means that SFAs that contract with FSMC are not included in the program. In Washington, D.C., all schools, no matter meal service style (self-operation, FSMC, or vended) receive reimbursement, however, the schools, not the FSMC, must report their meal claims to OSSE for the additional reimbursement.

Restricting participation from particular stakeholder groups

As mentioned in the "Challenges with Grant Programs" section, New Mexico and Oregon reported that the structure of their reimbursement disincentivizes tribal communities from participating. The reimbursement for the NM Grown program was not administratively congruent with how tribal schools are already being reimbursed. Oregon's grant timeline program was too short for tribal partners to meaningfully participate in the program. Both state departments are actively working on a solution that will result in more inclusive operations for Indigenous communities.

Pennsylvania's program is open to both ECE and K-5 school partners. While this has not yet happened, the coordinator fears that once the program becomes more competitive, ECE partners will be out-competed by schools, who typically have higher quality applications due to greater administrative capacity.

COVID-19 disruptions

Beginning in March 2020, the COVID-19 pandemic dramatically altered how the school food service industry operates. The pandemic and ensuing economic recession limited both financial resources for public schools. It also shifted operational focus from the serving of local food to simply serving students meals in a virtual, in-person, and hybrid situation that was constantly shifting. Indeed, every informant mentioned COVID-19 as an implementation challenge. The pandemic deflated the momentum of SFAs to purchase local food in most cases. The pandemic even halted funding for Colorado's program because of budget uncertainty. States with longstanding incentives such as Washington, D.C., Michigan, and Oregon saw that supply chain disruption was mitigated because schools had previously forged relationships with local food producers.

Producer Preparedness

Farm to School incentive programs appear to be more prevalent in states with more rural and agricultural cultures. For example, California's agricultural sector was valued at $52.3 billion in 2020 and is the largest producer of agricultural products in the US. However, there are programs in states that are not typically 'agricultural' and have no or very low values of agricultural sector production. For example, Washington, D.C. has no information on their agricultural data and Alaska had a value of agricultural production of $49 million in 2020 for all agricultural commodities (USDA Economic Research Service, 2022).

I asked informants whether they thought the local food supply chain was prepared for their programs. Many informants acknowledged that different parts of their state were better served by local producers and vendors. Typically, rural areas were noted to have a more difficult time finding local food than in urban areas, which may have vendors that already stock local food. Rural areas may be small and located far from direct market farms. These factors increase minimums for delivery or make delivery to a school infeasible.

> *"We have some rural, pretty remote districts that are super small. A lot of regular vendors don't even go there, so it's not worth the cost. Sometimes the distribution costs as much as the food. So, when thinking about how we are restructuring allowable costs and reimbursement rates, [this is] something that's on my mind. How do we make this [program] accessible to the least accessible location? If we allow 25% of funds to be used for just transportation or mileage reimbursement, is that going to be enough?... I think trying to be mindful of where the barriers are greatest, it seems to be around geography."*

Informants from New Mexico noted that incentive programs tend to focus on anchor products as an "easy-in" for SFAs looking to purchase local foods. For example, apples are abundant and commonly served in schools in Michigan, New York, Oregon, and Washington throughout the school year. New Mexico, however, is an outlier. The state does not have a core group of agricultural commodities that can easily serve as a local food staple in school meals. It does not have a ubiquitously available specialty crop in which to create coordinated advertising campaigns akin to how the aforementioned states promote apples and other staple foods. Informants believe that this contextual factor has created challenges for SFAs in their state.

> *"We don't have [staple crops] and we never had that. So we don't have industry partners adding funding or promotional materials. We're creating them from the ground up. So our biggest ally has been our farmers marketing association. We're working at that level, so it's just a really different way of starting to build a program that has grown so quickly with the lack of industry at the table."*

State coordinators from newly established incentive programs noted that they appreciated the small budget of their program, as the intention was to build relationships with producers and increase local food production over time. They believed that if their program had been established with large budgets ($1 million or more), producers in their areas may not have been equipped to adjust to the establishment of their program. State coordinators with long-standing programs noted that they saw their local food supply chain develop over time and that they viewed their program as a catalyst to strengthen the transparency and availability of local products in their state. Several informants shared that their programs encouraged food distributors to stock more local products, food manufacturers to produce local products specifically for schools, and encouraged non-school institutional and retail buyers to procure more local food.

> *"I would definitely say that we're not growing at a capacity for [the farmers] to be able to service all of our schools by any means. Our intent was that if we could help incentivize the schools to... buy local so [that] they're creating that demand. And then, now that that demand is created, we've got a reason for farmers to start growing more products. I guess it was almost like a chicken and egg situation. How can we create that demand for [farmers] to be able to want to grow it? We think that we're starting to grow that industry a little bit more here. Slowly, but surely."*

Challenges with Producers

Lack of local food supply and the number of producers

Local producers in Alabama do not typically grow products without having committed buyers, which limited local procurement. Both SFAs and producers are hesitant to engage in forward contracts. Therefore, many purchases have been made through micropurchase. New Mexico has a low farmer pool because of its state climate and regulatory issues such as water management systems. New Mexico also has experienced additional hurdles when working with farmers from indigenous communities because of the ways in which federal and state procurement regulations are perceived to impede on tribal sovereignty.

Lack of preparedness of the local food supply chain

At first, many distributors that were already selling to schools in Alaska, Alabama, and New Mexico did not carry local products and were hesitant to stock local items. This challenge has led to an unintended consequence of many SFAs purchasing local food from small-scale farms.

Lack of labeling & understanding of the program from producers

Before the incentive, Michigan distributors were not actively recording or advertising the source of their products. It is difficult for broad-line distributors to alter their operations to provide the level of information that state agencies needed for their programs. New York distributors often wrote "local" rather than "NY," which was required for the state's incentive. New York producers were reluctant to provide the kind of documentation needed for their products to be approved by the regulatory agency or filled out paperwork incorrectly. This created an additional step for each of the SFAs and their Farm to School coordinators to attempt to get proper paperwork from producers after the products had already been purchased. New York is not alone in this challenge.

> *"[Distributors] have a different definition of local. There's no Sysco definition of local. [The invoice] has to say [our state] next to [the item]. That's been a tricky part with the distributors. An example is in the beginning, when schools would buy from distributors and I was seeing these receipts that just add[ed] 'local' in handwriting. I'd have to reach out to the district leader or their sales reps and say 'hey, it needs to say what farm it's from.' So, there's been a lot of that and some pushback from the distributors, because that's added work on their part.... [Sometimes food service directors] send me a photo of the box that came in that says it's from [a local] farmer. It's just tricky."*

Lack of food safety knowledge

SFAs in New Mexico wanted to purchase from Good Agricultural Practices (GAP) certified producers. However, there was a lack of GAP-certified farms and food safety knowledge in general among New Mexico producers. New Mexico has circumvented this challenge by creating a GAP alternative program for food hubs and farms through their approved supplier program (see below).

