Sustainable Dining Initiative

University of Colorado Boulder

Strategic Plan

September 12, 2012
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Executive Summary

The increasing demand for local and organic food, the growing adoption of fair trade standards, and the expanding cultivation of permaculture gardens on college campuses clearly announces that we are in the middle of a rapidly-blossoming food revolution. Campus Dining Services (CDS) at the University of Colorado Boulder is recognized as a national leader in many sustainability fields and has implemented strong resource conservation projects in-line with campus goals. As the CDS organization continues to advance its own aggressive sustainability goals, it requires a review of all measures currently in place, the impacts of those programs, and recommendations for effectively moving forward.

Moreover, the recent upgrade of the “Sustainable Food” section of the Sustainability Tracking, Assessment, and Rating System (STARS) - utilized by both the CU campus and the Association for the Advancement of Sustainability in Higher Education (AASHE) to track progress on a wide variety of sustainability goals - requires the Campus Dining Services team to analyze the success of its current initiatives and create a dynamic plan for working within the evolving STARS system.

The CU Sustainable Dining Initiative is a comprehensive framework for increasing the level of sustainability in the Campus Dining Services unit over time. The project recognizes the complex and ever-evolving nature of the food system and places a strong focus on water and energy conservation, waste management and resource recovery, procurement and sourcing, education and outreach, and strategic partnerships. This document provides a series of short and long-term goals, project recommendations, definitions, and templates to be used by CDS staff and university partners in an effort to increase the sustainability of food served on campus.

The recommendations included in this report are a reflection of current trends in the food system and have been shaped to capitalize on advances within the industry over time. In order for this document to be utilized most effectively, it is important to recognize the three primary trends that are present throughout the different program areas.

On vs. Off-Campus Influences

The discrepancy between on and off-campus factors will significantly influence the impact of various sustainability efforts within the HDS organization. In general, utility and resource management projects (i.e. waste, energy, and water) are affected primarily by the availability of financial capital within the Campus Dining Services unit, as well as by campus-wide initiatives. Procurement and sourcing initiatives are also influenced by the availability of funding, but are also significantly affected by market and climate forces that exist outside of campus control.
This difference in the ability to influence the conditions in which various sustainability goals are pursued is an important project management consideration and will likely impact the timing, level of resource allocation, and employee dedication for various programs. For example, campus-wide energy conservation projects will likely include the kitchens used by Campus Dining Services. This type of partnership opportunity may inevitably reduce the need for HDS staff to focus significant time and capital on the creation of new conservation projects and financing tools. Increased procurement of food from local farms, however, may require significantly more effort to create new programs that will minimize the impacts of external forces outside of university control and maintain a high quality product.

The variance in the degree and source of factors that will influence the various projects within Campus Dining Services is an important consideration when moving forward the department’s sustainability goals. This discrepancy is modeled in the Sustainable Dining framework based on the depth of the assessments and recommendations. In other words, the energy, water, and waste categories contain noticeably less analysis and project focus, while the Education & Outreach and Procurement & Sourcing sections include a significantly greater degree of research and programmatic recommendations. This difference is not intended to detract from the importance of the utility categories, but reflects the research demands that outside influences place on different areas of sustainability within the department.

**Innovation and Flexibility**

In addition to the variance among project influences, this report recognizes the crucial role that continuous innovation and flexibility will play in the overall success of sustainability initiatives in the HDS organization. As such, this document is intended to be utilized as a continuously evolving framework that must be updated over time in order to capitalize on changes within the food industry and the CU campus. In order to maintain its position as a national leader in sustainability, it is recommended that the Campus Dining Services organization continue to provide incentives for employee innovation and accomplishment, while also regularly assessing the success of current initiatives and goals over time.

**Partnerships**

This report also places a strong focus on the need to continuously create and maintain partnerships among the various community groups and organizations within the food system. The ever-changing nature of the supply chain also necessitates a collaborative relationship with the food distributors contracted with the University of Colorado and CDS. Ultimately, partnerships and collaboration will lead to greater efficiencies, access to resources, and increased flexibility over time.
In conclusion, this report is a reflection of the progress and hard work that has been achieved by Campus Dining Services staff and campus partners over a number of years, and is intended to provide a framework for building on that success.

**Acknowledgements**

The creation of this report - and the development of the CU Campus Dining Services Sustainable Dining Initiative over the years - has been made possible by a large group of dedicated staff, faculty, students, and community partners. This report, developed by the SRS Consulting team, draws from a wide variety of internal documents and reflects the views of numerous Campus Dining Services staff and partners.

A special “Thank You” goes out to everyone who helped in the preparation of this report and who ultimately made this project possible. The authors of this report would also like to recognize Kambiz Khalili and Amy Beckstrom for providing the funding necessary to make this project feasible.

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A Message from the Executive Chef

In the 1940s, the Green Revolution began. This new advent in petrochemicals and heavy equipment allowed farmers to maximize production efficiency and achieve yields that were once never considered possible. The Revolution gave us cheap food with more options – and plenty of it. But in this time of great progress we also lost something: our relationship with food.

As we became increasingly disassociated with who was growing our food, how it was being produced, and where it came from, we fell victim to an industrialized system focused on maximizing yields at the lowest costs. But these “low costs” were only externalized for a short period of time. Over the past two decades, we have seen significant increases in the number of food-borne illnesses, the rapid loss of topsoil, the environmental impacts of synthetic pesticides and fertilizers, the disappearance of the small family farms, and the increase of human rights abuses.

Today, there is another food revolution; an effort to reconnect with those colorful objects on our plates and to rekindle the relationship with the farmers and communities that provide our meals. This movement can be recognized by the rapid growth of organic options, the mounting number of farmer’s markets, the blossoming farm-to-table dinners, and the ceaseless demand for “local”. People want to know where there food comes from, how it is grown, and put a face to who grew it.

This new revolution presents a number of fantastic challenges and opportunities for the culinary community. At the University of Colorado, our mission is to grow a more resilient and regional food system that promotes a healthy planet, strong communities, and robust local economies. These efforts to provide the most “sustainable food” are driven by the passion and knowledge of our staff, faculty, students, and community partners, and will consequently evolve over time.

The University of Colorado Sustainable Dining Initiative has germinated from the countless projects and hard work that have been planted for decades within Housing & Dining Services and the CU community. The Sustainable Dining Initiative Report is intended to provide the rationale behind our efforts and to highlight the ever-evolving framework with which we have chosen to engage our food system.

Thank you for your interest in our Sustainable Dining Initiative. We hope that our efforts will continue to inspire personal growth and bring about positive change in our communities. Together, we can build a more resilient food system that provides healthy, safe, and affordable food, while also growing a robust local economy and a healthier planet.

Kerry Paterson, CEC
Executive Chef
Campus Dining Services
University of Colorado Boulder
Introduction

Our Changing Climate
According to the Intergovernmental Panel on Climate Change, increasing levels of greenhouse gases are projected to result in hot temperature extremes, heat waves, changes in precipitation patterns, and decreased availability of water resources in arid and semi-arid climates\(^1\). Furthermore, by the middle of the century, “many semi-arid areas (e.g. Mediterranean Basin, western United States, southern Africa and north-eastern Brazil) will suffer a decrease in water resources”\(^2\). In addition to producing a growing number of resource conflicts and refugees, these changes in climate will drastically impact the food security of arid and semi-arid regions – including Colorado. In July, 2012, the US Department of Agriculture declared drought-related disaster areas in over 1,000 counties in the United States - many of which are responsible for producing the bulk of the corn, soybeans, and cattle grown in the U.S\(^3\). This dramatic loss of crops and animals has resulted in record increases in food commodity prices\(^4\), an event that will likely impact the average cost of food around the country.

In an effort to combat the rise in greenhouse gases, communities of various sizes have committed to improving resource efficiency and creating more sustainable ways of doing business. The University of Colorado and the Boulder community are no exception. As an original signatory of the College and University President’s Climate Commitment, and as a member of the Kyoto Protocol, both parties have publically expressed their willingness to reduce emissions through improvements in efficiency and use of renewable resources.

So what do our food choices have to do with climate change? According to a study released by the Center for Sustainable Systems at the University of Michigan, six-percent of greenhouse gas emissions (GHGs) in the United States are associated with the production, processing, transportation and cooking of food\(^5\). But GHGs are only one of the many reasons behind the rapidly-growing global food revolution.

The Food Revolution


Simply put, the food that we choose to buy and the way we choose to prepare it has significant economic, environmental, social, and health impacts. The type of food we put into our bodies carries a number of implications for our own health and the health of our communities. For example, over 25-million pounds of the antibiotics used in the United States are fed to livestock on an annual basis\textsuperscript{6}. The Food and Drug Administration has expressed significant concern that this large use of drugs in the food system is leading to resistant strains of bacteria that are causing incurable human illnesses\textsuperscript{7}. In addition to antibiotics, our increased consumption of processed sugars and foods, such as high-fructose corn syrup, has been linked to a growing number of diet-related chronic diseases\textsuperscript{8}.

The methods employed to grow our food and the ways in which we choose to prepare it also have significant impacts on our climate. According to the Food and Agricultural Organization of the United Nations, livestock production is responsible for roughly 18% of global greenhouse gases linked to climate change\textsuperscript{9}. In addition to harmful emissions, over 877-million pounds of pesticides were applied to crops in the United States in 2007\textsuperscript{10}, a practice that reduces the longevity of the soil over time and maintains a strong dependence on fossil fuels. That same year, over 1.73 billion tons of topsoil was lost to erosion caused mainly by these industrial farming practices – this loss is the equivalent of 200,000 tons of topsoil per hour\textsuperscript{11}.

There is also a significant community aspect of our food system. Increased reliance on large-scale industrial agriculture has led to many notable human rights violations and the exploitation of our farmworkers and food handlers. It is also important to recognize the severe repercussions that will continue to result from the rapid conversion of agricultural land to urban development. Moreover, small and mid-sized farms are increasingly being lost to large-scale commodity outfits, as with the genetic diversity of our crops. According to the Center for Sustainable Systems, large-scale farms account for only 9% of all farms in the U.S., but are responsible for over 66% of the agricultural production\textsuperscript{12}. In 2006, only $0.19 for every dollar spent on food went back to the farmer – in 1975, it was $0.40\textsuperscript{13}.

In short, we have found ourselves dependent on an industrial food system that remains fully reliant on fossil fuels and externalities. This concentration on conglomeration and

specialization has led to a societal reliance on an unsustainable production structure that lacks flexibility to cope with significant changes in climate and economic security. But all hope is not lost. The surge in demand for local and organic food, “never-ever” meats, farm-to-table meals, fair trade organizations, cooperatives, and community gardens is a testament to a rapidly growing paradigm shift – a global food revolution.

Our Place in the Revolution

When it comes to doing our part for the planet and our community, CU Campus Dining Services and the University of Colorado are committed to making a positive impact. These efforts are often fueled by student actions, as demonstrated by the recent Fair Food Statement of Values, and continually improve over time.

As an organization, we are dedicated to providing our customers with high quality, affordable meals that are good for people and the planet. The choices we make every day about where our own food comes from and how it is grown are always difficult ones. In an effort to keep college affordable, we strive to find the best prices when it comes to buying much of our ingredients. We also are committed to using the best quality food that we can. So between the demands for low prices and high quality, how could we afford to add “sustainable”?

As it turns out, sustainability in our dining centers provides many benefits beyond the normal environmental and social ones that we often read about. Surely we are committed to acting responsibly in those two areas, but it doesn’t hurt when doing so also helps your bottom line, improves customer relations, reduces long-term risks, and supports local economic development. Suddenly sustainable food becomes a central pillar in our efforts to provide high quality meals at affordable prices, and we are proud to be able to make this claim.

