

CHAMPIONS OF GAME DAY FOOD

PROFESSIONAL SPORTS VENUES HELP ADVANCE MORE SUSTAINABLE FOOD SYSTEMS



FOREWORD

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INTRODUCTION

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Learn more about the green sports movement at greensportsalliance.org and @SportsAlliance. Download this report at greensportsalliance.org/resource-center.

About NRDC

NRDC (Natural Resources Defense Council) is a national nonprofit environmental organization with more than 1.4 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Bozeman, and Beijing.

About Green Sports Alliance

The Green Sports Alliance leverages the cultural and market influence of sports to promote healthy, sustainable communities where we live and play. We do so by inspiring sports leagues, teams, venues, their partners and millions of fans to embrace renewable energy, healthy food, recycling, water efficiency, species preservation, safer chemicals and other environmentally preferable practices. Since launching nationally in March of 2011, the Alliance has grown from 6 teams and venues to representing over 300 teams, venues, events and universities from 20 different leagues and 14 countries. Learn more at greensportsalliance.org and @SportsAlliance.

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Foreword

CREATING A GLOBAL SPORTS VENUE FOOD PACT

*By Professor David Russell, Founder & Chairman,
The Russell Partnership Limited; Food Strategy Lead, London Olympics 2012*

With food consumption so closely linked to the game day experience, it's only logical to incorporate environmentally responsible food strategies into venue management. In so doing, we can extend the excellent work that has recently emerged driving familiar environmental improvements such as energy, waste, and water reduction.

Consumer interest in the sustainability, sourcing, and environmental impact of food production is increasing. More importantly perhaps is the growing recognition by the food industry that both the food production and food service businesses can contribute to environmental initiatives as part of successful growth strategies.

The case studies in this report provide excellent examples of how food is procured and prepared more sustainably in sporting venues across North America. Sports events allow many in the food industry to engage with guests who have an inherent interest in sustainability and the future environment. Participation in sports and allegiance to specific teams is often inherited by new generations. Consequently, environmentally intelligent food options today can lead to strong emotional relevance in the future.

Many great teams have advanced from their local roots and become international brands recognised for high performance, morals, and uncompromising vision. That said, food served at sports venues has tended to follow the path of highly processed meats and refined sugars. Not only is this unsustainable and potentially harmful, it delivers an incongruent message regarding sports, nutrition, and wellbeing.

There is a paradox in the fact that whilst watching athletes compete at the peak of their physical fitness, spectators are routinely offered food and drinks that contribute little or nothing to their own physical well-being. Arenas are historically renowned for providing processed, convenience food for guests and often fail to deliver nutritionally viable options. Furthermore, highly processed foods require energy intensive refining processes and extra packaging for longer shelf life. With the rapidly growing global problem of diet- and lifestyle-related chronic illnesses such as obesity and diabetes,¹ it is time to rethink the food culture associated with sports and sporting events.

Visiting a stadium promises each guest excitement, anticipation, and pleasure. Guests view their day out as a treat, often attributed to infrequency of visit or special occasions. Research suggests that food consumption plays a significant role in determining the level of satisfaction spectators obtain from the live sports experience.² However, sustenance offered in most arenas has evolved to become a sadly limited array that lacks

fruit, vegetables, and nutrients essential for optimal health. Furthermore, overarching environmental impacts of refined foods are another detriment to human health. For example, sugar has arguably had as great an impact on the environment as any other agricultural commodity. Wholesale conversion of tropical and coastal habitats to grow and process sugar has wreaked significant environmental damage and led to a loss of biodiversity.³ Correcting this provides an opportunity to reconnect the need for a unique food experience at live sporting events with nurturing the environment.

It is important to note that the growing interest in food and nutrition is being influenced by factors beyond individual health. As new technology feeds the thirst for instant information about the products we consume, the demand for information about our food is increasing too. Everything from the provenance of ingredients to the environmental credentials of packaging is under scrutiny. Telling positive stories about responsible food sourcing and production practices is opening up new ways to attract consumers. With growing evidence that nutrient-rich, locally sourced, and organically produced foods are environmentally sound choices,⁴ the environmental and health agendas are beginning to merge.

It may be argued that food offerings at sports venues simply provide what guests want or expect and that change would be detrimental to sales and the visitor experience. However, a global review of sports venue food illustrates how different ethnic and cultural groups choose and select foods based on cultural norms.⁵ Many foods eaten routinely worldwide would be considered healthy options in North America. In India, traditional game day food consists of freshly cooked, authentic dishes. A diverse array of options, including kheema pao (minced beef and bread), sunflower seeds, and chia seeds, are readily available.

Sports venue communications can set expectations and potentially encourage guests to try healthier foods. Not only are these ideas relevant in food, but they are also drivers for lifestyle habits—The Tarahumara Indians of Mexico run an annual marathon (26 miles per day) through cultural conditioning from a young age. They also eat an 80 percent carbohydrate/10 percent fat/10 percent protein diet and are among the healthiest people on the planet. Most importantly, this is the Tarahumara Tribe's ordinary lifestyle.

With rising rates of obesity and diabetes, awareness of the role of food in general health is increasing. More than 400 people per day are diagnosed with type 2 Diabetes in the U.K.⁶ In 2012, 29.1 million Americans—or 9.3 percent of the population—had diabetes.⁷ Whilst many people know they would benefit from a healthier diet, they often lack motivation to change their eating habits. Factors affecting food choices and motivation, such as dietary education, occupation, and socio-economic status, are all relevant. In professions that involve manual labor and driving, which can be associated with low socioeconomic status, food choices and nutritional education are often limited. Lower socioeconomic status assumes lower income, which in turn forces unhealthier options for the majority; refined grains, sugar, and salt often prevail over fresh produce as it is cheaper for consumers.

The prominence of fast food at sports venues may simply be due to visitor cravings and authentic enjoyment. It is not unrealistic to surmise that guests may genuinely prefer this food over healthier options. In fact, humans have neurological pathways that reward us for consuming fat, sugar, and salt.⁸ Neurotransmitter dopamine, also known as the pleasure hormone, is responsible for rewards. When we eat these calorie-dense foods, our brains reward us by flooding our systems with pleasure-inducing dopamine, which can feel like a high. This was originally meant to encourage ancient humans to eat as much as possible, as food was sparse and any excess could be stored as fat and used for energy later. Unfortunately, the very same systems that once gave us an evolutionary advantage are now responsible for poor health.

Sugary and fatty foods often have a negative effect on concentration and mood. This initial neurological reward is often followed by a “slump” that many people are familiar with as a lack of energy after a large lunch. Expanding the menus at sports venues can enhance relationships between the venue and guests. Signature products uniquely associated with a location or an event can add to the unique experience of the visit. The aroma of freshly cooked food and the visual impact of colorful fruit and vegetables can provide a stunning contrast to the frequently brown and bland food that has become the norm. Both of these would create the potential for fans staying longer at events due to increased energy from nutritionally dense meals and, in turn, this might drive spending and increase revenue.

Various strategies can be adopted to improve the nutritional value of stadium foods. One of the simplest is often referred to as “de-junking” or upgrading of existing products. This strategy focuses on incrementally improving the nutritional value and quality of standard foods. This could be as simple as replacing refined white breads with wholemeal alternatives and including more salad in sandwiches. Ultimately, food grown nearby and prepared fresh in sports venues travel shorter distances and are, therefore, less likely to be adulterated with additives and harmful preservatives.



Sports nutrition is a visibly growing sector and the link between nutrition and performance in sports is well documented. It would be a natural progression for sports arenas to develop a food strategy that positively contributes to nutritional status. In the future, arenas will celebrate both the high achievements of the sporting elite and healthy lifestyle choices for all. Guests will expect a range of high-quality foods. There will be fewer afternoon slumps or tiredness after watching an event. Instead, guests will leave energized. It is true that all guests have different needs and ideas. A coherent strategy is needed to provide the variety, diversity, and originality appropriate to the diversity of customers and operators. The progressiveness of that strategy will depend on the innovative courage and environmental values of the management.

There is great opportunity to unite athletic performance on the field with fans' health in the stands. Reuniting local identity back into venues, incorporating the use of traditional food products, local suppliers, and sustainably sourced food is only the beginning of the journey. Efficient transportation of goods, compostable packaging, and improved waste management will also extend environmental sustainability. By taking ownership, pushing boundaries, using natural resources more wisely, and building on local and sustainable goods, we will ensure the longevity of the sports industry's food economy and systems.

David Russell

Professor David Russell, Chairman and Founder,
The Russell Partnership (UK) Limited in collaboration
with David Titman and Charlotte Harbour

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EXECUTIVE SUMMARY

As the sports industry increasingly embraces ecological stewardship, some of the world's most iconic sports venues are championing healthier, more sustainable food. *Champions of Game Day Food* provides a detailed summary of some of the more successful game day food greening programs at professional sports venues across North America.

North America's professional leagues, teams, and venues have collectively saved millions of dollars by shifting to more efficient, healthy, and ecologically intelligent operations. At the same time, the sports greening movement has brought important environmental messages to millions of fans worldwide. Sport is a great unifier. It transcends political, cultural, religious, and socioeconomic barriers. Previous reports produced by the Green Sports Alliance and NRDC, including *Game Changer* and *Collegiate Game Changers*, documented how the sports greening movement embraces more sustainable business practices while promoting a nonpolitical public commitment to environmental protection.

The way our food is produced, transported, prepared, and disposed of has a profound impact on our environment, and directly affects public health. Fans are increasingly focusing on the impacts of our food supply and for good reason. There are many things that iconic sports institutions and their millions of fans can do to promote healthier, ecologically intelligent food systems.

Genuinely sustainable agriculture maintains the resilience of the entire ecosystem. It respects our invaluable water supply, supports biodiversity—the birds, bees, and countless macro and microorganisms—that maintain the health of our planet. Sports venues and concessionaires have a unique opportunity to embrace better practices and raise awareness about environmentally preferable decisions that promote more sustainable agriculture.

Champions of Game Day Food documents how sports venues and concessionaires across the country are already moving toward environmentally preferable food service. Its case studies confirm that environmentally intelligent decisions can be made at each stage of food service to help build a healthier and more sustainable food program.



MENU PLANNING

Manage portions and track demand to avoid waste, vegetarian and vegan options, versatility regarding local and seasonal ingredients.



PROCUREMENT

Choose certified USDA Organic, antibiotic-free, seasonal, locally produced products, as well as certified sustainable seafood.



PREPARATION EFFICIENCY

Measure and minimize food scraps during preparation, train staff and choose equipment to optimize energy and water efficiency in kitchens.



SERVICWARE AND PACKAGING

Reduce packaging, as well as reusable, recyclable, and compostable serviceware.



WASTE DIVERSION

Donate unsold prepared food, install and monitor use of composting and recycling infrastructure, educate fans and staff.

HIGHLIGHTS FROM *CHAMPIONS OF GAME DAY FOOD* INCLUDE



17 PROFESSIONALS
SPORTS VENUES
THAT SERVE
ORGANIC FOOD



5 PROFESSIONALS
SPORTS VENUES
WITH ONSITE
GARDENS



18 PROFESSIONALS
SPORTS VENUES
THAT SERVE
LOCALLY-SOURCED
FOOD



14 PROFESSIONALS
SPORTS VENUES
THAT SERVE MEAT
RAISED WITHOUT
THE ROUTINE USE
OF ANTIBIOTICS



14 PROFESSIONALS
SPORTS VENUES
THAT COMPOST
FOOD WASTE



Environmentally smarter decisions at each stage of food service can help address urgent environmental threats in the United States and globally.

The report explores the ecological attributes of the hospitality programs at 10 professional sports venues, 10 shorter “snapshots” of environmentally intelligent concessions at professional sports venues, and profiles five of the professional sports industry’s preeminent concessionaires. *Champions of Game Day Food* does not attempt to rank sustainable agricultural certifications. Instead, it seeks to highlight important ecological and health elements to consider at each stage of food service. It’s essential to evaluate the full lifecycle of food and beverage service in order to build a safer, healthier, and more sustainable food system.

GREENER GAME DAY FOOD CAN HELP BUILD A MORE SUSTAINABLE FOOD SYSTEM

Iconic sports venues can lead communities toward a stronger, more sustainable food system that:

- ▶ **SUSTAINS HEALTHY WATER SYSTEMS** through agricultural water conservation and water quality stewardship.
- ▶ **MAINTAINS SOIL NUTRIENTS** through the application of regionally appropriate farming and ranching techniques (e.g. cover cropping and rotational grazing).
- ▶ **OPTIMIZES AGRICULTURAL LAND USE** for responsible food production, preservation of open space, and farm habitat (habitat restoration and protection of native habitat from conversion where appropriate).
- ▶ **REDUCES GREENHOUSE GAS EMISSIONS** from the agricultural sector.
- ▶ **REDUCES DEPENDENCE ON CHEMICAL INPUTS** in agricultural production and increases protection for food producers, workers, and consumers from unsafe pesticide or fertilizer exposure.
- ▶ **SAFEGUARDS THE WELFARE OF FOOD PRODUCERS AND WORKERS**, provides equitable access to healthy and fresh foods, and ensures the humane treatment of livestock.
- ▶ **MINIMIZES THE TRANSMISSION OF DISEASES AT FARMS**, reduces air and water pollution, strengthens regional food supplies, and empowers consumers to make ecologically informed purchases.

THE VALUE OF GREENER GAME DAY FOOD

CUTS OPERATIONAL COSTS BY MINIMIZING FOOD, ENERGY, AND WATER WASTE IN KITCHENS:

Improving resource efficiency can save money and enhance program performance, benefitting the concessionaire, venue, and team.

- ▶ For example, see the Moda Center case study.

PROVIDES COMPETITIVE ADVANTAGE BY DIFFERENTIATING THE VENUE AND FOOD SERVICE BRAND:

A greener food service program can improve brand image and provide a point of market differentiation to help raise a venue’s environmental profile in the community.

- ▶ For example, see the Levi’s Stadium and Sonoma Raceway case studies.

ATTRACTS SPONSORS AND PARTNERS:

Sustainable food programs can lead to sponsorship opportunities with existing or new partners who also prioritize environmental stewardship in their business operations.

- ▶ For example, see the Bell Center and AT&T Park case studies.

SHOWCASES REGIONAL CULTURE TO HELP STRENGTHEN COMMUNITY CONNECTION AND BOOST SALES:

Sports greening programs can serve as models for local stewardship, improve community relations, and strengthen local business connections (which can help raise money).

- ▶ For example, see the AT&T Stadium and Safeco Field case studies.

HELPS MEET INCREASINGLY VARIED DIETARY PREFERENCES AND INCREASE FAN LOYALTY:

More sustainable game day food allows venues to meet evolving dietary needs as more fans prefer vegan, vegetarian, gluten-free and other diets based on personal preferences or allergies.

- ▶ For example, see the Petco Park case study.

ADDRESSES COMPLIANCE AND COMMUNITY EXPECTATIONS, BUILDING CONSUMER CONFIDENCE:

Fans nationwide are increasingly asking for fresher, local, and healthier food options during games. By procuring, serving, and publicizing more sustainable food, teams show that they are attentive to their fans’ concerns.

- ▶ For example, see the FirstEnergy Stadium and Citizen Bank Park case studies.

INTRODUCTION

By Allen Hershkowitz, PhD, *President, Green Sports Alliance*

“There is nothing more intimate, more essential, more tied to our humanness than how we secure our food. To engage in the process of growing food is to engage in life at its most elemental. To nurture soil, plant seeds, harvest and offer food to others is one of the most powerful expressions of love and healing. This is not only about... support[ing] farmers, it is about the power of farming to support all people to be more fully human.”

Michael Ableman – Agrarian Elders Conference¹

Food is not just another commodity.

The Sages tell us that when we eat properly, we can taste the Divine. From mother’s milk to the family table, the food we eat builds our flesh and bones. It nourishes our blood, our mind and our souls. Food nurtures. It is the essential nourishment we provide our children, our families, our loved ones, our guests, ourselves. Food sustains us. It heals us. It fuels romance and plays a central role in celebrations. Without it, we die.

Alas, the 20th century revolution in agricultural productivity that supplies the food most of us eat today, at home, at school, on the road, and yes, at sporting events, has engendered many unwelcome side effects, including enormous ecological and public health costs. It also fails to foster an understanding of our connection to and place within the community of life. Frankly, the nutritional quality of our food supply, the way our food is grown or raised, its effect on farm workers, animals and the health of children and adults alike is a moral and ecological disgrace. It is no exaggeration to say that the industrial food supply chain that dominates the market is killing people prematurely, and threatens the viability of life on Earth as we know it.

The U.S. industrial food production system is immoral, unhealthy, and unsustainable. It has to change.

If the global food industry were a country, it would rank as the third largest emitter of life-threatening greenhouse gases.² At the same time, the cocktail of chemicals routinely applied on an industrial scale to crops and animals are poorly regulated and poorly assessed for their harmful ecological and human health impacts. Food supply chemicals threaten farm workers, food animals, and a wide range of organisms that support essential ecosystem services such as pollination, pest control, biodiversity and water supplies. In drought-stricken California, where it takes a gallon of water to grow a single almond, that single crop alone consumes enough water to support 75 percent of the state’s entire population.³ In the name of providing cheap meat, industrial livestock operations consume about 2,000 gallons of water to produce one pound of beef,⁴ while eighty percent of all





antibiotics sold in the United States are for use in livestock, not humans.⁵ Antibiotics are routinely applied to livestock, breeding drug-resistant super-bacteria that threaten the health of farm workers and consumers alike.

According to the Scientific Report of the 2015 Dietary Guidelines Advisory Committee

“...[A] diet higher in plant-based foods, such as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in calories and animal-based foods is more health promoting and is associated with less environmental impact than is the current U.S. diet... Current evidence shows that the average U.S. diet has a larger environmental impact in terms of increased greenhouse gas emissions, land use, water use, and energy use, compared to” diets relying on higher percentage of vegetables.⁶

How do we get there? How do we shift United States’ consumers away from a diet dominated by cheap meat, coloring agents and processed sugars, towards a healthy diet that supports more sustainable food production?

We have two options: We can lobby government to reform our food production system, begging for standards that promote greater efficiency in water and energy use, that limit the use of chemicals only to those proven to be safe for children and ecosystems, that enforce a humane treatment of food animals, and that educate consumers broadly about how to eat a more healthy, ecologically sustainable diet.

Realistically, the likelihood of comprehensive government action focused on reforming the many ills associated with industrial agriculture in the United States is remote. Indeed, for the entire lifetime of even the oldest reader of this report, government has operated as a virtual subsidiary of an inhumane and polluting industrial agriculture, placing the needs of agribusiness, cheap meat and chemical marketers before the needs of consumers’ health, farm workers, food animals and the environment. Sadly, this has also been the case when government has stepped in to advise schools on children’s nutritional standards. The advice is focused less on children’s health than it is on the profits and priorities of industrial food.

A second option to instigate change in the food market involves realistically recognizing the limits, the bias and snail’s pace of government action. This second option focuses not on waiting for government to become an enlightened steward of our food supply, but focuses instead on changing cultural attitudes about our food supply to instigate a mass market shift towards healthier food. Instigating a cultural shift to move the marketplace towards a healthy food system is the strategic approach that forms the basis for this report, and the work of the Green Sports Alliance.

Food is the most ubiquitous product advertised at sporting events. Sports venues serve millions of people almost every conceivable type of food and beverage in every major market in the United States. And food companies are among the largest advertisers and sponsors of sporting events. The sports industry matters to the food industry, and the food industry matters to the sports industry. Hundreds of millions of people are exposed to food options and information at sporting events each year.



Champions of Game Day Food is a major contribution to the literature about sports and the environment produced during the past few years by the Green Sports Alliance and NRDC. It is premised on the belief that changing the menus at sports venues, which collectively serve hundreds of millions of people each year, offers the greatest platform to educate consumers and the marketplace about healthy food options.

This report covers sustainability initiatives related to the lifecycle of food at a sports venue. We consider more sustainable food service to encompass food and beverage production, procurement, transportation, preparation efficiency, serviceware, and food waste management.

Our case studies report on the following topics:

- ▶ **MENU PLANNING**, manage portions and track demand to avoid waste, vegetarian and vegan options, versatility regarding local and seasonal ingredients.
- ▶ **PROCUREMENT**, choose certified USDA Organic, antibiotic-free, seasonal, locally produced products, as well as certified sustainable seafood.
- ▶ **PREPARATION EFFICIENCY**, measure and minimize food scraps during preparation, train staff and choose equipment to optimize energy and water efficiency in kitchens.
- ▶ **SERVICWARE AND PACKAGING**, reduce packaging, as well as reusable, recyclable, and compostable serviceware.
- ▶ **WASTE DIVERSION**, donate unsold prepared food, install and monitor use of composting and recycling infrastructure, educate fans and staff.

In this report we consider any of the following specifications as contributing to environmentally intelligent, more sustainable food service:

- ▶ USDA Certified Organic products
- ▶ Meat, poultry, and dairy products raised and processed without hormones and non-therapeutic use of antibiotics
- ▶ Vegetarian and vegan meal options
- ▶ Locally grown and produced food
- ▶ Seafood certified by the Marine Stewardship Council or Monterey Bay Aquarium
- ▶ Free range and/or pasture-fed meat and poultry
- ▶ Legitimate third party sustainable food certifications (see glossary)
- ▶ Food products delivered in minimal, reusable, recyclable, or bio-based/compostable packaging
- ▶ Wine bottles sealed with natural cork instead of more polluting closures like plastic stoppers or metal screw-caps
- ▶ Zero trans fat, low-sugar, low-fat healthier options

Writing in the *New York Times*, Mark Bittman said “All Americans have the right to nutritious, affordable, sustainable and fair food.”⁷ Indeed we do. To achieve that, virtually everything associated with our industrial food supply needs to change: soil health, energy use and climate impacts, water use, protection of biodiversity, farm workers health, animal husbandry, and the use of chemicals. These impacts and more need to be managed more smartly to keep our food production systems viable in an environmentally constrained 21st century.

Can the sports industry instigate that change by itself? No, it cannot. Can it make a big contribution in shifting cultural consciousness and supply chain operations towards ecologically responsible healthy food? Yes, for sure it can. This report, the first of its kind to assess food quality at sports venues, will play an important role in moving society towards a more sustainable food supply chain that reduces environmental impacts and provides healthy meals to all consumers. Adhering to the lessons documented in this report might not lead us to sensing the Divine when we eat, but doing so will reduce the likelihood of getting ill from the system that produces our food, reduce farmworker illness, torture fewer animals and lessen damage to the planet on which we all depend.

Allen Hershkowitz, PhD,
President, Green Sports Alliance.

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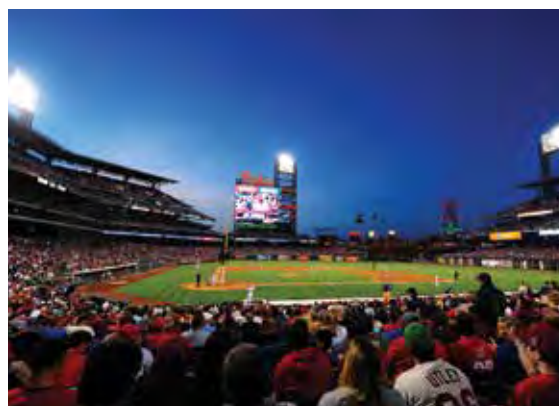
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DEFINITION OF AN ENVIRONMENTALLY INTELLIGENT FOOD SERVICE

For the purpose of this report, NRDC and the Green Sports Alliance include any of the following criteria as contributing to environmentally intelligent food service. References to “greener food” throughout this report imply an incorporation of at least one or more of the following considerations during the lifecycle of food service.

This report does not attempt to rank sustainable agricultural certifications. Instead, we seek to highlight important ecological and health elements to consider as part of each stage of food service. It's essential to evaluate the full lifecycle of food and beverage service in order to build a safer, healthier, and more sustainable food system for sports venues and beyond. As this report documents, many sports venues and concessionaires are already taking the following environmental considerations into account. The case studies we've produced confirm that environmentally intelligent decisions can be made at each of the following steps to help build a healthier and more sustainable food program at a sports venue:



SMART MENU DESIGN AND PLANNING incorporates seasonal and local ingredients that allow for quick market adaptation as available. For example, substituting locally sourced fish or vegetables for beef or other proteins can reduce costs. Smart menu design also minimizes food waste by carefully tracking demand, adapting menu choices to fan interests, and ordering volume accordingly. A versatile menu will also maximize ingredient use by creatively using the same ingredient throughout the venue. For example, using locally-grown peppers for salsa, pizza toppings, and chili.



FOOD AND BEVERAGE PROCUREMENT can incorporate environmentally intelligent sourcing when following third party certification standards.

We recommend USDA-certified organic, certified seafood, antibiotic-free. See Glossary for examples and explanations of these types of certifications.



FOOD PREPARATION EFFICIENCY PROGRAMS

aim to track and minimize food scraps produced in kitchens and prep areas, while also optimizing equipment use to minimize energy and water consumption. Through measuring food waste produced and resource use onsite, food service professionals can set a benchmark for improvement. These programs often involve installing scales to measure food waste daily. Some kitchens also photograph food scraps and track the ingredients that produce the most waste to identify ways to use them more efficiently (e.g., fruit rinds for use in cocktails or desserts). Other creative reuse of scraps includes using bones or vegetables for stocks and sauces.



SERVICWARE AND PACKAGING presents one

of the greatest opportunities to minimize waste at sports venues. Transitioning serviceware to reusable dishware in suites and to recyclable or compostable disposable serviceware on the concessions levels can significantly increase a venue's waste diversion from landfills. Reduced tipping fees from waste haulers can offset the potentially increased costs of providing environmentally intelligent serviceware.



FOOD DONATION, WASTE DIVERSION, AND COMPOSTING

diverts economically valuable and environmentally costly materials from landfills. Donating unsold prepared food benefits those in need, and avoids the loss of all the precious natural resources that went into growing, shipping, processing and preparing the food. Supporting composting and recycling infrastructure through fan education and staff training helps return materials and nutrients to productive systems. For example, plastic bottles can be made into valuable textiles for clothing or other products, while organic materials can produce compost to fertilize grounds.

All of these opportunities to make environmentally smarter decisions at each stage of food service can help address urgent environmental threats to our food system, water supply, and energy security both in the United States and globally. Sports venues and concessionaires have a unique opportunity to model better practices and raise awareness for environmentally preferable decisions. Environmentally intelligent food service at sports venues can help build a more sustainable food system that:

- ▶ **SUSTAINS HEALTHY WATER SYSTEMS** through agricultural water conservation and water quality stewardship.
- ▶ **MAINTAINS SOIL NUTRIENTS** through the application of regionally appropriate farming and ranching techniques (e.g., cover cropping and rotational grazing).
- ▶ **OPTIMIZES AGRICULTURAL LAND USE** for responsible food production, preservation of open space and farm habitat (habitat restoration and protection of native habitat from conversion where appropriate).
- ▶ **REDUCES GREENHOUSE GAS EMISSIONS** from the agricultural sector and the food system.
- ▶ **REDUCES DEPENDENCE ON CHEMICAL INPUTS** in agricultural production and increases protection for food producers, workers, and consumers from unsafe pesticide or fertilizer exposure.
- ▶ **SAFEGUARDS THE WELFARE OF FOOD PRODUCERS AND WORKERS**, provides equitable access to healthy, fresh foods, and ensures the humane treatment of livestock.
- ▶ **MINIMIZES** transmissions of diseases at farms, reduces air and water pollution, strengthens regional food supplies, and empowers consumers to make ecologically informed purchases.

Read about environmental certifications and standards that can contribute to environmentally intelligent food systems in the Glossary.

LIFE CYCLE OF GREENER GAME DAY FOOD OPERATIONS



THE CASE FOR ENVIRONMENTALLY INTELLIGENT FOOD IN SPORTS

By Erik D. Olson, Director, Health & Environment Program and Senior Strategic Director, Food & Agriculture, Natural Resources Defense Council

The way our food is produced, transported, prepared, and disposed has a profound impact on our environment, and can directly affect our health. Americans are increasingly focusing on the impacts of our food supply for good reason. Below we outline some of the major reasons we should all consider more environmentally intelligent and healthier options when choosing what we eat. There are many things we can do, as individuals and iconic sports institutions, to reduce the environmental and health impacts of our diet.

PRIORITIZE VEGETARIAN OPTIONS AND SOURCE LOCALLY TO HELP REDUCE GLOBAL WARMING EMISSIONS

About one-sixth to one-third of all global warming greenhouse gas emissions are linked to agriculture and food. Some experts estimate that agriculture's global warming pollution is responsible for an even higher percentage of greenhouse gasses.¹

How we produce what we eat has a huge impact on global warming emissions. For example, meat from ruminant animals like cows has an especially big carbon footprint because of the release of methane (a potent greenhouse gas) from their digestion and manure. While there are number of expert initiatives aimed at improving the U.S. beef industry, NRDC estimates that "if all Americans eliminated just one quarter pound serving of beef per week, the reduction in global warming gas emissions would be equivalent to taking 4 to 6 million cars off the road."²

USE FOOD EFFICIENTLY AND MINIMIZE WASTE TO HELP REDUCE ENORMOUS AGRICULTURAL FRESHWATER CONSUMPTION

In the United States, more than 80 percent of freshwater consumed is used by agriculture, and in many Western states, agricultural use exceeds 90 percent.³ Globally, more than two-thirds of water consumed is used by agriculture.⁴

We "eat" 10 times more water than we use in our homes. While the average American uses about 98 gallons of water per day for domestic use (household uses like showers, toilets, etc.),⁵ we "eat" an average of more than 920 gallons.⁶ That means that about 90 percent of our water consumption is "invisible" to us because it's used to produce our food.

The food we eat at our venues has a big impact on water use and scarcity nationwide. For example, producing beef uses an enormous amount of water through the growing of crops, like corn, which are used to feed cattle. And, of course, cattle consume a lot of water themselves. The amount of water required to produce a single pound of beef, by estimate, varies from 2,000⁷ to 4,000⁸ gallons or more. On the other hand, a pound of chicken takes about 500 gallons, and an egg just 50 gallons. Grains and plant-based foods use far less water than meat.

Improved irrigation techniques can substantially reduce the amount of water needed to grow crops. However, our food choices can have far bigger impacts that go beyond farming techniques.

PURCHASE ANTIBIOTIC-FREE MEAT TO ADDRESS HEAVY ANTIBIOTICS USE BY INDUSTRIAL MEAT AND POULTRY FARMS

In the United States, about 80 percent of all antibiotics sold are not used to treat humans, but are instead sold for use in animal agriculture, mostly to promote faster growth or to compensate for filthy, overcrowded conditions in large factory farms.⁹ This routine "subtherapeutic" use of antibiotics kills off weak bacteria, but allows stronger bacteria to live and reproduce, creating "Superbugs" that become resistant to antibiotic treatment. These antibiotic-resistant bacteria have been known to adhere onto meat and poultry and cause foodborne disease outbreaks. They can also disperse into the environment and infect people in the community.¹⁰





The solution is to raise animals without routinely feeding them antibiotics. These safer products are labelled “Organic” or “No Antibiotics Administered.”

PURCHASE FOODS THAT ARE PRODUCED USING MINIMAL PESTICIDES AND THAT PROMOTE SOIL HEALTH

Pesticides are ubiquitously used to control insects, weeds, or other threats to the health of crops that are not grown in accordance with USDA organic guidelines. Unfortunately, these pesticides often end up in our food, air, and water and can pose significant health risks, especially to children and pregnant women.¹¹

By contrast, foods certified Organic, are grown in accordance with USDA Organic guidelines, are produced without synthetic pesticides and fertilizers, and reduce the risks posed by pesticides. (See the Glossary for more information on the USDA

Organic certification and other third party certifiers that promote soil health.) Farm management practices that build soil health without the use of pesticides reduce the environmental impacts of agriculture and can also reduce crop loss. No-till farming, cover cropping, and efficient irrigation are three examples of soil-building practices that improve environmental outcomes while decreasing the risk of crop loss.¹²

Excessive fertilizer can run off into rivers and lakes, and cause “dead zones,” killing fish¹³ by encouraging blooms of toxic algae often called “red tide” and depleting available oxygen.¹⁴ In 2014, a huge toxic algal bloom in Lake Erie contaminated drinking water for more than 400,000 people in Toledo and Southeastern Michigan.¹⁵ In the Gulf of Mexico that same year, a Dead Zone the size of Connecticut emerged due to the run-off of fertilizer and other pollutants.¹⁶ Large dead zones also plague the Chesapeake Bay, the Great Lakes, and other coastal areas.¹⁷ Animal manure from big industrial farms can also enter nearby water, causing nutrient and pathogen pollution.

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Chapter 3

ON THE FUTURE OF FOOD

By His Royal Highness Prince Charles, The Prince of Wales¹

His Royal Highness Prince Charles, The Prince of Wales, gave the keynote speech at the Future of Food conference at Georgetown University in Washington, DC, on May 4, 2011. Parts of his speech are republished below as his powerful words still hold true today and help reinforce the importance of sports industry leadership toward building a more sustainable food system.