Designs for Additional Capacity Supports

Several states have found creative ways to combat challenges experienced by their agency, SFAs, and producers by incorporating flexibility, funding, and additional structures into the designs of their programs.

Flexibility

Reallocating expenses to allow for full utilization of funds

Many state programs are under-utilized due to a lack of participation in the incentive program or lack of execution by participating SFAs. Oregon has built in a safeguard to reallocate grant awards from schools that have not been regularly purchasing local products or have been in contact with the authorizing agency. While all SFAs are automatically eligible to participate in Oregon's program, Oregon has created a competitive grant track that allows higher-performing SFAs to request additional grant funds once they have exhausted their original allotment. This allows Oregon to allocate unspent grant funds to champion SFAs, ensuring that they are fully utilizing the available program budget.

Creating flexible Farm to School incentive legislation

As mentioned above, numerous informants felt restricted by the language in the legislation that established their programs. One overarching design component that can avoid these restrictions is to create legislation that is flexible, allowing the authorizing agencies to be nimble and adjust their programs to any unintended consequences or challenges as they arise.

Embedding participatory decision-making

California has an open comment period for the public to provide input and ask questions about the proposed RFA. They also have webinars introducing the RFA with listening sessions at the end of each presentation. California responds to these comments publicly and has made changes to its RFA as a direct result of this input.

Funding

Funding and embedding evaluations

Minnesota and California have exit interviews for each grant applicant to understand their challenges and needs for the program. Oregon, California, and Michigan have reserved funds in their program to hire external evaluation consultants. In 2022, California invested 10% of program funds into external evaluation with the University of California. This process includes quarterly quantitative and qualitative check ins as well as longer exit interviews. Michigan also requires grantees to complete surveys (typically quarterly) to participate in the 10 Cents a Meal program. They intentionally request more storytelling and qualitative questions in grant reporting and use these results in their communication and advocacy efforts.

"We're looking at a [budget] increase for this year and I don't know that there's necessarily a rhyme or reason to it outside of political support... Definitely part of how we've garnered such legislative support [is] because we told the stories in ... our legislature... [We] do targeted storytelling from around the state, so we tell the stories of not only grantees but of distributors of small farmers. We make the story more romantic in terms of the broader story of farm to school."

Funding technical assistance

Some states have adopted more creative approaches to providing technical assistance. California and Oregon have created specific grant tracks for applicants that are looking for additional technical assistance or nonprofit partners that want to provide technical assistance to SFAs. Several states with incentive-based programs recognize the value of technical assistance partners and are contracting these services with nonprofit partners. Michigan recently started contracting these services, while Washington plans to start contracting technical services within the next few years. Michigan's 2022 omnibus bill states that they can allocate 1% of program funds for each program partner for data collection, outreach and training. Colorado also funds the outsourcing of technical assistance and has written this into the legislation that established its incentive program.

Providing additional funding for SFAs that participate in training

In Maine, SFAs get additional funding if they participate in a variety of approved training opportunities offered by the Department of Education or its affiliated partners. These are offered on a quasi-monthly basis. If an SFA attends a training session, they will increase their maximum match by the Education Department by $500, or 10%. This incentivizes SFAs to continually develop their Farm to School programs.

Including one (or multiple) coordinator positions in legislation

Often, informants from the agencies overseeing the incentives have limited staff or staff time dedicated to supporting their programs. Maine and Vermont's legislation created positions for full-time coordinators to administer their programs.

Creating pathways to enter the program with low or no risk by including seed grants

Several states are mindful that not all SFAs may be ready to participate fully in their incentive program. Minnesota created a First Bite Mini-grant for SFAs new to Farm to School. Unlike their main incentive program, the Full Tray grant, the First Bite Mini grant gives awards up to $5,000 to SFAs and does not require a match. Vermont's Baseline Year grant is available to all SFAs, regardless of their percentage of local foods. SFA's are awarded a 15-cent reimbursement per meal and are required to track local food purchases in their first year of participation. The Baseline Year grant intends to provide seed funding for schools to build their programs without much risk. After the first year (Baseline), SFAs only receive funding if they achieve a minimum of 15% local food procurement.

> *"It's intentionally pretty easy. All the questions asked are really geared to get them thinking about local purchasing and help set them up for success in the future, while also providing them some seed money for those initial local purchases which presumably are going to increase their program budget."*

Earmarking funds for target groups

Washington, Oregon, and California reserve portions of their funding for ECE or tribal partners to ensure that their particular target groups are able to participate in their programs. Oregon has earmarked funds ($255,000 for their 2022-2024 grant cycle) specifically to be used in Indigenous communities. After listening to tribal members about their barriers to entry in their four grant tracks, the Oregon Education Department has shifted the way they award grant applications to support different cultural customs and needs. These funds ensure that Indigenous communities are still able to participate in the Farm to CNP program.

Structure

Making the procurement process simpler by providing an approved vendor/product list to SFAs

Both finding producers and providing documentation for local food purchases were nearly ubiquitous challenges for SFAs. New Mexico has developed a system in which SFAs must only purchase products from an approved supplier list. These suppliers participate in food safety training given by the authorizing agencies and their collaborators and agree to additional regulations required to participate in the NM grown program. The benefits of the approved supplier program are multifaceted: it takes perceived food safety liability off the SFAs, makes the procurement process easier for SFAs, and ensures that producers understand and are in compliance with the nuances, documentation requirements, and restrictions of the program. Each year, there is an application period for interested producers, but producers can apply anytime on a rolling basis. One caveat to the approved supplier system is that small farmers, and especially tribal farmers, have had more barriers to participation in New Mexico's program.

Other states do not have a strict approved supplier list scheme but have found ways to make the procurement process easier for SFAs. While Washington, D.C. does not provide an approved list for SFAs, the program coordinator keeps an up-to-date list of all producers selling to SFAs in the monthly tracking spreadsheet required for reimbursement. Oregon publishes a spreadsheet of all SFA purchases made in its program, which allows SFAs to regularly view a list of available vendors that supply local food. Cornell Cooperative Extension in New York has created an online database that is crowdsourced by Farm to School coordinators and SFAs. Producers can also submit their information in order to be listed on the database. The database also includes documentation such as letters from producers and Product Formulation Statements (required for processed products in New York) that have been pre-approved by the state's regulatory authority.

"[Before,] we had been working at an SFA level to have them approve sources. But it just became clear that that's really inappropriate and puts them in a strange position to have to verify farms. So we created this system basically to have third-party verifiers who could also make sure that the product is being grown there."

Embedding programmatic systems within typical SFA routines

Reimbursements for incentive programs may also be incorporated into the state's standard monthly claims process for SFAs. For example, Washington, D.C.'s reimbursement process is part of the state's ordinary claims process. These measures allow SFAs to feel like participating in the program is not too administratively burdensome.

"We're always trying to simplify things as much as possible... We are hoping to be able to roll it into existing reporting so that it's not an additional form, with an additional signature and all those things. Those numbers are essentially being collected in a similar recording method that we already have, so the additional layer isn't too cumbersome."

