



It's What's for Dinner: Furman University's Sustainable Dining Initiative



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Abstract

The majority of the food in the United States is produced via an industrial food production and distribution system, which is inherently unsustainable due to its widespread environmental, social, and economic impacts. In response to this system, a growing sustainable food movement has emerged that promotes local, organic, fair trade, and humanely raised foods. Institutions of higher education play a critical role within this movement educating the next generation on sustainable food systems while providing and promoting local and responsibly sourced food options in their dining halls. From institutional commitments to academic programs to sustainable dining initiatives to campus farms and composting programs, universities have begun to prioritize and institutionalize the importance of a campus-wide sustainable food system. The purpose of this study was to assess the sustainability of Furman University's current food system using a multi-criteria sustainability scoring system. This scoring method, originally developed by faculty at Warren Wilson College, gives each ingredient purchased by the university food provider a numerical sustainability score based on production method, purchasing geography, and length of supply chain. Purchasing data from September 2014 and February 2015 were used as seasonal end members for the analysis. The results were used to develop a series of food purchasing guidelines and strategies designed to improve the overall sustainability of the campus food system by increasing local foods, minimizing food miles, optimizing direct purchasing, and promoting socially responsible and ecologically sound agricultural practices from food providers.

Introduction

The majority of the food in the United States is produced via an industrial food production and distribution system, which is inherently unsustainable due to its widespread environmental (e.g., fossil fuel use, chemical dependence, soil depletion, biodiversity loss), social (e.g., hazardous working conditions, unfair labor management, public health threats), and economic impacts (e.g., subsidies, lack of true cost accounting, loss of small family farms).

There has been a significant increase in interest in environmentally responsible food systems among college campuses. From institutional commitments to new academic programs and courses to sustainable dining initiatives to campus farms and composting programs, universities have begun to prioritize and institutionalize the need for a sustainable campus food system:

More than 676 colleges and institutions have signed the American College and University Presidents Climate Commitment, which, among other things, encourages universities to develop more local and sustainably based food systems along with stronger farmer-university relationships (Bartlett, 2011).

Over 35 higher education institutions have signed the Real Food Campus Commitment. This program encourages institutions to create a "healthy, fair, and green food system by 2020" by shifting food budgets toward local, community based agriculture and away from industrial farms (Real Food Challenge, 2015).

Academically and educationally, institutions have developed majors, minors, and concentrations focusing on sustainable agriculture in addition to courses in Food Studies, Food Justice, and Sustainable Food Systems. In the United States alone, there are over 84 sustainable agriculture and food systems academic programs offered at colleges and universities (AASHE, 2015).

Many universities have established food-purchasing strategies that promote socially responsible and ecologically sound agricultural practices from their source providers. An increasing number of higher education institutions (e.g., Colgate University, Emory University, Berea College, Boston University, Yale University) have recently released reports describing their local food and sustainable dining efforts on campus.

Dining policies from other institutions including Warren Wilson, Colgate University, Berea College, Boston University, and Emory University were reviewed. Warren Wilson College in Asheville, NC was selected as a model for developing Furman University's sustainable dining policy.

We define *sustainable food production* as an integrated system of plant and animal production practices that meet America's need for food while minimizing energy usage in food production and transportation; in addition, to promoting environmentally friendly agricultural practices.

The purpose of this study is to assess the sustainability of Furman University's current food system using a holistic, dynamic systems approach and develop a purchasing strategy that prioritizes an increased commitment to local food and sustainability efforts in campus dining facilities.

Methodology

Since 1996, Furman University has used Aramark Corporation as their primary food provider. When this study was conducted, Aramark sourced 100% of its Furman food from two central regional providers: Sysco Corporation out of Columbia, SC and Freshpoint Produce food services out of Charlotte, NC.

This initial study only looked at food purchasing and sourcing at the Daniel dining hall facility, the university's main dining facility, and did not consider other dining locations on campus, Furman catering, or concessions at sporting venues.

The local Foods Policy Task Force at Warren Wilson college developed a sustainability food scoring system that calculates a multi-criteria sustainability score for a food item based on an assessment of the product's production method, purchasing geography, and length of the supply chain. This scoring system was used to evaluate the sustainability of foods purchased by Furman's dining services and served in Daniel Dining Hall. Purchasing data for two months (September 2014 and February 2015) were obtained from Aramark. These two months were chosen to represent what we believed to be end members for local availability. For the month students are on campus, September was hypothesized to be the month when the highest amount of local produce is available to purchase and February the least.