This is the challenge facing us. We have to maintain a supply of healthy food at affordable prices when there is mounting pressure on nearly every element affecting the process. In some cases we are pushing Nature's life-support systems so far, they are struggling to cope with what we ask of them. Soils are being depleted, demand for water is growing ever more voracious, and the entire system is at the mercy of an increasingly fluctuating price of oil.

Remember that when we talk about agriculture and food production, we are talking about a complex and interrelated system and it is simply not possible to single out just one objective, like maximizing production, without also ensuring that the system which delivers those increased yields meets society's other needs.... These should include the maintenance of public health, the safeguarding of rural employment, the protection of the environment, and contributing to overall quality of life.

So we must not shy away from the big questions. Chiefly, how can we create a more sustainable approach to agriculture while recognizing those wider and important social and economic parameters—an approach that is capable of feeding the world with a global population rapidly heading for 9 billion? And can we do so amid so many competing demands on land, in an increasingly volatile climate and when levels of the planet's biodiversity are under such threat or in serious decline?

As I see it, these pressures mean we haven't much choice in the matter. We are going to have to take some very brave steps. We will have to develop much more sustainable, or durable, forms of food production because the way we have done things up to now are no longer as viable as they once appeared to be.

Genuinely sustainable farming maintains the resilience of the entire ecosystem by encouraging a rich level of biodiversity in the soil, in its water supply, and in the wildlife—the birds, insects, and bees that maintain the health of the whole system. Sustainable farming also recognizes the importance to the soil of planting trees; of protecting and enhancing water-catchment systems; of mitigating, rather than adding to, climate change. To do this it must be a mixed approach. One where animal waste is recycled and organic waste is composted to build the soil's fertility. One where antibiotics are only used on animals to treat illnesses, not deployed in prophylactic doses to prevent them; and where those animals are fed on grass-based regimes as Nature intended.

This all depends upon us deepening our understanding of the relationship between food, energy, water, and economic security, and then creating policies which reward producers who base their farming systems on these principles. Simply because, if we do not consider the whole picture and take steps with the health of the whole system in mind, not only will we suffer from rising food prices, we will also see the overall resilience of our economies and, in some instances, our ecological and social systems too, becoming dangerously unstable.

Essentially, we have to do more today to avert the catastrophes of tomorrow and we can only do that by re-framing the way we approach the economic problems that confront us. We have to put Nature back at the heart of the equation. If we are to make our agricultural and marine systems (and therefore our economies) resilient in the long term, then we have to design policies in every sector that bring the true costs of environmental destruction and the depletion of natural capital to the fore and support an ecosystem-based approach. And we have to nurture and support the communities of smallholders and family farmers.

¹ HRH Prince Charles, *On The Future of Food*, Rodale Books, February 2012, ISBN: 978-1-60961-471-3, <http://www.onthefutureoffood.org/the-book>.



- ▶ The United Nations Food and Agriculture Organisation estimates that the global demand for food will rise by 70 percent between 2015 and 2050.
- ▶ The world has to find the means of feeding a staggering 219,000 new mouths every day.
- ▶ A person who eats a typical Western diet is, in effect, consuming nearly a U.S. gallon of diesel every day! (Most forms of industrialized agriculture now have an umbilical dependency on oil, natural gas, and other non-renewable resources.)
- ▶ In the United States, one acre is lost to development every minute of every day—which means that, since 1982, an area the size of Indiana has been built over.
- ▶ Twenty-two thousand square miles of arable land is turning into desert every year and, all told, it appears a quarter of the world's farmland, 2 billion acres, is degraded.
- ▶ For every pound of beef produced in the industrial system, it takes two thousand gallons of water.
- ▶ Nearly three quarters of available global freshwater is used in agriculture, but 30 percent of that water is wasted.
- ▶ By 2030 it is estimated that the world's farmers will need 45 percent more water than today. And yet already, because of irrigation, many of the world's largest rivers no longer reach the sea for part of the year—including the Colorado and Rio Grande.
- ▶ In developing countries approximately 40 percent of food is lost between farm and market.
- ▶ More than 1 billion people—one seventh of the world's population—are hungry and another billion suffer from what is called "hidden hunger," which is the lack of essential vitamins and nutrients in their diets.
- ▶ More than 1 billion people in the world are now considered overweight or obese. It is an increasingly insane picture— somehow half the world is on the wrong side of the food equation.

Read HRH Prince Charles' full speech in the book *On The Future of Food* published by Rodale books at www.onthefutureoffood.org.

ENVIRONMENTAL AND SOCIAL IMPACTS OF AGRICULTURE INDUSTRY

The way our food is produced, transported, prepared, served and disposed has a profound impact on our environment. It also directly affects our health and the health of our society. There are many things we can do, as individuals and iconic sports institutions, to build a stronger food system that doesn't just have fewer environmental, social and health impacts, but rejuvenates our communities and economy.

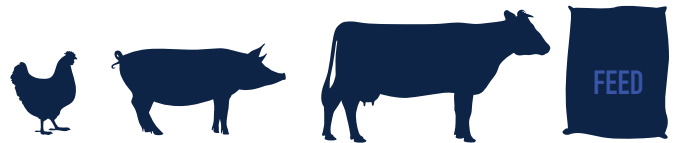
40% OF THE FOOD IN THE U.S. IS WASTED  *that's 20 pounds of food per person every month*

THE UNITED NATIONS FOOD AND AGRICULTURE ORGANIZATION FORECASTS THAT FOOD PRODUCTION *must increase by 70% by 2050* TO FEED AN EXPECTED GLOBAL POPULATION OF 9.1 BILLION PEOPLE.



50%

OF ALL WATER USED IN THE U.S. GOES TO LIVESTOCK PRODUCTION AND THE FEED THEY CONSUME.



87%

AGRICULTURE ACCOUNTS FOR 87% OF ALL THE FRESH WATER CONSUMED EACH YEAR IN THE U.S.

IT TAKES ABOUT

2,000 GALLONS OF WATER TO PRODUCE EVERY POUND OF BEEF



FOOD SAVED BY REDUCING FOOD WASTE BY JUST 15% COULD FEED MORE THAN

25 MILLION

AMERICANS EVERY YEAR.

 **25%**

OF ALL FRESHWATER IN AMERICA IS LOST THROUGH FOOD WASTE.



1 in 6 Americans

LACK A SECURE SUPPLY OF FOOD. MEANWHILE, 925 MILLION PEOPLE SUFFER FROM CHRONIC HUNGER.





260+

million acres of U.S. forest

HAVE BEEN CLEARED TO CREATE CROPLAND
TO GROW GRAIN TO FEED FARMED ANIMALS.



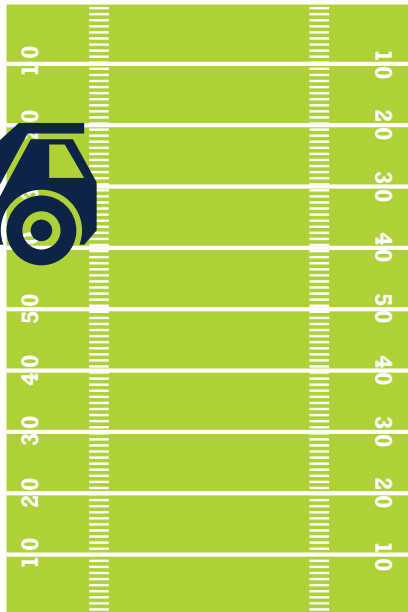
THE *~7 billion livestock animals* IN THE UNITED STATES CONSUME FIVE TIMES
AS MUCH GRAIN AS IS CONSUMED DIRECTLY BY THE ENTIRE AMERICAN POPULATION.

x7



football fields

OF LAND IS BULLDOZED
WORLDWIDE EVERY MINUTE
TO CREATE MORE ROOM
FOR FARMED ANIMALS.



ROUGHLY

80%

of all antibiotics

SOLD IN THE U.S. (ABOUT 30 MILLION POUNDS
A YEAR) GO TO NON-ORGANIC
FARM ANIMALS.



20%



80%



IN THE U.S.,

ONE ACRE

IS LOST
TO DEVELOPMENT
EVERY MINUTE OF
EVERY DAY.



600

Million football fields



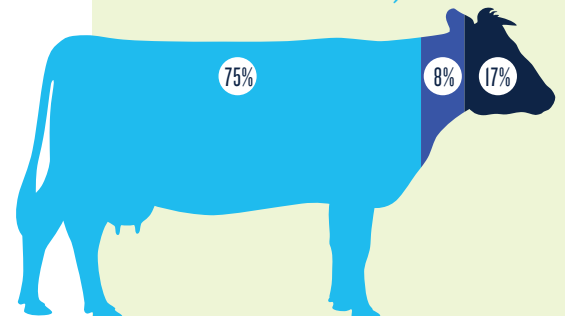
(782 MILLION ACRES)
OF U.S. LAND AREA
IS OCCUPIED BY
RANCHING. THIS IS
THE EQUIVALENT LAND
TO TWO ALASKAS.

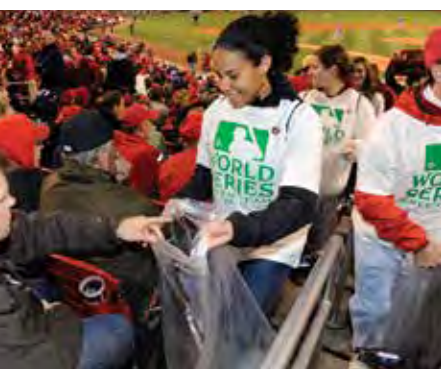
of that
782 Million Acres

17% (134 MILLION ACRES)
IS GRAZED FOREST LAND

8% (62 MILLION ACRES)
IS CROPLAND PASTURE
IN THE EASTERN U.S.

75% (586 MILLION ACRES)
IS RANGELAND
(GRAZED, SHRUBLANDS,
WOODLANDS)





Chapter 4

INTRODUCTION TO THE CASE STUDIES

The following chapter includes case study profiles assembled by NRDC and the Green Sports Alliance. These profiles include case studies on the ecological attributes of the hospitality programs at 10 professional sports venues, 10 shorter “snapshots” of environmentally intelligent concessions at professional sports venues, and five of the professional sports industry’s preeminent concessionaires.

The venue case study and snapshot profiles were selected based on a range of nominations submitted to the Green Sports Alliance from the foremost professional sports concessionaires and based on published documentation of greener game day food initiatives at professional sports venues across North America. The case studies provide a framework for viewing, planning, and implementing environmentally preferable hospitality programs.

The case studies in this report cover the lifecycle of food operations at a sports venue, including menu design, procurement, preparation efficiency, serviceware, food donation, and composting. The initiatives profiled here are devoted to hospitality greening efforts within professional sports. They do not focus on broader sustainability accomplishments across the agricultural sector unless those initiatives are directly related to food greening successes at a particular sports venue.

These case studies represent a diverse spectrum of professional sports venues throughout North America. However, this report is not a comprehensive list of environmentally intelligent hospitality programs at professional sports venues, nor does it rank greener food programs. Our intention is to provide an informative guide for those planning to advance greener food initiatives or implement new sustainability efforts in hospitality at professional (and collegiate) sports venues.

The conversation about healthier and ecologically preferable food is growing throughout the sports industry. Indeed, it is growing throughout North America. As the first report of its kind, this publication is designed to encourage all sports venues to shift toward more sustainable food procurement as well.

Each venue case study includes three sections:

1. THE GREENING STORY

provides background on the venue’s broader greening accomplishments and commitments to date.

2. THE GREENER FOOD STORY

explains how each team and venue began working with its concessionaire to pursue greener food. This section describes how programs were launched, their motivations, stakeholders, and successes to date.

3. WHAT’S NEXT?

describes future plans and opportunities for the greener food movement, the challenges, and solutions.

Each case study also features the venue’s standout greener food accomplishments.

This report spotlights a rapidly expanding national trend. In fact, more sustainable practices in game day food are now so widespread in North America that it is impossible to detail all of the impressive accomplishments. The sports industry is helping to lead a shift towards healthier food production that all businesses should emulate. Thus, in addition to the case studies, we have included shorter summaries of 10 noteworthy greener food initiatives at professional sports venues that demonstrate the breadth of this trend. Of course, we recognize that there are many similar stories as yet untold in the sports food industry and we encourage those leaders to reach out to the Green Sports Alliance so we can help tell their stories as well.

These case studies provide strategies to help leagues, teams, and venues decide why environmentally intelligent food matters and how to go about serving it. Although there is no one way to establish a greener food program, the most successful greening operators in the sports industry use similar elements to implement effective hospitality programs.



LEADING ENVIRONMENTALLY PREFERABLE FOOD PRACTICES AT PROFESSIONAL SPORTS VENUES

Professional sports venues across North America are helping to advance the trend towards healthier, ecologically intelligent food. The facts below are just a sample of the environmentally preferable food service initiatives at iconic sports venues nationwide. These facts showcase the 20 venues featured in the Champions of Game Day Food report.



MODA CENTER
HOME OF THE PORTLAND TRAIL BLAZERS

100% of seafood is certified by the Marine Stewardship Council, while 30% of meat and produce is certified USDA Organic.



SAFECO FIELD
HOME OF THE SEATTLE MARINERS

100% of all beef and pork is certified "Never Ever" (raised without antibiotics or hormones).



SONOMA RACEWAY
HOST OF NASCAR

2 ACRES onsite are dedicated to an organic garden at Sonoma Raceway that produces food for concessions meals and catering.



LEVI'S STADIUM
HOME OF THE SAN FRANCISCO 49ERS

30% of all Levi's Stadium produce is certified USDA Organic and more than 20% of the menu is vegetarian.



AT&T PARK
HOME OF THE SAN FRANCISCO GIANTS

100% of AT&T Park drinkware and food packaging is recyclable or compostable.



PETCO PARK
HOME OF THE SAN DIEGO PADRES

100% of used cooking oil is recycled and donated as biodiesel to support local public transportation and school buses.



AT&T STADIUM
HOME OF THE DALLAS COWBOYS

THOUSANDS of pounds of certified USDA Organic produce from nearby Paul Quinn College's student-run farm is served to Cowboys fans each year.



BELL CENTER
HOME OF THE MONTREAL CANADIENS

95% of Bell Center dairy and
cheeses are sourced locally.



PNC PARK
HOME OF THE
PITTSBURGH PIRATES

RANKED **3RD** ballpark in the
nation for its wide
array of vegetarian meal options.



FIRST ENERGY STADIUM
HOME OF THE
CLEVELAND BROWNS

ABOUT **10,000** pounds
of leftover,
unused food is donated each
season to the Cleveland Food
Bank from Browns games.



FENWAY PARK
HOME OF THE BOSTON RED SOX



It's only 35 miles from Fenway to the farm that
provides the produce served to Red Sox fans.



TD GARDEN
HOME OF THE BOSTON BRUINS

ABOUT **20**

local farms grow the produce and
make the cheese served at TD Garden.



BILLIE JEAN KING NATIONAL TENNIS CENTER
HOME OF THE US OPEN

180

tons of food waste from US Open fans
is composted for local landscaping and
farming use.



YANKEE STADIUM
HOME OF THE NEW YORK YANKEES

278

compost bins help Yankees fans
compost ballpark-wide, advancing
the Yankees' zero waste goals.



CITI FIELD
HOME OF THE NEW YORK METS

THE **11,000**

square foot green
roof on the Mets' admin
building is now complemented by a garden
at Citi Field to grow ingredients onsite.



CITIZENS BANK PARK
HOME OF THE PHILADELPHIA PHILLIES

100%

of concessions stands serve
vegetarian meal options to
Phillies fans.



EDWARD JONES DOME
HOME OF THE
SAINT LOUIS RAMS

100%

antibiotic-free,
humanely raised,
grass-fed beef hot dogs and
burgers are served to Rams fans.



MARLINS PARK
HOME OF THE
FLORIDA MARLINS

ABOUT **10,000**

pounds of unused
prepared food is donated
by the Marlins to local
seniors homes annually.



WELLS FARGO CENTER
HOME OF THE
PHILADELPHIA SIXERS/FLYERS

ALMOST **100%**

of serviceware
is compostable.



AMALIE ARENA
HOME OF THE TAMPA BAY LIGHTNING

125

hydroponic garden towers grow
organic food onsite for Tampa
Bay Lightning players and fans.

Case Study

LEVI'S STADIUM

HOME OF THE SAN FRANCISCO 49ERS

Location: Santa Clara, California

Opened: July 17, 2014

Owner: City of Santa Clara

Operator: Santa Clara Stadium Authority

Concessionaire: Centerplate

Seating Capacity: 68,500

Venue Uses: professional football (NFL), professional soccer (MLS), college football, wrestling (WWE), concerts and other events

LEED certification: Certified LEED Gold for New Construction, July 2014



"We hope that we are copied. We hope people try to one-up Levi's Stadium and get the LEED Platinum. People are going to start to ask questions: Why isn't our stadium like this? When your fans start asking that, you better deliver what consumers want." Jed York, San Francisco 49ers' CEO.

LEVI'S STADIUM'S GREENING STORY

The San Francisco 49ers' new stadium is the first professional football stadium in the United States to achieve LEED Gold certification under the U.S. Green Building Council's New Construction standard. Environmentally intelligent features at Levi's Stadium include a 27,000-square-foot green roof, efficient lighting and plumbing fixtures, high-efficiency HVAC systems, recycled building materials, electric vehicle charging stations, public transit access, and bicycle parking.

The 49ers play on a Bermuda Bandera grass playing field, which requires half as much water as typical NFL fields. The stadium uses recycled water, from the City of Santa Clara's recycled water system, for 85 percent of all water needs at the stadium, for uses such as for flushing toilets and playing field irrigation.¹ The 49ers' 10 home games during the NFL season will be powered by the 375 kilowatts of solar energy produced annually by the stadium's 1,162 photovoltaic panels. In the stadium concourse, fans can view a live display of data on the building's daily energy and water use and other statistics.

The 49ers worked with their contracted concessionaire, Centerplate, to build environmental considerations into their hospitality program throughout concessions, suites and catering. The stadium's menu items include antibiotic-free meats, vegan and vegetarian items, sustainable seafood, and certified organic and local produce.

LEVI'S STADIUM'S GREENER FOOD STORY

According to San Francisco 49ers' CEO Jed York, the team is committed to greener food because it's the Bay Area way of life. York says menu design and procurement choices at Levi's Stadium are crafted to meet the needs of 49ers fans. York explains, "We wanted to make sure the food that we use is local and organic as much as possible. It's about giving the stadium a Bay Area feel with great food, great atmosphere, great technology."

The 49ers' commitment to sustainable food options, particularly antibiotic-free hotdogs and a prevalence of vegan items, generated impressive positive press attention leading up to the opening of the stadium. "From the fresh, locally grown ingredients on menus to the investment in equipment, we are very excited to welcome guests to an unparalleled and highly differentiated stadium experience," says San Francisco 49ers President Paraag Marathe. The 49ers worked with Centerplate to incorporate environmentally preferable elements throughout their hospitality program, from sustainably produced ingredients to compostable serviceware and composting receptacles throughout the venue.



GREENER PROCUREMENT & MENUS

Centerplate chefs spent three and a half years developing the Levi's Stadium menu. They toured other NFL stadiums, surveyed 49ers fans and Bay Area residents, and refined their custom recipes. "We sought to create a hospitality program to usher in a new era of fan experience and to match the Bay Area's diverse culture," said Centerplate Executive Vice President Greg Fender.

From the outset, Centerplate and the 49ers aimed to draw from a wide variety of Bay Area cuisines to create a game day menu inspired by diverse local flavors. The 49ers' extensive vegan menu, for example, offers a nopales cactus torta sandwich, chickpea curry, BBQ jackfruit sandwiches, and ortobello mushroom steamed bao, in addition to a vegan burger and vegan hot dog. There is also a barbecue pulled jackfruit sandwich—a spicy vegetarian version of a pulled pork sandwich.

With a total of 40 vegetarian items (32 of which are vegan)—more than 20 percent of the full menu—Levi's Stadium has the most vegan and vegetarian items of any NFL stadium. "We made the decision to put a vegan item in every single concessions location and we made sure those items were appropriate to each of the concessions concepts," says Centerplate General Manager Zach Hensley. "In our Mexican stand, we have a braised nopales cactus torta sandwich, in our steamed bun [bao] stand we have a black vinegar portobello mushroom steamed bun, and in our barbeque stand we have a smoked jackfruit sandwich."

In its opening 2014-2015 season, 30 percent of all produce served at Levi's Stadium is USDA Certified Organic. The stadium also serves only seafood from sustainable fisheries, and cage-free eggs, in accordance with Centerplate's national sustainable procurement standards. Of all ingredients and products used at Levi's Stadium, 85 percent were sourced from within the state of California and 70 percent of food suppliers are from the Bay Area, within less than 150 miles from Santa Clara.

At Levi's Stadium, the signature "frankfurters" contain only antibiotic-free, hormone-free meat with a natural casing. Natural casings are made from the intestinal tract of farmed animals, such as sheep or pigs, and are edible. They are a great example of "whole animal use" (see Glossary). Artificial casings made of cellulose or plastic may not be edible and are more wasteful. Some artificial casings made from animal collagen, mostly from cows, can be edible but require more energy intensive processes to produce than natural casings.

The 49ers' more traditional game day menu items also include environmentally responsible and local ingredients. "Our burger is really cool, for example," says Centerplate Executive Sous Chef Dinari Brown. "The bun is from a bakery 10 minutes away, the beef is all fresh-ground, grass-fed from California's Masami Ranch (certified Never-Ever, meaning no use of antibiotics or hormones), and the lettuce and tomato is also from California. It doesn't get better than that."

STANDOUT GREENER FOOD ACCOMPLISHMENTS

- ▶ First LEED Gold certified NFL stadium under the U.S. Green Building Council's LEED for New Construction standard in the world.
- ▶ Thirty percent of produce is USDA Certified Organic, including romaine lettuce, kale, arugula, and spinach.
- ▶ All seafood is sourced from sustainable fisheries. This seafood includes albacore tuna from Pacific, Monterey Bay squid, white anchovy, Tomales Bay oysters, smoked salmon from Santa Barbara, Pacific salmon, and San Francisco Bay shrimp.
- ▶ Levi's Stadium serves a total of 40 vegetarian items (more than 20 percent of the full menu), of which more than 32 are vegan (17 percent of the full menu). As of June 2015, it has more vegan and vegetarian items than any other NFL stadium, with at least one vegan item at every concession stand.
- ▶ 85 percent of all fresh produce is procured from farms that use sustainable production practices.
- ▶ Of food suppliers, 70 percent are from the Bay Area, within less than 150 miles from Santa Clara. A total of 85 percent are from California.
- ▶ 60 percent of menu items are house-made, reducing packaging and external food processing waste.
- ▶ All shell eggs are cage-free.
- ▶ All menu items sold at Levi's Stadium have zero trans-fat.
- ▶ Most of Levi's Stadium food and beverage packaging/ serveware is recyclable or certified compostable.
- ▶ All of Levi's Stadium cooking oil will be recycled for use as biodiesel.
- ▶ All hot dogs (frankfurters) are completely antibiotic-free and hormone-free with a natural casing (see Glossary for more detail).
- ▶ All wine is from California wineries.
- ▶ Chardonnay and Pinot Noir from California-based Aiden Winery are available on tap throughout the stadium. Kegs reduce waste, transportation costs, and storage needs.
- ▶ More than 30 varieties of national and craft beer are available throughout the stadium, featuring several craft breweries that use more sustainable practices such as recycling and onsite renewable energy.
- ▶ Digital supplier storyboards at every permanent quick-serve location showcase Centerplate's use of local and environmentally preferable products.
- ▶ About 85 percent of Levi's Stadium waste is compostable.

“We made the decision to put a vegan item in every single concessions location and we made sure those items were appropriate to each of the concessions concepts,” says Executive Chef Ryan Stone. “In our Mexican stand we have a braised nopales cactus torta sandwich, in our steamed bun [bao] stand we have a black vinegar portobello mushroom steamed bun, and in our barbeque stand we have a smoked jackfruit sandwich.”

GREENER FOOD PREPARATION & SERVICE

Food preparation is executed onsite each day by a 350-person culinary team led by Chef Brown. More than 60 percent of menu items are prepared in-house, reducing packaging and external food processing waste while improving freshness. Levi's Stadium also has energy-efficient, live-fire kitchens throughout its concessions areas, designed to give Centerplate's chefs the capacity to cook more menu items from scratch using fresh, whole ingredients.

Each of the stadium's 500 permanent and quick-serve (cart) concessions have digital menu boards that detail Centerplate's use of local products and the names of local suppliers next to items, educating fans about their food's origins. The digital menus also include information about environmentally preferable ingredients in menu items, for example, by listing items that are “vegan,” “organic” or “cage-free.” Information about local suppliers and ingredients is also featured in the 49ers cellphone app, which allows fans to select in-seat delivery or pick-up orders.

WATER CONSERVATION

In response to rising drought concerns across California, Levi's Stadium prioritizes conserving water wherever possible. The 49ers' Bermuda Bandera grass playing field requires 50 percent less water to maintain than typical NFL fields. The stadium also uses the City of Santa Clara's recycled water system for 85 percent of water needs, such as flushing toilets and field irrigation. “With California experiencing historic drought conditions, the timing couldn't be better to showcase the benefits of using recycled water whenever and wherever possible,” says 49ers Vice President, Stadium Operations Jim Mercurio. “Fans visiting the stadium will become more aware of the importance and viability of incorporating recycled water to encourage a sustainable Bay Area water supply.”²

“We have been working with the team for years to combine smart data with operational expertise in designing our hospitality program, and to match the Bay Area's diverse culture and commitment to quality with the technological, environmental, and design innovations that Levi's Stadium offers,” says Centerplate General Manager Zach Hensley. “In every facet—from local sourcing to quality of products to speed and style of service—we are committed to ‘Making It Better To Be There’ (Centerplate's tagline) and changing the game for the fans and the community.”

The hospitality program also benefits from the stadium's energy efficiency initiatives. All refrigerators, freezers and icemakers are Energy Star rated. In addition, all walk-in refrigerators, ice-making equipment, and beer systems are water-cooled, which helps save energy.

Levi's Stadium is also outfitted with recycling and composting bins alongside every trash bin throughout the venue. Most of the disposable packaging and serviceware for food and beverages is recyclable or certified compostable. The stadium also uses reusable serviceware in suites and restaurants wherever possible.

WHAT'S NEXT?

York is confident that the 49ers' example will fuel competition across the NFL and the sports industry. “We hope that we are copied. We hope people try to one-up Levi's Stadium and get the LEED Platinum. People are going to start to ask questions: Why isn't our stadium like this? When your fans start asking that, you better deliver what consumers want.”

Super Bowl 50 Committee CEO and President Keith Bruce is convinced that there is a paradigm shift toward sustainability in sports. “We believe sustainability is a competitive advantage,” explains Bruce. He says that sustainability will be an important sponsorship vertical for Super Bowl 50, which will be hosted at Levi's Stadium in 2016. York agrees that sustainability will soon spread beyond concessions and sponsorships to all operations in order to connect with fans. “If you are not sustainably focused, you are not going to resonate with consumers,” says York.

1 Levi's Stadium, “Stadium Sets New Standard For The Use of Recycled Water,” June 20, 2014, <http://www.levisstadium.com/2014/06/stadium-sets-new-standard-use-recycled-water>.

2 Ibid.

Case Study

MODA CENTER

HOME OF THE PORTLAND TRAIL BLAZERS

Location: Portland, Oregon

Opened: October 12, 1995

Owner: Rip City Management

Operator: Rip City Management

Concessionaire: Levy Restaurants

Concessionaire Contract Established: April 2013

Seating Capacity: 19,441

Venue Uses: Professional basketball (NBA), hockey (WHL), football (AFL), concerts, family shows, conventions

LEED certification: Certified LEED Gold for Existing Buildings, Operations & Maintenance, January 2010. Recertified LEED Gold for Existing Buildings, Operations & Maintenance, May 2015



“Moda Center is a LEED Gold certified building, which sets the bar high for environmental work throughout the building, across all departments, and definitely for our food. It keeps us committed to going above and beyond on the environmental side.” Michael O’Donnell, Director of Operations for Levy Restaurants at Moda Center

MODA CENTER’S GREENING STORY

The Portland Trail Blazers are sports industry leaders in environmentally intelligent operations. Moda Center was the first professional sports arena in the world to achieve LEED Gold certification under the U.S. Green Building Council’s “Existing Building” standard. The Trail Blazers’ greening initiatives—including energy efficiency, ecologically preferable procurement, waste diversion, and sustainable food and beverage options —have saved the team more than \$3 million since 2008.

In May 2015, Moda Center achieved LEED Gold recertification for existing buildings. Sustainability efforts focused on reducing energy loads during peak and off-season times throughout the year. Whole building metering was incorporated, lighting was upgraded by converting to LED’s throughout, and a retro-commissioning plan was implemented. Management purchased 100 percent renewable energy offsets and voluntarily reports carbon reductions. The facility now tracks at an ENERGY STAR score of 80, indicating a high-performing, energy efficient building. An estimated 741,000 gallons of water is saved annually with efficient plumbing fixtures, and over 88 percent of the waste stream is diverted from landfill. In addition, through active fan engagement and education programs, over 43 percent of fans and visitors use alternative transportation to attend Moda Center events, and participate in recycling.

Moda Center’s concessionaire since July 2013, Levy Restaurants, has helped the venue excel with more sustainable procurement and menu design, efficient meal preparation, and food waste diversion through an extensive composting program. The Trail Blazers use only Marine Stewardship Council-certified seafood and cage-free eggs. They prioritize certified USDA Organic produce and antibiotic-free meats when available and price competitive (see the Glossary for details about these certifications and terms). Levy Restaurants partners with a variety of local producers to help provide local food and in-season menu options, including many vegetarian and vegan items.

MODA CENTER’S GREENER FOOD STORY

Sustainability was a top priority in choosing Levy Restaurants as Moda Center’s concessionaire in 2013. Environmental stewardship is part of the Trail Blazers’ identity, explains Michael O’Donnell, Director of Operations for Levy Restaurants at Moda Center. “When Levy Restaurants took over this contract in July 2013, we were tasked with pushing the envelope on environmental practices,” says O’Donnell. “Moda Center is a LEED Gold certified building, which sets the bar high for environmental work throughout the building, across all departments, and definitely for our food. It keeps us committed to going above and beyond on the environmental side.”



STANDOUT GREENER FOOD ACCOMPLISHMENTS

PROCUREMENT

- ▶ Of all food and beverage, 60 percent is obtained locally.
- ▶ Of all meat and produce, 30 percent is certified USDA Organic.
- ▶ All seafood is certified by the Marine Stewardship Council. (Corporate Levy Restaurants standard.)
- ▶ All fresh eggs (shell-on) are cage-free. (Corporate Levy Restaurants standard.)
- ▶ Levy procures USDA Organic Draper Valley Chicken.
- ▶ Levy uses Niman Ranch beef, pork, and sausage products, which are processed without hormones or antibiotics.
- ▶ Levy sources organic vegetables and fruit from local farms by working with Duck Produce.

WASTE MINIMIZATION & DIVERSION

- ▶ All food waste is composted.
- ▶ More than 95 percent of disposable food and beverage serving containers and packaging materials are compostable.
- ▶ More than 80 percent of the arena's waste is diverted from landfills.
- ▶ Recycling stations for visitors and a food waste composting program divert about 1,000 tons of waste from landfills annually.

The Trail Blazers awarded the arena concessionaire contract to Levy Restaurants because they believed Levy could deliver food that helps the team expand their local and national sustainability leadership. The team's sustainability program is driven by one overarching question: "How can the Trail Blazers make their community better?" The Trail Blazers' emphasis on more sustainable food options, valued highly in Portland, is one way the team leverages sustainability to partner with local businesses. Moda Center sells local food to support local farmers who share the team's environmental ethics, benefit their local economy, and help meet fan demand for local food.

Support from the franchise's leadership has been vital to achieving greener food goals, along with other environmental successes. Strong executive leadership in support of greening enabled the Trail Blazers' sustainability team to incorporate green initiatives across the venue. The Trail Blazers have a sustainability team composed of department leaders and frontline staff such as concession workers and cleaning managers. The sustainability team drafted a sustainability charter to articulate the environmental mission statement and priorities. This charter contributes directly to Moda Center's ongoing greener food service initiatives, guiding the arena's more sustainable procurement and operations. (Read more about the Portland Trail Blazers' sustainability charter in NRDC's 2012 report, *Game Changer*.)

Levy Restaurants started by suggesting procurement programs and concessions concepts that focused on more sustainable and local options for Moda Center's 70 concession stands, food portables (rolling concession stands), and bars. One example is Levy's Farm to Fork program. "Farm to Fork focuses on partnering with local farms, ranchers, brewers and vintners to create menus that are obtained from surrounding areas to give our guest a very specific Pacific Northwest feel and taste," says O'Donnell.

At the outset, Levy Restaurants mapped out a new concessions plan for Moda Center with a focus on publicizing the stories of local food suppliers. "It was fun to do because there's so much great artisanal produce and great people making food in the Portland area," says O'Donnell. "We started by bringing in a handful of well-known local restaurants such as Salt and Straw, Sizzle Pie, and Killer Burger, all of whom use local and more

sustainable ingredients,” explains O’Donnell. “We prioritize partnering with restaurants in the area that share a similar view about using more sustainable products and buying from local farms as a means of extending our environmental purchasing priorities.”

