FarmLab Study

Phase 1 - Needs Assessment

Appendix H - Farm to School

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by Phil Metzler and Mark Seeley

FARM TO SCHOOL

The Farm to School movement seeks to "enable every child to have access to nutritious food while simultaneously benefiting communities and local farmers."[1] This movement represents a distinct point of convergence for the four emerging directions examined in this study: food literacy, ag-based curriculum, ag innovation, and food localization as economic development. Most of the constituencies considered in this report would generally be significant stakeholders in farm to school initiatives. Farm to school therefore provides a strategic focus for the FarmLab to support existing efforts and help facilitate collaboration towards shared goals.

With the rapid growth of the farm to school movement from 1,000 participating school districts nationwide in 2006 to more than 5,200 in 2014, the many diverse benefits of farm to school programs are well-recognized. These benefits are summarized in the National Farm to School Network fact sheet for "The Benefits of Farm to School" attached to this study as Appendix M:

> "Farm to school enriches the connection communities have with fresh, healthy food and local food producers by changing food purchasing and education practices at schools and early care and education settings. Students gain access to healthy, local foods as well as education opportunities such as school gardens, cooking lessons and farm field trips. Farm to school empowers children and their families to make informed food choices while strengthening the local economy and contributing to vibrant communities."[2]

Farm to school programs typically include some combination of the following three principal elements:

- Farm to cafeteria - purchasing, promoting, and serving local food;
- Education - teaching students about nutrition and agriculture through classroom activities and curricula; and
- Direct experience - cooking demonstrations, educational gardens, and field trips.

These elements align with many of the needs and intentions identified in this study. Farm to school is a direct strategy for improving food and ag literacy and for reinforcing ag-based curricula and experiential learning. In many ways, the current farm to school movement is an attempt to make the benefits that ag education and ag in the classroom programs have been nurturing for years more accessible to a broader audience. Tapping and integrating these resources - as Elkhart Community Schools has begun to do with the support of the Elkhart County Farm Bureau (ECFB) - presents a reasonable path forward for other districts to pursue.

Otherwise, schools and teachers can look to abundant activities, lesson plans, curricula, and other resources provided by the National Farm to School Network (NFSN)[3] and Indiana Farm to School Network (IFSN).[4] In addition to a website full of information, the IFSN supports the development of farm to school curricula and assists schools in celebrating local food days. The IFSN also organizes informational tours and workshops to help connect districts with similar goals.[5]

With Horizon Education Alliance already providing a successful model for collaboration among Elkhart County public schools, the FarmLab could help facilitate a locally-based network to better identify the needs and interests of local schools. Most districts have interest but do not have available staff to implement more activities on top of their existing programs. By organizing an Elkhart County farm to school network, FarmLab staff could help fill this need by aiding curriculum development, coordinating overlapping efforts, and improving communication.

> *"If someone would take an already developed ag curriculum and align it with state standards in a way that involves teachers … they will do it. They are an enthusiastic bunch."* (Vallance)

The following sections introduce potential activities and influences through which the FarmLab could help facilitate the development of farm to school programs in Elkhart County, as a recommended focus for Phase 2 of this FarmLab feasibility study.

Educational Gardens

One application in which a coordinated network could immediately bear fruit would be support for more educational gardens at school sites. According to the National Farm to School Network:

> "School gardens are an integral part of farm to school programs and offer a multitude of educational opportunities. They are wonderful instructional tools and engaging spaces in which to explore the entire curriculum. Whether they are container gardens or school farms, fruit trees or herb gardens, greenhouses or other on-site food production, school gardens serve as hands-on, interdisciplinary classrooms for students of all ages."[6] (www.farmtoschool.org/)

The challenges of starting a new garden could be simplified by developing a replicable process for helping schools install relatively simple gardens designed to reinforce curricula through hands on learning and practical demonstration. At the very least, these "gardens" could demonstrate production of whichever specific crops are being locally procured elsewhere and used in the cafeteria.

More than providing "garden-in-a-box" infrastructure and materials, the FarmLab could potentially provide garden expertise, access to equipment for installation, and monetary assistance by pursuing funding for multiple initiatives at once. Through collaboration with groups such as Michiana Master Gardeners, Seed to Feed, and other community organizations, the FarmLab could help coordinate upkeep of the gardens over the summer when students are not around. FarmLab staff and volunteers could share best practices and help train students, teachers, and other school staff to become self-reliant in managing the gardens over time. FarmLab facilities could be used to help store some of the necessary tools, equipment, and supplies.

