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Farm-to-School in Montana: An Assessment of Program Participation

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FARM-TO-SCHOOL IN MONTANA:
AN ASSESSMENT OF PROGRAM PARTICIPATION

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Montana is a prominent player in the farm-to-school movement with its strong agricultural industry and its leadership in the farm-to-school FoodCorps program. Farm-to-school involves connecting students to food through local procurement, nutrition education, and garden immersion. Many researchers indicate that farm-to-school participation strengthens local economies, improves student health, and creates more cohesive communities, but the financial and logistical challenges of implementation signal the call for stronger policy and funding support. In this professional paper, I build upon previous research to understand the unique outcomes of farm-to-school participation in Montana and to explore the policy and funding needs specific to the state. In particular, I explored the social and economic impact of program implementation by surveying 16 participating K-12 public schools. To assess the perceived social impact, I interviewed food service directors from these districts on their attitudes towards program implementation including the benefits and challenges to participation. I profiled 5 programs by conducting face-to-face interviews with each school's food service director. To estimate the economic impact, I collected local food purchasing data from the 2013-2014 school year and applied a range of economic multipliers to the totaled purchasing number.

The results suggest that the 16 school districts' farm-to-school participation had a positive social and economic impact in their communities. The interviews, profiles, and purchasing data revealed that program implementation supports local growers and businesses, strengthens communities and increases awareness of food. Based on the challenges and solutions that the 16 food service directors listed, this professional paper concluded with recommendations for policy, government decision makers, and grantmakers to further program development.

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ABBREVIATIONS

DOD	Department of Defense
FSD	Food service director
FTS	Farm-to-School
MMFEC	Mission Mountain Food Enterprise Center
OPI	Office of Public Instruction
NCAT	National Center for Appropriate Technology
USDA	United States Department of Agriculture
WMG Cooperative	Western Montana Growers Cooperative

INTRODUCTION

Overview

Montana has long been known as an agricultural state. With almost two-thirds of its land area in farms and ranches, agriculture ranks as one of the state's top industries (United States Department of Agriculture 2013:10). Yet like the rest of the country, over the past half-century Montana farms and ranches have significantly grown in size, consolidated, and exported more products out of the state (USDA 2015a). These larger operations have taken over much of Montana's food production and have forced many smaller operations out of business (MacDonald, Korb and Hoppe 2013). A slow resurgence in small-scale agriculture and local marketing has begun, but more needs to be done to sustain this revival (USDA 2015a). Small to middle-sized farmers and ranchers need viable and consistent channels to sell their products. Accordingly, rural advocates and some economic development specialists increasingly recognize that public schools, which spend millions of dollars on food each year, can serve as this market (McCleay and Barron 2006).

Over the last decade, schools across the nation have developed "Farm-to-School" programs. Farm-to-School (FTS) connects students to food through three main avenues: local procurement, nutrition education and school garden immersion (National Farm to School Network 2015b). As FTS grows in popularity, an increasing number of school staff, parents, and organizations are realizing the value of supporting local producers and providing their students with healthy food (Beery and Joshi 2007; Joshi and Azuma 2009). The FTS movement reaches over 4,000 school districts in the country today (Farm-to-School Census 2011-2012). And, at least 21 public school districts in Montana currently participate, nine of which are affiliated with a service program called FoodCorps (see Appendix A). Researchers elsewhere have studied the various outcomes of FTS programs, including changes in consumption behavior, increases in nutritional knowledge, social benefits and barriers, and economic impacts. The spread of FTS

and the body of research it inspired indicate that these programs are making a difference across the country (Colasanti, Matts and Hamm 2012; Hinrichs and Schafft 2008; Izumi, Rostant, Moss, and Hamm 2006).

Less than a decade ago, in 2006, Montana schools were considered to be a relatively "untapped market" for local agriculture producers, indicating the potential for FTS program expansion (McCleay and Barron 2006:1-1). In their report investigating the capacity for Montana public institutions to buy from local producers, economists McCleay and Barron (2006) found that Montana K-12 schools could serve as a viable market. Since then, FTS participation has grown and expanded in the state through the efforts of school district staff, FoodCorps, local food movement actors, entrepreneurs, and the state government (Farm to Cafeteria Network 2014a). This professional paper explores the impacts that these changes have had, and identifies ways to further support the positive effects and overcome existing barriers.

McCleay and Barron (2006) took a broad approach in their research, looking at the impact and potential for local food purchasing by all public institutions in Montana. Because K-12 schools tend to have tighter, less flexible budgets than other public institutions (e.g., the University of Montana), looking more closely at schools is particularly valuable. (McCleay and Barron 2006). That is, finding solutions to make FTS participation more financially feasible for K-12 public schools can increase the opportunities for local producers to sell their product. Accordingly, the present research investigated both the realized and potential impacts of K-12 public schools' participation in FTS in Montana. Such research can be useful for food activists, FTS stakeholders, and state policymakers for several reasons. First, documenting the effects that participation has had on local economies can provide a more recent and systematic analysis regarding these programs and their community economic development potential. Secondly, descriptive data on the social benefits of program implementation can be used by local food advocates to inform funding allocation, policy development, and program participation (Becker

and Vanclay 2003). Finally, this research aims to build upon the emerging body of literature on FTS program implementation by extending the research to Montana.

School Lunch: The Evolution of Food Procurement

Looking at the evolution of the National School Lunch Program explains why nonlocal foods are often served to students nationwide. Touted as a matter of "national security" following World War II and a way to use agricultural surpluses, the United States government proposed a program to provide school meals to feed malnourished, low-income students (Plemmons 2004:184). Accordingly, Congress passed the National School Lunch Act of 1946 providing lunch to those students in need. Twenty years later, Congress enacted the Child Nutrition Act to expand the program and prioritize funding for low-income student populations (Plemmons 2004). This funding, still allocated today, is contingent upon schools following a set of dietary guidelines for student meals established by the United States Department of Agriculture (USDA) (Plemmons 2004). Each school district is reimbursed for a certain portion of these purchased items based on the number of student meals purchased the previous year. (McCleay and Barron 2006:3-7). For instance, during the 2013-2014 academic year, the USDA reimbursed schools 23 cents for each student meal to purchase USDA commodity items (Montana Office of Public Instruction, School Nutrition Program 2014:15). Some schools participate in the Department of Defense's (DOD) Fresh Fruit and Vegetables program, which also provides reimbursements to each school for purchases of fruits and vegetables (McCleay and Barron 2006:3-8).

Tight budgets incentivize school food service directors to sell as many lunches as possible in order to receive these reimbursements (Izumi et al. 2010:83). Often the need to sell as many meals as possible results in cooks preparing meals that are cheaper, less healthy, and contain nonlocal ingredients (Poppendieck 2010). Further, schools are regularly required to buy the "lowest cost" food items available to them to further stretch their budgets (McCleay and Baron

2006:5-13). Thus, buying fresher, local foods, which tend to be pricier, can be impractical for many schools.

Limited budgets aside, sourcing local food can pose challenges on its own for school food services. Schools use a variety of platforms to purchase their food. Most schools in Montana purchase through the USDA commodity program, as it provides a wide selection of products delivered by large distributors (McCleay and Barron 2006). These national programs are straightforward and convenient; orders can be completed online at the school staff's leisure. On the other hand, buying local produce directly from the grower can be complicated logistically for both school staff and growers as no streamlined system is in place for these transactions (McCleay and Barron 2006:3-4). Furthermore, because Montana is an especially expansive state, smaller distributors do not usually have the means to access the entire region, unlike large distributors already en route to other regions (McCleay and Barron 2006). While McCleay and Barron (2006) spoke of the particular lack of distributors in the state nearly ten years ago, Montana-based distributors have launched and grown since the study. One of those, for example, the Western Montana Growers Cooperative (WMG Cooperative), started in 2003 and has expanded its distribution to six cities in Western Montana (Brown, WMG Cooperative employee, email correspondence, March 21, 2015). While the WMG Cooperative shows that Montanans are responding to the distribution challenges that come with sourcing Montana products, many schools in the eastern part of the state are still out of reach for these distributors.

The affordability, convenience, and accessibility of nonlocal, commodity products make mainstream sources more appealing to food service directors. The USDA commodity program and large food service companies provide simple ordering with a large variety of cheap foods delivered quickly and without issue. Yet, school staff and supporting organizations in Montana and nationwide see the value in buying local food and have made the effort to source these foods in spite of the conveniences of mainstream procurement systems.

Farm-to-School: A School Lunch Revolution

Despite the financial, logistical, and distribution challenges to participation, schools are departing from the accepted norm and implementing FTS activities. Over 20 years ago, schools across the country began sourcing local food, engaging students in healthy eating and in growing food under the "Farm-to-School" moniker (National Farm to School Network 2015a). In 2000, the USDA National Farm-to-School Program was created, which helped expand FTS across the nation. The movement garnered additional government support in 2002 with an amendment to the National School Lunch Act, which urged schools to buy local food (Izumi et al. 2006:169). The results of these efforts are unmistakable, as every state in the country now has at least one FTS program and over 40,000 schools are involved (National Farm to School Network 2015a).

While schools can do a variety of FTS-related activities, they typically engage in three ways: local procurement, nutrition education, and garden immersion (Farm to School Network 2015b). Local procurement includes purchasing and serving locally grown food to students. Schools can connect directly with producers, processors or distributors to source these local food products. Nutrition education can entail in-class education, farm and ranch field trips, and culinary activities, while the immersion component can involve teaching students how to grow fruits and vegetables at school or community gardens (Joshi, Azuma and Feenstra 2008). Some schools also participate by installing salad bars in their cafeterias or running a promotional "Harvest of the Month" program in which they celebrate and serve seasonal foods (Joshi et al. 2008).

Funding

Farm-to-school activities can be expensive to initiate and maintain; therefore, funding is often required. Through its National Farm-to-School Program, the USDA provides $5 million each year in competitive grants to support schools in program implementation (USDA 2015c). Awards are limited to $100,000 per application and a 25 percent "in-kind match" must be identified for those applying (USDA 2015c). These grants support schools in their initiation or

development of FTS activities and the funding is given either directly to the school district or to an outside organization that works with the school. In 2014, the USDA awarded 71 grants to school districts throughout the country with two of those grants given to a Montana school district or a partner organization (USDA 2015b). For instance, Livingston School District received a grant for nearly $100,000 in 2014 to develop the school's FTS program. Among other improvements, the school district used the funding to start an animal husbandry program, expand its school gardens, and create a FTS staff position (USDA 2014).

Montana schools and supporting organizations have applied for a total of 16 grants in the three grant cycles since the programs inception in 2013, and over 30 percent of those applications have been approved for funding. This approval rate is quite high compared to the national average approval rate of 20 percent, suggesting that Montana schools and partners are particularly active in finding ways to grow their FTS programs.

The USDA and other FTS grant programs are undoubtedly valuable for those schools hoping to start or expand initiatives. Still, not all schools have the extra staff or time to apply for these grants, and even those who do are not necessarily approved for funding. Fortunately, other sources of support are available to make FTS activities possible for more schools.

FoodCorps

Thousands of Montana students have benefitted for nearly 10 years from the strong presence and support of FoodCorps, which facilitates FTS-related activities (Montana FoodCorps 2014). Crissie McMullan, a University of Montana environmental studies graduate program alumna, developed the idea for a FTS service program as a project of Grow Montana, a food policy coalition housed at the National Center of Appropriate Technology (NCAT) and involving a variety of food system stakeholders. The FoodCorps program launched in 2006 in Montana (Frederickson 2013; Montana FoodCorps 2014). Mirroring the AmeriCorps VISTA service program, FoodCorps trains volunteers to support FTS activities at selected school or partnering organization sites (Montana FoodCorps 2014). These volunteers can make the initial

connection with local growers interested in selling to schools, a step that is often difficult for kitchen staff to make. They can also promote the school district's FTS program, teach lessons to students on food and nutrition, and engage students in school gardens.

FoodCorps has been pivotal in helping institutions procure locally grown food, prepare fresher foods for their students, and educate about food, agriculture, and health (Montana FoodCorps 2014). In fact, Montana's program has been so successful that it has since grown into a national organization that now serves over 108 sites throughout the country (FoodCorps 2013).

Yet even with the strong presence of FoodCorps, government policy is greatly needed (Kloppenburg and Hassanein 2006). Policy on the state and national level that allocates funding or changes school purchasing restrictions can ease the financial and logistical burdens to buying local food. In Montana in particular, Grow Montana works to establish such policy (Grow Montana 2014). For instance, in 2007, the state legislature passed Grow Montana's bill, which lessens restrictions on buying local food. That is, the bill allows public institutions to buy Montana grown food even when such products are not the cheapest option (SB 328 2007). In 2013, Grow Montana drafted another bill to allot money to schools participating in FTS activities (HB 471 2013). The bill was ultimately tabled, but Grow Montana plans to rework it for future legislative sessions (HB 471 2013). Kloppenburg and Hassanein (2006) hope that with the creation of such policy, FTS activities can become the norm in all public schools.

Data and an analysis revealing the positive impacts of FTS participation on Montana's economy could be useful for Grow Montana as it develops future initiatives. Moreover, describing the social impacts of program participation could further bolster Grow Montana's argument that FTS programs should be supported. Social impact, though difficult to define, is often described as an action or event that results in a stronger, more stable community (Becker and Vanclay 2003). In an industrial food system where more food is produced by large-scale operations, a community's social fabric might be weakened. In such a system, farmers and ranchers are often "absentee" owners who live away from the land and do not interact with the

community (Lyson, Torres and Welsh 2001:320). Consequently, community members become socially and physically disconnected from the people that produce their food. With FTS, however, school staff members connect directly with local growers. Further, with educational activities such as farm field trips, students can not only learn how their food is grown but they can also meet their local farmers and ranchers. Perhaps, then, FTS participation can help rebuild the social connectivity in these communities.

Describing the economic and social impacts of FTS participation could validate the notion that FTS is a valuable program for Montana and should be supported. Tying an assessment of these impacts with an evaluation of the challenges to participation can demonstrate the potential for program growth in the state. If Grow Montana is able to make a strong argument using this analysis, the likelihood that FTS initiatives are passed in the state could be increased and consequently, more schools could be given the resources to participate and those existing programs could be improved.

Conclusion

To further support Montana's economy and the growing small- and medium-scale agriculture movement, more of these smaller producers should connect to public schools in the state. Unfortunately, tight budgets often force schools to buy cheaper food products from nonlocal sources. Because buying mainstream commodity products is convenient and affordable, school staff members are further incentivized to buy them instead of local products. And in Montana in particular, limited distribution makes buying directly from producers even more challenging for schools.

Still, many school staff, parents, community members, and supporting organizations have recognized the value of buying local and participating in other FTS activities, which is demonstrated by the number of schools engaging in the program in Montana. Some schools are supported in their efforts by FoodCorps or through additional funding, while others have

managed to make FTS a part of their food service program without outside support. Undoubtedly, communities in Montana appreciate the benefits of FTS and many people are willing to take the effort to make it possible for Montana schools.

Montana stands as a particularly valuable state to study the impact of these efforts. It's clear agriculture presence tied with a pioneering FoodCorps program and widespread FTS programs makes it especially unique. Montanans are undoubtedly committed to supporting local producers. In this professional paper, then, I detail my assessment of the economic and social impacts of FTS participation in the state. In the following chapter, I discuss past research on the impacts of program implementation and how these studies have shaped my research approach. The next chapter covers the methodology I used, including why I chose the particular scope of research and set of participants. Next, I discuss the results of my research and conclude with recommendations for future action. I direct my research findings and subsequent recommendations particularly to government decision makers, policy makers, FTS stakeholders, and food advocates.

CHAPTER I: EXISTING RESEARCH ON THE IMPACT OF LOCAL FOOD PURCHASING AND FARM-TO-SCHOOL PARTICIPATION

Introduction

Since it first took off in the 1990s, the farm-to-school (FTS) movement continues to grow throughout the country as food service directors, teachers, students, and communities are realizing its benefits. Numerous researchers have studied the phenomenon. For instance, researchers have explored the motivations for participating in spite of the given difficulties to FTS implementation (Colasanti et al. 2012; Hinrichs and Schafft 2008; Izumi et al. 2006; Izumi et al. 2010; McCleay and Barron 2006). Because many known challenges to FTS implementation are likely common, past studies can illuminate the struggles that Montana schools might also face. Fewer researchers have looked at the economic impacts of schools buying local food (Low and Vogel 2011; McCleay and Barron 2006; Otto and Varner 2005; Vo 2009). While local economies are unique, the limited existing research demonstrates the impact of FTS participation in other parts of the country. The following review identifies the collective social and economic impacts of FTS participation and indicates how I shaped my own research.

Economic Impact of Local Food Purchasing

By creating partnerships among schools and farmers, FTS programs can also circulate money back into the local economy (Colasanti et al. 2012). While the economic impact of buying local has been broadly studied, the economic impact that FTS programs have had on local economies has not been explored in depth. Instead, scholars have focused more on the economic viability of FTS programs and the economic impact of direct-sales markets (Low and Vogel 2011; McCleay and Barron 2006; Otto and Varner 2005; Vo 2009).