The CU Sustainable Dining Initiative is a comprehensive framework for increasing the level of sustainability in the Dining Services department over time. The project recognizes the complex and ever-evolving nature of the food system and emphasizes the importance of strategic partnerships. This document provides a series of short and long-term goals, project recommendations, important definitions, and templates to be used by Campus Dining Services staff and campus partners in an effort to increase the sustainability of food served at the University of Colorado.
Background

The Campus Dining Services team has partnered with numerous campus partners and outside organizations to implement a wide range of sustainability initiatives over the past thirty years. Many of these projects are still in place, while others have evolved or have been replaced. As Housing & Dining Services, the University of Colorado, and organizations in the local community continue to pursue aggressive sustainability goals, it is crucial that the Campus Dining Services unit analyze its current projects and create a framework to support further initiatives down the road.

Before focusing on the projects specific to Campus Dining Services, it is important to recognize the external forces and trends that will influence the success of these initiatives over time.

Campus and Community Initiatives

This section of the report highlights the many community-based sustainability projects occurring parallel to the efforts within CU Campus Dining Services. It is worth noting that the projects detailed in this report are not the complete list and are mostly food-related.

The 25% Shift

The “25% Shift” plan, created by Boulder-based Transition Colorado and economist Michael Shuman, presents the economic case for the rapidly growing local food movement in Colorado and around the country. The report provides data to support the development of local food processing infrastructure that will enable citizens to express a more regional diet and benefit the local economy. The authors analyze the financial impact of buying local and argue that, “every time you choose not to be self-reliant in a given good or service, you’re giving away business opportunities. So you not only lose the income, wealth and jobs associated with that business, but all of the jobs and income and wealth that would have come from linked businesses”. This multiplier effect is one of the key benefits of a more localized food system and is one of the more significant ways that the University of Colorado can support economic development in the State.

Over the next decade, Transition Colorado and many of its partners will be highly involved in the growth of local food production infrastructure. This evolution in the ability of Colorado to supply more of its own food over an extended growing season will likely provide the Campus

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Dining Services organization with more opportunities to source local and organic food, as well as meet many of its other sustainability goals. An opportunity to become more directly involved with this organization and its efforts is to take the “10% Shift Pledge”. By doing so, CU Campus Dining Services would commit to purchasing at least ten percent of its annual food budget from local sources (defined by STARS as within 250 miles). This shift in buying habits will likely lead to more local investment, more local jobs, and increased resiliency of our local foodshed.

*Boulder County Agriculture and the Cropland Policy*¹⁶

There are roughly 746 farms that exist on over 40,000 acres of agricultural land in Boulder County. These farms generate over $34,037,000.00 dollars in annual revenue from a wide variety of crops, including: corn for grain, wheat, barley for grain, corn for silage, sugar beets, livestock, and vegetables.

On December 20, 2011, the Boulder County Commissioners approved the latest version of the Cropland Policy. This document provides the guiding framework for land use decisions and maintenance of County Open Space over the next 10 years. There are several key pieces of this plan that will affect the amount of local and sustainable food products available to the University of Colorado over time. Some of these initiatives include:

- The prioritization of organic operations on Open Space land, with the goal of 20% of cropland being organic certified or in transition by 2020.
- Lessees seeking organic certification will receive a 50% reduction in the cost of rent during the three-year transition period.
- Boulder County will work with producers, the natural food industry, and other food stakeholders to explore and expand market opportunities for organic products.
- The prioritization of food crops on Open Space lands for local market consumption
- The development of direct-to-market operations and the facilities and structures required to provide more food products to the local community.

This shift in local farming and ranching practices will open up key opportunities for the university to source more of its food from within the County over the coming decade. This shift will also allow the university to contribute to greater economic growth in the Boulder community.

*The Produce Traceability Initiative*¹⁷

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The Produce Traceability Initiative (PTI) is a collective of produce industry partners that extend across the table, from the farm to the kitchen. The project aims to implement an electronic tracking system that will be able to verify the origin of every case of produce sold in the United States all the way down to the very field where it was picked. While the PTI is primarily being conducted as part of a growing food safety initiative, the project will supply data that can also be used in to track the “localness” of produce items. The organizing group for the PTI has set an aggressive timeline to have the program fully up and running by the end of 2012, meaning that Campus Dining Services will likely be able to track the origin of its produce items more easily.

Greening of State Government, Executive Order D0011 07

In 2007, Colorado Governor, Bill Ritter, signed an executive order that committed all public institutions to achieving the following resource conservation goals:

- 20% reduction in energy by 2012
- 10% reduction in water use by 2012
- 20% reduction in paper use by 2012
- “Zero waste” operations in new and renovated buildings
- 25% volumetric reduction in petroleum fuel used in fleet

Since 2008, the University of Colorado has made significant strides toward achieving these goals. Since dining operations consume significant amounts of energy and water, as well as produce significant waste, CDS is in a unique position to help the university continue to make positive advances towards these goals.

CU Carbon Neutrality Plan

In 2009, the University of Colorado released its plan to achieve “carbon neutrality” by 2050. Since the publication of the report, the university has created a series of Sustainability Action Teams (SATs) focused on various areas of carbon reduction, including: energy & water, purchasing, waste, and education. The campus has also promoted the recent creation of the Sustainable Food SAT, which will be responsible for implementing policies and programs that will impact the food served across campus. These SATs will likely be able to provide funding, policy support, research, and technical advice as Campus Dining Services pursues the various focus areas highlighted in this report (energy, water, waste, etc.).

CU Zero Waste Initiative

As the University of Colorado pursues “zero waste” as part of its commitment to the Greening the State Government initiative launched by Colorado Governor Ritter in 2008, it will provide opportunities for Campus Dining Services to accomplish its own waste management priorities as part of the campus whole. Some important university efforts that may impact Campus Dining Services over time will be:
• Increased funding for dock improvements
• Bin parity throughout campus (inside and out)
• Public vendor bids for compost and waste oil collection (reduction in overall cost)
• Waste audits
• Waste-to-energy initiatives
• Expanded materials recycling and hard-to-recycle materials collection
• Product policies (i.e. water bottle ban/elimination)
• Employee training programs and materials

**STARS 2.0**
The Sustainability Tracking, Assessment, and Rating System (STARS) used by AASHE and the University of Colorado to assess the progress of various sustainability programs is currently undergoing revision. The updated STARS 2.0 model is expected to be released early 2013, and will present a series of new project opportunities for the Campus Dining Services unit. Some of these improved focus areas will include:
• Closed-loop waste recovery systems
• Fair food policies
• More focus on community-based, locally-owned and sourced food items
• Campus gardens and sustainable food systems
Sustainable Dining Initiative

The following section of this report provides the evolving framework for sustainability efforts in the Campus Dining Services unit. The Initiative focuses on five key areas, including:

- Energy & Water Conservation
- Waste Management & Resource Recovery
- Education & Outreach
- Sourcing & Procurement
- Strategic Partnerships

It is important to note that some of these sections contain more specific research and recommendations than others. This discrepancy is not intended to detract from the importance of each specific area, but is directly correlated to the availability of similar campus initiatives and policies that will help achieve certain goals. In other words, areas with less information are more likely to be paired with ongoing campus-wide projects (i.e. water conservation) as opposed to other areas that require industry research and new projects in order to be feasibly implemented within the Campus Dining Services organization (i.e. local food sourcing program).

Each section will provide an overview of goals, ongoing efforts, recent achievements, challenges, and project opportunities.
# Energy & Water Conservation

## Goals

### Energy
- Reduce energy use 20% by 2020 (campus goal)
- Identify facility energy loads
- Replace old equipment

### Water
- Reduce water use 20% by 2020 (campus goal)
- Identify water conservation opportunities in facilities

## Recent Achievements
- 1st round of kitchen audits completed in 2011 with follow-up action items
- Closed glycol loop for coolers saves over 100,000 gallons of water per year

## Ongoing Efforts

### Energy
- Conduct biannual kitchen audits
- Purchase Energy-Star rated equipment when available
- Install self-cleaning AV hoods
- Perform kitchen upgrades based on results from 1st audit
- Conduct annual fleet study
- Develop baseline data for C4C
- Staff training and customer outreach

### Water
- Grey water used in many dishwashers and pulpers
- Performing kitchen upgrades based on results from 1st audit
- Develop baseline data from C4C
- Staff training and customer outreach

## Challenges
- **Timing of building renovations** limits ROI for efficiency upgrades in kitchen facilities
- **Lack of sub-metering** limits data available to track water and energy use in dining facilities – reducing opportunities to implement target-specific projects and calculate ROI
- **“The utilities disconnect”** between the staff that use the equipment and the organization that pays the bills reduces the incentive to conserve energy and water during the cooking and cleaning process
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Waste Reduction & Resource Recovery

Goals
- Minimize waste in all operations
- “Highest & Best Use” of recovered resources
- Incorporate “closed-loop” recycling systems when feasible

Recent Accomplishments
- Elimination of plastic bags at all grab-n-gos
- 340.1 tons of food waste diverted from the landfill in 2012

Ongoing Efforts
- Waste cooking oil collection/recycling
- All outdoor events are zero-waste
- Pre & post-consumer composting
- Education events for customers (i.e. scrape-your-plate day)
- Filtered water stations
- Eliminate bottled water from grab-n-go operations
- Reusable to-go container pilot program in grab-n-gos
- Reusable packaging from distributors
- Food Donations

Challenges
- Lack of waste processing infrastructure limits the ability of HDS and CU to operate closed-loop compost and biodiesel systems
- Availability of trays in dining halls may promote excess food waste among customers
- “Disposable mentality” among customers and staff promotes single-use containers over reusable ones
- Outdated collection infrastructure and dock space at some of the dining centers limits the ability of staff, campus partners, and haulers to appropriately sort, collect, and track materials
<table>
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<th>Project Opportunities: Waste Management &amp; Resource Recovery</th>
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**Description**
- **Tray-less Dining Pilot Program**
  - **Goals**: Reduce food waste, increase customer satisfaction, encourage sustainable food choices.
  - **Actions**:
    - **Remove trays from various dining halls & record savings, food use/waste, and customer feedback**.
    - **Provide discounts at point-of-sale for customers that use reusable containers/mugs**.
    - **Continue to develop & test reusable to-go container programs**.
    - **Work with campus partners to partially finance a biodiesel refinery that can recycle all waste oil into fuel**.
    - **Work with campus partners to site and use a compost digester where it is most feasible**.

**Benefits**
- **High**
  - **Resource Conservation**: Significant water and energy savings.
  - **Incentive Programs**: Contingent fee with customers.
  - **Environmental**: Reduce the use of single-use plastic.
  - **Sustainability**: Top-down to-go container composting.

**Feasibility**
- **High**: Most feasible.
- **Medium**: More feasible.
- **Low**: Least feasible.

**Financial Impacts**
- **High**: Good return on investment.
- **Medium**: Break-even.
- **Low**: Negative.

**Financial Responsibility**
- **High**: High risk.
- **Medium**: Medium risk.
- **Low**: Low risk.

**Timeline**
- **2012-2014**
- **Ongoing**

**Action**
- **Program/pilot development & testing**.
- **Top-down to-go container composting**.
- **Financial incentives**.
- **Education & outreach**.