Levy Restaurants’ approach to food at Moda Center has been very popular. “We get a lot of positive feedback in the press and from fans about how we’ve changed the arena look and atmosphere to one where you feel like you’re walking down the street in Portland,” explains O’Donnell. “We now have that local flair and more authentic local feeling.”

This model of bringing in local brands that serve higher quality, responsibly grown food has also had strong financial returns for the Trail Blazers. “We have certainly had increased sales. In several places where we have brought in a local partner we have seen the sales go through the roof,” says O’Donnell. “A lot of it is about who we are selecting to work with, vetting them carefully, making sure we agree with their ingredients and practices.”

Companies, brands and suppliers with a sustainability focus that Levy works with include:

- Beaverton Foods
(various items including condiments and sauces)
- Don Pancho (tortillas and similar items)
- Cage Free Eggs (shelled and liquid)
- Trans Fat-Free fryer oil
- Draper Valley Farms (chicken)
- Carlton Farms (pork)
- Duck Produce (local and seasonal sourcing)

“We use 100 percent grass-fed beef from Washington, and a closed circuit of ranchers extending into Oregon and Idaho who are committed to raising beef that is antibiotic and hormone free,” O’Donnell said. “Each week, all ranchers that sell into our program must sign an affidavit verifying that all our standards are met. The animals are harvested at Schenk Packing in Stanwood, Washington.”

GREENER PROCUREMENT & MENUS

At Moda Center, Levy now employs the same environmentally preferable procurement practices they use at all their venues. “Levy has definitely been a driver toward better practices. We have a lot of existing Levy initiatives that we have expanded at Moda Center,” says O’Donnell. “For example, we purchase responsible meat products like those from Niman Ranch, which are raised more humanely and without the use of antibiotics, among other sustainable measures (see Niman Ranch sidebar). This purchasing priority was something that Levy brought in, not something Moda Center had done before. All U.S. Levy properties use Niman Ranch products and every single venue has the option to use those products—and 100 percent of the properties do use them to some extent.”

Levy Restaurants uses its considerable buying power to encourage regional buyers to buy more environmentally sound products, according to O’Donnell. “Levy provides support and leadership on everything, from guiding us on which seafood to avoid because it is not environmentally sustainable to picking the right zero trans-fat oil to making sure we have the best wine selections,” says O’Donnell.

This mutual investment in more responsible, more sustainably produced and local products by Levy Restaurants and the Trail Blazers has helped Moda Center achieve impressive

procurement benchmarks. “We are using about 30 percent USDA Organic certified products on any given event day and we are looking to expand on that,” says O’Donnell. “We’re also using close to 60 percent local product arena-wide.”

“All of our seafood is certified by the Marine Stewardship Council. We use Niman Ranch beef, pork, and sausage products, which are processed without hormones or antibiotics,” continues O’Donnell. “We work with Food Services of America (FSA) to source organic chicken for the entire venue from Draper Valley Chicken. 100 percent of our fresh eggs are cage free. For produce, we use a local company called Duck Produce that relies on multiple farmers in the area to provide us with fantastic local, organic vegetables and fruit.”

Levy Restaurants is also proud of their local sourcing program at Moda Center. “Our coffee and ice cream are from a farm literally right up the road. We use Zenner’s Hot Dogs, which are made minutes away from the arena,” says O’Donnell. “We are lucky that we have a lot of excellent food made in Portland. But many other facilities around the country also have great products in their backyards. Venue managers need to begin to have the conversation about local and sustainable food and recognize that it’s not necessary or preferable to source food and beverages from 3,000 miles away.”

LOCAL PARTNER FEATURE

WIDMER BREWERY

“We work with a local craft brewery named Widmer Brothers Brewing, which actually has a small satellite brewery right behind my office,” says O’Donnell. “Not all of their beer is not getting shipped to us by truck—some of it is literally walked here, using a handcart, from the on-site brewery.”

Widmer Brewery is a member of the Craft Brew Alliance, which issues an annual sustainability report and prioritizes environmentally preferable operations such as waste diversion programs, carbon footprint reporting, water and energy efficiency programs, and pursuing renewable energy (learn more in the Glossary). The brewery partners with local farmers and delivers spent yeast, hops, and grain back to the farms for use as animal feed. “It’s great that the brewery partners with farmers to get responsibly produced crops out of the ground and then recycles the waste produced by the brewery by putting it back into the farms,” explains O’Donnell. “I think it’s a great story.”

The Widmer partnership has also allowed Levy Restaurants to create personalized beers for Moda Center. “It’s been a fun project working with them and even developing recipes during the first half of 2014. They are developing a beer specifically for us right now called ‘post-seasonal ale’ because we’re about to enter the playoffs,” says O’Donnell.

PARTNER FEATURE

NIMAN RANCH

Niman Ranch supplies Moda Center with beef, pork, and sausage products, which are processed without hormones or antibiotics. “The tenets of our brand are family farms, sustainable agricultural practices, the highest animal welfare, traceability, and never, ever hormones or antibiotics,” says Niman Ranch CEO Jeff Swain. The Niman Ranch network includes more than 700 independent American farmers and ranchers. They all share Niman Ranch’s dedication to the strictest protocols and the belief that all-natural, humane, and sustainable methods produce the best possible flavor. These standards include:

- ▶ Humanely raised by the largest network of U.S. family farmers and ranchers
- ▶ No antibiotics or added hormones—ever
- ▶ Only the finest all vegetarian feeds

“At Niman Ranch, the animals are never, ever given antibiotics. In the rare instance that an individual animal becomes sick and requires treatment with antibiotics, it is treated and removed from the Niman Ranch program. Niman Ranch opposes using growth hormones and prohibits their use for all livestock,” explains Swain. “Growth hormones, which are outlawed in much of Europe, raise a number of environmental, animal health, and human health concerns. Our farmers and ranchers believe that animals should be allowed to mature naturally.

“The focus was really about creating a brand and creating the best-tasting, most wholesome, and wonderful food, and we felt that eventually it would become profitable,” says Bill Niman.

Niman Ranch is committed to environmental and economic sustainability. “Sustainability at Niman Ranch incorporates sustainable agricultural practices with economic sustainability for the farmers, the ranchers, our customers, and our employees, all of [whom] are integral parts of Niman Ranch’s overall business philosophy of ‘Raised With Care,’” says Swain. “We believe sustainable agriculture is best described as livestock raising and production practices [that] balance current resource demands without compromising the future of these resources, from an environmental, economic, and human perspective.”

For beverages, Moda Center features an array of local and environmentally responsible wines and craft beer. “People expect to find good beers here. We have Widmer, Laurelwood, and Pyramid, three local sponsors from Oregon and Washington beers at Moda Center,” says O’Donnell. “There is absolutely a business case for bringing in local craft beer. It’s something that people are not only wanting but willing to pay for—a quality, local product. I think there’s an endless desire from the guests for these quality, local products.” Widmer and Pyramid breweries are both part of the Craft Brew Alliance, which issues an annual sustainability report and prioritizes environmentally preferable operations such as extensive waste diversion programs, carbon footprint reporting, water and energy efficiency programs, and pursuing renewable energy. (Learn more in the Glossary.)

Through their many partnerships with local suppliers, Levy Restaurants is supporting the regional economy and helping to maintain demand for more sustainable, responsible food production. “When you sell to a large building like Moda Center, it means a much greater volume for many of our local partners,” says O’Donnell. “Bringing products into the building from a local, sustainable rancher, for example, really expands the supplier’s visibility and helps to grow their business.”

GREENER FOOD PREPARATION

Moda Center’s commitment to greener food practices is not limited to front-of-house operations. Levy Restaurants uses a program called Trim Tracks to monitor food waste in all the arena’s kitchens. The program requires kitchen staff to measure their scraps on large kitchen scales at the end of each night. Staff are required to review the food scraps and come up with strategies to minimize the waste in the future with more precise cuts during food preparation or finding creative uses for scraps.

“Trim Tracks is essentially an awareness program for our chefs and team members to see how much food waste we produce, from carrot tops to the fat trimmings off meat,” explains O’Donnell. “All scraps are measured and that’s a powerful visual, as well as record, for staff to have.”

In addition to the ecological motivation to minimize food waste, reducing the amount of food disposed also saves money. “The Trim Tracks program lets us know how much money we are throwing away. It has helped us reduce by a huge amount the food waste that was being thrown away,” says O’Donnell. “When as much as 20 percent of landfill space is taken up by food waste, we’re proud to be able to significantly reduce our food wasting and also compost the scraps we do produce. That’s really positive.”

GREENER FOOD SERVICE & WASTE PRACTICES

Because the surrounding community has invested in recycling and composting infrastructure, 86 percent of Moda Center’s waste is diverted from landfills. The arena features recycling stations and an extensive front- and back-of-house food waste composting program. These initiatives divert about 1,000 tons from landfills annually. All of Moda Center’s food waste is composted. In order to maximize composting, the arena relies solely on compostable food and beverage serveware provided by Stalk Market.

"We are one of only a handful of professional sports venues using only compostable serviceware and packaging materials," says O'Donnell. "We don't use disposables in any of our suites, replacing them with reusable serviceware. 100 percent of napkin dispensers at Moda Center are also one-at-a-time systems to minimize waste." Moda Center also only uses disposable napkins made with recycled content.

Moda Center partners with Republic Services to haul all organic material from the arena to a composting facility. "They make compost out of our food waste and I actually have some of that compost sitting in my office to use on my home garden. It's a cool full-cycle," says O'Donnell. "We are also recycling all our cooking oil, which is converted to biodiesel that powers buses in Portland."

The Alleviate Hunger Program redirects unserved food at the Moda Center to families in need in the Portland area. After every event at the Rose Quarter, locally-based Urban Gleaners collect hundreds of pounds of food that volunteers then sort, pack and deliver to schools, community organizations and free farmers markets.

WHAT'S NEXT?

With ongoing assistance from Green Building Services, the Moda Center continues to up its sustainability game through new initiatives, internal policies, and creating meaningful fan and vendor engagement. Management has renewed their commitment to accountability for environmental stewardship, and helping Portland become the greenest city in the nation.

Transforming the arena's concessions to support sustainability objectives brings some market challenges. "We have some corporate sponsorships that unfortunately require us to serve certain food and beverage products, which is unavoidable at this stage. But we are looking for ways to overcome those sourcing limitations," says O'Donnell. "I think it's just a matter of continuing to find those companies that align with our values and expanding our relationships with current contractors who support our sustainability goals."

The venue could also benefit from expanding fan education about the value of more sustainable food, according to O'Donnell. "Education still needs to take place with some of our fans. Sometimes people don't know why a grass-fed beef burger is going to be a little more expensive than your run-of-the mill frozen patty," he says.

"More and more people do understand that sustainable food production practices are not only great for the environment but also for the flavor of the product. It's just more delicious!" says O'Donnell. "I think prior to Levy coming into the building, they didn't quite know what they were missing. Now that we've offered some of these great options, I think it's just going to get better and better. A lot is going on here, arena football, basketball, hockey, music fans. We hit a lot of demographics of people here with our message."

So far the Portland community has been receptive to the Trail Blazers' efforts and continues to support the team's expanding greening program. "Our efforts have only received positive feedback, including thousands of positive media articles, local achievement awards, and immense fan applause," observes O'Donnell.



HEALTHY FOOD OPTIONS

PLUM TASTY

"We have partnered with Moda Health, which has the naming rights for the building, to provide some healthier food options at Moda Center," says O'Donnell. "I worked with their nutritionist to come up with healthier menu options, including some vegan and vegetarian, on a new concessions cart called Plum Tasty."

Plum Tasty offers a variety of "grab-and-go" options that meet specific nutritional guidelines. Each menu item from this cart has minimally processed whole food ingredients and less than 35 percent calories from fat, with a focus on healthy fats and less than 600 mg of sodium.

The cart also features specialty gluten-free and dairy-free items. Registered dietitian and a coach with Moda Health Chrissy Cralen worked with Levy Restaurants to establish guidelines for the Plum Tasty menu. "As a healthcare company, we are intently aware of the importance of healthy living – which begins with a balanced diet," says Cralen. "Our partnership with the Trail Blazers is much more than our name on the side of the arena. We truly want to use this platform to help people achieve their health and wellness goals."

"During our process of reshaping the food and beverage offerings inside Moda Center, our goal was to deliver a wide range of food categories—including healthier food options," says O'Donnell. "Being able to work with Moda's dietitian on the menu items made this a seamless and enjoyable process."

"More and more people do understand that sustainable food production practices are not only great for the environment but also for the flavor of the product. It's just more delicious!"
Michael O'Donnell.



Grilled Sourdough and Heirloom Tomato Toast

One Loaf Thick Sliced Sourdough Bread
 2 Large Certified USDA Organic Heirloom Tomatoes, the
 brighter and different the coloring, the better presentation
 2 tbsp. River Ranch Oregon Olive Oil
 ¼ cup Good Quality Balsamic Vinegar
 8 oz. Burrata Cheese
 Sea Salt, I prefer Malden Salt
 4 each Fresh Basil Leaves

Turn your grill on to 400 degrees. Lightly brush both sides
 of the sourdough bread slice with olive oil.
 Put the ¼ cup of balsamic vinegar into a cold sauce pot.
 Put over medium heat until the vinegar has reduced by half.
 Set aside.

Once the grill is nice and hot, Grill Bread on both sides
 getting cross hatch marks. Cut the slices of bread on a
 bias, and set aside.

On a plate with a spoon, drizzle the thickened vinegar
 around the plate. Set the slices of bread on the plate. Thick
 Slice tomatoes and layer on top of the bread. Slice Burrata
 Cheese, and layer these on top of the tomato. Roll the basil
 leaves into a tight tube and with a very sharp chef's knife
 slice the basil across the leaves creating long thin strands.
 Lightly sprinkle the strands over the cheese. Lightly
 sprinkle with sea salt.



Case Study

BELL CENTER

HOME OF THE MONTREAL CANADIENS

Location: Montreal, Québec

Opened: March 16, 1996

Owner: Molson Family

Operator: Molson Family

Concessionaire (suites and catering): Levy Restaurants

Concessionaire (concessions): Bell Center (in house)

Concessionaire Contract Established: 2001

Seating Capacity: 21,273 (hockey), 22,114 (basketball)

Venue Uses: Ice hockey, basketball, lacrosse, concerts

LEED/ISO Certification: Certified LEED Silver for
Existing Buildings: Operations and Maintenance in
October 2009, ISO 14001 certified



“When developing our menus, we first look to source the freshest ingredients available in Québec. We have a mission to get as many local products as we possibly can. Not only to reduce the carbon footprint of what we source and our impact on the environment, but also because people from Québec are so proud of the local terroir and we want to feature what Québec is known for.”
Ed Hunt, Director of Operations for Levy Restaurants at the Bell Center.

BELL CENTER'S GREENING STORY

In October 2009, the Bell Center, home of the Montreal Canadiens, became the first NHL LEED-certified arena and the first NHL arena to achieve the LEED Silver level. A month later, the Bell Center was awarded the International Organization for Standardization's 14001 certification for implementing an environmental management system. The arena is the only professional sports venue in North America to receive three independent environmental certifications: (1) LEED Silver for Existing Buildings (EBOM), (2) ISO 14001, and (3) Québec's ICI ON RECYCLE Level Three (the highest level). In 2014, the Canadiens planned a renewal of their LEED EBOM certification.

The Canadiens' sustainability commitment extends to hospitality. In partnership with their premium business concessionaire, Levy Restaurants, the team has pursued greener food and beverage for all 135 arena suites, three in-arena restaurants, player meals, and event catering. This includes only sourcing sustainably produced seafood recommended by the Monterey Bay Aquarium, sourcing more than 85 percent of food from within Québec, and designing menus to feature many vegetarian options and seasonal produce. The Bell Center has also achieved a more than 80-percent waste diversion rate by donating unsold food to a homeless shelter one mile away and implementing an extensive recycling and food composting program.

BELL CENTER'S GREENER FOOD STORY

GREENER MENU DESIGN & PROCUREMENT

“Levy Restaurants' culinary philosophy is driven by sustainability,” says Ed Hunt, director of operations for Levy Restaurants at the Bell Center. “Not only is this part of the heart and soul of our company, but the tastes and preferences of Montrealers also influence us to incorporate sustainability into our menu engineering at the Bell Centre.”

Levy Restaurants' commitment to sustainability has helped the Bell Center offer environmentally preferable food in the arena's premium areas including suites, restaurants, and catering (the Bell Center runs all concessions-level food with their in-house hospitality group). This commitment includes greener food initiatives such as Levy Restaurants' sustainable seafood policy and Farm to Fork sustainable food stands.

"We are committed to Levy Restaurants' company-wide program to use the Monterey Bay Aquarium Seafood Watch as our guide for all seafood procurement," says Hunt. "We want to make sure we are practicing safe, environmentally friendly menu choices for all of our seafood."

In addition, Hunt's team at the Bell Center seeks to create a versatile menu that prioritizes locally produced, seasonal ingredients. "We recognize that our guests are more knowledgeable than ever about the foods they choose to eat. The quality of food produced and cultivated in Québec is at an all-time high," says Hunt. "When developing our menus, we first look to source the freshest ingredients available in Québec. We have a mission to get as many local products as we possibly can. Not only to reduce the carbon footprint of what we source and our impact on the environment, but also because people from Québec are so proud of the local terroir and we want to feature what Québec is known for."

Hunt explains that their menus are adaptable to fluctuations in the availability and cost of ingredients. "We think creatively about how food can be prepared and how menus can be altered in changing market conditions. If for some reason costs spike for certain ingredients we adapt specific recipes by switching to lower cost proteins or to vegetables. There are significant rising costs of beef right now, both economic and environmental, so our chefs have focused on featuring alternative forms of proteins in more of their recipes. Right now we are pursuing seafood," explains Hunt. "As Montreal is an island, we have easy access to the Atlantic Ocean and Gaspésie, for example, and we are in a geographical location where people really enjoy seafood. We're proactive about finding those alternatives to incorporate into our menu that are more economical and more sustainable."

Levy Restaurants' company-wide Farm to Fork hospitality program, which serves only locally sourced ingredients, has also been very successful at the Bell Center, reports Hunt. "The Farm to Fork chef's table in our restaurants is about pairing up with local farmers and suppliers to serve as many local ingredients as we possibly can. They are very popular," says Hunt.

"In fact, given the great success of our permanent chef's table, we just released a special Farm to Fork catering package," says Hunt. "It changes monthly during the hockey season and is devoted to highlighting the freshest local food available during different times of the year." Again, Hunt explains that the Farm to Fork catering menu spinoff at Bell Center features only locally sourced (meaning from within Québec) and more sustainably produced ingredients such as free-range chicken. "Sustainable packages like this one help us distinguish in-arena restaurants, it gives us a point of difference from other restaurants around Montreal, which is very important to us," says Hunt.

GREENER FOOD PREPARATION & SERVICE

Levy Restaurants' culinary team at Bell Center includes a full-time employee (a saucier) who makes sauces for many of their recipes. Hunt notes that the saucier plays a vital role in minimizing food waste in the kitchen. "Our in-house saucier has been making sauces from literally bare bones for many years. He makes beautiful stocks and reductions with the trimmings from meats and vegetables used in all kinds of dishes," explains Hunt. "We also use 'rationale ovens' which allow us to cook our proteins more efficiently. They work by steam-cooking meat, which helps to reduce shrinkage. It allows us to maximize the meat available to us."

To avoid food spoilage and minimize overproduction, the Levy culinary team keeps records of restaurant, suite, and catering ordering practices. This practice goes back to 2001, when the arena opened. Hunt calls it their "just in time" ordering system, as the chefs can accurately predict the volume of food needed each day. "We're a very mature business now and we have a back office system (BOS) that allows us to generate orders for our suites," explains Hunt. "As our restaurants are completely sold out for hockey, we know exactly what we need to order and we can bring it in exactly when we need it and not have a lot of raw products left over at the end of an event."

The kitchen arrangement at Bell Center also helps Hunt's team minimize food waste during preparation. "One of the best ways that we minimize our waste is by having a central kitchen where all food is prepared and then sent to satellite kitchens in all restaurants near the luxury suites," says Hunt. "In the main kitchen we can do all of our bulk preparation, then on the day of an event that food gets dispatched to the satellite kitchens where it's kept warm or reheated before sent out to guests. At the end of an event, all food in the satellite kitchens comes back to our central prep kitchen, which helps us keep tabs on all food we have in house and avoid waste by storing unused ingredients in bulk or donating unsold prepared food."

GREENER WASTE PRACTICES

The Bell Center's waste diversion practices were vital for achieving their three independent environmental certifications since 2009. "We recycle and compost roughly 80 percent of all materials that come into the building. We have separate compost and recycling bins in every kitchen," says Hunt. "Our staff is trained on what goes where and we have pictograms that explain the bins, which has been really effective. The waste work is something that we've supported the Bell Center staff wholeheartedly on and I'm really proud of the fact that we compost as much as we do."

Levy Restaurants is able to help prevent waste by avoiding disposables in all suites. "In our suites we serve all our food on china, glass, and silver, so there is no disposable serveware. We produce much less waste that way," says Hunt. "All of our suites have a dishwasher so that we can keep our suite holder's china glass clean and organized by suite." The disposable serveware and packaging used throughout the arena concessions is all compostable. (Read more about the Bell Center's waste diversion strategies in NRDC's 2012 report, *Game Changer*.)

Since 2008, The Bell Center has partnered with Levy Restaurants to donate all unsold, untouched leftover food. "Our food donation program has also been really effective. It is a partnership with a local nonprofit called 'La Table du Chef' or 'The Chef's Table,' which helped us put together a process for donating leftover food following every single hockey game and larger concerts," explains Hunt.

"After all hockey games, we package up leftover food from suites and restaurants into containers that go into a cooler immediately. The packaged food is picked up the next day and donated to local food shelters," explains Hunt. "A lot of what we donate goes to a shelter that is two blocks away from the Bell Center called the Welcome Home Mission. So we are feeding homeless people in the surrounding area of the Bell Center, which I think is unique and impactful. On the premium end of the business itself we're donating more than 50,000 meals a year to the homeless."

WHAT'S NEXT?

Hunt's team at Levy Restaurants does extensive research ahead of designing their menus at the Bell Center in an effort to continuously improve. "The number one most important thing we ask our guests is what they liked and what they didn't like about the menu the year before," explains Hunt. "We engage a third party marketing agency to do three different surveys, two during playoff games and one during a concert event. That provides the full span of guests that come on a hockey night versus a show night, giving us insight into what their tastes and preferences."

Hunt sees potential for integrating some of Levy Restaurants' success with locally sourced dishes into the Bell Center's in-house concessions menus. An expanded fresh and local food campaign could build off of their existing healthy options. "The Bell Center's concessions have introduced healthier options such as salads and wraps," says Hunt. "For example, they have a sponsorship with Fontaine Sante, which is a local company that makes tabbouleh salads and hummus, among other healthier options. So they've incorporated some of these items as healthy options at selected stands."

"Given the great success of our permanent chef's table, we just released a special Farm to Fork catering package," says Ed Hunt. "It changes monthly during the hockey season and is devoted to highlighting the freshest local food available during different times of the year. Sustainable packages like this one help us distinguish in-arena restaurants, it gives us a point of difference from other restaurants around Montreal, which is very important to us."



STANDOUT GREENER FOOD ACCOMPLISHMENTS

- ▶ Of the meat served at the Bell Center, 85 percent comes from Québec.
- ▶ Fish and seafood is purchased as close as possible to Montreal (at least 85 percent is local) and follows sustainable fishing recommendations from the Monterey Bay Aquarium Seafood Watch.
- ▶ Of dairy and cheeses, 95 percent are purchased locally. The Bell Center has a corporate sponsorship with Agropur, one of the largest Dairy Cooperatives in Québec.
- ▶ Of bread and bakery goods, 85 percent are purchased from Québec. The Bell Center's bread is baked by Boulart, which is 11 miles away from the Bell Center.
- ▶ Of fruits and vegetables, 40 percent are purchased locally based on seasonal availability:
- ▶ Year-round, Levy Restaurants buys Québec mushrooms, herbs, sprouts, carrots, peppers, potatoes, eggplant, beets, cauliflower, tomatoes, and lettuce
- ▶ In the summer, Levy purchases, wild strawberries, blueberries, blackberries, raspberries, apples, and pears from Québec
- ▶ All Bell Center suites, restaurants, and concession stands feature vegetarian options, including penne pasta salad, beet carpaccio, market fresh salad, Québec cheese tasting, and a ricotta and mozzarella tortella.
- ▶ During the in 2014-15 season, the Montreal Canadiens donated 24,5 tons of food, the equivalent of 70,000 meals to local charities.



***Gilles St-Hilaire's
Featured Recipe***

***Slow Roasted Québec Lamb
with Porcini Mushroom
Risotto***

6 servings

Slow roasted for 14 hours, basted with herbs, served with porcini mushroom risotto and pan seared orange and yellow carrots with shallots.

First, prepare the roasted lamb and hot hold on the top of the stove. Then, prepare the vegetables to add to the finished risotto. Present as pictured or on individual plates. Garnish with micro greens.

Ingredients for the roasted lamb:

1 lamb shoulder Quebec (2.8 lbs.)
1 3/4 oz. Dijon mustard
1/4 oz. coarse salt
1/4 oz. crushed black pepper
1 3/4 oz. carrots
1 3/4 oz. green celery
1 3/4 oz. large Spanish onions
1 3/4 oz. leeks
3/4 oz. garlic
3/4 oz. thyme
3/4 oz. Rosemary
1/2 oz. bay leaf
1 3/4 oz. tomato paste
1 3/4 oz. flour
3/4 oz. white wine
17 oz. demi-glaze (see recipe)
Butcher twine

Method of preparation:

Debone the lamb shoulder and season the meat with mustard, herbs pepper and salt. Marinate for 24 hours. After marinating, tie the shoulder roast. Wash, peel and dice the vegetables into mirepoix. Sear the lamb shoulder in a roasting pan quickly at high heat and let the meat stand. In another pan add the mirepoix and sweat the vegetables until nicely browned. Dust the mixture lightly with flour then deglaze with white wine and reduce by half. Combine the lamb shoulder and mirepoix mixture and bring to a boil. Cover and bake 320 degrees for 14 hours. After cooking, remove the meat and set it aside. Reduce the remaining liquid if necessary to a nappe (silky smooth) consistency and adjust the seasoning if necessary. Strain and set the liquid aside as it will become the sauce. Cut the lamb into 1 1/2 inch slices and allow it to cool in the fridge. Warm the roasted lamb for 5 minutes at 350 degrees in the oven and drizzle it with the sauce prior to adding the Porcini mushroom risotto and pan seared orange and yellow carrots.

Case Study

FIRSTENERGY STADIUM

HOME OF THE CLEVELAND BROWNS

Concessionaire: Aramark

Concessionaire Contract Established: 2012 for Premium Services, 2014 for General Concessions

Location: Cleveland, Ohio

Opened: September 12, 1999

Owner: City of Cleveland

Operator: Cleveland Stadium Corporation

Seating Capacity: 67,389

Venue Uses: NFL/NCAA football games, concerts, soccer, special events



“Our chef-inspired concession stands have been such a tremendous success that it’s in our best interest to support them with the best ingredients we can. That means continuing to focus on building local relationships with organic farmers, sustainable fisheries, and distributors that value sustainability as much as we do,” Jessica Jacobson, General Manager for the Cleveland Browns Hospitality Group.

FIRSTENERGY STADIUM’S GREENING STORY

FirstEnergy Stadium’s external lighting consists of energy-efficient LEDs. The stadium’s field surface is planted with Kentucky Bluegrass, which is native to the state of Ohio and thrives in the cooler temperatures of Cleveland’s football season. In July 2013, in partnership with Ohio State University’s College of Agriculture, the Cleveland Browns installed a Grind2Energy system to help direct food waste to anaerobic digestion. The system grinds food waste into slurry and stores it in a holding tank; the contents are then transported to a facility in urban Cleveland five miles from FirstEnergy Stadium. It is then fed into an anaerobic digester operated by Quasar Energy to create biogas and fertilizer. From July 2013 to September 2014, the system helped divert nearly 40,000 tons of food waste from landfills.

The Browns have assembled a team of local chefs known for their sustainable food practices to enhance game day food at FirstEnergy Stadium. One of the team’s chefs opened Ohio’s first restaurant to be certified by the Green Restaurant Association. The chefs prioritize seasonal and more sustainable ingredients, including all antibiotic-free chicken, cage-free eggs, grass-fed beef, and organic produce grown within 50 miles of the stadium. In addition, the Browns offer vegetarian options at every concession stand throughout the venue.

FIRSTENERGY STADIUM’S GREENER FOOD STORY

In 2012, FirstEnergy Stadium contracted with Aramark Service to provide food service for the suites, special events catering, and club-level food concessions. Initially, Aramark focused on serving fresh, local, vegetarian, and healthier options to the premium food service areas. From 2012 to 2014, per capita food sales increased by 30 percent. In 2014, Aramark was contracted to expand their concession operations throughout the entire venue, focusing on a Cleveland-specific dining experience. “Aramark has hit the nail on the head with what they’re doing here—local chefs, local products, house-made—all of that makes eating at the stadium more of a Cleveland experience,” said Brent Stehlik, Cleveland Browns executive vice president and chief revenue officer in a 2013 press release.¹



Jessica Jacobson is the general manager for the Cleveland Browns Hospitality Group, a joint effort between Aramark, the Cleveland Browns, and the four guest chefs (Michael Symon, Rocco Whalen, Jonathon Sawyer, and Chris Hodgson). The group is responsible for all food procurement and preparation in the premium areas, which include club levels, suites and special event spaces. As of first preseason game in August 2014, this included the concessions level as well. “Our focus here is on fresh food. Fans get to see what food is being prepared and how,” says Jacobson. “We have a heavy focus on fresh, local food preparation. Fans like to know where their food is coming from.”

Jacobson recognizes that the local sustainable food movement in Cleveland is evolving. Bringing in local chefs who are well known in the community has helped the stadium adapt to local food preferences and attract fans. “We love being a part of this time of stadium food service. It’s come a long way. The celebrity chefs are very active in this,” continues Jacobson. “We talk frequently with the chefs on what food we procure for the stadium. We have this vast amount of culinary knowledge and resources.”

The guest chefs operate eight of the 12 premium-level concession stands. “A lot of the local and sustainable food we source comes through these chef partners, and that’s a significant quantity because of the amount of food we serve with these partnerships. We collaborate with them on their recipes and what we think works in a stadium environment. We use their preferred sources for ingredients in their recipes, whether that be an organic farmer or a meat provider,” says Jacobson.

One of the stadium’s guest chefs is Jonathon Sawyer, who opened the Greenhouse Tavern in Cleveland in 2008. The Greenhouse Tavern was the first restaurant in the state of Ohio to receive both LEED certification and Green Restaurant Association certification. “Sawyer has a tremendous focus on locally sourced and sustainable meat and produce. He has a very green agenda in his restaurant and has brought those values to the Cleveland Browns,” says Jacobson. The Greenhouse Tavern was one of four finalists in the Nature Conservancy’s 2014 Nature’s Plate contest for the region’s “most sustainable restaurant,” based on local/seasonal organic produce, sustainable seafood, and free-range and grass-fed meat. Sawyer runs two “Sawyer’s Street Frites” concession locations at FirstEnergy, using the same procurement standards he uses at his restaurants. Dishes include Lake Erie-caught fish and chips and organic, Ohio-grown Brussels sprouts. Sawyer makes his own vinegar, which he substitutes for citrus given the recent global lime shortage. Sawyer also uses Bell & Evans organic chicken. In 2014, he opened two “Sausage & Peppers” locations in FirstEnergy’s main concourse. This latest Sawyer concept at the stadium features local Publican Quality Meats Sausages served on rolls from local Orlando Breads. The produce is griddled with Sawyer’s Tavern Vinegars.

Chef Mike Symon, a Cleveland native and 2007 Iron Chef America winner, also runs three locations at FirstEnergy Stadium. At the “B Spot”—which the Food Network voted as having the best burger in the United States for the last four years—Symon sources Pat LaFrieda beef, which is 100 percent antibiotic- and hormone-free and primarily grass-fed.

Chef Rocco Whalen’s “Rosie and Rocco’s” and Chef Chris Hodgson’s “Hodge Podge” concessions offer vegetarian and vegan options made from USDA-certified organic ingredients. Chef Rocco Whalen is visible at every single game often behind the stand dishing out meatballs or cooking cheesesteaks. Hodgson actively engages fans on social media, often releasing impromptu surveys for his food fans on Facebook asking what they would like him to serve.

Hodge Podge serves a tofu dog that has been well received by Browns fans. “I think 10 years ago we might not have even thought about have a vegetarian hot dog at a hot dog stand. Today, it’s very important for us to have this vegetarian option so that people have the choice to purchase a healthy and creative hot dog,” says Jacobson. “I think often vegetarian folks get a frozen veggie burger, thrown on a bun with some lettuce and tomato. We serve a product that is new and exciting. The ‘Tofun Dog’ is a tofu dog with shredded romaine, pickled jalapeno, Stadium Mustard, stewed tomato, and green onion and feta cheese.”