Field Trips and Farm Tours

Similar FarmLab efforts to promote educational ag experiences could include collaboration with related school services such as ETHOS Science Center. ETHOS' mobile labs have helped address shrinking transportation budgets that have restricted field trips for districts throughout the county. While visiting ACCELL and other off-site operations would generally be preferable, the FarmLab could design and manage mobile demonstration units that would bring the "farm" right to the schools. Seeley successfully implemented this approach in Detroit after similar budget cuts.

While the FarmLab could be useful for storing and maintaining the mobile units, its highest potential is unlikely to be a typical on-site demonstration farm, due to limited transportation budgets and an abundance of other options. As a possible aggregation hub or lab, however, it could serve as a meaningful alternative if connected to curricula focused on local food systems. As a space for incubating, demonstrating, and connecting ag innovation, the FarmLab could provide a complimentary destination for area schools. The currently proposed FarmLab site could also be developed to complement field trips to Crystal Valley Dairy Farms next door.

As relationships are established with local producers through value chain facilitation and farm to cafeteria initiatives, the FarmLab could help organize field trips to these farms when budgets allow. Collaboration with ECFB could help more schools participating in farm to school programs gain access to on-farm experiential learning opportunities.

Farm to Cafeteria

While the various farm to school elements explored here are complimentary and best viewed as parts of an integrated strategy, getting local food onto students' plates through farm to cafeteria programs may be the most important and effective element overall. Introducing locally

produced foods in the cafeteria will add relevance to lessons, field trips, and gardens intended to increase food and ag literacy. By consuming local foods they might not otherwise be encouraged to try, students are more likely to let what they are learning inform future purchases and perceptions of agriculture.

For schools, the potential benefits of farm to cafeteria programs listed in the 2015 Farm to School Census were:

- reduced food waste;
- lower school meal program costs;
- greater acceptance of the new meal patterns;
- increased participation in school meals; and
- greater community support for school meals[7]

But substantial obstacles to realizing these benefits must first be addressed throughout the supply chain. These are addressed briefly in Section 3.4.2 and elaborated on in Appendix D in the context of school food services. The critical issue is a lack of local food producers capable of meeting school demands for quality, quantity, consistency, and cost. However, efforts to increase production must coincide with supporting improvements to intermediate infrastructure and food service capacities as well.

Ken Meter's "Opportunities for Farm-to-School in Hancock County" report explores various technical and logistical issues with local procurement between farmers and schools in Indiana.[8] Commissioned by the Indiana State Department of Health (ISDH), the study presents a wealth of information relevant to the feasibility of the FarmLab project, particularly with respect to farm to cafeteria programs. The following excerpts highlight key findings from the report (readers are encouraged to review the full report to develop a broader appreciation of farm to school challenges and opportunities):

> Primary obstacles to local procurement:
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> - "School food service staff still express doubt that they are allowed to purchase food from local farms – despite USDA's assurance that this is encouraged."
> - "School staff are already facing intense deadline pressure in their jobs, and do not have significant time to explore new purchasing arrangements. Having a coordinator engage staff in a conversation about this appears to help them focus their attention on local suppliers more effectively, so that purchases can be made."
> - "Nutrition budgets are severely limited, so schools are unlikely to source more food from local farms without special funding being allocated to them for that purpose. Plenty of similar food is available through established (but distant) sources at relatively low prices."

> “Many startup farms are not interested in selling to schools because they can sell at higher prices when supplying household consumers. Many food service directors also look askance at purchasing from a small farm, thinking that the supply may not be consistent over time. While some school food service directors enjoy making regular contact with farmers and find ways to integrate them into school programming, many food service directors prefer the convenience of placing an order from a single vendor. Indeed, the costs of dozens of farms all converging with their own trucks to supply a school or wholesale buyer, and for school staff to negotiate with each of them, can quickly outrun the benefits of sourcing food from local farms.”
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> “For farms that grow greens year round, the school market is very interesting. Yet for other products that only ripen during a few short weeks in July and August, there is a seasonal mismatch with the school schedule. For farms with limited season extension, the most likely crops to sell schools would be root crops such as onions, garlic, potatoes, sweet potatoes, beets, turnips, rutabagas, and so forth, since these could be stored either at the school or at the farm. Prices are generally lower for these items, at least at the current time. Yet many students would currently consider these to be unusual foods, even though they are easy to grow in Indiana.”
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> “All told, the true promise of farm-to-school may be to educate youth about the foods that can easily be grown and stored in Indiana, and to foster sufficient growing, preparation, and eating skills that those foods which Indiana farms can easily raise, store, and ship become familiar to consumers and favored by them.”
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> “At its core, what farm-to-school efforts are rubbing up against is inequality of income. Those school districts in privileged communities that are willing to allocate special funds for farm-to-school purchases are not having difficulty creating a flow of local foods, though this flow is certainly limited by the lack of available supply. Most school districts, however, operating in a climate in which staff have multiple demands on their time and in which public funds are limited, seldom take concerted action to source food locally. In those districts where local sourcing is established as a priority, this is usually accomplished because one key leader makes it happen. If that motivated person changes jobs, or is placed under other pressures, often the farm-to-school effort is weakened.”
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> “Perhaps the most significant opportunity created by farm-to-school activity is the forum it creates for parents, students, farmers, school officials, and other stakeholders to convene, working together to make proactive choices regarding the foods that will be served in school nutrition programs, and to do this in a manner that builds new connections, and more food choices, in the broader community.”[9] (Meter)