**Challenge**
- **Project Opportunities: Waste Management & Resource Recovery**

**Goal**
- **Highest & Best Use of recovered resources**
- **Closed-loop systems**
- **Disposable Mentality**


**Goals**

- Provide education opportunities for customers
- Provide “real-world” experience for student interns
- Support staff sustainability initiatives at home and work
- Provide academic opportunities for students and faculty

**Recent Accomplishments**

- Inclusion of sustainability messaging on WOW Wall in C4C Dining Center
- First resource conservation training included in annual staff training event
- Sustainable Food Week, highlighting local vendors and local and organic food items

**Ongoing Efforts**

**Community/Customer Outreach**

- Scrape-your-plate day
- Local Food week
- Annual “local” meal event
- “Food for Thought” Dinner
- WOW Wall and website
- Point-of-sale waste reminders

**Employee Education**

- Employee training program
- Reminder sticker program in kitchens
- Website
- Energy/water conservation posters
- Culinary Herb Garden

**Challenges**

- **Language barriers** between staff (and students) limits the ability of Dining Services to effectively communicate sustainability initiatives
- **Lack of Incentives** and engagement opportunities for staff to provide project ideas creates a “top-down” culture that reduces overall participation in sustainability initiatives
- **Abundance of advertising campaigns** on campus reduce student attention to sustainability-related messages
- **Lack of information** available to students and faculty regarding opportunities for research projects and internships
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<td>Reduced time to research and publish</td>
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<td>Time to market new products</td>
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<td>Feasibility of research &amp; development projects</td>
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<td>Lack of Incentives</td>
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**Project Opportunities: Education & Outreach**
Education & Outreach

Campus Dining Services Internship Program
(Recommended Program)

Overview
The objective of the Campus Dining Services Internship program is to provide students with “real world” experience in the food industry, while also gaining valuable research and project development skills. These internships can be both for-credit and non-credit opportunities.

The Campus Dining Service department will also benefit from the projects and research that are generated within the program.

Management
Staff Requirements
The internship program will need to be managed by a Campus Dining Services staff member, who will be able to:

• Provide students and faculty with information about the particular project focus;
• Continuously update the project/research opportunities list on the Campus Dining Services website;
• Validate project performance for students invested in for-credit internships;
• Provide guidance and professional development for interns over the course of the project;
• Ensure that the project meets the needs of the Dining Services organization;
• Direct students and faculty to appropriate resources related to the project focus (including other Campus Dining Services staff and distribution partners)

It is likely that this position will need to be created as a full or part-time employee in order to reduce time demands on current Campus Dining Services staff. This position could be funded as part of a campus-wide Sustainable Foods Coordinator, whose responsibilities would include internship coordination and project management in addition to other tasks.

Timeline
Internships could be scheduled in a variety of different ways, including: semester-based, year-long, project-based, and summer-based. Each internship or class project would begin with an interview and provide routine progress reports as appropriate.
**Funding**

Funding will be required to pay the employee responsible for providing program oversight and coordination. This position will help streamline the internship program and allow for the efficient use of Campus Dining Services staff time. Funding could be shared between other campus partners and not be the sole responsibility of the department.

**Opportunities**

There is a wide variety of projects that could take place under this type of internship program that would help the Dining Services organization accomplish its goals. Some of these efforts could include research, project development, surveys, messaging campaigns, project implementation, and more!

Some of the opportunities that currently exist within Campus Dining Services include:

- Food producer research
- Customer labeling surveys
- Sustainable food research
- Tray-less dining pilot program research and data collection
- Garden maintenance
- Event coordination (i.e. Eat Local Week, Food for Thought, etc.)
- Reusable container program development and coordination
- Analysis of current food industry trends
- Food waste & back-of-house waste audit
- Real Food Challenge Coordinator
- Marketing and social media
- Seafood certification research

**Next Steps**

In order to get a full understanding of the opportunities that exist within this type of program, a comprehensive review should be conducted that will highlight internship standards for each department, provide key contacts and interested partners, and prepare a budget for any financial needs associated with the creation and maintenance of the internship program.
Goals

- Local: 10% by 2012
  25% by 2015
  Continue to source local food when available
- Organic: 5% by 2012
  15% by 2020
  Sourcing of “dirty dozen”
- Determine “source-of-origin” for all food items
- Research & develop “fair food” standards
  Purchase fair trade when available
- Reduce exposure to harmful cleaning chemicals

Ongoing Efforts

- Continued education of procurement staff
- Fair Trade, organic coffee at all facilities
- Organic salad greens at all facilities
- “Never-ever” ground beef
- Organic 2% milk in all operations
- Cage-free Eggs
- Go Fresh@Farrand (organic & local options)
- Increase partnerships with local farms & producers
- 100% recycled fiber napkins & paper towels
- Use of Green Seal-certified cleaning chemicals and non-chemical methods

Recent Accomplishments

- Adoption of Fair Food Statement of Values into all procurement contracts & vendor bids
- Recently developed bid language related to sourcing goals

Challenges

- **Higher food costs** associated with local, organic, and certified items may limit the ability of staff to source large quantities of those particular items
- **Availability of food items** in the appropriate timeframe, quantity, and quality needed to serve 15,000 meals per day
- **Some local producers lack the necessary GAP and insurance requirements** needed to sell to the University
- **Difficult to track** the location and specific qualities (i.e. organic) of every ingredient purchased throughout the year
- **Difficult to prioritize** and define the value of certain food items over others when making decisions with limited resources
Dirty Dozen
Increase Fair Trade / Fair Food

Goal / Challenge

Increase Student Awareness of Sourcing and Procurement Initiatives
Engage strategic partners in the CU Food System

Description

Source as much as possible
Conduct review of all foods to verify natural standards
Conduct review of certifications & practices for all food items
Harvest Meals
Confirm no artificial dyes, flavorings, preservatives; no high-fructose corn syrup; non-GMO; no growth hormones or non-therapeutic antibiotics
Confirm all suppliers and producers act in accordance with CU’s Fair Food Statement of Values
Source and Serve Local/Organic Meals in one or more dining halls.

Timeline

2012
2013-ongoing
2012
2013
Fall 2012-ongoing
Aug 2012

Responsibility

Dining Services
Dining Services
Dining Services
Dining Services
Dining Services

Feasibility

Medium
Medium
High
High
High

Financial Impacts

N/A
N/A
N/A
N/A
N/A

Financial Benefits

Medium
Medium
Medium
High
High

Project Opportunities: Procurement & Sourcing

Procurement and sourcing initiatives:
- Source CU Food products
- Host state & community CAE’s, distributors’ and suppliers’ events
- Broadcast HDS to instigate discussion and dialogue, identify opportunities for collaboration
- Source and serve meals more dining halls
- CU conference at HDS distributor
- Strategy 

Action

Broadcast HDS goals, instigate discussion and dialogue, identify opportunities for collaboration
Educate students and staff regarding HDS sourcing efforts
Harvest Meals
Collaboration for opportunities and ideas, bringing together CU and HDS distributors’ strategy & goals, initiating community
Engage
Increase

Dirty Dozen
Organic
Natural
Trade / Fair

<table>
<thead>
<tr>
<th>Goal / Challenge</th>
<th>Action</th>
<th>Description</th>
<th>Timeline</th>
<th>Responsibility</th>
<th>Financial Feasibility</th>
<th>Benefits</th>
<th>Feasibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase Quantity of Sustainable Food</td>
<td>Help to form a CO public institution based partnership</td>
<td>Help to develop a partnership with other CO institutions that are focused on increasing the sustainability of their food items</td>
<td>2013 - ongoing</td>
<td>Community Partners</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Support the development of local food hubs</td>
<td>CU Source Local Pilot Program</td>
<td>CU Source Local Pilot Program</td>
<td>2012 - ongoing</td>
<td>Community Partners</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Partner with local food producers to test products and connect them with distributors over time</td>
<td>Work with distributors to create tracking report with product attributes</td>
<td>Partner with local food producers to test products and connect them with distributors over time</td>
<td>2012 - ongoing</td>
<td>Primary Distributors</td>
<td>Low</td>
<td>High - impact areas</td>
<td>High</td>
</tr>
<tr>
<td>Demonstrate greater consumer demand</td>
<td>Build support for state-wide policies that promote healthy local food systems</td>
<td>Demonstrate greater consumer demand</td>
<td>2012 - ongoing</td>
<td>Other Public Institutions</td>
<td>Low</td>
<td>NA</td>
<td>Medium</td>
</tr>
<tr>
<td>Support local community development</td>
<td>Increase access for locally produced products</td>
<td>Support local community development</td>
<td>2012 - ongoing</td>
<td>Community Partners</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Ensure product success within DS operations</td>
<td>Direct sales increase</td>
<td>Ensure product success within DS operations</td>
<td>2012 - ongoing</td>
<td>Community Partners</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Calculate high impact areas</td>
<td>Calculate policy impacts</td>
<td>Calculate policy impacts</td>
<td>2012 - ongoing</td>
<td>CU Dining Services</td>
<td>Low</td>
<td>High - impact areas</td>
<td>High</td>
</tr>
<tr>
<td>Track progress on goals</td>
<td>Streamline reports</td>
<td>Track progress on goals</td>
<td>2012 - ongoing</td>
<td>CU Dining Services</td>
<td>Low</td>
<td>High - impact areas</td>
<td>High</td>
</tr>
<tr>
<td>Calculate policy impacts</td>
<td>Streamline reports</td>
<td>Calculate policy impacts</td>
<td>2012 - ongoing</td>
<td>CU Dining Services</td>
<td>Low</td>
<td>High - impact areas</td>
<td>High</td>
</tr>
</tbody>
</table>

Project Opportunities: Procurement & Sourcing
Procurement & Sourcing

Defining Priorities: Addressing Procurement Decisions Through Frameworks

Overview
As the Campus Dining Services team continues to increase the quantity of “sustainable food” served in its facilities, difficult decisions related to sourcing and “bang-for-the-buck” will consistently arise. This document is intended to provide a clear set of definitions and frameworks that will help DS staff more confidently procure ingredients that move the organization closer to its sustainability goals.

Where We Stand
HDS is already recognized as a leader among higher education institutions for its various sustainability initiatives, including sourcing and procurement. Recent efforts have centered on increasing local and third-party certified offerings in the dining facilities. The table below presents the estimated quantity of organic and local food purchased in fiscal year 2011.

<table>
<thead>
<tr>
<th>Food Purchased by Campus Dining Services FY 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fair Trade Purchases</td>
</tr>
<tr>
<td>% Fair Trade Purchased</td>
</tr>
<tr>
<td>Total Local* Purchases</td>
</tr>
<tr>
<td>% Local Purchased</td>
</tr>
<tr>
<td>Total Organic Purchases</td>
</tr>
<tr>
<td>% Organic Purchased</td>
</tr>
<tr>
<td>Total Sustainable Purchases</td>
</tr>
<tr>
<td>Total % Sustainable Purchased</td>
</tr>
</tbody>
</table>

Organic and local sourcing efforts were made possible through partnerships with Robinson Dairy, American Produce, United Natural Foods/Albert’s Organics, Sysco Denver and several smaller vendors. Over 100 separate products were purchased organically in 2011.

*Local is defined as products grown, produced, manufactured or processed in Colorado.
Defining Priorities
As Campus Dining Services continues to source increasing quantities of sustainable food (i.e. local, organic, third-party certified, etc.) on a limited budget, it will need to make some tough decisions in the face of some already significant procurement challenges. The following information is intended to help navigate the complexities of the food system by providing basic principles that can be used by procurement staff and distribution partners to source the most ideal ingredients under varying circumstances.

Definitions
It is important to establish a clear set of definitions for the food producers and distributors responsible for helping Campus Dining Services meet its sustainability goals. These definitions should be applied to all ingredients sourced throughout the year.

Location

Regional – a food product that was grown, processed, and/or produced within 400 miles of the University of Colorado (United States Department of Agriculture).

Local
There are two classifications of local that will be utilized under the Sustainable Dining Initiative to accomplish a number of specific goals. These different tiers can be categorized into Single-Factor and Multi-Factor definitions.

Tier 1: Single-Factor Definition of Local
This first definition of local is to be primarily used for reporting metrics and binary assessments that mandate a strict classification of a certain good as “local” or “not local”. For this purpose, CDS shall rely on the following STARS method to track the local attributes of its food items:

- Local: “a food product that was grown, raised, or caught and processed or manufactured within 250 miles” (STARS 2.0).

