



# **Purchasing 40 Percent Local and/or Sustainable Food by 2025**

The Ohio State University  
Panel on Food Sustainability

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# Table of Contents

Executive Summary .....	1
History and Process.....	6
Definitions and Criteria .....	8
Data Metrics and Reporting.....	14
Governance.....	18
Curriculum .....	20
Communications and Marketing .....	26
Funding .....	27
Conclusion.....	30
Attachment A: Original Charge.....	32
Attachment B: Panel and Workgroup Membership .....	33
Attachment C: Perspective Review .....	37
Attachment D: Buckeye Bullseye.....	38
Attachment E: Matrix of Food Sustainability .....	39
Attachment F: Food Producers, Processors or Aggregators Maps.....	40
Attachment G: Vendor Form .....	45
Attachment H: Example Bid Document.....	46
Attachment I: Bylaws .....	49
Attachment J: Partial List of Potential Curriculum Partnerships.....	53
Attachment K: Stories of Success and Challenges .....	68

## Executive Summary

The relationship humanity has with food is one of fundamental importance. The unavoidable need to acquire food throughout history has led to the development of social norms that persist today. Growing food was the key building block for establishing human civilization. Trading food advanced cultural interaction and spurred global exploration. Food provides the nutrition to power our lives, and a venue to bring people together to share meaningful social experiences, though its production and marketing also impact some of the biggest issues we face in the world today.

With its beginning as the Ohio Agricultural and Mechanical College, The Ohio State University itself owes much of its history to the ongoing need to help meet society's challenges in providing a sufficient, safe and sustainable food supply.

Recognizing an opportunity to honor this heritage, provide strong national leadership and enable new student engagement, in 2015 Ohio State established an ambitious goal to source 40 percent of its food procurement needs from local and/or sustainable sources by 2025. For one of the largest universities in the nation, with a complex food procurement network, this was not intended to be an easy goal, but rather a learning opportunity for students, staff and faculty, and a demonstration that institutions can play a positive role in affecting local agricultural economies and environmental stewardship.

In order to achieve the goal, Dr. Bruce McPheron, Executive Vice President and Provost, and Dr. Javaune Adams-Gaston, Senior Vice President for Student Life, charged a diverse and interdisciplinary panel to develop an implementation strategy for the university beyond the good work already occurring in this area. The panel consisted of students, faculty, staff and external community stakeholders. The panel held regular meetings between April 2016 and December 2018, with five workgroups meeting concurrently during that timeframe.

A critical aspect of the panel's work was to define the terms local and sustainable in such a way that these complex concepts could be easily understood and operationalized. In addition, the panel sought to encourage continuous improvement towards local and sustainable food procurement in a manner that could be consistently monitored. With both terms, the panel arrived at innovative approaches reflecting both clarity and nuance:

**Local** – Resisting the popular inclination to establish an overly simplistic standard of a preferred geographical scope for sourcing food, the panel created the *Buckeye Bullseye* concept to represent a range of embedded institutional values. This approach counts as local any raw materials

originating within 275 miles of Ohio State campuses where food is served. It also tracks food coming from North America, the state of Ohio, and within 50 miles of the campuses in order to document continuous improvement as the verified sources of food gravitate closer to the center of the bullseye over time. The panel is optimistic that other institutions operating in Ohio might join in adopting this same standard in the future, establishing a broad regional strategy to achieve food system health and vibrant economic development.

**Sustainable** – The panel affirmed that Ohio State could not appropriately be in a position to independently declare any particular farm or business to be sustainable or otherwise. Reliance would have to be on the expertise of certifiers who could make objective determinations based on consistent criteria used for all food sources they certify. Five areas of primary sustainability concern were identified, with a sustainable definition referring to those entities that satisfy at least two categories, so long as one is the environment category and, in the case of livestock operations, the second is animal welfare. The results of our survey of currently acceptable certifiers are displayed in the *Matrix of Food Sustainability*. Two important factors to note: 1) The five categories offer an opportunity to track continuous improvement of qualified sources, and 2) The matrix is not a fixed point of reference, as with geography, but must be updated over time by following an ongoing, rational and transparent process.

**Ohio Sourced** – Recognizing that foods processed, packed and/or distributed by businesses located within Ohio should be celebrated in a special way, whether or not the source of raw materials is sufficiently known, the panel determined that such purchases should be tracked so the campus community will know how much product is purchased from Ohio-based businesses, including food that does not technically qualify as either local or sustainable. This results in a third reportable statistic, which is complementary toward efforts to achieve the overall 40 percent goal.

In an ideal world, Ohio State would have ready access to the data needed to document the sources of the food served and calculate the percentage that meets these new definitions. However, vendors do not commonly track and provide such information in a food system that strongly emphasizes price while treating other factors, such as the source of standardized food commodities, as incidental and less important. The system being proposed requires a commitment to an improved data management process across the university to assemble and analyze the detailed, but still incomplete, data presented in this report. **It is urgently noted that success will require not only the steps recommended**



**here, but in particular, a clear and consistent intention, and sometimes even an insistent nudge, from university administration in the years to come.**

In addition to further details regarding relevant definitions and how success can be measured, the following pages provide a suite of specific action steps for the university to consider in ensuring the established goal is achieved. Nevertheless, a few recommendations deserve immediate consideration in order to propel the university from a planning mode into an action and implementation role. Though more detailed explanation, advice and proposed objectives are found throughout the body of the report, here are those most critical recommendations:

- **Designate a standing governance body to provide goal implementation oversight.**
  - Recognizing that conditions and opportunities will change between now and 2025, the university would be well served to have a designated structure to guide future decision making in regards to goal implementation.
  - In designating this structure, the panel recommends continuing with a similar, but smaller and more efficient structure that would meet at regular intervals to evaluate goal progress and address any pending opportunities or issues.
  
- **Build on the university's strong food system curriculum to establish a wider student-learning platform regarding their role and impact on food procurement decisions.**
  - The university has been building strength in food systems scholarship through the Discovery Theme in Food Production and Security, and the general public has demonstrated a growing interest in food issues. Ohio State is in a good position to expand curricular and co-curricular student engagement in their food system.
  - The panel recommends adopting a multifaceted approach to engage students through undergraduate and graduate curricula, on-campus experiential learning programs, and formal community-academic partnerships to address localized sustainable food issues.
  
- **Develop adequate and sustainable goal implementation funding sources.**
  - New data management tools are needed to consistently track and publicly report the university's progress towards the 40 percent procurement goal. In addition, food produced locally or through third-party certified vendors often costs more than traditionally marketed products, even when factoring in the university's ability to negotiate bulk rates. Finally, there may be reasons to help some vendors, as our partners, address operational practices that would qualify their products for helping the university achieve the 40 percent goal.



- In the near term, the panel recommends that an Ohio State Sustainability Fund grant request be submitted to address initial tracking, reporting, campus communications and vendor engagement needs around the goal. This would be a start towards larger funding needs outlined later in this report.
- **Identify an existing program(s) to develop relationships with potential vendors, especially local farms and small businesses, and to facilitate introductions with appropriate purchasing units for consideration.**
  - Aside from an ongoing governance process, there needs to be a very thoughtful collaboration and coordination between this relationship-building role, university purchasing, and those units that prepare and serve food to campus constituencies, such that the value of the process is clear to all players, including those potential new business partners who wish to engage with the campus community.
  - This is an ideal role for the Initiative for Food and AgriCultural Transformation (InFACT), both in line with its experience as part of the panel’s leadership team, and as one of Ohio State’s Discovery Theme initiatives, which are intended to spur innovation in interactions of the university with the broader community of entrepreneurs.

The panel would also like to reiterate the guiding principles identified at the outset of this project, as portrayed in the initial plan of action published in September 2016:

- 1) To achieve 100 percent transparency with regard to the sources and production means for all food sourced for campus dining venues.
- 2) To establish clear and consistent metrics by which continuous improvement can be achieved throughout the course of this project.
- 3) To assure that the methodology used reflects the diversity of perspectives within this dynamic and ever-changing community.

These principles still hold for the work of this panel and, hopefully, for the full implementation of the 40 percent goal across the entire university in the future.

Furthermore, and just as the panel itself worked in a collaborative fashion, the following report outlines many areas for continued or increased collaboration across the university and with external partners. No single university unit will be able to achieve the ambitious goal alone.

Through the panel’s work over the past two years, its members have experienced the excitement and appreciation of producers and the public for Ohio State’s leadership in



choosing to support statewide and regional producers and sustainable production systems. There is already evidence of local economic development in response to the opportunity this goal represents in Ohio communities. Through this goal, the university can help meet basic needs for healthy food for all citizens as well as better support for those doing the producing and processing. The university, however, should also endeavor to document, measure and validate the health and economic impacts of promoting a new level of citizenship through food procurement. Such level of engagement would demonstrate Ohio State's national leadership in this critical area.

With all of this in mind, the panel's leadership team wishes to thank the many individuals and university departments that have dedicated their time and expertise to the panel's deliberations. While this phase of the work is completed, and the university's food procurement team has already achieved successes in recent years, there is still much more to be done. The leadership team hopes all who have participated to date will continue to stay engaged to help in accomplishing the overall goal, and even to go beyond it in the years to come.

As directed in the panel's charge, this report is respectfully submitted to Provost McPheron and Sr. Vice President Adams-Gaston for additional feedback and guidance.

With sincere appreciation and respect,

The Ohio State Food Sustainability Panel Leadership Team



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## History and Process

Since the mid-20<sup>th</sup> century, global food production and distribution has become an increasingly complex web, and increasingly removed from individual food consumers. The nation has never seen a lower percentage of its population directly participate in raising and rearing food staples than it currently does. Similarly, and perhaps relatedly, the nation's general population has never been less knowledgeable about where its food comes from, and how it is produced, than it is now.

Further, as the food production and distribution system has become more globalized and driven by commodity pricing, it has not generated beneficial economic returns for all producers, nor has it sufficiently fed all of the people, including those in rural and urban areas that, in many cases, are located close to concentrated production systems.

Within this context, university stakeholders, primarily students, approached administration and faculty leaders on Ohio State's role in addressing one of the most important challenges of our time: feeding a growing population in a manner that ensures human health; the economic viability of food producers, processors and distributors; and stewardship of the earth's limited natural resources.

Recognizing the opportunity to reflect on the university's strong agricultural and community engagement roots, and propel new leadership from the university, in November 2015, the President and Provost's Council on Sustainability accepted a set of [strategic sustainability goals](#) for the university that included a goal to "increase production and purchase of locally and sustainably sourced food to 40 percent by 2025."

In April 2016, Provost McPheron and Sr. Vice President Adams-Gaston delivered a charge (Attachment A) to Kate Bartter, chair of the President and Provost's Council on Sustainability, to convene a group to develop a plan to meet this goal. In September 2016, that group, the Ohio State University Panel on Food Sustainability, delivered a [plan of action](#) to Provost McPheron and Sr. Vice President Adams-Gaston that outlined a comprehensive process to deliver recommendations within two years.

Since then, nearly 50 students, faculty, staff and community members (Attachment B) have been involved in the development of these recommendations through panel or workgroup representation. Additionally, the panel conducted an extensive perspectives review and engaged broader community members experienced in institutional sourcing with local or sustainable elements (Attachment C is a list of individuals and organizations interviewed or offered presentations from panel leadership). At the one-year mark, the panel also delivered an extensive [progress report](#) that guided further decision making.



The recommendations developed by the panel seek to significantly expand upon, accelerate and formalize work that has quietly been occurring through university food procurement over the past few years, in order to achieve the ambitious 40 percent goal. With its recommendations, the panel aims to energize the university community, stakeholders and partners to better understand its food choices and build a new path forward that bolsters regional economic development in an environmentally sustainable manner.

The panel has aimed to design an inclusive process that educates consumers about the impacts of their food choices through a reporting system that identifies qualifying foods over time towards the 40 percent goal achievement. The panel believes this approach will have an impact beyond just the university's on-campus food procurement effort, and will enable continuous improvement beyond 40 percent in future years once the right tracking tools are established and partner relationships are built.



## Definitions and Criteria

The Definitions and Criteria workgroup was tasked with developing working definitions for the concepts of local and sustainable that could guide the panel in achieving its overall objectives. An understanding of the way these two concepts interact is key to understanding the workgroup’s determinations. The workgroup envisioned these two terms as ideas, each with merit in terms of the value placed on food, and each needing a very different approach for the sake of determining progress toward the overall 40 percent goal.

The workgroup developed a list of “decision points” that were detailed in a full panel meeting with Provost McPheron and Sr. Vice President Adams-Gaston in December 2017. That meeting also provided an opportunity to clarify the university’s intent that each concept, local and sustainable, would be measured separately such that 40 percent of the food purchased by Ohio State would meet one definition or the other, perhaps with special appreciation for food that meets both definitions. With that clarity of the overall goal, and the criteria identified below, the workgroup made a variety of presentations across Ohio State to pressure test its proposals and gain additional insight. This section is based on those original decision points, feedback received in the December 2017 meeting, subsequent presentations and regularly scheduled discussions of the panel.

### Basic principles

Whereas the university aims to achieve certain discrete levels of local and sustainable food purchasing, the definitions and criteria developed do not intend to govern or dictate food purchases, as the majority of purchased food may fall outside of the panel’s criteria for at least the near future. All food is assumed to be outside the definitions of local and sustainable unless there is clear and sufficient evidence that it should be counted as such. That is, purchased food will not be included within the 40 percent goal unless it meets the standards that the workgroup established for inclusion. It is notable that the definitions the workgroup developed are a high bar to achieve, by design.

Many processed foods are comprised of numerous ingredients that come from different sources and are produced using a variety of methods. Recognizing the difficulty of identifying the sources of all ingredients within processed foods, the workgroup determined criteria that requires clear identification of the source(s) of at least 50 percent of the ingredients of a processed product (as measured by volume) in order for it to qualify as local or sustainable, as those terms were defined by the panel. Again, the assumption is that specific foods do not qualify toward the 40 percent sustainable food goal unless sufficient evidence exists to determine conclusively that they do. The workgroup believed



that the university's food vendors, over time, should provide the necessary information regarding each product provided to Ohio State, as an enhancement for maintaining their good standing with Ohio State campuses and food venues.