Creating standard tracking tools for SFAs

Tracking local products was a challenge for both SFAs and authorizing agencies. Vermont provides two methods for SFAs to track their local purchases. They require participating SFAs to use one of these two tracking methods or have a method pre-approved by the department. While the vast majority of states use spreadsheets to track local purchases, Michigan has created its own online platform for SFAs to input local purchasing data. New Mexico is working with software company Falling Colors to create an online system for their state's incentive program. Informants from New Mexico believe this kind of software will benefit the SFAs and allow the agency to more easily aggregate data to evaluate their program.

Creating opportunities to provide wrap-around services

New Mexico and Michigan are excellent examples of incentive programs that aim to create wrap-around services for SFAs. One of Michigan's partner organizations regularly hosts scheduled networking events for SFAs in their program. They also automatically provide virtual and physical materials to SFAs to promote the 10 Cents a Meal Program to their school community. The New Mexico Department of Education hosts annual buyer-grower meetings and other networking events for food service directors to meet participating producers. State coordinators also reach out to champion food service directors who formally and informally act as mentors for new participants in their New Mexico Grown program. This mentorship method is particularly helpful as New Mexico expands its incentive program into ECE and eldercare. SFAs in Oregon must join a listserv to receive news and potentially ask questions to peers that may be able to provide support.

Supporting producers throughout the data verification and input process

California and Maine verify the procurement data of their producers throughout the year. During this process, they will call producers to not only verify they are a local producer, but also to start a relationship with them. Maine uses program invoice data to share information about producers and specific products with SFAs.

> *"We're not verifying, though. It's more like a 'how can I help you?' call. It's not like a 'send me all your ingredients call', it's like 'Hey we saw you sold to a school. That's so great. Do you sell to any other schools? Have you thought about selling to more schools? Do you need any grant funding? Have you heard about this [program]? Tell us why you do what you do."*

Chapter 6. Incentive Goals & Measuring Success

Farm to School activities have the ability to (1) promote economic development, (2) incorporate agricultural and nutritional education, (3) benefit the environment, (4) increase community engagement and equity, and (5) improve public health. These abilities, which I call "goals," are taken directly from the National Farm to School Network's Benefits Fact Sheet (NSFN, 2020), where they are used as the main five categories to describe the benefits of implementing Farm to School programs. Listing goals can help SFAs understand what the intention of the program is and align their purchasing behavior accordingly. I searched for explicitly defined program goals in both the bill language and program materials and asked informants what their state's program goals were during the interview process. The goals are listed for each state in the Incentive Program Compendium.

In many states, the establishing bills did not describe the motivations behind encouraging local food procurement. For example, Maine's legislation states "to encourage the purchase of local foods for public schools." However, the programmatic materials describe the motivation and intention behind the programs. These explicit goals and their alignment with the five Farm to School goals are listed below in Figure 13. It is important to understand that if a state does not incorporate a goal explicitly or implicitly into its incentive programs, it may also have a separate program or policy that works to advance that goal in tandem with their incentive. For example, Washington, D.C.'s Local5 incentive program does not involve nutrition education, but they have school garden grants and require environmental literacy as part of the Healthy Schools Act, which established the Local5 program.

Figure 13. Explicit Program Alignment with Five Farm to School Goals

Goal	State	Explicit Program Goals (listed in both legislation and program materials) *Not an exhaustive list*
Economic Development	AL	To help Alabama farmers sell to Alabama schools at an affordable amount
	CO	To create an important financial opportunity for farmers, ranchers, food processors, and food manufacturers by connecting them with school nutrition programs
	MI	Invest in Michigan agriculture and the related food business economy
	OR	To benefit the local economy, job market and environment by cycling State dollars back into communities around Oregon
	PA	To aid farmers in this Commonwealth in gaining access to new markets
	UT	To make it possible to pay farmers fair market value for their food
Education	MN	To give youth access to nutritious, high quality, local food so they can excel in the classroom
	MN	To enable Minnesota schools to continue to develop their Farm to School experiences
	PA	To increase awareness of agriculture in this Commonwealth
Environment	CA	To support projects that build climate resilience
Equity & Community Engagement	CA	To support projects that cultivate equity
	MN	To prioritize applicants that procure and purchase Minnesota grown and raised foods from Emerging Farmers
	MN	To intentionally serve diverse populations, especially populations experiencing inequities and/or disparities
	WA	To increase purchasing from small and mid-size farmers and food producers
	WA	To increase purchasing from historically underrepresented farmers and ranchers
Public Health	AK	To encourage every Alaskan school district to purchase nutritious Alaska Grown/caught/harvested foods
	CA	To support projects that nurture students
	DC	(Healthy Schools Act) To ensure that all students attend schools that support their health and well-being
	MI	Improve daily nutrition and eating habits of children through school and ECE settings
	NM	To foster links between schools and local farms or farm organizations so that freshly harvested local foods become a staple in the diets of NM students
	PA	To educate pre-K through fifth graders and their families about the importance of choosing healthy, locally produced foods
	UT	To make it possible for schools to provide fresh nutritious meals to as many students as possible

Source: Figure created by author in July 2022. Data sources listed in Appendix C.

Figure 14. Design Structures in Alignment with Five Farm to School Goals

Goal		Element	Alignment *("+" = positive alignment, "-" = negative alignment)*
Economic Development	+	*Allowable Costs / Eligibility*	Tracking new purchases or requiring baseline information on local purchases in order to participate
		Reimbursement	Matching reimbursement structure
		Supports	Reallocating expenses to allow for full utilization of funds
		Eligibility	Encouraging more local purchases through a sliding scale performance-based eligibility
		Allowable Costs	Incentivizing all or most local food types in the program
		Allowable Costs	Allowing a la carte and adult meals as incentivised meals in the program
Education	+	*Allowable Costs*	Incentivizing the purchase of school garden produce
		Allowable Costs	Making education an eligible (or mandatory) expense
		Eligibility	Grant scoring criteria can prioritize effective in-school partnerships and educational activities
	__	*Allowable Costs*	Not allowing educational supplies as allowable expenses without another program for this need
Environment	+	*Eligibility*	Grant scoring criteria can prioritize sustainable agricultural practices
	__	*Allowable Costs*	Allowing processed products, meat-based protein, and dairy as incentivized purchases
Equity & Community Engagement	+	*Eligibility*	Eligibility through universal qualification
		Eligibility	Grant scoring criteria can prioritize high need communities, cultural foods, high need farmers, and applicants that are engaged in their communities
		Eligibility	Sliding scale reimbursement structure creates pathways for SFAs to enter a program with low risk
		Allowable Costs	Allowing non-food items such as staff time and equipment as eligible expenses
		Supports	Earmark funds for tribal communities or adopt separate program timelines
		Supports	Seed grants can create pathways for SFAs to enter a program with low or no risk
	__	*Eligibility*	Performance-based eligibility without sliding scale or other equity measures
		Eligibility	Grant application eligibility without additional equity measures
Public Health	+	*Eligibility*	Grant scoring criteria can prioritize applicants that include nutritional activities and promotion
		Eligibility	Grant scoring criteria can prioritize the purchase of unprocessed and minimally processed foods
		Allowable Costs	Restrict allowable items to unprocessed and minimally processed foods
	__	*Allowable Costs*	Allowing processed products as incentivized purchases

Source: Figure created by author in July 2022. Data sources listed in Appendix C.