Farmers' Markets

For instance, Otto and Varner (2005) estimated the economic impact of direct sales from farmers' markets in Iowa. They surveyed consumers at farmers' markets asking them about the

estimated amount of money they spent per visit and the average number of visits they made per season. The researchers estimated the total sales of all vendors per market session by extrapolating from the reported average amount of money spent per consumer per visit, the total number of consumers per farmers' market and the number of visits per season (Otto and Varner 2005). A second survey for farmers' market vendors measured the total sales based on reported vendor sales.

With the results of these two surveys, the researchers estimated that market sales reached $20 million during the 2004 growing season (Otto and Varner 2005:5). To find the economic impact, Otto and Varner used the IMPLAN model to estimate the farmers' market sales effect on total state economic transactions, household income, and job creation. IMPLAN is a matrix of economic factors, which allows the user to alter one factor, forcing the other factors to adjust and balance in response to the change (Otto and Varner 2005:12). With this model, the economic impact of farmers' markets can be estimated by the shifting and balancing of the other economic factors in the state (Otto and Varner 2005:13). Otto and Varner (2005) estimated the impact using direct, indirect and induced economic effects. Direct effects are the total direct sales from the farmers' markets, while indirect effects include expenses that vendors and farmers spent in the local economy to produce and sell their products. Induced effects include the dollars spent by vendors and workers in "indirect industries" in the local economy (Otto and Varner 2005:12). Based on the analysis, over $30 million of sales in Iowa were either directly, indirectly, or induced from farmers' market sales. Using this figure, the researchers found the "gross sales multiplier" or the extrapolated effect of the farmers' market sales on the state economy to be 1.58 (Otto and Varner 2005:13). In other words, they found that a dollar spent at the farmers' market would become $1.58 as it circulated back into the state economy.

Though the analytical methods used by Otto and Varner (2005) are beyond the scope of my proposed research, the economic impact theory used in their research is applicable. Otto and Varner (2005) found that when consumers purchase produce at farmers' markets in Iowa, each

dollar spent adds another 58 cents as it redistributes back into the local economy. Using a similar economic multiplier model, as we shall see, my research aimed to gather the total dollars spent by Montana schools on local food and use that data to estimate how it affects the local economy.

Public Institutions

In McCleay and Barron's (2006) study of the opportunity for institutions to serve as a viable market for local growers, they surveyed 32 institutions in Montana ranging from public schools to hospitals (1-3). They tabulated the total food expenditures of these institutions for the 2004-2005 fiscal year and found that an estimated $32 million was spent on food by these public institutions, and nearly $50 million was spent when including non-public institutions expenditures (3-23). Using this data, McCleay and Barron (2006) argue that if public institutions spent just 10 percent on locally grown food, then $3.2 million would remain in the Montana economy. Further, using multipliers employed by other researchers ranging from 1.8 to 15, they estimated that the economic impact from the above expenditures could range from "$9 million to $75 million" (3-23). The low end of the range they used is slightly higher than Otto and Varner's (2005) estimated multiplier of 1.58. Though, McCleay and Barron used previously existing multipliers, while Otto and Varner (2005) formed the 1.58 multiplier using their own data and IMPLAN software.

Though they did not separate out the economic impacts by type of institution, McCleay and Barron (2006) totaled all food expenditures of each institution. They found that Montana school food expenditures alone totaled an estimated $19 million for the 2003-2004 school year, suggesting that K-12 schools are key potential markets (3-3). Still, this number shows the potential, and not the actual economic impact, as McCleay and Barron (2006) did not find how much of the $19 million was spent on local food products. Thus, it will be useful to analyze the actual economic impact of FTS participation in the state.

Public K-12 Schools

Narrowing the research focus, Kane, Kruse, Markesteyn Ratcliffe, Sobell, and Tessman (2011) looked at the economic impact of local food purchases made by public schools in Oregon. Specifically, Kane and her colleagues (2011) looked at the economic impact of adding seven cents per student meal of local food products. They surveyed two school districts, Portland and Gervais, to include in the analysis an urban school district with an already active FTS program and a more rural district with a less active program. Applying the IMPLAN "input-output analysis," the study involved estimating economic impact using several indicators (Kane et al. 2011:16). As with Otto and Varner's (2005) analysis, these indicators included the direct, indirect, and induced effects of increased local food spending and were tabulated to determine the overall economic impact (Kane et al. 2011). They also looked at job creation due to local food spending. Kane and her colleagues developed a multiplier using the input-output analysis of the expenditure data from the two schools. With this analysis, they found the multiplier to be 1.86 (Kane et al. 2011:27). Further, seven jobs were directly created from local food purchasing.

With the case study approach, Kane and her colleagues (2011) were able to go quite in-depth with the economic impact analysis. For instance, they collected data on the types and poundage of all purchased local food items, which requires that schools provide every local food invoice. Such an endeavor is not necessarily realistic for a larger sample of school districts. Still, the conclusions that Kane and her colleagues (2011) make about the economic impact of local food purchasing informed my research.

Taking a different approach, Vo (2009) looked at the economic *viability* of FTS programs in Oklahoma and attempted to find which economic factors either encouraged or discouraged FTS participation by schools. Creating separate instruments for FTS participating schools and non-FTS participating schools in Oklahoma, Vo's (2009) survey measured numerous variables, including current vendors, FTS participation, district size, the school's food budget and popular foods. Vo examined the correlations among the variables. For instance, district size and FTS

participation were compared to determine a positive, neutral or negative relationship between the two variables. Respondents included food service directors and other knowledgeable school staff (i.e., school nutritionists and superintendents). Vo (2009:44) found that as food budgets increased, so did FTS participation. Only 10 percent of respondents participated in FTS-related activities while only 11 percent reported having purchased local foods. Vo (2009) concluded that FTS implementation, particularly concerning local procurement, hinged on having an adequate food budget.

While Vo (2009) demonstrated the importance of having sufficient funds to participate in FTS activities, the study did not address economic *impact*. Instead, Vo (2009) focused on trends and behaviors dictated by financial constraints. Even so, his research strengthens the notion that many schools need supplemental funds to purchase local foods and to support local producers. Further, the scope of Vo's (2009) research was limited to Oklahoma. And again, because the agricultural environment varies greatly, the economic viability findings might be specific to Oklahoma. Even so, his research can stand as a touchstone to future research.

Economic Multiplier

Building on this study, my proposed research will look at the economic impact of FTS programs specific to Montana. Ken Meter (2011), however, cautions researchers to strongly consider their motivations for using particular economic analysis methods like IMPLAN. Meter (2011:10) argues that fully comprehending IMPLAN results is often limited to experts, and that the application of such results is often misplaced by "economic developers." That is, because the multiplier and the subsequent estimated impact is not fully understood, it can be incorrectly used to warrant development. Meter (2011), suggests instead to use a generic multiplier of 1.3. While IMPLAN is used to estimate "unique multipliers for individual industry sectors," a generic multiplier can be applied more broadly though with less specificity (Morgan 2010:3). As Meter (2011:9) indicates, this particularly conservative multiplier of 1.3 is often used to understand the economic impact in farm communities. He also stresses that collecting and describing basic data

(i.e., total dollars spent on local food) is accessible to a wider audience, less likely to be misunderstood and perhaps more useful to stakeholders. Still, applying a generic multiplier to the total dollar amount found in this research may be valuable for policy developers, though acknowledging the limitations of economic analysis methods will be crucial.

Food Service Directors' Perspectives on Farm-to-School Participation

With increasing support from programs like FoodCorps, Montana farmers and ranchers are being connected with more public schools. Still, numerous studies show the many logistical and financial challenges that schools face when attempting to purchase locally grown food (Colasanti et al. 2012; Hinrichs and Schafft 2008; Izumi et al. 2006; Izumi et al. 2010; McCleay and Barron 2006). These studies surveyed food service directors in various parts of the country, who are responsible for procurement and overall management of school kitchens, making them necessarily involved in FTS program participation. Izumi and her colleagues (2006:170) argue that food service directors are vital to successful FTS implementation. Furthermore, in their analysis of FTS programs, Kloppenburg and his colleagues (2008:450) indicate, "If the food service director does not want the project, it will fail." If they are supportive of and even excited about FTS, then food service directors' enthusiasm can be instrumental in persuading the school at large to participate. Surveying food service directors about their perspectives can thus help shape policy and help FTS program development.

Further, FSDs' perspectives on participation can point to the social impacts of FTS. Beck and Vanclay (2003) argue that social impact is difficult to define. Still, they indicate that a common indicator used to assess the social impact of a particular event or action made in a community is a change in the cohesion and stability of that community. Other common indicators include a change in the well-being of the community members and in the community's political power. For the purposes of this study, "social impact" refers to those positive and negative social changes, or "social consequences," made on an individual, school-wide and

community level (Freudenburg 1986:453). The studies described below point to the many social consequences of FTS participation.

Midwest and Northwest

A study completed in 2010 looked at the motivations that food service directors have for participating in FTS. Izumi and her colleagues (2010) surveyed seven food service directors from programs in the Midwest and Northeast regions of the country. As the purposive sample was small, Izumi and were colleagues were able to employ an in-depth interview process with each participant, interviewing each director twice to explore their motivations.

Izumi and her colleagues' (2010) study revealed a variety of motivations for participating in FTS activities. For one, directors recognize that local food is preferable to the alternative. For instance, they reported that students enjoy the freshness and improved taste of these products. Secondly, the surveyed directors found that local food was actually competitively priced. Because directly buying from a grower simplifies the process, some mentioned that unnecessary costs are eliminated which can lower the price of local food. Finally, the food service directors also mentioned that supporting local growers is a significant motivator. As Izumi and her colleagues (2010:88) note, the seven directors "expressed genuine concern about farmers' livelihood."

While that particular study provides an important look into these FTS programs, its scope is particularly limited. For one, while the sample size enabled in-depth interviews, such a small number limits the variety of perspectives to just seven people. Having more participants can reveal trends and potentially identify unique issues and perspectives. Further, the researchers focused on only the *motivations* for implementation. While motivations often translate to the benefits to participation, explicitly asking about the benefits and challenges can identify the factors that can help improve the development and implementation of FTS in Montana. Thus, my research draws from this study and expands to look at the benefits and barriers to FTS implementation.

Michigan

In another study, Izumi and her colleagues (2006) took a much broader look at food service directors and their perspectives on FTS in Michigan. Adapting a questionnaire from an earlier Oklahoma FTS study, they surveyed these food service directors on their perspectives of FTS programs and purchasing local foods (Izumi et al. 2006:170). Just over half of the entire population of Michigan food service directors participated in the survey.

Ten percent of the food service directors surveyed reported purchasing locally grown food in the previous school year (Izumi et al. 2006:170). Further, seventy-three percent of the food service directors surveyed wished to purchase and prepare locally sourced foods if pricing was affordable and if their current vendors facilitated the transaction (Izumi et al. 2006:170). Circulating money back into the local economy and providing fresh foods were the most frequently reported incentives. And unsurprisingly, most respondents reported price as the main constraint for not purchasing local foods.

While that study creates a crucial starting point for research about the perspectives of food service directors, the researchers surveyed all food service directors, whether or not they were participating in FTS-related activities. Focusing on the attitudes expressed by food service directors who are explicitly participating in FTS, as is my focus here, will help us better understand why food service directors choose to participate, how they implement FTS, and what changes might be useful for future FTS programs.

In a follow-up study, Colasanti and her colleagues (2012) looked at changes in FTS participation by schools previously surveyed in Michigan. The researchers repeated the scope of their previous study and surveyed all food service directors in Michigan. To safeguard for consistency and validity, researchers used the same set of questions from the 2004 survey with a few additional questions asking about "FTS expansion opportunities" (Colasanti et al. 2012).

Echoing the findings from the earlier study, food service directors in the later study were interested in participating in FTS activities if prices of locally grown food were affordable

(Colasanti et al. 2012). Interestingly, four times as many respondents (40 percent) as the 2004 study reported having purchased locally grown food in the previous school year (Colasanti et al. 2012:345). Further, respondents reported supporting local businesses and providing healthier food as the main motivations for buying local food (Colasanti et al. 2012:345). Like the 2004 study, price and federal regulations were the most frequently cited barriers to purchasing local foods. Regarding FTS expansion, respondents reported that ensuring "food safety" and receiving "financial incentives" would motivate them to purchase local food and participate in FTS activities (Colasanti et al. 2012:346). Colasanti and her colleagues (2012) found that food service directors had purchased more local foods since 2004. Colasanti and her colleagues (2012) noted that the low response rate (28 percent) might indicate a response bias, as food service directors interested in FTS activities might have been more likely to respond. Further, because most of the questions were closed-form, Colasanti and her colleagues (2012) reported that attitudes towards FTS might not have been fully captured.

Colasanti and her colleagues' (2012) researched the changes overtime in food service directors' perspectives on local procurement and FTS in Michigan. These changing attitudes are perhaps due to the program's increased popularity in the state and nationwide. Again, this research help shaped my own research. That is, because the use of closed-ended questions discourages participants from elaborating on responses, my research included open-ended interview questions to encourage depth and detail in participant responses.

Pennsylvania

In a similar study, Hinrichs and Schafft (2008) surveyed FTS programs in Pennsylvania to look at FTS participation, food service directors' perspectives of FTS and schools' produce demands. Using a quantitative survey with close-formed questions, the researchers asked about the benefits and obstacles to local procurement, local food purchasing numbers, and food budget limitations. The researchers found that less than 10 percent of respondents were familiar with FTS. Despite the low rate of program familiarity, many food service directors reported

participating in FTS-like activities (e.g., local procurement). For instance, over a third of respondents (35 percent) had featured local produce in school meals in the previous school year (Hinrichs and Schafft 2008:7). Nearly all (93 percent) of respondents felt that local procurement would support local farmers and strengthen local economies (Hinrichs and Schafft 2008:7). Further, 67 percent of respondents indicated interest in purchasing local foods. Still, respondents acknowledged the many barriers to FTS implementation. For instance, "logistical problems," such as lacking sufficient equipment and storage, was the most frequently reported barrier (Hinrichs and Schafft 2008:8).

Expanding on this study, my research will involve interviewing food service directors in Montana using similar methods. Because Montana has a limited food distribution system, the logistical barriers faced by Montana food service directors might vary from the logistical problems identified in the Hinrichs and Schafft (2008) study.

Montana

Looking at the perspectives unique to Montana, McCleay and Barron (2006) surveyed food buyers for institutions such as prisons, schools and hospitals as part of their local food purchasing research. While they looked at the potential for local food to be sold to these institutions, they also looked at the barriers that institutions face when buying local. As the food system is "process-driven" or favoring value-added over raw goods, they found that local growers are often unable to find a market for their unprocessed foods (McCleay and Barron 2006:5-4). In this same vein, they concluded that Montana lacks processor able to value-add these raw products. They also found that due to the state's limited growing season, the types of foods that can be produced and sold to institutions is much smaller than with other states. Moreover, as McCleay and Barron (2006) explain, "Montana's large geographic area and low population base makes it one of the most sparsely populated states in the nation." That is, local food producers do not necessarily have the means to travel to every part of the state to deliver their product, unlike large distributors and food service companies. McCleay and Barron

(2006:5-7) found that the volume schools require further limits many institutions ability to buy local produce and other products. Institutions often demand a quantity that a small-scale producer simply cannot meet. Finally, McCleay and Barron (2006:5-12) unsurprisingly found cost as a huge barrier to local food purchasing. With these challenges, McCleay and Barron (2006) created a list of recommendations for future action. These ideas include piloting FTS programs to demonstrate how they can successfully run and encouraging schools and producers to develop partnerships with other organizations (McCleay and Barron 2006:5-23).

Their research provides an important look into the realized and potential opportunities for institutional local food buying. Because their researched was conducted nearly 10 years ago, the present study explores what program developments have been realized in that time, especially in regard to their recommendations. And again, they looked broadly at public institutions, but because of the unique financial barriers that K-12 public schools face, my research will focus on this type of institution.

Conclusion

These studies show a consistent set of challenges that food service directors face when participating in FTS. Yet despite the logistical, financial and distributional difficulties, schools continue to provide local food to their students and new programs are being developed across the country. The clear persistence in FTS participation suggests that schools and a wider community of local food advocates are motivated to make it happen.

With its rich agricultural setting, strong FTS base, and FoodCorps leadership, Montana stands as particularly unique state for program research. As such, documenting and describing the impacts specific to Montana can be valuable. While previous researchers have estimated the economic impact of local purchasing, either through direct sales from farmers' markets or from general public institutions, such research is distinct by region and institution. In the same way, the motivations and social impact of FTS found by research conducted in other states might not be shared with those impacts experienced in Montana. Thus, researching the perceived social

impacts of participation in Montana can build upon other research and make clear those impacts that are specific to the state. And, an assessment of the economic and social impacts of participation will not only add to the body of literature, but it will also be useful for Montana policy makers, stakeholders, and grantmakers.

Accordingly, I conducted research in the fall of 2014 looking at the economic and social impact of FTS participation in Montana. The following chapter details my methodological approach, including the chosen set of participants, interview guide, and research procedures. Further, I discuss the analytical approach I took for estimating both the social and economic impact.