The workgroup felt very strongly that, in addition to reporting on local and sustainable foods, a third category for reporting based on business location should be created, particularly whether or not the business is located in Ohio. This additional category would have both a practical and public relations purpose. The practical consideration is the acknowledgment that there is value in knowing where businesses we engage with are located, irrespective of whether we can determine the sources of ingredients in the foods they provide. It is, for instance, useful to know that bread is purchased from a nearby bakery, even if we don't know exactly where the wheat and other ingredients in the bread come from or how they were produced. The panel acknowledged that there is a benefit for the university to state that a certain portion of food purchases are made directly from businesses located in Ohio.

### **Local Definitions and Criteria**

As noted above, when designating foods that are local, the intent should be to acknowledge where and how the ingredients in the particular food were originally produced, not where the business that provided it is located. And while single-ingredient foods are easier to distinguish along these lines, we are aware that many, if not most, foods are comprised of multiple ingredients, making the determination more challenging. Adding to that complexity, the workgroup also strongly preferred to avoid any one-dimensional or "silver bullet" definition of what it means for food to be considered local. Proposed is a system in which various "degrees of localness" are recognized, establishing a method of determining not only what foods qualify, but also a scaling system for recording improvement over time.

To decide how local an individual product might be, the workgroup asserted that there are various definitions, both on and off campus. Many people consider a product to be local if it comes from within an hour's drive of where it is consumed. Others, particularly at a state-based institution such as Ohio State, might think of what is produced within the state of Ohio as constituting such a definition. Many universities, on the other hand, use the arbitrary designation of "within 250 miles" as a definition. In this case, the workgroup chose to utilize the standard codified in the federal Food Safety Modernization Act (FSMA), which provides some limited exemptions for producers selling most of their product within 275 miles. There also was interest in determining if a vast majority of food served at Ohio State could be shown to come from within North America, with enough climate zones represented to support even tropical produce and coffee. The following chart was



developed to show the categories of interest to the panel at this time, with the thought that all foods would clearly fall into one of these geographical categories:

### Local Determination Chart

Zone designation	Range
Ultra-local	Within 50 miles of where Ohio State serves food
Ohio-produced	Produced within the state of Ohio
Regional	Within 275 miles (FSMA standard)
North America	USA, Canada, Central America, Caribbean
Beyond or Unknown	Undetermined or outside North America

Together, these categories comprise what we call the **Buckeye Bullseye** (Attachment D). For determining what local means in the context of Ohio State’s goals, it proposes to use the FSMA standard of within 275 miles of the point of purchase, which in this case means within that distance of an Ohio State campus serving food originally purchased by the university. However, it is the point of this multifaceted definition that all food be designated in one category or another, and that continuous improvement over time in bringing the bulk of food purchases toward the center of the bullseye be valued, tracked and reported to the Ohio State community.

### Sustainable Definitions and Criteria

Similar to the definition of local, the workgroup recognized that overly simplified concepts and determinations of what is sustainable food must be avoided. The university and its employees cannot be in the business of determining exact and inflexible criteria for what happens on farms, nor of visiting and inspecting farms and businesses to determine compliance. The workgroup therefore developed a system based on criteria of particular interest to the panel that relies upon commonly understood dimensions of sustainable food production, and relies upon existing certification organizations that do inspections and determinations according to criteria consistent with our interests.

In developing a system to determine sustainability, the workgroup created the **Food Sustainability Matrix** (Attachment E). The matrix takes into account the three commonly understood dimensions of sustainability: Economic Viability, Environmental Stewardship and Social Responsibility. It also breaks down the latter dimension into three distinctly different aspects of interest to the panel, which involve the welfare of farm workers, livestock and the communities where production facilities operate. Furthermore, the workgroup was transparent in indicating at least some of the Criteria of Interest identified



by the panel in each of these stated categories. The list, however, is not exhaustive and is subject to change, which will need to occur in an organized and transparent manner.

Using the matrix as a guide, the workgroup then considered existing programs and agencies that award certifications based on inspections they conduct using consistent, fair and transparent criteria. In doing so, the workgroup surveyed several such programs, conducted in-depth interviews with representatives from the most promising ones and, in the context of those surveys and interviews, considered which of the columns in our matrix would be satisfied by their favorable determination. In approving certifiers for Ohio State's use, the following criteria were applied:

- Independent, third-party certification is required, defined as designations made by agents/persons directly representing neither the location (farm or business) nor an industry group that is promoting that farm or business.
- Whichever certification or combination of certifications is used, an onsite inspection regimen should be in place, specifying that every site is available for inspection and will be visited on a clearly stated regular basis.

In the first half of 2018, the workgroup conducted surveys with a wide variety of certification programs known to be operating in the United States and elsewhere in the world, and ultimately held interviews with 12 programs based on an understanding of the current alignment of their sustainability standards with our own. The goal with these interviews was: 1) to determine the viability and integrity of the certification, and 2) to decide which criteria the certification would satisfy. The results of those interviews are contained in the matrix. It is anticipated that the group designated to do so will adjust this list as necessary in the future. A common understanding of sustainability criteria and the specific entities that award certification according to such criteria will continue to evolve in the years to come.

Furthermore, and in determining how this matrix would indicate food sustainability, the following conclusions were reached:

- To be sustainable, a farm or source of food must qualify for one of the certifications in the environmental column of the sustainability matrix, in addition to any certification in at least one other column.
- For animal production (meat, dairy, eggs, etc.), farms or businesses must qualify for certification in both the environmental and animal welfare columns at a minimum.
- While qualifying under only two columns is required, the five categories of sustainability allow tracking of continuous improvement among the farms and businesses that qualify over time.



The Food Sustainability Matrix indicates the findings of the workgroup with respect to qualifying certification schemes and the categories they potentially cover. In general, the definition of sustainable is far more complex than the corresponding one for local, and it is likely to need review and adjustment over time. For instance, new certification schemes are under development all the time, and some older ones may fall out of favor for one reason or another. Such evolution of thinking must be accounted for in any plan to implement the proposed systems to achieve the university's goals. With that in mind, the workgroup reached the following conclusions regarding the process and pathway for eventual success:

- The Food Sustainability Matrix can be edited when necessary to reflect changing science, values and conditions by an ongoing campus workgroup and a clearly determined governance process.
- A farm or business could be conditionally approved as a source of sustainable food, based on an expectation that it achieves certification within a clearly specified amount of time, most likely within months, not years.
- The university may consider helping a producer bridge certification hurdles, including potential cost-share arrangements where appropriate, but this option needs to be a carefully considered exception to the normal process.

### **Special Considerations & Limits**

When setting aspirational standards for food purchases, it is reasonable to consider what limiting factors to include in those standards. Some institutions might even start with such considerations, due to articulated values that certain foods should be avoided. It was not the responsibility of this panel to suggest that certain foods be excluded from use on campus, but instead to set standards that would help the university to achieve its goals. The following are some baseline considerations for implementation to assist in doing so.

The panel asserts that purchases from farms or businesses that are known to be in violation of regulatory standards concerning the welfare of workers, animals and/or the environment should not qualify for consideration as a local or sustainable source until the situation has been clearly and publicly rectified. The continuation of a University Panel on Food Sustainability and appropriate governance procedure would be key in making these determinations. Again, decisions about whether to purchase anything at all from known offenders are outside the purview of this panel's charge, but deserve the university's earnest attention.

The panel also asserts that any farm or business that would not welcome, for any reason, a delegation of Ohio State students, faculty or staff to tour for educational purposes, would be excluded from consideration as a local or sustainable source of food, though purchases



from such entities could continue if advisable for other reasons. The underlying value of this project is that the experience of any campus community member, students in particular, be enhanced by the closer relationship being developed with the sources of our food, and the educational component of that relationship is a priority.

The workgroup also considered whether products coming out of systems relying upon **genetically modified organisms (GMOs) or concentrated animal feeding operations (CAFOs)** should be discounted from consideration as coming from local or sustainable sources. There are strong feelings on all sides of these issues, and the panel did consider the pros and cons of making a stronger statement of some kind. However, in the end, the realization was that the standards for such products should not be different than for others, i.e. they must qualify through third-party certification under the categories specified in this section of the report. Some certifications can and will exclude products relying upon genetic engineering or highly concentrated livestock operations, but others may not, leaving a more flexible overall approach and a need to continually examine the broader issues involved in such production systems.

Finally, the workgroup considered whether **highly sweetened beverages** should qualify as either local or sustainable under any circumstances. There are strong reasons from a nutritional science point of view to avoid support for such beverages, but that same argument might be made of other foods. However, since State of Ohio tax law treats “soft drinks” different than other foods (Ohio Revised Code 5739), it was concluded that any beverage or other substance not considered as food by the statutory language will also not count as such for the purposes of this project or calculations toward the university’s sustainability goals. It is acknowledged that sugary foods and beverages comprise more than just a minor portion of campus foodservice purchasing, and that the health concerns are real, but this general rule is a good starting place. Further consideration of the role of sugary foods and beverages within the campus community should remain as an earnest concern of other policymaking efforts within The Ohio State University.



## Data Metrics and Reporting

The Data Metrics and Reporting workgroup created the framework for data collection on metrics for local and sustainable sourcing, analysis, and transparent reporting to the university and public.

### Findings and conclusions:

In FY17, Ohio State spent an estimated \$33,597,600.22<sup>1</sup> on food. These purchases included food served at the Columbus campus, as well as three regional campuses: Mansfield, Wooster, and Newark. In FY18, the figure was estimated to be \$31,132,627.26. A significant difference between the two fiscal years is that in FY18, taxable items that were identified by the Definitions Workgroup as non-food items for the purposes of our panel's work were not included in the total, whereas in FY17 these items were included.

The workgroup developed databases of all zip codes that fall within 50 miles and 275 miles of the four Ohio State campuses that serve food, and within Ohio. This will allow simple spreadsheet operations to place each purchase for which zip code data is available into the corresponding rings of the Buckeye Bullseye (Attachment D). Based on zip codes for foods purchased from verified sources, maps have been produced showing the approximate locations of producers and processors/aggregators from which Ohio State purchased food products during FY17 and FY18 (Attachment F).

The workgroup focused on local purchases of five foods for FY17, chosen because they were most likely to contribute to the total local purchase: fresh meat, dairy, yogurt, tomatoes, and lettuce. In FY18, estimates were based on data obtained from vendors. Using the data that could be verified by university food services, 9.5 percent of food purchased was produced locally (fresh or processed ingredients from within 275 miles of one of the Ohio State campuses that serve food), and 11.7 percent of food was purchased from local businesses, primarily processors and aggregators, during FY18. There is insufficient data and resolution in the data to estimate the percentage of food purchased from producers or processor/aggregator businesses within Ohio or within 50 miles, although we have been able to map many of them (Attachment F).

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<sup>1</sup> These calculations includes data from Ohio State's Office of Student Life Dining Services; Wexner Medical Center, Nutrition Services; and Ohio State's Office of Athletics and Business Advancement. The calculation does not include data from Levy Restaurants, a contractor to Ohio State's Office of Athletics and Business Advancement. Ohio State does not track catering purchases for events from unbid outside vendors.



The workgroup created a vendor form (Attachment G) to be used by current and future food suppliers that work with the university. This form allows for the identification by zip code of the ingredients of the products purchased by the university. In addition to the zip code information, vendors will report all food certification programs they participate in with the goal of using vetted certifications to calculate the proportion of purchases that meet the Panel's sustainability definition.

### **Recommendations:**

- **Create a uniform and automated data collection mechanism for all food service providers on campus.**

As reported by the workgroup in the panel's [June 2017 progress report](#), data collection can be very complex and has required a tremendous amount of tedious work to gather and verify data under our current data structures and systems. This process must be improved to accomplish efficient, accurate reporting and transparency with a minimum of additional effort, particularly for those working in Ohio State food service areas. Additionally, vendors used by the university's food service programs have varying levels of capacity to handle purchasing and validation requests, which should be taken into consideration in developing systems to request and catalog data.

The workgroup made progress on identifying baseline data for food purchased locally, initially focusing on items judged to be most likely to contribute to the 40 percent local sourcing goal. This work has been without the benefit of a system for including the sourcing information from vendors at the time of purchase, so it has required contacting each vendor, referring to specific orders, and asking after the fact if they can provide data on the source. A subsection of this data was reported in the panel's [June 2017 progress report](#). Data collection will continue along with continuous enhancement of the data collection process as outlined below. A goal of the workgroup is to develop systems for use beyond Ohio State, to encourage reporting standards in the broader industry.

- **Engage Ohio State Purchasing as an integral partner in the process of establishing reporting requirements, data collection and data verification with vendors.**

The workgroup recommends adding specifications in future bid documents (example in Attachment H) to outline the data reporting required or at requested of vendors. If vendors are required or encouraged to provide sourcing data, then eventually the analysis of the data can be based on purchasing data rather than ordering system data, be updated in close to real time, and be done by students or others, without increasing the workload of



those working in food services. Blockchain technology or other data analytics approaches should be considered to accomplish the acquisition of sourcing data, subject to the potential for improving data acquisition procedures in Purchasing.

The workgroup recommends that these data be readily available in as close to real time as possible to both those involved with purchasing, so that they can be aware of where the university stands with respect to meeting the goals at any point in time, and to the group conducting the data analysis and reporting on sourcing with respect to the goals.

- **Develop formal engagement with student groups and academic programs on campus to assist with data analysis and verification.**

The workgroup recommends that a group be identified to conduct the analysis on an ongoing basis, taking into account the recommendations of the curriculum working group on classes that could be engaged to leverage this work as part of student experience and education at Ohio State.

- **Establish a website or page on which the percentage of total food purchases, across all parts of the University, fall within the categories defining local, and the percentage meeting the definition of sustainable can be displayed publicly.**

The workgroup recommends that graphic displays (e.g. bar charts or info graphics) of the data include the percentages in each of the local categories (50 miles, Ohio, 275 miles, etc., example in the [June 2017 progress report](#)) and meeting each of the sustainability certifications as well as the percentage meeting the definition of sustainable. The data should be presented for the original source of fresh products (i.e. not packing/shipping locations), and for processed foods, the percentages of processors meeting the local and sustainability definitions should be reported, but separately from the ingredients. As recommended by the Definitions workgroup, only products for which the source of at least 50 percent of the ingredients is known should be included in the reported percentage of total purchases that meet the definitions of local and sustainable. The reported percentages should be updated at least twice annually and preferably on a more frequent (e.g. monthly) basis, subject to the capacity of the group doing the data analysis.

- **Seek and achieve continuous improvement in metrics, data, baseline measures, analysis and verification for each of the areas outlined in the panel charge.**

The workgroup acknowledges that not all of the metrics and baselines outlined in the panel charge were feasible given the resources available, although the group supports the need to collect data on each of them. The following approaches for continued progress on this important part of the panel's charge is recommended. Furthermore, the workgroup



advises that these responsible groups be coordinated via the governance structure recommended for the overall sustainable food-purchasing program.