(1) Economic Development

As mentioned in Chapter 2, research suggests that there is a multiplier effect when institutions purchase local food. Economic Development was the most prevalent theme among goals mentioned explicitly in programmatic materials and by coordinators during interviews. Many state coordinators want their incentive programs to not simply offset the purchase of local foods, but hope that these programs create new market opportunities for farmers and encourage SFAs to spend beyond the value of their state subsidy.

In an interview with a representative from Alabama, the state coordinator discussed the economic impact of their program by sharing the value of local products SFAs purchased throughout the year in relation to the value of the subsidy they were given. Colorado, which provides lump-sum funding, asks that SFAs enrolled in their programs track local food purchases regardless of whether they have exhausted their award amounts to assess economic output. Therefore, they can state something to the effect of "so-and-so district spent $10,000 on local food, but received $2,000 in grant subsidy." However, without understanding what and how much local food SFAs were purchasing before the incentive, it is difficult to determine whether the incentive caused any behavioral change, or whether this rhetoric is substantiated. Other ways that states have attempted to embed measures that can convey economic development include tracking the purchase of or requiring new local purchases and requiring baseline information from SFAs on local purchases.

Encouraging NEW local purchases

Several states such as California and Minnesota have designed their programs to encourage grantees to purchase foods that had not been procured previously. Minnesota encourages new relationships with farmers in addition to long-term relationships with agribusinesses, but does not have a requirement that foods purchased using grant funds be new for foods or producer relationships. They ask applicants to list how many new farms they plan to source from as a result of their grant award as part of the application narrative. In its first year, California required that grantees purchase new varieties of local foods with their grant awards. For example, if an SFA was purchasing Empire apples before the incentive, the Empire apples would not be subsidized by the program. This, of course, is difficult to track, and states use the honor system when implementing this rule. California coordinators found that requiring new purchases was cumbersome for agency staff, confusing for applicants, and created a burden for champion SFAs that were already purchasing large quantities and varieties of local items. California's officials decided to remove this requirement from their guidelines grant RFA in its second year.

Requiring baseline information on local purchases

States such as California, Colorado, and Vermont ask or require applicants to provide information about what and how much they were purchasing locally before participating in the incentive program. This information helps the state assess local spending trends to determine the economic impact of the program. Several program coordinators questioned to what extent their base information through this process is accurate due to a lack of SFA or vendor

knowledge about local products. Other states have used the USDA Farm to School census as a guide for determining baseline information on local purchases. However, every coordinator who mentioned the Farm to School census also acknowledged the caveats with getting accurate information from the census because it is based on SFAs volunteering to take the survey and self-reporting data. Therefore, there may be participation bias among SFAs and the census is not statistically representative of the population. SFAs may also not understand which of their purchases are truly local.

(2) Education

Education is one of the three pillars of Farm to School. Incentive programs may increase educational outcomes by providing students the opportunity to try new foods, learn about local food systems and gardening, and learn about nutrition and health. Education was not often listed as an explicit goal for these incentive programs. Colorado's programmatic goal insinuates that serving more local food will lead to increased educational outcomes: "to give youth access to nutritious, high quality, local food so they can excel in the classroom." Minnesota's AGRI Full Tray Grant is "intended to enable Minnesota schools to continue to develop their Farm to School experiences," which may include educational components. Though educational components were not always explicit among incentive programs, many states focused on bolstering education by allowing education as an allowable expense (Chapter 4) or through other synergistic programs and policies.

(3) Environment

The promotion of environmental sustainability was the least prevalent among all programs. This may be because local food is assumed to be more environmentally sustainable by policymakers (depending on the product or context, this claim may not have any factual basis). Regardless of the reason, California in particular demonstrated how to prioritize environmental sustainability in its incentive program. They incorporated the environment into their program by listing environmental protection as a goal. California lists protecting soil, water, and air quality, increasing biodiversity, and soil carbon storage as a purpose for their program.

(4) Equity & Community Engagement

Though community engagement and equity were mentioned seldomly among states in their explicit goals, programs commonly incorporated elements that encourage community engagement and equity among their participating SFAs and in the community at large. There are also several ways in which these programs may work against principles of equity.

(5) Public Health

Following closely behind economic development, public health is the second most commonly mentioned goal of an incentive-based program. Phrases such as "nutritious," "high quality," "freshly harvested," "improve eating habits," and "improve daily nutrition" were found in the documents about these programs or mentioned by informants during interviews. However, in practice, few policies found ways to explicitly promote nutrition and public health through their program designs.

Measures of Program Successes

I searched programmatic materials for ways in which state agencies described "success" when discussing the desired goals of their incentive programs. Though few states had comprehensive evaluations (with the exception of Oregon, New York, Michigan, and Washington, D.C.), I found secondary sources with evaluative components, such as websites, evaluations, legislative reports, and webinars that listed outputs or outcomes of programs from most states that have been established for at least a year. It is common to see metrics such as money spent on local ingredients, the number of students served, the number of pounds procured, or the number of producers benefiting from their program in these materials (others listed in Chapter 2).

Several evaluative reports and informants during the interview process provided descriptions of program achievements that go beyond these basic measurements. Some of the indicators mentioned below have been observed and reported by coordinators. Others are harder to measure and have not yet been operationalized. Descriptions of "success" were mostly aligned with principles of community engagement and equity, followed by economic development. These collective indicators can be found in Figure 15, and can help state program coordinators and nonprofit partners develop a way to view and evaluate the implementation of their incentive programs.

Figure 15. Descriptions and Indicators of Incentive Program Success (shared by informants)