The purchasing data obtained from Sysco and FreshPoint included information on item description, brand name, sold quantity, net sales, and shipping information, which were utilized for scoring each food item. FreshPoint provides weekly reports, Locally Grown Reports, for the sourcing of their local produce. These reports were obtained for both September 2014 and February 2015.

Production method scoring analyzes food production practices (3rd party certifications), purchasing geography analyzes transport of food (food miles), and supply chain measures the pathway of food from farm to plate. For each of the three component criteria a number from -1 through 6 was assigned. The higher the number, the higher the sustainability effort; the lower the number, the less sustainable the sourcing and presumably the more detrimental these practices are having on the environment.

These three criteria (production method, purchasing geography, and supply chain) were integrated to provide a comprehensive sustainability score that is a numerical expression of the sustainability of each food item.

Results

Table 1. The Sustainable Food Score Chart

Table with 14 columns: 3rd Party Certification, Food Alliance, Production Method Score, Geography Score, Supply Chain Score, and Overall Score. Rows include various food categories like Produce, Meat/Protein, Eggs/Dairy, etc., with sub-rows for Direct, 1 Stop, Min. Process, and Other.

Figure 1. The Sustainable Food Score Conceptual Model

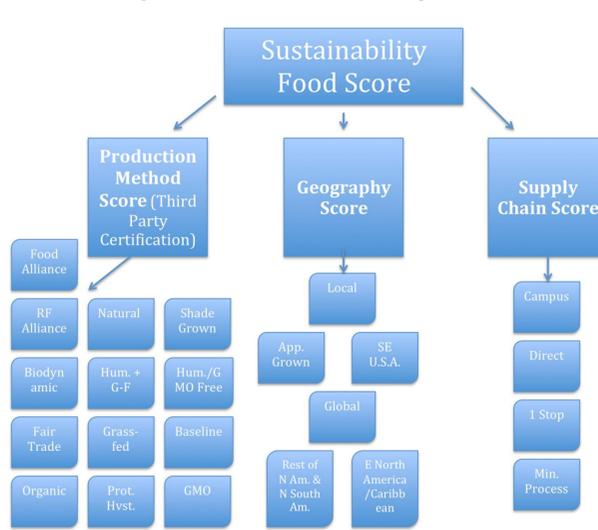
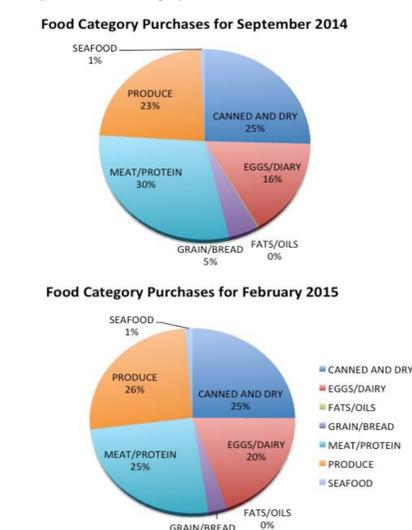


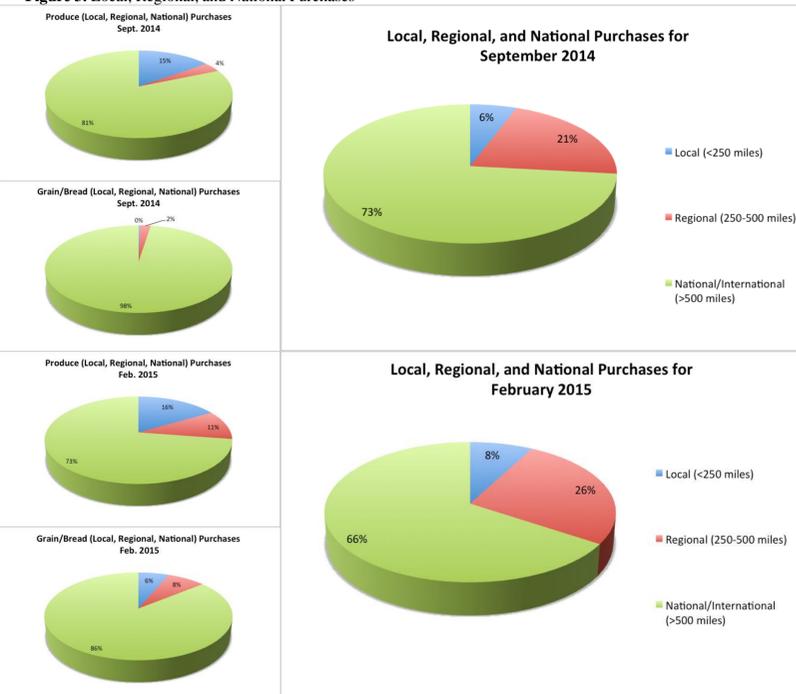
Figure 2. Food Category Purchase Distribution



Aramark typically purchases over 480 different food items per month for the Furman dining hall. A breakdown of those purchases and the percentage spent on each food group for September 2014 and February 2015 are shown in Figure 2. Data were analyzed by food miles (Figure 3) and Final Sustainability Scores (Figure 4). These data were further analyzed by food category.