Aramark also has a number of greener stadium-wide procurement standards. “We always use 100 percent cage-free shell eggs and eggs that are organic, when we can source them, through our high-volume food provider, Sysco,” explains Jacobson. “For our organic produce, we work with Chef Garden, which is a farm that is about 50 miles away from us in Cleveland. We also use a local produce company called Sirna & Sons, which is only 40 miles away. We get organic produce from them as well particularly in our winter months and later in the year when we don’t always have the ability to order organics through our large distributors,” says Jacobson. FirstEnergy Stadium features a vegetarian option at every concession stand.

GREENER FOOD WASTE PRACTICES

The Cleveland Browns Grind2Energy program was the pilot project for a NFL-wide rollout of Grind2Energy systems for all venues. This project is a collaborative effort between the USDA’s Innovation Center for U.S. Dairy and the EPA to promote adoption and support of anaerobic digesters throughout the country. Food waste at FirstEnergy Stadium is run through a processor, turned into slurry and held in a 3,000 gallon holding tank for transport to an anaerobic digestion facility in the Cleveland neighborhood of Collinwood operated by quasar energy group, which digests

the organic waste to produce fertilizer as well as biogas for energy use. According to the USDA, if diversion of food waste to anaerobic digestion is adopted throughout the NFL, about 620 tons of food scraps will be diverted from landfills annually. That translates into a potential reduction of carbon dioxide emissions by 465,000 pounds per year, along with the creation of almost 87,000 pounds of chemical-free fertilizer.

Cleveland Browns President Alec Scheiner said in a 2013 press release, “One of our top priorities is innovation, and this new system not only helps our stadium operate efficiently but also preserves valuable resources in our community.”² In addition to the anaerobic digestion project, the Browns work with programs such as the EPA’s WasteWise and Energy Star to track and improve their waste diversion from recycling.

The Cleveland Browns also have a food donation program that helps minimize food waste. Any food that comes back to the main kitchen that has been kept at the proper temperature and covered and not sent out on a public line is sent to the Cleveland Food Bank. In 2013, the Browns donated more than 10,000 pounds of food. In addition, all fried food is prepared in zero trans fat oil. The fry oil is filtered on a rotating schedule to extend its usability by up to three times before it is recycled by Waste Oil Recyclers and turned into biodiesel fuel.

FirstEnergy Stadium’s food waste reduction and diversion projects complement the City of Cleveland’s ongoing effort to become more sustainable. “When we launched Sustainable Cleveland 2019 ...our mission was to bring together people who could apply sustainability principles to our local economy, and that’s exactly what the Cleveland Browns are doing,” said Cleveland Mayor Frank Jackson.³

Aramark’s premium kitchen staff is trained to minimize food wasting in all FirstEnergy Stadium kitchens as well. At every food preparation station, there are clear, five-gallon containers to collect food waste. Jacobson describes the process: “When our team is slicing vegetables or trimming tenderloins, any food that can’t be used or put on any platter is put into this container. We can look at the food waste in these clear containers and learn from what ends up in them. If we see a lot of trimming that looks like it could have been used or cooked, we bring staff together to discuss more efficient preparation techniques. Then we weigh the container contents and enter the weights into our food waste tracking website to record the weight of the food waste for that day. Beginning with the first preseason game to the end of the season, that number typically decreases, with only a few exceptions, such as a really big game.”

WHAT’S NEXT?

As the Browns expand their successful greener food program, they plan to give even more food sourcing responsibility to their guest chefs. “Our chef-inspired concession stands have been such a tremendous success that it’s in our best interest to support them with the best ingredients we can. That means continuing to focus on building local relationships with organic farmers, sustainable fisheries, and distributors that value sustainability as much as we do,” says Jacobson.

Currently, the Grind2Energy program is focused on back-of-house operations. The Browns are exploring options to send all food and landscaping waste generated in the stadium through the anaerobic digestion program. The Cleveland Browns will continue to develop fan and staff education about waste disposal and collection greener practices.

STANDOUT GREENER FOOD ACCOMPLISHMENTS

- ▶ The stadium expects to send 35 tons of food waste per season to Quasar’s anaerobic digestion.
- ▶ All concession-level serveware is made from post-consumer recycled materials.
- ▶ Beef served at B Spot locations is 100 percent antibiotic- and hormone- free.
- ▶ Bell & Evans organic chicken is served in suites, catering, and at select concession stands.
- ▶ Organic produce is obtained from Sirna & Sons (40 miles from FirstEnergy Stadium) and Chef Garden (within 50 miles of the venue).
- ▶ Leftover, unused food is donated to the Cleveland Food Bank after each game. In 2013, more than 10,000 pounds of food was donated.
- ▶ Vegetarian options can be found at every concession stand and vegan options are also available.

ANNUAL “TASTE OF THE BROWNS” BENEFIT DINNER

Since 1998, FirstEnergy Stadium has hosted an annual “Taste of the Browns” benefit dinner in its club lounge. The event allows guests to meet football players and sample dishes from acclaimed local chefs. Guests are asked to bring non-perishable food donations for Northeast Ohioans in need and event proceeds go directly to the Cleveland Food Bank. According to the Greater Cleveland Food Bank’s webpage, the organization leads hunger-relief efforts in Northeast Ohio, leveraging donations of food, funds and volunteer time to make nearly 40 million meals possible each year. The 2014 event featured tastings prepared and donated by more than 30 local restaurants and beverage purveyors, and the 1,000 guests met active and retired Cleveland Browns. Each of the four celebrity chefs from the Cleveland Browns Hospitality Group prepared a dish from their award-winning restaurants. The event raised more than \$184,000—that’s approximately 736,000 meals for the Cleveland Food Bank.

1 Northeast Ohio Media Group, “For Cleveland Browns fans and foodies alike, new mealtime options at FirstEnergy Stadium,” September 9, 2013, http://www.cleveland.com/dining/index.ssf/2013/09/for_cleveland_browns_fans_and.html.

2 Innovation Center for U.S. Dairy, “FirstEnergy Stadium Living Up to Its Name with Food Waste Partnership,” November 21, 2013, <http://www.usdairy.com/news/2013/firstenergy-stadium-living-up-to-its-name>.

3 *ibid.*

Cucumber Relish

*Featured on the Tofun Dog at Hodge's,
by Christopher Hodgson at FirstEnergy Stadium*

4 C. Cucumber, peeled and chopped

1 C. Red Onion, minced

½ C. Garlic, minced

¼ C. Fresh Dill, chopped

2 oz. Red Wine Vinegar

1 Tbs. Sugar

4 oz. Extra Virgin Olive Oil

Mix first 4 ingredients in large mixing bowl

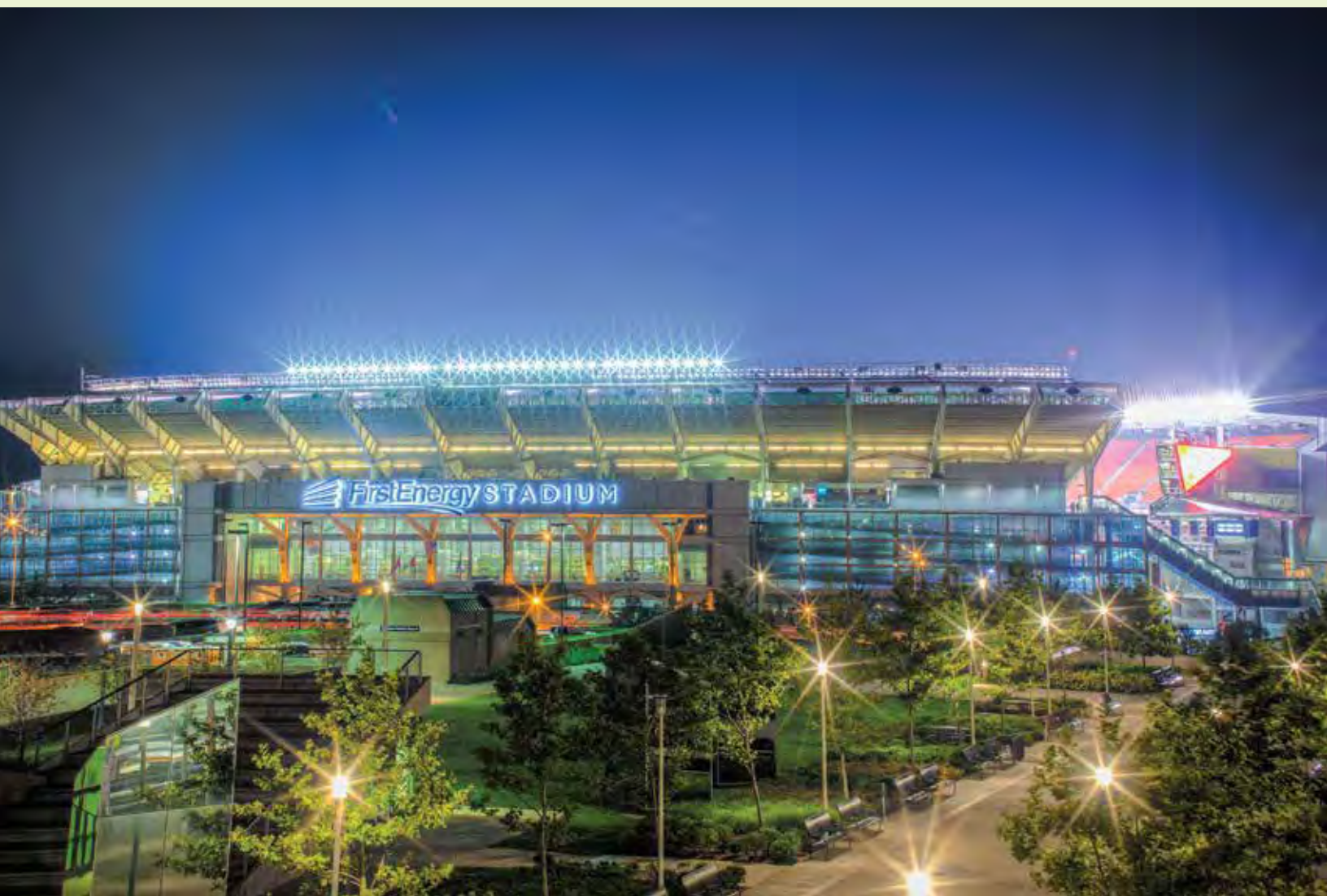
Whisk together vinegar and sugar, pour olive oil in a slow stream.

Add dressing to vegetables, season with salt & pepper to taste.

For a great vegetarian alternative to a hot dog, do like Chris Hodgson does with this relish at FirstEnergy Stadium and top a tofu dog with pickled jalapeno, Stadium Mustard, stewed tomato, green onion and cucumber relish



© Aramark at FirstEnergy Stadium



Case Study

AT&T STADIUM

HOME OF THE DALLAS COWBOYS

Location: Arlington, Texas

Opened: May 29, 2009

Owner: City of Arlington

Operator: Dallas Cowboys

Concessionaire: Legends Hospitality

Concessionaire Contract Established: October 2008

Seating Capacity (football): 105,121

Venue Uses: Professional football (NFL), college football, college basketball, concerts and other events.



“We use cage-free eggs and organic food everywhere that we can in the building,” says AT&T Stadium Executive Chef Orazio LaManna. “More and more people are asking about what ingredients we are using. Their interest in where the food comes from inspires us to source responsibly. That makes it even more important to us.”

AT&T STADIUM'S GREENING STORY

AT&T Stadium in Arlington, Texas is the largest domed stadium in the world, with a seating capacity of more than 105,000.

When constructing the new home of the Dallas Cowboys, the City of Arlington made a public commitment to minimize the stadium's environmental impact wherever possible.

AT&T Stadium was built using recycled materials, water-efficient plumbing fixtures, and energy-efficient systems and lighting.

For example, the stadium's 18 custom escalators use variable frequency drives that are 50 percent more energy-efficient and can send energy back into the stadium's power grid.

Since opening in 2010, AT&T Stadium has also supported the sustainability commitments of the major events it hosts, such as the 2014 NCAA Final Four Men's Basketball Championship. AT&T Stadium worked with the city of Dallas and nonprofit “Rock and Wrap It Up!” to divert 2,800 pounds of leftover food from landfills at the conclusion of the Final Four events and continues to donate food each game day to local shelters. AT&T Stadium also has a permanent venue-wide recycling program.

AT&T Stadium's sustainable food priorities set it apart from other professional sports venues working toward environmental stewardship. The Dallas Cowboys work with Legends Hospitality to source environmentally intelligent ingredients for their menu, prioritizing organic and local items. All fresh eggs used are cage-free. More than 25 percent of all produce is certified USDA organic, 5 percent of which is grown by college students at the Paul Quinn College campus farm just 23 miles away. Legends also sources the majority of dairy and meat products for AT&T Stadium from farms within Texas. Before signing any contracts, the chefs visit and carefully review these farms for responsible and humane practices.



STANDOUT GREENER FOOD ACCOMPLISHMENTS

PROCUREMENT

- ▶ All eggs used at AT&T Stadium are cage-free.
- ▶ More than 25 percent of produce used at AT&T Stadium is certified USDA organic.
- ▶ AT&T Stadium offers a vegetarian, vegan, and gluten-free menu item at every major concessions area.
- ▶ AT&T Stadium has at least five concessions carts at every game devoted to certified USDA organic and healthier items.
- ▶ AT&T Stadium sources thousands of pounds of organic produce from Paul Quinn College's WE Over Me Farm each year.
- ▶ There are two devoted full-time purchasers that find local, organic, hormone-free product.

AT&T STADIUM'S GREENER FOOD STORY

GREENER PROCUREMENT & MENUS

The Dallas Cowboys work closely with Legends to set procurement priorities. "We want top notch products coming through this building so we are really focusing on local, organic, sustainable. We have two full-time purchasers that go and find the best local, organic, hormone-free products. That's what they do on a daily basis," says George Wasai, the director of food and beverage for Legends, has been working with the Dallas Cowboys for the past 24 years. "We are really proud of the quality of our food and of how we work with the community to source locally. That's everything from dairy, beef, poultry, to produce on the farms."

"We use cage-free eggs and organic food everywhere that we can in the building. Not all of our produce is organic, but a lot of it is," adds AT&T Stadium Executive Chef Orazio LaManna. "More and more people are asking about what ingredients we are using. Their interest in where the food comes from inspires us to source responsibly. That makes it even more important to us."

Legends carefully vets every potential vendor by arranging chef visits to review farm operations and ensure AT&T Stadium's high standards are met. "We send our purchasers with our chefs before we make any business arrangements with anyone. We like to assess their practices. That makes us feel a little more comfortable doing business with them," explains Wasai.

"It's very important for us to do site visits at every vendor location before we do business," agrees Chef LaManna. "For example, we have a site visit tomorrow with a company called 44 Farms to see their operations and make sure they meet our specifications (including prioritizing organic practices and local production). We are interested in doing business with them because they're local Texas-based farmers who have some really great certified as a Step-1 Global Animal Partnership cattle producer angus beef." (See Glossary for more information about Global Animal Partnerships [GAP].)

During these site visits, the Legends chefs and purchasers focus on the farm operations, animal welfare, and the types of products used by the farmers. "First of all, we make sure the place is clean, well maintained, and that people are proud of what they do. You can tell just by walking in," explains LaManna. "We want to know what type of feed is being used and where is it coming from. We want to know how the animals are raised. We inspect the animal surroundings and make sure the animals are not confined and are taken care of. Those are the key things that we look for and the farmers will generally have a lot of information available for us."

In 2010, Legends and the Dallas Cowboys began working with the local "WE Over Me Farm" organic farm run by college students from Paul Quinn College (see sidebar). The farm grows everything from peas to watermelons, much of which goes into dishes served at Cowboys games and other events. "There is a very good chance if you eat something at the AT&T Stadium, part of it came from the Paul Quinn College farm," says Wasai, a Paul Quinn alum. Legends Hospitality is the farm's largest client. "Fruits and vegetables picked at the farm today are used at the stadium this afternoon—it doesn't get fresher than that," says Chef LaManna. Recipes for the Cowboys' menu depend, in part, on what's thriving at the farm.

Since Paul Quinn's football program was no longer benefitting the school, it was disbanded and the two-acre field, where Wasai once played as a student-athlete, was converted into a community garden. Students and staff maintain the farm and donate 10 percent of produce to the surrounding community, which is considered a food desert (see Glossary). "We had no idea what we were doing when we started," said Hannah Koski, who had no farming experience. "We just knew it was not right for people to live in a food desert." Some of the farm's produce is also used in the school's cafeteria.

For example, Legends chefs created a salsa using tomatoes, jalapeño peppers, onions, and cilantro grown on the farm to top tacos, burritos, and nachos at the stadium, where fans consume more than 1,500 gallons of salsa each season. Legends also uses mint from the farm for iced tea and gelato. Over a single weekend of AT&T Stadium events, 40 pounds of zucchini, 38 pounds of squash and 26 pounds of various peppers, among other produce have been harvested. "They can't keep up with our full demand, so they give us everything that they can and then we source elsewhere to fulfill our needs," says Chef LaManna. "It's a celebration from their football field to our football field."

Legends and Cowboys staff participate in harvesting twice a year and the farm has a volunteer day the second Saturday of each month. "We have a great relationship with Paul Quinn College that we're really proud of. It's getting bigger each year," says Wasai. "They recently added a huge greenhouse that will help them grow even greater volumes. So it gives us the opportunity to procure even more produce from their farm. It's very exciting."

"Our employees get excited to come to work every day because they get to work with real food, they don't come in and unzip bags or unwrap plastic on processed food," says Chef LaManna. "They have more passion for fresh ingredients and they take care of the products a lot more because they see the quality."

GREENER FOOD SERVICE & WASTE PRACTICES

Legends offers healthy food options on game days with five healthy concessions locations serving fresh organic produce sourced from Melissa's Produce. "We feature vegetarian and vegan items throughout the building. We review our concession

LOCAL PARTNER FEATURE

PAUL QUINN COLLEGE'S "WE OVER ME FARM"

Paul Quinn College, a historically black college in South Dallas, created the "WE Over Me Farm" in 2010 to address their community's food desert crisis. Under the guidance of its director, Hannah Koski, the farm is operated and maintained entirely by Paul Quinn student-employees, engaging in all farm activities, from business planning to marketing. The farm, thus, serves as a model of socially and environmentally driven servant leadership and entrepreneurship. "Our mission is to transform the health and well-being of under-resourced communities in South Dallas by providing fresh, healthy, affordable food options and by educating and empowering future generations to take better care of themselves, their environments, and their communities," says Koski. "Since opening in March 2010, we have employed 60 students on the farm and had at least 100 student volunteers."

The farm has produced more than 30,000 pounds of 100 percent organic produce since its inception. The farm is also home to four active beehives, 10 laying hens, and an aquaponic system that contains more than 100 tilapia fish.

"At the WE Over Me Farm, we support all projects dedicated to improving food security nationwide," says Koski. "The WE Over Me Farm's produce is sold according to its '4 Cs of Distribution,' which include charitable organizations, community members, the College, and commercial enterprises such as farmers markets, grocers, distributors, and restaurants throughout Dallas. No less than 10 percent of the Farm's produce is donated without any cost to local charitable organizations."

The school also plans to open a grocery store, providing another job skills opportunity for students. Every semester, about 10 to 15 Paul Quinn College students work on the farm to help pay for their education while others learn entrepreneurial skills first-hand like business planning, marketing, food distribution and cash flow analysis. In addition to fresh, healthy, affordable food options for surrounding residents, the farm also aims to provide hands-on educational experiences for youth and adults alike to promote healthy eating, improved food access, and environmental stewardship.



Tony Sinese, Senior Executive Sous Chef, Legends at AT&T Stadium, Home of the Dallas Cowboys; George Wasai, Food and Beverage Director, Legends at AT&T Stadium; Hannah Koski, Farm Manager, WE Over Me Farm; and Eli Hernandez, Farm Manager, WE Over Me Farm, in one of their regular planning meetings at the organic farm to connect harvests and the seasons with menus for fans. George Wasai is also an alumnus of Paul Quinn College, where the innovative organic WE Over Me Farm is based.

items and make many veggie versions, such as veggie nachos or black bean veggie burgers. Everywhere you go around the stadium, you'll have those options," says Wasai. "We are really passionate about our dedicated healthy food carts throughout the building. We are particularly interested in providing healthy food options and organic produce for kids visiting AT&T Stadium, it is very important to us."

Legends closely monitors food sales to minimize waste, tracking fan purchasing habits based on the time of the game, the time of year, the weather, and the visiting team. "The timing of a football game—whether it is at noon, 3:00 p.m., or 7:00 p.m.—determines the quantity of food that we'll put out. Recording the historical data for all of our events really gives us a good idea of how we develop our production list," says Chef LaManna. "It's about really understanding the numbers and your clientele."

More efficient food purchasing to minimize waste has also allowed the Legends team to manage higher costs for some organic products. "We are very frugal about what and how we order. When it comes to procurement of sustainable and organic products we try not to over-order so at the end of the day our costs are still in line with our profits," explains LaManna.

WHAT'S NEXT?

Building a more sustainable food system has become part of the Legends brand at AT&T Stadium. "When we sell our brand, our environmental procurement initiatives are really what we talk about. It's really all connected to our brand. That's what Legends is about, this is who we are," says LaManna. "When it comes to the extra 30 percent cost for us to source these products, at the end of the day that's just the cost of doing business and it also contributed to our business philosophy. Sustainable food is part of our brand because there is demand for more sustainable products, it's what our clients want too."

Their greener food initiatives have increased overall sales notes LaManna. "Our business is always growing, particularly in catering, and a lot of that has to do with the quality that we put out, which is directly connected with our sustainable procurement," says Chef LaManna. "There is nothing that our chefs want to do more than produce fresh food, and know where it is coming from."



Chef Crafted VEGETARIAN Black Bean Burger

Serves six

3 cups black beans, cooked until very soft, rinsed and drained

3Tbsp. olive oil

3 medium red bell peppers, diced fine

1 large Hatch Chili, chopped fine
(use poblano if Hatch chilies are not in season)

1 medium onion, diced fine

8 cloves, peeled, roasted, peeled and chopped

1 cup roasted corn kernels

1 cups brown rice, cooked

1/4 cup toasted pine nuts, chopped

2 eggs

2 Tbsp. mayonnaise

1 teaspoon ground cumin

2 teaspoons Chef Crafted Fire Roasted Hot Sauce
(available at Dallas Cowboys Pro Shop at AT&T Stadium)

3/4 cup panko bread crumbs

Kosher Salt, to taste

6 burger buns

Chipotle mayo

Pico de gallo

Lettuce leaves

Heat the olive oil in a large sauté pan over medium heat, add peppers, onion, garlic, corn and cook stirring frequently until soften, add black beans and continue to stir for 4-5 minutes.

Allow to cool and transfer mixture to a large mixing bowl.

Add all remaining ingredients except for eggs breadcrumbs and salt.

Knead mixture by hand until well blended.

Remove 1/3 of the mixture and pulse in a food processor to a fine puree and add back to mixing bowl.

Add eggs and breadcrumbs and mix thoroughly.

Season to taste with salt and more hot sauce if desired.

Form patties and grill on flat top or frying pan in a small amount of olive oil. Cook on each side for approx. 3-4 minutes per side until nicely browned and crisp.

Toast burger bun on grill with garlic butter.

Finish with cooked Vegetable Pattie, leaf lettuce, Pico de Gallo and chipotle mayo.

Case Study

SONOMA RACEWAY

Concessionaire: Levy Restaurants

Location: Sonoma, California

Opened: 1968

Owner: Speedway Motorsports Inc.

Operator: Speedway Motorsports Inc.

Concessionaire Contract Length: TBD

Seating Capacity: N/A

Venue Uses: NASCAR, INDYCAR, NHRA races
racing school, motorsports events.



“Through our efforts to build an organic garden here, irrigated with our own recycled and recaptured water, we hope to provide an example of a resilient food system during times of environmental pressure,” explains Victoria Campbell, Director of Operations for Levy at Sonoma Raceway. “My hope is that our garden project is just the beginning.”

SONOMA RACEWAY'S GREENING STORY

Sonoma Raceway, with 12 turns and 160 feet of elevation change, is one of only two road courses in the NASCAR Sprint Cup Series. When Steve Page took over as track president and general manager in 1991, one of his priorities was transforming Sonoma Raceway into a leading venue in sustainable practices in the motorsports industry. “We give lots of thought to how we can integrate a sustainable approach into the way we operate our facility and the ways we interact and communicate with all of our users. It’s part of our DNA as a company,” says Page. Sonoma Raceway (whose motto is “Think Outside the Oval”) was the first racetrack in North America to host a sustainability summit focused on the high-performance automotive industry. The first summit, held in 2011, brought more than 200 industry leaders together to discuss how motorsports could drive sustainability.

Between 1999 and 2002, Sonoma Raceway underwent \$100 million in renovations. Many of these renovations focused on developing more sustainable infrastructure. The venue’s rainwater catching system provides water for racetrack landscaping and its organic garden, while offsetting potable water demands. This is particularly important given California’s frequent drought conditions.

Sonoma Raceway landscapes its grass, fire lanes, and surrounding grounds with the help of 3,500 sheep, which are rotated to graze on different parts of the property (see sidebar). This practice reduces the need for fossil fuel-powered landscaping equipment, as well as adding valuable nutrients to the soil through their manure, reducing the need for synthetic fertilizer. The 1,600-acre raceway is also home to 20 owl boxes (bird houses). The owl boxes were installed to encourage owls to nest and hunt for gophers and other rodents, reducing dependence on pesticides and other pest-control poisons. A solar array consisting of 1,652 panels produces 41 percent of the facility’s energy. In 2011, the raceway worked with Panasonic to install a 60,000 LED billboard display, which uses half the energy of the older incandescent display.



STANDOUT GREENER FOOD ACCOMPLISHMENTS

- ▶ As of 2014, Sonoma Raceway has donated 325 trees to surrounding schools and local communities through the NASCAR Green Clean Air program.
- ▶ The Sears Point Grill serves Niman Ranch antibiotic-free, grass-fed beef burgers and sausages and cheese from Vella Cheese, a Sonoma dairy with 100 percent pasture-fed cows.
- ▶ Sonoma Raceway's organic garden was established in 2013. As of 2014, it produces more than 15 vegetables and herb varieties. It is the first organic garden planted at a NASCAR racetrack. The garden's produce and herbs are featured at concessions, in private suites, and at specialty catered events.
- ▶ Sonoma Raceway grows grapes and fruit throughout the 1,600-acre property (see Fruit Tree Donation sidebar).

FRUIT TREE DONATION PROGRAM

In 2014, Sonoma Raceway partnered with NASCAR, UPS, and the Arbor Day Foundation to donate 90 fruit trees to all 11 schools in the Sonoma Valley Unified School District. "The garden project in our Sonoma Valley schools is a model for student involvement and for building good nutritional habits with our kids," said Page. "We are very proud to partner with NASCAR to donate these trees and help grow this program in all of our valley public schools." Sonoma Raceway began participating in NASCAR's tree-planting program in 2010, and from 2010 to 2014 all of NSACAR donated and planted more than 325 trees.

"This is the next step in having locally grown food in our schools," said Justin Frese, deputy superintendent of Sonoma Valley Unified School District, in a 2014 press release. "We really look forward to the day when we're going to be able to harvest all of this fruit and serve it to our students."

SONOMA RACEWAY'S GREENER FOOD STORY

Steve Page works with Sonoma Raceway's food hospitality partner, Levy Restaurants, to make the raceway's food service operations more environmentally sustainable. In 2013, Levy Restaurants hired local food catering expert Victoria Campbell as director of operations. "Our events are held in such a rich agricultural region; here in Northern California, we are blessed to have a wealth of amazing local food to draw from," says Campbell. "We show our support of Sonoma's rich agricultural food history by serving it in our venue and encouraging the public to grow their own food at home."

GREENER PROCUREMENT

The raceway features a number of concessions locations that highlight local and environmentally preferable food options. The Sonoma Farmstand offers local organic fruit cups and salads. The Sears Point Grill serves Niman Ranch beef burgers and sausages that are antibiotic-free and grass-fed. Cheese is sourced from Vella Cheese, a Sonoma dairy that raises 100 percent pasture-fed cows.

The raceway often hosts as many as 15 gourmet food trucks from the Bay Area during race weekends, giving fans a chance to sample a variety of local cuisines. For examples, fans can enjoy wood-fired pizza with Sonoma cured cheese, sushi made with Marine Stewardship Council-certified seafood, and organic ice cream.

Several local craft beers are also featured at the raceway, including beer from Bear Republic Brewing Company, which uses a bioelectrically enhanced wastewater treatment and reuse system. This system, made by EcoVolt, has cut Bear Republic's energy use in half. According to Victoria Campbell, "Given our proactive stance on more sustainable operations here at Sonoma Raceway, it just makes sense for us to bring in local businesses who are doing the same in their daily practices as well."

"We are focused on developing a resilient food system at Sonoma Raceway, which is very exciting. It shows our fans what can be grown in this region and it communicates our commitment to the quality of food we serve," says Victoria Campbell.



Sonoma Raceway also sets an example in cultivating better agricultural practices as well. In July 2013, the raceway worked with students at a local high school to plant the Sonoma Organic Track Garden, becoming the first North American racetrack to plant an organic garden onsite. Sonoma Valley High School students sprouted seeds in their school's local garden and then donated the seedlings to the raceway's garden. The garden is now a large in-ground plot producing organic produce for catering events, VIP suites, concessions stands, and the Raceway Café. During the summer, the garden yields tomatoes, peppers, edible flowers, green beans, lettuces, kale, chard, and eggplant. Winter crops include lettuces, chives, spinach, beets, and herbs. Raceway Café, which is open seven days a week to all visitors, serves kale and carrot smoothies. Sonoma Raceway plans to plant potatoes, squash, zucchini, and pumpkins in the spring.

"We are focused on developing a resilient food system at Sonoma Raceway, which is very exciting. It shows our fans what can be grown in this region and it communicates our commitment to the quality of food we serve," said Campbell. There is even a one-acre vineyard that grows pinot noir grapes near the administrative offices. There are plans to add fruit trees to the garden.

Sonoma Raceway and Levy Restaurants work with local farmers and vendors to obtain the freshest products possible. Local and sustainable food vendors include Brentwood Farms, Diestel Family Farms, Superior Farms, Artisan Bakers, Del Monte Meat Company, Frog Hollow Farms, Koslowski Farms, Coke Farms, and Las Palmas Melons. "We are constantly looking to expand our local food providers. In building strong relationships with these community partners, we are helping them grow their business while educating our fans on what it means to be part of a healthy environmental food production system," said Page.

GREENER FOOD WASTE PRACTICES

In conjunction with the garden project, Levy Restaurants composts some of their organic food waste onsite to produce natural fertilizer for their garden. The food waste is measured and tracked through Levy's Trim Tracks program, a comprehensive Levy-wide initiative focused on measuring and analyzing organic waste from the kitchens. It also involves educating kitchen staff about reducing food waste during the preparation process, including efficient butchering techniques, food spoilage reduction methods, and creative recipes to maximize ingredients (e.g. pickling and making stocks for soups).

ROCKY MOUNTAIN WOOLY WEEDERS/ NAPA VALLEY LAMB COMPANY

Don Watson began his environmentally friendly lawn mowing service Rocky Mountain Woolly Weeders, in 2007. He contracts with large tracts of land that would otherwise require many hours of work along with fossil fuel-powered landscaping equipment. But Watson's company does not use any industrial mowing equipment. Instead, his "mowers" are a herd of nearly 3,500 East Friesian milking sheep. "[Sonoma Raceway] has employed our mowing service for more than a decade. We can make almost any grassland look like a golf course in a matter of days. We use 'cell' grazing techniques to remove frost and fire hazards. Noxious weeds are our specialty. We are able to leave a healthy biodynamic soil and sward after we leave. We are the only mowers that we know of [who] mow, weed, and fertilize at the same time," explains Watson. Fertilizer is contributed in the form of sheep manure. The herd of sheep navigates tall grass and uneven landscapes to thoroughly trim the grounds, reducing fire hazards associated with NASCAR crashes.

Watson also markets his animals' meat through Napa Valley Lamb Company. East Friesian milking sheep are notorious for their nutrient rich milk. "This is a wonderful place to market for a local farmer," Watson says on his website. "San Franciscans are passionate about local production." In addition to using the services of Watson's sheep for landscaping, Sonoma Raceway also purchases Napa Valley Lamb products for its specialty menus.

"The more we can tell the story of our organic garden project, the better," says Campbell. "It's important to share our successes with those seeking to learn how to adapt a food system to a changing climate," says Victoria Campbell.



Sonoma Raceway also partners with a local church that brings food back to those in need in San Francisco after every event. “Donating food is a powerful way to continue our contribution to the community. Not only does it help us reduce our waste to landfill, but it helps those in need,” says Campbell.

WHAT’S NEXT?