<b>Issue</b>	<b>Proposed Metrics</b>	<b>Status</b>	<b>Suggested Responsibility</b>
Waste	Mass, volume of food entering landfill, consistent with campus zero waste efforts	Initial study undertaken, report expected in 2019	Ohio Food Waste Collaborative
Nutritional status	Healthy Eating Index for quantitative measures of dietary patterns aligning with DGA guidelines; OSU employee and student health data collection efforts focused on diet and biometrics related to nutrition	Partnership for a Healthier America collaboration led by Dean Bern Melnick, Wexner Medical Center, Student Life	Student Life, Human Resources, Wexner Medical Center
Nutrition-related health	Body composition, malnutrition	Food and health programs offered in the community by Wexner Medical Center (including federal/state/local/campus)	Student Life, Human Resources, Wexner Medical Center
Hunger	Economic Research Service low and very low food security metrics based on ERS survey questions	Survey conducted on a sample of OSU students in 2015, Buckeye Hunger Alliance and Best Food Forward have responded with food pantry and buying club programs, graduate student plans to repeat the 2015 survey	Student Life, student organizations, HR, Financial Aid
Food sources/cost	\$ value of purchases	baselines for purchases outlined above produced by all OSU dining outlets working with their vendors	OSU Purchasing/student coursework



# Governance

The Governance workgroup ensured that the panel's governance procedures are representative of the campus community and consistent in the way that rules, procedures and policy recommendations are developed and implemented across Ohio State's enterprise.

## Findings and conclusions:

In summer 2017, the panel adopted its organizational bylaws for how the panel makes decisions (Attachment I). The Governance workgroup ensured that the bylaws are followed, and was tasked with understanding and applying university governance, identifying areas of congruence or conflict, and ensuring impacted parties were engaged in the panel's dialogue.

## Recommendations:

- **Establish a Local and Sustainable Food Reporting Committee.**

The University should establish an ongoing committee to track progress and report to the Provost and to the Senior Vice President of Student Life on an annual basis the percent of local and/or sustainable food purchased by Ohio State food service units. This committee should be charged with assisting units with measuring progress to the 40 percent local and/or sustainable food purchasing goals; however, day-to-day decisions on what specific food items to be purchased are to be managed by the individual food service units.

- **The recommended governance structure and guidelines (Attachment I) should be updated and adopted by the above-referenced working committee.**

The Governance workgroup believes that these bylaws have served the panel well and can provide a foundation for future productive meetings. Specifically, representation of various stakeholders, food service units, faculty and students is very important. Maintaining open communications of performance on our goals and committee decisions/processes is highly critical. Operating in a collaborative manner that encourages consensus building should be preserved.

- **Ohio State food service units should work with Ohio State Purchasing to continuously improve the percent of local and/or sustainable foods purchased.**

The Governance Workgroup recognizes that Ohio State's Purchasing Department receives its purchasing authority through the Board of Trustees, and is tasked with ensuring that



Ohio State follows all appropriate laws and regulations set forth by various governing agencies. As such, food service units will need to work with Purchasing to continuously improve the percent of local and/or sustainable foods through competitive bidding processes that already exist. Such processes include adding language to bids and contracts that will encourage suppliers to source food for sale to the university from local and sustainable sources. The Local and Sustainable Food Reporting Committee can assist Purchasing and food service units to develop language that encompasses Ohio State's definitions of both local and sustainable.

- **The Local and Sustainable Food Reporting Committee should follow guiding principles to ensure that the goals of transparency, involvement and collaboration continue.**

The guiding principles include:

- Diversity of views: Distributed leadership and diversity of opinion makes for better outcomes. Therefore, the governance structure should engage operations, academics and relevant student groups.
  - The governance structure should include the units most impacted (e.g., Student Life Dining Services, Medical Center Dietetics, Business Advancement, etc.)
  - In addition to the units above, the governance structure should tap into expertise across campus, including academic units that specialize in food production, policymaking and communication.
- Third-party certifications: Ongoing governance should include a vetting process to visit new or revisit third-party certifications that will ensure a transparent process. The Local and Sustainable Food Reporting Committee can develop this process, using the governance structure proposed herein.
- Purchasing governance: Just as definitions of qualities of food (e.g., local and sustainable) evolve over time, so will the governance of purchasing. As such, it is recommend that the governance structure be adaptive and revisited on a regular basis. Minimally, the governance structure should be examined on an annual basis to ensure it is following all university policies and procedures.

### **Implications**

It is important to realize that various units will have additional burdens by engaging in Ohio State's local and sustainable food purchases. Because of this, additional support may be required by these units to help with procurement, sourcing and tracking of purchases.



# Curriculum

The Curriculum Workgroup identified short- and long-term curriculum integration targets for future consideration. The workgroup focused on the development of possible research questions, examined potential long-term targets for food-curriculum integration, and reviewed courses/departments with which the University Panel on Food Sustainability may seek to collaborate (Attachment J).

## Findings and conclusions:

### Potential Research Questions

The workgroup identified short and long-term curriculum integration targets for consideration as it implements the panel's recommendations. The following sections focus on research questions that could be formally embedded into the university curriculum in the short-term (the next few years) and long-term (5+ years and beyond) to engage the university community on achieving the 40 percent local and/or sustainable food goal.

#### Short Term Research Questions:

- Assistance setting up data collection systems
  - Review of existing sustainability reporting structures (What are companies already providing to other vendors?)
  - Development of sustainability reporting structure that aligns with existing tasks
  - Software/spreadsheet creation for purchase tracking/vendor compliance
- Verification of data
  - Development of verification "checklist"
- What are we trying to change and how do we measure impact?
  - Why establish a 40 percent goal?
    - Opportunity for class exploration into value of local and/or sustainable
    - How can this goal impact farmers, community, industry and beyond?
  - Can we measure change?
    - In order to measure change, we need to benchmark now
    - Challenge students to provide metrics (economic, social, environmental) for the current state of agriculture in general in Ohio and for vendors in particular
- Is there a difference between local and sustainable?
  - Explore the differences – opportunity for great discussion on social and environmental trade-offs, market evaluation, long-term vs. short term etc.
- What do students, faculty, staff and the community know about the 40 percent goal?
  - What is the current level of engagement, messaging impact, etc.? (Provide the baseline so that future impacts can be measured.)



- Is the messaging working?
- Is the Ohio State community interested?
- How does Ohio State measure up against other institutions?
- What do first-year students know about food systems when they enter Ohio State?

Long Term Research Questions:

- What have we changed and how can we measure the impact?
  - What are the metrics telling us?
    - How much have we changed?
    - How close are we to meeting the challenge?
    - Why did we not meet or exceed the goal?
    - Did we set the “right” goal?
      - Are we seeing the desired changes?
      - If not, why?
      - Overall review of the challenge
        - How are we doing?
        - How is the community doing?
        - How are farmers doing?
        - How has the challenge impacted the Ohio State community’s views?
- How have economic, environmental and/or social benefits grown (or regressed) as a result of the 40 percent goal?
  - Are we seeing different results when addressing different segments of the population?
- How has agriculture been impacted by the 40 percent goal?
  - Can we measure impacts on farmers, vendors, local economies, etc.?
- How has the 40 percent goal impacted everyone at Ohio State, from dining hall workers and custodial staff to faculty and administrative executives, and how do we measure this impact?
- Has there been an impact on public health and, if so, how do we measure this impact?

**Notes from Relevant Peer Institutions**

The workgroup investigated food/curriculum connections at peer institutions and found best practices that Ohio State could learn from in ensuring that the goals of the 40 percent local and/or sustainable food project overlap with Ohio State’s classroom experience.

University of Michigan’s Sustainable Food Systems Initiative

This program offers a separate web platform for all food-related research/engagement/curriculum offerings/etc. in highlighting the university’s food and sustainability work. A lesson



learned is that Ohio State could replicate by embedding similar content in the university's sustainability site (split off by content areas: food, energy, water, etc.).

Michigan also offers "Food Literacy For All," a community and academic partnership course that is free and open to the public. Students can enroll for two credits or community members can enroll for free. If Ohio State was to pursue something similar, this could be a meaningful way to showcase the work of the panel and highlight partnerships (faculty and community partners leading seminars).

The university also offers food/curriculum connections through the following coursework:

- [Interdisciplinary Food Minor](#)
- [Graduate Certificate in Sustainable Food Systems](#)

Finally, Michigan's Sustainable Food Program operates as a part of a larger university initiative but is run by students. The program provides student leadership opportunities, like Ohio State's student sustainability council, but the program focuses solely on food.

#### Michigan State University

Through the university's "Cultivate Michigan" program, there is an effort to ramp up Farm to Institution programs and track progress on these goals.

Additionally, Michigan State also has a robust organic farm on campus that offers a year-round community-supported agriculture (CSA) program and sells produce one day per week on campus. Another growing site on campus, Bailey GREENhouse and Urban Farm, works with Residence Life and the RISE program (which is the equivalent to Ohio State's SUSTAINS Learning Community) as a student-led hoop house that grows fruits and vegetables for dining halls. Food is grown in soil with composted pre-consumer food waste. There is also a dairy store on campus, the MSU Dairy Store, and a bakery, MSU Bakers.

The university offers an experiential field course (1-2) credits exploring and analyzing MSU's agricultural and food system operations that are working to achieve greater sustainability.

#### University of Illinois at Urbana-Champaign (UIUC)

The university claims that 95 percent of all produce grown at their [Sustainable Student Farm](#) is utilized by their Dining Services program. Projects at the farm focused on vermicomposting, weed management, design, and solar-charged electric motor conversion for tractors all connect to research projects with faculty on campus. Involving students in pre-consumer composting and reusable mug/cup design are other ways to engage learning communities or classes in dining initiatives.



Additionally, through the university's [Institute for Sustainability, Energy, and Environment \(iCAP – Illinois Climate Action Plan\)](#), there are significant projects focused on the UIUC sustainable agricultural food system and collaborative partnerships.

#### University of Kentucky:

The university's [Food Connection](#) supports the university's land-grant mission through three key areas of work: interdisciplinary and innovative instruction, high-impact service and outreach, and innovative research on foods and food systems. The program aims to enhance student experiences through on-campus dining and enriched learning environments. Additionally, it leverages campus dining as a living laboratory to facilitate growth of the local food economy and it operates "The Learning Kitchen" as part of on-campus curriculum enrichment. The program is funded through the university's contract with Aramark, which offers a \$1 million endowment to promote student opportunities in food studies and supports student opportunity grants.

There is also the [Shawneetown Student Garden Project](#) on campus, which is a student-led initiative launched in 2009, which now has 90 garden plots.

#### **Recommendations:**

- **Once the new General Education (GE) guidelines and revision process is complete, consideration of possible ways to integrate work to achieve the panel's goals into the GE.**

Based on the current draft, the workgroup recommends consideration of GE seminar (one credit introductory level courses focused on specific topics and designed for first year students) offerings and identification of units willing to provide teaching and course development support. The GE sustainability, places and spaces, and transformative ideas categories also may be suitable avenues for courses designed to integrate the panel's work. However, these specific connections are not clear until the GE is finalized. At that point, existing and new course opportunities for integration can be clearly identified.

One further note is that the sustainable agriculture major (soon to be offered) workgroup plans to create a GE course offering in this content area that may work well for a starting point. (The development of a new GE Cultures and Ideas course focused on sustainable agriculture is moving forward within the context of the current GE structure with plans for easy integration into the new structure.)



➤ **Creation of an interdisciplinary sustainable food systems minor.**

Consider the creation of an interdisciplinary sustainable food systems minor with an experiential learning component that ties to vendors and farmers who are engaged in partnerships with Ohio State.

The development of the new Bachelor of Science degree in sustainable agriculture may also connect to these types of partnerships but the addition of a minor program would allow the panel to reach a broader audience due to student engagement from those not enrolled in the full major program. Considerations for this minor include the student target audience, ownership and administration as well as funding.

This minor could work well with new General Education (GE) requirements, offer more room to incentivize minors and be reviewed by the Sustainability Education workgroup (seven colleges represented) for feasibility/interest from academic units.

➤ **Collaboration with the SRE-led Sustainability Education and Learning Committee (SELC) to identify possibilities such as minors, majors, graduate programs, or degree enhancements (e.g. certificate programs) related to food and sustainability.**

This faculty committee has representatives from seven colleges and includes faculty members who specialize in food systems research and teaching. As recommendations are identified, the panel should seek to connect with SELC, which is currently assessing the larger landscape of sustainability and environmental program offerings and improved communication about existing programs. Contacts are Dr. Elena Irwin (.78) and Gina Hnytka (.4).

➤ **Development of a community-academic collaborative food education effort.**

For example, the Food Literacy for All initiative at the University of Michigan noted above.

➤ **Partnership with the Environmental and Social Sustainability (ESS) Lab to measure knowledge gaps amongst current Ohio State students related to food and food systems.**

The workgroup recommends the creation of opportunities for students to develop surveys to measure student perception of Ohio State food sourcing, the 40 percent goal, and to measure the impact on campus community/change in perception over time. Some of this content may be addressed in the ESS lab sustainability survey, but there may be further behavioral elements for which ESS lab may be able to assist in the development. Contact: Atar Herziger. 1 (Postdoctoral Researcher for the ESS Lab)



➤ **Partnership with the Student Farm to engage students in exploring production and as a vendor for produce for Ohio State Student Life Dining Services.**

Based on good practices from other institutions, the workgroup recommends a discussion with Ohio State’s Student Farm leadership team regarding the potential connection of the farm to the Student Life Dining Services program. Additionally, it would be worthwhile to create a physical classroom location at the Student Farm, which would open for tours and classes with on-site fieldwork incorporated.

The Ohio State Student Farm provides an excellent opportunity for students to “get their hands dirty” and learn about the production side of agriculture. As part of the new bachelor’s in science in sustainable agriculture, a new practicum course is being developed that will be based at the Student Farm. Additionally, a Farm Manager has been hired through the Department of Horticulture and Crop Sciences. A Farm Manager provides structure and continuity and creates greater opportunity for reliability of production for dining outlets.

It is also noted that the broader efforts of the College of Food Agriculture and Environmental Sciences (CFAES), working at Waterman Farm and elsewhere, would be an important resource that should be consulted for the sake of curriculum development, and that efforts made in this area generally speaking should work through existing and formal structures regarding ongoing curriculum development as a priority.