CHAPTER II: RESEARCH METHODOLOGY

Introduction

A wide variety of scholars and practitioners have argued that farm-to-school (FTS) activities build community and support local economies by helping schools create relationships with and financially support their neighbors (Colasanti et al. 2012; Hinrichs and Schafft 2008; Kane et al. 2011; McCleay and Barron 2006). Yet finances, staff, and time can often limit FTS implementation. Assessing the extent to which participation has an economic and social impact in Montana can help illuminate solutions to these challenges. And, policy makers and stakeholders can use this research to secure future funding and help ease the burdens of participating in FTS. Accordingly, my study attempts to examine the individual and varied impacts that each school district has experienced through its FTS participation.

This chapter covers the methods used for my study, including the chosen participants, research instruments and procedures. Using an interpretive lens, I explored the impacts of FTS participation specific to Montana (Creswell 2009). In particular, my study attempted to answer the following research question:

What are the realized economic impacts and perceived social impacts of public schools' participation in farm-to-school activities in Montana?

Research Objectives

1. To estimate the extent to which local food expenditures made by participating schools affects the local economy.
2. To investigate the social impacts of program implementation as described by participating food service directors.
3. To inform policy makers of current and potential FTS impacts.

Participants

In order to meet my research objectives, I interviewed food service directors (FSDs) from K-12 public school districts throughout the state. Based on their job responsibilities and necessary involvement in FTS, they offer the best insight into their school district's participation. With a complete survey of all FSDs in the state, regardless of FTS participation, I planned to explore why certain schools choose not to participate, which could bring to light the insurmountable challenges to implementation. Such an endeavor requires interviewing hundreds of participants and is therefore outside the scope of this research. Instead, I used a purposive sample of FSDs whose school district actively participates in FTS activities (Marvasti 2004). With this approach, I investigated why and how school districts participate despite the known difficulties, while also explored possible solutions to the challenges. Further, because this study attempted to assess the economic impact of FTS participation, it was only useful to survey those schools known-to-be currently purchasing local food as part of their FTS activities.

A complete list of participating schools does not exist; therefore, I accessed several sources to find school districts that met my selection criteria. Using the recently released United States Department of Agriculture (USDA) FTS census; the Montana FoodCorps website; a survey of FTS-participating schools conducted by the National Center for Appropriate Technology (NCAT); and general web research and networking, I developed a list of 23 K-12 public school districts in Montana (Farm to Cafeteria Network 2014b; Farm-to-School Census 2011-2012; Montana FoodCorps 2014; Roth, email correspondence, October 30, 2014). Some schools may have been missed. The dragnet might have failed to catch schools that do not consider what they do "farm-to-school" or those that are especially geographically remote. Even so, the list in Appendix A is the most complete one as of 2014.

I organized the school districts by size, geographic location, and FoodCorps support to explore trends in the data. These categories are referenced in the follow results chapter. The characteristic categories include:

- Size of district based on student population: small (under 700 students) (n=8), medium (between 700 and 2,000) (n=5), large (over 2,000) (n=3)
- Geographic location: Northwest (n=7), Southwest (n=4), Central and East (n=5)
- FoodCorps support: Yes (n=7), No (n=9)

Instrument

As I needed both qualitative and quantitative information, I designed a 30-question interview guide with both open-ended and closed-formed questions (see Appendix B). The questions were created based on the above research objectives and organized into four sections: 1) FTS participation and goals, 2) food purchasing habits, 3) support, and 4) social impacts. To ensure clear, concise, and cohesive questions, I pre-tested the interview guide on two individuals. I selected one individual generally unfamiliar with FTS and one current Montana FoodCorps volunteer.

The interview guide included an initial set of simple, uncontroversial questions to help set respondents at ease (Clifford et al. 2010). Questions asked about the history of the school district's participation as well as the directors' goals for FTS. These questions were meant to explore the reasons why schools initiated FTS and to identify necessary changes made to the school's food services once participation was underway.

To estimate and describe the economic impact of FTS participation, the interview guide included questions about the specifics of each school district's food purchasing habits. Montana policy makers will benefit from a detailed description and analysis of local food purchases in the state. In particular, data showing the amount of local food dollars that were spent in a school year can show the economic impact of local procurement and further the potential for increased

impact if local procurement is increased and if additional funding is allocated. I chose to collect this data for the 2013-2014 academic year, as it is the most recently completed school year. Questions in this section asked about how the FSD defined "local" when purchasing food, his or her specific sourcing practices, and the types of local foods purchased during the chosen school year. These questions gauged the variations in each school district's FTS practices and procurement methods. Along with asking about jobs that were created in order to participate, this section asked for the amount of money spent on food during the last school year and the amount spent on local food. Though the interview guide asks FSDs to define "local" for themselves, for the purposes of this study and to maintain consistency, I only collected purchases from those food products produced or processed in Montana.

To understand the usefulness and application of existing support and to make suggestions for future funding, the next set of questions asked about the types of support each school district receives in order to execute FTS activities. For instance, this section asked whether a grant was received to pay for extra staff or necessary equipment. Additionally, questions asked about the specific roles that FoodCorps members play in the school's FTS participation. For schools without a FoodCorps volunteer, the interview guide included questions about other types of support that the school receives, such as community volunteers and what FSDs would do with additional support.

In an attempt to measure the perceived social impact of program implementation, the interview concluded with questions covering the directors' attitudes towards participating in FTS. These questions were open-ended to facilitate elaboration and specificity and included probing questions to encourage further detail (Creswell 2008). Questions aimed to understand the aspects of participation that are rewarding or particularly difficult, and to explore possible solutions to prevent or mitigate challenges. This section concluded with questions about feedback from others and relationships that the director or other staff built by purchasing food from local producers. Again, the positive aspects of FTS participation as portrayed by FSDs in

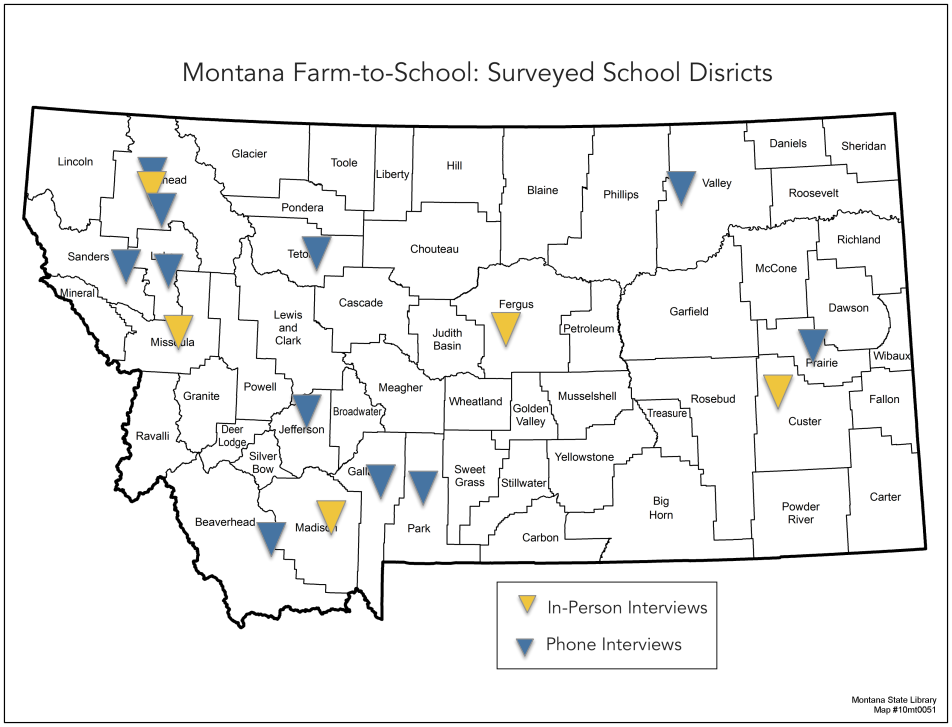
their responses could be used to prove FTS's worth while the negative aspects could be used as leverage for policy changes and funding.

Procedures

To recruit the 23 FSDs, I contacted each potential participant using two avenues. For maximum participation, I sent initial letters or emails (depending on available information) to inform potential participants about the study (see Appendix C). I made follow-up calls to further explain the project and to establish a convenient time to conduct the interviews.

Of the 23 potential participants, 16 agreed to be interviewed. Two FSDs reported that their school district no longer purchased local food, and thus did not meet the selection criteria. Because these two directors did not qualify, the total population of qualifying directors dropped to 21. Three FSDs declined to be interviewed, and two were unreachable after five contact attempts, making the response rate 76 percent. Figure 2.1 shows the final participating school districts.

Figure 2.1: Map of Surveyed School Districts



Profiles

I interviewed the 16 directors to explore the breadth of perspectives on program participation. The interviews were conducted either over the phone (n=11) or in-person (n=5). In order to more closely capture the nuances of certain school districts and their individual attempts to participate in FTS activities, I profiled five FTS programs. I completed face-to-face interviews with the food service directors for these five programs as they allow the researcher to develop a rapport with each respondent and encourage detail in the respondent's answers (Clifford et al. 2010). Further, by meeting the directors at their place of work, I observed region-specific characteristics and the different ways in which school kitchens run at each selected school district. Face-to-face interviews are also ideal for a small sample size, due to their proven high response rate (Kumar 2014). The five school district profiles represent a mix of school size, length of program operation, FoodCorps involvement, and geographical location. The remaining 11 directors were interviewed over the phone, as shown in Figure 2.1.

Data Collection

I digitally recorded each phone and in-person interview in order to better focus on the conversation itself. I read an informed consent script approved by the Institutional Review Board (IRB) to each participant (see Appendix D) before recording began. All 16 participants agreed to be recorded. As many directors did not have the food purchasing information available during the interview, I made follow-up phone calls to retrieve this data. During these phone calls, most of the FSDs directed me to the school district's business clerk to contact for the purchasing information.

Analysis

Upon completing the 16 interviews, each audio file was transcribed. While open-ended interview questions encourage detailed answers, coding and analyzing these responses can be particularly difficult (Clifford et al. 2010). To maintain consistency and validity, then, I used

systematic content analysis. I coded the transcripts to identify themes and conceptual categories that emerged during the analysis. Because of the nature of the interview questions, responses were fairly direct and explicit. To discover, organize, and count the frequency of themes, I used three steps in coding. The open coding step helped bring out initial themes and concepts (primarily manifest content), while the axial coding step involved applying existing themes, combining redundant concepts, and recording new ideas (Neuman 2002). For the last coding step, I applied a final list of established and organized codes to the transcripts.

For the responses related to specific types of food purchasing, I coded answers and entered them into a spreadsheet. The types of food purchased were given codes depending on the food category (e.g., beef = 1, dairy = 2). Each school provided the total amount of money spent on food during the 2013-2014 school year. Schools also provided "local" food purchase amounts from the same school year; however, none of these dollar amounts are complete. Many schools receive local foods through Food Services of America (FSA) or Sysco, but there is no clear way for schools to separate out those purchases from nonlocal food products. Instead, most schools provided numbers from sales with growers, ranchers, or local processors (e.g., Bear Paw Meats). To ensure consistent and accurate data, I used only these "direct sales" numbers provided by each school district. Any estimate or potentially inaccurate information was omitted from the analysis. To add to the direct sales data, I collected additional sales for food produced or processed in Montana from local distributors (e.g., WMG Cooperative), local processors and larger distributors (e.g., Sysco).

With the figure for sales totaled from all participating schools in the 2013-2014 school year, I applied basic statistics to describe the data. To make a more in-depth analysis, I then employed a generic multiplier to the total dollar amount. As discussed, recognizing the limitations and implications of using a multiplier is vital for this study. And, because an economic multiplier has not been established specifically for school food purchases in Montana, I used a range of generic multipliers. McCleay and Barron (2006) use a range in their study, with

the higher multiplier at 15. I chose not to use this particularly high multiplier in my analysis because McCleay and Barron (2006) did not find the multiplier using their own data, but instead used previously existing multipliers. Instead, Meter's (2011) suggested generic multiplier of 1.3 was used for the low end of the range as it is particularly conservative, and I used Kane and her colleagues' (2011) multiplier of 1.86 for the high end as they found the multiplier with their own data. Otto and Varner's (2005) established multiplier of 1.58 will also not be used because it falls within the range of multipliers. While a conservative calculation, the proposed range of multipliers can still be used to make some estimates about the economic impacts of FTS in the state.

Research Limitations

Though these methods provide an in-depth look into the social and economic impact of FTS, there are limitations to this approach. For one, I only surveyed those school districts actively participating in FTS activities. Thus, the viewpoints of those FSDs that choose not to participate are overlooked. Further, because only food service directors were interviewed, the social impact assessment is particularly narrow. The producer's view, for instance, can be hugely valuable in adding to the social impact analysis and in indicating program stability. That is, growers might not find selling to schools convenient or practical. If so, many FTS programs might not be stable, unless changes are made to make the FTS more viable for sellers.

Other perspectives on participation, such as those of students and other school staff, are also missing from this research. If administration approval is necessary to participate, the administrative staff's opinions on FTS participation can be vital for program initiation and development. Further, as students are directly affected by FTS participation, their views can be helpful in further understanding a program's benefits and challenges.

Additionally, while my list of participating school districts might be the most up-to-date, there are schools I likely missed in my search. And as mentioned, the data collection of local

food expenditures is not comprehensive. No school was able to provide every local food transaction that they made. Having a complete list of all local food expenditures would undoubtedly show a greater economic impact.

CHAPTER III: FOOD SERVICE DIRECTORS' PERSPECTIVES AND LOCAL FOOD PURCHASING: RESULTS OF IN-PERSON AND PHONE INTERVIEWS

Introduction

To meet my research objectives, I conducted a study in the fall of 2014 to explore the economic and social impacts of farm-to-school (FTS) participation in Montana. Using a mixed methods approach, I interviewed school kitchen staff to gather quantitative and qualitative data. Interviewing food service directors in particular provides a broader view of farm-to-school participation than simple statistics. The nuances involved in program implementation are not always clear on paper, and interviewing those involved can reveal these subtleties. As such, I conducted interviews in the fall of 2014 with 16 qualifying food service directors (FSDs) (see Appendix A). For five of those, I traveled to selected school districts to conduct in-person interviews.

The interviews highlight the directors' perspectives on program implementation including the motivations for initiating the program, the benefits and challenges to participation, and the relationships developed by purchasing food from local producers. Again, these responses draw attention to the opportunities for further program development. I created profiles for these five schools to contextualize the broader perspectives I gathered from the collective interview responses.

Further, to understand the economic impact of FTS participation, I collected data on each school district's local food purchasing. This data included how food service directors source their food, both local and nonlocal. I also collected information on the specific types of foods sourced locally. Finally, I gathered data on the jobs created or equipment purchased that resulted from local food purchasing and preparation. These data provide a broad picture of the economic impact of local purchasing and the challenges of program implementation.

In this chapter, I describe the results of my analysis. The three components of my research—the interviews, the profiles and the local food purchasing—show different ways in

which FTS participation has had an impact in the state. In the sections below, I discuss the realized and potential impacts that I found from these three components.

Farm-to-School Profiles

The five selected school districts that I profile below represent a range of school district size, geography, age of FTS program, and FoodCorps support. Though the in-person and phone interview guides did not differ, I had expected that the in-person interviews would allow for lengthier and more in-depth conservations. Not all of the five in-person interviews, however, were necessarily longer or more detailed than the phone interviews.

Even so, the in-person interviews were quite valuable. The snapshot of each FTS program that I formed through preliminary research did not always provide an accurate picture. For instance, a school district's size does not always fully indicate how large its central kitchen is or how many hands are involved in preparing meals for students each day. Thus, while not always as in-depth as I initially hoped, the in-person interviews revealed more of the tangible, yet subtle, characteristics of each school district and its programs than did the phone interviews.

To give a closer look at these characteristics, I describe each of the five selected schools and their individual FTS participation below. In these profiles, I detail their responses to the interview questions (see Appendix B), including the process of initiating FTS as well as reported motivations, limitations, and rewarding aspects of participation.

Kalispell

Just 10 miles from the colossal Flathead Lake, Kalispell is situated in the Flathead Valley of northwestern Montana. Of the 16 school districts in my study, Kalispell Public Schools is one of the larger districts with an average 2,000 students eating school lunch each day (Culbert, email correspondence, October 27, 2014). The food service program runs as a satellite with the food prepared in a central kitchen and sent to each school's smaller, individual kitchen to be

served. With a number of cooks at the central kitchen and the individual schools, Kalispell Public Schools enjoys a large team to run its food service program.

With a short three years as the district's new director, Jenny Montague has made wide-reaching, progressive changes to the FTS program. Jenny explained that her desire to make real, positive change in our food system motivates her to participate in FTS activities. After completing a master's program in sustainable food systems, she decided that she wanted to affect the food system in some way: "I was just really hungry to put my ideas in power." With this drive, Jenny's main goal is to buy as much locally produced food as financially possible. She also strives to buy foods that are geographically appropriate: "Local chicken isn't an option for us really." Instead, she looks for products that grow well in Montana, like beef, grains and lentils.