Campbell is excited that Sonoma Raceway is setting a good example for motorsports by prioritizing environmentally intelligent food practices. “Levy Restaurants and Sonoma Raceway will continue to explore food options that represent the agricultural heritage of this wonderful region. Through our efforts to build an organic garden here, irrigated with our own recycled and recaptured water, we hope to provide an example of a resilient food system during times of environmental pressure,” explains Campbell. “My hope is that our garden project is just the beginning.”

Page and his staff are also working with Sonoma’s local government to explore expanding the raceway’s ability to host events other than motorsport competitions. “The professional sports and entertainment industry has changed dramatically over time and our business model needs to change with it,” says Page. The venue would like to host a large festival music event as an additional source of revenue. Additional events would create further opportunities for local food producers to showcase their items.

Campbell also hopes the racetrack garden will serve as a model for similar facilities. “The more we can tell the story of our organic garden project, the better,” says Campbell. “It’s important to share our successes with those seeking to learn how to adapt a food system to a changing climate.” The wastewater treatment system can also provide an example for other venues hoping to reduce reliance on outside wastewater treatment by offsetting their demand for fresh groundwater. As of 2014, California has seen three years of a historic drought, with 96 percent of the state experiencing “severe drought” conditions, according to the National Weather Service. Sonoma Raceway’s ability to cultivate their own garden with reclaimed water is an important example for farmers in the area wishing to adapt to a changing landscape.

1 Sonoma Raceway, “Sonoma Raceway and NASCAT Donate 90 Trees to Sonoma Schools,” February 4, 2014, <http://www.racesonoma.com/media/news/sonoma-raceway-nascarat-donate-trees-sonoma-schools.html>.

2 Ibid.

3 “Rocky Mountain Woolly Weeders, Napa Valley Lamb,” 2015, <http://woollyweeders.com/id1.html>.



Sonoma County Greens

Serves 4

8oz Mixed Greens

1.5oz Pt. Reyes Blue Cheese

1.5oz Candied Walnuts

2T Red Onion, sliced thin

1 pear, cored and sliced

Balsamic Dressing to taste

Place mixed greens in a bowl, top with blue cheese, walnuts, red onion and pear, serve with the balsamic vinaigrette on the side

White Balsamic Vinaigrette

Serves 4

3T Balsamic Vinegar

3T Olive Oil

1 T Honey

salt & pepper to taste

Whisk ingredients together to emulsify.
Serve on the side of the salad.



Case Study

CITIZENS BANK PARK

HOME OF THE PHILADELPHIA PHILLIES

Location: Philadelphia, Pennsylvania

Opened: April 3, 2004

Owner: City of Philadelphia

Operator: Spectra

Concessionaire: Aramark

Concessionaire Contract Established: 2004

Seating Capacity (football): 43,651

Venue Uses: Baseball, Hockey, Special Events, Concerts



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“...The net benefit is not just solely on the environmental side, we are saving a lot of money while saving resources, which says a lot about Aramark and Citizens Bank Park.”
Glenn Richmond, Executive Chef at Citizens Bank Park.

CITIZENS BANK PARK'S GREENING STORY

The Philadelphia Phillies' path to greener operations began in 2008. Their “Red Goes Green” initiative established them as the first U.S. professional sports team to offset the electricity to run Citizens Bank Park, the Phillies' home. By purchasing renewable energy credits (RECS), it was first stadium in Major League Baseball to be powered 100 percent by renewable energy. In 2012, the Phillies purchased more than 22 million kilowatt hours of such credits, the equivalent of planting 100,000 trees. Citizens Bank Park has expanded its greening focus to include the entire ballpark.

This work has translated to many accomplishments in greener food practices. For seven of the last eight years, the Phillies have won the PETA Award (see Glossary) for the most vegetarian-friendly ballpark in the United States. With support from their contracted concessions provider, Aramark, Citizens Bank Park currently offer more than 100 different vegetarian and vegan items. Many of these items are grown in the surrounding Philadelphia area and are USDA certified organic. The success of environmentally intelligent food initiatives at Citizens Bank Park continues to build momentum for future innovation.

CITIZENS BANK PARK'S GREENER FOOD STORY

Leading up to the opening of Citizens Bank Park in 2004, operations staff and Aramark maximized the venue's efficiency. “When we moved into the new facility we were blessed. It was a new ballpark, with more resources to put better food out and offer different varieties. This meant bigger stands, bigger kitchens, and more capabilities,” says Glenn Richmond, executive chef at Citizens Bank Park.

Richmond and his staff drew on a number of fan surveys to identify a growing desire for healthier food options in the park. This encouraged the kitchen staff to explore culinary creativity. “We don't always measure the success on specialty items, like many of our vegan dishes or healthy locations, by simple dollars or cents. The impact of those items translates to the significant fan feedback, the outpouring of thank yous,” says Jeremy Campbell, Aramark Concessions Manager for Citizens Bank Park. “On the concourse yesterday, I met up with a couple [of] fans who were vegetarians for environmental reasons. The young lady couldn't stop thanking me enough for having a location where she could have a pizza and her husband could have a veggie cheesesteak. That there is the success. Of course our business is a lot about dollars and cents, but it's not always about that. A lot of that success is measured in fan appreciation, happiness.”



STANDOUT GREENER FOOD ACCOMPLISHMENTS

- ▶ All concessions stands feature a vegetarian option.
- ▶ All tomatoes and mushrooms are grown within 100 miles.
- ▶ All wine bottles use all natural corks.
- ▶ All eggs are cage-free.
- ▶ All fryer oils are zero trans-fat.
- ▶ The grounds crew uses electric service vehicles and 100 percent organic fertilizers on the playing surface.

“Food industry leaders like Aramark recognize the skyrocketing demand for mouth-watering, meat-free meals, from hearty veggie dogs and burgers to gourmet fare,” says PETA Director of Campaigns Dan Shannon. “PETA is grateful to Aramark for providing baseball fans across the country with delicious, environmentally healthy, and humane vegetarian options.”

With “Red Goes Green” programs, the Phillies and Aramark take a full-cycle approach to stadium food. They invested in a comprehensive waste diversion strategy (eliminating polystyrene serviceware stadium-wide), brought in a state-of-the art fryer oil technology that converts spent oil to biofuel, and teamed up with nonprofit “Rock and Wrap It Up” to donate leftover prepared food to local community centers after each game. Increased sales, a steady growth in positive fan feedback, and press highlighting the park’s innovative accomplishments have contributed to the success of the effort toward procuring and serving greener food.

GREENER PROCUREMENT

Many produce items used in menus in the premium sections throughout the ballpark are sourced from environmentally credible sources. “We buy all our tomatoes and mushrooms locally. They come from Kennett Square Farmer’s Market in Downtown Philadelphia. We buy our Swiss chard and collard greens from multiple farms in New Jersey. We are doing everything we can to buy as much as we can,” explains Richmond. “We also craft our menus in the premium and catering level with a focus on local seasonality. This keeps costs down and helps us source items grown local to this region. Availability certainly plays a part in all that as well.”

Aramark purchases produce from Ambrogi Produce located just twelve miles from the ballpark to fulfill their demand for local, seasonal items that are often organic when price competitive. Ambrogi’s distribution network sources from farms in Western Pennsylvania, New Jersey, and Maryland.

Citizens Bank Park and Aramark have also committed to expanding their sourcing of environmentally intelligent fish and poultry. “We have a partnership with the Monterey Bay Aquarium Seafood Watch Program and by 2018 we are committed to have all of our seafood products sustainable. We are currently doing our best to purchase as much as we can from that sustainability list,” states Richmond. “We’ve also partnered with our local seafood vendors to give us periodic lists of what they have available that is local [and] sustainable. We purchase all cage-free eggs. And as a company, Aramark is moving toward purchasing cage-free eggs company-wide by the end of 2015. As far as poultry’s concerned, we will feature free-range poultry as menu items in many of our premium locations.”

“Food industry leaders like Aramark recognize the skyrocketing demand for mouth-watering, meat-free meals, from hearty veggie dogs and burgers to gourmet fare,” says PETA Director of Campaigns Dan Shannon. “PETA is grateful to Aramark for providing baseball fans across the country with delicious, environmentally healthy, and humane vegetarian options.”



A number of beers from breweries with environmentally intelligent practices are also featured in the park. For example, Dogfish Head Brewing Company, located in Wilmington, Delaware, 100 miles away, has instituted a number of water conservation practices, including capturing wastewater for use at local farms and donating their spent 50-gallon ingredient barrels to the Delaware Department of Natural Resources for water catching projects. "Like a lot of other small, independent businesses, craft brewers take stewardship and sustainability very seriously," says Mark Carter, Dogfish Head's events and benevolence director. "Brewing is so water-intensive that it makes sense for us to focus a lot of our effort on water."

Victory Brewing Company, 40 miles away in Downingtown, Pennsylvania, is Citizens Bank Park's largest independently owned brewery partner. Victory won the 2014 Sustainable Agriculture Business Leadership Award from the Pennsylvania Association for Sustainable Agriculture. Victory powers their operations with 345 solar panels and donates the nearly 25,000 pounds of spent grain it generates every 24 hours to local farmers. "Sustainability, to us, means more than just implementing practices and policies that conserve our precious resources," says Victory Brewing Company's CEO Ron Barchet says. "We're fortunate that our products and platforms permit us a unique opportunity to affect positive change in our communities."

GREENER WASTE PRACTICES

With a zero waste goal for 2014, Citizens Bank Park implemented a variety of practices to minimize and divert waste. Reusable souvenir soda cups, ice cream cups, popcorn buckets, large sundae helmets, and beer cups all reduce single-use disposable products in the premium seating sections. All serviceware for suites, restaurants, and clubs are made from compostable renewable resources, e.g. bamboo, sugarcane and vegetable-based products. Liquor cups at all bars are made with plant-based materials. Cups for all hot beverages are made from 25 percent post-consumer materials. All food left over after events is sent Rock and Wrap it Up, which coordinates with local charities.

All compostable food waste is captured in the kitchens and preparation areas. In 2012, Aramark arranged to haul 17 tons of organic material (food) for composting by Global Spectrum and to recycle 70 tons of cooking grease for use as biodiesel. "We partner with Waste Solar Recyclers to convert our used oil to biodiesel. They furnish us with the equipment that we use to filter the oil and reuse it," explains Richmond. "So our oil, instead of having a one day life span, has up to a 4 day life span depending on the location. The net benefit of that is not just solely on the environmental side, we are saving a lot of money while saving resources, which says a lot about Aramark and Citizens Bank Park."

FEDERAL DONUTS

Federal Donuts, a favorite Philadelphia establishment, came to Citizens Bank Park in 2014. Their menu consists of two comfort food items: fried chicken and donuts. They use sustainably sourced ingredients. The chicken is antibiotic-free, cage-free, and fed a 100 percent vegetarian diet. By focusing on only two menu items, donuts (made with local flour) and Korean-style fried chicken, the restaurant can focus on each item's quality and sourcing. They also serve PT's Coffee, which sources its beans through direct trade. PT's criteria maintains sustainable-quality coffee (see Rainforest Alliance), best environmental practices, and responsible community education practices.



WHAT'S NEXT?

Aramark and Citizens Bank Park will continue to answer the call of their fans and company-wide initiatives. "We receive and analyze a lot of feedback, not just from fans, but also from internal staff. A lot of people asked for vegetarian and healthier options. So we created a menu items to reflect those requests and they have been tremendously successful," says Richmond. "Ten years ago creating a vegetarian option would have been [an] afterthought, now we put a vegetarian item on every menu we create. We are asking ourselves: if I'm a vegetarian and I'm a concerned environmentalist (as well as looking for something healthy), what can I order from this menu? That wasn't always the case."

While many organic and certified sustainable items are still price prohibitive, Jeremy Campbell believes increasing demand for greener food will reduce procurement challenges. "Aramark Corporate is also driving sustainability strategy from the top. Soon we will have the structure in place to go and purchase environmentally preferable products, so those cheaper, industrial items won't [be] an option anymore," says Campbell. "As we migrate down the road toward a better food system, at some point we're not going to be able to purchase anything but sustainable food, which is great. It will make it easier when sustainability is integrated throughout the supply chain."

“We buy all our tomatoes and mushrooms locally. They come from Kennett Square Farmer’s Market in Downtown Philadelphia. We buy our Swiss chard and collard greens from multiple farms in New Jersey. We are doing everything we can to buy as much as we can,” explains Glenn Richmond. “We also craft our menus in premium and catering level with a focus on local seasonality. This keeps costs down and helps us source items grown local to this region. Availability certainly plays a part in all that as well.”



© Atramark at Citizens Bank Park

Vegan Mushroom Steak

Yields 4 sandwiches

48 oz. Kennett Square wild organic mushroom mix
 8 oz. tofu
 8 oz. caramelized yellow onions
 12 slices vegan cheese (optional)
 4 local steak rolls
 1 1/2 tablespoons kosher salt
 1 teaspoon fresh cracked black pepper
 1 tablespoon minced shallots
 1 tablespoon minced garlic
 2 cups olive oil
 1/2 cup sherry wine vinegar

Warm 1/2 cup of olive oil in a heavy bottomed pan, slice onions and caramelize for 30 minutes on low heat, salt and pepper to taste. Sweat shallots and garlic with 1/2 cup olive oil, add mushroom mix, salt and pepper, and cook on medium heat for 10 minutes until mushrooms have reduced by half. Deglaze with vinegar, check seasoning, keep warm and set aside. Heat remaining olive oil to 325 degrees in a cast iron pan. Cube tofu, and pat dry. Fry tofu in olive oil until golden brown, approximately 3 minutes. Drain on paper towels and season with salt and pepper.

To assemble each sandwich, split rolls, add 4-5 ounces of mushroom mix, 2 ounces of tofu and 3 slices of vegan cheese (optional).

FIGHTING FOOD SCARCITY AND HUNGER

In 2014, the Citizens Bank Foundation, official sponsor of Citizens Bank Park, announced that it is donating a total of \$105,000 in grants to food-focused nonprofits throughout Eastern Pennsylvania, New Jersey, and Delaware as part of its Citizens Helping Citizens Fight Hunger initiative. These nonprofits provide hunger relief, nutrition assistance, and improved food access for families. The Citizens Bank Foundation supports the following organizations as part of its hunger initiative:

- ▶ **Urban Tree Connection (West Philadelphia)** – Urban Tree Connection will use its award for its urban farm center to grow food on underutilized land. The organization revitalizes neighborhoods by transforming abandoned open spaces.
- ▶ **Center for Transformation (Camden, New Jersey)** – The Center will use its award for its children and youth programs. The organization is focused on creating young leaders through gardening, cooking, and nutrition programs to address childhood obesity.
- ▶ **East Park Revitalization Alliance** – The East Park Revitalization Center is focusing on opening a farm stand in the Strawberry Mansion neighborhood to improve access to fresh, locally grown, and affordable produce for the community.
- ▶ **Common Market** – Common Market, a distributor of local foods to the Mid-Atlantic region, will use its award for hospitals, school cafeterias, and the “Farmer Hub” program that provides technical assistance to farmers (e.g., crop planning, packing, refrigeration, and food safety).

Case Study

PETCO PARK

HOME OF THE SAN DIEGO PADRES

Concessionaire: Delaware North Sportservice

Concessionaire Contract Established: 2004

Location: San Diego, California

Opened: April 8, 2004

Owner: City of San Diego: 70 percent; Padres LP: 30 percent

Operator: Padres LP

Seating Capacity: 42,302

Venue Uses: professional baseball (MLB), amateur and collegiate baseball, rugby, concerts, and corporate and political events.



“We are proud that our investment in environmentally friendly food options has strengthened our business through more efficient operations and increased food sales.” Executive Chef Carlos Vargas for Delaware North Sportservice at Petco Park

PETCO PARK'S GREENING STORY

The San Diego Padres have invested in greening initiatives since their new venue, Petco Park, opened in 2004. In 2005, the team won the city of San Diego's "Recycler of the Year Award." Every year since, the Padres have been recognized with a greening award from the City Council of San Diego, the State of California Governor's Office, or from Major League Baseball. They currently have 20 ongoing waste reduction initiatives targeting each element of ballpark operations. The Padres are on the way to reaching their goal, established in 2012, of net "zero waste" building-wide by 2017. As of 2014, their waste diversion rate was 79 percent.

Toward that goal, the Padres have discovered a number of ways to reduce or recycle waste throughout the venue. They recycle all electronic waste and their employees bring in household items to recycle. Team uniforms are also recycled after they are no longer usable. With their long-time concessionaire partner, Delaware North Sportservice, the Padres are exploring new ways to purchase, prepare, and serve environmentally preferable food at Petco Park. As of 2014, Petco Park features more than a dozen local food vendors. The venue has built partnerships with surrounding community food distributors and brought in local vendors with a history of prioritizing greener food options.

PETCO PARK'S GREENER FOOD STORY

Petco Park's initial improvements in sustainable food service were an outgrowth of its zero waste initiatives. When the Padres opened Petco Park in 2004, they contracted Delaware North as their concessionaire. In 2014, Delaware North's contract was extended an additional 10 years. Over these next 10 years, the Padres and Delaware North have committed to investing \$8 million in their catering and concessions infrastructure. This money has been used to create more made-to-order food service locations around the ballpark. Made-to-order options allow fans to purchase unique items to their preferences while reducing food waste from overproduction. Delaware North has also tapped into the excellent local supply of environmentally preferable food available in Southern California.

Headed by Executive Chef Carlos Vargas, the Delaware North team serves environmentally preferable ingredients in multiple recipes that maximize the ingredients. For example, many of the Padres' concession locations feature the same organic ingredients used in their baguette sandwiches, salads, and flatbreads. Prioritizing sustainable ingredients means that Vargas has been proactive in working with his suppliers.

STANDOUT GREENER FOOD ACCOMPLISHMENTS

PROCUREMENT

- ▶ The Padres source local and organic foods when available.
- ▶ All of Rimel's Rotisserie chicken, beef, and pork is California-raised, antibiotic-free, and hormone-free.
- ▶ The Padres offer a vegetarian option at all concession locations.
- ▶ All meat and poultry purchased from Suzie's Farms is USDA certified organic and is raised locally, only 13 miles south of Petco Park.
- ▶ The Padres source meats and poultry from Golden West Meats (Los Angeles, California) which is 100 percent Certified All Natural and Never Ever.

ZERO WASTE INITIATIVES

- ▶ All the concession stands and restaurants participate in a food waste diversion program. At the conclusion of any game or major event, food waste is compacted and subsequently taken to the Miramar Greenery to be turned into compost. Some of the finished compost is returned to the venue for groundskeeping purposes.
- ▶ The Padres are aiming for zero waste by 2017. As of 2014, they have a 79 percent diversion rate.
- ▶ Petco Park donates 100 percent of their used wine corks to various companies. In 2013, they donated used wine corks to a waste reduction fundraising gala that reused the corks to create artwork and decorations for the event. They also donate to a company that makes cork tiles and sandals with cork-soles.
- ▶ All non-logo uniform attire is donated to Goodwill Industries for re-use.
- ▶ The playground in "Park at the Park" was built with recreational surfacing made from 75 percent recycled rubber.
- ▶ The Padres send 100 percent of their used cooking oil to Buster Biofuels, a local San Diego company, which creates biodiesel and donates it to local public transportation and school buses.

In one year, the Padres' financial returns from food service have increased by more than 21 percent, which Vargas attributes in part to their investment in environmentally preferable food. "When I am planning food offerings I ask, 'What does the client want?' It puts in perspective what type of foods I'm going to add to the menu. We are putting a lot of organic or local grown produce on the menus throughout the ballpark. We are featuring a lot of local flavor. As a result, it's been a tremendous success," Vargas said.

"People used to come to the ballpark just to watch the game. They would not even sit down and eat. Or they used to just order a hotdog and that's it. But now that we have more offerings from local and environmentally responsible vendors, fans are coming earlier and staying later; it's paying off," Vargas said. "As I was walking the concourse the other day, a guy stopped me and said, 'You guys took me out of my routine. Before I used to come five minutes before the game started. Now I come an hour and a half or two hours before the game starts so I can try some of the unbelievable food you guys have.'"

With more fans buying food in the stadium than ever before, Petco Park is able to keep food costs from increasing significantly even though they are spending more for local environmentally preferable items.

GREENER PROCUREMENT

In 2014, the Padres announced a number of new partnerships with California businesses that are committed to serving California-raised organic meat and produce. Seaside Market is a family-owned specialty market in Cardiff-by-the-Sea, CA. Seaside has been offering local organic produce, meat, cheese and wines since it opened in 1985. Delaware North partnered with Seaside Market to create two new meal stands in Petco Park offering fans a wider variety of fresh, California-grown food. Seaside Markets at Petco offers its famed flatbreads, a made-to-order sandwich and organic salad bar, fruit, fresh juice and organic sodas. Seaside Market is located on the concessions level and is accessible to all fans in the ballpark.

"Our menu for Seaside Market and Petco Park is based on health, sustainability, and efficiency," Vargas explained.

"We're excited to welcome another popular local business into the Padres family," said Scott Marshall, the Padres' vice president for concessions and retail, in a 2014 press release.¹ "Seaside Market is going to provide our fans with more fresh, healthy and gluten-free food options than they've previously had. Being able to take their items to their seats or to 'Park at the Park' for a picnic will be unlike anything Padres fans have ever experienced." (See "Park at the Park" sidebar.)

The Padres also welcomed Rimel's Rotisserie, which has three locations in the greater San Diego area, into the park in 2014. Rimel's is committed to serving more sustainable food. "At Rimel's Rotisserie, everything we create is from scratch; it's all organic, locally grown and healthy. Farm to table is the way that we have been doing it for over 20 years, actually long before the term 'farm to table' existed," said Rimel's owners Matt and Jackie Rimel.

"We're committed to providing products that are healthy, environmentally sensible, humane, local, and incredibly tasty," the Rimels added.²



By bringing in local purveyors like Seaside Markets and Rimel's Rotisserie—two popular local restaurants committed to sustainability—the Padres are able to build on their reputation as environmental leaders while supporting their local economy. The Padres also work with two local distributors to procure better meats and produce. “Every week we look at what is available from our local marketing partner Melissa’s Produce out of Los Angeles. We also buy organic produce from Suzie’s Farm [13 miles south of Petco Park].” Melissa’s Produce is one the largest organic and specialty produce distributors in the country and offers more than 150 organic fruit and vegetable items, many of which Petco Park features. The Padres procure their meat from Golden West out of Los Angeles, which is certified under the USDA’s All Natural Never Ever Program

Vargas has food delivered daily during the baseball season, which avoids over-ordering and reduces food waste. Vargas says he gets on the phone with his produce vendors daily and his meat suppliers at least three days a week. Working with premium organic, local products pushes Vargas and his team to get the most out of their investment in better food. The focus on reducing food waste is amplified when the ingredients cost more than traditional items. “We are proud that our investment in environmentally friendly food options has strengthened our business through more efficient operations and increased food sales,” Vargas said.

GREEN FOOD PREPARATION

Chef Vargas works with a 16-day menu rotation that, he believes, offers Padres fans a wide variety of food experiences. It also provides his kitchen staff planning time to accurately estimate quantity, reducing the potential of over-preparation. Because his staff works closely with Melissa’s Produce, Suzie’s Farms, and high-volume distributor U.S. Foods, the Padres can switch the menu on any given day based on the availability of particular food items. If an organic produce or meat item is available, the Delaware North staff can pivot their menus to use readily available ingredients.

“Our vendors often come to me with great specials because they know I love to get my hands on the best quality seasonal food available,” Vargas explained. “For example, the other day a vendor came to me and asked, ‘Hey, Carlos, we have these organic baby artichokes, do you want them?’ And I said, ‘Of course!’ We served them fresh steamed that night. I then pickled them and sent them to salad bars throughout the stadium. I can change the menu that fast for the next day. You can use the best ingredients when they’re available but you have to be ready to use them.” Vargas’ team uses pickling to prolong the versatility and shelf life of vegetables. (See Glossary for more detail on the benefits of pickling.)

“At a grocery store, after a certain number of days, you have to throw vegetables away. Here, I have the ability to take them from our Seaside Markets locations and send them over to one of our restaurants or do a special menu item for one of our concession stands. I think it’s a unique strategy to minimize food waste,” Vargas said.

PETCO PARK – BULLPEN GARDEN

Since 2011, Luke Yoder, head groundskeeper for Petco Park, has maintained a garden in the Padre’s home bullpen. This was the first ballpark garden in all of Major League Baseball, and originally held only peppers and tomatoes. “This year there will be 30 different varieties of peppers from 20 different countries, as well as tomatoes, lettuce, onions, beets, 10 different types of herbs, and sweet peas. We are growing blueberries and strawberries as well, along with lemon, lime, and orange trees,” says Yoder. “The garden gives my staff an opportunity to blow off some steam and relax from the stress of building out the mound or mowing the outfield.”

“The tomatoes and the peppers are being used in restaurant locations throughout the park. We are coming up with ideas to use the ingredients like ‘Strikeout Salsa’ for the tacos and ‘Sweet and Spicy Ballpark Relish’ for our burgers. It’s my hobby and it’s fun to do. The fans love it,” Yoder said in a 2014 radio interview.⁴

“When I am planning food offerings I ask, ‘What does the client want?’ It puts in perspective what type of foods I’m going to add to the menu. We are putting a lot of organic or local grown produce on the menus throughout the ballpark. We are featuring a lot of local flavor. As a result, it’s been a tremendous success,” says Chef Vargas.

PARK AT THE PARK

Park at the Park is a 2.7-acre grassy area just outside of the outfield wall with a direct view of the field. Adults can watch the game while their kids have fun at the playground or the wiffle ball diamond. Admission starts at \$10 and fans are welcome to bring their own picnic food. They can also purchase organic salads, pizza, and sandwiches from one of the two Seaside Market locations at Petco right near the park.



Vargas' team also uses leftover meats that have been prepared but not served. They have a famous Tri Tip Steak Sandwich prepared and served by a local favorite, Seaside Market, and is served at two locations in the building. "We use some of the leftover tri tip from a night game for the next day by chopping it up in the kitchen and then creating tri tip nachos. The nachos have been selling even better than the sandwich lately," notes Vargas.

GREENER FOOD SERVICE & WASTE PRACTICES

In line with their zero waste goals for 2017, the Padres collect all of their back-of-house food scraps for composting. The organic waste is sent to Miramar Greenery, a local San Diego plant nursery, which composts the waste, and returns some of it to the ballpark for use in groundskeeping. Sponsored by Miramar Greenery, the Padres give some of the finished compost away to the public. In 2014, the Padres diverted 183.5 tons of organic waste from landfills resulting in approximately \$5,700 in savings.

Used cooking oil is collected by Buster Biofuels, who converts the cooking oil to biodiesel and then returns some of it to the Padres for their powerwashers and lawnmowers. The remaining oil is donated to the local school district to power their school bus fleet.

"We are always looking for new opportunities to reduce our carbon footprint and make Petco Park more energy efficient," says Mark Guglielmo, the Padres' vice president of ballpark operations and general manager of Petco Park. "With approximately 2 million fans visiting the ballpark each season, we use a substantial amount of cooking oil. The idea that we could reuse that oil for another purpose within the ballpark was intriguing."³

WHAT'S NEXT?

"Our biggest challenge is that there are times when we want to order something from our vendors that is just not available," Vargas said. When this happens, his kitchen staff has to reference a different menu from their 16-day rotation and act quickly to prepare something else. Having a diverse menu plan has allowed Vargas' staff to act quickly to adapt to challenges from late food orders.



Duo Entrée

California Black Cod, Lemon Grass Beurre Blanc,
Candied Baby Carrots, Lava Salt.

Prime Braise Kalbi Short Rib, Confit Cipollini Onions
Truffle Risotto Purse.

By communicating frequently with their suppliers, the Padres and Delaware North are able to track available ingredients daily and bring a variety of food offerings to the ballpark. This allows the team to procure organic, local ingredients as soon as they are available. Distributors also know they can offer the Padres specialty or limited quantity items on short notice.

1 San Diego Padres, "Cardiff's Seaside Market coming to Petco Park," March 24, 2014, <http://m.padres.mlb.com/news/article/70025096/cardiffs-seaside-market-coming-to-petco-park>.
 2 Rimel's Rotisserie, "The Rimel's Story," 2015 <http://rimelsrestaurants.com/our-story>.
 3 Buster Biofuels, "Padres Go Sustainable with Biofuel," June 25, 2012, <http://busterbiofuels.com/2012/06/padres-go-sustainable-with-biofuel>.
 4 Major League Baseball, "Yoder Discusses #GardenGate and More...," April 8, 2014, <http://padres.mlbblogs.com/2014/04/08/yoder-discusses-gardengate-and-more-2/#more-324>.

Case Study

SAFECO FIELD

HOME OF THE SEATTLE MARINERS

Concessionaire: Centerplate

Concessionaire Contract Established: 2011

Location: Seattle, Washington

Opened: July 15, 1999

Owner: Washington-King County Stadium Authority

Operator: Baseball Club of Seattle LP

Seating Capacity: 47,860

Venue Uses: MLB games, amateur baseball events, collegiate football events, concerts, corporate and political events.



“The biggest factor for me is safety. That includes what’s going into and on the food before it comes to me. I prioritize food that is organic and humanely raised. I get grass-fed beef from a local co-op. We are seeing more interest in local food because people are focusing on where their food comes from and how it is produced.”
Executive Chef Michael Johnson for Centerplate at Safeco Field.

SAFECO FIELD’S GREENING STORY

The Seattle Mariners have been a pioneer in sports greening for nearly a decade. The team’s greening efforts began in 2006 when they invested in LED lighting systems, established zero waste goals, and prioritized greener food and beverage serviceware and cleaning products. They have continuously improved this environmentally intelligent work and have saved a total of \$1.75 million in utilities costs due to energy and water efficiency improvements to date.¹ As founding members of the Green Sports Alliance, the Mariners share their successful greening strategies with other teams and venues, while continuing to challenge themselves to take their green leadership even further.

Over the past four years, the Mariners have focused on serving fresh, local food and beverages that embody the flavors of Pacific Northwest agriculture. Executive Chef Michael Johnson for Centerplate at Safeco Field, have worked together with the Club to transform Safeco Field into a game-day destination restaurant that reflects the tastes and preferences of Seattleites. Their stadium-wide menus include locally produced and other sustainable food items. For example, 100 percent of all beef and pork served at Safeco Field is certified “Never Ever” (has never been treated with antibiotics or hormones).² Safeco Field serves food and beverages from a number of local artisans and brewers. The stadium’s craft beer list features many organic beers and breweries with a commitment to sustainable practices (see the Glossary for more information).

SAFECO FIELD’S GREENER FOOD STORY

Safeco Field procures and serves greener food for three main reasons. First, serving greener food helps the Mariners advance their overall sustainability goals. Second, according to Centerplate, visitors to Safeco expect the venue to offer the best of Seattle’s rich food culture. Third, the Mariners generate more revenue by serving environmentally preferable local food.

Chef Johnson recognizes that Seattle has a very food-centric culture. “Our fans give us the ability and the freedom to explore higher quality foods and expand our options. If it’s important to our fans, it’s important to us,” says Johnson. “We have been given the green light by Centerplate corporate to challenge ourselves to see how far we can push the envelope with sustainability. Without the fans’ support that would not be possible.”

STANDOUT GREENER FOOD ACCOMPLISHMENTS

PROCUREMENT

- ▶ All beef and pork served at Safeco Field is certified “Never Ever” (raised without antibiotics or hormones), and all the beef is procured from Washington State.
- ▶ More than local craft breweries are featured (from Washington and Oregon).
- ▶ Vegetarian and/or vegan options are served at every concession location throughout the ballpark.
- ▶ All potatoes and onions served in the stadium are Washington-grown.
- ▶ Shellfish is obtained from Taylor Shellfish Farms in Shelton, Washington, the largest family-owned shellfish farm in the country. The Monterey Bay Aquarium’s “Seafood Watch Guide” lists farmed clams, mussels, and oysters as three of its “Best Choices” for sustainable seafood, and all of the locations of Taylor Shellfish Farms in Washington State have been certified sustainable.

ZERO WASTE INITIATIVES

- ▶ Of game day waste, 90 percent is recycled or composted, including foodservice and beverage items.
- ▶ All disposable food serviceware used in the ballpark is compostable (certified compostable by BPI and approved by Cedar Grove).
- ▶ BASF-sponsored zero waste stations (featuring recycling and composting bins) are located throughout Safeco Field concourses and compostable bags for food waste collection are used in all kitchens and concession disposal containers at the ballpark.
- ▶ In 2013, Safeco Field diverted 3 million pounds of waste from landfills through recycling and composting, saving \$114,000 in waste disposal costs.



Safeco Field launched its sustainable food initiative in 2010 when they consulted with local star chef Ethan Stowell, owner of 10 Seattle-based restaurants, to create concessions concepts using local ingredients at the stadium. In an April 2014 press release,³ Chef Stowell described his menu philosophy as focusing on “keeping it simple, using fresh ingredients and allowing the food to do the talking.” The first location in the stadium to feature Chef Stowell’s food was “The ‘Pen,” an area overlooking the outfield that is open to all ticket holders. Chef Stowell’s focus on fresh Seattle fare and the popularity of menus with fans was a key factor in the decision to expand the number and variety of fresh and local offerings at the park. Today, Centerplate and Chef Stowell are working together to seize the opportunity to build local partnerships.