## Communications and Marketing

The Communications and Marketing Workgroup was established to announce and promote the work of the panel, and to document results.

### Findings and conclusions:

In 2017, a Communications Plan was created to guide the dissemination of information coming from the panel. The Communications group established a [dedicated website](#), created a dedicated email address for public correspondence ([localfood@osu.edu](mailto:localfood@osu.edu)), and developed recommendations for communicating with senior leadership and internal and external audiences.

The [Food Sustainability Panel website](#) offers an overview of the goals and work of the panel; features the [June 2017 Local and/or Sustainable Food by 2025 Report Update](#) and the [September 2016 Local and/or Sustainable Food by 2025 Report](#); maintains a complete inventory of the panel's governing documents and meeting minutes; and lists all panel members.

The website also features pertinent news articles stemming from Ohio State research projects that lend expertise to the area of local and sustainable food.

The Communications and Marketing Workgroup will continue as the final report is completed and released. The university community will continue to be updated on the findings of the panel through multiple communication outlets, including OnCampus newsletters for students and faculty/staff, appropriate websites, direct messaging and other means to reach the widest audience.



# Funding

In order for the university to successfully achieve the 40 percent goal, adequate and sustainable funding sources will need to be implemented. The panel identified four key initiatives that will potentially require new funding resources:

- 1. New Data Management Tools.** Throughout the panel process, staff have manually identified the sources of a variety of food purchases. This is a time-consuming process that involves extensive contact with food vendors, comparative analysis of the data received from those different vendors, and then confirmation as to whether the data meets the panel's definition of local or sustainable. While this manual effort has been the foundation for understanding the nature of the university's current food procurement, and therefore deeply appreciated, it is not reasonable to add this new task to existing staff workloads in perpetuity. In addition, given the manual nature, this methodology could result in unforeseen human errors that skew the resulting tabulations. Therefore, the university needs to work with internal, and potentially external, partners to develop a software program that will automate the data collection and analysis to provide timely, accurate reports. The university needs to ensure that whatever system is implemented fits the needs to accomplish the goal. That may require customized tools and new staff training on those tools. It is difficult to assess the cost of implementing this initiative. The cost could range from a few thousand dollars annually, if an existing subscription-based tool will meet the university's needs, to a number that may approach or even exceed six figures if wholly new software needs to be developed.
- 2. Food Procurement Budget.** While not always the case, it is generally recognized that food produced by local or by third-party certified vendors costs more than conventionally produced food items. For example, Consumer Reports conducted a recent analysis that found, overall, [certified organic food items cost 47 percent more](#) than similar conventionally produced items. In an older analysis of price premiums for a smaller set of organic goods, the U.S. Department of Agriculture found that certified organic products cost more, but had a large variation in price difference depending on the product, ranging from [7 percent to 82 percent more expensive](#). Third-party certified products, particularly USDA organic, are increasingly common in the market place since these studies were conducted, so pricing differences are likely to be smaller in nature in the future. In addition, the university has negotiating leverage given its volume and predictability of purchasing that may lend itself to attractive purchasing contracts with local and sustainable vendors. However, even a conservative 25 percent price premium for these goods applied to 40 percent of the university's total food procurement budget would result in a \$3.4 million net



increase in annual food cost, based on the university's FY17 food procurement budget. It is anticipated that cost difference would be incorporated over time through 2025 as a routine budgeting consideration, but availability of a cash investment to get the preferential purchasing program started may be necessary.

3. **Partner Assistance.** There may be instances where an existing, or potentially new, partner is running its food production operation consistent with one of the university's recognized certifying third-party criteria, but has not taken the steps to complete certification. Similarly, an existing, or potentially new, partner may have the opportunity to shift production closer to one of the university's campus locations to fall within geographical preferences. In these instances, it may be more economical or otherwise desirable for the university to work with the partner to achieve the desired certification or arrange operations to better invest in local economies than to negotiate different food procurement contracts for the sole purpose of achieving the 40 percent goal. This programming concept would need to involve internal, and possibly external, stakeholders to ensure legal standards are met for assisting external private businesses as well as leveraging external grant or funding opportunities from like-minded economic development and sustainable agriculture agencies, foundations, and organizations. While there is no estimate for potential cost impact to the university for this initiative, it could be conducted as opportunities arise and in a manner that avoids increased costs associated with food products from new vendors that can otherwise meet the university's standards.
  
4. **Education and Outreach.** The university has conducted some efforts to educate stakeholders on measures are being taken to incorporate more local and sustainable food options into university offerings. However, the university has not yet achieved widespread recognition and acknowledgement for those measures. The panel recommends conducting a coordinated, multi-year communication and marketing effort to raise the visibility of the university's 40 percent goal; the activities currently underway to achieve that goal; and how campus stakeholders can participate through their daily individual food choices. This effort could include education components that will help campus stakeholders understand the importance of choosing local and sustainable food options when eating off campus as well. While a communications and marketing plan can be executed at different levels, with corresponding expectations of success, the panel anticipates there will be significant effort needed to do this right. The costs for planning, materials, and execution over multiple years leading up to 2025 should be strongly considered, and possibly offset by internal university capacity in this important area.



## Recommendations:

- **Pursue initial pilot funding to direct additional activity that needs to be incorporated into annual budgeting over the mid-term.**
  - In the near term, the university should pursue an Ohio State Sustainability Fund grant to begin work to develop a new data management tool, a marketing and communications plan, limited pilot funding for immediate opportunities to provide partner assistance, and possibly a temporary and targeted purchase transition to local and/or sustainable sources.
  
- **Identify cost-effective transition opportunities and begin budgeting for increased annual expenditures.**
  - Longer term, the university needs to identify opportunities for cost effective transition to more local and sustainable food sources. Simultaneously, the university should begin budgeting for food expenditure cost increases over time, potentially up to a \$3 to \$4 million annual increase over current expenditures.



## Conclusion

The work of the University Panel on Food Sustainability has been a labor of love for many of its participants, and this meaningful work is hardly over with now. The panel started with a sense of urgency to address concerns raised by some students and partners who care a great deal about where food comes from, how it is raised, and how thoughtful institutional purchasing policies can be a force for positive change in the community, both internal and external to the university. This report has aimed to begin the process of instilling such thoughtfulness, but the work is far from complete.

There is much care and attention at all levels within Ohio State still needed for the overall goal, and the true potential of the posited transformation, to be realized.

Whatever else is said, one major advantage regarding food procurement practices at Ohio State has been clear from the beginning. With a mostly “self-operated” food system, the university has the flexibility needed to reach its goals without compromising quality or allowing public messaging to overwhelm earnest attention to reality on the ground. In brief, the necessarily arduous task of implementing change will be so much more predictable and effective given that the players who must accomplish that change are on the same team. That said, it is advised that, at some point in the future, food service providers on campus that are not directly operated by Ohio State should be required to track purchases and adhere to the 40 percent goal as closely as possible. Such transparency and collaboration could and should be asked of all food service providers and caterers responding to Ohio State’s food needs.

In a like manner, Ohio State should not be satisfied to transform only its own food purchasing systems, but could very well encourage other institutions, and even individuals, to join in the effort to positively affect the health and wellbeing of Ohio communities and citizens by transforming their own buying habits in accordance with the principles established in this report. At the very least, it would be wonderful to imagine that all current faculty, staff and students could join the effort as part of one massive Buckeye team. Perhaps a consumer purchasing cooperative could even be established with an aim to continuously improve buying habits throughout the Ohio State campus communities along the lines of what this report recommends.

Additionally, efforts could be made to influence those who produce, process and deliver food to Ohio State to join in the grand challenge of transforming our food system for the betterment of all. Farmers in particular are in need of, and asking for, new models for maintaining their own sustainability in the face of increasingly difficult challenges coming from many different directions. Effective and comprehensive implementation of this plan



may require the development, support, and expansion of a local and regional food economy that includes supply chain infrastructure (e.g. food hubs), resources and services for food and agricultural enterprise, and reformulated approaches to institutional purchasing.

It may in fact be necessary to develop innovative strategies for building relationships between suppliers and the university by, among other things, entering into contracts with organized groups of food producers that would service Ohio State campus locations, while ensuring compliance with local and sustainable standards and providing a dependable revenue stream for farmers and regional food hub operators. Such an approach could lead to new locally-based, quasi-public, public/private, nonprofit, or even for-profit organizations that could assist in maintaining relationships between Ohio State and food suppliers based on the broader mission of the 40 percent local and/or sustainable objectives and standards. Ohio State may also consider supporting innovative financing strategies for critical components of regional food system infrastructure that fit within the university's core educational and land grant missions.

Undoubtedly, the food system is a key driver and indicator of success for the entire constituency of a public institution such as Ohio State. What better way would there be for this great institution to realize its desired leadership role as a land grant university than to lead the way in achieving the goals set out in this report while encouraging its members, partners, neighbors, friends, and even competitors, to do the same in new and imaginative ways?



# Attachment A: Original Charge

THE OHIO STATE UNIVERSITY  
OFFICE OF ACADEMIC AFFAIRS

## Charge to Establish a University Panel on Food Sustainability April 2016

### BACKGROUND

In November 2015, university leaders accepted a comprehensive set of sustainability goals developed by the President and Provost's Council on Sustainability. Among the goals was one that calls for the university to "increase production and purchase of locally and sustainably sourced food to 40 percent by 2025." Additionally, university leaders have supported an initiative through the Discovery Themes to transform food systems on campus, in the community, and across Ohio and beyond to achieve food security for health. Building on the goals outlined, the university needs to consider issues related to how it informs internal and external audiences about our strategic plan and our progress. To this end, the university will create a panel and charge its members with the development of this plan.

### THE CHARGE

Deliver to the Ohio State community and the public a full accounting of accomplishments related to food sustainability across the institution, not only in the dining halls but in all phases of university life and in connection with Ohio communities; and to develop the strategic plan to accomplish our 2025 goal. At a minimum, these are goals the University Panel on Food Sustainability will accomplish:

- Define terms, particularly "sustainable" and "local," to achieve scientific rigor and clarity around our 2025 goal.
- Determine metrics by which waste, nutrition, diet-related health, hunger, food sources, cost and impact of Ohio State purchasing will be measured;
- Establish baselines for each of the metrics listed above.
- Develop an inclusive system of governance over the implementation of the initiative that engages students, staff, faculty and stakeholders in ensuring a rigorous and transparent approach to achieving the goal.
- Ensure an approach that engages food buyers on all Ohio State campuses and others impacted by university purchasing on Ohio farms and in Ohio businesses and communities.
- Incorporate the initiative as a larger educational component of the Ohio State experience.
- Outline how the internal Ohio State community informs and interfaces with external audiences.
- Report on progress to date as well as future plans and opportunities to engage all audiences.
- Create a timeline for action.

### PANEL FORMATION / TIMELINE

Kate Bartter, chair of President and Provost's Council on Sustainability, will convene the group, which will determine the appropriate chairperson or persons and coordinate additional members for the panel. The panel's agenda of action will be delivered to Senior Vice President Adams-Gaston and Interim Executive Vice President Provost McPherson by September 15, 2016.

### POTENTIAL PANEL MEMBERS

- Student Representatives – to be determined
- Faculty/Staff Representatives – to be determined
- Zia Ahmed, Sr. Director, Dining Services, Student Life
- Kate Bartter, Director, Office of Energy and Environment (initial convener)
- Molly Calhoun, Associate VP of Student Life (or alternative leader)
- Casey Hoy, Faculty Director, the Initiative for Food and AgriCultural Transformation (InFACT)
- Ryan Schmiesing, Senior Administrative Officer, College of Food, Agricultural, and Environmental Sciences
- Brian Snyder, Executive Director, InFACT



## Attachment B: Panel and Workgroup Membership

### Panel Members:

<b>Faculty</b>
Casey Hoy, Faculty Director, InFACT (Panel Leadership Team, Alternate)
Colleen Spees, School of Health and Rehabilitation Services, College of Medicine
Jill Clark, John Glenn College of Public Affairs
Kareem Usher, Knowlton School
Nick Kawa, Department of Anthropology
Shoshanah Inwood, School of Environment and Natural Resources
<b>Students (Undergraduate and Graduate)</b>
Emily Hayden, Residence Halls Advisory Council
Josh Shekhtman, Residence Halls Advisory Council
Kaleigh O'Reilly, Undergraduate Student Government (Panel Leadership Team)
Thelma Velez, NSF Doctoral Fellow, CFAES SENR
David Wituszynski, Graduate Research Associate, CFAES FABE
Sophie Chang, Undergraduate Student Government (Panel Leadership Team)
Mara Momenee, Real Food OSU
Ethan Shillington, Real Food OSU
Mikayla Bodey, Undergraduate Student Government
Katie D'Amico, Real Food OSU
Sally Doyle, Real Food OSU
Sarah Brown, Residence Halls Advisory Council
Brandon Free, Council of Graduate Students
<b>Staff</b>
Zia Ahmed, Senior Director, Student Life Dining Services (Panel Leadership Team)
Lesa Holford, Associate Director, Student Life Dining Services
Kate Bartter, Director, Office of Energy & Environment
Mike Shelton, Associate Director, Office of Energy & Environment
Molly Calhoun, Associate VP, Student Life
Tom Reeves, Director, Energy Management & Sustainability, Student Life
Ryan Schmiesing, Associate Provost, Office of Academic Affairs
Brian Snyder, Executive Director, InFACT (Panel Leadership Team)
Julie Jones, Director, Nutrition Services, Wexner Medical Center
Mike Folino, Associate Director, Nutrition Services, Wexner Medical Center



Graham Oberly, Sustainability Coordinator, Athletics, Business Advancement, Business and Finance
Laura Kington, OSU Extension, Farm to School Program
<b>External Partners</b>
Leslie Schaller, AceNET
Matt Brown, Planning Administrator, Franklin County Economic Development & Planning Department
<b>Non-Voting Members</b>
Nicole Pierron Rasul, Panel Coordination, Program Coordinator, InFACT
Gina Hnytka, Workgroup Chair, Academic Program Manager
Gina Langen, Workgroup Chair, Communications Director, Office of Energy & Environment

**Workgroup Members:**

<b>Definitions and Criteria for Local and Sustainable</b>
<p>The Definitions and Criteria workgroup was charged with fleshing out the definitions of local and sustainable as referred to in the panel’s charge and with providing sufficient measurable criteria related to meeting the food sustainability goal.</p> <p>Members: Brian Snyder, Executive Director, InFACT (Chair); Mike Shelton, Associate Director, Office of Energy &amp; Environment; Colleen Spees, School of Health and Rehabilitation Services; Casey Hoy, Faculty Director, InFACT; Kaleigh O'Reilly, Undergraduate Student Government; David Wituszynski, Graduate Research Associate, CFAES FABE; Mike Folino, Associate Director, Nutrition Services, Wexner Medical Center; Thelma Velez, NSF Doctoral Fellow, CFAES SENR; Matt Brown, Planning Administrator, Franklin County Economic Development &amp; Planning Department; Lesa Holford, Associate Director, Student Life Dining Services</p>
<b>Governance</b>
<p>The Governance workgroup focused on developing organizational bylaws for how the panel makes decisions. It is important in maintaining the credibility of the effort to achieve 40 percent local and/or sustainable food purchasing on Ohio State campuses to maintain a governance procedure that is representative of various campus communities and that is consistent in the way rules are developed and applied.</p> <p>Members: Tom Reeves, Director, Energy Management &amp; Sustainability, Student Life (Chair); Jill Clark, John Glenn College of Public Affairs; Kareem Usher, Knowlton School; Kate Barter, Director, Office of Energy &amp; Environment; Ryan Schmiesing, Associate Provost,</p>



Office of Academic Affairs; Tim Keegstra, Associate Director Operations, Student Life Dining Services

### **Sourcing, Data Metrics and Transparency**

The Sourcing, Data Metrics and Transparency workgroup created the framework for data collection metrics for local and sustainable sourcing, analysis, and transparent reporting to the university and public.