- A multi-ingredient/value-added food item can be considered local if at least 50% of its ingredients meet the “local” definition listed above (STARS 2.0).
Tier 2: Multi-Factor Definition of Local

This definition of local combines the many important community values connected to a local food product with the STARS classification (distance from production). By highlighting various attributes of the local foodshed, this second tier of classification is intended to help distributors source the most community-based food products possible. In doing so, the Dining Services department seeks to promote the long-term health and sustainability of the local food system.

By sourcing products that were grown/raised-caught, processed, and manufactured locally by locally-owned companies, Campus Dining Services ensures that dollars spent on various goods are continuously re-circulated in the community – thereby building a stronger local economy and regional foodshed. This action also ensures the continuous development of new food-related enterprises and promotes long-term food security over time.

The following table highlights the four major areas of the local food system that are intended to be considered in the procurement of any and all food items by the Campus Dining Services team. When faced with the decision between two sources of a similar product (i.e. potatoes, organic chicken, etc.), preference should be given to the product that fits within the most categories (unless otherwise directed by CDS staff). In other words, the most desired products can be included in all four categories, while the least desired items cannot be included in any of the categories.
NOTE: It is important to note that the transportation and packaging portion of the food industry is not included in this chart. The absence of this particular section of the food system from the list of values is due to the inherent inclusion of packaging within the other production categories and the fact that transportation and aggregation is the role of the primary distributors under contract with the Campus Dining Services organization.

As the Campus Dining Services team continuously analyzes and reports on the progress achieved in reference to its local food goals, it will need to clearly highlight different products and companies under the different value categories defined above. The following table demonstrates one of many possible methods of acknowledging the diversity of vendors in the local foodshed. This type of list could be included in many of the Campus Dining Services educational material and reports.

**CDS Summary of Local Purchases**

**FY 2011**

<table>
<thead>
<tr>
<th>Owned</th>
<th>Grown, Raised, Caught</th>
<th>Processed</th>
<th>Produced, Manufactured</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Udis Bakery</td>
<td>• Full Circle Farm</td>
<td>• Robinson Dairy</td>
<td>• Udi's Bakery</td>
</tr>
<tr>
<td>• Full Circle Farm</td>
<td>• Grant Family Farm</td>
<td>• Boulder Sausage Co.</td>
<td>• Celestial Seasonings</td>
</tr>
<tr>
<td>• Grant Family Farm</td>
<td>• Ela Family Farm</td>
<td>• Daffy Apple</td>
<td>• Rudi’s Bakery</td>
</tr>
<tr>
<td>• Rudi’s Bakery</td>
<td></td>
<td></td>
<td>• Boulder Hot Sauce</td>
</tr>
</tbody>
</table>

**Note: This is not a complete list of local vendors.**

In order to establish a successful multi-factor analysis of local food products, it is important to work directly with distributors to create easily navigable tracking forms that provide the various attributes of each food product. This action will allow for a streamlined process that will likely reduce the staff time needed to analyze the overall sustainability of the food sourced by the organization and enable CDS staff to target specific items or values in the food chain.
Production
The following definitions are intended to help Campus Dining Services staff and its distributors to source specific food items that meet the values of the university and Boulder community. The following list of terms does not include every possible certification and focuses on the major terms that are most commonly used by the CDS team. For a complete list of 3rd-party certifications and their respective level of effectiveness, please see the “Greener Choices” rating system published by Consumer Reports (available: www.greenerchoices.org).

Organic – In general, organic foods are produced without the use of synthetic fertilizers and pesticides, do not contain genetically-modified organisms (GMOs) or growth hormones, and are not processed using irradiation or any chemical additives or preservatives. All food can be considered organic when it meets the minimum standards regulated by the US Department of Agriculture.18

Natural - a food item that does not contain: artificial dyes, flavorings, and preservatives; high-fructose corn syrup; genetically-modified organisms (GMOs); and growth hormones and antibiotics. For a more detailed description, please refer to the “Defining Natural” report included in the Appendix section of this document.

“Never-Ever” – often used to describe protein products, this term means that the animal in question was never given antibiotics, hormones or steroids, and was never processed using nitrates or other artificial chemicals.

“Dirty Dozen” – Certain produce items contain higher residual levels of pesticides than others. The produce items containing the highest levels of these chemicals are typically categorized as the “Dirty Dozen”, which includes: Apples, Celery, Strawberries, Peaches, Spinach, Imported Nectarines, Grapes, Sweet Bell Peppers, Potatoes, Domestic Blueberries, Lettuce, and Cucumbers.

“Certified Humane Raised andHandled” - designed to certify that animals raised for dairy, lamb, poultry and beef products are treated in a humane manner. Under the program, growth hormones are prohibited and animals are raised on a diet without antibiotics. Antibiotics can be used in the treatment of sick animals. Access to clean and sufficient food and water; and a safe and healthful living environment is also required from birth through slaughter. Producers also must comply with environmental standards. Processors must comply with the American Meat

18 USDA National Organic Program. Available: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=0ea8f8be1c7cd78c51513eaab48a09dd&rgn=div8&view=text&node=7:3.1.1.9.32.2.354.6&idno=7

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Institute Standards, a higher standard for slaughtering farm animals than required by the Federal Humane Slaughter Act.

“Free Range” - Free range (or free roaming) is a general claim that implies that a meat or poultry product, including eggs, comes from an animal that was raised in the open air or was free to roam. Its use on beef is unregulated and there is no standard definition of this term. Free range is regulated by the USDA for use on poultry only (not eggs) and USDA requires that birds have been given access to the outdoors but for an undetermined period each day. USDA considers five minutes of open-air access each day to be adequate for it to approve use of the free range claim on a poultry product. "Free range" claims on eggs are not regulated at all. To learn more about what is meant by this term, consumers must contact the manufacturer.

“Fair Trade Certified™” – these standards aim to ensure that farmers and farm workers in developing nations receive a fair price for their product; have direct trade relations with buyers and access to credit; and encourage sustainable farming methods, without the use of a dozen of the most harmful pesticides, and forced child labor. Products must be grown by small-scale producers democratically organized in either cooperatives or unions. In order to use the Fair Trade Certified label, the buyer must also be willing to pay up to 60% of the purchase in advance for some products, including coffee, tea and cocoa, with added premiums for social development projects, including healthcare, educational and capacity-building projects that can improve quality of life for farming communities. This certification is verified by the TransFair USA organization. (Source: “Greener Choices” Consumer Reports.)

“Fairtrade Certified™” – Fairtrade standards are not simply a set of minimum standards for socially responsible production and trade. The Fairtrade standards go further in seeking to support the development of disadvantaged and marginalized small-scale farmers and plantation workers. Fairtrade standards relate to three areas of sustainable development: social development, economic development and environmental development.

In summary the key objectives of the standards are to:

- ensure a guaranteed Fairtrade minimum price which is agreed on with producers
- provide an additional Fairtrade premium which can be invested in projects that enhance social, economic and environmental development
- enable pre-financing for producers who require it
- emphasize the idea of partnership between trade partners
- facilitate mutually beneficial long-term trading relationships
- set clear minimum and progressive criteria to “ensure that the conditions for the production and trade of a product are socially and economically fair and environmentally responsible.”

This certification is administered by the Fairtrade Labeling Organization International, a group of 22 labeling organizations from around the world.
“Marine Stewardship Council Environmental Standard for Sustainable Fishing” - The MSC, which oversees “wild-caught” fish sales, utilizes three overarching principles to evaluate the sustainability of each fishery. In order to be certified, an operation must prove that it meets:

**Principle 1: Sustainable fish stocks**  
The fishing activity must be at a level which is sustainable for the fish population. Any certified fishery must operate so that fishing can continue indefinitely and is not overexploiting the resources.

**Principle 2: Minimizing environmental impact**  
Fishing operations should be managed to maintain the structure, productivity, function and diversity of the ecosystem on which the fishery depends.

**Principle 3: Effective management**  
The fishery must meet all local, national and international laws and must have a management system in place to respond to changing circumstances and maintain sustainability.

“Monterey Bay Seafood Watch” – This organization creates science-based recommendations for sourcing both wild-caught and farmed fish species. The ratings include:

**Green = Best Choices**  
Best Choices are well managed and caught or farmed in environmentally friendly ways.

**Yellow = Good Alternatives**  
Buy, but be aware there are concerns with how they’re caught or farmed.

**Red = Avoid**  
Take a pass on these. These items are overfished

(Source: www.montereybayaquarium.org)

It is recommended that Dining Services focus on sourcing fish species that are rated in the “Green” category. All fish purchased should also meet the Marine Stewardship Council’s Environmental Standard for Sustainable Fishing (if available).

*It is also important to note that there is a growing number of seafood certification agencies that specialize in various areas of the supply chain. It is recommended that the Campus Dining Services organization evaluate the different agencies and create a list of approved certifications. This process will allow the university’s primary distributors to focus on sourcing seafood that meets at least one more of those criteria.*
“Fair Food”
The Campus Dining Services organization has been sourcing various fair trade certified food items for a number of years. However, after a guest speaker sparked significant controversy on campus in 2011, university leadership made the purchasing of “fair food” an institutional priority. The directive from the CU Chancellor, Phil DiStefano, and the associated Fair Food Statement of Values are listed below:

A Message from the Chancellor of the University of Colorado at Boulder

DATE: 12/05/11

SUBJECT: University of Colorado Boulder Fair Food Statement of Values

To the University of Colorado Boulder campus community:

Last May I had an informative and inspiring discussion about sustainability and social justice related to the production of food with a number of student leaders on campus, including Dan Omasta, Anthony Delarosa, and Evi Valencia.

We agreed that the University’s food purchasing agreements should reflect, as much as possible, the University of Colorado Boulder’s values, goals and campus culture. Based on this discussion, I asked Deb Coffin, our now Interim Vice Chancellor for Student Affairs, and her team to conduct a review of the university’s food purchasing agreements for Housing and Dining Services (HDS) and the University Memorial Center.

I am happy to let you know that Deb, Kambiz Khalili, Executive Director of HDS, and Carlos Garcia, Director of the UMC, along with the support of many others on campus, have developed a “Fair Food Statement of Values” for the University of Colorado Boulder (see below). This statement has received the official support of students at CU Student Government, Environmental Board and Residence Hall Association (RHA), as well as the support of major food purchasers on campus including HDS, UMC and the Department of Athletics. The Procurement Service Center (PSC) was engaged in developing the language and worked with the team to devise strategies for insertion of this language in future University food purchasing agreements with our food suppliers.

I am in support of this values statement as I believe it reflects our campus values and will help influence the public course toward the important issue of sustainability and social justice in our food supply chain. I want to thank the many people and groups who contributed to this effort, including CUSG, RHA, Procurement Services Center, the Environmental Center, the Department of Athletics, UMC food service and HDS Dining Services. Congratulations to all of you!

Best always,
Philip P. DiStefano, Chancellor

University of Colorado Boulder

The letter of support from Chancellor DiStefano and the Fair Food Statement of Values are significant indicators of the university’s continued support of sustainable food. Although the statement of values has been incorporated into all of the procurement contracts managed by the University of Colorado, there is still substantial progress to be made in this area.

To begin, there is not a universally recognized certification for “Fair Food”. While there are many groups that certify food items as “Fair Trade”, that process is often not associated with many of the food products served in campus dining halls (i.e. tomatoes, protein, dairy, etc.). Additionally, fair food standards are likely to differ among the various industry areas, creating a need for further research and development of “Fair Food” efforts by the university and its distribution partners.

This need for further development can be satisfied through a multitude of channels that include:

- research of standards/certifications (conducted in the CUDS Internship program)
- the identification of “source of origin” for all food items served
- on-site verification of “fair food” standards by university employees and/or sustainable foods coordinator

The University of Colorado Fair Food Statement of Values
Adopted: December, 2011

Fair Food Statement of Values

The University of Colorado Boulder (CU Boulder) seeks to enhance the sustainability experience of our students, faculty, staff and visitors by providing food that is healthy for people and our planet.