“The success of Chef Stowell’s hamburger in The ‘Pen led to our decision to use only antibiotic-free and steroid-free Washington-raised beef for those hamburgers,” says Chef Johnson. “Next, we asked why we couldn’t we do that in the rest of the building. The price difference really wasn’t so great that I couldn’t scale up and serve it elsewhere.”

“So I changed every hamburger that Centerplate sells in this stadium. This all happened in the first season. We then went with ‘Never Ever’ certified brisket and naturally raised pork,” explains Chef Johnson. “Within the first two seasons we had adopted pasture-raised, antibiotic-free meat stadium-wide. Costs are always going to be an issue, but when you’re purchasing a high volume, those costs come down.”

Over the last three years, Centerplate has transformed Safeco’s stadium-wide menu planning, prioritizing healthier meat, local food, and organic produce in suites and general concessions. As a result, Safeco experienced a 20 percent increase in per capita food sales between 2011 and 2014. While many venues rely on high beverage sales to meet their sales quotas, Safeco is experiencing higher annual sale totals on their concessions than ever before as a result of these changes in the menu.

“We are picking up a lot more food sales every year. Even when attendance drops we see higher food sales,” says Chef Johnson. “Also, the huge attention that we get from the media for our food initiatives keeps people coming back. We are still a viable business regardless of the team’s performance. On game days, fans are arriving well before the first pitch and staying after the game ends to experience our food. For me, as a chef, it’s a huge amount of pride.” Johnson explained that Safeco’s increase in total revenue generated from food sales has been attributed to more fans eating at the venue as opposed to simply raising the prices of food options.

GREENER PROCUREMENT AND MENUS

When seeking out ingredients for menu items, Centerplate’s highest priority is food safety, which extends to the practices used in producing food. “The biggest factor for me is safety. That includes what’s going into and on the food before it comes to me. I prioritize food that is organic and humanely raised. I get grass-fed beef from a local co-op. We are seeing more interest in local food because people are focusing on where their food comes from and how it is produced,” explains Chef Johnson.

As a result of focusing on local procurement, organic when possible, and responsibly raised meats, Safeco Field has encouraged distributors to expand their portfolios to include healthier and organic options for large buyers like stadiums.



Chef Johnson is also collaborating with larger food distributors to find the products his team needs. “In order to reduce the stress on one particular farm, we work with our distributor to cooperatively obtain the purchase from five or six farms in the area. This allows farmers to supply to us and continue to supply to the local community as well by not spreading themselves too thin,” explains Chef Johnson. “This supports local suppliers and allows other businesses to source locally as well. We work with purchasers who work with co-ops to meet our demands.”

Safeco also works with Peterson, a Washington-based food distributor, to obtain specialty products like organic cheese and raw honey. This close relationship affords Chef Johnson and his staff the ability to evaluate smaller producers seeking to supply to Safeco. It also allows these producers to warehouse their product outside of Safeco’s facilities, which helps them expand their local product line. Local farmers have taken advantage of supplying Safeco Field to grow their brand visibility and expand their customer base.

“Buying product from local farmers and producers only helps the business,” explains Chef Johnson. “I’ve learned over the years that at the end of the day what matters most about a chef’s name is how much of the community he involves in his good work. That’s where he gets the accolades. When you share the wealth like that, it comes back to you.”

By offering local products, Safeco Field is improving its sales while helping small businesses grow. For example, in 2014, Chef Ethan Stowell opened a chicken wing stand at Safeco, “Swingin’ Wings,” that features a locally-produced Bonache hot sauce made in the Seattle neighborhood of Ballard, with Washington-grown ingredients.⁴ What started as a small side project turned into a full-time business for this hot sauce company, thanks in part to the visibility and branding value of the Mariners.

GREENER FOOD SERVICE & WASTE PRACTICES

The Mariners estimate that 90 percent of the waste generated at their games in 2013 was either recycled or composted. The team diverted over 3 million pounds of waste from landfills in 2013, resulting in a savings of \$114,000 in avoided landfill costs. These accomplishments earned the Mariners Major League Baseball’s American League Recycling Champion award two years in a row (2013 and 2014).

In 2011, the Mariners began partnering with BASF to host “Sustainable Saturdays,” which feature fun and engaging fan activities focused on sustainability as well as giveaways. In 2014, the Mariners hosted eight Sustainable Saturdays, featuring in-game trivia about recycling and composting and special giveaway prizes like tablets and iPads. For a June 2014 home game against the Cleveland Indians, BASF and the Seattle Public Utilities teamed up to give away “compost caddies” (small collection bins for food waste) to the first 8,000 fans to arrive at Safeco.

NAMESAKE DISH EDGAR’S LENGUA TACOS

In 2014, Chef Ethan Stowell and Centerplate partnered with legendary retired Mariners Hall of Fame player Edgar Martinez to create a taqueria open to all ballpark attendees. “Working together with our local consulting chef, Ethan Stowell, we created a taqueria featuring what we call Northwest Mex—classic tacos built using locally sourced ingredients like carne asada and carnitas—a best-of-both-worlds type deal,” explains John Sergi, who consulted on the design for Centerplate.

The taqueria menu includes several locally sourced, healthier menu options. For example, the renowned lengua (beef tongue) tacos are made using Painted Hills Natural Beef, which is 100 percent antibiotic-free meat from Oregon. The tacos were ranked one of Seattle’s 10 best tacos by Zagat in April 2014.⁶ The lengua tacos are also an example of the growing focus on “nose-to-tail” cooking practices (see Glossary).

According to the U.N. Food and Agricultural Organization, about 43 percent of a cow and 44 percent of a pig is typically discarded after it has been dressed. The “Nose to Tail” movement encourages reducing this amount of waste by preparing less traditional offerings of meat including tongue and offal. There is also significant supply of these less traditional cuts in the market, making them more affordable. Will Homer, the owner of Painted Hills Natural Beef, says, “I think it’s fantastic that Safeco is featuring our product. Its success as a menu item not only helps our brand, but also speaks to Seattleites’ growing interest in exploring new food options. Our family also happens to be huge Mariners fans.”

“Buying product from local farmers and producers only helps the business,” explains Chef Johnson.

“I’ve learned over the years that at the end of the day what matters most about a chef’s name is how much of the community he involves in his good work. That’s where he gets the accolades. When you share the wealth like that, it comes back to you.”



LOCAL PARTNER FEATURE: “THE NATURAL” FOOD STAND

“The Natural” food stand features a menu of local and healthier food options, including Seattle-based Field Roast vegan and vegetarian frankfurters and burgers.⁷ In 2014, The Natural updated its menu to feature new options such as organic smoothies and sandwiches served on all organic bread. The Natural also serves Widmer Brewing Company’s Omission Ale, a gluten-free beer that has been highly rated by Bon Appetit.⁸ Widmer Brewing Company produces its beer using a variety of environmentally preferable practices. For example, 100 percent of the Widmer Brewery’s electricity is sourced from renewable wind power through Pacific Power’s Blue Sky program. Widmer is also a founding member of the Craft Brew Alliance (see the Glossary for more information) as well as a member of the Green Restaurant Alliance.

Food serviceware served at Safeco Field is compostable (certified by the Biodegradable Products Institute as meeting ASTM 6400 compostability standards, and verified by Cedar Grove, the composting facility for Safeco as compatible with their system). The compostable serviceware includes straws, cups, bowls, hot dog trays, food wraps, and cutlery. Very few items used in Safeco’s food service are not compostable or recyclable; these include plastic wrap and ketchup and mustard packets.

“Environmental sustainability is a core part of our operational philosophy at the Mariners, and with the help of BASF, we are able to engage our fans and spread the message beyond the ballpark,” said Joe Myhra, Seattle Mariners Vice President of Ballpark Operations in a BASF press release from April 2014.⁵

WHAT’S NEXT?

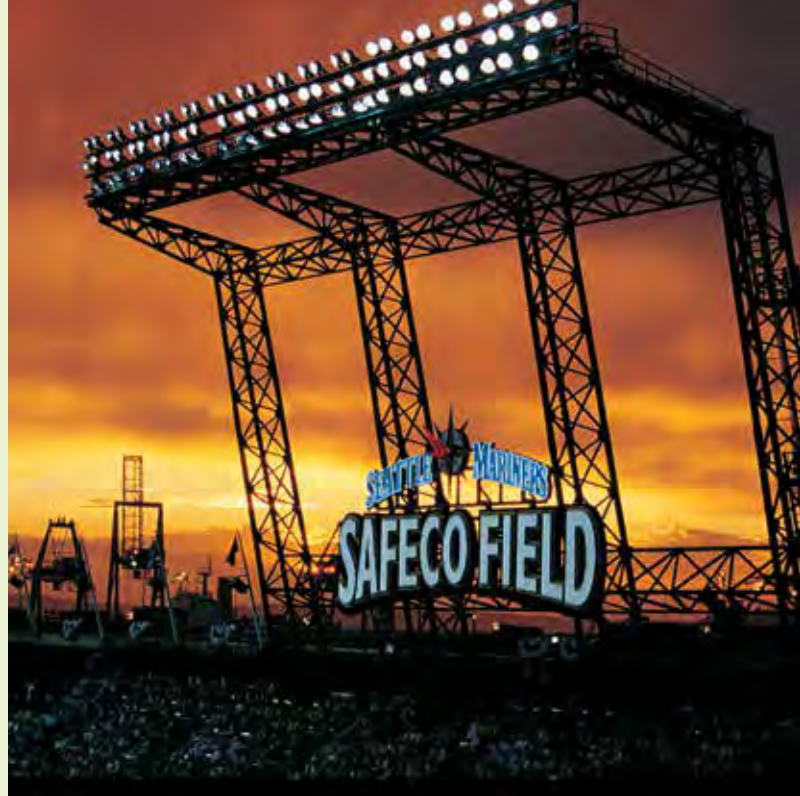
According to Chef Johnson, the continuous transition towards a local menu has some challenges. As Safeco Field gained recognition for its innovative procurement practices, producers of all sizes with more sustainable practices approached them hoping to supply their products to Mariners fans. “One challenge is making sure that we select food that meets Centerplate’s quality assurance standards. Insurance is a key in terms of

product safety and liability,” explains Johnson. “Someone may come in and say, ‘Hey, I have the latest and greatest ground lamb burger,’ but if they don’t have enough insurance to meet the USDA organic requirements, that could create a big liability problem.” Chef Johnson also relies on his distributors to evaluate smaller farmers that his team is interested in buying food from.

Smaller producers can also face challenges meeting the supply volumes required by a large venue like Safeco Field, which can’t tolerate supply interruptions. “We start shooting numbers and tonnage at them and they soon realize that over two million people come to our restaurant for 81 games a year. It adds up quickly,” explains Chef Johnson. He has also built a unique relationship with a Peterson Foods warehouse in Seattle where many of the products they buy are stored: the warehouse maintains an inventory of the hundreds of local products featured at Safeco Field.

Chef Johnson hopes that the improvements to the Mariners’ menus will serve as examples for others to follow. “What I would like to see in 10 years isn’t about what I’m doing here at Safeco. I’d like to see what we started take a foothold and change the way that people see stadium food on the whole,” says Chef Johnson. “We’re really getting that momentum rolling—it feels like we are pioneering this great movement,” says Chef Johnson.

1 <http://seattle.mariners.mlb.com/sea/ballpark/information/index.jsp?content=sustainability>.
 2 <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5066028>.
 3 <http://www.ballardnewtribune.com/2014/04/09/news/safeco-concessions-go-bat-ballard-food-vendors>.
 4 <http://bonachesauc.com/collections/sauces>.
 5 <http://www.basf.com/group/corporate/us/en/news-and-media-relations/news-releases/news-releases-usa/P-13-556>.
 6 <http://www.zagat.com/b/seattle/seattles-10-best-tacos-and-a-salsa-bar-shout-out#10>.
 7 <http://fieldroast.com>.
 8 <http://www.bonappetit.com/drinks/beer/slideshow/10-gluten-free-beers-that-actually-taste-good/?slide=6>.



Edgar's Cantina Carne Asada Street Tacos

Approx 48 4-inch tacos

3 pounds hanger steak

Marinade:

3/4 cup orange juice

1/2 cup lemon juice

4 cloves garlic, minced

1/2 cup soy sauce

1 teaspoon chipotle powder

1 tablespoon chili powder

1 table spoon paprika

1 teaspoon dried oregano

1 tablespoon black pepper

1 bunch cilantro, chopped

1/2 cup tequilla

1/2 cup olive oil

Toppings:

8 ounces crumbled cotija cheese

96 4-inch corn tortilla

8 ounces diced onion

1 cup chopped cilantro

2 limes cut into 8 wedges each

48 slices of fresh radish

Directions for Carne Asada:

Combine all ingredients except the beef in a large glass or ceramic bowl. Wisk together until well combined. Remove 1 cup of the marinade and reserve refrigerated until meat is cooked.

Place steak between plastic on a solid level surface. Pound the steak to a thickness of 1/4 inch. After pounding the steak poke all over with a fork to allow marinade to penetrate meat.

Add meat to marinade and let sit refrigerated for 24 hours.

Preheat outdoor grill to medium-high and lightly oil grates.

Remove steak from marinade and discard used marinade. Grill to desired doneness, about 5 minutes per side for medium rare. Remove meat from heat and slice across the grain.

Pour the cup of reserved marinade over meat and make tacos.

Directions for taco assembly:

Warm tortillas on a griddle or frying pan.

Stack 2 tortillas per taco.

Per taco fill with the following: 1 ounce of Carne Asada garnished with diced onion, cotija and cilantro. Finish each plate with 3 tacos, a lime wedge and 3 slices of radish.

Optional condiments include a variety of your favorite salsas, pickled peppers, Mexican crema and guacamole.

Case Study

AT&T PARK

HOME OF THE SAN FRANCISCO GIANTS

Location: San Francisco, California

Opened: March 31, 2000

Seating Capacity: 41,915

Owner: China Basin Ballpark Corporation, San Francisco Giants subsidiary

Operator: San Francisco Giants

Concessionaire (Concessions): Centerplate

Food Service Provider (Suites & Catering): Bon Appétit Management Company

Concessionaire Contract Length: 2000

Venue Uses: MLB games (primary), international soccer and MLS games, collegiate football games, big-air ski and snowboard contests, concerts, and private events

LEED Certification: Certified LEED Silver for Existing Buildings: Operations and Maintenance in April 2010



“By surrounding fans with a beautiful garden, the garden sends fans the message that they can truly enjoy fresh food at our ballpark. That is why this is so important for us: it shows fans that more sustainable food is about appreciating the quality of the food and the place it comes from.”
Bill Greathouse, Centerplate’s Senior Vice President of Sports.

AT&T PARK’S GREENING STORY

AT&T Park, home of the San Francisco Giants, was the first major league ballpark to install a solar array (123 kilowatts) and the first to receive LEED Silver certification for the U.S. Green Building Council’s existing buildings operations and maintenance standard. The Giants also divert more waste from landfills than any other professional sports team in North America, with a 2013 diversion rate of 95 percent.

The Giants’ greening accomplishments include energy efficiency, onsite renewable energy production, waste diversion, and irrigation water efficiency as well as greener hospitality practices. In partnership with Bon Appétit Management Company, AT&T Park built the first large-scale organic edible garden housed inside a professional sports venue in the United States. In 2014, the arena was ranked first in PETA’s “2014 Vegetarian-Friendly MLB Stadium Rankings” for its wide variety of vegetarian (including vegan) menu options.

AT&T PARK’S GREENER FOOD STORY

GREEN MENU DESIGN & FOOD SERVICE

The Giants and Bon Appétit have partnered with Centerplate to offer many locally sourced and organic items at AT&T Park, reducing fuel emissions and pesticide use. For example, Centerplate placed a stand behind home plate that serves fresh USDA certified organic produce from the Ferry Plaza Farmer’s Market, a California-certified farmer’s market located just a mile from the ballpark and operated by the nonprofit Center for Urban Education about Sustainable Agriculture (CUESA). The Farmer’s Market stand offers locally grown produce, fresh fruit, aguas frescas, organic strawberry shortcake, seasonal pies, and sustainable and locally crafted wines on tap and in bottles.

Thanks to Centerplate’s commitment to offering lower-impact vegetarian menu options, AT&T Park was ranked first in PETA’s “2014 Vegetarian-Friendly MLB Stadium Rankings.” The park was also ranked first in 2006 and 2011 and second from 2007 to 2010. The stadium features vegetarian (including vegan) options in every concessions area. Vegetarian items include vegetarian sausages, portobello sandwiches, made-to-order vegetable tacos and burritos, vegetable bowls with pineapple salsa, a lemongrass green curry, and baked or mashed potatoes with toppings.

Centerplate’s kitchen facilities and concessions areas are outfitted with energy-efficient lighting and refrigeration equipment. Centerplate has worked to convert the park’s most popular concessions stands, starting with Gilroy Garlic Fries stands, into more sustainable operations by retrofitting cooking equipment to reduce oil consumption by 32 percent and cut utility costs by more than half (see Gilroy Garlic Fries sidebar). “We are proud to support AT&T Park as its hospitality partner and

are honored that our efforts to make environmentally conscious choices have helped the facility earn a prestigious LEED Silver Certification for Existing Buildings,” said Bill Greathouse, Centerplate’s Senior Vice President of Sports.

GREENER PROCUREMENT & FAN EDUCATION

In June 2014, the Giants opened a 4,320-square-foot organic edible garden by center field, the first of its kind at a major league ballpark. This “centerfield-to-table project” is run in partnership with the Giants and Bon Appétit Management Company, which has operated the catering in the field and club levels and suites since the ballpark opened in 2000. Bon Appétit also owns the Mijita and Public House restaurants at the ballpark. Fans already enjoy fresh herbs from the garden, topping their concession pizza or pasta with fresh basil, for example. Other plants—such as bok choy, kale, kumquats, strawberries, broccolini, huckleberry, avocados, and chard—will be harvested for use in ballpark menus when they mature. The garden will supply food for the park’s catering operations and double as an open-air restaurant and community classroom.

“We believe strongly that fresh, delicious food is a powerful teaching tool,” said Bon Appétit CEO and Co-Founder Fedele Bauccio in a press release. “There’s so much produce we can grow, it’s unbelievable. Kale, strawberries, broccolini, citrus, and huckleberry. The idea would be for people to sit there and watch the game and eat food from the garden.”

Peet’s Coffee & Tea, a sponsor of the garden, will provide coffee grounds to fertilize the planter beds. Bon Appétit will also serve Peet’s Gaia Organic Blend Coffee at the concession stands in the garden. In addition, by growing fresh ingredients onsite, the garden will help reduce the fuel costs and greenhouse gas emissions that would come from trucking in produce from outside farms.

“We really wanted to be able to do something that is not just very San Francisco, but also a part of today’s world,” said Larry Baer, Giants president and CEO. “The commitment we’re making is to create this garden and use that real estate in a way that’s productive. We think it’s the perfect solution. There’s the sustainable part of it, but there’s also the health food aspect of it. People can eat out there in a healthy way. People think about eating at the ballpark, ‘I’m going to cheat on my diet or cheat on my health.’ When you come to this ballpark, you don’t have to cheat.”²

The garden features traditional raised platform plant beds for vegetables like cucumbers and bok choy, as well as aeroponic towers for growing leafy greens and tomatoes. Each tower is made of FDA-compliant, food-grade plastic and can grow up to 44 plants in a tiny space. The aeroponic towers use up to 95 percent less water than conventional farming. There is also a miniature grove of lemon trees mixed in with herbs, marigolds, and pansies alongside green trellises or “living walls.” President Barack Obama also supported the garden, saying the Giants are “champions in the community” for “what is believed to be the first ever edible garden in a major American sports facility.” The goal of the garden is to educate the community about the benefits of a healthy lifestyle. The garden will also serve as an outdoor classroom for Bay Area students to learn about sustainability, urban farming, and healthy eating. The Giants and Bon Appétit will work closely with local chefs, farmers, and wellness organizations to teach children about how to plant their own urban garden and prepare healthy meals. Baer describes the garden as “a special place in the ballpark [that] will certainly become a popular place for our fans to gather and an outdoor

STANDOUT GREENER FOOD ACCOMPLISHMENTS

- ▶ AT&T Park was ranked first in PETA’s “2014 Vegetarian-Friendly MLB Stadium Rankings” and features vegetarian (and vegan) options in every concessions area.
- ▶ “Gilroy Garlic Fries” was AT&T Park’s first “green concession stand,” launched in 2009. Switching to energy-efficient appliances has saved enough energy to fry 110 tons of garlic fries (see Gilroy Garlic Fries sidebar).
- ▶ The ballpark features a stand serving fresh USDA certified organic produce from the Ferry Plaza Farmers Market, a California-certified farmers market.
- ▶ AT&T Park serves meats from local butcher 4505, which produces 100 percent grass fed, grass-finished beef on pasture.
- ▶ AT&T Park features a wine cart with 35 varietals of California wines.
- ▶ AT&T Park features local Mexican restaurant, Mijita, which uses only USDA certified organic ingredients wherever possible along with local and seasonal items.
- ▶ The Giants achieved 100 percent waste diversion ballpark-wide in March 2012 and an 85.2 percent annual waste diversion rate for 2011. The team recycles or composts cans, bottles, plastic cups, cardboard, paper, wood pallets, electronic components, lightbulbs, batteries, cooking grease, food waste, and grass clippings.
- ▶ Close to 100 percent of food packaging sold at the ballpark is recyclable or compostable.





STANDOUT DISH: GRILLED EGGPLANT SANDWICH

AT&T Park's grilled eggplant sandwich features USDA certified organic eggplant marinated in balsamic, thyme (grown onsite in the garden), and garlic. The eggplant is grilled and topped with roasted red bell peppers, goat cheese, salsa verde, pesto, and baby arugula, and served on toasted baguette.

classroom where our children can learn." Peet's Coffee & Tea locations will offer community members free coffee grounds to use as fertilizer in their personal gardens.

"We're making a statement about the importance of freshness and sustainability with the edible garden, but it's also about the environment that we're putting fans in. We're surrounding fans with vines, plants, hummingbirds, and butterflies," says Bill Greathouse. "Our concessions and food service are always about the fan experience. By surrounding fans with a beautiful garden, the garden sends fans the message that they can truly enjoy fresh food at our ballpark. That is why this is so important for us: it shows fans that more sustainable food is about appreciating the quality of the food and the place it comes from."

GREENER WASTE PRACTICES

Centerplate has rigorous goals for minimizing food waste in kitchens and keeping food out of landfills, which includes donating any unsold food to local food shelters. "Food waste detracts from our ability to be financially successful. We have careful and continual monitoring efforts for all of our food production practices in our kitchens. Our goal is to produce less than one percent of extra, unsold food across all of our concessions," says Greathouse. "We're at an advantage because we can accurately predict the volume of food that we'll sell because we're blessed to consistently sell out for Giants games."



When no longer usable, all food storage containers are composted or recycled. All disposable food serviceware distributed in the park, is compostable. The Giants recycle or compost cans, bottles, plastic cups, cardboard, paper, wood pallets, electronic components, lightbulbs, batteries, cooking grease, food waste, and grass clippings. In 2013, the Giants achieved a season average waste diversion rate of more than 95 percent. In March 2012, the team accomplished 100 percent waste diversion ballpark-wide for the first time, though it was during the off-season.

From 2007 to 2013, the Giants have won the coveted Major League Baseball Green Glove Award, for leading the sports industry in recycling initiatives. With support from Centerplate, the Giants' recycling and composting program diversion rates from landfill have consistently grown: 57 percent in 2009, 75 percent in 2010, 85 percent in 2011, and 95 percent in 2013. According to Jorge Costa, senior vice president of ballpark operations who has been with the Giants for 25 years, one secret to the Giants' success is hand-sorting waste. "We process all waste at the end of the game by hand as it comes through the loading dock," says Costa. "Even though it's costly and a dirty job, we get our money back and definitely see dividends." (Read more about the San Francisco Giants' waste diversion strategies in NRDC's 2012 report, Game Changer.)

"We're making a statement about the importance of freshness and sustainability with the edible garden, but it's also about the environment that we're putting fans in. We're surrounding fans with vines, plants, hummingbirds, and butterflies," says Bill Greathouse. "Our concessions and food service are always about the fan experience."

WHAT'S NEXT?

Centerplate plans to continue enhancing the healthy and environmentally thoughtful food experience by experimenting with new recipes based on the garden's seasonal produce. The majority of the fresh items grown onsite will be served at the garden's restaurant to establish it as a "destination restaurant" that always serves healthy, organic food. The Garden has two primary concessions stands to date, Garden Table and Hearth Table, which serve a range of vegetarian options that will eventually incorporate more and more ingredients grown onsite.

The Garden Table features a grilled eggplant sandwich (see sidebar), an antipasto platter, and a three bean salad. The Garden Table's extensive salad bar allows fans to select made-to-order salads or grab pre-made salads in a mason jar. One of the suggested combinations is an arugula salad with beets, peaches, and tomatoes with a honey-tarragon vinaigrette.



CONCESSION STAND FEATURE: GILROY GARLIC FRIES

The Giants partnered with Centerplate, PG&E, ABM, Henny Penny, and Coca-Cola to turn one of AT&T Park's most popular concession stands, Gilroy Garlic Fries, into the ballpark's first sustainable stand. The 550-square foot sustainable stand was retrofitted with Henny Penny Open Fryers, which reduce gas consumption by 32 percent, cut utility costs by more than half, and reduce cooking oil consumption by 12 percent compared with traditional fryers.

The team installed Coca-Cola's Energy Management System Cooler, which uses up to 35 percent less energy than traditional models. The lights were upgraded with high lumen lights and ballast lamp starters, which use 36.5 percent less electricity. The stand was repainted with environmentally preferable, low-VOC paint. In all, compared with the original appliances, the stand's energy-efficient appliances save enough energy to fry an additional 110 tons of garlic fries. Approximately 800 pounds of garlic fries are prepared at the Gilroy Garlic Fries stand per game.

Centerplate is replicating the success of Gilroy Garlic Fries by improving the equipment across the venue. "We are implementing these operations upgrades in our other concession stands around the ballpark as they need renovation," says Greathouse.



- 1 PETA, "The Winners of PETA's 2014 Vegetarian-Friendly MLB Stadium Rankings Are...", July 14, 2014, <http://www.peta.org/blog/winners-petas-2014-vegetarian-friendly-mlb-stadium-rankings>.
- 2 SF Gate, "Giants plan to bring food from centerfield to table," July 29, 2013, <http://www.sfgate.com/giants/article/Giants-plan-to-bring-food-from-centerfield-to-4694738.php>.



The Original AT&T Park Garlic Fries

2-2.5 lbs Hand-cut fries (keeping some skins on)
 1/2 Cup Chopped Garlic
 1/2 Cup Chopped Fresh Parsley (must be hand-chopped)
 5-6 oz. Olive Oil
 1 TBsp Kosher Coarse Salt
 1 TBsp Ground Pepper – Coarse

Fry french fries till golden brown.

Drain well of oil or blot on towels.

Combine olive oil, chopped garlic, and fresh parsley in a large mixing bowl.

Fold in the fries and toss until fries are well-coated.

Season with Kosher salt and coarse-ground pepper to taste.

Serve and enjoy!



BBQ Jackfruit Sandwich

Yield: 6 Servings

6 ea Egg Buns, plain
 6 oz Apple Jalapeno Dressing, see recipe below
 18 oz Cabbage, shredded, with carrot
 30 oz Jackfruit, fresh, cleaned, seeded
 15 oz BBQ Sauce, smoked
 8 oz Vegetable Stock
 1 oz Tomato Paste

Toss cabbage, carrot with apple jalapeno dressing, check seasoning, set aside.

Place Jackfruit, smoked BBQ sauce, tomato paste and 4oz of vegetable stock in an oven proof sauce pan, braise in oven until Jackfruit is tender. Add more stock if needed.

To build the sandwich: toast egg bun, place braised Jackfruit on the bottom part of the bun, top with cabbage slaw and top of bun. Serve.

Apple Jalapeno Dressing

Yield: 58 oz.

6.5 oz Apple Cider Vinegar
 25 oz Applesauce, Unsweetened
 0.8 oz Dijon Mustard
 0.8 oz Dill Weed, finely chopped
 0.8 oz Kosher Salt
 4 oz Jalapeno Pepper, finely chopped
 20 oz Canola Oil

Mix all ingredients together.

VENUE SNAPSHOTS

The movement toward greener game day food and hospitality practices in sports is impressive. And it's growing. Below are a few noteworthy snapshots of greener food successes at professional sports venues in the United States.

EDWARD JONES DOME HOME OF THE ST. LOUIS RAMS

SOURCING ANTIBIOTIC-FREE, ANIMAL WELFARE APPROVED MEAT FROM SHIRE GATE FARM

Starting with the 2014 opening game, Edward Jones Dome, home of the St. Louis Rams, began offering hot dogs and burgers made from certified humanely raised, antibiotic-free, 100 percent grass-fed beef. The stadium's concessionaire, Delaware North, teamed up with Shire Gate Farm, located about 80 miles southwest of the stadium in nearby Owensville, Missouri, and became the first NFL stadium to sell Animal Welfare Approved (AWA) and American Grassfed Association (AGA) certified hot dogs and beef burgers.

Shire Gate Farm is owned by former Rams player and 12-year NFL linebacker Will Witherspoon. "Working with DNC at the Edward Jones Dome, my goal is to make good food available to all and to start a food revolution from the ground up," says Witherspoon. "I am excited that the Rams are taking a stand on more sustainable food production. Hot dogs and burgers are practically shorthand for bad food, but my grass-fed hot dogs and grass-fed ground-beef burgers are fit for a professional athlete." (See Afterword for more from Will.)

Shire Gate Farm obtains its beef from local AWA-certified family farm suppliers. The AWA certification requires that animals be raised outdoors on pasture and prohibits the use of antibiotics or artificial hormones (see Glossary). Shire Gate also works with KeHe Distributors to procure organic, natural, and specialty food. "This is the first time that sustainable meat products have been served at this level at a major sports venue," said Andrew Gunther, program director at AWA, in an interview with *The Guardian*.¹

"When the bigger players in the food industry raise their game, and start sourcing local, sustainably produced food, it can lay the foundations for real change—not just at sports venues, but everywhere," says Witherspoon. "The key is meeting the concession stand's price points. Now that this has been proven possible, there's no reason why it can't happen everywhere." According to Lisa Boaz, marketing manager for the Rams, "We are really committed to serving more sustainable and local food as part of our overall green efforts." The Rams' greening initiatives include donating leftover food to St. Louis-based Operation Food Search and composting food scraps from all stadium kitchens. The team also holds an annual Green

Game every October with prizes for fans who travel to the game by public transit. The team prints media guides on 100 percent post-consumer recycled paper, recycles venue wide, has purchased renewable energy credits (RECs) since 2011 to offset 100 percent of electricity used at the venue for all regular season home games as well as carbon offsets for team flights for all away games. "Since 2005, the St. Louis Rams have been committed to establishing and growing our green platform with the intention of identifying authentic opportunities with local partners to reduce our carbon footprint," says Boaz.



"When the bigger players in the food industry raise their game, and start sourcing local, sustainably produced food, it can lay the foundations for real change—not just at sports venues, but everywhere," Will Witherspoon, 12-Year NFL Player; Founder & Owner of Shire Gate Farm.

¹ *The Guardian*, "Oddly sustainable: will grass-fed beef score at the stadium?," September 16, 2014, <http://www.theguardian.com/sustainable-business/2014/sep/16/oddly-sustainable-grass-fed-beef-sports-fans-guns-school-children-health-food>.

BILLIE JEAN KING NATIONAL TENNIS CENTER HOME OF THE U.S. OPEN

LOCAL FOOD, "FARM 2 FORK" CONCESSION STAND & VENUE-WIDE COMPOSTING

The U.S. Open has the highest attendance rate of any other sporting event hosted at a single location in the world. The U.S. Tennis Association (USTA) partners with concessionaire Levy Restaurants to serve a wide range of local food and beverages to the 700,000 fans who visit the Billie Jean King National Tennis Center in Queens, New York for the two-week tournament each year. Levy Restaurants manages five restaurants, 60 concession stands, and 100 suites, all of which offer locally sourced and more sustainably produced menu items.

In 2012, the USTA and Levy Restaurants committed to procuring 40 percent of all food for the U.S. Open from local sources—a higher percentage than at any previous tournament. Local menu items include organic ice cream from Blue Marble in Brooklyn, organic produce from Satur Farms and Red Jacket Orchards, local seafood from Gosman's Fish Market, and antibiotic-free and certified humane chicken from Murray's Chicken. Levy Restaurants obtains more than 30,000 pounds of produce from farms in the New York metro area. The Patio Cafe caprese salad, for example, features tomatoes from New Jersey and local basil. Several restaurants and concession stands also feature northeastern seafood. For example, the Aces restaurant serves a Long Island lobster roll and the Champions restaurant features spicy Long Island clam chowder.