Members: Casey Hoy, Faculty Director, InFACT (Chair); Zia Ahmed, Senior Director, Student Life Dining Services (Co-Chair); David Wituszynski, Graduate Research Associate, CFAES FABE; Julie Jones, Director, Nutrition Services, Wexner Medical Center; Mike Folino, Associate Director, Nutrition Services, Wexner Medical Center; Eric Stucke, Business Manager, Student Life Dining Services; Lesa Holford, Associate Director, Student Life Dining Services; Mike Shelton, Associate Director, Office of Energy & Environment; Graham Oberly, Sustainability Coordinator, Athletics, Business Advancement, Business and Finance; Kevin Armstrong, GIS Application Developer, Agroecosystem Management Program; Sophie Chang, Undergraduate Student Government; Matt Brown, Planning Administrator, Franklin County Economic Development & Planning Department; Joe Brown, Food Service Director, Columbus City Schools; Brian Williams, Local Nexus – Consultant

### **Communications**

In collaboration with university communicators, the Communications workgroup developed a comprehensive communications plan to keep the campus community informed regarding progress toward the food sustainability goal. The plan includes communication channels to reach diverse stakeholders, including Ohio State students, faculty and staff; food producers, processors and distributors; government agencies; and the public. A portion of the [Ohio State sustainability website was established for panel news](#).

Members: Gina Langen, Communications Director, Office of Energy & Environment (Chair); Emily Hayden, President, Residence Halls Advisory Council; David Isaacs, Communications Manager, Strategic Communications, Student Life; Stephanie Lingofelter, Marketing Specialist, Student Life Dining Services, Student Life; Leslie Schaller, AceNET; Tracy Turner Robinson, Technical Editor, CFAES Communications

### **Curriculum Integration**

The Curriculum Integration workgroup identified short and long-term curriculum integration targets to tie university curriculum to the work needed to implement the panel's recommendations. The group focused on the development of



possible research questions, examined potential long-term targets for food-curriculum integration and reviewed courses/departments with which the panel may seek to collaborate.

Members: Gina Hnytka, Academic Program Manager (Chair); Jennifer Harrison, Post-Doctoral Researcher, OARDC Entomology; Sarah Gabel, Environment, Economy, Development and Sustainability (EEDS) Student; Nicole Pierron Rasul, Program Coordinator, InFACT

### **Outreach Strategy**

A group of students from the Buckeye Undergraduate Consulting Club was contracted during the spring 2018 semester to develop and deliver an outreach strategy for Ohio State to engage food system providers who may meet the group's definitions of local and sustainable. The group delivered a case study focused on Ohio State Student Life Dining Service's current sourcing program for fresh chicken purchases.

Members: Lydia Sweed, Buckeye Undergraduate Consulting Club Student; Sanjana Chidambaram, Buckeye Undergraduate Consulting Club Student; Qing Chu, Buckeye Undergraduate Consulting Club Student

### **Writing**

The Writing workgroup convened during the fall 2018 semester to compile, draft and edit the panel's final report for submission to university administration. All panel members who were not enrolled in the workgroup, reviewed and provided feedback on drafts of the report.

Members: Gina Langen, Communications Director, Office of Energy & Environment (Chair); Nicole Pierron Rasul, Program Coordinator, InFACT; Brian Snyder, Executive Director, InFACT; Mike Shelton, Associate Director, Office of Energy & Environment; Tracy Turner Robinson, Technical Editor, CFAES Communications; Rick Livingston, Associate Director, Humanities Institute and Senior Lecturer, Department of Comparative Studies; Mike Folino, Associate Director, Nutrition Services, Wexner Medical Center; Eric Stucke, Business Manager, Student Life Dining Services; Lesa Holford, Associate Director, Student Life Dining Services; Tim Keegstra, Associate Director Operations, Student Life Dining Services; Kaleigh O'Reilly, Undergraduate Student Government; Alyssa Gilliland, Athletics, Business Advancement, Business and Finance; David Isaacs, Communications Manager, Strategic Communications, Student Life



## Attachment C: Perspective Review

Over the course of their research, the panel reviewed perspectives and engaged with those with experience in local and sustainable sourcing. The following individuals and organizations were interviewed and offered presentations to the group:

- Zia Ahmed, Ohio State Student Life Dining Services
- Julie Jones and Mike Folino, Ohio State Wexner Medical Center, Nutrition Services
- Laura Kington and Emily Evans, Real Food Challenge at OSU
- Anim Steel, Real Food Challenge
- Joe Brown, Columbus City Schools
- Lillian Brislen, The Food Connection, University of Kentucky

Presentations/meetings on the work of the panel were made to the following Ohio State groups:

- Athletics and Business Advancement
- Purchasing
- Trademark and Licensing
- Administration: Bruce McPherson, Executive Vice President and Provost, and Javaune Adams-Gaston, Senior Vice President for Student Life

Additionally, meetings were held with the following food certifications programs to review their certification standards by the Definitions and Criteria workgroup:

- Food Alliance
- Ohio Ecological Food and Farm Association (OEFFA) regarding the National Organic Program
- Certified Naturally Grown
- Rainforest Alliance
- Animal Welfare Approved
- Global GAP
- Fair Trade Certified
- Certified Humane
- Marine Stewardship Council
- ANSI/LEO-4000
- American Grassfed Association
- Sustainable Food Group



# Attachment D: Buckeye Bullseye



*Distances are from each campus where Ohio State provides food.*



# Attachment E: Matrix of Food Sustainability

Sustainability defined as meeting one certification under Environmental Soundness, and at least one more column; livestock products meet at least one each in Environmental Soundness and Social Responsibility/Animals columns.

		Environmental Stewardship	Economic Viability	Social Responsibility		
				Workers	Animals	Communities
Criteria of Interest		<b>Soil &amp; Water Conservation</b>	<b>Collective</b>	- Accessibility of food	- Accessibility to outdoors	- Food security
		- Conservation Plans	- Cooperatives	- Affordability of food	- Appropriate antibiotic & hormone use	- Public health outcomes
		- Intensive use of cover crops	- Food Hubs	- Nutritional quality of food	- Responsible health care	- Active community involvement
		- Water monitoring systems	<b>Ownership &amp; Scale</b>	- Worker fairness standards	- Express natural behavior	- Social service farms/businesses
		- Organic matter in soil	- Farmer ownership/control	- Supporting minority farmers	- Access to food and water	- Culturally appropriate food
		- Microbial life in soil	- Local ownership/control	- Supporting women farmers	- Avoid overcrowding	
		- Conservation tillage	- Fair Trade		- Clean and comfortable living conditions	
		<b>Input Reduction</b>	- GMO Free		- Humane slaughter	
		- Pesticide/herbicide reduction	- family-sized operations		- Humane transportation & handling	
		- Input substitution	<b>Profitability</b>			
		<b>Systems Emphasis</b>	- Direct to consumer sales			
		- Crop rotations	- Valuing quality vs. quantity			
		- Nutrient cycling (aquaponics)	- Paying for nutrient density			
		- Improving energy balance (out/in)	- Adding Value for Best Practices			
		- Rotational grazing	<b>Business Practices</b>			
		- Increasing Biodiversity	- Operational Transparency			
		- Genetic preservation (breeds & seeds)	- Continuous Improvement			
		<b>Seafood</b>	- Quality Management Systems			
		- sustainably farmed	- Waste Reduction Systems			
		- sustainably wild-caught				
	<b>Wildlife Conservation</b>					
	- habitat preservation & restoration					
<i>Each certification individually vetted to determine which categories, if any, it satisfies</i>						
Approved Certifications	<a href="#">Food Alliance</a>					
	<a href="#">National Organic Program</a>					
	<a href="#">Certified Naturally Grown</a>					
	<a href="#">Rainforest Alliance Certified</a>					
	<a href="#">Animal Welfare Approved</a>					
	<a href="#">Integrated Pest Management</a>			Under development		
	<a href="#">Marine Stewardship Council</a>			Under development		
	<a href="#">Global GAP</a>			Available as add-on	Outside U.S. & seafood	
	<a href="#">Fair Trade Certified</a>					
	<a href="#">Certified Humane</a>					
<a href="#">American Grassfed Association</a>						



## **Attachment F: Food Producers, Processors or Aggregators Maps**

The following maps show food producers and processors or aggregators from which Ohio State has purchased food during FY17 and FY18.

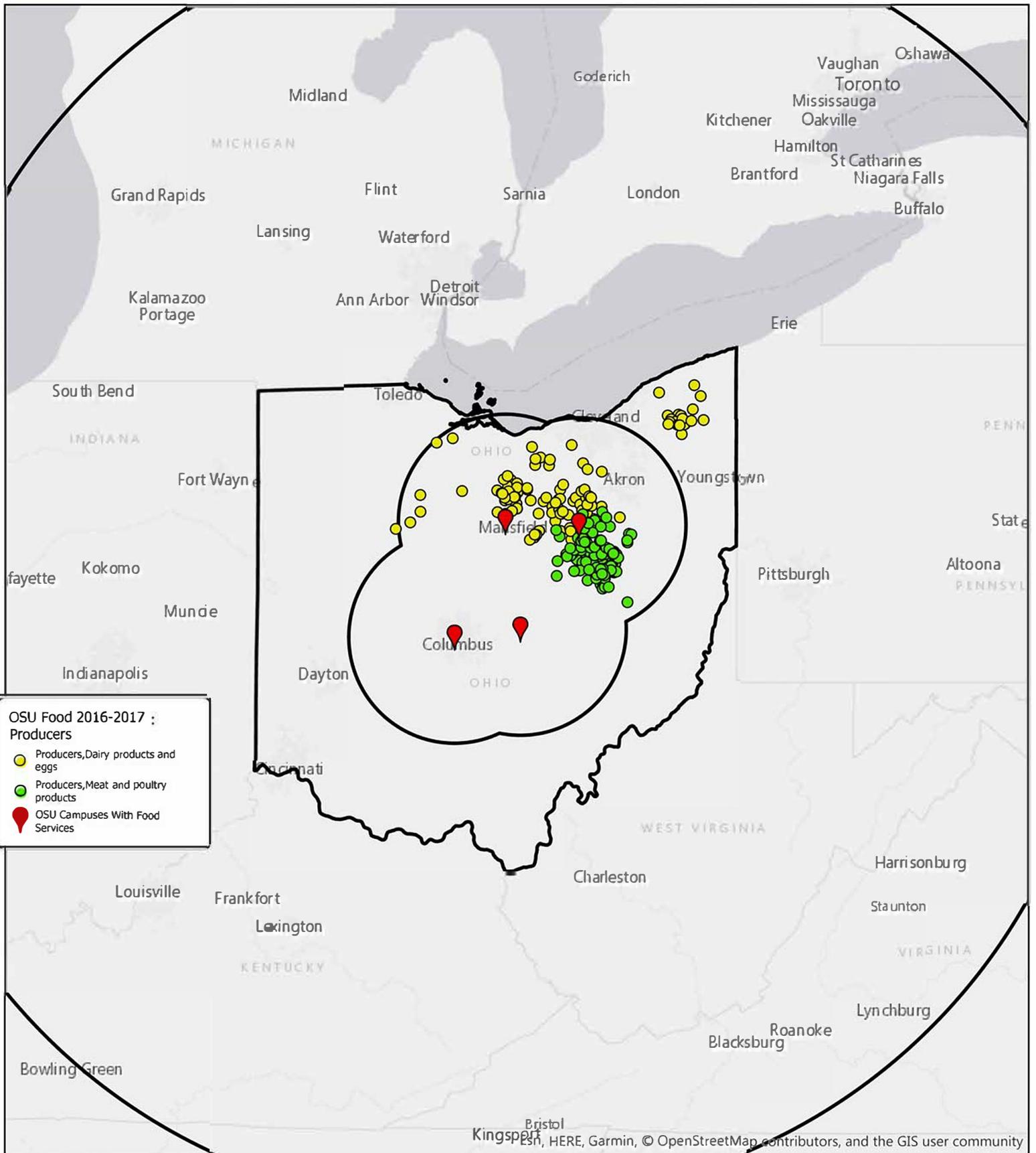
Producers are the sources of fresh products (e.g. meat, vegetables, fruit, etc.) or ingredients that have been processed before sale to Ohio State (e.g. yogurt, baked goods, sauce). Producers that are mapped are primarily farms that produce various products.

Processors and aggregators sell food items to Ohio State but typically do not produce their ingredients. If the processors or aggregators have provided the source of their ingredients, then those sources show up on the producer map and the amount spent on their processed or aggregated products may be included in the percentage of local food purchased. If not, which is more typical, then we have mapped the processors and aggregators to show the additional local and regional businesses that we are supporting with Ohio State purchasing.

Note that the maps do not provide the exact location for any of our producers, processors or aggregators; their locations have been randomly placed within their zip code and only the Ohio State campus addresses are accurate.