We encourage social and environmental justice in purchasing through the humane treatment of all living things; safe and fair working conditions and agricultural practices; and stewardship of ecosystems, while operating in an economically sound manner.

CU Boulder endeavors to support practices and vendors that actively seek strategies to reduce the overall amount of pesticides and carbon footprint, support Colorado economies, and stand alongside our peer institutions and private organizations in promoting a healthier, more sustainable agricultural system without significant financial impact on the University.

CU Boulder encourages its suppliers to support these practices and to share CU Boulder’s values with others in order to have a global effect on sustainability.
• working with distributors to identify appropriate industry standards and methods of verification
• the continued use of recognized “fair trade” certifications

**Decision Framework**
The following table can be utilized when assessing the overall sustainability of a particular food item, as well as when comparing the benefits of multiple products.

### Procurement Decision Chart

<table>
<thead>
<tr>
<th>Geographical Location</th>
<th>Ownership</th>
<th>Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Colorado *</td>
<td>Independent* Producer</td>
</tr>
<tr>
<td>“STARS Local” 250 miles*</td>
<td>Producer Cooperative*</td>
<td>Institution-Verified Humane*, Ecological*</td>
</tr>
<tr>
<td>“USDA Regional” 400 miles</td>
<td>Independent Aggregator</td>
<td>Institutional- Verified Transitional Organic*, Ecological*</td>
</tr>
<tr>
<td>United States/North America</td>
<td>Franchise</td>
<td>Integrated Pest Management</td>
</tr>
<tr>
<td>Low</td>
<td>International</td>
<td>Corporation</td>
</tr>
</tbody>
</table>

* STARS credit eligible

**Single vs. Multiple Ingredients**
The table above is more easily used for single-ingredient products (i.e. apples) for obvious reasons. When it comes to assessing items with multiple ingredients that fall in different categories of the decision chart, it is recommended that the item be considered more as the “whole” versus the “sum of its parts”.

For example, Udi’s Bread Company is a local business (based in Boulder) that makes artesian breads using ingredients sourced from all over the country. This sourcing decision is to ensure the best quality product possible. For this reason, it may not be feasible for the university to encourage the Udi’s team to source its ingredients more locally. Since Udi’s is a local company and has the potential to use organic ingredients, it is still beneficial for Dining Services to...
purchase food products from them. When it comes to assessing the sustainability of a loaf of bread, the product as a “whole” may not be considered “local” under the STARS’ 250-mile definition, but would still satisfy at least two of the four criteria outlined in the *Local Food Matrix* (page 29).

It is also important to note that the USDA requires at least 95% of the ingredients in a processed food item to be organically-certified in order for that item to be considered “organic itself”. The Dining Services organization currently follows the USDA 95% standard.

*Local vs. Organic*

The decision to source local food over organic and visa-versa is a difficult one. Ideally, the outcome of such a decision is to buy the product that is local AND organic. Often times, this latter choice is unavailable – or is only feasible during a certain time of the year. The following table provides one of the potential ways to navigate the complex sourcing decision.

**When to buy...**

<table>
<thead>
<tr>
<th>Local</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The product can be sourced organically</td>
<td></td>
</tr>
<tr>
<td>2. The product is in season (see crop calendar in Appendix G)</td>
<td></td>
</tr>
<tr>
<td>3. The product is a part of the <em>CU Source Local Pilot program</em> (see page 38)</td>
<td></td>
</tr>
<tr>
<td>4. The product is cheaper than options outside of the “local radius”</td>
<td></td>
</tr>
<tr>
<td>5. The product cannot be sourced organically (often due to cost)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The product is on the “Dirty Dozen” list</td>
<td></td>
</tr>
<tr>
<td>2. The product can be sourced locally</td>
<td></td>
</tr>
<tr>
<td>3. The product is within a reasonable price range of the conventionally-grown option</td>
<td></td>
</tr>
</tbody>
</table>

*“Dirty Dozen”*

The Environmental Working Group suggests that purchasing organic crops included on this list can significantly decrease pesticide intake and improve overall human health.\(^{19}\) For products included in the “Dirty Dozen”, organic practices should take precedence over cost considerations and local production.

When presented with a purchasing decision with multiple options, Dining Services’ sourcing specialists should refer to STARS and NACUFS standards for sustainable purchasing. HDS purchasing preferences should be explicitly stated to the distributors under contract with the university and clearly defined in all future bid language to encourage proactive sourcing behaviors on behalf of the University of Colorado.

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Procurement & Sourcing
(Recommended Program)

CU Source Local Pilot Program

Overview
The CU Source Local Pilot Program is intended to build relationships with new local vendors and growers, while also providing the University with the opportunity to test product quality and availability over time.

Benefits
The CU Source Local program will enable Campus Dining Services to directly contract with local food producers (farmers, ranchers, vendors, distributors, etc.) and create an opportunity to:

- Analyze the ability of the provider to meet demand while maintaining high product quality
- Ensure that the provider can meet appropriate GAP / GHP standards and comply with University of Colorado insurance requirements
- Provide opportunities for growing Colorado businesses
- Increase the quantity of local (and organic) food items and meet the long-term goals of the organization
- Build a stronger relationship with current distribution partners

Management
This pilot program can be coordinated by current Campus Dining Services staff with the help of one or two interns. Responsibilities would include:

- Maintaining constant communication with the new provider
- Recruiting and researching new providers
- Coordinating product selection and purchases
- Facilitating the transfer of the new provider to the current distributor under contract (i.e. Sysco, Robinson Dairy, American Produce, etc.)
• Inspecting the facilities of the new provider

**Timeline**
The vendor purchase order would be established on an annual basis with a maximum of two years in the program. After that time, the vendor can be transferred under the operations of the appropriate distributor. This timeline was created to provide both the provider and the University with the opportunity to gauge the feasibility of a certain food item to meet various standards over multiple growing seasons and procurement cycles.

**Funding**
There are very few aspects of this program that require significant financial support. The elements that may require some sort of funding over time are:

- Staff time required to run the program in addition to currently-assigned responsibilities
- Travel to and inspection of vendor facilities
- The cost of the food item itself, which may be high until an appropriate economies-of-scale can be reached with the help of CU and its distribution partners

**Opportunities**
While Campus Dining Services procurement staff already have the ability to establish purchase orders with vendors for products totaling less than $10,000.00 throughout the fiscal year, this pilot program would arguably provide a more transparent and targeted way of doing business. For example, the vendor would have an incentive to assess their capacity to provide certain quantities of food to the university over time, which may result in an increase of production to meet a larger portion of CU’s demand. This program would also allow producers to plan their crop/herd/production schedules to meet the needs of Campus Dining Services if they could be guaranteed sales through the university or its distributor. This type of situation would reduce the need to continually look for new sources of sustainably-grown food items and possibly result in financial savings through staff efficiency.
Strategic Partnerships

Goals
Develop robust relationships with student groups, campus partners, and community organizations to increase awareness and adoption of sustainable food initiatives.

Be an active partner in the development of a strong local economy and resilient food system.

Partnership Opportunities

<table>
<thead>
<tr>
<th>Partners</th>
<th>Contact Information</th>
<th>Partnership Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transition Colorado</td>
<td>Lynette Marie Hanthorn Executive Director</td>
<td>Developing local food hub</td>
</tr>
<tr>
<td></td>
<td>Michael Brownlee Catalyst</td>
<td>SOURCE Local Food Distributor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Localization Partners LLC.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community events &amp; outreach</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Focus group discussions</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.transitioncolorado.org">www.transitioncolorado.org</a></td>
<td>25% Shift Plan</td>
</tr>
<tr>
<td>Boulder County</td>
<td>Jennifer Kemp Local Food Coordinator</td>
<td>Boulder County Cropland Policy</td>
</tr>
<tr>
<td></td>
<td>David Bell Agricultural Resources Manager</td>
<td>Link farmers and ranchers to buyers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide land and resources for local food production</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community events &amp; outreach</td>
</tr>
<tr>
<td>Colorado State University &amp; Agricultural Extension Office</td>
<td>Dr. Dawn Thilmany Agricultural Economics</td>
<td>Economic Impact Assessment Colorado production capacity model</td>
</tr>
<tr>
<td>Preserving Community</td>
<td>Luther Green</td>
<td>Community food preservation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Season extension for local food</td>
</tr>
<tr>
<td>CU Environmental Center</td>
<td><a href="http://www.ecenter.colorado.edu">www.ecenter.colorado.edu</a></td>
<td>Outreach and Education events</td>
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<td>Resource conservation assistance</td>
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<td></td>
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<td>Posters and training materials</td>
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<td></td>
<td></td>
<td>Internship recruiting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STARS Tracking</td>
</tr>
</tbody>
</table>
**Conclusion**

The Campus Dining Services Sustainable Dining Initiative is a reflection of all the success and hard work made possible by students, staff, faculty, and community partners over the years. It is an effort to link the diverse menu of sustainability projects to a common cause and to provide a unified vision for moving forward. In the opening of this report, Chef Kerry and the authors highlighted the very real circumstances of the current food system and many of the impacts that they carry for students, the university, and the local community. As a recognized leader in sustainable food, the University of Colorado and the Campus Dining Services team have a responsibility to hold themselves to high standards and continually strive for innovative solutions to challenges presented in all areas of the food system.

As the Campus Dining Services organization continues to push the boundaries of social and environmental sustainability, a balance will need to be achieved between idealism and reality. The current food system did not develop overnight and very intentional actions were required to create the present paradigm within which CDS operates. The value chains that converge in HDS dining centers can be powerful. Collaboration and creativity will be necessary, for nothing as important as providing healthy, sustainable food to thousands of students and staff can (or should) be accomplished alone.

The initiatives being pursued as part of the Campus Dining Services Sustainable Dining Initiative are ultimately connected to efforts occurring on an international scale. In fact, the development of stronger regional food systems and the demand for safe and healthy food are both part of one of the most rapidly blossoming and influential movements of our time – the global food revolution. At their most basic level, each is an opportunity for a marriage of mutually invested and interdependent actors. Public, private, and non-profit actors alike have a stake in creating a sustainable future in which everyone has access to plentiful, healthy, sustainable, and locally-produced food.
Through the continuation of sustainable food projects, the Campus Dining Services organization will play a key role in redefining the value of food in our community. Food cannot be seen only as a commodity to be sourced at the lowest price, but should instead be appreciated for its immense power to build community, grow local economies, support social justice, and cultivate a healthier planet. Campus Dining Services has embarked on a significant journey and is joined by countless individuals, entrepreneurs, peer-institutions and communities also striving to achieve a greater connection to food and actively engage with the current system to determine where we will steer the perpetual project we call feeding ourselves.

Appendix A: Letter from SRS Consulting

In May of 2011, students at the University of Colorado joined campus faculty and staff, as well as numerous community groups, to stand up for the rights of farmworkers around the world. This unique assembly of diverse stakeholders demanded that the University create a policy that promotes social justice in all of its food sourcing practices. Just a few months later, the campus formally adopted the CU Fair Food Statement of Values that directs all campus food providers to verify the humane treatment of the laborers involved throughout the supply chain – from farm to fork. In doing so, CU drew a clear line between social justice and the food on our plates.

The Fair Food Statement has already begun to spread to other campuses and was recently highlighted in a sustainable food presentation at the National Association of College and University Food Services (NACUFS). The now-blossoming use of fair food language among campus dining service organizations is just one example of the impact that individual buyers (often influenced by small groups of committed individuals) can have on the larger food system - especially when those efforts morph into collaborative partnerships among peer institutions, non-governmental organizations, the private sector, and various non-profit groups.