Policy Goal	Success Statement	Indicators
Economic Development	*The program supports local producers and promotes economic development.*	• The program directly connected producers with SFAs • Department officials were able to connect local producers with other school districts when inputting SFA invoice data • SFAs purchased from a wide variety of producers (big tent approach) • SFAs purchased from small, direct farms • Districts spent more on local food than their incentive award • There was a diversity of types (direct farm, distributor, coop, food hub), geographic regions, and sectors represented by producers participating in the program • The program addresses needs for producers with wrap around services such as food safety training or grant funding • The department or their partners connected producers with food hubs and institutional partners • There were new products developed by producers for the program • Food distributors are now including farm-level or state-level data for all their clients • More anchor institutions and retail buyers are purchasing local food
	The program expanded use and uptake among SFAs in their state.	• The program's budget has expanded over time • All of the funds were being utilized • The number of participants (SFAs or CNPs) expanded over time • Ability to foster the growth of an SFA's Farm to School program over time
Equity & Community Engagement	*The program has uptake among diverse stakeholders in their state.*	• Ability to connect with SFAs new to Farm to School • Ability to serve SFAs with more diverse or lower socioeconomic students • The program had diversity in the types of stakeholders that participate in the program (tribal communities, expanding into community partner and ECE sites) • The program identified SFAs and fostered program success in underserved geographic regions
	The program cultivates a positive relationship with participating SFAs.	• There were repeat participant SFAs over time • There was positive feedback from and ease of use by SFAs • SFAs are public advocates of the program • Program participants saw the program as worthwhile
	The program cultivates community, builds trust & builds culture around the program.	• There was trust between buyers and growers • Experienced SFAs are mentoring new SFAs or ECE/community partners • State agencies were able to quickly adapt to better serve SFAs in light of an implementation challenges
	The program engages the community at large.	• The program has garnered bipartisan support • The program can engage the community through storytelling
Public Health & Education	*The program fosters agricultural education and improves school meals.*	• The department or collaborative agencies developed resources and conducted promotional activities for districts to better participate in the program. This can be through items such as a recipe book, local food days, or local food training for cafeteria staff • The nutritional quality of school foods was perceived to increase • SFAs engaged classrooms and clubs in building their Farm to School programs. • The program worked to diversify the types of new foods that are served in meals • The program allowed foods that were more attuned to community foodways of that area
Other	*The program allows the department to build its capacity for partnerships and interagency participation.*	• The program expanded to ECE and community partner facilities • Stakeholders and departments were sharing resources and creating efficiencies • The department collaborates with other agencies and organizations to improve the program • The department has been able to maintain or increase staff dedicated to the program, either at the agency or among their partners • There are new partnerships with tribal communities beyond the incentive program.

Source: Figure created by author in July 2022. Data sources listed in Appendix C.

Part III
Conclusion

This report presents a characterization of the field of incentive-based programs and a classification system that describes core programmatic features in existing incentives. This document, the State Incentive Program Compendium, and other folders with aggregated state program data provide a building block for future research that analyzes Farm to School incentive programs as a coherent policy paradigm within Farm to School, rather than as individual, state by state, phenomena. Currently, there is no existing resource that observes the prevalence of specific incentive design elements. This research adds to the existing literature by observing all incentive programs at once and creating a framework to discuss the ways they vary. This framework, and the aggregated experiences of states with incentive programs, can act as a resource for practitioners and researchers looking to design and evaluate incentive-based Farm to School programs. Coordinators from states with incentives can use this research to identify particular design features that they may want to adapt to their particular contexts. They can also use the state-based information to connect with coordinators and build a community of practice around Farm to School incentive programs. This kind of nuanced knowledge from the field and the experiences of statewide practitioners is essential for the diffusion of policy innovations (Rogers, 2003).

Chapter 7. Summary of Findings

This report sought to address the question: How do statewide Farm to School incentive programs vary with respect to (a) program design, (b) context, and (c) alignment to existing Farm to School policy goals?

Key findings are as follows:

1. No two incentive programs are identical, and there is a great diversity in program designs.

There are at least 15 states with incentive-based programs. More than half (60%) were implemented in the last five years. The first state to establish an incentive program was Maine in 2001, with their Local Foods Fund (formerly Local Produce Fund). However, the Local Foods Fund was not given permanent or substantial funding until 2019, where previously it was funded inconsistently. Washington, D.C. was the second, established nine years later through the Healthy Schools Act of 2010. The only state to establish a program and become inactive is Alaska, whose program lasted from 2012 to 2015. The differences among the program designs ultimately fell into the following themes:

1. Eligibility Determination
2. Reimbursement determination
3. Program funding
4. Incentivized purchases
5. Incentivized meal types
6. Incentivized child nutrition programs
7. Program size

Eligibility Determination:
Competitive grant application, Universal Eligibility, and Performance-based

Most (47%) have competitive grant applications, 33% are universal eligibility, in which all SFAs are eligible to participate, and the least number of states (20%) are performance-based, in which SFAs are only eligible for reimbursement if they reach a certain local food procurement threshold. Grant applications provide the most structure for states to prioritize particular priority goals and embed them into scoring criteria, such as giving additional points to applicants with higher free and reduced rates. Oregon has both a competitive and non-competitive program, and Vermont has a universal eligibility program for a baseline year, after which, SFAs are eligible for an additional subsidy based on their performance.

Reimbursement Determination:
Lump-sum based on a per-meal formula, lump-sum not based on a per-meal formula, per-meal reimbursement, and matching

There are many nuanced variations in how states have determined they will reimburse SFAs in their programs. More than half of programs base their reimbursement determination from a per-meal or similar formula. This determination is awarded as a lump-sum, and SFAs can be reimbursed up to this maximum throughout the year. The benefit of providing lump-sum awards based on a per-meal formula is that this method is simply calculated and scalable, increasing with the enrollment or average daily participation of the SFA, but can disincentivize small SFAs from participating if the award is not large enough. Awards not based on per-meal formulas are less common, but can allow SFAs to request what they need to fully develop their Farm to School programs. Matching schemes are

also less common, and are typically viewed as rebates, where an SFA will be reimbursed a percentage of what they spend on local food.

Allowable Costs:

Primary Categories:
Fresh fruits and vegetables, proteins, grains, minimally processed items, processed items, fluid milk, and value-added dairy

Secondary Categories:
School garden produce, non-food items, and government programs

Minimally processed fruits and vegetables and fresh, unprocessed fruits and vegetables are incentivized by all programs. Grains are another largely popular incentivized food among the programs, with all but one state incentivizing grain. All but two states (87%) incentivize value-added dairy (including items such as yogurt, cheese, and sour cream) and local proteins. The items least likely to be incentivized by these programs were processed items (8 states, 53%) and fluid milk (5 states, 33%).

All states, with the exception of Washington, D.C., used a "state border" definition for local fresh and minimally processed products. Most states that allowed processed products used a 51% or greater definition for processed products, while several others did not have a minimum local ingredient threshold. Some states used existing definitions from other programs on how to define "local." The decision on what foods to allow is perceived to impact programmatic simplicity and alignment with Farm to School goals (typically the balance between nutritional quality and economic development). Many states voiced an interest in adopting a regional definition for local but recognized the potential political and administrative hurdles that come with a regional definition.

Most programs allow costs beyond foods purchased through typical vendors. A vast majority of states (12 of 14 for which there are data) allow school garden produce to be purchased for their programs. Only one state, Michigan, allows local foods "purchased" through federally funded programs as part of their matching requirement. A third of programs allow non-food items as allowable costs such as equipment, staff time, transportation, and labor, to be purchased as part of their programs. These purchases can help build SFA capacity for scratch cooking and foster more educational activities.

Types of Meals Incentivized:

Lunch, breakfast, after-school snack, supper/dinner, a la carte, adult meals

A vast majority of programs (79%) help subsidize local food purchases that are served in all NSLP reimbursable meals (lunch, breakfast, after school snack, supper/dinner). Four states allow their funds to be used for a la carte or adult (staff) meals. Most states did not restrict their funding to a particular meal, even though their award calculations may have been based on lunch participation.