Since 2012, the U.S. Open Food Village has also featured the Farm 2 Fork concession stand, which offers local organic, antibiotic-free meat and produce. For example, the menu features "Murray's Locally Raised Chicken Sandwich," which is antibiotic-free and certified humane. The stand's popularity led Levy Restaurants and the U.S. Open to add a second Farm 2 Fork location on the Club Level of Arthur Ashe Stadium for the 2014 U.S. Open tournament.

Behind the scenes, the Billie Jean King Tennis Center kitchens compost all food waste and recover 12,000 gallons of leftover grease for conversion into biodiesel by Tri-State Biodiesel. More than 180 tons of food and fan waste is collected and sent offsite become compost for landscaping and farming use. Almost all serviceware is compostable. The 2.4 million napkins in general concessions are made from 100 percent recycled content. During each U.S. Open, the USTA also works with Levy Restaurants to collect more than 10 tons of unsold, prepared food to donate to the local community.



LOCAL AND ORGANIC PRODUCE SOURCED FOR THE 2014 US OPEN

SATUR FARMS,
LONG ISLAND:

230 LBS
OF FRISÉE

3,000 LBS
OF MESCLUN

1,000 LBS
OF ARUGULA

PORCH FARMS,
NEW JERSEY:

12,000 LBS
OF TOMATOES



TUREK FARMS,
NEW YORK:

1,500 LBS
OF CORN

500 LBS
OF PEAS

2,300 LBS
OF CARROTS

1,000 LBS
OF ZUCCHINI

GURDA FARMS,
NEW YORK:

3,000 LBS
OF HERBS AND
LETTUCES



LYNETTE FARMS,
NEW YORK:

3,500 LBS
OF SQUASH

2,500 LBS
OF CABBAGE

500 LBS
OF PEAS



CITI FIELD HOME OF THE NEW YORK METS

MORE SUSTAINABLE FOOD VENDORS & AN ONSITE GARDEN

Citi Field, home of the New York Mets, partnered with their concessionaire Aramark in 2014 to create the “Citi Small Business Call Ups” program, which gives small food business owners in New York City the opportunity to serve their food at Citi Field. During the 2013 season, the Mets surveyed fans about new food stands to add to the ballpark. The winner of Citi Field’s 2014 “Citi Small Business Call Ups” was Corfu Grill from Forest Hills, New York. “They’re going to like our food, something different, more traditional, a real cultural food,” said owner Georgios Aspiotis in a Mets’ press release. “They’re going to step up from the hot dogs and the burgers.”²

Corfu Grill is just one of the many local purveyors that Aramark works with at Citi Field. Jennifer McCrary, Aramark’s General Manager at Citi Field, notes that the stadium’s excellent range of local food served includes a number of more sustainably produced items. For example, the ballpark features Pat LaFrieda’s antibiotic- and hormone-free beef in their burgers and steak sandwiches. Citi Field also hosts Shake Shack, one of New York’s fastest growing burger chains. Shake Shack serves only antibiotic- and hormone-free beef in their hamburgers and hot dogs, and also offers several popular vegetarian options, including the “Shroom Burger,” a portobello mushroom patty stuffed with cheese.

“One of the things we’re most proud of here at Citi Field is our local partnerships and sourcing locally. We’ve tried to bring a taste of New York into the ballpark. We try to showcase the bounty that we have around us,” says McCrary. For example, Dave Pasternak, 2004 James Beard Foundation’s NYC Best Chef Award winner, uses only locally sourced food for his Citi Field “Catch of the Day” dish.

In 2014, the Mets started a small onsite garden, planting herbs and vegetables in hydroponic window boxes for use in the suites and catering kitchens. “We are very excited to have broken ground on this small project. We are growing herbs, tomatoes and edible flowers. It’s really fun and has our chefs working to create creative dishes that use the most local ingredients we have possible,” says McCrary. “This project is just the beginning. We definitely plan to expand it further and grow more onsite.”

In addition to greener procurement choices, the ballpark is working to incorporate other more sustainable hospitality operations. Beginning in 2012, the Mets partnered with Action Carting Environmental Services and Aramark to implement food waste collection for composting in all kitchens, suites, clubs, and restaurants. The venue also saves more than 4 million gallons of water per year through water-efficient features including 414 hands-free faucets, 635 automated toilet flush-valves, and 270 waterless urinals. The Mets’ administration building also features an 11,000-square foot green roof.³



© Aramark at Citi Field

Hepworth Farms Heirloom Tomato and Burrata Cheese Salad

Makes 4 servings

4 large heirloom tomatoes (about 2 1/2 pounds)

1/4 cup good cabernet vinegar

1/4 cup basil infused extra-virgin olive oil

Sea salt or coarse kosher salt

Freshly ground black pepper

1 teaspoon minced fresh chives

1 each Torpedo onion or shallot, thinly sliced

1/4 cup basil infused extra-virgin olive oil

4 (2-3ounce) rounds Burrata cheese

2 cup Petite greens such as water cress or arugula,
divided equally

Preparation

Cut tomatoes into wedges, slices or random shapes. Place on baking sheet and dress with cabernet vinegar and basil infused olive oil. Sprinkle with sea salt, fresh ground pepper and minced chives. Allow tomatoes to marinate at room temperature wrapped in plastic for approximately 30 minutes.

Cut burrata rounds in half, drizzle with basil oil and season with sea salt and ground pepper. Arrange tomatoes and cheese on center of plate, drizzle with juices from marinated tomatoes garnish with sliced torpedo onion and petite greens.

² New York Mets, “Corfu Grill earn a Citi Small Business Call-Up,” July 1, 2014, <http://m.mets.mlb.com/news/article/82416564/corfu-grill-earns-a-citi-small-business-call-up>.

³ Major League Baseball, “Mets expand green initiatives at Citi Field,” April 23, 2012, http://mlb.mlb.com/news/print.jsp?ymd=20120423&content_id=29457622&c_id=nym%20?iframe=true.

TD GARDEN HOME OF THE BOSTON BRUINS AND BOSTON CELTICS

MENU FOCUSED ON SEASONAL AND LOCAL FARE

TD Garden, home of the Boston Bruins, has cultivated a unique relationship with local farmers to supply fans with seasonal and unprocessed fare. One of the driving forces behind this movement has been native Bostonite regional executive Chef Kevin Doherty of Delaware North, who manages the premium hospitality business at the TD Garden. The relationships he's developed with local family farmers has helped TD Garden bring in produce, often organic, from the surrounding region.

More than 3.5 million people attend events at the TD Garden every year.⁴ Chef Doherty stresses the importance of sourcing what is actually in season to create menus that fans will enjoy. As TD Garden's main events, ice hockey and basketball, are winter sports, Chef Doherty often features winter produce like squash and other hearty vegetables.

Because the venue requires a large quantity of produce for its menus, Chef Doherty and the produce company source from about 15 to 18 different farms. "One of the local lettuce suppliers produces 6 to 8 cases a couple times a week, which is mixed with other local vegetables and ingredients to create great dishes," says Doherty. "Additionally, all of the cheese comes from Western Massachusetts, New Hampshire, Vermont, and New York, and most of the providers are not big, corporate companies."

Meat is obtained from a number of suppliers, including Northeast Family Farms, which is comprised of about a dozen farms in western Massachusetts and New York. These farms slaughter less than 50 head of cattle a year, according to Doherty, which means they can only supply a portion of the arena's needs. Although buying from many different small suppliers means more work for Doherty, he prefers to source from Northeast Family Farms because of their high standards. Northeast Family Farms standards include livestock raised to maturity on pasture with completely vegetarian diets, animals raised without added hormones, beef raised without sub-therapeutic antibiotics, and pork and lamb raised without any antibiotics.⁵

"I am not looking for fillers or chemical additives," says Chef Doherty. "When I think of a burger, I think 100 percent ground chuck, nothing else." After touring an enormous meatpacking plant in Chicago and witnessing the problems associated with chemical use and tracking sourcing, Doherty promised his staff they wouldn't buy from that plant anymore. Instead, he sources from more local and sustainable suppliers, often from the farms in western Massachusetts. Doherty is proud of the food at TD Garden, saying, "There's no hormones; we're not messing with Mother Nature, it's real food. It's food the way it should be."



⁴ TD Garden, "The Garden," <http://www.tdgarden.com/the-garden>.

⁵ Northeast Family Farms, "About," 2015 <http://www.northeastfamilyfarms.com/about.php>.

***Murray's All Natural Roasted Chicken with Organic Freekeh Pilaf,
Heirloom Pickled Local Beets, Local Corn Puree, Aspiration Natural Jus***

Chicken breast (murrays all natural 2.75 lbs)

Quarte epics

Active gs

Kosher salt

Black pepper

Fabricate chicken breast, shape into cylinder,
wrap with chicken skin, season salt and pepper.

Wrap in cheese cloth, vacuum seal.

Cook sous vide 66 c for 90 minutes.

Remove from sous vide , sear skin in hot fat,
slice as needed for service.

New England Beets

7 oz Sugar

14 oz Cider vinegar

3 grams peppercorns

1 gram celery seed

1 gram red pepper

60 gram honey – local new England

1 sprig tarragon

3 sprig parsley stems

1 each shallot chopped

Place all ingredients in small pot bring to boil, reserve to cool,

Wash 2 beets, place to boil in water till tender, peel and dice.

Place in pickle liquid above (make sure its strained).

Organic Freekeh Pilaf

4oz USDA Certified Organic freekah

2 oz unsalted butter

2oz diced white onion

1 bouquet garni

8 oz water

1 oz unsalted butter to finish

Melt butter in small pan, add onions and
bouquet garni, cook till soft.

Add freekeh , saute 2 minutes, add water,
cook covered till done, add final butter with
seasoning when complete.

Chicken Leg croquette

Remove skin from both legs,

1 shallot

½ carrot

1 celery stick

1 bay leaf

Parsley stems

¼ onion sliced

Braise chicken in stock till tender, remove from pot, strain
braising liquid, reduce by 1/2 while picking and chopping
leg meat, shape into small balls season as needed, standard
breading procedure, fry for service.

The braising liquid is also the sauce for this dish.

Corn Puree

1 ear fresh local corn

1/2 shallot

1/2 white onion sliced

4 oz milk

Parsley stems

Bay leaf

Unsalted butter

Remove corn from kernel, place all in milk and simmer till
done, puree this mixture, strain season as needed.

Brocolinni Saute

1 small head brocolinni,

1 oz unsalted butter

Salt

Black pepper

Blanch, shock and saute as for service.

MARLINS PARK HOME OF THE FLORIDA MARLINS

PROCURING LOCAL, ORGANIC FOOD

When Marlins Park opened in April 2012, it became the first retractable roof structure in the world to earn LEED-NC Gold Certification from the U.S. Green Building Council. The ballpark's environmental features include 249 waterless urinals, which save approximately 6 million gallons of water each year. Marlins Park also features 319 bike parking spaces and is centrally located near public transportation, reducing the number of fans driving to games.

With support from their concessionaire Levy Restaurants, Marlins Park is committed to sourcing and preparing their food in an environmentally preferable way. The Marlins obtain antibiotic- and hormone-free beef for all burgers, organic fruits and vegetables, and free-range chicken from a number of local purveyors. "Everything is fresh, sustainable, and from Florida whenever possible," said Jim Abbey, regional executive chef for Levy restaurants, in a 2012 press release.⁶ "Tomatoes in season are raised in Homestead or The Redland; our shrimp come from the Gulf of Mexico, and our rock shrimp from north Florida." The ballpark's suppliers include Niman Ranch and Harris Ranch (antibiotic- and hormone-free beef and pork); Ashley Farms (antibiotic-free chicken); Teena's Pride, All Locally Grown Produce (organic tomatoes); and Paradise Farms, Tom Vick Farms, and J&C Tropicals (organic herbs, fruits and vegetables).

Levy also donates unused prepared food to the Robert King High Towers, a housing complex for seniors. After every event, food is collected from concession stands and main kitchens and stored in coolers. Staff and residents from the housing complex collect the food and distribute it to their neighbors. Between 2013 and 2014, Levy and Marlins Park donated more than 10,000 pounds of food to the housing complex. "The folks at the Robert King High Towers are so appreciative of the food that has been delivered. The quantity of food delivered to date has allowed them to feed several other tenants in the complex," says Jeff King, vice president of facilities at Marlins Park. "We really appreciate the cooperation from Levy in this effort and the ease with which the program was instituted."

Food that can't be salvaged for consumption is donated to a local composting program to create a nutrient-rich fertilizer. All food scraps (peelings, shavings, cores, leftover food, etc.) are collected from Marlins Park's three main kitchens as well as concession stands and held in collection bins. Fertile Earth, a local farming organization, picks up the scraps regularly and brings them back to their farms to be composted. Since the program was launched in 2012, 28.76 tons of composting materials have been collected.



Marlins Veggie Burger

Yield: 10 burgers

- 3 cups Yellow Rice – Cooked and cooled
- 3.5 oz package Sazon seasoning
- 1 Fresh Jalapeno pepper
- 1/3 cup Red Onions – Minced
- 2 cloves Garlic, minced
- 1/3 cup Red pepper – dice the same size as the beans
- 4 Tablespoons, Molasses
- 1 cup rolled oats
- 2, 14 oz cans Black Beans – drained and rinsed
- 1 cup Sweet Plantains – finely diced
- 1 Tablespoon Chili Powder
- 1 Tablespoon Cumin – Ground
- 3 Egg Whites
- 2 Tablespoons Cilantro, minced
- ½ cup all purpose flour, for coating patties

Cook the rice until soft then cool.

Mix, Rice, Beans, Oats, Plantains, Onions, Peppers and Goya Sazon by hand thoroughly.

Add remaining ingredients and mix well until combined.

Form into 6oz Patties.

Chill for at least one hour.

Coat Patties in flour then deep fry at 350 for two minutes

Cool quickly on a wire rack before serving, or wrap in plastic and freeze until needed.

⁶ Examiner, "Marlins Park sets new Miami stadium food standard," April 3, 2012, <http://www.examiner.com/article/marlins-park-sets-new-miami-stadium-food-standard>.

FENWAY PARK HOME OF THE BOSTON RED SOX

CREATING PARTNERSHIPS BETWEEN CHEFS AND FARMERS

Fenway Park buys seasonal, local produce whenever possible, and sends employees to local suppliers to see how their food is grown. Each year, Rich Roper, who has been stadium manager at Fenway for 30 years, and Head Chef Ron Abell from Aramark bring the entire Aramark food team to spend a weekend at Ward's Berry Farm in Sharron, Massachusetts. The farm, located only 35 miles from Fenway, provides much of the ballpark's fresh produce, including many organic items such as beets, potatoes, corn, and tomatoes. "We take all of our kitchen staff and show them how the food is grown and harvested, how hard the farmers work, and what the farmers' days look like. We end up cooking a meal for all of the farmers from what we've harvested," explains Chef Abell.

Chef Chef Abell of Fenway's EMC Club notes that this process helps to educate the culinary students who work as apprentices at Fenway Park. "We get a whole new breed of cooks coming in who understand where their food comes from. It helps them respect it and treat it better. Everyone benefits from that, all the way to the guest."⁷

Currently, much of the local and seasonal produce is incorporated into menus for the suites areas, the EMC, and Pavilions clubs. But Roper anticipates expanding these offerings to all fan concessions, noting that there is a growing trend in favor of local food that's better for the environment. "Over the last 10 to 12 years, it's become more prominent that people have been looking for vegetarian options in particular," says Roper. He continues, "The increasing number of folks making requests is very important because we are taking care of those people that would not be able to eat if we didn't make available organic or veggie burgers and tofu dogs. In all clubs we offer vegetarian entrees. In those areas we have a higher percentage of organic items as well."



Fenway Farms Kale Salad with Lemon Vinaigrette

Yields: 4 salads

For Salad:

- 1/2 head each of red Russian kale, Tuscan kale, green leaf kale
- 4 oz dried cherries (or any other favorite dried fruit)
- 2 oz shaved fennel
- 5 oz crumbled Vermont goat cheese
- 4 oz toasted marcona almonds

For the dressing:

- 1 oz lemon juice
- 3 oz of either canola oil or grape seed oil
- 1 tblsp of local honey
- 1 tsp Dijon mustard

To make dressing add the lemon juice, honey, mustard to a bowl and whisk to combine, one combined slowly whisk in the oil until all of its incorporated. Set aside. Take the kale and julienne each type and toss it in large bowl and salt it lightly (this helps break down the kale slightly and makes it less tough) and let it sit for an hour or so. After the hour add the cherries and fennel into a different bowl and add the kale to it, add a few spoon fulls of the dressing and toss together, add salt and pepper if needed. Plate a handful each of the mix on the four plates, top with the marcona almonds and crumbled goat cheese and enjoy.

© Aramark at Fenway Park

⁷ Boston.com, "The Sox' other farm team," September 8, 2010, http://www.boston.com/lifestyle/food/articles/2010/09/08/the_sox_other_farm_team.



The Fenway food service team continually explores new ways to incorporate and highlight regional offerings into their menus. Roper says, “We’re putting out a food cart with apples and bananas and pears and all kinds of fruits. We also do fruit cups that we put all over the stadium and we might sell a few hundred of those on a hot day.” He also notes that better food doesn’t always have to mean more expensive food. “If you are designing seasonal and local menus, your food costs are going to be lower. If you surround yourself with a great team and pay attention to how you are running your business, you can still run reasonable food costs if you know how to plan and execute menus.”

Abell also notes that prioritizing local and seasonal food requires frequent communication with suppliers. “We constantly question our purveyors. We call them up once a week and ask them, what do you have and where is it coming from,” he says. “In this day and age, nothing is hidden anymore. If someone is telling you



that they are buying from such and such organic farm, it’s your responsibility to make the phone call and find out what’s going on. There are no excuses anymore when it comes to verifying the sustainability claims being made in the food industry.” Asking the right questions allows Abell and his staff to confidently communicate to the ballpark’s guests about their more sustainable food options.

Aramark’s kitchen staff also participates in a composting program that closely monitors all organic waste leaving the back of house areas. “Something that I hadn’t seen in the business until I got here was a waste barrel where we put all of our kitchen scraps,” says Abell. “We track, analyze, and weigh our food waste in the back of house area. After the waste, scraps, peelings, bones, postconsumer waste is weighed. We put them into barrels, which are sent to be composted.”

WELLS FARGO CENTER HOME OF THE PHILADELPHIA FLYER | 76ERS

"FARM TO FAN" STAND & COMPOSTING PROGRAM

As part of the Wells Fargo Center's ongoing sustainability initiatives, the Philadelphia Flyers created a Farm to Fan stand dedicated to locally sourced produce. "We work with Melissa's Produce to purchase locally and get fresh, seasonal produce," says Dave Salinger, former division manager of concessions at Wells Fargo Center. "Fans can also find a range of vegetarian options at the stand, including salads and a black bean chipotle burger as well as smaller snacks such as granola bars and fresh fruit."

The Farm to Fan stand was created in response to fan feedback asking for more vegetarian and fresher options. Chef Peter DeCarl, Aramark executive chef at Wells Fargo Center, notes that they are "constantly working on menu innovation." Several of the vegetarian options were introduced on the concessions level first and, once they proved very successful, were added to the premium menus. "A couple of vegetarian items we serve in the concessions stands, such as our black bean burger wrap, just took off, so we introduced them on the premium side—and the sale of those items in our suites and catering areas tripled," explains Chef DeCarl. Seeing the success of those items encouraged further innovation for Chef DeCarl and his staff, who next created an organic tofu rice bowl. This also proved a popular item, according to Chef DeCarl, who added, "After the great response we had once again on the concessions level, we introduced it into our premium menus as well." Chef DeCarl's repeated success piloting vegetarian dishes in concourse concessions and then rolling them out across all menus has encouraged his team to create even more vegetarian options.

Tackling responsible food waste disposal is also a key part of Wells Fargo Center's greener food strategy. In 2011, representatives from the NHL and Comcast Spectator (the owner of Wells Fargo Center) met with Aramark to discuss a composting program at the venue. Salinger helped roll out a comprehensive food waste recovery program building-wide. The program was launched in January of 2012, and has helped increase the arena's diversion rate from 7 percent to 77 percent.⁸ "We worked with Waste Management and created signs that were specific to the items served by Aramark at Wells Fargo Center, so people easily recognized pictures on the signs and changed behavior, while maintaining the same great fan experience," says Salinger.

In order to better capture postconsumer food waste for composting, Wells Fargo Center switched to compostable serviceware for all concessions. "There was concern that switching to compostable serviceware would be pricey, but when we priced it out it was only about penny more per item," says Salinger. For some items, there was no cost difference between compostable and non-compostable options. "Right now 99.9 percent of our serviceware is all compostable. At the end of the day, it's great for the environment, it's great for the company, and it works out well for everyone, so a few pennies here and there are not going to make a huge difference," Salinger adds.

⁸ Aramark, "Venue Highlights," <http://www.aramarkentertainment.com/news/newsletters/newsletter-details.aspx?articleId=50>.

Ginger Steamed Halibut with Orange and Carrot Puree, Green Peas, Shitakes

Servings: 1

1 8oz Halibut Filet
1 Knob Fresh Ginger
2 cloves garlic
2 oz Shucked Green Peas
1/2 oz Pea Shoots
2 oz Shitake Mushrooms, washed
2 oz Orange+Carrot Puree*

Instruction:

Season Halibut filet with salt.
Rough chop ginger and garlic.
Combine ginger, garlic and water and place in the bottom of steamer, under steamer basket.
Place fish in steamer basket and cook till an internal temperature of 145 degrees.
Saute green peas, shitakes and sprouts together.
Season to taste with salt and pepper.
Heat carrot puree.

Assembly:

"Swoosh" puree on the bottom of the plate.
Place the fish on one end.
Pile the sautéed vegetables on the fish.

***Orange+Carrot Puree**

1 cup Carrot, rough chopped
1/2 cup Orange Juice
2 Tbsp Butter, unsalted
Salt to taste

Cook carrots in orange juice till soft
Add carrot and juice mixture to blender.
Puree till smooth. Add whole butter. Season with salt.



© Aramark at Wells Fargo Center

AMALIE ARENA HOME OF THE TAMPA BAY LIGHTNING

ONE-ACRE HYDROPONIC GARDEN GROWS ORGANIC FOOD SERVED TO PLAYERS AND FANS

Amalie Arena, home of the NHL's Tampa Bay Lightning, built an onsite outdoor hydroponic garden in 2014 to grow produce to serve inside the arena. The arena created a one-acre organic garden in an 80-foot by 14-foot area adjacent to the arena by using a stacking system. The hydroponic system maximizes growing space by growing plants vertically in 125 towers of stacked garden pots, which only take up 0.026 acres (1,120 square feet). The growing model also minimizes water and nutrient use to grow the plants by collecting excess runoff and returning it to storage tanks below the garden to save for the next watering.

Amalie Arena executive chef Rich Mathis incorporates many of the fruits and vegetables grown in the onsite hydroponic garden into menu items in premium seating areas as well as for Lightning players and coaches during team meals. "Not only is it fresher but the flavor is much more intense the way we're growing it here hydroponically," says Chef Mathis.⁹ Butter lettuce, romaine, mesclun mix and other greens are grown to supply the arena's Firestick Grill, the VIP Chase Club and the arena's suites. "Where we used to do 200 salads a night, now we're doing 450 to 500," says Chef Mathis, describing the "Living Green Salad" station in the Chase Club.¹⁰

The arena general manager, Darryl Benge, launched the garden in order to incorporate more "Tampa" flavor into Amalie Arena's menu, following a global trend of sports venues of all kinds showcasing regional delicacies and signature dishes. "The garden is in line with being best in class and having something that differentiates us between Raymond James Stadium and Tropicana Field and the MidFlorida Credit Union Amphitheatre," says Benge.¹¹

The garden grows a wide array of plants including tomatoes, squash, arugula, turnips, eggplant, basil, dill, spinach, cucumbers, lettuce, strawberries, and much more. "We'll plant a few stacks of new stuff every week so we have a consistent growing season," says Benge. "We're in Florida, which pretty much means you can grow year round. And actually the time of year we struggle for growing is during the summer months, but that's during a lower event base for us."¹²

The garden was built on top of an under-used, fenced-in area next to the arena that was formally for player parking. "I'm really excited about (the garden) because if you think about it, everybody is starting to go back to growing their own vegetables," says Benge. "When you taste a fresh vegetable, it just has a better taste and quality than something that's store bought and been frozen or refrigerated for a period of time before it arrives. Being able to provide our fans with that high-quality product, I think, differentiates us. It's also what more people are starting to expect."¹³



9 Jason Beisel, Hydroponic garden outside Amalie Arena is changing how fresh food is served inside, ABC Action News, October, 2014 <http://www.abcactionnews.com/news/region-tampa/hydroponic-garden-outside-amalie-arena-is-changing-how-fresh-food-is-served-inside>.

10 Laura Reiley, "Organic garden at Amalie Arena feeds Lightning players, fans," Tampa Bay Times, November 2014 <http://www.tampabay.com/things-to-do/food/dining/new-organic-garden-at-amalie-arena-feeds-players-fans/2204948>.

11 Bryan Burns, "Hydroponic garden provides farm-fresh produce for Amalie Arena," Tampa Bay Lightning, November 2014, <http://lightning.nhl.com/club/news.htm?id=739621>.

12 *ibid.*

13 *ibid.*

PNC PARK HOME OF THE PITTSBURGH PIRATES

VEGETARIAN AND LOCAL OPTIONS

PNC Park, home of the Pittsburgh Pirates, came in third on PETA's list of "Top 10 Vegetarian-Friendly Major League Ballparks for 2014."¹⁴ As part of its sustainability initiative, PNC Park has been working to improve and expand the stadium's vegetarian offerings. Fan feedback and surveys communicating a desire for healthier food at the ballpark were a catalyst for adding more vegetarian variety. "Healthier and vegetarian options are definitely gaining momentum," says Aramark General Manager Steve Musciano. "We see the customer demand for it and we try to be proactive toward it."

PNC and Aramark debuted their Just4U concessions stand in 2012, positioning it as an "appealing and inventive new healthy items stand for fans hungry for more than hot dogs and burgers."¹⁵ Menu items at the Just4U stand include a caprese panini, a grilled veggie toasted sandwich, and gluten-free nachos—all of which have been very popular among fans and consistently outperformed initial expectations. "Stand sales have been great," says Musciano. "Our veggie wrap has brought in tremendous revenue, and I believe the main reason for that is that we didn't brand it solely as gluten-free or vegan, but instead branded it as part of our Just4U selections."

The Just4U stand, as well as the other concession areas, procures much of their produce locally. "Fans like to hear and feel good about the fact that we're purchasing locally grown produce; when we have locally grown vegetables, we advertise that. It all starts with awareness," explains Musciano. According to him, they have received feedback from people that do not normally seek out vegetarian options but have been drawn to the stand because "it just looks so good they had to try something. To be able to offer environmentally intelligent, healthy, and delicious menu items is something to be proud of."



© Aramark at PNC Park

Caprese Salad

- 2 ounces fresh cherry tomatoes
- 2 ounces fresh ciliegine (mozzarella balls)
- 1 tsp fresh basil, chopped or torn
- 2 teaspoons balsamic vinaigrette
- 4 teaspoons extra virgin olive oil
- Kosher salt and black pepper to taste

Mix balsamic and olive oil in small bowl, set aside.

Wash and chop tomatoes.

Add ciliegine and chopped basil to tomatoes.

Drizzle with vinaigrette and sprinkle with salt and pepper.

Serve immediately.

¹⁴ PETA, "The Winners of PETA's 2014 Vegetarian-Friendly MLB Stadium Rankings Are...", July 14, 2014, <http://www.peta.org/blog/winners-petas-2014-vegetarian-friendly-mlb-stadium-rankings>.

¹⁵ Aramark, "Just4U Healthy Options," <http://www.aramarkentertainment.com/success/featured-story/actionable-insight/detail/storyid/28.aspx>.

YANKEE STADIUM HOME OF THE NEW YORK YANKEES

LOCALLY SOURCED FARMER'S MARKET CONCESSION STAND

Yankee Stadium, home of the New York Yankees Locally Sourced Farmer's Market Concession Stand Yankee Stadium's "Melissa's Farmer's Market" stand features locally-sourced fresh fruit and vegetables located by Gate 4. The stand has been at the new Yankee Stadium since it opened in 2009. "We believe that communication is key when it comes to sourcing environmentally intelligent food. Without the tireless efforts of our purchasing manager, who works closely with our purveyors, our chefs would not be able to design the menus that showcase what our local farms have to offer," says Dan Smith, president of Legends Hospitality, concessionaire for Yankee Stadium. "It has been very well received by fans. We have several repeat customers who come to the cart each game to enjoy fresh, healthy produce before they go to their seats."

The Yankees are committed to building strong ties with the companies that provide environmentally preferable ingredients. "We keep an open line of communication with our purveyors in regards to fresh, locally sourced produce, and create menus based on the availability of locally-harvested seasonal items," says Smith. "We host a guest chef program at Yankee Stadium, which invites local chefs to come in during a game to demonstrate some of their signature dishes, consisting mostly of fresh ingredients sourced locally. We offer vegetarian (such as veggie burgers, nachos, and sushi) and vegan (such as fresh fruit at our farmer's market) choices on all of our menus."

Positive fan response to new food items is an important measure of success for the Yankees. "We have received positive feedback on our new healthier menu items. Fans here at the ballpark appreciate food that is fast, fresh, and tasty. Sourcing local ingredients for these dishes makes achieving those three needs much easier," says Smith. "We will continue to maintain a solid relationship with local organizations and our purveyors in order to produce quality environmentally intelligent food service for our guests."

The Yankees have also pursued sponsorships with food companies, like LUVU, that prioritize environmentally preferable practices. "We have found sponsors very eager to engage, but specifics do depend on each particular instance and tend to be unique. We recently worked with LUVU, and are now featuring their responsibly raised, healthy product to the masses using their product line." For example, LUVU sells organic, fair-trade rice and antibiotic-free meats. All LUVU paperboard food packaging is made using 100 percent recycled content, with 75 percent postconsumer recycled content.

Yankee Stadium also donates all unsold food items to local community food banks after home games. All kitchens are stocked with compost bins, all kitchen staff are trained to discard all organic waste in these receptacles, and the contents are taken offsite to be turned into compost for local farms. All Yankees fans are now composting using one of the stadium's new 278 compost bins throughout the ballpark as well.

LOCALLY SOURCED FRESH PRODUCE

HUDSON RIVER APPLES

Apples

MILTON, NY

SATUR FARMS

*Baby Arugula
& Baby
Lettuces*

CUTCHOGUE, NY

HEPWORTH FARMS

*Red &
Yellow Beets*

MILTON, NY

KOPPERS CRESS

*Baby &
Micro Greens*

CUTCHOGUE, NY

FANTASY FRUIT FARMS

Raspberries

AFTON, NY

FRALINGER ORCHARDS

*Yellow
Nectarines*

BRIDGETON, NJ

ECKERTON HILL FARMS

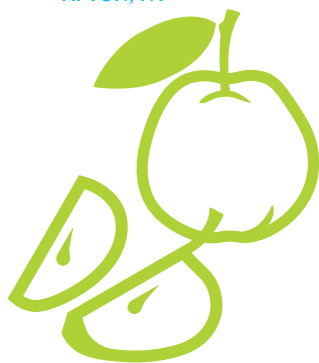
*Heirloom
Tomatoes*

HAMBURG, PA

MEATS

*Crescent Duck –
Whole Duck*

AQUEBOQUE, NY



Chapter 6

CONCESSIONAIRE PROFILES

NRDC and the Green Sports Alliance have assembled profiles of five of the professional sports' preeminent concessionaires to celebrate the industry's impressive greener food accomplishments. This highlights the extraordinary work being done largely behind the scenes.

Ideally, the following stories will inspire many more businesses and the sports venues they service to follow this example. Lessons from those who operate sports facilities will help us move toward ecological stability, crucial for social and economic prosperity. Current and future generations depend on these efforts, and on the hope that others will notice and emulate this industry's evolving and inspiring greening work.

ARAMARK

Founded: 1936

Headquarters: Philadelphia, Pennsylvania

Number of Sports Venue Clients: 73

Aramark-Serviced Venues Featured in Report: Citizens Bank Park, FirstEnergy Stadium, PNC Park, Wells Fargo Center, Citi Field, Fenway Park

"We are pleased to continue to partner with Aramark and applaud their continuing efforts to develop industry-leading commitments for the treatment of animals," said Josh Balk, senior director of food policy at Humane Society of the United States.

"Our focus on minimizing food waste enables us to decrease costs, demonstrate our performance as an efficient operator, and reduce our impact on the environment," said Carl Mittleman President, Aramark's Sports & Entertainment division.

COMPANY-WIDE SUSTAINABLE HOSPITALITY COMMITMENTS:

- ▶ By 2018, use only seafood that meets Monterey Bay Aquarium Seafood Watch® recommendations. To date, 74 percent of frozen fin fish purchased meets the Seafood Watch "Best Choice" and "Good Alternative" recommendations.
- ▶ By the end of 2015, procure only cage-free shell eggs (typical eggs as sold in supermarkets), and complete transition to cage-free liquid eggs (eggs that are pre-cracked and purchased in cartons) in the United States by 2020. Currently purchases approximately 30 million shell eggs and 20 million pounds of liquid eggs annually in the United States. Aramark partners with the Humane Society of the United States, the nation's largest and most effective animal protection organization, on its animal welfare commitments.
- ▶ Eliminate pork from animals bred in gestation crates from Aramark's U.S. supply chain by 2017.
- ▶ Measure and minimize kitchen food waste. Standardized food production and procurement plan helps Aramark produce less waste even before a meal is served.