In February, 2012, Strategic Resource Solutions (SRS) was contacted by members of the University of Colorado Dining Services organization to facilitate the development of a comprehensive sustainability plan. The department has already been recognized as a national leader in sustainable dining, but seemed to lack an overarching framework that provided the guiding vision and tools required to advance towards some of their more long-term goals. As such, our firm was brought onboard to help synthesize current projects into specific focus areas, develop procurement priorities and definitions related to sustainable food, and produce various tracking models that enable short and long-term project assessment. Additionally, SRS was tasked with creating a framework for future initiatives that included tactics to increase
sustainability efforts within the organization, while also providing a basic assessment of the economic impacts resulting from local procurement.

In order to accomplish the project goals described above, the SRS team interviewed numerous Campus Dining Services staff, campus sustainability coordinators, food industry representatives, and various community groups to fully understand the diverse perspectives surrounding sustainable dining service programs and the food system as a whole. The results from these interactions were then combined with independent research and published resources to produce the *CU Sustainable Dining Initiative* report.

The document is intended to serve as a guiding framework for the Campus Dining Services organization as they pursue their strong sustainability goals and has been crafted in way that promotes flexibility and continuous improvement over time. Moreover, the strategic plan provides numerous opportunities for developing important partnerships with key stakeholders and has made several programmatic recommendations that depend on constant, open dialogue in order to be successful.

The specific recommendations included in the *CU Sustainable Dining Initiative* report can be found in the document itself and will not be discussed here. However, it is important to highlight a few very important trends that surfaced throughout the project itself, as they will continue to influence the overall success of the CU plan over time.

Defining what it means for a food item to be “local” is a difficult task and should not be oversimplified. Often times the distance from source-to-kitchen of a particular item, such as milk, is calculated from the last point of handling (i.e. the aggregator) and not necessarily the specific dairies involved in producing the milk. In this example, a dairy aggregator that has been asked to provide more organic milk options may be forced to source from individual producers further away, but all of that milk would be calculated as “local” since it came from the aggregator – even if the smaller producers were outside of the university’s definition of local. Multiple-ingredient foods can often present even more of a challenge in this area. To combat this dilemma, our team recommended using different levels and classifications of local. Instead of just calculating miles traveled, a particular food item can also be appreciated for qualities such as: “locally grown, raised, or caught”; “locally produced”; “locally processed”; and “locally owned.” By recognizing the various attributes of a single ingredient, the Campus Dining Services team can effectively work with its distribution partners to source items that have the greatest community impact.

Seasonal access to various produce items is one of the most significant limiting factors to increasing the total amount of local food served in the dining facilities. However, there are a number of producers that are able to employ various methods to extend growing seasons and
be able to meet demand. Additionally, significant quantities of value-added goods, protein items, and dairy products can all be found within Colorado and should play an integral role in the university’s efforts to increase its use of local items.

In short, the University of Colorado can play a significant role in the development of a robust local food system through its direct support of producers and growers in the area. In order to achieve this goal, SRS has recommended that the Campus Dining Services team partner with its current distributors to source from as many Colorado and regionally-based companies as possible. In addition to working directly with the larger food system, it is also important that the university leverage its buying power to directly support start-up food companies, as well as source from producers that share the sustainability values held by the school and the Boulder community. To accomplish this second goal, a local producer pilot program should be created to help incubate these types of innovative sustainable sourcing relationships. The program is intended to directly engage new producers over a two year period and then help that company transition into the primary sourcing operation led by the university’s contracted distributors. By helping small growers and manufacturers experience the demands of a larger buyer (i.e. quality, quantity, timing of orders, etc.) and empower them to make important changes along the way, the institution can play a crucial role in the development of a robust food system and healthy local economy.

Tracking is another keystone to the success of the Sustainable Dining Initiative. The ability to assess multiple attributes of a specific product, as well as identify opportunities for improvement throughout the various goal areas is crucial to a well-functioning program. From continuous waste audits and utility metering, to a list of food qualities (i.e. local, organic, fair trade, etc.) and consumer surveys, long term success hinges on the availability and analysis of data. To help meet this important need, SRS has recommended a strong partnership with campus groups and distributors to provide a steady stream of information. Moreover, a sustainable food internship program is needed to help generate surveys, analyze data, and create actionable recommendations for the department. This type of system would also provide educational opportunities and practical experience for students. A sustainable foods/operations coordinator position is also recommended to enhance project viability and efficiency.

Although CU does not have overly significant buying power as a single campus within the Colorado (or national) food system (based on total dollars spent), purchasing practices that increase quantities of local, fair trade, and organic food products are still important. Such initiatives will provide healthier food to students and community members, as well as reduce long-term risks associated with routine exposure to the pesticides and antibiotics used in the production of that food. In doing so, Campus Dining Services and the University of Colorado will also empower growth among various Colorado businesses. Ultimately, through proactive
execution of sustainability programs, HDS can continue to act as a leader in the institutional dining community and create demand for products that require a more long-term shift in infrastructure, including the creation of local food hubs.

Moving Forward
As the Campus Dining Services team continues to work towards its aggressive sustainability goals under the new Sustainable Dining Initiative, there are a number of significant opportunities to be addressed that can help build a more sustainable regional food system. To begin, the university should consider increasing the use of robust and flexible seasonal menus. These meals would provide excellent educational opportunities for customers, highlight the diversity of produce grown in Colorado, and reduce the impacts of seasonality on local food goals.

The university also has a unique opportunity to facilitate the creation of a Colorado Higher Education Sustainable Food Taskforce (or Public Food Buyers Task Force) that can conduct research, promote certain policies within the member organizations and the State, as well as increase consumer awareness of global food issues and options available to make a difference. Finally, CU dining service groups should consider partnering with Boulder County, the City of Boulder, and food-related community groups to support the creation of a local food hub and advocate for the formation of an institutional producer cooperative in Colorado.

Next Steps
As the Campus Dining Services team begins to work on the various sustainability projects under the new Sustainable Dining Initiative, the department should consider focusing on a few immediate opportunities that will help promote efficiencies in project coordination and the long-term success of its sustainability goals. These project opportunities are listed below:

- Develop a standard tracking & assessment framework for current food sustainability on campus. This effort will require the creation of a reporting and tracking model with Sysco and the adoption of compatible tracking and reporting protocols for all distributors.
- Work with campus partners to streamline the collection and analysis of waste and utility data used in the dining facilities.
- Using input from this report, Campus Dining Services should develop comprehensive sustainable food standards and incorporate sourcing definitions and priorities into all bids and contracts.
- Begin working with distributors to create robust and flexible seasonal menus that leverage Colorado and regional goods.
- Develop an internship program and potential part-time position that would increase opportunities for student and faculty involvement, while streamlining current staff time already committed to HDS sustainability initiatives.
In closing, the task of creating a forward-reaching and pragmatic sustainability framework has certainly been a challenging and rewarding experience for the SRS team and Campus Dining Services partners. The Sustainable Dining Initiative is intended to lend support to CDS staff as they confront difficult choices and seemingly overwhelming challenges in their effort to build a more sustainable food system. It has certainly been an honor to work so closely with all of the knowledgeable and hard-working people in Dining Services, the University of Colorado, and the local community. Hopefully much good will come from this report and that its readers will feel more empowered to step out of their comfort zone and deeper into the food revolution.

**Appendix B: Sourcing Local: Economic Impact Assessment**

**Overview**

This preliminary economic impact assessment will focus on potential increases in revenue for Colorado food producers directly corresponding to growth in demand for local food items on behalf of the CU Dining Services organization (CUDS). The report will forecast potential increases in local expenditures and highlight specific Colorado commodities (Apples, Beef, Carrots, Onions and Potatoes) in order to demonstrate specific impacts. This document is not intended to be an exhaustive economic impact analysis, nor should the numbers be considered authoritative. The information herein is intended to be the start of a conversation and investigation of the CU food system and the university’s relationship to the growers and producers around the State.

One of the significant shortcomings of the following discussion is the lack of economic models that can demonstrate direct, indirect and induced effects of university purchases. We believe that HDS should commission a more thorough economic impact analysis and enlist the help of Dawn Thilmany and Allie Gunter at Colorado State University, based on the merit of their work and the embedded focus on Colorado agriculture. The use of IMPLAN to create relatively holistic economic models for the effects of institutional buying practices could be essential to CU’s broad and HDS specific long-term sustainability goals.

Furthermore, we believe that food is often left out of discussions to which it is pertinent. For example, the recently released Economic Impact Study conducted by the Leeds School of Business neglected to include food in any meaningful way, even though the Dining Services organization alone spends over $7 million-dollars providing food to students and staff. Importantly, we are confident that a study that uses CU-customized IMPLAN models to extrapolate impacts and value chain development over time, will be instructive in the continued evolution of HDS purchasing protocols and priorities and can effectively demonstrate the university’s support of Colorado farmers and ranchers.
Estimating the impact that Campus Dining Services purchasing has on the Colorado economy has been both challenging and rewarding. We welcome suggestions for improvement and invite the collaboration of interested individuals. This section of the report in particular should be considered a jumping-off point and we wholeheartedly support its evolution and further development.

Current Local Expenditures
In FY 2011, HDS purchased $7,110,721.77 of food through various Colorado distributors. Based on data presented to SRS and upon extensive analysis, $2,169,955.11 or 30.52% of the 2011 budget was invested in the Colorado food system. Ostensibly, this money supported local businesses, farmers and ranchers and provided low-carbon food to students and staff. The biggest concern with these figures is that “local” is defined as grown, produced, manufactured OR processed in the state of Colorado.

The table below provides “rough” estimates for the quantity of local products supplied by four of the largest distributors contracted with Campus Dining Services. The chart demonstrates the significant economic impact that the university and its distributors can have on the local food economy and highlights potential room for improvement. It is important to note that the numbers used in this table are estimates and that there is not a common definition of local. Most items defined as local came from producers within 250 miles, but many of these companies are considered aggregators that likely source their inputs from a larger geographic area. It is possible that the total percentage of “local” products highlighted in the table below would decrease as a more exact definition and verification of local is employed.

<table>
<thead>
<tr>
<th>Distributor</th>
<th>Total Food Costs</th>
<th>*Estimated Local Food Expenditures</th>
<th>*Estimated Local Cost %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sysco</td>
<td>$5,404,614</td>
<td>$1,761,872</td>
<td>32.60</td>
</tr>
<tr>
<td>American Produce</td>
<td>$841,166</td>
<td>$70,964</td>
<td>8.44</td>
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<tr>
<td>Robinson Dairy</td>
<td>$469,349</td>
<td>$316,150</td>
<td>67.36</td>
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<tr>
<td>UNFI/AO</td>
<td>$395,591</td>
<td>$20,967</td>
<td>5.30</td>
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<tr>
<td><strong>Totals</strong></td>
<td><strong>$7,110,720</strong></td>
<td><strong>$2,169,953</strong></td>
<td><strong>30.52</strong></td>
</tr>
</tbody>
</table>

*NOTE: This table utilizes multiple definitions of local employed by the various distributors, including grown, produced, manufactured or processed. All values are estimated values using data supplied by each distributor.*
Importantly, we cannot assume the story ends with the numbers and percentages listed above. Each dollar spent on the local economy, including non-local expenditures made through our vendors has demonstrable effects within the local economy. This multiplier effect can be further investigated through a more in-depth analysis.

**Future Local Expenditure Estimates**

Current HDS food expenditures total upwards of $10 million-dollars, translating into significant opportunities for well-positioned local growers, producers, and processors. Campus Dining Services currently receives purchase orders from and thereby invests in the fiscal solvency of over 15 local producers and 25 distributors from around the state. Their locations can be seen within the context of the 250 mile circle in the map below.