Types of Child Nutrition Programs Participating:

NSLP, CACFP, SFSP, SSO, and ECE / non-school partners

All 15 of the programs incentivize reimbursable lunch meals served through NSLP, and most (80%) subsidize local food purchases that are served in all NSLP reimbursable meals (lunch, breakfast, after school snack, supper/dinner). A vast majority of state programs do not subsidize a la carte and adult meals. Child nutrition programs such as Child and Adult Care Food Program (71%), Seamless Summer Operation (71%), and Summer Food

Service Program were less likely to be included in these incentive programs. There is a growing effort from states to expand their incentive programs into other spaces outside of school to reach a larger and more diverse subset of the population. Thus far, seven states have incentive programs that reach ECE and non-school partners. States expanding into ECE and non-school partners have experienced implementation challenges working with these populations.

Funding Avenues:
General appropriations or "other"

More than 70% of these programs are funded through general budget appropriations from the state legislature. Unique avenues used to fund these programs include a liquor tax, a bag tax, COVID-19 relief funds, and piggybacking on larger agricultural development efforts in the state. The temporal nature of the programs led to hesitance among interested SFAs and producers.

Incentive Rate
The per-meal reimbursement rate ranged from 5 cents (Washington, D.C. and Colorado) to 25 cents, which is the top threshold for Vermont's sliding scale program. More than two-thirds (7 of the 10 in this category) provide an additional $0.14 or less per meal and half (5 of the 10 in this category) give $0.10 or less. Other states do not use a per-meal formula.

Program Budget Size
The program budgets ranged from $220,000 (Alabama) to $10,000,000 (New York). Many new programs have been introduced as pilot programs. States with more established programs have seen this amount fluctuate greatly over time. The amount of program funding per enrolled public school student ranged from $0.30 (Alabama) to $22.73 (Alaska). All but three states (Alaska, Oregon, and Vermont) allocated less than $5 per enrolled public school student for their incentive program, with the median amount just above $1.50.

2. While there is great diversity in the context of these programs, many states shared similar implementation challenges. States have integrated unique additional support structures into their programs to contend with these challenges.

Farm to School incentive policies cross political and geographic lines. While most incentive-based programs (8 of 15, 53%) have been established and implemented under Democratic governors, 27% (Alaska, Alabama, Utah, and Vermont) began under Republican governors. Three states, Michigan, Maine, and New Mexico, have had programs operate under both Republican and Democratic governors. Farm to School incentives were found in all geographic regions of the US and from the second least populous state (Vermont, 650,000) to the most populous state (California, 39.2 million). The density of the states ranged from the least dense state (1.3 in Alaska) to the densest state (11,280 in the District of Columbia).

A majority (53%) of statewide Farm to School Incentive programs are administered by their Departments of Education. Of the 15 states with incentives, eight are administered through the Department of Education, six through the Department of Agriculture, and one through the Department of Commerce, Community, and Economic Development (Alaska,

now defunct). More than half of the programs were initiated by Farm to School advocacy groups that partnered with state legislators. Many of these advocacy groups and legislators were also responsible for designing these programs, though a handful were designed in-house.

One unifying characteristic among states was the presence of strong partnerships with businesses, nonprofits, institutions, or agencies for the establishment and promotion of their incentive-based programs. Most commonly, intrastate agency partnerships were mainly between Departments of Agriculture and departments of Education but also included the Department of Health. Some incentive-based programs were influenced by their state's food system policy advisory councils or working groups. In addition to these governmental partnerships, all states also relied on nonprofit partners to varying degrees. Every state has at least one additional program or policy that helps bolster incentive-based programs.

Common implementation challenges were shared among three main actors within incentive programs: state agencies, SFAs, and producers.

Common challenges for state agencies include:
- navigating strict or flawed legislation
- developing administrative systems from scratch
- staff turnover
- connecting SFAs with producers
- reviewing grant applications
- tracking expenditures
- collecting data and evaluation
- conducting ongoing training for SFAs

Common challenges for SFAs include:
- verification and documentation of local products
- finding local producers
- not understanding program rules
- restricted budgets
- staff turnover and labor shortage
- restrictive bill language
- restricting participants from certain groups
- disruptions caused by the COVID-19 pandemic

Common challenges for producers include:
- lack of local food supply and the number of producers
- lack of preparedness of the local food supply chain to handle additional demand for local products
- food safety training and knowledge
- complications in understanding and labeling local products such that they qualify for the incentive programs

Some states have found unique ways to contend with the aforementioned implementation challenges.
These additional supporting program elements, which do not fall into the seven "design elements," have tremendous value and potential to aid in implementation.

Some states have incorporated flexibility, such as:
- reallocating expenses to allow for full utilization of funds
- creating flexible Farm to School incentive legislation
- embedding participatory decision-making.

States have utilized program funding for purposes outside procurement including:
- outsourcing evaluations
- contracting technical assistance
- providing additional funding for SFAs that participate in training

- including one (or multiple) coordinator positions
- earmarking funds for specific target populations
- creating alternative pathways to enter their program with low or no risk by including seed grants.

States have improved structural elements in their programs such as:

- providing or requiring an approved vendor/product list
- embedding programmatic systems within typical SFA routines
- creating standard tracking tools for SFAs
- creating opportunities to provide wrap-around services to SFAs and producers
- supporting producers throughout the data input and verification process.

3. Explicit programmatic goals did not always translate into program designs (and vice versa).

I analyzed how five Farm to School goals were both mentioned explicitly and incorporated into the design of the 15 incentive programs. More than two-thirds of states with incentive programs do not have explicit goals listed directly on their program's website or in the bills that established the incentive. The legislation and websites seldom listed goals that went above surface statements such as "to help offset the cost of schools buying [local] products to serve in their meal system" and did not expand further to discuss the motivations behind encouraging local food procurement. Explicit goals were more often mentioned in programmatic materials such as RFAs, posters, and recorded webinars.

Economic Development was the most prevalent theme among explicit goals mentioned in programmatic materials and by coordinators during interviews. Many state coordinators want their incentive programs to not simply offset the purchases of local foods, but hope that these programs create new market opportunities for farmers and encourage SFAs to spend beyond the value of their state subsidy. Following closely behind economic development, **public health** was the second most commonly mentioned goal. Phrases such as "nutritious," "high quality," "freshly harvested," "improve eating habits," and "improve daily nutrition" were found in the documents about these programs or mentioned by informants during interviews. However, in practice, few policies found ways to explicitly prioritize nutrition and public health through their designs.

Community engagement and equity were infrequently mentioned among the explicit goals incentive programs, but were commonly incorporated through design elements. They were also often mentioned as indicators of success. Most states incorporated this goal through grant scoring criteria and program supports.

Education was not often listed as an explicit goal. However, many states often bolstered education through other synergistic programs and policies. Some states also prioritized educational activities in grant scoring criteria.