Meter concludes his report with a series of policy-level recommendations for the ISDH and Indiana Legislature. These recommendations, summarized below, are provided in full at the end of this appendix.

- “ISDH and it partners should recognize that farm-to-school efforts are the crucible in which new economic relationships are being formed.”
- “Indiana must make a concerted effort to train new farmers and ensure they have access to land in and near major urban areas.”
- “Special training and land access will be required for farmers who wish to grow produce at scale.”
- “The Indiana Legislature should allocate several million dollars per year in special funds for schools to use in purchasing locally raised and processed food items.”[10] (Meter)

Farm to School as Catalyst for Ag Innovation

Scaling up local food production will require extensive innovation throughout the supply chain. This is particularly true in the context of local procurement by schools. While the critical issue is a lack of supply, there may not be adequate incentive for farmers to scale up their production to fill school demand unless appropriate intermediate infrastructure is developed to facilitate aggregation, storage, processing, and distribution to the schools.

Addressing these challenges for farm to school initiatives could provide a leverage point for stimulating local food production and innovation focused on larger markets. As a “lab” designed to incubate scalable prototypes for increasing production, and as a community organization focused on value chain facilitation, the FarmLab could help develop appropriate intermediate infrastructure to support farm to cafeteria pilot programs. Supportive infrastructure could entail:

- Farm-Lab land for trial production, demonstration, and training;
- Aggregation facilities and coordination;
- Mobile or FarmLab-based washing and packing stations for specific crops;
- Mobile cold storage;
- Delivery vehicles sized to accommodate school receiving capacities;
- Online ordering, billing, and payment;

While designed to be versatile, this infrastructure could be initially focused on aggregating and distributing specific crops attractive to both farmers and schools. Growers could concentrate on crops that are well suited to local growing conditions and relatively easy to harvest, transport, and store, such as root vegetables and melons. From these potential options, food service staff could identify which food items can be most readily used in their kitchens and menus, such as sweet potatoes or turnips. As Meter observes:

> “Energy costs for raising such products should be quite low compared to importing fragile specialty produce items. Overall, the promise of local food in Indiana is more likely to be realized by exploiting the foods that are easy to grow here, rather than attempting to grow substitutes for foods that are currently imported from warmer climates.”[11] (Meter)

As the range of functions highlighted in the "Vermont Food Hub Study" demonstrates, organizations designed to be agile and responsive to many different procurement issues can be effective catalysts for farm to cafeteria programming.

> "These community organizations are able to focus their efforts and provide more comprehensive (farm to school) programming and education while the school can focus on delivering nutritious meals to its students. Some of the food hubs are able to provide farm and food education, coordinated farm field trips, school garden materials and support, food safety trainings and local food procurement advice and assistance. A school can select which services it would like and a food hub will provide them with the corresponding education. In this capacity, the food hubs provide supplementary services where needed, without requiring schools to hire new, dedicated staff. This support is beneficial in that it minimizes expenses while maximizing impact. Thus food hubs facilitate the adoption of innovative, low-cost (farm to school) activities and practices through demonstration and education with the ultimate goal that school personnel will become responsible and trained in providing these food education opportunities."[12]

SAE's and Career Pathways

Farm to cafeteria initiatives could reinforce ag education and vocational programming by providing opportunities for CDE and SAE placements. The corresponding local food innovation and development needs offer a spectrum of practical real-world problems, from production to distribution. The FarmLab could help facilitate collaboration with ag education and vocational programs to directly engage students in understanding and overcoming the challenges of getting locally sourced food onto their own plates.