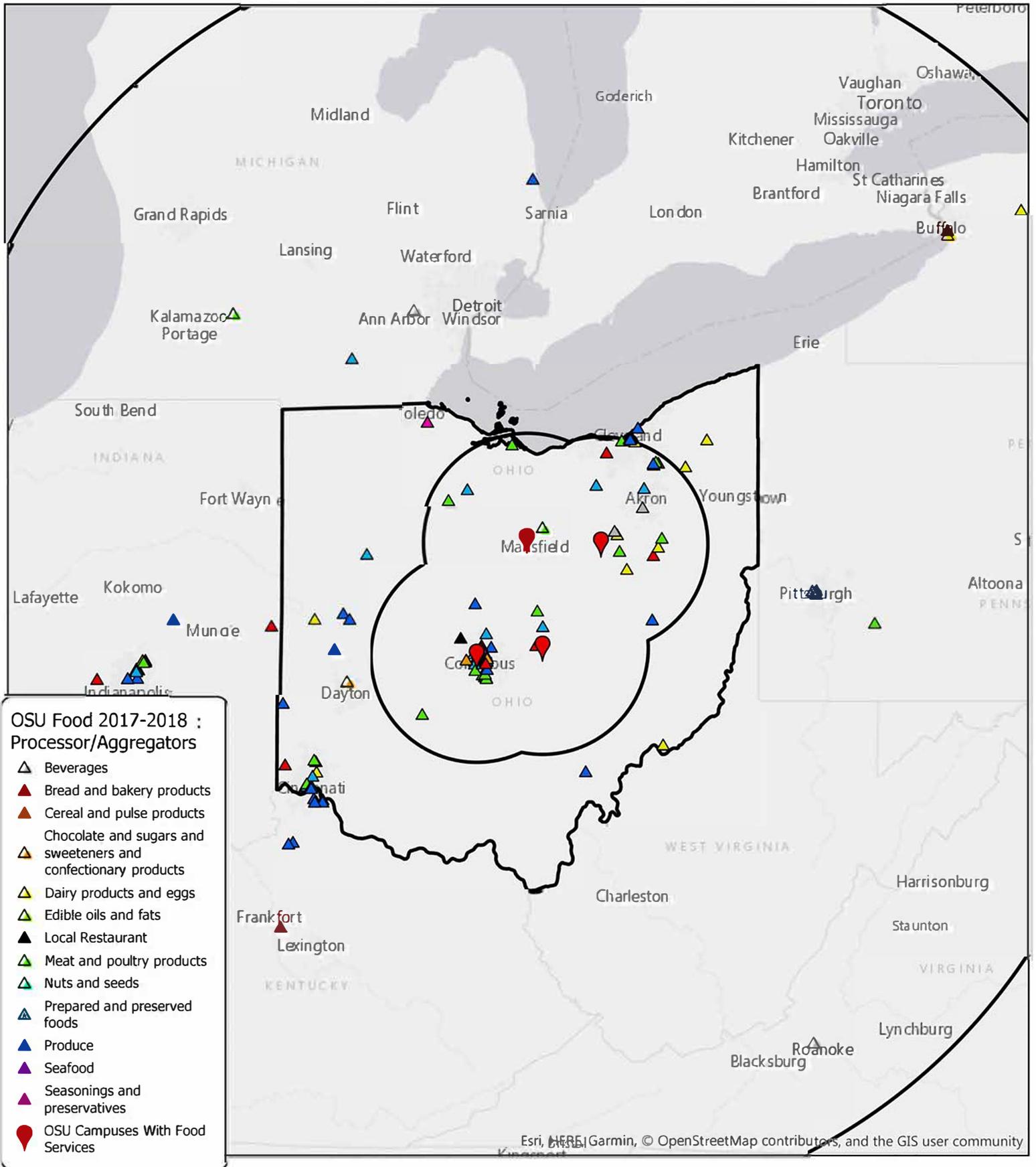






Map data by OpenStreetMap contributors, and the GIS user community







# Attachment G: Vendor Form

Draft 9/17/18

Item Identification by Vendor	Vendor	Blue Ribbon	
	Item Name	3X1 Ohio Gourmet Beef Patty	
	Item # (SKU)	129	
	Class (refer to UN Classification Codes)		
	Fresh Product	1	
	Processed Product		
	Processed Ingredient		
	% of product or purchase	100%	
	\$ Amount		
	Type	Distributor	
	Zip Code	43220	
	Certifications	<a href="#">Food Alliance</a>	
<a href="#">National Organic Program</a>			
<a href="#">Certified Naturally Grown</a>			
<a href="#">Rainforest Alliance Certified</a>			
<a href="#">Animal Welfare Approved</a>		1	
<a href="#">Integrated Pest Management</a>			
<a href="#">Marine Stewardship Council</a>			
<a href="#">Global GAP</a>			
<a href="#">Fair Trade Certified</a>			
<a href="#">Certified Humane</a>		1	
<a href="#">American Grassfed Association</a>			
Criteria Met	Environmental Soundness		
	Economic Viability		
	Social Responsibility		
	Meets Criteria?		
	Notes		

The purpose of this form is to standardize data collection for consistency with OSU purchasing goals; it will require updates as needed.



# Attachment H: Example Bid Document



## Purchasing Department Bid Preparation Form

**INSTRUCTIONS:**

- This form is required for preparation of all new bids.
- Provide required information by typing into the designated form fields.
- Forward the information and necessary attachments to the Purchasing Department by email (see section L) and upload to eRequest with an approved Bid Requisition.
- A Commodity Manager will contact you regarding your request within 3 business days.

**Section I: Customer Information**

Department:	Student Life Dining Services	Contact:	Lesa Holford	REQ #	
Phone:	614-477-0240	Fax:	614-292-5288	E-mail:	<a href="mailto:Holford.8@osu.edu">Holford.8@osu.edu</a>

**Section II: Bid Preparation Information**

**A. Name of Project/Services: What is the University purchasing?**  
 The Ohio State University seeks proposal for a term contract for fresh red meat, poultry, and seafood to be delivered to various food service operations around the Columbus Campus and three satellite campus operations, including Wooster, Newark, and Mansfield. Terms of the contract will be three years with three each one year renewals.

**B. Scope(s) of Work: Describe the scope of work for the project and/or service in 2-3 sentences. If relevant, provide the previous fiscal year's data.**  
 The Ohio State University operates food service facilities at the Columbus campus and three satellite campuses. Operations include traditional all you care to eat operations, quick service casual, catering, coffee shops, culinary production center, cafes, and marketplaces.

**C. Estimated Costs: In order to simplify and standardize the reporting of procurement cost avoidance, rudimentary mathematical calculations are performed. It is critical for audit and validation that consistency of the components included in the reporting of cost avoidance and the calculations be maintained. Provide all that apply:**

- Quote and/or Price List
- Past Purchase Value (or similar commodity for comparison)
- Detailed Project Cost Analysis

**D. Background: Provide relevant experiences and conditions that exist in the University, college and/or administrative area that may influence the scope of work. Provide background information and data if this type of work has existed in the past. Identify the customer(s) group for this project or service.**

**E. Evaluation Criteria (assign weight values): The bid evaluation criterion summarizes the measurable elements considered when evaluating vendor proposals. Each vendor is evaluated relative to the evaluation criteria and ranked based on their overall ability to provide the products and services as defined in the specifications. This process is the determining factor for recommending awards and must be considered prior to issuance of the bid preparation documentation.**

1. Market basket evaluation 20%
2. Cost to University 20%
3. Ability to provide OSU with local Ohio (raised and processed within 275 miles of campus will be considered) fresh poultry 20%
4. Ability to provide OSU with local Ohio (raised and processed within 275 miles of campus will be considered) fresh pork and beef, with preference of Certified Angus Beef/certified beef programs 15%
5. Ability to provide a comprehensive seafood program that is sustainably certified such as BAP, Marine Stewardship Council, or Monterey Bay Aquarium 10%
6. Ability to meet delivery specifications, product specifications, and vendor requirements as listed below 15%



**F. Department Specifications: Provide expectations and parameters that each vendor must conform to and include in their proposal or quotation.**

**Expectations/parameters are:**

- **Non-negotiable,**
- **Integral to the effective delivery and outcome of the scope of work and each vendor must comply, and**
- **Vendors may not take exception to these conditions in their bid; or the bid proposal/quotation will be deemed as non-responsive and not be accepted by the Purchasing Department.**

**DELIVERY SPECIFICATIONS:**

- The successful supplier will agree to university delivery times of 5am-9am Monday thru Saturday. Alternate delivery times for weekend or special event services may be required. In addition, if multiple deliveries are required the successful supplier will agree to those terms as needed.
- Delivery receipt must be provided with each delivery and the driver must sign off on HACCP receiving forms before departure
- All deliveries must be delivered in a designated food safe delivery area
- Delivery surcharges will not be paid by the University (fuel, drop ship, etc.)
- No delivery minimums
- Delivered items must have at least one (1) week before labeled expiration date
- Items must be delivered in a safe manner, organized per health department standards and requirements (example: no raw meat stacked on top of heavy cream)
- Frozen items shall not be substituted for fresh unless vendor has notified location and received permission. Frozen like items will have different item numbers.

**PRODUCT SPECIFICATIONS**

- Meat/Poultry and seafood must be the freshest variety available and of the highest quality and must be checked for quality, cut, size, and suitability before shipment
- Quality standards must meet or exceed USDA standards
- All product must be absent of any signs of temperature abuse
- Ability to provide Halal items as requested with certification as requested
- Ability to provide locally processed meats such as breaded chicken tenders, pot roasts, cooked short ribs, deli meats
- All packaging shall be clean, sound, and packaged in sanitary containers as standard in the industry. Seafood to be packed on ice as deemed necessary by vendor or University

**PROBLEM RESOLUTION**

- The successful supplier will provide a name and contact information including phone number, email, of the person who shall be responsible for problem resolution including delivery issues and product issues. The University expects problems to be resolved in a timely manner.
- The successful supplier must have the ability to provide various reports as needed
- Bidder must define cost plus in regards to university pricing in university format
- All orders will be placed by formal purchase orders, nothing is to be delivered without a purchase order.
- Billing: invoices must be provided in duplicate

**SAMPLING AND TASTING**

- At the discretion of the buyer, representative samples may be required for testing by Corporate Executive Chef. In such cases, the test panel will evaluate the samples in order to determine the degree to which the products meet the basic requirements of the university in respect to maintaining levels of quality which are consistent with the standards and preferences of the clientele served by our establishments. Samples are free of charge.

**CANCELLATION**

- Contract awarded on this order may be cancelled by either party after the expiration of 60 days for the effective date of the contract by giving 30 days prior written notice of intent of cancellation to the others hand

**REJECTION OR ACCEPTANCE**

- Final inspection as to acceptance or rejection is reserved, and to be made upon receipt of items at The Ohio State University. We reserve the right to reject any item that does not meet our specifications

**GENERAL SPECIFICATIONS**

- Products shall be prepared from the top quality ingredients equal in all respect to the products customarily sold to the vendor's general trade. Products shall be strictly fresh, and be produced in compliance with the regulations recommended by the Ohio Department of Health, as adopted by the Columbus Health Department. All packaging and labeling will be in compliance with all laws and regulations of the City of Columbus and the State of Ohio



**G. Vendor Requirements: List critical elements that vendors must submit with proposals/quotations, which are the criteria used to review proposals/quotations and assist with final selection of the bid. Departments should identify five (5) to eight (8) fundamental requirements related to the scope of work that can be used to determine the strength of the vendor's proposal.**

- Vendor will be able to provide OSU with FOOD TRANSPARANCY, including entire supply chain for each product. Awarded vendor(s) shall utilize specific transparency document provided by The Ohio State University that will request processor zip codes, ingredient zip codes and certifications (if any)
- A sales representative who can answer questions, take orders, and be easily accessible 24 hours a day 7 days a week. Questions should be answered in a timely manner (within 4-6 hours). Staff should be knowledgeable about product, new items, and trends
- Ability to purchase product in whatever ways deemed necessary by the University
- Ability to order items cut to specification
- Ability to provide specific reports as requested. Purchase history, product spend, unit spend, local purchasing, farm locations, ingredients, and general transparency of any product as requested. Farms/processing facilities will allow OSU on premise for onsite educational tours
- Ability to obtain specialty meat items required by the University. Ability to research and provide information on new items
- In some cases, the University expects to be able to order items for pick-up at the vendor facility
- Vendor will be expected to help forecast future pricing and trends to assist with menu planning and budgeting
- Vendor must have the ability to provide refrigerated trucks when needed by the University for special events at no additional charge
- Ideally, vendor will have the ability to support university events and functions as requested
- Vendor will stock items as requested by Student Life Dining Services
- Vendor will have the ability to work with OSU to develop food products specifically for OSU.

**H. Minority Business Participation: The University has a goal consistent with the State of Ohio legislative mandate to procure 15% of its aggregate total of goods and services from a State of Ohio Certified [MBE](#) vendor and 5% of its aggregate total of construction from a State of Ohio Certified [EDGE](#) vendor. Indicate what should be provided.**

**I. Pre-Bid Meeting: Determine if a pre-bid meeting is necessary, and communicate to the Purchasing Department. Pre-bid meetings are often used to convey additional requirements and special conditions to the vendors, or conduct site visits.**

**J. [Strategic Sourcing Timeline](#): Identify timeline expectations – general date guidelines provided:**

- Date vendor's proposal/quotation returned to the college or administrative area (approximately 6–12 business days after pre-bid meeting).
- Date of pre-bid meeting (approximately 5–10 business days after anticipated receipt by vendors).
- Date proposal sent to bidders (approximately 3–5 business days after college and administrative units submit to Purchasing Department).
- Date college and administrative unit personnel to submit final requirements to Purchasing Department.
- When will the project start or when are the goods needed?

**K. Bidders List: Identify known vendors (name and address) who may be interested in this project. Encourage potential bidders to become registered with [Ariba](#).**

**L. Attachments: Indicate if drawings, specifications and/or other attachments should be included. If attachments are submitted in pdf format, they must be combined as one file. (reference eRequest if necessary)**

Upload this completed form to your eRequest along with an approved Bid Requisition. Submit this completed request to the appropriate Commodity Manager. See Strategic Purchasing Teams link for the names of the Commodity Managers and the Purchasing Categories for which they are responsible.