The promotion of **environmental sustainability** was the least prevalent among all programs in both explicit goals, design elements, and indicators of success. Only one state incorporated environment into its explicit and implicit goals.

Successes

I looked to see how states were describing the "success" of their programs. Surprisingly, when describing success, informants went beyond listing the kinds of metrics that are typically observed in program evaluations or legislative summaries. For example, informants did not discuss the success of their program based on dollars spent or pounds purchased, but rather on whether their program reached diverse audiences, cultivated relationships, built trust, and engaged the community. Informants saw success when their programs were being fully utilized and expanded over time, promoted culturally relevant foods, improved school meal quality, and built the capacity for partnerships and interagency participation.

Some of the indicators mentioned below have been observed, recorded, and reported by states. Others are harder to measure and have not yet been operationalized. Descriptions of "success" were mostly aligned with principles of community engagement and equity, followed by economic development. These collective indicators can help state program coordinators and nonprofit partners develop a way to view and evaluate the implementation of their incentive programs.

4. There is interest among state officials to create a community of practice.

My research into the literature and conversations with state-level Farm to School professionals called attention to the fact that many coordinators did not know which of their contemporaries were operating similar programs. Many had heard of the longer-standing programs such as Oregon and Michigan, but even officials in those states were unaware that many of their contemporaries had adopted similar incentive programs. Part of this lack of awareness may be because more than a third of the programs were established relatively recently, since 2020. This may also be due to the nature of the work of coordinators and department officials, whose demanding work can create silos within a state's borders.

There is a burgeoning effort, including work by the Michigan State University Center for Regional Food Systems, to intentionally strengthen these relationships through listservs, webinar training, and coordinated meetings between states. There are also nationally-focused organizations and projects, such as the National Farm to School Network, the National Farm to Institution Metrics Collaborative, and a project team at Colorado State University, Ohio State University, and USDA – Agriculture and Marketing Service who are working to understand the impacts of statewide incentives on procurement.

There was a desire from officials to collaborate with others or learn more about: drafting bill language, creating tracking sheets, developing RFAs, conducting evaluations, expanding into ECE sites, working with tribal partners, developing price points for school garden produce, and creating a pool of professionals familiar with Farm to School to review grant applications. To kick-start this process, I attempted to glean tracking sheets, evaluations, and RFAs from each state to establish a repository for interested parties who wanted to observe how other states are implementing their programs. These resources are available in a Farm to School Incentive Toolkit.

Chapter 8: Limitations & Recommendations

This chapter shares the limitations of this research and provides recommendations for two distinct groups: (1) researchers and nonprofit partners and (2) incentive-based program designers, policymakers, and program coordinators.

Recommendations for Researchers & Nonprofit Partners:

1. Create a community of practice.
More work can be done to create a community of practice among agencies with incentive programs. Future projects may be able to more closely review practitioner content to find emergent themes and create guidance on drafting bill language, creating tracking sheets, developing RFAs, conducting evaluations, expanding into ECE sites, working with tribal partners, developing price points for school garden produce, and creating a pool of professionals familiar with farm to school to review grant applications. This report can help practitioners identify potential partners and projects and create a framework for which they base their research.

2. Create a searchable database for incentive program materials.
Much of this research was conducted using secondary sources. Therefore, the level of detail, the evaluation metrics, and the uplifted voices differ in each state based on the available and identified resources. Each state had less robust evaluation material than I originally anticipated at the beginning of this study. To combat this lack of data, I was able to contact a coordinator or nonprofit partner from every state with an active incentive policy. Each informant was very gracious with their time, either providing resources or speaking with me for an interview.

Resources, such as this report, should be viewed as snapshots of these dynamic programs and will not be accurate over time. A searchable database that incorporates evaluations from each state, in which state stakeholders upload relevant materials, would be helpful for individuals that are trying to access similar information in the future. It must be updated regularly to reflect the constant iterations and expansions of incentive programs in order to stay relevant to the evolving and growing trend of Farm to School.

3. Conduct an Analysis of Incentive-based Program Legislation Language & History.
Analyzing the legislative language and the origins of each program with greater care was outside of the scope of this project, but may be valuable for states wishing to adopt incentive programs. During this process, I attempted to find some of the details about the origin of the program, who designed it, and what the legislative process was like to establish them. However, many state program coordinators were either new to their positions or not personally involved in this process, and secondary sources could not provide all the information to these questions. A content analysis of Farm to School incentive bills and interviews with advocacy partners could illuminate a richer story of what kind of language can be more influential for states that are looking for support during their legislative process.

4. Include Food Service Director and SFA-level input.
The perceived challenges and successes used as the basis of this study were often provided from the limited perspective of a state department official. Including the perspectives of stakeholders that are actually impacted by these policies (such as food service directors, producers, or students) was outside the scope of this study. Researchers may wish to dive deeper into understanding how the statewide programs were perceived by food service directors in each state, or how the incentives were impactful on an SFA level.

5. Operationalize this classification scheme to compare state programs directly.
Due to the numerous variables of each program and the diversity of program designs, as each is implemented in different locations at different times under different circumstances, it is difficult to make full comparisons between the programs. This report seeks to tease out possible attributes of different programs and identify trends in experiences, rather than compare incentive-based programs directly with each other. Comparative analyses may be able to further investigate the nuance of varying program designs (observed in this report) and how program attributes affect implementation on the ground.

6. Study the causes and effects.
This report does not attempt to definitively state that specific program design elements have led or will lead to specific outcomes. However, the conclusions and recommendations created from this analysis can provide additional best practices and lessons learned, comparisons between policy design and outcomes, and identify which state programs have outcomes that closely align with different concepts of success. Future research can take a longitudinal and more in-depth approach and may be able to describe the impacts of different incentive programs and the extent to which specific design elements are likely to yield different outcomes while taking into account contextual factors. This research could begin with cohesive measurement criteria that states use to evaluate their programs, which could be used to compare outcomes between states with less variability. For example: Do states with more limited food criteria lead to more nutritional outcomes? Do states with match structures promote economic development more than programs with universal eligibility?

Recommendations for Incentive Program Designers, Policymakers, and Coordinators

Design Process

Conduct extensive research before starting the program.
It is important to understand how an incentive program can complement current Farm to School activities in the state. Conducting research such as a needs assessment will establish a baseline local procurement threshold and understand what SFAs are already purchasing. Designers should also research incentive-based programs from other states to understand the range of available models. Incorporate as many stakeholders into the design process. Stakeholders should be from a variety of disciplines and especially food service directors.

Start small with a pilot program to work through implementation challenges before expanding.

Develop clear goals and bake them into the program.
More than two-thirds of states with incentive programs do not have clear goals listed directly on their program's website or in the bills that established the incentive. Typically, the purpose was simply to offset the cost of local food for school cafeterias. However, understanding what success looks like in your community can give state administrators a guiding star on which to base implementation and evaluation.

Use intentionally flexible language in legislation that encourages incentive programs to be nimble, iterative, and attuned to the evolving needs of stakeholders. Not all unintended consequences and implementation challenges can be foreseen, and feeling beholden to strict bill language was noted by several informants. It is critical that programs are designed to adapt such that they can avoid issues in the future.