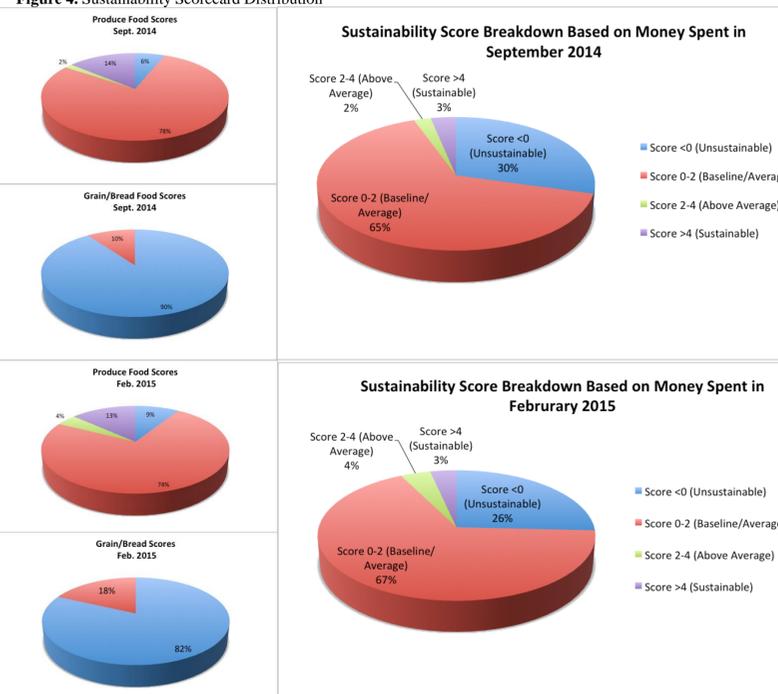
Local vs. Non-local

Figure 3. Local, Regional, and National Purchases



Sustainability Score Breakdown

Figure 4. Sustainability Scorecard Distribution



Discussion

The sustainability food scoring metric used in this study provides an assessment framework that is transferable and can be readily utilized at any institution of higher education. The scorecard provides a quantitative analysis of the sustainability of each item that can be readily aggregated to provide a comprehensive baseline or benchmark against which current and future food purchasing strategies can be measured. The approach can be used to identify where the greatest opportunities lie for improving the overall sustainability of a university food system. In Furman's case, only 3% of the overall food items met the sustainable food designation, and the majority of these items were within the "Produce" category for both September 2014 and February 2015. It is apparent that based on this analysis there is significant room to improve local and sustainable purchasing in all of the food categories at the university.

The study highlighted some of the major challenges of sourcing more sustainable food items at higher education institutions: (1) typically large national corporations have established vendor contracts that can limit the options and availability of sustainable food choices; in Furman's case we were bound to buy from Sysco and Freshpoint; (2) in addition, trying to get sourcing data from these large scale providers can be challenging; for example, we had difficulty getting source data from Freshpoint and as such often had to make educated guesses based on the type of food and where it's typically grown during that time of year; (3) there are often concerns over liability when trying to source from local farmers including the risk of foodborne illness; (4) local and small-scale farms are often unable to provide the volumes and varieties of food typically needed to feed a hungry student population, and so a local food hub or coop is usually needed. A food hub is currently being developed in Greenville which should significantly increase the opportunity for more local purchasing in Furman's future; and (5) the cost of sourcing local and/or more sustainable foods can be more expensive, and as such create budgetary challenges.

The methodology also allows for comparative tracking among months. We had expected to see distinct seasonal differences in the sustainability scores and locally sourced foods between September and February, given known differences in what is seasonally available. However, there were surprisingly very little differences between the two presumed end member months, and actually February had a higher percentage of local food purchased compared to September. The difference was more due to the fact that overall food purchased during the month of February 2015 (403 items) was less compared with September 2014 (572 items), and therefore local and sustainable foods made up a higher percentage of the total food eventhough the volumes between months were fairly comparable. A limited list of local items was being purchased year round, mainly from the produce category. There is significant room to improve more sustainable purchasing in the eggs/dairy, seafood, and grain/bread categories in particular.

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