# Attachment I: Bylaws

Adopted June 2017

## Preamble

In April 2016, the Executive Vice President and Provost and the Senior Vice President for Student Life charged the University Panel on Food Sustainability (the panel) with delivering a “full accounting of accomplishments related to food sustainability across the institution” and the development “of a strategic plan to accomplish our 2025 goal to increase the production and purchase of locally and sustainably sourced food to 40 percent by 2025.” To effectively and efficiently carry out this charge, the panel has adopted the following organizational bylaws governing how it will operate:

## Membership

### A. Panel Composition

1. The University Panel on Food Sustainability shall strive for balanced representation of food system stakeholders in the campus community through panel membership.
2. The panel shall be comprised of not more than twenty (20) members, including at least five (5) faculty members, five (5) staff members, five (5) student representatives, and no more than five (5) external partners, described as follows:
  - a. Faculty
    - i. Faculty representatives shall be of diverse academic and research interests.
    - ii. Faculty members with interests in institutional purchasing, agriculture, planning, economics, sustainability, and food system work.
  - b. Students
    - i. Students from governing organizations including but not limited to: Undergraduate



Student Government, Residence Halls Advisory Council, and the Council of Graduate Students shall be given preference.

ii. Students with an interest in food system planning may also be seated on the panel.

c. Staff

i. Staff with job directives in sustainability and food shall be given preference.

ii. Staff with an interest in food system planning may also be seated on the panel.

d. External Partners

i. External partners unaffiliated with the university may obtain a seat on the panel.

ii. External partners seated on the panel shall not be in a position to financially benefit from decisions or recommendations made by the panel.

B. Attendance

1. A member of the panel may not miss more than three (3) consecutive all-panel meetings.

2. Panelists may send an alternate in their place.

a. An alternate must be of the same membership category as the seated member (i.e. faculty, staff, student or external partner)

b. Panelists sending an alternate will not be considered absent.

3. Panelists may use video conferencing, teleconferencing, or other means of digital connection to attend the meeting without attendance penalty.

4. A panelist missing more than three (3) meetings in a row without sending an alternate will be replaced.

a. The panel co-chairs may choose to waive this requirement for extraordinary circumstances.

C. Quorum

1. Quorum shall be defined as a minimum of three



- (3) faculty, three (3) students, and three (3) staff members.
  2. No decision or recommendation may be advanced without a quorum present.
- D. Leadership Team
1. Leadership for the panel shall be provided by a 3-member team comprised of the director of Student Life Dining Services, either the faculty or executive director of InFACT, and one student assigned by either USG or CGS.

## **Decision Structure**

### **A. Consensus**

1. The panel shall make decisions or recommendations by reaching consensus, which is determined at the discretion of the three (3) Co-Chairs in the context of a duly called meeting.
2. Members of the panel who do not agree with a decision or recommendation reached by consensus may indicate as such by following the process outlined in section III.B.
3. Consensus is not inherently unanimous.

### **B. Dissenting Opinions**

1. Should a panel member disagree with consensus reached by the panel, he or she may submit a statement of dissent for the record.

### **C. Recommendation Submissions**

1. The panel shall be open to potentially including agenda topics from the university community and/or external stakeholders.
2. Agenda topics are to be submitted to the panel leadership or their designee for potential inclusion.
3. Agenda topics may include, but not be limited to, time at a meeting to share ideas, thoughts, feedback, or to present a formal proposal or recommendation.

## **Record-Keeping Requirements**

- A. The panel shall strive for transparency in all meeting records.
- B. Minutes, articles of dissent, and presentations given to the panel must be made public on the panel website within five (5) working days of a full panel meeting.



- C. Agendas must be sent to panel members at least 48 hours in advance of a full panel. Articles of dissent must be posted with their corresponding minutes.

### **Working Groups**

- A. Purpose – To allow the panel to more quickly and efficiently advance the work of the panel, further engage diverse voices into the conversation, and allow for individuals to work closely on areas of intense interest.
- B. Role – To develop recommendations and/or suggested courses of action to the larger body for consideration.
- C. Working Groups will spend time on details, research and identifying pros and cons to their recommendations.
- D. Working groups will present their findings to the full panel for consideration.
- E. Panel meetings shall not be used to do (or re-do) the work of a Working Group, but rather to react to the overall proposal, accept as is, accept with minor modifications, or ask for additional work to address issues or opportunities that have been raised by the membership.

### **Adoption and Amendment of Bylaws**

Bylaws may be adopted or amended by a two-thirds vote of panel members present at any duly called meeting where a quorum is achieved and drafts have been shared the day before the meeting or earlier. Amendments to the drafts that are, in the opinion of the Co-Chairs present, considered minor may occur within the context of such a meeting before a vote is taken.



# Attachment J: Partial List of Potential Curriculum Partnerships

## Potential course/faculty/department partnerships:

The section below lists courses by focus area where faculty, staff and students affiliated with these offerings could be engaged to help meet the goals of the 40 percent local and/or sustainable food goal. This list is just a start as the group recognizes that there are a wealth of course opportunities, both at the graduate and undergraduate level, at Ohio State where the work of the food sustainability goal could be incorporated.

### Agricultural Communication, Education and Leadership:

- AGRCOMM 2367: Agricultural Issues in Contemporary Society
  - develop a critical understanding of agricultural, environmental and related issues facing the US and world
- AGRCOMM 3488: Professional Development In Agricultural Communication
  - hands-on, contextual, and authentic, out-of-class experiences

### Agricultural, Environmental and Development Economics:

- AEDECON 2001: Principles of Food and Resource Economics
  - Microeconomic principles applied to allocation issues in the production, distribution, and consumption of food and natural resource use
- AEDECON 2005: Data Analysis for Agribusiness and Applied Economics
  - Introductory course in data analysis, stressing computer applications of probability and statistics, problems of data gathering, presentation, and interpretation in economics and business
- AEDECON 2105: Managerial Records and Analysis
  - Nature and need for business records, analysis and interpretation of essential records from manager/owner viewpoint
- AEDECON 2500: Introduction to Environment, Economy, Development and Sustainability

### (Cross listed ENR)

- Introduces students to principles from various disciplines related to



- social, economic and environmental sustainability
- AEDECON 2580: Feast or Famine: The Global Business of Food
  - Global and regional trends in food consumption and production are surveyed. Trade, technological change, and other responses to food scarcity are analyzed
- AEDECON 3104: Farm Business Management
  - Analysis of resource control and detailed application of economic and management principles to the organization, operation, and administration of farm businesses
- AEDECON 3128: Marketing Fruits and Vegetables
  - Principles involved in the marketing of fresh and processed fruits and vegetables and the institutions and agencies concerned in pricing and product flows from producer to consumer
- AEDECON 3680: Regional Economics and Sustainable
  - Designed to study theories and methodologies for analyzing rural and regional economic development, primarily in advanced economies
- AEDECON 4532: Food Security and Globalization
  - Examination of the causes of and solutions for food insecurity. Global and local factors that affect access to food are also considered
- AEDECON 4597.01: Food, Population, and the Environment
  - Issues related to world-wide population increases, food production, and associated environmental stress; policy options for lessening these concerns, especially in low- income countries
- AEDECON 5900: Food System Planning and the Economy
  - Examines the social, environmental and economic costs and benefits of our food production, distribution, and consumption

**Animal Sciences:**

- ANIMSCI 2200.03: Animal Systems
  - Overview of the size and scope of the livestock and companion animal systems, the economic and social impact of the animals and their products, and the structure of the industries
- ANIMSCI 2260: Data Analysis and Interpretation for Decision Making
  - Introduces students to the use of statistics in data analysis and interpretation. Students develop skills in quantitative literacy and logical reasoning



- ANIMSCI 2367: Animals in Society
  - Introduction to the historical, social, cultural, economic and legal frameworks within which current human-animal relationships have evolved
- ANIMSCI 3101: Equine Facilities, Marketing, and Management
  - Aspects of equine business management, marketing and facility design
- ANIMSCI 3600: Global Food and Agriculture
  - The integration of food, agriculture, environment, resources, technology, culture, and trade on a global scale
- ANIMSCI 4597: Contemporary Animal Use Issues
  - The historical, biological, ethical, nutritional and economic issues of using animals to meet human needs
- ANIMSCI 5031 Ruminant Nutrition
  - Principles of ruminant nutrition: nutrients, metabolism and physiology. Includes computer formulations and feeding strategies for nutritional management of ruminants.
- ANIMSCI 3400 Management Intensive Grazing
  - Application of scientific principles of plant growth, animal nutrition and behavior to manage grazing systems for profitable, sustainable livestock enterprises.
- ANIMSCI 4006.01 Poultry and Avian Management
  - Describes classes of poultry and game birds, incubation, housing, anatomy, diseases, genetics and nutrition.
- ANIMSCI 4006.02 Poultry and Avian Management Lab
  - Hands-on application of nutrition, genetics, physiology, health, economics, products and housing in integrated management systems for the raising of chickens for market and egg production.
- ANIMSCI 4003.01 Swine Production
  - Application of science and basic principles of nutrition, physiology, genetics, health, economics, meats, and housing in integrated management systems for modern swine production.
- ANIMSCI 4003.02 Swine Production Lab
  - Hands-on application of scientific and basic principles of nutrition, genetics, physiology, health, economics, meat products and housing in



integrated management systems for modern swine production.

- ANIMSCI 4002.01 Beef Cattle Production and Management
  - The application of science and basic principles of nutrition, genetics, physiology, and marketing to the production and management of beef cattle.
- ANIMSCI 4002.02 Beef Cattle Production Lab
  - Hands-on application of the science and basic principles of nutrition, genetics, physiology, and marketing to the production and management of beef cattle.
- MEATSCI 5310: Auditing Processing Facilities
  - Auditing programs and processes used in the food animal processing industry

**Anthropology:**

- ANTHROP 4597.05H: The Global Food Crisis
  - This multidisciplinary course explores the causes, consequences and potential solutions to the global food crisis
- ANTHROP 597.05H: The Global Food Crisis
  - This multidisciplinary course explores the causes, consequences and potential solutions to the global food crisis
- ANTHROP 5624: The Anthropology of Food: Culture, Society and Eating
  - Explores food traditions, global expansion of foods and the production/exchange of food in culture and society

**Business Admin: Marketing and Logistics:**

- BUSM&L 3380: Logistics Management
  - Concepts and methods used to plan and manage logistics activities in a business environment. Understanding of the components of logistics management and tradeoffs required to manage the integrated flow of goods through the supply chain
- BUSM&L 4382: Logistics Analytics
  - Will equip student with the tools and skills necessary to recognize, analyze and solve significant problems in the operation of a logistics system through the application of techniques using spreadsheet analysis, optimization and simulation
- BUSM&L 4383: Supply Chain Management



- Focuses on distinction between logistics and supply chain management; cross-functional integration of key business processes within the firm and across network of firms that comprise supply-chain; framework for supply chain management
- BUSM&L 4385: Building a Sustainable Supply Chain
  - Focuses on understanding how to measure and impact the long-term sustainability of a company's supply chain operations; learn practices for reducing carbon footprints and creating a more resilient supply chain, while meeting financial goals

**Business Admin: Management Sciences:**

- BUSMGT 4262: Purchasing Strategy
  - Strategic purchasing is a methodology used in many businesses to realize the greatest amount of benefit to the company while still effectively managing the costs associated with the acquisition of raw materials and operational components

**City and Regional Planning:**

- CRPLAN 2000: Introduction to City and Regional Planning
  - How transportation, housing, and land use work together to create vibrant cities and regions
- CRPLAN 2210: Sustainable Urbanism
  - Globalization is changing cities, economies, social networks, and the environment. Technological innovation, entrepreneurship, and policy making guides the future of sustainable cities
- CRPLAN 2798: Comparative Studies in Planning
  - Planning issues are global in context. Through direct experience studying globalization, migration, sustainability, and public participation, critically understand planning on a global and community scale
- CRPLAN 3100: Analyzing the City
  - Spatial, economic, and demographic tools aid in forecasting the future of cities and regions. These tools serve as a foundation for imagining the future
- CRPLAN 3300: Planning for and with People
  - Application of skills and techniques of community participation, emphasizing education, group formation and dynamics, consultation, engagement, and creative change within groups
- CRPLAN 3500: The Socially Just City



- Too many cities are split between the haves and the have-nots. Explore how to reduce poverty, increase access to public services, and create a high quality of life for all residents

**Civil, Environmental and Geodetic Engineering:**

- ENVENG 5195: Engineering Design for Environmental Health
  - Students in this course will learn how to incorporate health information into the engineering design process. This material complements risk assessment by focusing on the design of engineering systems. Course will discuss balancing financial, health, performance, and other considerations. Quantitative analysis will be conducted in soil, water, air, buildings, and occupational health scenarios.

**Crop Management and Soil Conservation:**

- CRPSOIL 2200T: Introduction to Sustainable Agriculture
  - A study of the farm system as a whole and sustainable management methods for healthy soil, crop, and livestock
- CRPSOIL 2201T: Sustainable Cropping Systems and Marketing
  - A study of cropping systems and marketing strategies related to sustainable agricultural enterprises
- CRPSOIL 2265T: Integrated Pest Management
  - A review and application of sustainable methods for controlling disease, insect, and weed pests in crops
- CRPSOIL 2300T: Introduction to Soil Science
  - An introduction to soil physical, chemical, and biological properties related to plant systems, environmental quality, and construction
- CRPSOIL 2324T: Soil Management
  - A study of sustainable-use of soil resources related to soil formation, mechanics, and erosion control
- CRPSOIL 3800T: Principles of Farm Business Management
  - A study of economic and management principles involved in planning, organizing, operating, and administering a farm business; emphasis placed on developing a business plan and problem solving

**Computer Science and Engineering:**

- CSE 2111: Modeling and Problem Solving with Spreadsheets and Databases
  - Spreadsheet and database modeling/programming concepts and techniques to solve business related problems; efficient/effective data handling, computational analysis and decision support. Additional topics:



- computer concepts, networking, project integration
- CSE 2231: Software II: Software Development and Design
  - Data representation using hashing, search trees, and linked data structures; algorithms for sorting; using trees for language processing; component interface design; best practices in Java
- CSE 3231: Software Engineering Techniques
  - Software engineering issues, techniques, methodologies and technologies; software lifecycle activities: requirements analysis, architecture, design, testing, deployment, maintenance; project management; enterprise software systems; frameworks
- CSE 3903: Project: Design, Development, and Documentation of System Software
  - Intensive group project involving design, development, and documentation of system software including an assembler and a linking loader; communication skills emphasized; builds programming maturity

#### **Education and Human Ecology:**

- CSHSPMG 3720: Food Service Management
  - Identification of the crucial elements involved in the successful operation of a foodservice enterprise and demonstrate their inter-relationships. Special emphasis will be on customer service and employee development.
- CSHSPMG 3730: Food Service Management Practicum
  - Application of customer service and restaurant management responsibilities in a real operating foodservice environment.
- KNHES 5704: Health Program Evaluation
  - Methods for evaluating health behavior interventions. Skills to conduct process, impact and outcome evaluations including data analysis will be developed. The political, educational and theoretical aspects of evaluation practices are covered.
- KNHES 5652: Worksite Health Promotion
  - Effective health promotion practice at the workplace. Skills: health needs assessment, health program decision-making, reviewing educational / health behavior literature, health behavior program planning, implementation, and evaluation.