At a Glance

City of Kalispell
- Northwest MT
- 20,000 residents

School District
- 3,000 students
- 10 schools

Free and Reduced Lunch
- 36% of students qualify

FTS Program Elements
- Began in 2011
- FoodCorps
- Local procurement
- Nutrition education
- School garden

(Sources: Flathead County 2014:2; Montana OPI 2015a; U.S. Bureau of Census 2010)

Before she became Kalispell's director, the FTS program was mostly nonexistent. To get local purchasing started, Jenny made some significant changes: "It has brought sort of a scratch cooking theme to a lot of what we do, just because that's required when you're purchasing locally." Along with learning new recipes and cooking skills, Jenny and the district's FoodCorps volunteer developed partnerships with local organizations to make program implementation easier.

Kalispell's location lends itself to many FTS opportunities. Farming and ranching are abundant in the area, and both the Western Montana Growers Cooperative (WMG Cooperative), a local distributor, and the Mission Mountain Food Enterprise Center (MMFEC), a local processor, are within the school's distributive reach. Jenny also partners with MMFEC to create recipes using local ingredients, including a beef-lentil crumble. The school district sources a majority of its beef locally and connects with a local meat processor that forms the beef into

hamburger patties. And amidst dozens of Flathead apple orchards, the school district is able to source nearly half of its apples locally during the school year.

While the school district enjoys many of these amenities due to its location, the program does not run effortlessly. Jenny says that limited time is one of her biggest roadblocks to implementing FTS activities, especially with expanding the program. She often loses sight of her broader FTS goals having to focus more on day-to-day management: "I'm just trying to keep them in mind on a daily basis and hope [they] translate to bigger accomplishments." To help manage FTS activities, Kalispell's FoodCorps volunteer is often the delivery person for smaller producers. She initiates connections with growers, a task that Jenny cannot do: "I don't have a lot of time, but [our FoodCorps member] is oftentimes maintaining that relationship with the producer." She stressed that many of the FoodCorps volunteer's tasks are not sustainable. Even so, while many of the FoodCorps duties are not realistic for Jenny to do, one of the FoodCorps volunteer's goals is to ensure that the program runs once she is out of the picture. She is setting up nutrition education posters in cafeterias throughout the school district and creating a community signup system for school garden maintenance in the summer, for example.

Even with FoodCorps support and organizational partnerships, financial constraints and product availability restrict Kalispell's FTS program. Jenny notes that finding that balance between buying locally with her tight budget and ensuring that local growers are getting a fair wage can be morally challenging. With the many roadblocks that she faces to make her FTS program run smoothly, though, Jenny sets an example for those who can make it work despite these difficulties. More than once, Jenny noted that participating in FTS activities requires just that, participating: "I really feel like anybody can make do with anything. It's just about priorities." Often FSDs are intimidated by all of the logistics, but Jenny says its best to just start purchasing locally and then see what changes need to be made: "Having people in leadership roles with that outlook is just automatic; it makes things happen."

The challenges faced by Jenny and her staff members are overshadowed by the tremendous rewards they enjoy. Along with providing healthier and tastier food to Kalispell students, Jenny says that buying locally improves the quality of the work for her staff. When ordering food products, staff members connect with real people rather than with a computer screen, and positive feedback from students and teachers motivates them to put in the extra work required to prepare local ingredients. Jenny feels that the students and the community now see food service program in a more positive light than before FTS participation began, and while it took time for students to warm to the healthier, scratch cooking, she receives mostly positive feedback from them.

Jenny dreams of having a coordinator who can do many of the roles and duties that the district's FoodCorps volunteer does now. Hiring a full-time employee to do FTS activities is, however, a financial and bureaucratic challenge on its own. Jenny also hopes that state and federal policies will be created to help make FTS activities more achievable for herself and beyond.

Kalispell's FTS program sheds light on how some programs in Montana are currently thriving. Jenny and the food service staff make use of resources by creating partnerships with local organizations and by leveraging FoodCorps support. Though she benefits from extra help, buying local food is undoubtedly a stable element of Kalispell's food service program due to the commitment of its director.

Lewistown

Once a mining town, Lewistown now benefits from a recent growth in the area's agriculture (Central Montana 2010). Like Kalispell, the school district's food service program uses a satellite program, sending hot, prepared food from the central kitchen to individual schools. In charge of the management side of the operation, Lewistown's director, Amie Friesen, oversees 20 employees.

This fairly nascent FTS program began when two Lewistown retirees approached Amie about sourcing local food for her school. She looked into it, verified that food standards could be met, and began making connections with area producers. The district's participation in FTS began in 2012 with Amie buying melons from a producer in Big Sandy, but did not gain momentum until the fall of 2014 when Amie started sourcing most of her beef from a Montana producer.

Amie's main motivation for buying local food is to support the community: "If I want my community to support the school, to pass levies, to be willing to fund us, then I want them to see that we're willing to give back to the community." This reciprocal relationship seems obvious to her. Still, it takes more than one person to make FTS happen. Amie's ultimate goal is to have a school garden where students can learn to grow and appreciate healthy food: "If the kids grow it, they're more likely to eat it." Amie feels that adding the garden piece would greatly improve the program, but thus far she cannot find a teacher willing to take on the project.

At a Glance

City of Lewistown
- Central MT
- 6,000 residents

School District
- 1,200 students
- 5 schools
- 20 kitchen staff

Free and Reduced Lunch
- 56% of students qualify

FTS Program Elements
- Began in 2008
- Local procurement

(Sources: Montana OPI 2015a; U.S. Bureau of Census 2010)

Along with the usual challenges to FTS implementation like the need for increased food processing, Amie finds affording local food particularly difficult. She initially struggled to convince the administration that spending more on local food was worth it. Now that she has the money in her budget, beef prices have increased. Though the beef producer agreed to honor the original contract for the remainder of the year, Amie might not be able to afford local beef if prices continue to rise.

Aside from increasing her budget or having local food prices fall, Amie explained that grant funding to purchase new equipment would be helpful. She buys local ground beef for all beef entrees except for hamburgers, because as she noted, "we can't patty up 700 burgers." But if

the school or a local meat processor received funding to buy a patty machine, she explains that the school could buy all of her beef locally, assuming prices do not increase. Without a FoodCorps volunteer or another staff member with the time to apply for grants, however, funding is difficult to secure.

Even so, Amie plugs along with her FTS program, adding more and more local products each year. While having more staff and volunteer support would help, Amie seems satisfied with buying local products: "I truly think that it's a healthier product." Amie has received positive feedback, mostly from parents pleased that their children are eating well. Amie also stressed several times that buying local puts money back into the community, a benefit that she highly values. Although having enough money to buy local food can often be challenging, she feels that the higher price is worth it.

Amie works on her own to make connections with farmers, convince the school to expand her food budget, and to create new recipes for local ingredients. Though Lewistown's FTS program reveals the consequences of having less support and fewer local food amenities, it also demonstrates that participation can be possible without additional money or staff.

Miles City

A rural community in southeastern Montana, Miles City's western edge touches the Yellowstone River (U.S. Bureau of Census 2010). Amanda McDowall, Miles City Public School's FSD, has spent nearly a decade working for the district's food service program, and like many other small districts, she wears many hats. As part of her job duties, she is responsible for menu planning, cooking and sourcing food for the kitchen.

A combination of factors led to Amanda buying local food for the schools. Not long after she took a class on FTS, local producers approached her about donating excess produce. Upon receiving the donations, Amanda looked into purchasing locally grown food on a regular basis. With her efforts, the school has purchased local food for nearly five years. While Amanda stressed that her community has a very limited number of local growers, she continues to buy

what is available whenever possible. Still, she noted that buying locally is not always steady: "I go in kind of spurts. I have one guy that's really committed to me, and I have one lady that [sells to me] when it's convenient for her." And similar to Amie's FTS goals, Amanda wishes that a school garden could be installed on school grounds, but she does not have the time to take on such a project. Another staff member is needed to make it happen but, as she noted, "I just don't have a committed teacher."

At a Glance

City of Miles City
- Southeast MT
- 9,000 residents

School District
- 1,500 students
- 5 schools

Free and Reduced Lunch
- 39% of students qualify

FTS Program Elements
- Began in 2009
- Local procurement

(Sources: Montana OPI 2015a; U.S. Bureau of Census 2010)

Product availability is unquestionably the main challenge to FTS participation for Amanda, particularly due to the area's short growing season. Availability is further limited by the school year not lining up with the growing season, which constrains Amanda to buying fresh produce for a brief two months of the school year. She considered preserving fresh produce for use in the winter, but limited time, staff and equipment make such a project unrealistic.

Finding producers in the area not only willing to sell but also able to deliver to the school is yet another challenge she faces. Unlike other directors I interviewed, Amanda explained that producers selling to her are primarily elderly people with large gardens who are not always able to meet her volume. Further, she worries that one of her main producers might not be gardening next year: "I mean, if he's gone, what are we gonna do?" Her challenges suggest that the area desperately needs a resurgence in young farmers and ranchers.

Amanda described her FTS program as "meager," because of the limited availability of local products. Still, making do with what she has would be easier if volunteers were available to preserve produce, search for more growers or install and run a school garden. And though she occasionally receives positive feedback from students, she has largely received no comments about the FTS program. Yet, Amanda plans to continue her program because she feels that kids

need to know where and how their food is grown. She also hopes that kids will have a sense of pride knowing that they are eating a neighbor's produce.

Miles City's physical isolation and arid climate explain the district's limited FTS participation. Those few producers in the area are mainly large-scale gardeners. And again, like Amie in Lewistown, Amanda is the sole orchestrator of FTS for her school district: "It's not gonna happen if I don't do it." Though she is modest about her efforts and considering the significant lack of producers in the area, Amanda makes FTS work for her school district.

Ennis

Nestled in a valley below high peaks and surrounding the Madison River, Ennis is a particularly small community in southwest Montana. While any food service program involves a careful balance of hard work and smart planning, the handful of staff members running Ennis' program manage to serve food made from scratch to students each day. And like many of the other smaller school districts, Ennis's director, Tammy Wham, is responsible for both managing the food service program and cooking the food. Partly because of her extensive job duties, Tammy is less involved in the district's FTS program than I observed with the other directors.

At a Glance

City of Ennis
- Southwest MT
- 800 residents

School District
- 300 students
- 4 kitchen staff

Free/Reduced Lunch
- 66% of students qualify

FTS Program Elements
- Began in 2011
- FoodCorps
- Local procurement
- Nutrition education
- School garden

(Sources: Montana OPI 2015a; U.S. Bureau of Census 2010)

For one, Tammy did not initiate her school's FTS program. School districts begin to participate in FTS activities for a variety of reasons, from the FSDs own sense of responsibility to effort made by FoodCorps. In this case, the district's administration made the decision to start implementing FTS: "They just came in and told us to do it." Although Tammy had no say in whether the program itself would happen, she is a well-seasoned staff member of 15 years and was able to place stipulations on the FTS program's operation. If she does not like

some aspect of FTS, she is frank when telling the administration and the FoodCorps volunteer that she will not do it.

To carry out its FTS activities, the school's FoodCorps volunteer works with the Madison Farm-to-Fork program, which grows food for the community in a local greenhouse (Madison Farm to Fork 2014). With this local producer, Ennis School's FTS program seemed to come together naturally. The greenhouse produces fresh vegetables and sells them to the school district. And, at Tammy's request, the greenhouse vegetables must be precut and prewashed before the kitchen will receive them, because adding labor or processing time was not an option for the district. Accordingly, Ennis's FoodCorps member does much of the processing, delivers the food and stocks it in the school kitchen.

Besides the greenhouse, the school is limited to what locally grown produce it can purchase. Ennis is surrounded by ranches, not vegetable farms. The school purchases some local beef, but most of its meat comes from the United State Department of Agriculture's (USDA) commodity program. Tammy's biggest concern with purchasing local food, particularly with beef, is the price: "It's silly to buy it when you can get all of it for free." As her food budget gets tighter, she indicated that in order to continue buying from Madison Farm-to-Fork, prices must be lowered. In the same way, if FoodCorps is phased out and no one is able to prewash and process the vegetables, she said that she will likely not continue buying from the greenhouse.

Tammy noted that she is less enthusiastic about the school's FTS program than the district administration and FoodCorps. Her priority as the FSD is ensuring that the food service program runs smoothly with its limited staff. She admitted, "I'm more focused on the whole picture." She feels that students benefit from exposure to local food and she mentioned that students might find local food tastier than the alternative.

The FTS program at Ennis Schools paints a much different picture than many of the other programs I observed. The director plays a minimal role in the program. Even so, the program itself seems to be successful. The Madison Farm-to-Fork greenhouse works in partnership with

FoodCorps to get as much local produce as possible into the school's cafeteria. And in fact, Ennis Schools stands as a valuable example of a program running without its FSD initiating or orchestrating the program. The program is vulnerable, however, when FoodCorps support is discontinued, because the volunteer plays a crucial role in making the program possible in the Ennis community.

Missoula

In the western part of the state near the confluence of the Clark Fork, Blackfoot and Bitterroot Rivers, Missoula is a particularly large Montana community. With a massive central kitchen, the school district's food service staff prepares ready-to-serve meals and ships them to schools throughout the Missoula county. The well-established program has purchased local foods for many years and runs several school gardens including a newly installed garden at the central kitchen owned by the district. Due to its geographic location, Missoula enjoys many of the same local food system amenities as Kalispell.

At a Glance

Missoula County
- West MT
- 109,000 residents

School District
- 8,000 students
- 17 schools

Free/Reduced Lunch
- 43% of students qualify

FTS Program Elements
- Began in 2005
- FoodCorps
- Local procurement
- School gardens
- Nutrition Education

(Sources: Missoula County Public Schools 2015:3; Montana OPI 2015a; U.S. Bureau of Census 2010)

Ed Christensen, the FSD at Missoula County Public Schools (MCPS), has worked for the school district for the past decade. From the start of our conservation, he stressed that the district's FTS program is about buying what is cost-effective and convenient: "The operation purchases in such a way that we tend to source things as locally as we can. It's how we operate." If buying locally is practical, then the school district will purchase locally grown food. In fact, the district buys a substantial amount of locally grown food. From making pounds of kale into tasty chips to sourcing apples from area orchards, Ed works to make local food a part of daily meals. Motivated by supporting the local economy, Ed stressed the value of putting money back into the community.

When asked how MCPS's food service program changed once its FTS program began, Ed argued, "If it's done right, nothing changes." Scratch cooking was already a part of the school district's food service program before FTS. Further, as Ed pointed out, when food is in season, when it's the best quality and the most abundant, it is usually the cheapest. With these two factors at play, Ed argued that buying local should occur naturally. The school already used unprocessed ingredients, and if local products are cheap while in season, it makes sense for him to buy them. The school district also benefits from FoodCorps support, but Ed has no worry about being able to continue FTS activities if the support ends: "I don't think you should depend on other people to do what you want to do." Again, Ed stressed that his FTS program can and should run organically.

The sheer scale of MCPS's food service program sets it apart from other school districts in Montana. Because of the high volume that the food service program requires on a daily basis, Ed explains that he faces challenges that smaller districts do not: "Have you ever peeled, and I'm not joking, 800 pounds of carrots? No? Well, I have." Processing raw, local food products is no doubt one of the district's biggest challenges. Ed also cited finding enough food products to meet his school district's high volume as a persistent difficulty. He is interested in buying local beef, for instance, but has yet to find a producer that can provide the amount of beef he needs. Plus, the kitchen has to be particular about how local food is processed so that it still appeals to students. Often buying local, unprocessed ingredients requires more labor-intensive preparation like peeling carrots, for example. Ed stressed that in order to be successful as a food service program, the kids can't go hungry: "If they don't eat it and they buy it, it doesn't matter." But, he explained that he has been able to work out some of the kinks to buying and serving local food while also preparing meals that appeal to students.

As far as overcoming the many other challenges faced with FTS participation, Ed had several ideas. Though MMFEC currently processes local ingredients, such as peeling and cubing winter squash, Ed feels that further steps can be made to create value-added products. In

particular, he thinks that certain steps can be taken to increase efficiencies and make local food products more affordable: “Volume solves all your problems.” For example, he suggested that schools could collectively purchase bulk commodity items from the USDA and send them to MMFEC for processing with added local ingredients. Then, schools could buy these value-added goods at a lower price and everybody would benefit: “Tell me where there's a loser there. No. There isn't.” Such an innovative idea might seem obvious, but according to Ed, convincing people to change and to try new models can be difficult.

Despite the challenges faced by such a large district, Missoula’s FTS program seems quite successful. Ed receives overwhelmingly positive feedback for his FTS efforts. While he feels that local food is not necessarily healthier, he believes that it is certainly higher quality, fresher, and tastier. He notes that when schools buy local food, producers benefit, and not just financially. Selling to schools is a quick, reliable, and high-volume sale for area producers, making it incredibly convenient. Plus, Ed has built a working relationship with many growers: “We have a very positive relationship with a lot of these folks.”

The Missoula community is certainly progressive in its efforts to create a sustainable food system, and this shines through with the school district’s FTS participation. Still, Ed stressed that he does not consider what he does a “FTS program.” Instead, he stressed that he simply acts in such a way that he often buys local food for his school district.