![Map of Local Businesses](image)

### Potential Economic Impacts Generated Through Local Purchasing by CU Dining Services

<table>
<thead>
<tr>
<th>HDS Food Expenditures with 4 largest vendors</th>
<th>15%</th>
<th>25%</th>
<th>50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>$7,110,721.77</td>
<td>$1,066,608</td>
<td>$1,777,680</td>
<td>$3,555,361</td>
</tr>
</tbody>
</table>

To analyze possible future contributions to the local economy through expenditures made by the Campus Dining Services organization, our team looked at current total spending and created estimates of potential dollar values at 15% (close to baseline), 25% (short-term goal),
and 50% (medium-term goal). First, “local” food needs to be defined in such a way that it makes sense to all parties. There are several possible definitions out there and we all need to be in agreement. Even with the current definition of grown, produced manufactured or processed, Campus Dining Services is investing a significant amount into the local economy. Of course, budgets change on an annual basis, so these projections are only to be used to demonstrate the potential level of impact of Campus Dining Services purchases.

**Case Study Overview**

CDS sources thousands of different individual products each year and in consideration of the enormous task of evaluating each and every product, we selected five products that are representative of various food categories overall. Each product is grown in Colorado and consistently sourced by the Campus Dining Services organization. These products include: one fruit (apples), one protein (beef), and three vegetables (carrots, onions, and potatoes). Apples are versatile and desirable within dining services goals to provide fresh fruit. Beef is widely used as a protein source in the dining halls and is a high demand product. Carrots, onion and potatoes are used both fresh and processed and possess high storage capacity. In total, Dining Services spent $374,363.90 on these five products in 2011, accounting for roughly 5.25% of total expenses. The department spent $24,067.91 acquiring local items in these five categories (6.43%). If 50% of these products were sourced locally, $175,148.50 could be directly invested Colorado economy. In the event of 100% local sourcing, CDS could be investing an additional $350,296.99 in local growers, producers and processors.

Where possible, we have included estimated yields per acre for conventional and organic production to demonstrate the potential acreage requirements for specific products. Conventional yields per acre for Colorado are most easily accessible, whereas organic yields are more difficult to assess for individual crops in specific locations. In the context of a recent meta-analysis of comparative crop yields published in the journal *Nature*, organic yields were found to average 75% of conventional yields, we use this figure to calculate potential organic yields in this report.²⁰

**Specific Product Purchases Made by CDS in FY 2011**

<table>
<thead>
<tr>
<th>Product</th>
<th>Total HDS Cost</th>
<th>Current Local Purchases</th>
<th>50% Local Purchase Increase</th>
<th>Possible Local Purchase Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td>$44,740.17</td>
<td>$5,769.96</td>
<td>$19,485.11</td>
<td>$38,970.21</td>
</tr>
</tbody>
</table>

Apples
Colorado grows a significant amount of apples every year, yet only ranks 25th in US apple production. In 2009, 16 million pounds of this fruit were harvested on roughly 1,400 acres.\textsuperscript{21} Currently, CDS sources local apples in the form of organic applesauce from Leroux Creek Foods in Hotchkiss, CO. Campus Dining Services does not have access to an enormous local apple supply, however considering total fresh apple use for 2011 was 43,720 lbs there is definitely a possibility to source more Colorado apples. If just 50% of HDS purchases were made in local markets, $19,485.11 could be invested in Colorado apple growers and processors. If 100% of HDS purchases leverage locally grown apples, an additional $38,970.21 could potentially be transferred to growers and processors.

In 2009, average conventional yields per bearing acre in Colorado were 11,400 pounds, therefore we will estimate organic yields per bearing acre at roughly 8,550 pounds.\textsuperscript{22} In consideration of apples “dirty dozen” classification, HDS should prioritize organic production and could safely assume that six apple-bearing acres could hypothetically supply most, if not all fresh apple demand. Seasonality of the produce also plays an important role in this sourcing decision.

Beef
In 2009, Colorado ranked 7th in the country for beef cows, with the statewide herd numbering around 714,000 head. In 2011, Dining services spent $116,394.63 on beef products, none of which was explicitly locally sourced. However, HDS has access to all Colorado produced beef and parts of Nebraska, Kansas and Wyoming which are included in the 250 mile radius. An additional challenge when considering increasing beef purchases is the availability of natural, organic and “never-ever” beef in the area. Hypothetically, if HDS purchased even 50% of their

\begin{tabular}{|c|c|c|c|c|}
\hline
Fruit & Cost & Amount & Cost & Total Cost \\
\hline
Beef & $116,394.63 & $0.00 & $58,197.32 & $116,394.63 \\
Carrots & $31,425.13 & $4,843.65 & $13,290.74 & $26,581.48 \\
Onions & $64,043.25 & $6,483.65 & $28,779.80 & $57,559.60 \\
Potatoes & $117,761.72 & $6,970.65 & $55,395.54 & $110,791.07 \\
Total & $374,364.90 & $24,067.91 & $175,148.50 & $350,296.99 \\
\hline
\end{tabular}


beef locally, over $58,000 could be invested in beef products that supported sustainable ranching in Colorado, Nebraska, Kansas or Wyoming. Importantly, the price differentials between conventionally sourced beef and natural, organic, or “never-ever” beef are significant and therefore present a challenge for HDS because equal volume acquisition is difficult under current budget constraints. However, the long-term impacts of local investment in beef production should be investigated more fully.

Carrots
In 2004, the estimated Colorado carrot harvest was 107.1 million pounds from roughly 1700 acres. Unfortunately, more recent yield data was not readily accessible. However, considering CDS purchased just under 32,000 pounds of fresh market and processing carrots in 2011, it seems as though historical Colorado carrot production could easily absorb all HDS demand. One challenge for estimating potential economic impact of carrot purchases is that much of the Colorado carrot harvest is designated as “fresh market” rather than “processing”. However, as the current relationship with Hungenberg Produce of Greeley demonstrates, local processing of carrots is entirely possible. In 2011, $31,425 was spent on fresh market and processed carrots, with $4,843.65 dedicated to local purchases. If HDS sought to purchase 50% of carrots from the local market, $13,290 could be invested in Colorado carrot growers.

Based on 2004 USDA estimates, average conventional yields per acre for Colorado carrot growers was 63,000 pounds. Therefore we will assume that organic yields per acre could equal 47,250 pounds. In either scenario, an appropriately managed acre of land could supply the entirety of HDS yearly demand.

Onions
In 2009, the estimated Colorado harvest of dry bulb, storage onions was 3,015,000 pounds, which ranked 6th among US states. In 2011, CU HDS spent $64,043.25 purchasing 76,385 pounds of dry bulb, storage and processing onions and 10,806 green onions. HDS could easily source 50% of onion demands from Colorado, which could increase investment in local onion growers and processors by $28,779.80. Additionally, production dynamics of green onions are such that a local grower could confidently expect to supply HDS with adequate volumes on very low acreages for much of the year. If HDS purchased onions 100% locally, an additional $57,559.60 could be invested in Colorado onion growers and processors.

Average yields in Colorado for conventionally produced dry bulb onions were estimated to equal roughly 40,000 lbs per acre. Organic yields can then be estimated at roughly 30,000 pounds per acre, which indicates that 3 acres could produce more than enough onions to satisfy not only fresh market onion demand, but processing supply as well.

**Potatoes**

In 2009, estimated potato production for Colorado totaled 23,640,000 pounds, ranked 4th among US potato producers. During 2011 nearly 160,000 lbs of potatoes were prepared in dining halls across campus. HDS used roughly 50,000 lbs of fresh potatoes, while the total weight of processed potatoes was just under 110,000 lbs. If Campus Dining Services chose to purchase 50% of potatoes locally, $55,395.54 could be invested in Colorado potato growers. If CDS increased local purchases of potatoes to 100% of demand, which could be accessed within existing supply, $117,671.72 could be invested in Colorado potato growers. In the context of this report, these figures may be misleading since potatoes are a member of the “dirty dozen” – leading to a prioritization of organic production over local supply. Yet, the average yield per acre for potatoes in Colorado between 2009 and 2011 was roughly 39,000 pounds. Estimated organic yield per acre would equal 29,250 pounds and as such, all HDS potato demand could hypothetically be grown organically on 5.5 acres.

**Conclusion**

There are significant levels of local food production that exists in the State of Colorado and Campus Dining Services can access this food with the right partnerships and institutional willpower. If CDS can leverage food expenditures in such a way as to incentivize increases in local food production and capacity, the organization will contribute to the development of a more vigorous regional food system. Additionally, Campus Dining Services’ efforts will invariably be observed by other institutions in the State and around the Nation, leading to greater benefits that cannot be fully projected at this time. Based on our research, while institutions cannot reshape the food system unilaterally, end users in value chains such as

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CUDS, have the ability to collaborate and co-create new and better systems with other members of the value chain. Moreover, if Campus Dining Services purports to be invested in the Colorado food system and the greater regional food system, it is the responsibility of CDS to leverage its position in the value chain to promote social and environmental sustainability.

Appendix C: “Natural Food” Vendor Policy

Defining “Natural” Foods

Overview
As the sustainable food movement continues to grow and consumer demand increases for foods produced without the use of growth hormones, antibiotics, dyes, and preservatives, the food industry has naturally responded. Today, the use of the marketing brand “Natural” and “All-Natural” has become common place throughout grocery stores, restaurants, suppliers, and producers. Unfortunately, use of this term is not regulated by federal agencies such as the Food and Drug Administration or the US Department of Agriculture, so “Natural” can mean pretty much anything.

This short brief provides a list of common uses for the term “Natural” and offers a series of basic recommendations for how the term can be beneficially employed by the Dining Services team at the University of Colorado. This document draws from the technical report created in 2011 by Dr. Lisa Barlow and her Sustainable Consulting class at the University of Colorado, entitled, “Defining Natural Foods for the University of Colorado’s Campus Dining Services”. The report highlights the intricacies of “natural” food production and provides a robust analysis of specific actions that the Campus Dining Services staff can take to achieve 25% truly “Natural” food by 2015.

While 25% is a worthwhile goal, this report recommends that the University of Colorado pursue an overall goal to provide “Natural” food 100-percent of the time. The following sections of this brief include specific language and decision-making hierarchies that can be provided to distribution partners in the pursuit of the larger 100% goal. Many of the recommendations have been inspired by, or are directly cited from, the 2011 Barlow report.
Who Uses “Natural”
As consumers, we often hear of “All-Natural Beef” and “Natural flavorings”, of the cage-free hens that are fed a “Natural grain diet”, and of the local farmer that cannot afford the USDA Organic certification and has elected to sell her “naturally-grown” tomatoes at the farmers market. In 2008, the national Corn Refiners Association filed a motion with the U.S. Food and Drug Administration for the right to claim that products using high-fructose corn syrup could be considered “natural”\(^ {27}\).

This wide range of producers and the limitless associations that can be made with the term “natural” result in a need for the particular consumer to define the term for themselves and pass that definition onto their suppliers. This process of selecting the specific traits identified as the most important elements of “natural production” will allow the organization to more easily assess the percentage of ingredients tied to that definition, as well as reduce the need to research each product and respective manufacturer.

Proposed “Natural Food Policy”

It is recommended that the following statement be inserted into all current and future procurement contracts and bids. In doing so, the Campus Dining Services organization will clearly establish its ultimate goal for the quality of food it uses and thereby provide a guiding framework for working with its distribution partners.

*The University of Colorado Campus Dining Services organization hereby defines the term “Natural” and “Naturally-raised” as a food item that does not contain: artificial dyes, flavorings, and preservatives; high-fructose corn syrup; genetically-modified organisms (GMOs); and growth hormones and antibiotics. In order to protect the health of our customers, our planet, and our community, the Campus Dining Service team is committed to using as much “Natural” and “Naturally-raised” ingredients as possible.*

The following table provides a framework for making procurement decisions related to processed food. This type of structure can also be passed on to Campus Dining Services’ food distribution partners to help facilitate the continuous increase of the “natural” food stock served at the University of Colorado.

This table was adapted from the 2011 report, “Defining Natural Foods for the University of Colorado at Boulder’s Dining Services”.