> "For some high schools, the best way to source local foods may well be to grow these foods at the school itself, engaging students in farming and marketing the products. For example, a school might want to build a greenhouse as an instructional facility that also supplies the school lunch program with the salad greens it requires over the school year. Pursuing such strategies would of course enhance the goal of building food industry clusters, by training students in production and management skills."[13] (Meter)

SAE placements in such projects could prepare students for the entrepreneurial opportunities that food localization would open up. Such placements could segue into apprenticeships and careers supporting local food systems. As Reding and Moody observe:

> "It is challenging to find young people to replace the aging agricultural owners and operators as the training requirements for artisanal forms of production are learned over time and through experience rather than in a classroom setting. Farm apprentice programs are great opportunities for this type of education."[14] (Reding and Moody)

Farm to School as Economic Development

As discussed in Appendix F, a 2011 farm to school economic impact study in Oregon found that an initial investment of $160,750, corresponding $.07 per lunch, inspired schools to purchase $461,992 in local foods they had been buying outside the state.[15] Overall, the investment created an estimated 17 jobs, and each dollar spent locally on school food encouraged an additional $.86 of spending amongst suppliers and households. The study concluded that:

> "Local school food purchases not only support local jobs and have the potential to increase output in food producing and processing sectors, but may also create jobs in other sectors and increase output in the broader state economy through the economic multiplier effect. Moreover, the business relationships built between school districts and local farms through the purchase of local foods are likely to persist and may strengthen. Relationships between school districts and local farms support the production of healthier, tastier, and more nutritious food for schoolchildren as well as provide long-term revenue streams for local farmers (for whom a little more production may be enough to take their farms from being unprofitable to profitable)."[16]

Meter's evaluation of farm to school opportunities in central Indiana reinforces these findings.

> "Local food purchases by schools can create multiple benefits beyond the value of the food sold, including making a solid contribution to the formation of business clusters:
>
> - New social and commercial connections are created as farmers, wholesalers, hubs, and schools collaborate to strengthen local food trade.
> - These new connections also help shape a wider vision for future food systems work in each region. Such a vision in turn helps build capacities among graduates, and helps strengthen local food business clusters.
>
> The educational component of farm-to-school is at least as important, if not more important, than the financial value of farm-to-school purchases. Indiana is a farm state that proudly boasts that it "feeds the world," yet schools often do not have enough money to purchase food from local farms. Many rural students grow up not knowing about farming, food preparation, or healthy eating. Diabetes and obesity rates are high. Integrating farm-to-school activities into the curriculum, connected to specific school food purchases, will reap multiple rewards in reducing living costs, improving health, and building local capacity."[17] (Meter)

Conclusion

As presented in Section 5 of the current report, "Farm to school" initiatives provide a practical point of convergence for the focus directions identified in this study. As an an education and innovation lab for exploring opportunities to advance farm to school initiatives in Elkhart County,

the FarmLab could facilitate collaboration with schools and partner organizations to build stronger networks across the targeted constituencies. In practice, the FarmLab could work with local producers and school food service directors to identify and develop farm to cafeteria procurement programs and processes. Successful farm to cafeteria projects would provide a focus for ag-based curricula, which the FarmLab could help source and integrate into the schools.

“Opportunities for Farm-to-School in Hancock County” - Recommendations
- Ken Meter, Crossroads Resource Center, 2015 [18]

Commissioned by the Indiana State Department of Health, this study presents a wealth of information relevant to the feasibility of the FarmLab project. The following recommendations from the report provide a useful introduction to the challenges and opportunities associated with pioneering new farm to cafeteria programs in Indiana. Readers are strongly encouraged to review the full report to develop a broader appreciation of farm to school challenges and opportunities. The bold text in the recommendations below was emphasized by Meter.

Recommendations:

1. “ISDH and it partners should **recognize that farm--to--school efforts are the crucible in which new economic relationships are being formed**, so their value far surpasses the quantity of actual food purchases made. Farm--to--school trade is an essential community--building strategy, a capacity--building venture, and an opportunity for farmers, students, parents, and civic leaders to come together to frame a vision for the foods they want to grow and eat.”

2. “**Indiana must make a concerted effort to train new farmers and ensure they have access to land in and near major urban areas** — including suburban areas east of Indianapolis in Hancock County — at prices appropriate to the costs and risks of farm production, rather than at real estate development costs.”

3. “**Special training and land access will be required for farmers who wish to grow produce at scale**. This requires a different set of skills, different equipment, and often requires a different temperament than farming produce for direct sale to households, or farming more conventional crops and livestock.”