Food Service Director Interview Responses: Results and Discussion

Looking more broadly at all 16 food service directors’ perspectives on participation in FTS, my study explored the social systems affected by these programs across the state. Several themes emerged from systematic content analysis of the 16 FSD interview responses. These topics, each described and analyzed in turn below, are organized into 10 main categories: motivations, program initiation, FTS goals, support, benefits, challenges, solutions, feedback, relationships, and program outlook. While the above profiles contextualize the social impact of

FTS participation, these categories provide a more general though comprehensive look into the perceived social consequences.

The 16 FSD's also described their work background and the history of the school's FTS participation. These data show the range and variation of program implementation. On average, the 16 FSDs had worked for five years in the position. While all of the school districts regularly purchase local foods, 10 also provide nutrition education and 11 run school gardens. Unsurprisingly, the school districts with FoodCorps volunteers provide more nutrition education than others, and only one of the eastern schools maintains a school garden (see Appendix A).

Motivations

Exploring the reasons why these 16 school districts decided to implement FTS activities revealed unique and broad motivations. With a median of 7.5 years of work as a food service director, some of the newer directors took on already existing FTS activities, while some had begun the program themselves. Many of the FSDs had been in the position for nearly a decade, and were either inspired to start the program on their own or influenced by someone outside the school to initiate the program. In fact, half of the FSDs reported that an outside person or organization wanted FTS to happen and initiated program implementation. These outside influences include FoodCorps, district administration, community members, and local producers. In two cases, producers approached the school and asked to sell their produce, while a local university helped start the FTS program for another school district.

Those directors who initiated the program themselves cited several reasons for taking on this process. Nearly half of the FSDs wanted to increase awareness and education. For instance, multiple directors wanted students to know where food comes from and how it is produced. One FSD said, "I think kids need to realize that [their

Box 3.1: Common Motivations for Implementing FTS

- Felt personal responsibility to do FTS activities
- Wanted to increase awareness and education of food
- Urged by outside influence to start
- Considered FTS to be practical or convenient

food] doesn't just come from the store." Another director wanted to raise awareness about foods that grow particularly well in Montana.

Nearly half of the FSDs felt a duty to buy locally grown food. As one director explained, "It's my personal believe system that we should be eating healthy, fresh, local." Several directors also began purchasing local food for their schools to support the area economy. Surprisingly, five of the FSDs mentioned that buying local was simply convenient or practical: "It just kind of seemed like an obvious transition to me." As one director reported about purchasing locally, "It made much more sense to me than having beef shipped 1,500 miles from unknown origins." On the other hand, one director who said she is not particularly invested in her FTS program noted, "It's only four months. It's half the year, so we just do it." One FSD reported that when a food product is in season, it makes sense to buy it. That is, in season food is higher quality and more abundant, which he argued should bring down its price. And local food travels fewer miles, which he thought should further lower its price.

Two directors reported that they began purchasing local food to increase the quality of the ingredients they use. As one noted, "when the recall happened with the beef, I thought it was a good leaping-off point for me. I had good grounds to discontinue the commodity beef, and I felt we are in an area where we can procure beef." Four more FSDs decided to buy local products after taking classes about FTS and learning about the steps to begin participating, while two directors were inspired to start participating partly due to FTS's growing popularity.

From a sense of responsibility, to practicality and affordability, the 16 directors began buying local for many reasons. The FSDs who initiated their program can motivate other directors to get involved. Further, the perspectives of those FSDs who did not choose to start FTS participation at their school are necessary to show how a program runs with less enthusiastic people involved.

Program Initiation

For many, initiating a FTS program is not as simple as deciding to do it. Depending on a food service program's operation, buying local can greatly alter the system or hardly impact it at all. One director conducted research to ensure that local food products could meet regulations and standards. That is, to buy local meat, she needed to verify that her local meat processor met the required state certification. Three FSDs sought out local producers that were willing and able to sell to the school.

The majority of the FSDs said that their food service program changed to accommodate the processing of local ingredients. Nearly half also had to learn or develop cooking skills and new recipes while four reported that no changes were made to their food service program. While the steps to initiate might be few for some, others had to put a substantial amount of work into making FTS happen for their school district. As the FSDs indicated above, most of them changed some level of planning, preparation, or management to buy and serve local ingredients.

Box 3.2: Common Steps Made to Initiate Program

- Acquired administrative approval
- Changed meal preparation and planning
- Learned new cooking skills and recipes

Farm-to-School Goals

The 16 directors also reported the goals they established for their FTS program. Nearly all of the directors said that their primary goal is to buy locally produced food whenever possible. Many of the FSDs also have several secondary, long-term goals. For instance, one director's goal is to improve the health of her students while another FSD hopes to increase overall participation to the school lunch program. Further, a handful of the FSD's goals mirror their motivation for participation, to increase education and awareness of locally grown food. One director wished to increase production of the

Box 3.3: Frequently Cited Farm-to-School Goals

- Strives to buy as many locally produced foods as possible
- Hopes to increase education and awareness

school's garden, and another director's ultimate goal is to produce all of the food he needs for his food service program on site.

One director wishes to create a self-sustaining program: "Our goal of FTS is making sure that it's sustained and carried on when the [food service] positions pass hands." In contrast, one director's main goal is to "try to do it as little as possible and keeping everybody happy." Unsurprisingly, this director did not start his FTS program. All of the directors felt that they had succeeded in meeting their primary goals and were working to achieve their secondary, long-term goals. This finding highlights the efforts that FSDs are willing to make to run their FTS programs.

Support

Having additional support to carry out FTS activities can greatly ease the burdens to implementation and can aid program development. And as Montana is the birthplace of FoodCorps, it is no surprise that seven of the 16 districts officially host a FoodCorps volunteer.

Box 3.4: Common Support

- Hosts a FoodCorps volunteer
- Partners with another organization
- Received a grant or other funding

These seven schools hosting FoodCorps are evenly spread by school district size. No school in the eastern and central parts of the state, however, currently receives FoodCorps support and only two of the five southwestern districts have a FoodCorps volunteer.

Three schools have organizational partnerships as a form of support. For instance, one school district works with a local processor to develop recipes that use locally grown ingredients. The school benefits by developing recipes that appeal to students while the processor can be assured that the school will purchase its value-added products.

Five of the 16 FSDs mentioned receiving grants to help purchase equipment to process local ingredients. Three directors receive donated foods from area growers, and perhaps unsurprisingly, all three fit in the small school district category. One FSD, also from a smaller

school district, has volunteers help harvest produce from the school garden. Three schools in the central and eastern parts of the state do not receive extra support of any kind.

As the FSDs indicate, the more support a school receives, the easier FTS participation becomes. The clustering of FoodCorps support in Western Montana suggests that there are opportunities for the program to extend to other parts of the state. Still, three of the 16 schools manage without any support suggesting that extra resources are not always essential, though undoubtedly welcomed.

Benefits

Building an evidence base demonstrating the benefits of participation can show government decision makers and policy makers that FTS is worth funding. Unsurprisingly, the 16 FSDs cited wide-ranging benefits to FTS participation. Supporting the local economy would seem to be an indisputable benefit. It is no surprise, then, that nearly all of the directors mentioned giving back to the community as one of the benefits to FTS. Several directors specifically mentioned that buying local food keeps money in the local community. One director, for instance, mentioned that buying local, "plays a significant role in the economic impact of the community."

Further, many directors mentioned that local growers directly benefit from such a large sale. One director mentioned that growers particularly benefit from the convenience and reliability of selling to schools: "I'm not a huge buyer, but consistent and they know I'll get it. It's easier and better for them."

Most of the directors also mentioned that serving local food increases general knowledge of food and nutrition. For instance, one director said, "there's a better awareness of real food and where food comes from, from students, and from staff, for that matter." Further, five FSDs felt that students are more likely to try local foods: "I think kids are more apt to eat or try the vegetables if they know that they came out of somebody's garden rather than from the store."

Nearly half of the directors felt that buying local food improved the reputation of their food service program. For instance, two FSDs mentioned that food services have a negative stigma associated with them, but by buying local, the community sees it in a more positive light: "It's important for the community to see that the school district is working hard and doing extra to make sure their kids are getting healthy and nutritious meals."

In addition, nearly all of the directors felt that local food is higher quality than nonlocal food. Several mentioned that local food tastes better and is fresher. As one director said, "The kids notice when you have food that tastes good, food you've cooked yourself." Nearly half of the FSDs also mentioned that local food is nutritious: "I know that our beef is healthier because we know where it came from." In contrast, two FSDs felt that while local is a higher quality product, it is not necessarily more nutritious.

Box 3.5: Common Benefits

- Keeps money local
- Increases awareness and education
- Encourages students to try new food
- Provides higher quality food to students
- Improves food service program's reputation

Four directors reported that buying local creates a sense of pride for those involved. For example, one director noted about parents: "It's a feeling of pride about feeding their kids school food." Two directors reported that the quality of their work has improved with buying and preparing local products. As one noted, "it adds a level to your program when you're not just a lunch lady."

Further, as local residents are necessarily involved, three directors mentioned that buying local strengthens the community: "There's a general community building effect." Only one mentioned that buying local creates jobs, while two FSDs felt that buying local is better for the environment as fuel use and fossil fuel emissions are reduced. Another director mentioned that her work has inspired other schools to participate.

Again, these FSDs give testament to the many benefits to FTS participation, which stretch beyond just economic and social rewards. The fact that all involved benefit in some way, including the "lunch lady," suggests that FTS *is* worthwhile.

Challenges

Despite the numerous benefits of program participation, implementing FTS activities is unquestionably challenging. In fact, the 16 directors cited 18 different challenges. While many FSDs reported similar challenges, some mentioned individual roadblocks unique to the school's size and geographic location. Over half of the directors mentioned, for instance, that product availability does not match their school's need. Directors from the larger school districts said that the volume of food they require limits the number of producers who are able to provide for them. Those directors in the southwest and eastern part of the state mentioned that due to a lack of farmers in the area, local food is hard to procure. In reference to buying local, one of these directors said, "the hard part is that we don't have a lot of opportunity." Another noted, "I can't find anybody besides Joe and the one lady that will give me some leftovers sometimes." Three directors also mentioned that food availability is further limited by the school year not aligning with the growing season. In the same vein, six directors mentioned that they are limited in buying local food by their area's limited growing capacity: "Around here we're limited on vegetation so it's hard to participate in FTS year round."

Predictably, almost half of the directors reported that their food service program's limited budget is a challenge to FTS implementation. Many directors specifically said the higher price of local food makes choosing those products over more affordable commodity products difficult to justify. And, one director mentioned that prioritizing the budget to make room for local purchasing is a

Box 3.6: Commonly-Cited Challenges

- Local growers cannot meet school's volume
- Budget limits FTS participation
- Nonlocal food is more convenient to buy
- Local food cannot always be delivered
- FTS activities require too much of FSD's time

constant struggle.

Nearly half of the directors reported that the alternative to local food is more favorable. For one FSD, he noted that larger food service companies deliver more frequently and with larger quantities, which simplifies planning and storage. Other directors noted that buying through these mainstream food service companies is a more reliable and consistent process: "I get carrots everyday coming in from FSA, Sysco, wherever I want to get them, and [at] the quantity I want." Three directors also mentioned receiving food from a local producer that did not meet quality standards: "I think it's just the fact that produce shows up at your doorstep not looking exactly like what people are used to or what it looks like in the grocery store." Food service staff members do not have the time to handle inconsistencies or surprises in the food products they need: "We need a product and the quantity that we need and the form we need it at and we need it right now." Another director also reported that it is not always as efficient to work with a real person to order food than with a computer, which is often the case when ordering through larger distributors and food service companies.

Nearly half of the directors also said limited distribution is a significant barrier to buying local food. One director from an eastern school district noted that due to the school's isolation, she worries about local produce going bad during the transportation phase: "I used to get eggs, but we ran into problems with quality because [the producer] is so far away." Several other directors mentioned that particularly small-scale producers are often unable to deliver to schools, which results in a school staff, often the FoodCorps volunteer, handling the delivery.

Six of the FSDs reported that they struggle to buy local because of limited time. That is, finding the occasion to plan, find producers, and develop new recipes can often seem impossible. Still, only three FSDs said that processing local ingredients is challenging. Other directors reported that because their food service program already employs scratch cooking using unprocessed ingredients, preparing local ingredients required the same amount of preparation.

Nearly half of the directors said that managing FTS activities is a challenge. Several directors each noted that FTS only occurs at their school because of their efforts. Two directors specifically mentioned that it is difficult for one person to make FTS happen: "I do think that one person can't make all these changes on their own." Many directors noted that the top priority is successfully running their food service program: "I'm just trying to get the kids fed." Often FTS activities become less of a priority for food service staff. Still, another director mentioned that the only barrier to FTS is good management, and that if smart systems are in place, FTS should be possible.

Three FSDs reported that learning new recipes and skills in order to successfully prepare local ingredients is a barrier. One FSD said that he had to figure out the logistics of preparing and serving a new local product, while another director reported that motivating staff to learn new skills is difficult. For two FSDs, certain local ingredients were completely new to them, and they had to experiment with new recipes: "It's hard trying new stuff and not knowing what you should do."

Three FSDs also reported that standards and regulations limit their FTS participation. For instance, two directors reported that a local meat processor did not meet the required certification and therefore, was not a feasible source for local meat. Three more directors reported that local food is not always as popular as the alternative. One director noted, for example, that many students miss the processed items that the school used to serve more regularly.

One FSD worried that buying local food might show favoritism. She mentioned that because there are only a few ranchers in the community, she does not want to choose one and offend the other: "What if you start dealing with one rancher and getting all your meat from him and then another guy is mad about it." Another director reported that finding and connecting with local producers is a struggle. Unsurprisingly, this particular director's school district is in the eastern part of the state, a more isolated region. Further, the district does not host a FoodCorps

volunteer who can often make the initial connections with local growers. Interestingly, this same director was the only participant who reported that her budget was *not* a challenge.

These varied and numerous challenges illustrate the many roadblocks to full FTS participation. FSDs are often faced with limited budgets, product availability, and distribution when seeking out local food products. While some of these difficulties are not easily fixed, many underscore the need for bureaucratic, infrastructural and financial solutions.

Solutions

The 16 FSDs suggested 20 different solutions to prevent or mitigate some of the difficulties mentioned above. While many solutions to the challenges of FTS implementation seem obvious and at the same time unrealistic, others seem hopeful. For instance, four directors said that they manage the high price of local food by balancing it with commodity foods. That is, ordering a high value product, such as meat, through the USDA commodity program creates more room in the budget to afford pricier local food products.

Nearly half of the directors felt that having more staff to do FTS activities would make up for the directors' limited time. Several of these directors mentioned that extra staff could help with the added processing that comes with preparing local food. Two directors also wished that a teacher in the school would be willing to install and run a school garden. In the same vein, two FSDs mentioned that having volunteers to help with food preparation would be useful. Unsurprisingly, none of these directors have a FoodCorps volunteer on site.

Box 3.7: Common Solutions

- Offset local food costs by purchasing commodity foods
- Add employees
- Acquire processing equipment
- Increase the number of local processors and packers
- Improve management
- Receive extra funding

To further ease the burden of added processing, three directors felt that having extra equipment would be beneficial. Three also mentioned that acquiring funding through grants

would help along their FTS program. Extra funding could be used to purchase necessary equipment, for example. Two others noted that increased opportunities in the area for value-added processing could solve the problem of processing local ingredients. As one director suggested, if local food could already be processed, he would be more likely to buy it.

Four directors noted that better management could help alleviate many of the challenges to participation. And in fact, a few of these directors have already made management improvements. For instance, one FSD works out the kinks with connecting with and ordering from local growers. Once the process is established, she passes the work on to her staff, leaving her more time to do other management duties. One director mentioned that creative management is key while another remarked that keeping goals and tasks simple is essential.

A few FSDs felt that learning new cooking skills and recipes would help with preparing local and sometimes unfamiliar ingredients. One director thought that if she started experimenting with recipes in small batches, then she would be more confident making them on a larger scale for her students. Another mentioned that figuring out which vegetables need to be processed can eliminate unnecessary labor: “I don't think lots of things need to be peeled.”

A handful of directors also said that receiving extra support from staff and students would be beneficial. For instance, one director mentioned that people at the school, including students, are generally ambivalent to FTS. If he received some words of encouragement or signs of interest, he said he would be more motivated to continue engaging FTS activities. Another director said that having an enthusiastic and supportive administration would help motivate her as well.

Two directors suggested that improvements to the local distribution system would help resolve the problem of limited food access. For both, having a producer able to deliver is key: “Delivery is something that we’re trying to work on and get a little more wiggle room with our producers.” Both directors host a FoodCorps volunteer, which might indicate that each director buys from certain sources only because the volunteer is able to pick up the food.

Three more directors noted that extending the growing season could increase product availability. One director, for instance, mentioned that having a greenhouse on site could lengthen the kitchen's access to fresh produce during the school year. Two directors said that if they were able to can and preserve produce then they could use local products in the winter. As expected, both of these directors are in the eastern part of the state, too far to purchase processed items from MMFEC. Two directors from smaller school districts and without FoodCorps support mentioned that increasing the number of local producers in the area would be beneficial.