#### **Environment and Natural Resources:**

- ENR 2500: Introduction to Environment, Economy, Development and Sustainability  
**(Cross-listed in AEDECON)**



- Introduces students to principles from various disciplines related to social, economic and environmental sustainability
- ENR 3900: Sustainability Metrics
  - Addresses the use of metrics, data, and indicators to measure sustainability and track progress
- ENR 5270 Soil Fertility
  - Principles of soil fertility, plant nutrition, and nutrient management; environmental considerations and low input concepts in soil fertility.
- RURLSOC 5530: Sociology of Agriculture and Food Systems
  - Overview of sociological theory and research related to agricultural change and food system development, focusing on individual, family, farm, community and environmental impacts

#### **Food, Agricultural and Biological Engineering:**

- FABENG 4567: Assessing Sustainability: Project Experience
  - Students gain experience in sustainability assessment by applying concepts and quantitative methods to evaluate environmental, economic, social, and technical sustainability of specific projects  
**(EEDS major capstone)**
- FABENG 5550: Sustainable Waste Management
  - A comprehensive examination of waste generation, treatment and reuse including the impacts of pollution on the environment and human health

#### **Food, Agricultural and Environmental Sciences:**

- PLNTPH 7300 OR ENTMLGY 7300: Plant Health Management Seminar
  - This course is designed to cover current topics in plant health management for students in the Master in Plant Health Management program.
- FDSCTE 4536: Food Safety and Public Health
  - Principles and practice of food safety; transmission, inactivation and control of foodborne pathogens, hazards, toxins and allergens; risk assessment, sanitation, and pest control in foods.

#### **Food Science and Technology:**

- FDSCTE 2400: Introduction to Food Processing
  - Introductory class applying chemistry, biology, and engineering to hands-on experience on the production and evaluation of foods.



Includes basic food regulations, sanitation and formulation

- FDSCTE 5310: Food Quality Assurance
  - Provides students with a knowledge of quality assurance concepts and procedures and tools for establishing quality control programs to produce high quality safe foods
- FDSCTE 5320: Food Laws and Regulations
  - Major food laws/regulations, food regulatory agencies, good manufacturing practices, HACCP, ingredients, labeling regulations, adulteration and misbranding, compliance/investigations/enforcements, crisis management, recall, Ohio State food laws

### **Geography:**

- GEOG 2500: Cities and their Global Spaces
  - Globalization and urbanization; urban economies, spaces, and societies; function, form, and pattern in developed and developing world cities

### **Health and Rehabilitation Sciences:**

- HTHRHSC 2300: Service Learning in Vulnerable Communities
  - This service-learning course examines vulnerable populations from multiple perspectives including ethnicity, socioeconomic status, mental and physical disability, chronic disease, culture, and the impact on both individual and community health.
- HTHRHSC 4950: Program Development and Evaluation for Health Sciences
  - Exposes the student to practical methods that can be used to develop and evaluate health services programs in a variety of settings.
- MEDDIET 4500: Health Promotion and Community Nutrition
  - Study of community needs assessment, national nutrition policy, design and evaluation of programs and cultural factors to promote the health and nutritional status of the community.

### **Health and Wellness Innovation in Healthcare:**

- HWIH 3240: Health Program Planning and Evaluation
  - The social, educational and behavioral foundations of health promotion programming and methods for evaluation will be covered. Skills to conduct needs assessment, program planning and implementation, and process, impact and outcome evaluations will be developed

### **Horticulture and Crop Sciences:**



- HCS 2306: Sustainable Vegetable Production Practicum: Planning, Growing and Marketing
  - Provides students with an introduction to small-scale vegetable farm planning and management through consideration of plant growth and production, farm design, farm management and operations, and produce marketing
- HCS 2260: Data Analysis and Interpretation for Decision Making
  - Basic concepts of probability and statistics applied to the interpretation of quantitative data

**Human Nutrition:**

- HUMNNTR 7600: Metabolomics, Principles and Practice
  - This course aims to introduce students to the principles and practices of metabolomics with a focus on the application of metabolomics to plant, food, nutrition and health-related research.
- HUMNNTR 8834: Comprehensive Approach to Food Safety
  - A comprehensive overview of food safety challenges and solutions as experienced through the food chain from farm to consumers. Demonstration of food safety system from cellular aspects through public policy.
- HUMNNTR 2450: Foodservice Sanitation and Safety
  - Organization of a facility to ensure safe and sanitary foodservice program. Includes National Restaurant Association's ServSafe Sanitation Certification program and Ohio Department of Health Certification in Food Protection.
- HUMNNTR 4504: Nutrition Education and Behavior Change
  - Contemporary theories and models of health education and behavior change related to individuals, groups and communities and applied to field of nutrition. Review of effective communication techniques with individuals and groups.
- HUMNNTR 3704: Public Health Nutrition
  - Review of evidence base for public health nutrition including examination of food assistance and education programs; Description of public health nutrition efforts; Investigation of practices aimed at empowering the public to choose healthy foods.
- HUMNNTR 3415: Global Nutrition Issues
  - Topics in global nutrition with critical appraisal of research basis and



alternative viewpoints. Current issues include research and evaluation, major global nutrition issues (obesity, food insecurity, malnutrition, bioengineering, vegetarianism).

### **Nursing- Health and Wellness Innovation in Healthcare:**

- HCINNOV 7440: Innovation in High Performing Organizations
  - Students learn advanced concepts of innovation in a high performing organization and the leadership behaviors that sustain innovation. Students discuss cross-disciplinary theories of innovation for improving health and quality of healthcare. Students are introduced to innovation competencies including positive deviance, complexity leadership, and disruptive innovation.
- HWIH 3490: Technology-Based Health Promotion Strategies
  - Explore theory underlying selection and use of education technology and pedagogy to engage individuals, families, organizations and communities in health promotion and wellness strategies.
- HWIH 3240: Health Program Planning and Evaluation
  - The social, educational and behavioral foundations of health promotion programming and methods for evaluation will be covered. Skills to conduct needs assessment, program planning and implementation, and process, impact and outcome evaluations will be developed.

### **Philosophy:**

- PHILOS 2342: Environmental Ethics
  - Examination of the moral issues generated by the impact of human beings on the natural environment

### **Public Affairs:**

- PUB AFFRS 5900: Food System Planning and the Economy
  - Examines the social, environmental and economic costs and benefits of our food production, distribution, and consumption.
- PUB AFFRS 5890: US Food Policy
  - An examination of national food affairs and policy at the federal level. Attention will focus on contemporary policy issues including food insecurity, health claims, obesity, novel crops, ingredients and processing techniques, sustainability, corporate consolidation, and food advertising; as



well as how these issues impact the choices of federal institutions.

### **Public Health:**

- PUBHHMP 7632: Strategic Change for Public Health and Population Health Mgmt
  - This course will provide students a foundation in the theories, concepts & methods of strategic planning and the management of organizational change as applied to public health & population health management endeavors.
- PUBHHMP 6630: Project Management for Health Care and Public Health
  - This course introduces students to the role of project management in executing successful projects. The course focuses on concepts & tools of basic project management, with a special emphasis on managing projects in health care & public health settings. Students will learn fundamental techniques for project planning, scheduling & monitoring through case studies, class exercises and assignments.
- PUBHHBP 7532: Program evaluation in public health
  - Examination of evaluation models for public health programs; exploration of philosophical and scientific issues in evaluation; and skill building in both qualitative and quantitative evaluation methods.
- PUBHLTH 5760: Public Health Informatics
  - Introduction to the emerging and interdisciplinary field of Public Health Informatics. This course will highlight the history, current and future use of informatics in the public health settings, and give students an understanding of the role and broad application of informatics to promoting health and preventing disease.
- PUBHLTH 5015: Public Health Data Analytics I
  - In this course, students will gain a very general introduction to data analytics concepts and methods in the context of current and emerging public health issues. Students will be exposed to foundational concepts in data analytics that are relevant to the design, analysis, and interpretation of data-driven decision-making in public health and healthcare settings.
- PUBHEHS 6315: Advanced Environmental Health Science
  - Survey of environmental influences on human health and strategies for prevention considering source emissions, environmental fate and transport, human exposure, dose, biological effects, and ultimately disease associated with exposure.



- PUBHEHS 5395: Engineering Design for Environmental Health
  - Students in this course will learn how to incorporate health information into the engineering design process. This material complements risk assessment by focusing on the design of engineering systems. We will discuss balancing financial, health, performance, & other considerations. Quantitative analysis will be conducted in soil, water, air, buildings, and occupational health scenarios.
- PUBHEHS 6310: Principles of Environmental Health Science
  - Survey of environmental influences on human health and strategies for prevention considering source emissions, environmental fate and transport, human exposure, dose, and biological effects.
- VETPREV 7710: Ecosystem Health Conservation Medicine
  - Principles and application of ecosystem health and conservation medicine will be examined using the One Health One Medicine paradigm. This course may also serve as a component of a non-degree certificate for external veterinarians interested in gaining training in ecosystem health, conservation medicine and/or One Health

**Social Work:**

- SOCWORK 3101: Professional Values and Ethics
  - Introduction to the NASW Code of Ethics, ethical theory, and ethical issues and dilemmas that confront professional social workers
- SOCWORK 5026: Exploring Community Food Security Strategies
  - Explores the complex interrelated social and environmental issues related to the food system. The development of the global food system and social, economic, health, and environmental consequences related to disparities in the food system will be discussed. Students will spend some class periods working at a food pantry, soup kitchen, produce distribution program and community garden.

**Statistics:**

- STAT 3202: Introduction to Statistical Inference for Data Analytics
  - Foundational inferential methods for learning about populations from samples, including point and interval estimation, and the formulation and testing of hypotheses. Statistical theory is introduced to justify the approaches. The course emphasizes challenges that arise when applying classical ideas to big data, partially through the use of



- computational and simulation techniques
- STAT 3301: Statistical Modeling for Discovery I
  - Statistical models for data analysis and discovery in big-data settings, with primary focus on linear regression models. The challenges of building meaningful models from vast data are explored, and emphasis is placed on model building and the use of numerical and graphical diagnostics for assessing model fit

### **Wooster Campus Courses:**

- BLOWMGT 2035T Sustainability and Waste Management
  - The science and economics of composting, recycling, bioremediation, and phytoremediation will be introduced. Biocoverion of organic wastes and plant-derived sugars to value-added non-fuel products (platform chemicals and other bio-products) will be explored through classroom sessions and laboratory experiments.
- HORTTEC 2500T Greenhouse Environment Control
  - Principles and practices of sustainable greenhouse operation and management. Topics include glazings, frames, heating, cooling, energy conservation, nutrition, irrigation, light, plant growth and operations management.
- HORTTEC 2560T Greenhouse Vegetable Production
  - Principles and practices of greenhouse vegetable crop production, including propagation, production systems, nutrition, environmental requirements, management practices, harvesting, pests, pathogens, food safety and post-harvest handling.
- ANMLTEC 3402T Beef Production and Management
  - The application of science and basic principles of nutrition, genetics, physiology, and marketing to the production and management of beef cattle in breeding and feeding production programs. 1 to 3 day field trips, including weekends, may be required. Students will pay costs associated with field trips (lodging, transportation, meals, etc.) above Ohio State tuition and fees.
- ANMLTEC 3133T Practical Swine Feeding
  - A study of the basic nutritional requirements and feeding management of swine, with an emphasis on evaluation and formulation of common feedstuffs and ration balancing.
- ANMLTEC 3170T Principles of Livestock Health
  - A basic introduction to the relationship between animal health and



performance. Topics include: immunology, sanitation, disease etiology, and disease prevention, symptoms, and treatment.



## Attachment K: Stories of Success and Challenges

During 2017/2018, a number of enhancements to Ohio State's local and sustainable food options have been established, documented and promoted to students, faculty and staff.

In October 2017, a major event was planned to recognize "World Food Day 2017," a United Nations' effort to bring attention to food issues throughout the world. Ohio State participated by hosting an event that served local and sustainable food options, available in university dining facilities, to students to raise awareness of the efforts to serve local and/or sustainable foods to our campus community. More than 800 students participated in the event, learning about Ohio State's local/sustainable food goal and interacting with local food vendors directly.

In addition, digital signage was created to continue the spread of information on local and sustainable food options to students in the dining facilities throughout campus. A series of digital slides were created to highlight the many improvements Student Life Dining Services is incorporating into its local and sustainable food efforts.

A series of news articles were posted that brought attention to the efforts that Student Life Dining Services is making to serve local and sustainable food options, including these reports:

### [Got Milk? Buckeyes Do.](#)

09/05/17 -- How much milk does it take to quench the dairy thirst of Ohio State's Columbus campus? About 13,000 gallons every month. And most of that milk comes from Ohio farmers. In order to meet the Ohio State sustainability goal of increasing production and purchase of locally and sustainably sourced food to 40 percent by 2025, Student Life Dining Services is tracing the university's liquid dairy products to find out where the milk originates before it reaches campus.

### ['Local' Rules the Roost in Ohio State Chicken Supply](#)

08/29/17 -- If you have chicken in your sandwich, salad or soup for lunch at a campus dining services location, be assured that it's an Ohio-based meal. Student Life Dining Services obtains all of its fresh chicken for the Columbus campus from Gerber Poultry in Kidron, Ohio, says Zia Ahmed, senior director of Student Life Dining Services.

### [Blend Burgers at Traditions Locations Are a Sustainable Success](#)

09/12/17-- When 10 Student Life Dining Services chefs tried a new blend burger of half



mushroom and half beef, half of them preferred the blend burger over the traditional burger without knowing the ingredients.

[New report focuses on the effort to solve global food and nutrition security challenges](#)

5/19/17 -- Leaders at The Ohio State University working to combat the growing problem of food insecurity have joined a comprehensive and coordinated effort to address global hunger. The university is part of the [Challenge of Change Commission](#). The group of university, government, non-governmental organization and business leaders is committed to solving food and nutrition security challenges in the U.S. and abroad that pose significant humanitarian, environmental and national security risks.

