Food System Research and Project Ideas for Students
Independent of CLF

The following research and project ideas could advance the science, policy and/or practice of food systems or provide valuable learning opportunities for students. The Center for a Livable Future is not directly involved in the following projects and does not provide funding for students pursuing them. This list is by no means comprehensive; these ideas are illustrative, and different versions of these projects could also be valuable. While we cannot generally mentor these projects or share further about the ideas on this list, we would like to know if you pursue one of these ideas. Please contact Meg Burke.

Note for Instructors: In 2015, CLF published the college/graduate level textbook, *Introduction to the US Food System: Public Health, Environment and Equity* (Wiley-Jossey Bass). In addition to the ideas below, the book’s online supplement has numerous learning activities that could similarly be developed into valuable student projects.

Healthy and Sustainable Eating and Living
1. Moveable Feast (mfeast.org) is a provider of healthy nutritious food to people who are seriously ill with chronic or life threatening illness/disease. Conduct a study among their clients to show the connectedness between healthy and nutritious foods and quality of life for people who are seriously ill vs. medical outcomes for people who are sick and food insecure.
2. Many senior citizens and immigrants in Baltimore have experience with gardening and farming in their childhoods. Examine current interest among these populations in getting engaged in gardening activities or garden education.
3. Research the undergirding philosophies of Baltimore area soup kitchens and food pantries to see how many of them are religiously motivated, and for those that are, what theology undergirds the actions of their organization.
4. Research the foods that soup kitchens and food pantries request from donors and give away to determine if the foods will promote positive or negative health outcomes.
5. Review the effects of the prevailing industrial food system on the Omega 6:3 ratio in the U.S. food supply and discuss implications.
6. Discuss whether there are “obesogens” in the environment and/or food system that should be banned on a precautionary basis, based on existing evidence.

Food Systems and Agriculture
7. Survey farmers in a farmers market or elsewhere to gain insight into how many small, local-market farmers are using farming techniques that would be considered USDA-certified organic, but have not gotten certified (and the reason why they have not done so). Additionally, ask about what types of pest control they DO use.
8. Describe issues and barriers for farmers transitioning to more sustainable methods.
9. Discuss “ecosystem services” – ecosystem contributions whose economic value is generally not quantified and thus not appropriately appreciated or subsidized. Try to put a
dollar value on one “ecosystem service” (e.g., water filtering by soil) provided by sustainable or urban farms.

10. Develop a review paper on animal agriculture contributions to foodborne illness and discuss relevant policy or technical options.

11. Review the literature on possible links between animal welfare and public health. For example, does the welfare of animals have any direct bearing on the healthfulness of animal products (e.g., does the release of stress hormones in hogs introduce chemicals into their meat)? Do industrial food animal production workers suffer psychological harms from slaughter and other forms of animal handling?

12. Develop case studies of successful policies or covenants between competing users of freshwater, e.g., agriculture and municipalities.

13. Develop alternative scenarios for different agricultural systems in Maryland, and analyze the varied environmental and public health impacts associated with each.


15. Historical analysis of different dominant forms of agriculture that have evolved on the Eastern Shore, such as vegetable production, seafood industries, forestry and poultry.

16. Describe the global dissemination of industrial food animal production methods.

17. Many households have old containers of garden pesticides and herbicides stored in their garages. Review municipal or other guidelines for disposal and discuss how consumers might likely respond to them in the real world, considering safety for both consumers and the environment.

18. Choose one processed food and research its ingredients in terms of one or more of: sources, food miles, chemistry, water use, pesticide use, etc. Calculate the water or energy it took to produce it and get it to that store.

**Seafood and Aquaculture**


20. Is there a relationship between aquaculture production methods with increased sustainability and reduced threats to environmental/occupational public health?

21. Do the environmental public health risks from industrial aquaculture affect minority populations or groups with few resources differently than others (i.e. environmental justice)?

22. What are the impacts of climate change on production of (and demand for) aquaculture? Are the impacts differential by aquaculture methods?

23. What aquaculture production trends are occurring globally, in the U.S., and/or regionally (i.e. in the Chesapeake Bay watershed)? Are sustainable methods gaining ground?

24. What policy changes (at any level) are needed to increase use of sustainable aquaculture methods? What barriers need to be addressed?

25. How do food safety risks differ between various seafood sourcing, aquaculture production methods, and species consumed?

26. What do consumers understand about food safety risks, sustainability, and nutritional value of different types of seafood and different sourcing/production methods?

27. What messages work best to convey important information about these topics?
28. How do different labeling schemes and/or communication materials impact consumers’ seafood choices?
29. Are messages comparing consumption of land animals and sea animals regarding nutritional value, sustainability, and food safety effective in changing dietary choices?
30. How do different production methods affect food security and employment in surrounding communities and regions (i.e. Chesapeake Bay watershed)? How many jobs are created using different aquaculture production methods?
31. What is the status of vaccine development for aquaculture species; any relevant pending policies and regulations?
32. Assess newly implemented oyster aquaculture regulations in Maryland. Are policies modifying production and harvest practices?

Food System Policy
33. Review potential policy changes at federal and state levels that could facilitate transition to more sustainable farming methods in Maryland and the Chesapeake Bay region.
34. Present a case study of the FDA's decision to remove fluoroquinolones from poultry production. Why this drug only? Any chance for others?
35. Create a map of the “political terrain” of Chesapeake Bay Watershed regulation, legislation, and advocacy – who are the key players, what are their roles, how are they related, etc.
36. Examine perceptions of local and state food systems policy and food policy councils, among a variety of groups representing different demographics and regions, particularly youth, communities in the south, rural areas and elected officials to understand appropriate messages for food policy councils to engage the surrounding community and key stakeholders in their efforts.
37. Examine the USDA Agricultural Marketing Service (AMS) commodity purchasing program, which purchases farm products for school lunches and other food assistance programs, and has the dual aim of stabilizing commodity prices. Discuss what foods are purchased, their healthfulness, and the potential economic and environmental impacts of these purchases.

Food and Resource Usage
38. Develop a case study looking at ethanol impact on chemical use, land use, food costs. What is the impact in Maryland and on the Chesapeake Bay?
39. Raising animals on pasture is often touted as a more sustainable alternative to industrial food animal production (IFAP). Assess the feasibility of converting to an entirely pasture-based system of food animal production—in particular, review the literature on how much land would be required to sustain current consumption levels or meet USDA consumption guidelines.
40. Conduct qualitative interviews with farmers to learn about their needs for compost from off-farm.

Food Systems Education
41. School gardens are becoming more popular as a means of encouraging students to understand where their food comes from. How are schools making use of these gardens
in Baltimore (or elsewhere)? Do they impact the food choices students and/or their families make?

42. Assess the level of awareness among youth regarding food system issues, e.g. industrial food animal production, agricultural chemical use, links to public health, social justice and the environment; health implications of food processing; inequitable access to healthy, culturally appropriate food.

43. Literature is increasingly indicating benefits of healthy food interventions in preschool years rather than waiting until elementary school. Review literature on this theme and/or develop an intervention and present it in a local preschool or day care