Two directors suggested that to manage financial limitations, local food prices should be lowered. Another director mentioned that creating or expanding partnerships with other organizations could allow the school to share resources and help spread out the burdens. Two other directors felt that if the administration could be educated on why buying local is worth the extra cost, their districts might be willing to increase the food service program's budget. One director also mentioned that state and federal level policies to increase funding opportunities could help with program development. This director hopes to add a FTS coordinator, but she noted, "I would need some support that came from somewhere else to try and get my finance manager to believe that [buying local] was a valid thing for the school district to be doing."

As these directors suggest, sharing knowledge, resources, and partnerships is often necessary to making FTS participation happen. Finding ways to increase product availability, lower costs and minimize processing can make participation more manageable. Even so, support on a government level is also needed to make some of the above solutions feasible.

Feedback

As two directors noted above, receiving feedback can help motivate staff to participate despite the challenges. Further, feedback from students, staff, and the community can both validate the above benefits and demonstrate the social impact that FTS has had in a particular area. Still, nearly half of the FSDs reported that they had received little to no feedback from students. Several directors said that students are ambivalent to the school's FTS program or

whether or not the food they eat is local: "I really don't get any feedback and I don't get any demand." Interestingly, most of those particular directors do not have school gardens or nutrition education as part of their FTS program. This gap might indicate that participating in all of the three components of FTS, procurement, education, and immersion, is key to creating both awareness and excitement around local food. One FSD received negative feedback from students about the new, less processed local food entrees. She explained that she received backlash when she had to decrease portion sizes with the local, more expensive beef she now purchases. Even so, three directors mentioned that they had received positive feedback from students. As one director noted: "A lot of the parents are saying that kids were coming home saying the food is great here."

Five directors said that they had received positive feedback from parents about their FTS efforts. Several noted that parents are pleased knowing their children are fed healthier, fresher foods: "Lots of parents were happy about their kids eating local beef that doesn't have hormones or all of the vaccinations." None of the directors reported receiving negative feedback from parents. Nearly half of the directors received positive feedback from the community. As one director noted, "I've had nothing but support from the community." Another director mentioned that community members like knowing that the school's money is spent well. On the other hand, three directors said they had received no feedback from community members. One director in particular mentioned advertising her program in the city newspaper, but did not receive any feedback about the article.

Box 3.8: Common Feedback

- Community supports school's FTS program
- Parents happy that their children are fed better food
- School staff positive about FTS participation

Two directors had received positive feedback from staff, including from administration and teachers. One said, "I've gotten a ton of support from the staff from the school itself." Two more directors said they had not received feedback from the school. As one director noted, "I'm not seeing a lot of interest from other areas of the school." One director mentioned that the only

feedback she has received was a thank you note from local producer for buying his product. On the other hand, another director said that she has received positive feedback from beyond her community: “From the FTS world, we've gotten a lot of support.”

Though some directors received little feedback from anyone, many received positive comments from staff, students, and the community. For those directors receiving little to no feedback, it seems that finding ways to promote their FTS program would likely help increase awareness and incite those benefitting from FTS to provide feedback.

Relationships

Directors also reported on whether they had developed relationships with local producers as a result of buying local produce. Beyond the health and economic benefits mentioned by the 16 directors, building relationships with local growers might indicate a social benefit of FTS participation. That is, strong professional and personal relationships between schools and producers can indicate a sustainable community. As one director noted, “Relationships [are] a huge part of it.” Nearly all of the FSDs felt that they had built positive relationships with growers and processors.

Nearly all of the directors felt that they could rely on their local producers. Many mentioned that a level of trust exists between the grower and the school: “They're very dependable.” Another director mentioned, “They try to give me the best of the best.” Six of the directors each said that they work with the local producers to help each other. That is, several directors said that they work with the producer to make sure that the sale makes sense on both ends: “It’s very different than working with FSA or Sysco because you're working with a person. If you say you're going to buy from them, you buy from them because they're relying on it.” One director mentioned that she works with a local producer to find out what is available and adjusts her

Box 3.9: Commonly-Cited Relationships with Local Producers

- Trusts and relies on local producer
- Collaborates with producer

menu accordingly. Another director mentioned that he had worked with a local grower to promote FTS: "It's neat for them too because people buying their product are like, 'Wow they're growing carrots for the school and those are the same ones I buy for my family.'"

Half of the directors reported that they had developed a level of familiarity with the producers that sell to their school. One mentioned being on a first name basis with a producer while another mentioned receiving a holiday card from a grower. Two directors said that they had developed a friendship with the farmers: "It's not just a business relationship. I've actually become friends with the farmers I deal with directly."

The positive relationships described above between school staff and producers suggest that FTS participation has had a social impact on local communities across Montana. Instead of interacting with a computer to buy foods, school staff members connect with a real person who actually grows the food for the school. Again, these relationships indicate that FTS participation has many benefits beyond the obvious.

Program Outlook

Though all of these directors participate in FTS, not all initiated their school's program. Thus, reporting on whether they are content to participate in FTS might help forecast the programs stability. Nearly all of the 16 directors said that they were glad to participate in FTS activities. Several directors specified that buying local and spending more on local food is worth it. As one FSD noted, "this is just what it should be, what is normal."

Two others reported that they are indifferent to the school's participation. One of these directors felt that her program is not substantial, making her apathetic about its continuation. The other director did not initiate the program, but was told by administration to start. One director mentioned that he is not happy to be participating: "The costs outweigh the benefits." Predictably, this director also did not initiate the program at his school district.

These attitudes speak to the benefit of having the FSD fully committed, as they are instrumental in making the food service program run for their school. If challenges are mitigated

or eliminated by creative solutions, however, perhaps even those FSDs less enthusiastic would be on board. Still, that nearly all of the FSDs said they were content with doing FTS activities at their school suggests that these programs are stable.

Conclusion

The FSD's perspectives detailed above reveal the many perceived social consequences of FTS participation. Several of the directors participate because they want to give back to the local community and others want to provide healthier foods to their students. Further, many expressed the satisfaction they felt with buying local food and with knowing that the community appreciated their work.

And while many of the FSDs reported receiving little feedback from staff and students, the relationships they had established with growers and processors are more indicative of a realized social impact. That is, creating more positive relationships between community members can result in a more cohesive community. Moreover, because the agriculture revival in Montana will further progress if more schools and farmers are connected, these findings show that the process can be socially beneficial to schools. What is more, school staff might receive more feedback from staff and students if promotional and educational activities are available.

The long list of challenges and solutions suggests the need and potential for program development. For instance, many FSDs cited distribution, limited time, and financial constraints as the most difficult aspects to buying local. These challenges underscore the gaps in support and funding. Nevertheless, all 16 directors continue to buy local foods despite these challenges, even the few who are not fully invested. Again, these perspectives underline the potential for growth in FTS program development. The rewards of FTS can motivate those schools hoping to participate. And, schools that manage to participate given the many difficulties can stand as proof that it is possible despite the challenges. Additionally, the 16 directors mentioned more solutions than challenges. These varied and numerous solutions can be used to expand the program for those already participating. To encourage program development, increase

participation, and prevent apathy with those involved, the recommended solutions made above need to be considered.

Sourcing, Expenditures and Economic Impact: Results and Discussion

To assess the economic impact that school districts' local food purchasing have had in Montana, I gathered information about food expenditures, sourcing practices, and other necessary expenses made to initiate or maintain a FTS program. Data on local food expenditures was used to estimate how much money is staying in Montana communities. And, tracking the sourcing habits highlights the variations by school size and location. The data I collected exposed trends in purchasing, for instance, for those schools situated in the Northwest where many farms and food processors are located, while it also uncovered the gap in available resources for those more isolated school districts.

'Local Food' Defined

These geographical constraints and advantages can explain how FSDs define 'local' as they source food for their schools. In general, how one defines 'local' can be a divisive topic, particularly in such an expansive state like Montana. Those school districts in the western part of the state are physically closer to Spokane, Washington, than they are to farms in the southern or eastern parts of Montana, for instance. With these western schools in consideration, should 'local' food cross state boundaries? One food service director felt that food should be sourced from physically closer places rather than being limited by state borders. The question of how 'local' should be defined is further complicated when the economic impact is considered. Though food produced in another state might be considered 'local' because it is physically closer, buying products from these areas is not necessarily contributing to Montana's economy. In spite of these controversies, how a school defines 'local' reveals what motivations, whether economic or otherwise, influence their chosen parameter.

Each of the 16 directors provided his or her definition of 'local' food. Three directors define local as anything grown or produced in Montana. One director from a northwest school district counts regionally produced food as 'local.' Again, this director might choose such a parameter because Idaho and eastern Washington are physically closer in her case than eastern Montana.

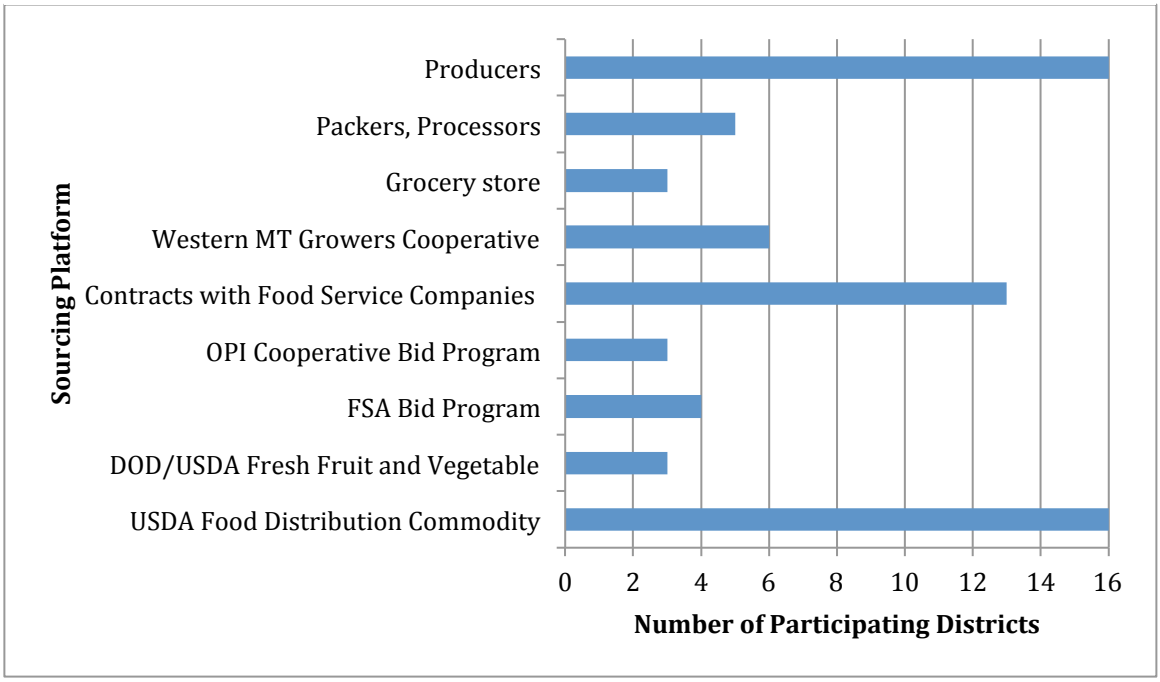
The remaining 12 directors use a tiered approach, where they prioritize buying food products within a certain mile range then they expand from there if necessary. For instance, one director gives first preference to products grown in his town, a range of a few miles. Next, he looks for Montana grown products and then he will consider regionally produced foods. On the other hand, three of the directors in the eastern part of the state each gave quite a large mile radius for their top preference. For instance, one director's first choice is products grown in her school district's county and the next county, a range of nearly 100 miles. This preference is unsurprising considering farms and ranches are significantly more spread out in the eastern part of the state (USDA, Census of Agriculture 2012).

Though one director regards regionally produced food as 'local,' the remaining directors only consider products grown in Montana and prefer food from even closer sources. These preferences might indicate that FSDs wish to support their communities and local economic systems.

Sourcing

How schools source both local and non-local products reveals geographic-specific patterns. For instance, the Western Montana Growers Cooperative (WMG Cooperative) only distributes to the western part of the state. Because the eastern part of the state lacks a similar local distributor, school districts in this area must source their food from larger distributors and food service companies.

Figure 3.1: School District Food Sourcing Practices



As shown in Figure 3.1, the 16 school districts use a variety of avenues for purchasing food. All of the districts purchase food items through the USDA commodity program, which provides an assortment of products from an online menu that are then delivered by large food service companies. Some of the schools also participate in the Department of Defense's (DOD) Fresh Fruit and Vegetables program which reimburses schools for a portion of the money they spend on fresh fruits and vegetables (McCleay and Barron 2006:3-8). As shown in Figure 3.1, four of the schools use the Food Service of America's (FSA) bid program, while three use OPI's state-run bid service program (Montana OPI 2014). Many of the schools also individually contract with food service companies while some of the smaller schools purchase some items from local grocery stores.

Some food products delivered by FSA and Sysco are Montana-grown, though they are not necessarily or clearly distinguished from non-local items (Baxter, Sysco employee, phone correspondence, March 10, 2015). All of the directors purchase a portion of their local food products directly from the producer and all of those in the northwest region use the WMG

Cooperative to buy at least some local products. Five of the directors also purchase items directly through a local packer or processor, including Mission Mountain Food Enterprise Center (MMFEC).

The location and size of each school district explains some of the variations in sourcing. The especially small school districts with only a few hundred students source some food from grocery stores, a source that cannot meet the volume needed by larger districts. Further, most districts in the western part of the state have access to a local distributor, WMG Cooperative. Even so, more of the schools used large distributors and bid programs to source their food, likely because of the consistency and convenience of these options.

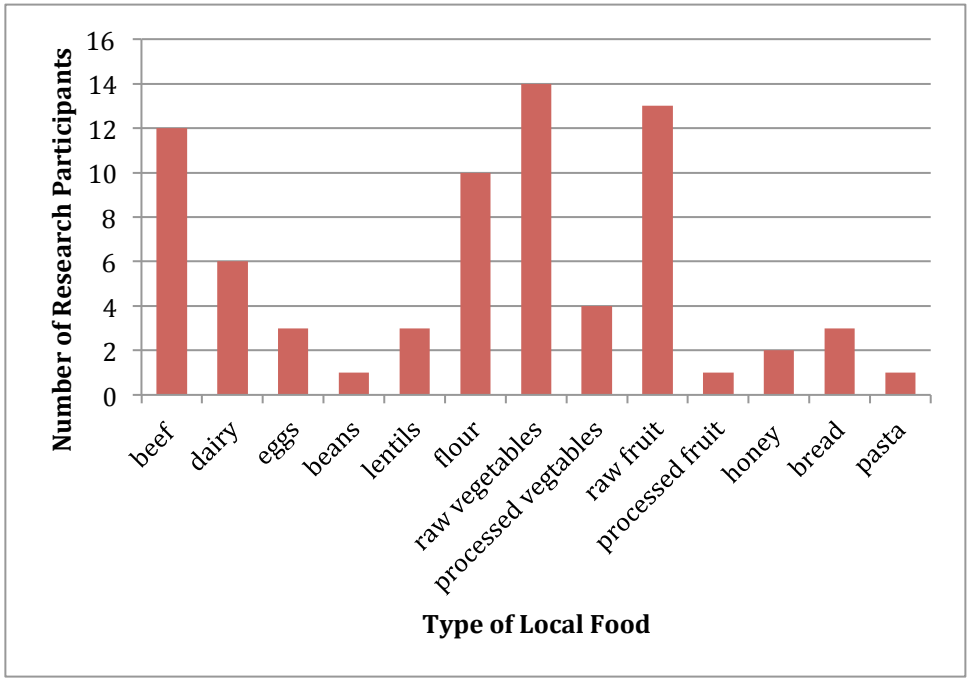
Purchased Local Food Items

Montana's widespread landscape gives rise to a variety of climatic zones and agricultural resources. Nearly half of the 16 school districts are situated in the western part of the state where WMG Cooperative and MMFEC are located. The northwest region of Montana also enjoys a high concentration of farms, while the farms in the central and eastern parts of the state are much more widely dispersed (USDA, Census of Agriculture 2012). In Flathead and Lake County alone, where four participating school districts are located, over 2,000 farms are currently in operation.

To show trends in local food purchasing, directors reported which types of local foods they bought during the 2013-2014 academic year. Though each director provided her own definition of 'local' food, for the purposes of continuity I include only those food items purchased that were grown or processed in Montana. During the 2013-2014 school year, the FSDs purchased 13 different types of local food products, as shown in Figure 3.2. Nearly all of the schools purchased raw fruits, vegetables, and beef, while over half bought flour. As Figure 3.2 shows, only four schools in the northwest region purchased lentils and beans. A handful of directors bought processed grains like bread and pasta, and only two purchased honey from an

area producer. Only a few directors reported buying eggs locally and none reported buying poultry from a local source.