4. “**Several barriers exist to farming at scale, however:** (a) Few Indiana farmers currently have the technical knowledge or own the equipment required for produce farming at a larger scale. (b) Prevailing infrastructure does not support local produce

trade as efficiently as it does exporting grains or livestock. (c) If a farmer has established wholesale markets, she/he may not need to sell to schools; if a farmer is a newly emerging one, she/he may not be able to afford to sell to schools. (d) Tremendous amounts of competing produce of decent quality is readily available from sources such as California, Canada, Mexico, and South America. (e) All this means that it may well be that only those farmers who can tap stored wealth (an inheritance, investors, foundation support, or public support) will be able to afford to launch new produce farms for local food trade."

5. "**Ultimately, success in farm--to--school will be built on growing and selling to schools the foods that are easy to grow and store in Indiana's climate**, not based on substituting for imported food that is more readily grown in warmer locales. As oil prices increase, a wider range of import substitution may become more desirable."

6. "**The Indiana Legislature should allocate several million dollars per year in special funds for schools to use in purchasing locally raised and processed food items**. When schools can count on specific funding to arrive consistently, they will be more free to work directly with farmers and processors to ensure local sourcing. Many other states have made such appropriations."

7. "**The educational component of farm--to--school is at least as important, if not more important, than the financial value of farm--to--school purchases**. Indiana is a farm state that proudly boasts that it "feeds the world," yet schools often do not have enough money to purchase food from local farms. Many rural students grow up not knowing about farming, food preparation, or healthy eating. Diabetes and obesity rates are high. Integrating farm--to--school activities into the curriculum, connected to specific school food purchases, will reap multiple rewards in reducing living costs, improving health, and building local capacity."

8. "**For some high schools, the best way to source local foods may well be to grow these foods at the school itself**, engaging students in farming and marketing the products. For example, a school might want to build a greenhouse as an instructional facility that also supplies the school lunch program with the salad greens it requires over the school year. Pursuing such strategies would of course enhance the goal of building food industry clusters, by training students in production and management skills."[19]

References:

1. Indiana Department of Education, Office of School and Community Nutrition. "Farm to School." Viewed August 28, 2016, at http://www.doe.in.gov/nutrition/farm-school
2. National Farm to School Network (2016). "The Benefits of Farm to School." Available at: http://www.farmtoschool.org/Resources/BenefitsFactSheet.pdf
3. National Farm to School Network (2016). Viewed September 1, 2016 at: http://www.farmtoschool.org/
4. Indiana Department of Education (2016). "Indiana Farm to School Network." Viewed September 1, 2016 at: http://www.doe.in.gov/nutrition/farm-school
5. Ibid
6. National Farm to School Network (2016). "Starting and Maintaining a School Garden." Available at: http://www.farmtoschool.org/Resources/School%20Gardens%20Fact%20Sheet.pdf
7. USDA Food and Nutrition Service (2016). "The 2015 Farm to School Census." Available at https://farmtoschoolcensus.fns.usda.gov/
8. Meter, Ken (2015). "Opportunities for Farm-to-School in Hancock County, Indiana." Crossroads Resource Center, MN. Compiled for the Indiana State Department of Health Division of Nutrition and Physical Activity, 2015.
9. Ibid
10. Ibid
11. Ibid
12. Vermont Agency of Agriculture (2014). "Using Food Hubs to Create Sustainable FTS Programs." Vermont Agency of Agriculture, Food and Markets, Montpelier, VT. Prepared for the Vermont Community Foundation, 2014.
13. Meter, Ken (2015). "Opportunities for Farm-to-School in Hancock County, Indiana." Crossroads Resource Center, MN. Compiled for the Indiana State Department of Health Division of Nutrition and Physical Activity, 2015.
14. Reding and Moody (2011). "Sustainable Local Food Initiative Report." Prepared for the Indiana Office of Community and Rural Affairs by a Grant through the Indiana Cooperative Development Center, in coordination with Purdue University and the Indiana Farm Bureau. February, 2011.
15. Kane, D. et al (2011). "The Impact of Seven Cents." Ecotrust, Portland, OR, 2011. Available at: http://www.ecotrust.org/media/7-Cents-Report_FINAL_110630.pdf
16. Ibid
17. Meter, Ken (2015). "Opportunities for Farm-to-School in Hancock County, Indiana." Crossroads Resource Center, MN. Compiled for the Indiana State Department of Health Division of Nutrition and Physical Activity, 2015.
18. Ibid
19. ibid