Program Supports

Provide technical assistance to stakeholders, either through the authorizing department or by working with partners. Funding partners to provide technical assistance is a bonus.

Embed a funded coordinator position (or several) to implement the incentive program.

Require (and finance) evaluation in the program. If this is not possible for the authorizing agency, evaluation can be outsourced to a supporting nonprofit firm.

Collaborate with partner agencies, nonprofits, and producers in the design, advocacy, implementation, and evaluation of the program.

Design Attributes

Make the program simple and user-friendly for participating SFAs.
Making a program welcoming and accommodating for SFAs is key to genuine, meaningful, and abundant participation. Authorizing agencies can make a program more user-friendly by (but not limited to):

- assisting SFAs with finding vendors, such as with an approved supplier list;
- working through the process of how SFAs become eligible for reimbursement and making it as simple as possible;
- and designing their incentive processes to align with existing SFA processes as to not overwhelm food service directors, such as incorporating incentive reimbursement into the monthly claims process.

Reflect on key programmatic considerations in the design process:

- How does re-allocation work? What happens if there are unspent funds?
- Should there be a cap on the sizes of funds disbursed to sponsors?
- Who defines local?
- Who will be responsible for vetting suppliers or their products?
- How will purchases be reviewed and tracked by the authorizing agency?

Incorporate other local food promotion programs, if applicable, into your incentive design.
This is in reference to local food branding programs, capacity-building grants, and educational programs taught by supporting stakeholders.

Programs that are funded for multiple years (or indefinitely) may be more likely to have greater buy-in from stakeholders, who may be apprehensive to be involved in a new program if it isn't permanent.

Embed professional development.
Find ways to mandate or incentivize ways that promote scratch cooking and menu development.

Consider accessibility and bake equity into programs, with the intention of supporting SFAs, producers, and students in under-resourced communities. See Chapter 6, Incentive Goals & Measuring Success, for more details on ways states have incorporated equity into their programs.

Consider transformational change.
The freedom in which SFAs are able to spend their reimbursement, the incentive rate per SFA, and the program budget can be viewed as indicators of how impactful program funding may be. To what extent will these relationships continue if the incentive program stops? To what extent is the program going to change how students are engaged with local food, and how producers and SFAs interact with one another? What are ways that your infusion of government dollars can not only encourage local food procurement, but change the status quo of school food?

> *"What does it mean to scratch-cook everything and local education connected to the cafeteria? How much will that cost? Because we want every school to actually do it all the way."*

While all of these recommendations may not be feasible for each state's context, results from this report provide valuable insight into the current landscape of Farm to School incentive programs in the U.S. and support their diffusion. We can benefit tremendously from reflection, collaboration, and learning from one another's lived experiences. These lessons can assist future states as they develop incentive programs to understand how existing incentives were designed, what rationale was placed on that decision, and what, if any, challenges have occurred from these decisions. They can also inform the work of agencies that have already adopted incentives as they evolve, expand, and refine their programs. Nuanced differences in each policy can drastically alter how the program is accessed and perceived by Farm to School stakeholders. The decisions one makes in the design and implementation of these programs have the ability to greatly impact the livelihoods of children, farmers, and communities - hopefully - for the better.

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Appendix A. Standard Interview Questions

(In addition to clarification or state-specific questions compiled during the original research process)

Are there existing program evaluation reports they or others have conducted?
Is evaluation baked into your program ? If so, is it also funded by legislation?
What kinds of meals qualify for reimbursement? (CACFP, SFSP, SSO… A la carte, breakfast, lunch, supper, snack, etc.)
How are the programs funded?
Are your programs expected to continue in perpetuity incentivizing SFAs?
Goals
Does your program have clearly defined goals/objectives, and if so what are they?
How are the goals reflected in the program design?
Program Successes
What are some successes or outcomes of this program?
What design elements do you believe are leading to success?
Implementation Challenges
What are some implementation challenges of this program?
How has capacity - either on the state department side, or on the school provider side - influenced the implementation of this program?
Are design elements leading to implementation challenges?
How have you worked to contend with these challenges?
Unintended Consequences
Have there been any unintended consequences in this program?
How have you worked to ameliorate these issues?
Are design elements leading to unintended consequences?
Context
Who (what department, organization, elected official, etc.) initiated the program? In other words, how did the incentive program get started?
How has the existing Farm to School work within the state influenced the adoption and implementation of this policy?
How have other non-farm to school contextual factors (political party, geography, poverty, demographics) influenced the adoption and implementation of this policy?
Who provides support for participating or interested SFAs?
Is there a target audience? (for example, Food Service Directors are the ones that the 30% Initiative flows through; maybe elsewhere it's communicated first to Superintendents?)
Are there existing supporting farm to school policies and programs that align / support this incentive policy?
Has the work of nonprofit and institutional partners helped the success of the incentive program? If so, explain?
Was the existing local food supply chain prepared for the adoption of this program? How has it changed since?
I'd be curious about overall program perception. Do schools feel it's "worth it" to apply?
Design
How was the design of their incentive program created?
What are potential design considerations you would suggest for a state looking to adopt a Farm to School incentive policy?
What is successful about the design elements of your program?

Appendix B. List of Interview Informants

State	Informant Name	Organization Representing	Contact Information
Alabama	Beth Spratt	Department of Agriculture	Beth.Spratt@agi.alabama.gov
California	Nicholas Anicich	Department of Food and Agriculture - Office of Farm to Fork	Nicholas.Anicich@cdfa.ca.gov
Colorado	Becca Boone	Department of Education	Boone_R@cde.state.co.us
District of Columbia	Anonymous	N/A	N/A
Maine	Renee Page	Healthy Communities of the Capital Area	R.Page@hccame.org
Maine	Robin Kerber	Department of Education	Robin.Kerber@maine.gov
Michigan	Nathan Medina	Groundwork Center (former employee)	N/A
Michigan	Colleen Matts	Michigan State University Center for Regional Food Systems	Matts@msu.edu
Minnesota	Emily Mehr	Department of Agriculture	Emily.Mehr@state.mn.us
New Mexico	Alena Paisano	Private Contractor for Education Department	N/A
New Mexico	Anonymous	N/A	N/A
New York	Michele Beaver	Department of Education	N/A
New York	Tara Webster	Department of Education	N/A
Oregon	Rick Sherman	Department of Education	Rick.sherman@ode.oregon.gov
Oregon	Michelle Markesteyn	Oregon State University	Michelle.Markesteyn@oregonstate.edu
Pennsylvania	Patrick Andrews	Department of Agriculture	PatriAndrew@pa.gov
Utah	Kate Wheeler	State Board of Education	Kate.Wheeler@schools.utah.gov
Vermont	Conor Floyd	Agency of Education	Conor.Floyd@vermont.gov
Washington	Annette Slonim	Department of Agriculture	ASlonim@agr.wa.gov

Appendix C. References for Statewide Programs

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