Figure 3.2: Number of Participating Schools that Purchased Certain Local Food Items in 2013-2014 Academic Year

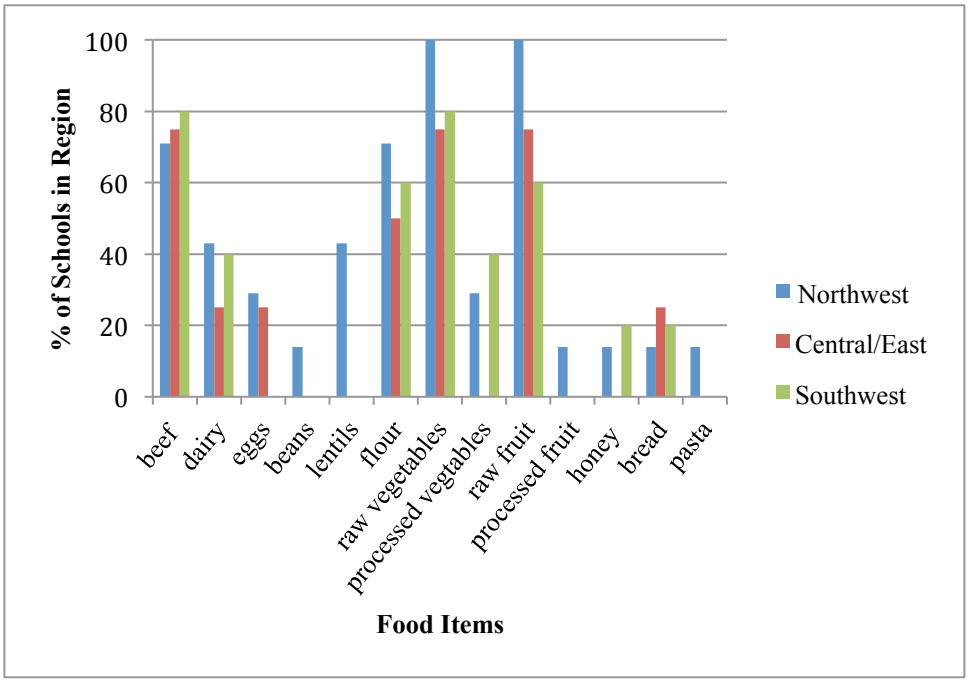


On average, school districts purchased five different local food products during the 2013-2014 school year. The Kalispell district purchased the most with seven products, and the Dillon and Terry school districts purchased the least with only one local product each. On average, schools in the northwestern part of the state purchased six different local products, while schools in the southwest purchased four. Those in the central and eastern parts of the state purchased an average of three local food products.

Figure 3.2 shows the most frequently purchased food products: raw vegetables, fruit, beef, and flour. Interestingly, the more predominant products are fairly spread out by geographic location and district size, though slightly more schools in the northwestern region bought fruits and vegetables, as shown in Figure 3.3. The less common products are limited to north and

southwestern Montana. As Figure 3.3 also shows, no schools in the central and eastern regions purchased legumes, processed fruits, honey or pasta. This data shows the large assortment of produce available in the north and southwestern areas as well as the lack of variety in the central and eastern parts of the state.

Figure 3.3: Local Foods Purchased in 2013-2014 Academic Year by Region



Other Food Service Expenses

To determine other expenditures made to prepare local foods, the 16 directors reported whether they purchased equipment or hired staff. Nearly half of the directors bought new equipment in order to process local ingredients, five of which using grant funding. This finding suggests that buying equipment might be prohibitively expensive without additional funding.

Only four directors reassigned staff and none hired new staff to process local foods. Further, none of the directors hired or reassigned staff to connect with local producers. As one director mentioned, getting approval from the administration to hire a new employee can be a barrier, even if funding is available. Instead, staff members often shift roles to process local ingredients. Plus, most of the directors already do the ordering themselves and finding local food

sources simply becomes a part of that role. Some of the school districts with FoodCorps support use their volunteer to connect with producers as well.

School Food Expenditures

Data on the total dollars spent on local food was used to estimate the economic impact of FTS participation. Each school district reported the total amount of money spent on all food and the estimated amount spent on local food during the 2013-2014 school year. Few schools actually track their local food purchases, however, as it requires entering each invoice separately. One director mentioned that she had recently acquired a new tracking system, but the process was still too cumbersome and time-consuming. When directors and their staff are already working to get meals served to as many as thousands of students each day, tracking local expenses can drop to the bottom of the priority list.

Thus, while many schools gave estimates on the amount of money spent on Montana grown or processed food, none of the schools could provide comprehensive data. As mentioned, large food service companies like Sysco do not designate local and non-local items on their invoices. Therefore, schools are often uncertain which items are produced in Montana and which are not. Instead, most of the provided purchases are direct sales made with area producers and processors since schools generally have only a few, clear receipts from these transactions. Unless schools were able to access invoices and be certain about other local food purchases, only direct sales provided by schools are included. To add to these, I gathered purchasing sales from the WMG Cooperative for each participating school. It must also be noted that of the known 21 schools participating in FTS, only 16 were interviewed and provided their food expenditures. Therefore, expenditures from five schools, including the particularly large Butte School District, are not included. As shown in Table 3.1, I tabulated all 16 school's local food purchase numbers.

Table 3.1: Local Food Expenditures for the 2013-2014 Academic Year for Participants (N=16)

School/District	WMG Cooperative	Producer	Meat Processor	Wheat MT	Other	Fluid Milk	TOTAL	% of Total Food Spending
Boulder Elementary	$1,670	$909				$14,129	$16,708	30
Bozeman					$35,000	$105,000	$140,000	22
Dillon		$120					$120	Less than 1
Ennis		$1,164					$1,164	1
Fairfield		$1,046					$1,046	1
Hinsdale			$4,843			$3,193	$8,036	21
Hot Springs		$3,711					$3,711	8
Kalispell	$38,787	$17,998	$30,976	$1,111	$2,034	$139,000	$229,906	29
Lewistown		$346	$225	$500	$150	$46,603	$47,824	17
Livingston		$1,000	$7,600	$1,000			$9,600	5
Miles City		$2,102				$32,244	$34,346	18
Missoula	$1,225	$24,273				$208,409	$233,907	32
Ronan	$2,782	$4,400	$2,000			$89,760	$98,942	29
Somers/ Lakeside	$1,479	$4,817		$6,308			$12,604	15
Terry		$2,033					$2,033	7
Whitefish	$538	$5,000	$4,200		$1,500	$27,000	$38,238	29
TOTAL	**$46,481**	**$68,919**	**$49,844**	**$8,919**	**$38,684**	**$665,338**	**$878,185**	**23**

Fluid milk is included in the local food expenditures, as shown in Table 3.1. Montana has a particularly complex dairy system in which dairy operations follow a quota system or a "mandatory supply management" policy to ensure that dairy production remains stable in the state (Ginsburg 2013:2). As part of this system, fluid milk produced in the state is pooled. While milk produced out of the state can be sold in Montana, it is not combined with this pooled Montana-produced milk. MeadowGold and Darigold, the two primary sources for dairy products in the state, were purchased by most of the 16 schools in this study. Darigold is a farmer-owned cooperative, while MeadowGold is a branch of Dean Foods (Ginsburg 2013; Make it Missoula 2012). Though MeadowGold is not a Montana-owned company, its fluid milk is produced and processed in Montana (Hassanein et al. 2007:4). Because Montana's quota system guarantees that fluid milk produced in the state is not mixed with out-of-state milk and since the majority of

the 16 directors consider MeadowGold milk a local product, milk expenses from this source is included along with the Darigold expenditures.

Each school supplied the total dollars spent on all food during the 2013-2014 school year, an amount much more easily accessed by school staff. I totaled these amounts to find that $3,862,257 was spent on all food for the 16 school districts. The total estimated number spent on local food reached at least $878,185, or 23 percent of the total food expenditures. On average, each school spent 17 percent of their total budget on local food.

To compare, the University of Montana (UM) Dining Services spent 24 percent of its total food expenditures on food produced or processed in Montana during the same 2013-2014 academic year (Finch, UM Farm to College Coordinator, email correspondence, April 14, 2015). The university spearheaded Farm-to-College implementation in 2003 thanks to the efforts of a handful of students in the Environmental Studies Program (Hassanein 2007). UM's Farm-to-College program is undoubtedly progressive. Still, considering the limitations of the dataset, that K-12 public school budgets are much more limited, and that FTS programs have existed for less time in the state, 23 percent is remarkably close to 24 percent.

Economic Multiplier

With the local food expenditures totaled, an economic multiplier was applied to estimate the economic impact. As mentioned, a multiplier refers to the amount of times that a given dollar, once spent locally, is circulated back into the local economy (Otto and Varner 2005). Though many economic multipliers exist to estimate the economic impact of local food purchasing, none have been established to estimate the particular impact that school district food purchasing has in Montana. Thus, I employed a range of conservative, generic multipliers, with the low end of 1.3 suggested by Meter (2011) and the high end of 1.86 established by Kane and her colleagues (2011). These multipliers estimate the impact beyond direct sales with indirect and induced effects included. That is, the 1.3 multiplier estimates that if one dollar is spent locally, then 30 cents beyond that dollar would be circulated throughout the local economy,

while with the higher multiplier, 86 cents would be circulated. With the estimated total amount of local food purchases made by Montana schools, an approximation can be made on the impact of such economic activity. Using the multipliers and the total local food expenditure, $878,185, the estimated economic impact ranges from *at least* $1,141,641 and $1,633,424.

The economic impact of the 16 school district's FTS participation is impressive, particularly considering that just 16 of the total 57 school districts in Montana were included in the analysis. In the 2013-2014 school year, total food expenditures reached an estimated $30 million for all Montana school districts (Montana OPI 2015b). Using this number, if every school district in Montana spent at least 23 percent or a total of $6.9 million on local food products then the estimated economic impact would range from $9 million to over $12.8 million.

Conclusion

The 16 school districts purchased a variety of foods that were spread across the state. Still, the data show that schools in Western Montana undoubtedly have more access to fruits and vegetables than other regions. Schools also use similar mainstream sources such as the USDA commodity program and many contract with large food service companies. As expected, those in the western region use MMFEC and WMG Cooperative to source raw and processed foods, while the particularly small schools are able to supply some of their food from area grocery stores.

Estimating the economic impact of a school district's local food purchasing was neither straightforward nor comprehensive, making the limitations to this portion of the study evident. As noted, keeping track of local food purchases is often challenging for FSDs. Also, many schools not included in this study might be purchasing local products and not tracking or recording it. Further, the five directors that declined to participate in the study had local food expenditures not recorded for this study. Thus, more local food expenditures were missed in this analysis.

Even with this unavailable data, the analysis shows the clear economic impact that FTS participation had in the 2013-2014 school year. The analysis suggests that a substantial amount of money was circulated back into the Montana economy thanks to local food purchasing, money that stayed in the hands of Montana business owners, community members, and individuals. Despite the challenges to participation and in some cases, fairly small FTS programs, *at least* these16 school districts are supporting Montana's economy by purchasing local food. And again, it must be stressed that this economic impact is an underestimate, suggesting that the actual economic impact is likely much greater.

This analysis also draws attention to the *potentia*l economic impact if schools increased their local food purchasing. If those schools not buying local products were given the opportunity to do so, the economic impact could be beyond substantial. And, if those already committed to FTS were given the means to expand their local purchasing, the impact would further increase. Thus, the economic impact estimated in this analysis should be used as a stepping off point for creating opportunities for FTS growth.

CHAPTER IV: CONCLUSION: RECOMMENDATIONS FOR POLICY, STAKEHOLDERS, AND GRANTMAKERS

Introduction

Farm-to-School programs are continuing to grow as more schools, volunteers, and supporting organizations work together to buy locally grown food, operate school gardens, and provide nutritional education to students. Not only do these programs help more students eat fresh, locally sourced food, but they also support local growers, create strong communities, and increase awareness. Montana in particular has helped lead the farm-to-school (FTS) movement, pioneering the now national FoodCorps program (Montana FoodCorps 2014). But the state's recent agricultural resurgence could be further helped along if more schools bought Montana-grown food. In their study nearly 10 years ago, McCleay and Barron (2006) hinted at this potential for public schools to serve as viable markets for local growers. To explore the development and positive effects of FTS participation in Montana since their research, this study assessed the economic and social impact of FTS participation in the state. Through interviews of food service directors (FSD), including five school profiles, and data collection on local food purchasing, this analysis not only showed the realized economic impacts and the perceived social impacts of FTS participation, but it also pointed to future potential.

This analysis revealed the positive social consequences of FTS program implementation. The 16 interviewed FSDs made clear the many benefits to FTS participation, including increasing awareness about food, supporting local growers and creating more cohesive communities. Many of the FSDs had received positive feedback from their community and felt satisfied running their FTS program. And, nearly all of the participants had built relationships with local growers. Some directors felt they could trust and rely on growers, while others indicated that they had developed personal relationships with them. Further, the profiles highlighted FTS participation by five school districts across Montana. They showed the

particularly successful and supported FTS programs alongside those programs that operate even when an FSD is indifferent or when the school has limited resources.

The benefits to FTS participation are perhaps overshadowed by the many challenges that the 16 directors face in terms of financial, logistical, and distributional barriers. Nevertheless, these difficulties do more to inspire than to discourage. For one, the long list of challenges that participants listed speaks to the need for policy and funding and the potential for program development. Secondly, the dozens of solutions that FSDs suggested, if considered, could greatly improve and expand program participation and create opportunities for increased economic development in these communities. That is, if schools are given the resources and support to buy local food, then more schools will be able to support local growers and help keep money in their communities.

This analysis also showed a clear economic impact from FTS participation in Montana. While no schools hired new staff in order to participate, many schools purchased equipment with grants to process local ingredients. Moreover, during the 2013-2014 school year, the 16 schools collectively spent at least 23 percent of their total food expenditures on locally grown food. And, using an economic multiplier range, the estimated economic impact of the total local food expenditures in that year reached between $1.1 million and $1.6 million. Again, this range estimates the amount of money that remained in and continued to circulate throughout Montana due to the local food purchases made by these 16 schools. This impact tied with the perceived social benefits described by the FSDs shows the value in supporting FTS participation.

Recommendations

Intended for a wide audience, the following recommendations are based on the most prevalent challenges and solutions that emerged from the FSD interviews. For instance, Grow Montana, a food policy coalition, can use these suggestions in their development of future initiatives for the state (Grow Montana 2014). The suggestions can also be used more broadly by

government decision makers and foundations to understand why support for initiatives and extra funding is needed to ensure that programs will continue to thrive.

Funding and Policy Opportunities

As Kloppenburg and Hassanein (2006) stress, strong government policy is needed on the state and national level to support FTS implementation. In fact, many states have passed FTS legislation. For instance, Montana and six other states passed legislation allowing public entities to give preference to local food without penalty (National Farm to School Network 2015d). Such legislation allows these institutions to purchase locally grown food if is competitively priced and available. Otherwise, these institutions are required to purchase the cheapest products available. Thus, along with a handful of other states, Montana has taken a small step towards supporting FTS policy.

National policy is also needed to help schools facilitate FTS activities. For one, volunteers can ease many of the burdens to program implementation by finding potential sellers, promoting activities and setting in place the necessary systems for prolonged program engagement. Of course, FoodCorps members do these tasks as part of their work, but the FoodCorps organization cannot feasibly reach every school district. At present, Montana FoodCorps reaches nine school districts, which is a fraction of the 57 school districts in the state (Montana Office of Public Instruction 2015c). Furthermore, K-12 public school budgets are relatively inflexible even with the legislation mentioned above. Many schools are entirely dependent on additional support to make certain FTS activities possible, such as FoodCorps, and their programs might not be sustainable if such support disappears. Thus, policy supporting strong and lasting FTS programs can help these schools. On a national level, an initiative that provides more funding for FoodCorps, an organization dependent on funders and AmeriCorps support, could help spread its efforts by increasing the number of volunteer positions and service sites (FoodCorps 2015).

Grants are undoubtedly beneficial to schools and supporting organizations to further ease the financial burdens of FTS participation. As mentioned, the United States Department of Agriculture (USDA) grant program has helped school districts make real progress towards their FTS efforts in Montana and nationwide (USDA 2015b). Many states have also passed legislation establishing grant programs to support FTS participation. In fact, eight states have established FTS grant programs with state initiatives (National Farm to School Network 2015d).

Even so, many of the 16 FSDs said that they did not have the time to apply for grants. Thus, initiatives that provide reimbursements for all schools to buy local food could ease the financial burdens for those schools without the time to apply for funding. In fact, four states and the District of Columbia provide such reimbursements for schools to encourage local food purchasing (National Farm to School Network 2015d). Locally, Grow Montana has pushed for similar legislation. In 2013, the food policy coalition proposed a bill in the Montana State Legislature appropriating funds to reimburse schools for meals when at least half of the ingredients came from local sources (HB 471). The funding, a one-time appropriation, was intended to set up the necessary systems to make FTS possible for those schools in the future. That is, the goal of the funding was to financially support schools to make the initial connections with local growers, a step that might be impossible for many schools. Once these connections were made, then schools could have developed stable, long-lasting FTS programs. Though the bill was unfortunately tabled, Grow Montana should continue to develop initiatives of this kind that promote funding without burdening school staff with the task of applying for grants (HB 471).