### Three Tier Natural System

<table>
<thead>
<tr>
<th>#1. No Artificial Dyes or Artificial Flavorings</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2. No High-Fructose Corn Syrup or Artificial Preservatives</td>
</tr>
<tr>
<td>#3. No Genetically-Modified Organisms (GMOs)</td>
</tr>
</tbody>
</table>

**Tracking and Assessing “Natural”**

As previously mentioned, the act of defining a clear set of principles under the heading “Natural” will allow the Campus Dining Services team to track the number of ingredients that meet that definition over time. The organization can choose to record food items that meet all of the major principles, or specific principles based on available data or interest.

**Appendix D: Proposed STARS 2.0 Food Credit Tracking Form**

<table>
<thead>
<tr>
<th>Local &amp; Sustainable Food Project</th>
<th>Sustainable Food</th>
<th>Fair Trade Campus</th>
<th>% (Local) Organic, Fair Trade, Community-based Labor</th>
<th>Sustainable Food Criteria</th>
<th>Food &amp; Beverage Purchasing STARS Category</th>
<th>Available Credits</th>
<th>Credits Earned</th>
<th>Current Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>0.25</td>
<td>(6.0)</td>
<td>(6.0)</td>
<td>(6.0)</td>
<td>6.0</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Culinary Herb Garden (demonstration project) | Fair Food Statement of Values | Fair Food Statement of Values | % (non-local) 3rd-party | Total (%) = Total ($) = Calculations based on total percent of purchase amount ($) for each sub-category | Real Food Challenge Signatory Fair Food Statement |

---

<table>
<thead>
<tr>
<th>Project Opportunities</th>
<th>Ongoing</th>
<th>Credits Earned</th>
<th>Available Credits</th>
<th>Sustainability Total STARS</th>
<th>Feasibility</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-campus farm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus CSA program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm-to-campus program</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus market</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CU Source Local Program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distributor Tracking</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Increase 3rd-party verifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase local and organic food</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased budget for local/organic/3rd-party items</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased sourcing of seasonal menu (focused on locally produced)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form &quot;closed loop&quot; systems</td>
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<td></td>
</tr>
<tr>
<td>Reduce carbon footprint of food by increasing proportion of plant-based proteins</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce carbon footprint of food by offering vegan options</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-consumer compostitor/recovery program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food donation program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reusable service ware</td>
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<td>0.0</td>
<td>0.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reuselable service ware for &quot;dine-in&quot; meals</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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<td></td>
</tr>
<tr>
<td>Food container waste reduction &amp; elimination</td>
<td>Complete</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
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<td></td>
</tr>
<tr>
<td>Food container waste reduction &amp; elimination (0.25 each)</td>
<td>Complete</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
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<td></td>
</tr>
<tr>
<td>Food waste recovery</td>
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<td>1.0</td>
<td>1.0</td>
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<td></td>
</tr>
<tr>
<td>Food waste recovery (0.25 each)</td>
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<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
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<td></td>
</tr>
<tr>
<td>Pre-consumer compostitor/recovery program</td>
<td>Complete</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-consumer compostitor/recovery program</td>
<td>Complete</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste oil collection/recycling</td>
<td>Complete</td>
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<td>0.5</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste oil collection/recycling (0.25 each)</td>
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<td>0.5</td>
<td>0.5</td>
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<td></td>
</tr>
<tr>
<td>Resource Recovery</td>
<td>Complete</td>
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<td>0.5</td>
<td>0.5</td>
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<td></td>
</tr>
<tr>
<td>Resource Recovery (0.25 each)</td>
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<td>0.5</td>
<td>0.5</td>
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<td></td>
</tr>
<tr>
<td>Vegan entrees &amp; sides</td>
<td>Complete</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegan entrees &amp; sides (0.5 each)</td>
<td>Complete</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegan &amp; vegetarian options</td>
<td>Complete</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegan &amp; vegetarian options (0.5 each)</td>
<td>Complete</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Projects, credits earned</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Currently available credits</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Waste oil – fuel for fleet</td>
<td>Reusable/3rd-party compostable to-go containers in ALL grab-n-go dining</td>
<td>Pre-consumer food waste audit</td>
<td>Policy/practice to increase vegetarian options in dining halls</td>
<td>Increase availability of entrees and sides at meals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------</td>
<td>-----------------------------</td>
<td>---------------------------</td>
<td>----------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CU garden/greenhouse food</td>
<td>Post-consumer food waste audit</td>
<td>CU garden/greenhouse food waste audit</td>
<td>CU garden/greenhouse food waste audit</td>
<td>CU garden/greenhouse food waste audit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Appendix E: Review of Procurement Initiatives by Corporate Food Service Organizations**

**Practices and Priorities:**

**A Review of Sustainable Practices in the Commercial Food Industry**

**Overview**

This document provides a basic review of the practices and priorities put in place by a select number of commercial food organizations to improve the sustainability of their operations. This report is not intended to provide a generalized assessment for the overall food system in the United States and recommends that further research be conducted before any formal strategies are derived from the data listed below.

This research was conducted as part of a larger sustainability project for the University of Colorado Boulder and is focused primarily on sourcing decisions made by the organizations under review.

The case studies in this report were selected to highlight the diverse range of groups within the food industry and include: Boulder Valley School District, Alfalfa’s Market, and Sysco-Denver. Each company has been recognized for various levels of sustainable food initiatives and
provides a solid understanding of many challenges and opportunities unique to their area of specialization in the food system. It is also important to note that researchers involved with this project also sought participation from Whole Foods and Lucky’s Market, but were unable to successfully interview members involved with these organizations.

Boulder Valley School District

Boulder Valley School District provides roughly 15,000 per day. The Nutrition Services Director, Ann Cooper, is well-known for her dedication to improving the healthy and nutritious qualities of such food and has transformed the district’s dining service program to insure that students are fed well-balanced and made-from-scratch meals every school day.

In order to provide such quality food, BVSD Food Services purchases healthy ingredients that fit their set standards. This effort includes sourcing local and organic products when available and financially viable. Some of the products sourced locally include: dairy products from Organic Valley Dairy, as well as prepared foods (pizza, burritos, and bread) that are all made by local Colorado companies. Occasionally BVSD will purchase produce from local farms when such products are seasonally available.

While the staff at BVSD Food Services try their best to provide organic and local products to the students, their main focus is providing nutritious meal plans. Food sustainability is an important element to their food program, but is not the primary goal mainly due to budget constraints.

Key Sustainability Practices

☑️ Provide more vegetarian options and fresh produce in the cafeterias
✓ Source produce from local farms when seasonally available (using the primary distributor and sourcing direct)
✓ Work with primary distributor to source prepared foods from local companies in Colorado
✓ Provide organic milk free of growth hormones and antibiotics

Key Challenges
✓ Seasonality of produce
✓ Limited budget

Alfalfa’s Market
Alfalfa’s Market, located in Boulder, Colorado, is a local grocery store that strives to provide the community with fresh, healthy, organic food options. The company is dedicated to researching every product sold in its store to be sure that it meets a series of stringent sustainable food standards. These criteria include:

- Organic products from local/regional sources
- Organic products from non-local/regional sources
- GMO-free
- Produce is grown using sustainable methods
- “Natural” and “never-ever” meats (no growth hormones, antibiotics, etc.)
- 3rd-party certified seafood
Alfalfa’s continues to develop and foster strong partnerships with local producers in Colorado to provide a year-round supply of “sustainable food” for its customers. These relationships allow the company to sell certain products (i.e. produce) that may not be certified organic but still be confident that they were produced using sustainable methods. This type of effort is especially important for smaller local farms that may not be able to afford the USDA Organic label, but operate under the same standards.

In addition to providing these sustainable food options, Alfalfa’s uses various labeling strategies to provide information to the customer as they make their own decisions about which food to buy. For example, the seafood department sells both farm-raised and wild-caught species of fish – a controversial subject within the sustainability community. Instead of taking a specific side on the issue and only selling one type of fish (i.e. only wild-caught), the store allows customers to choose which type of practice they support more. This labeling strategy also encourages the consumer to ask questions and research the issue for themselves in order to be confident in their choice.

Key Sustainability Practices
- Sources as much produce local farms as possible
- Researches all products to ensure that they meet their “sustainable food” standards
- Focuses on non-GMO foods
- Develops strong relationships with growers and producers
- Supplies “never-ever” protein that is free of growth hormones and antibiotics
- Uses labels to differentiate between products and allow customers to make their own decisions – as well as highlight the fact that there is a choice to be made in the first place
Key Challenges

✓ Wide variety of customer demands
✓ Ability to verify the existence of GMOs in their products
✓ Price points

Sysco-Denver

As one of the largest food distributors in the world, the Sysco organization has tremendous opportunities to help customers and producers achieve their sustainability goals. According to the company’s 2011 sustainability report, “We [Sysco] know that when we do what is right to serve our customers, associates, investors and society, we create a business that is sustainable economically, environmentally, and socially. And we help raise the bar for our suppliers and other industry members to do the same.”

The company is surely holding true to this claim for increased levels of sustainability throughout its supply chain. Some of the company’s initiatives include:

• Becoming a founding member of the Sustainable Food Lab
• Working with farmers & ranchers to reduce their use of pesticides and fertilizers through their Sustainable Agriculture/Integrated Pest Management program
• Helping farmers achieve Good Agricultural Practices (GAP) Certification and afford the liability insurance necessary to sell to certain buyers
• Implementing a transportation management program that improves the efficiency of its fleet and shipping protocols – significantly reducing the number of truck on the road.
• Utilizing a social responsibility assessment as part of its supplier approval process
• Working with customers and producers to increase the availability of local food
• Participating in the Produce Traceability Initiative project

Sysco has made the business case for sustainable food and will likely be a key partner for the University of Colorado as it pursues its own sustainability objectives.

Appendix F: Procurement Product Attribute Tracking Form

The tracking form highlighted below is an alteration of the current form used by the CU Dining Services organization and its distributors. This form demonstrates the various product attributes that can be tracked and monitored throughout the year. It is recommended that CUDS and its distribution partners adopt this type of model in order to streamline data collection and analysis of sustainable food goals. In doing so, the department will be able to more effectively track the success of various procurement initiatives and be able to gauge the best “bang-for-the-buck” sourcing options. The data below is only an example and does not accurately portray the specific product attributes.
<table>
<thead>
<tr>
<th>IPM / other environmental stewardship</th>
<th>Fair Trade (Certified)</th>
<th>Fair Food (Verified)</th>
<th>Locally-Raised/grown/caught</th>
<th>Locally-Processed</th>
<th>Ownership</th>
<th>Other Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Farmer-Cooperative</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Farmer-Cooperative</td>
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<td>None</td>
</tr>
<tr>
<td>No</td>
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<td>No</td>
<td>Farmer-Cooperative</td>
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</tr>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Independent</td>
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<td>Yes</td>
<td>Franchise</td>
<td>Franchise</td>
<td>No RGBH, Antibiotics, Humanely-raised</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Franchise</td>
<td>Franchise</td>
<td>No RGBH, Antibiotics, Humanely-raised</td>
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<tr>
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<td>Yes</td>
<td>Farmer-cooperative</td>
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</table>
## Appendix G: Colorado Crop Calendar

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<thead>
<tr>
<th>Month</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruits</td>
<td>apricots</td>
<td>apples (storage to June 1)</td>
<td>cherries</td>
<td>onions (to March 15, storage included)</td>
<td>peaches</td>
<td>pears</td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td>asparagus</td>
<td>beets</td>
<td>bell peppers</td>
<td>broccoli</td>
<td>cabbage</td>
<td>cantaloupe</td>
<td>carrots</td>
</tr>
</tbody>
</table>

Provided by the Colorado Department of Agriculture, (303) 239-4114. Dates are approximate.