Partnerships

While funding is greatly needed to support FTS program development, partnerships can help sidestep certain financial barriers. Partnerships among organizations make it possible to pool and share resources such as people and money. For instance, Missoula County Public Schools (MCPS) partners with Garden City Harvest (GCH), a local non-profit (Garden City

Harvest 2015). MCPS provides land for GCH to operate its community farm, and in exchange, GCH provides education and on-farm experiences for Missoula children. Jenny, the FSD in Kalispell, mentioned a similar partnership in development for her school district. Food advocates, policy councils and organizations should help schools find and create these partnerships when additional funding is unavailable.

Local Food Purchasing Tracking System

While this analysis showed a significant economic impact due to FTS participation, the gaps in the available data underestimate the actual impact. This limitation is largely due to the difficulty in tracking local food purchases. Many of the FSDs mentioned that they did not have the time to track their local food purchases, and as many of the FSD roles vary, some were not in charge of the financial transactions anyway. Instead, these tasks often fall to the school district's business clerk, a staff member who is often in charge of managing the district's entire budget and spending. Thus, tracking local food purchases can be understandably low on the priority list.

FoodCorps members recently began using a food tracking mechanism to help record local purchasing (Gerbatsch, FoodCorps fellow, phone correspondence, April 13, 2015). The system helps track expenditures, types of products purchased, seller details, and delivery specifications. While it is an improvement from the previous tracking system, the current online tracking mechanism runs through a free service and is fairly cumbersome. As one FoodCorps volunteer mentioned, the tracking mechanism still requires spending a minute or two on each local food transaction, and recording all of the invoices can take up a large portion of the day. While the FoodCorps volunteer can make time to record these expenditures, using the tracking mechanism is likely impractical for most FSDs.

On a state level, OPI has a tracking mechanism for the "Montana Harvest of the Month Program" (Roth, email correspondence, April 7, 2015). The tracking system helps FSDs record local food purchase made for their promotional event. This tool is much less time consuming

than FoodCorps tracking mechanism, as it only requires keeping and recording data from one event.

A more user-friendly, convenient tracking system to record data from purchases made during the entire year would be valuable to document the economic impact of FTS. That is, if tracking systems worked, more comprehensive data on local food expenditures could be gathered and a more accurate economic impact could be estimated. As Montana's FoodCorps fellow suggests, a statewide streamlined and easier-to-use tracking system operated through OPI could make tracking more practical and realistic for FSDs (Gerbatsch, phone correspondence, April 13, 2015).

Distribution Needs

Several FSDs mentioned that getting food delivered to their school is often difficult. This challenge was faced by schools of all sizes and in all parts of the state. For instance, when dealing with individual growers, many directors mentioned struggling with the uncertainty of when the food would be delivered. And, more isolated schools simply do not have access to distributors or growers that can deliver produce directly to the school.

Sysco and Food Services of America (FSA) distribute throughout the state, but do not necessarily seek out local products. As McCleay and Barron (2006:2-9) suggest, these larger distributors are reluctant to do so when local produce can be inconsistent or inadequate. Alternatively, the WMG Cooperative helps schools easily access local produce without having to take the extra time to figure out the delivery logistics. Finding ways to either expand WMG Cooperative's reach, create a market for regional distribution in the eastern part of the state, or incentivize larger distributors to carry local produce could help mitigate the distributive challenges that schools face in the east. In fact, the WMG Cooperative expanded its distribution by partnering with a larger distributor, Charlie's Produce, to deliver produce to parts of the state that the WMG Cooperative trucks do not reach, particularly Butte, Bozeman, and Billings (Brown, WMG Cooperative employee, personal communication, March 21, 2015). Thus, the

distributor found a way to use an already existing system to distribute local food. This innovative solution should be used as a model for other more isolated areas of the state.

Even so, direct sales between the school and the grower might remain as the most realistic method of local food purchasing for smaller districts. As McCleay and Barron (2006:2-14) argue, "An advantage of marketing directly to institutions is that it allows producers to capture a greater share of marketing dollars and gives the institution the freshest possible products." Because it minimizes costs and considering schools' tight budgets, connecting schools and producers to each other should be a top priority. In fact, the National Center for Appropriate Technology (NCAT) has two databases on its website with institutions and producers wishing to connect to each other (Farm to Cafeteria Network 2014a). Still, this resource is limited to school staff who already know about NCAT's website. A database that is state-operated, perhaps through OPI, could be accessible to more school staff. In fact, five states have passed legislation to develop such statewide FTS databases (National Farm to School Network 2015d). Policy makers and local food advocates in Montana should explore the possibilities for introducing similar legislation.

Processing Capacity

As many FSDs made clear, processing is a challenge to their FTS participation. Affordable, value-added products made with local ingredients would help schools buy local without adding to their labor or preparation needs. Further, certain processed foods can be stored or frozen over the winter, allowing schools to serve local ingredients outside of the growing season. Developing opportunities for local processors to be created or expanded is therefore needed. While the Mission Mountain Enterprise Center (MMFEC) has stepped in to fill the gaps in value-added processing in the western region of the state, more is needed to provide the volume needed for Montana schools in other areas.

While many of the schools have access to local meat, most lack the equipment to process it. Having processing centers with the equipment to form hamburgers into patties, for instance,

could make buying beef more viable for these schools. Further, because the MMFEC is located in the western part of the state and does not connect with central and eastern schools, having a non-meat processor in the eastern region would be useful for expanding local food availability for those schools.

Five states, including Montana, have pushed forward initiatives that establish or expand food processing centers to provide value-added products for schools and business (National Farm to School Network 2015d). In 2009, legislation was passed in Montana to fund "food and agricultural development centers" established in the state (National Farm to School Network 2015d:58). Though such legislation is helpful, FSDs located in the central and eastern parts of the state still lack access to value-added food made with local ingredients. Thus, future policy appropriating funds to *create* processing centers in these areas is undoubtedly needed.

Future Research

The social impact analysis for this research was particularly limited by this project's participant sample. That is, this study only explored the attitudes of FSDs on FTS participation. Because producers are necessarily involved in FTS programs, surveying their perspective could provide a more comprehensive social impact analysis. Though public schools are high volume, consistent markets, certain producers might have reasons for not wanting to sell to these markets. For instance, vending at farmers' markets tends to be a less rigid process than with selling to schools, as producers often have to meet quality and delivery requirements made by school districts. (McCleay and Barron 2006). Exploring the solutions to the challenges that producers face when selling to schools, such as addressing quality stipulations, might make farm-to-school more feasible on both ends. Further, identifying producers who might not be a good fit for selling to schools, perhaps because their operation is too small or too large, can help make clear which producers should and should not be targeted by schools. Thus, I would encourage future researchers to survey these other FTS players.

Conclusion

This professional paper described and analyzed the realized economic impacts and the perceived social impacts to FTS participation in Montana. The positive impacts were found to be significant and far reaching, though the challenges to FTS participation are clear. The above recommendations, if considered, can thus help improve and expand FTS programs by addressing these challenges. Through increasing opportunities for school to buy local, the benefits of FTS can reverberate and be felt by many communities. More of the money that schools spend on food will be kept within the state, recirculating through the hands of Montanans. The lives of food service directors can be improved as they interact and form relationships with their neighbors. Staff and students alike can further understand the seasonal and geographical constraints and opportunities for growing food in Montana. With strong FTS support and funding, Montana communities can become more self-sufficient, cohesive and economically sustainable.

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APPENDIX A

Participating School Districts

	City/Area	School/District	Year Started	FoodCorps	Type of Outreach	Interviewed
1	Boulder	Boulder Elementary School	2011	Yes	Procurement, garden	Yes
2	Bozeman	Bozeman School District	2009	No	Procurement, garden	Yes
3	Butte	Butte School District	2012	Yes	Procurement, education	Unreachable
4	Darby	Darby Public Schools	Not known	No	No longer qualifies	No longer qualifies
5	Ennis	Ennis Schools	2011	Yes	Procurement, education, garden	Yes
6	Hot Springs	Hot Springs School District	2012	No	Procurement	Yes
7	Kalispell	Kalispell District 5	2011	Yes	Procurement	Yes
8	Lewistown	Lewistown Public Schools	2008	No	Procurement	Yes
9	Livingston	Livingston Public Schools	2009	No	Procurement	Yes
10	Malta	Malta Public Schools	2010	No	Procurement	Declined
11	Miles City	Miles City Public Schools	2009	No	Procurement	Yes
12	Missoula	Missoula Public Schools	2005	Yes	Procurement, education, garden	Yes
13	Red Lodge	Red Lodge Public School District	2011	Yes	Procurement, education, garden	Unreachable
14	Ronan	Ronan Public Schools	2006	Yes	Procurement, education, garden	Yes
15	Saco	Saco Public Schools	2005	No	Procurement	Declined
16	Sheridan	Sheridan Public Schools	2010	No	Procurement	Declined
17	Somers/ Lakeside	Somers/Lakeside School District	2006	Yes	Procurement, garden	Yes
18	Terry	Terry Public Schools	2010	No	Procurement	Yes
19	Whitefish	Whitefish Public Schools	2009	No	Procurement, garden	Yes
20	Dillon	Dillon Schools	Not known	No	Procurement	Yes
21	Fairfield	Fairfield Schools	2002	No	Procurement	Yes
22	Hinsdale	Hinsdale Public Schools	2009	No	Procurement	Yes
23	Bozeman	Anderson School	Not known	No	No longer qualifies	No longer qualifies

APPENDIX B

Food Service Director Interview Guide

Date _____ Participant ID _____

Introduction

Thanks again for agreeing to meet with me.

Before we get started, I am going to read you the verbal informed consent form.
[READ verbal informed consent script].

[IF PARTICIPANT GIVES PERMISSION TO BE RECORDED, BEGIN RECORDING]. If not, take notes.

BACKGROUND.

Let's begin by talking about your work background and school's history.

1. How long have you been a food service director?

   Follow-up: When did you start working for this particular school district?

2. Tell me about your role as a food service director for the _____ school district.

3. How do you and your school/district participate in farm-to-school activities?

   Probe: You mention that you participate in _____. Is there anything else farm-to-school-related that you do at your school such as _____ or _____?

4. When did farm-to-school activities begin at your school/school district?

5. How has participating in farm-to-school activities changed the way your school/district's food service program runs?

Probe: Are there any other changes you have noticed in the way your food service program runs?

Probe, if necessary: Any changes that you yourself had to make?

Goals.

Now I'd like to understand a bit more about your farm-to-school program and its goals.

6. Why did your school/school district initially decide to start doing farm-to-school activities?

7. What are the goals of your farm-to-school program?

8. Do you think that your school/school district been successful in meeting these goals?

Probe: You mention _____. Are there any other reasons why your program has [or hasn't] been successful?

BUDGET AND PROCUREMENT.

Now let's talk about your food budget and local food purchasing.

9. How do you define local food? Please be as specific as you can.

- ☐ Mile radius: within ____ miles of school/school district.
- ☐ Produced in Montana.
- ☐ Produced regionally (including Eastern Washington, Northern Idaho, etc.).

  Specify region: _____.
- ☐ Other: _____

10. How do you source your food for your school/school district?

Probe, if necessary: Do you connect directly with farmers, or do you use a distribution company, or both?

Follow-up: Do you have separate vendors for local and nonlocal food?

11. What local food products have you purchased for your school/school district in the 2013-2014 school year?

CHECK APPROPRIATE BOXES FOR ALL FOOD PRODUCTS MENTIONED FOR CODING: CHECK= 1, NO CHECK= 2

- ❑ Beef 1
- ❑ Dairy 2
- ❑ Eggs 3
- ❑ Poultry 4
- ❑ Beans 5
- ❑ Lentils 6
- ❑ Grain 7
- ❑ Raw vegetables 8
- ❑ Processed vegetables 9
- ❑ Raw fruit 10
- ❑ Processed fruit 11
- ❑ Other (specify) _____ 12

12. Was extra equipment purchased in order to prepare local food for your school?

Probe: IF YES, which types of equipment were purchased?

13. In order to prepare this local food, did you hire new staff or did you reassign existing staff members?

Probe: IF YES, how many were hired or reassigned?

14. Did extra staff need to be hired or existing staff reassigned in order for your school/school district to connect with farmers and purchase local food?

Probe: IF YES, how many were hired or reassigned?

15. During the 2013-2014 school year, how much money did you actually spend on food alone?

$ _____

16. During the 2013-2014 school year, how many dollars were spent on local food as you defined it?

$ _____

FoodCorps and other outside support.

To follow-up on your purchasing activities, I'd like to learn about outside support you might have had to carry out farm-to-school activities.

17. Have you had or do you have a FoodCorps volunteer working with you?

- ☐ Yes, currently 1
- ☐ No, not currently 2
- ☐ Yes, previously 3

18. IF 'YES, CURRENTLY' TO #17, how many years have you had support from FoodCorps?

19. In what ways does your FoodCorps volunteer support farm-to-school for your school/district?

20. Do you plan to continue participating in these activities if you stop receiving FoodCorps support?

Probe: How come?

21. IF 'NO, NOT CURRENTLY' OR 'YES, PREVIOUSLY' TO #17, do you receive outside support such as volunteers or funding in order to purchase local food and/or participate in other farm-to-school activities?

Follow up: IF YES, Which types of support do you receive?

22. What do you think you would do if you had additional support?

SOCIAL IMPACTS.

Now I'm going to ask you some questions about the benefits and challenges you experienced while participating in farm-to-school.

Benefits.

23. What benefits has your school experienced with farm-to-school participation?

24. Who do you see benefitting from your farm-to-school program?

    Follow-up, if necessary: Can you say a little more about those benefits or how you have seen or heard about them?

25. Have you or other staff built relationships with local farmers and ranchers while purchasing local food?

Follow-up: IF YES, tell me more about these relationships.

Challenges.

26. What challenges have you faced while participating in farm-to-school activities?

    Probe, if necessary: Any other difficulties that you or your staff has faced?

29. What do you think would help you overcome these challenges?

Perspective.

30. What kind of feedback from others, if any, have you gotten in response to doing farm-to-school activities?

31. Overall are you glad that you are involved in farm-to-school activities?

    Probe: Why or why not?

    END RECORDING

APPENDIX C

Recruitment Letter

[Date]
[Potential Participant Name]
[Address]
[City, State, Zip]

Dear [Potential Participant Name]:

My name is Autumn Lee and I am conducting a research study about farm-to-school programs in Montana through the University of Montana. This study will investigate the economic and social impact that farm-to-school programs have had in the state. The outcome of this research will be valuable for future farm-to-school funding.

I have compiled a list of food service managers in the state who either have a FoodCorps member or have reported that they participate in farm-to-school activities (such as buying local food). I am writing to you because you are on that list, and I would like to interview you.

The interview will be over the phone [or in-person] and will take around 30 minutes to complete. Participation is completely voluntary and your answers will be anonymous. A follow-up phone call to this letter will be made shortly.

If you have any questions, please do not hesitate to contact me, Autumn Lee, at XXX-XXX-XXXX or XXXXXXXXX@umontana.edu.

Sincerely,

Autumn Lee
M.S. Candidate, Environmental Studies
University of Montana

APPENDIX D

Informed Consent Form

Purpose
You are being asked to take part in a farm-to-school study. The purpose of this study is to investigate the economic and social impact that farm-to-school programs have had in Montana.

Procedure
The interview will take about 30 minutes to complete. I will ask you about the goals of your farm-to-school program and the benefits and challenges you have faced. I will also ask you questions about your school or school district's food budget and local food purchases from the 2013 to 2014 school year.

Confidentiality
When the results of this study are shared publicly, your identity will not be associated with any information you provide in this interview without your permission.

Voluntary
Your decision to take part in this study is entirely voluntary. You may refuse to take part in or you may withdraw from the study at any time without penalty. You may leave the study for any reason.

Statement of Consent
By agreeing to this interview, you indicate that you understand the description of this study and the procedures for the interview. Further, you indicate that you voluntarily agree to take part in this study.

Do you consent to be interviewed? Yes / No

Statement of Consent to be Audio-Recorded
If you are okay with it, I would like to record our interview. By recording the interview, I will be able to focus and concentrate on our conversation, rather than on taking notes.

The digital recordings will be kept confidential and will be stored on my password-protected computer. My faculty supervisors, Neva Hassanein and Robin Saha, and myself will be the only

people with access to these digital files. Once the research study is complete, I will delete the digital files.

By consenting to be recorded, you indicate that you understand these recordings will be kept confidential, will not be shared, and will be destroyed following transcription, and that no identifying information will be included in the transcription.

Do you consent to be recorded? Yes / No

Reporting Budget and Purchasing Information

I need to ask for one more permission, since I will be collecting information about your school or school district's food budget and purchases of local foods. It will be valuable for the study to report that information for all schools or school districts participating in this study.

Do you agree to allow me to report food budget and local foods purchasing information you provide for your school/school district? Yes / No

Questions

If you have any questions about this study now or after the interview, please contact:

Autumn Lee
XXXXXXXXXXXXX@umontana.edu
XXX-XXX-XXXX

If you have any questions or concerns about this study, you can also contact my faculty supervisors:

Neva Hassanein
XXXXXXXXXXXXXXXX@mso.umt.edu
XXX-XXX-XXXX

Robin Saha
XXXXXXXXX@mso.umt.edu
XXX-XXX-XXXX