ADDITIONAL ONGOING SUSTAINABLE HOSPITALITY GOALS IN THE SPORTS & ENTERTAINMENT SECTOR:

- ▶ Provide vegetarian and vegan meal options at all venues (with vegetarian options served in every concession stand at select venues).
- ▶ Offer organic, shade-grown, and fair trade coffee.
- ▶ Prioritize environmentally preferable serviceware (recyclable or compostable) where proper recycling or composting facilities exist.
- ▶ Prioritize packaging and service items with recycled content (such as 100 percent post-consumer recycled paper napkins).
- ▶ Promote waste diversion through food donation, composting, and recycling.

CENTERPLATE

Founded: 1929

Headquarters: Stamford, Connecticut

Number of Sports Venue Clients: 80

Centerplate-Serviced Venues Featured in Report: AT&T Park, Safeco Field, Levi's Stadium

COMPANY-WIDE SUSTAINABLE HOSPITALITY COMMITMENTS:

- ▶ Procure only cage-free, shell eggs (liquid eggs purchased in cartons to be cage-free by 2020)
- ▶ Measure and minimize food waste in kitchens
- ▶ Offer USDA-certified organic food options to all clients

ADDITIONAL ONGOING GOALS IN THE SPORTS & ENTERTAINMENT SECTOR:

- ▶ Provide vegetarian and vegan menu meals at all venues (with vegetarian options served in every concession stand at select venues).
- ▶ Prioritize environmentally preferable serviceware (recyclable or compostable)
- ▶ Prioritize packaging and service items with recycled content (such as 100 percent postconsumer recycled paper napkins)
- ▶ Promote waste diversion through food donation, composting, and recycling
- ▶ Use only seafood sustainably sourced according to the Monterey Bay Aquarium's Seafood Watch at select venues

"We are exceptionally proud of our efforts to 'Make It Better to Be There' at sports venues through a consistent focus on quality and community across our operations," said Chris Verros, Centerplate's President and CEO. "It is rewarding that those efforts are being recognized across the board, from LEED certified operations, to accolades for #1 and #2 rankings for food and beverage among MLB parks—thanks in part to a commitment to great local partnerships and high-quality ingredients—to advances in technology that help to lessen our impact on the environment while serving our guests. We're excited, and look forward to doing more great things in the months and years ahead."

DELAWARE NORTH SPORTSERVICE

Founded: 1915

Headquarters: Buffalo, New York

Number of Sports Venue Clients: 44

Delaware North-Serviced Venues Featured in Report: Petco Park, TD Garden, Edward Jones Dome, Amalie Arena

COMPANY-WIDE SUSTAINABLE HOSPITALITY COMMITMENTS:

- ▶ Provide a safe, secure, and traceable food supply
- ▶ Measure and minimize food waste in kitchens.
- ▶ Promote waste diversion through food donation, composting, and recycling.
- ▶ Provide 100 percent postconsumer recycled paper napkins.
- ▶ Provide recyclable or compostable serviceware where infrastructure supports recycling or composting
- ▶ Eliminate the purchase of pork products from animals bred using gestation crates in the U.S. supply chain by 2017
- ▶ Procure safe local produce—Delaware North was the first major hospitality and foodservice company to join Greener Fields Together, a national farm-to-fork sustainability program developed by PRO*ACT to provide food safety and good agricultural practices education and verification to local farms
- ▶ Purchase all eggs from cage-free sources by 2020—or sooner as supplies become available

ADDITIONAL ONGOING FOOD CHOICE GOALS IN THE SPORTS & ENTERTAINMENT SECTOR:

- ▶ Expand vegetarian and vegan menu options.
- ▶ Prioritize packaging and service items with recycled content.
- ▶ Offer USDA-certified organic food options.

"At Boston's TD Garden, which Delaware North owns and operates, our fans love their local favorite foods, and we are always looking to surprise them with new choices," Amy Latimer, president of TD Garden. "Our chefs work hard at not only coming up with new dishes, but also at minimizing our 'foodprint.'"

"Public awareness of where food comes from and how it's handled has risen dramatically in recent years, and as a result we have added many new food choices," Michael Reinert, vice president of supply management services at Delaware North.

LEGENDS HOSPITALITY

Founded: 2008

Headquarters: New York City, New York

Number of Sports Venue Clients: 26

Legends-Serviced Venues Featured in Report: AT&T Stadium, Yankee Stadium

COMPANY-WIDE SUSTAINABLE HOSPITALITY COMMITMENTS:

- ▶ Measure and minimize food waste in kitchens

ADDITIONAL ONGOING GOALS IN THE SPORTS & ENTERTAINMENT SECTOR:

- ▶ Prioritize environmentally preferable serviceware (recyclable or compostable)
- ▶ Prioritize packaging and service items with recycled content (such as 100 percent postconsumer recycled paper napkins)
- ▶ Promote waste diversion through food donation, composting, and recycling.
- ▶ Use only seafood sustainably sourced according to the Monterey Bay Aquarium's Seafood Watch at select venues.
- ▶ Expand vegetarian and vegan meal options at all venues.
- ▶ Procure cage-free, shell eggs (omits liquid eggs purchased in cartons)
- ▶ Offer USDA-certified organic food options to clients

"Legends Hospitality aspires to produce the best game day experience possible for our guests by prioritizing sustainability, including serving responsibly sourced food and giving back to the community," says Dan Smith, president of Legends Hospitality. "In these instances we strive to use resources as efficiently as possible to continue to be an accountable community leader."

"We are continually seeking out like-minded partners," says Smith. "We believe that alignment helps create a true partnership that enables us to bring key operational initiatives such as sustainability and sourcing to life in a more impactful, meaningful way."

LEVY RESTAURANTS

Founded: 1978

Headquarters: Chicago, Illinois

Number of Sports Venue Clients: 62

Legends-Serviced Venues Featured in Report: Bell Center, Marlins Park, Moda Center, Sonoma Raceway, Billie Jean King National Tennis Center

COMPANY-WIDE SUSTAINABLE HOSPITALITY COMMITMENTS:

- ▶ Procure only cage-free, shell eggs (omits liquid eggs purchased in cartons).
- ▶ Measure and minimize food waste in kitchens.
- ▶ Offer USDA-certified organic food options to all clients.
- ▶ All locations source from local farmers, artisans and purveyors.
- ▶ All disposable napkins are made from recycled or otherwise biodegradable/compostable material.
- ▶ All locations use environmentally preferable flatware.
- ▶ All locations offer vegetarian menus. (Locations have been named among the Top Vegetarian Friendly Ballparks, Stadiums, and Arenas by PETA since 2009.)
- ▶ Partner with local food banks and pantries to donate unsold food.
- ▶ Levy Restaurants donates 735,000 pounds of food annually.

ADDITIONAL ONGOING GOALS IN THE SPORTS & ENTERTAINMENT SECTOR:

- ▶ Expand vegetarian and vegan menu options with full meals available at all venues (with vegetarian options served in every concession stand at select venues).
- ▶ Prioritize environmentally preferable serviceware (recyclable or compostable).
- ▶ Prioritize packaging and service items with recycled content (such as 100 percent postconsumer recycled paper napkins).
- ▶ Promote waste diversion through food donation, composting, and recycling.
- ▶ Use only seafood sustainably sourced according to the Monterey Bay Aquarium's Seafood Watch at select venues.

"Building on our history of corporate responsibility and leveraging our passion for giving back, in 2011, we expanded Levy Cares to encompass our care for the environment, the community, and our guests. Bringing the ethos of Levy Cares to our broader corporate conscience is our way of making sure we deliver that same level of passion to social responsibility," says Andy Lansing, president of Levy Restaurants.

FAST FACTS

FOOD PRODUCTION IN THE U.S.

The United States is a global leader in agricultural productivity. Though much of the nation's food cultivation takes place in the drought-stricken state of California, more farmers are adopting environmentally intelligent organic practices throughout the country and it's paying off!

California IS THE LARGEST PRODUCER OF FOOD IN THE U.S.



REMAINS THE LEADING STATE IN CERTIFIED ORGANIC AGRICULTURAL LAND, WITH MORE THAN 2,700 OPERATIONS COMPRISING MORE THAN 470,000 ACRES OF CROP, PASTURE AND RANGE LAND.



IS THE WORLD'S

5TH LARGEST

supplier of food, COTTON FIBER AND OTHER AGRICULTURAL COMMODITIES.



36%

IS HOME TO ABOUT 20% OF THE NATION'S ORGANIC FARMS AND GENERATES 36% OF THE SALES IN ORGANIC PRODUCTS.

#1

CALIFORNIA IS THE NUMBER ONE DAIRY STATE IN THE U.S.



450

GROWS OVER 450 *different crops.*



IS THE LARGEST EXPORTER OF ALMONDS *in the world*



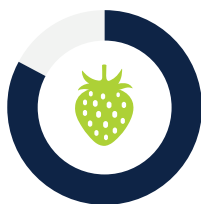
90%

OF THE WINE PRODUCED IN THE U.S.



86%

OF ALL THE LEMONS CONSUMED IN THE U.S.



83%

OF ALL THE STRAWBERRIES IN THE U.S.



43%

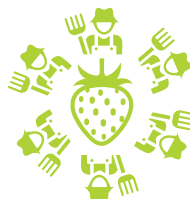
OF ALL GREEN ONIONS IN THE U.S.



94%

OF PROCESSED TOMATOES IN THE U.S.

THE VALUE OF THE CALIFORNIA STRAWBERRY CROP IS APPROXIMATELY
\$700 MILLION



STRAWBERRY INDUSTRY EMPLOYS MORE THAN
48,000 PEOPLE



AS OF 2013, THERE ARE **12,880**
CERTIFIED ORGANIC FARMS

3,500%

AS OF 2013, THE ORGANIC FOOD INDUSTRY
ACCOUNTS FOR **\$31.5 billion in sales**.
BETWEEN 1988 - 2013 THE US HAS HAD A
3,500% INCREASE IN ORGANICS SALES.

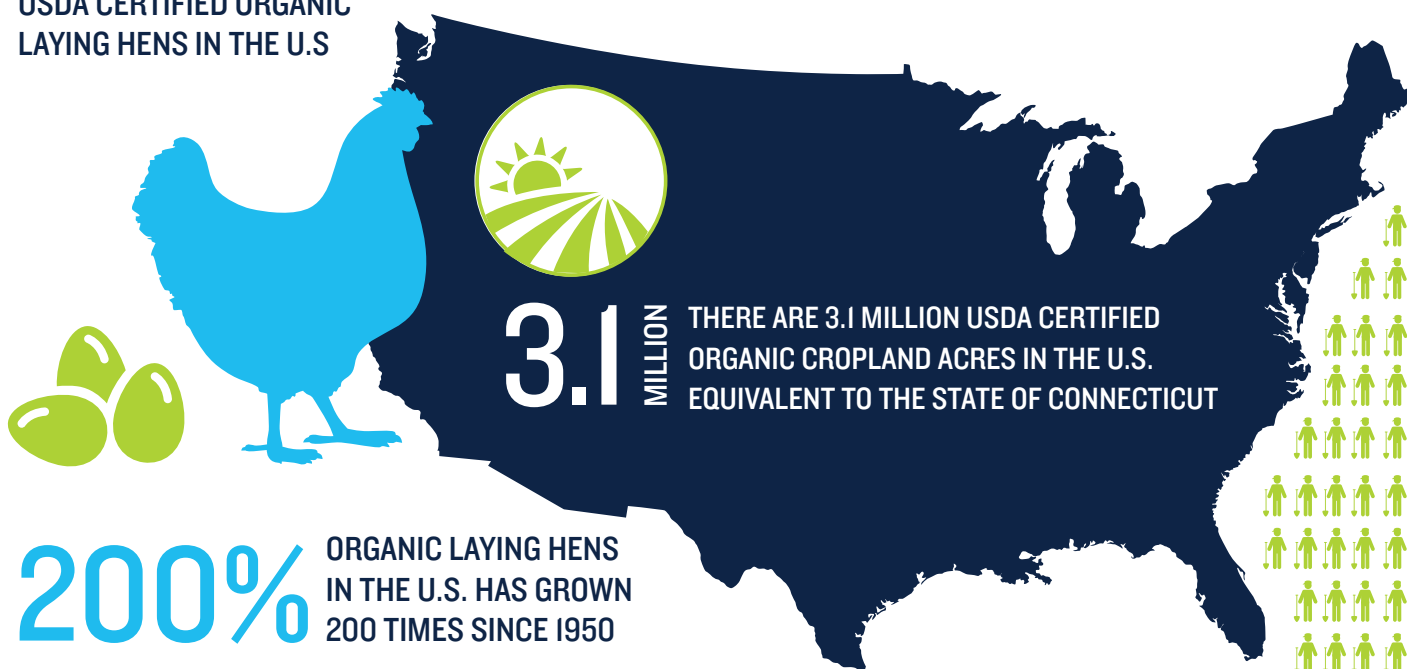
6.6

MILLION

USDA CERTIFIED ORGANIC
LAYING HENS IN THE U.S

2.8%

OF EGGS IN THE U.S.
ARE CERTIFIED ORGANIC



200%

ORGANIC LAYING HENS
IN THE U.S. HAS GROWN
200 TIMES SINCE 1950



155

MILLION



TODAY'S AMERICAN FARMER FEEDS ABOUT
155 million people worldwide.
IN 1960, THAT NUMBER WAS 25.8 MILLION.



APPROXIMATELY **1 in 5 school districts**
(13,506 TOTAL OR 20% OVERALL) IN THE U.S.
HAVE A USDA FARM-TO-SCHOOL PROGRAM.



x10

PROFIT

ORGANIC FARMING REQUIRES
ON AVERAGE 2.5 TIMES MORE
LABOR THAN CONVENTIONAL
FARMING,

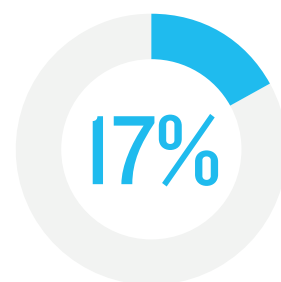
**but it yields
10 times
the profit.**

24

MILLION



AGRICULTURE EMPLOYS
MORE THAN 24 MILLION
AMERICAN WORKERS.



OR 17% OF THE TOTAL
U.S. WORK FORCE.



LESSONS FROM THE FIELD

RECOMMENDATIONS FOR IMPLEMENTING A GREENER FOOD SERVICE PROGRAM

This chapter contains recommendations to help teams and venues begin or expand their greener hospitality programs, based on lessons from leading greener food initiatives at professional sports venues in North America. The recommendations attempt to accommodate the diverse needs and capacities of sports venues spread throughout North America. If adopted, some of these recommendations can help sports teams and venues gradually improve hospitality operations, strengthen their brand, attract green sponsors, and engage with fans on this issue.

USE SUSTAINABILITY TO GAIN A COMPETITIVE ADVANTAGE BY DIFFERENTIATING AND STRENGTHENING YOUR FOOD SERVICE BRAND

A greener food service program is increasingly desired in the sports marketplace, and can help raise your venue's environmental profile in your community. Engage fans and publicize your greener food practices when marketing to fans and during events.

Greening initiatives provide another opportunity for fans to interact with their favorite teams. Fan engagement can be as simple as incorporating signage about healthier and environmental sourcing at concession stands, encouraging support for local farms, or featuring environmental displays. Public service announcements or other broadcast initiatives can also yield great fan response. Some teams and leagues are modifying their websites and using social media to inform fans about their greening initiatives.

RECORD FOOD PREPARATION WASTE AND RESOURCE EFFICIENCY IN KITCHENS TO MINIMIZE WASTE, SAVE MONEY

By tracking environmental data related to your food services (e.g., energy and water use, waste generation, and packaging use), you will be able to assess performance and identify opportunities for improvement across all hospitality operations. Measuring also allows you to set short- and long-term goals and compare your performance with others in the field. Quantifying successes can help identify high-impact opportunities and can help your organization document progress, inspiring further investment by staff, partners, fans, and sponsors.

Most concessionaires are implementing company-wide tracking systems for environmental metrics like energy consumption, water use, waste management, and food purchasing. If available, take advantage of your concessionaire's measurement program. Even if your concessionaire doesn't yet offer an environmental tracking system, you can use tools like the EPA's Portfolio Manager and WasteWise, or even spreadsheets.

START WITH THE EFFORTS THAT HAVE THE FASTEST RETURN ON INVESTMENT TO BUILD MOMENTUM

Cost-saving environmental initiatives in kitchens can help garner institutional support. Improved efficiency means less waste, which often translates into savings. A startup/shutdown plan in all kitchens, more efficient appliances, water-efficient fixtures, waste reduction or minimizing food packaging can build momentum and attract interest in other greening opportunities. See the sidebars and special feature section from the EPA's ENERGY STAR® program for more ideas.

IDENTIFY WAYS TO WORK WITH SPONSORS AND VENDORS TO PROFIT FROM THIS SUPPORT

Greening may lead to sponsorship opportunities with like-minded partners. These partners may bring funding, advertisements, or new products to your greening effort. Talk with your sponsors about funding environmental enhancements like onsite gardens or compost stations.

Collaborating with sponsors and vendors can also help disseminate information about your food service greening program to fans and your community more broadly. This can help move the marketplace toward more sustainable practices. Involving your sponsors and vendors signals to fans and your supply chain that environmental issues are important to your organization.

TRACK AND PUBLICLY REPORT FOOD PROCUREMENT PRACTICES TO MEET COMMUNITY EXPECTATIONS AND BUILD CONSUMER CONFIDENCE

Fans nationwide are increasingly asking for fresher, local, and healthier food options during games. By procuring, serving and publicizing more sustainable food, teams show that they are attentive to their fans' concerns. Greener food is about anticipating market changes and meeting the needs of a growing segment of sports fans who want more a varied and higher

quality game day dining experience. Track and share stories about the food you're serving to address growing public interest in transparency.

DESIGN A DIVERSE MENU TO HELP MEET INCREASINGLY VARIED DIETARY PREFERENCES AND INCREASE FAN LOYALTY

Food preferences evolve over time. These trends are often influenced by popular diets or the proliferation of allergies. Teams are witnessing growing fan appreciation by catering to preferential diets or specific allergies. In addition, there is increasing awareness of the adverse impacts of a growing industrial food system. If you serve "climate-friendlier" food like vegetarian dishes or locally sourced, better meat options throughout your venue, fans will recognize and appreciate your commitment.

REALIZE THAT GREENING IS A JOURNEY, NOT A DESTINATION. THERE IS NO GREEN, ONLY GREENER. THERE IS NO BEST, ONLY BETTER

Greening means reviewing your operations and procurement with an eye toward reducing environmental impacts. It is an iterative, ongoing process. Greening means not just following a checklist, but also integrating environmental criteria into decision-making about product procurement, service, and operations. Make a formal environmental commitment across all food service operations where possible to encompass purchasing policies, vendor contracts, and sustainability reporting. Refer to the Green Sports Alliance Greening Advisor online tool at www.greensports.org for advice on designing environmental procurement standards.

The greening is ongoing because more efficient, environmentally preferable products and services are always entering the market. If you can't find the product or service that meets your environmental needs at a given point, keep looking. Continue to tell your vendors what you want—chances are that the product will be available (and affordable) before long. Educating staff, fans, vendors, and partners is also an ongoing process. By seeing greening as a journey, you can celebrate accomplishments along the way and create a flexible initiative that can respond to changes in internal priorities and the marketplace.

SERVE LOCAL AND SEASONAL FOOD TO SHOWCASE REGIONAL CULTURE, STRENGTHEN COMMUNITY CONNECTION AND BOOST SALES

Consider partnering with local suppliers and bringing in local star chefs who value greener food. Venue brands can benefit by featuring appealing star chefs who take pride in showcasing local fare. Working directly with farms and hometown artisans to manage unexpected shortages and other changes in supply and swiftly finding alternatives can also improve supply chain resilience. Designing menus to highlight local flavors is boosting sales as sports venues become renowned restaurant destinations in their own rights.

START WITH EFFORTS THAT HAVE THE FASTEST RETURN ON INVESTMENT: ENERGY, FOOD, AND WATER EFFICIENCY PROGRAMS

1. Perform walk-in refrigerator maintenance: check and replace door gaskets, clean evaporator and condenser coils, check refrigerant charge.
2. Install compact fluorescent lamps (CFLs) or light-emitting diodes (LEDs) in walk-in refrigerators and kitchen ventilation hoods (and throughout kitchens where appropriate).
3. Donate prepared, unsold, untouched food to local shelters to benefit the needy and save on hauling costs.
4. Install a high-efficiency, pre-rinse spray valve in dish-rooms.
5. Replace worn-out cooking and refrigeration equipment with ENERGY STAR-certified models.
6. Educate kitchen staff on best ways to minimize food waste and reuse scraps in recipes including jarring and pickling.
7. With the right equipment, clean, used cooking oil can be used to power utility vehicles like lawnmowers, and power-washers.
8. Fix water leaks immediately—especially hot water leaks. Wasted water, sewer, and water heating costs can add up to hundreds of dollars a year.



RECOGNIZE THAT SHIFTING TO ENVIRONMENTALLY PREFERABLE HOSPITALITY PRODUCTS AND OPERATIONS TAKES TIME

The infrastructure that dominates the way goods and services are manufactured and supplied in the marketplace was built over many decades. In fact, that infrastructure—including environmentally harmful production practices—is often supported by subsidies, regulations, and vendor relationships that make it more difficult to implement change. Some initiatives, such as energy efficiency and water use audits, can make swift progress. But other adjustments can take a few years to implement. Be patient.

This should not deter you from taking the small steps toward gradual progress. Give your organization time to make these adjustments out of respect for vendor relationships, staff comfort, proper training and implementation, and budgetary restrictions. This will contribute to the longevity and stability of the greening program. Moreover, long-range planning can allow an organization to invest in capital improvements that will save money over time.

LEARN FROM OTHERS. JOIN THE GREEN SPORTS ALLIANCE AND USE LEAGUE-BASED RESOURCES

Leagues, concessionaires, and the Green Sports Alliance (through webinars, newsletters, conferences, technical support from staff, workshops, and greening committees) can share information about better practices from other teams and venues. To start greening your team, venue, or event today, consult the Greening Advisor at www.greensports.org, which helps sports leagues, teams, and venues implement environmentally intelligent practices in collaboration with their food service partners. The GSA's Greening Advisor covers everything from energy audits and arena transportation to purchasing, travel, and waste management.

AVOID GREENWASHING, OVERSTATING ACCOMPLISHMENTS CAN BACKFIRE

Don't be shy about communicating success stories, but don't greenwash. Exaggerating your environmental achievements can undermine your work and do long-term damage to the credibility of your brand. There is no shame in announcing a small accomplishment. Indeed, no business undertaking can single-handedly solve our many ecological problems. However small our day-to-day actions may seem, our collective purchases add up to meaningful regional and global benefits. Most individuals and businesses can do only relatively small things, whether it's buying napkins made with recycled content, composting food scraps, or conserving water. What is clear, however, is that everyone has to do something to reduce their ecological footprints.



QUICK START GUIDE TO COMPOSTING AT SPORTS VENUES

from the NRDC/Green Sports Alliance
Guide to Composting at Sports Venues

WHAT CAN BE COMPOSTED

What you can collect for composting at your venue depends on the requirements of your composting system and hauler. Different composting facilities and haulers have different requirements, so be sure to verify the specifics with your hauler and composting facility before creating training materials, signs, and so on. Also, ask your hauler to clarify what percentage and types of contamination (non-compliant materials) are permissible.

As a rule of thumb, if it was once alive, it can be composted. Here are some examples of waste materials that are typically compostable, may be compostable, and are not compostable:

TYPICALLY COMPOSTABLE:	MAY BE COMPOSTABLE:*	NOT COMPOSTABLE:
<ul style="list-style-type: none">▶ Fruits and vegetables, including peels, cores, seeds, etc.▶ Bread and grains (pasta, rice, etc.)▶ Meat and dairy products (seafood, cheese, etc.)▶ Eggs and eggshells▶ Leftover or spoiled food (donate unused edible prepared food)▶ Tea bags and loose tea leaves (no plastic)▶ Coffee grounds and paper coffee filters (no plastic)▶ Paper napkins and paper towels▶ Paper cups and paper plates (not plastic-coated)▶ Other food-soiled paper (not plastic-coated; if not food-soiled, paper should be recycled instead of composted)▶ Grass clippings▶ Leaves, flowers, and other plant matter (branch diameter under 1")	<ul style="list-style-type: none">▶ Liquids (broth, sauce, beverages, etc.)▶ Milk cartons and other "waxed" (actually plastic-coated) containers▶ Food-soiled cardboard (if not soiled, cardboard should be recycled)▶ Bioplastic/compostable serveware (certified to ASTM-compliant compostability specifications)▶ Fats, oils, and greases (can be collected separately for biodiesel production)▶ Woody landscaping waste (branch diameter over 1 inch) <p>*DEPENDENT ON SYSTEM</p>	<ul style="list-style-type: none">▶ Stickers on individual fruits and vegetables▶ Metals▶ Glass▶ Plastics, including foam (polystyrene), bags, and film▶ Soil, rocks, concrete, etc.▶ Composite packaging (juice boxes, chip bags, condiment packets, etc.)▶ Treated/painted wood (plywood, pressboard, etc.)▶ Textiles (clothing, rags, linens, etc.)▶ Cat litter or animal feces▶ Diapers

If your venue has already developed a robust recycling program, it's likely that non-recovered organics such as food and yard waste make up the largest portion of your remaining waste. For sports venues, as for cities more broadly, developing a composting program or otherwise repurposing organic waste is key to reducing the amount of waste sent to landfills or incinerators. Learn more about how to develop a successful composting program at your venue by downloading the full "Guide to Composting At Sports Venues" at greensportsalliance.org/resource-center.

QUICK START GUIDE

RECOMMENDATIONS	ADDITIONAL INFORMATION
1 PERFORM A WASTE AUDIT.	<p>Performing a waste audit is an effective way to learn more about the type of materials your organization generates as waste. During a waste audit, the auditor investigates the sources, composition, weight, volume, and destinations of the materials that your organization generates, most of which are likely to be recyclable or compostable.</p>
2 CONDUCT AN INVENTORY OF EXISTING WASTE INFRASTRUCTURE.	<p>Evaluate how compostable items are currently managed. If you already collect compostables, evaluate how that collection is coordinated alongside recycling and garbage collection. Determine what infrastructure, resources, and staff time are currently devoted to waste management. Consider the available budget, infrastructure, staff time, and space available (in concourses, loading docks, etc.) for an expanded program.</p>
3 IDENTIFY AN ORGANICS HAULER AND VERIFY ORGANICS COLLECTION REQUIREMENTS.	<p>Determine whether your existing waste hauler can handle your organic waste, or locate another hauler. Ask your hauler whether there are certain types of organics the company does not accept, whether there are requirements to put organic waste in special containers or leave them in a particular location, etc.</p>
4 NEGOTIATE A COMPOSTING HAULING CONTRACT AND PLAN A COMPOSTING BUDGET ACCORDINGLY.	<p>Negotiate a composting hauling contract and integrate this into your overall waste budget. Ask your hauler to clearly break out the different costs in the contract, including hauling and landfill disposal fees.</p>
5 MAP OUT ADDITIONAL COMPOSTING RECEPTACLE AND SIGNAGE NEEDS.	<p>We recommend co-locating recycling, compost, and garbage bins in all locations where feasible, and providing clear and consistent signs for each type of disposal. Brand all signs. Clearly and visibly identify acceptable items for all receptacles; it helps to use a combination of images and words.</p>
6 WORK ON CONVERTING CONCESSION SERVICEWARE TO COMPOSTABLE PRODUCTS AND TEST COMPOSTABLE SERVICEWARE WITH YOUR COMPOST COMPANY.	<p>We recommend that all bioplastics be certified as compostable to ASTM 6400 standards, or ASTM 6868 standards for coated paper/board. Prioritize waste-based compostable packaging where feasible (e.g., bagasse or wheat/rice straw). Verify that any compostable serviceware you choose is compatible with your compost company's processes and specifications.</p>
7 TRAIN CONCESSIONAIRES AND OTHER STAFF ON COMPOSTING PROCEDURES.	<p>Make sure all concessionaires and staff, including facilities, purchasing, food service, housekeeping, and security personnel, are trained about composting procedures, and solicit their ideas for implementation. For collection of back-of-house food waste, train all relevant staff on what they should separate for compost collection. Also train front-of-house staff in how to guide fans to use the correct waste receptacles.</p>
8 MEASURE YOUR WASTE GENERATION/DISPOSAL.	<p>We recommend working with your hauler to gather recycling and waste data. Use your league's data tracking systems where available, consider tools such as EPA's WasteWise, and/or develop your own measurement system.</p>
9 CONSIDER SPONSORSHIP.	<p>Investigate potential sponsors from waste, food, or other industries (including current vendors) that may be interested in aligning their brand with your composting initiatives. Involving sponsors and vendors may bring funding, infrastructure, products, and advertisements/publicity to your composting program.</p>
10 EDUCATE AND INVOLVE FANS IN YOUR INITIATIVE.	<p>Informed participation by fans in your composting program is essential for its success. Through signs, announcements, volunteer opportunities, and social media, encourage fans to learn about and participate in your initiative.</p>

TIPS FOR SAVING WATER AND MONEY IN KITCHENS AND CONCESSIONS AREAS

from the ENERGY STAR® Guide for Restaurants

Using water more efficiently preserves water supplies, saves money, and protects the environment. Conserving hot water trims two bills: the water and sewer bill and the electricity or natural gas bill.

Similar to the ENERGY STAR, the WaterSense® label identifies water-efficient products and programs. WaterSense is a partnership program sponsored by the EPA. Additional information is available at: www.epa.gov/watersense. For example, WaterSense bathroom faucets are 30 percent more water efficient. Save money by adding aerators, repairing leaks, reducing sink and tap use, and buying ENERGY STAR and WaterSense products.

Good practices can save \$1,000 annually by turning down dipper wells and making sure they are off when the kitchen is closed. They can also save \$1,000 annually by fixing leaks in sinks, mop-stations, and dishwashing machines. Look for WaterSense equipment and use WaterSense irrigation partners to plan your kitchens. Planning with a WaterSense irrigation partner could save 15 percent compared to average watering bills.

HIGH-EFFICIENCY, PRE-RINSE SPRAY VALVES

A high-efficiency, or low-flow, pre-rinse spray valve is one of the most cost-effective, energy-saving devices available. Installation is easy—just unscrew the old spray valve and screw in the replacement. In addition to minimizing hot water consumption, the new valve can reduce water-heating and sewer expenditures per month. Typical spray valves can release hot water at a rate of three to four gallons per

minute (gpm), while common high-efficiency units spray only 1.6 gpm or less without sacrificing cleaning power. Installing a 1.6 gpm spray valve can save \$300 to \$350 annually in water, sewer, and natural gas costs (used one hour a day and compared to a 3 gpm sprayer).

DISHWASHERS

From an operational standpoint, dishwashers are one of the most expensive pieces of kitchen equipment. ENERGY STAR commercial

dishwashers are on average 25 percent more energy and water-efficient than standard models. ENERGY STAR commercial dishwashers can save \$720 in electricity annually and \$300 in water annually.

Make sure to run fully loaded dish racks through the dish machine. Cutting wash cycles could save you hundreds of dollars annually. Pay attention to your dishwasher's pressure gauge. Most dishwashers require only around 20 psi. So

if yours is showing pressure above 25 psi, there is a good chance you are using much more water than necessary. If you have a conveyor-style dishwasher, make sure you are using it in auto mode, which saves electricity by running the conveyor motor only when needed.

Cut operating costs by turning off dishwashers at night, replacing torn wash curtains, repairing leaks, replacing work spray heads, and buying ENERGY STAR models.

FOR MORE INFORMATION, CONSULT THE FOLLOWING ONLINE RESOURCES:

- ▶ ENERGY STAR Commercial Food Service: www.energystar.gov/cfs
- ▶ ENERGY STAR Restaurants: www.energystar.gov/restaurants
- ▶ ENERGY STAR Portfolio Manager: www.energystar.gov/benchmark
- ▶ PG&E Food Service Technology Center: www.fishnick.com
- ▶ National Restaurant Association Conserve: <http://conserve.restaurant.org>
- ▶ EPA WaterSense: www.epa.gov/watersense
- ▶ EPA WasteWise: www.epa.gov/wastewise
- ▶ NRDC Idle Load Report: <http://www.nrdc.org/energy/home-idle-load.asp>

TIPS FOR SAVING WATER AND MONEY IN KITCHENS AND CONCESSIONS AREAS

from the ENERGY STAR® Guide for Restaurants

Kitchens use about 2.5 times more energy per square foot than other commercial areas. Most commercial kitchen appliances are energy-intensive. For instance, a typical electric deep fat fryer uses more than 11,000 kilowatt-hours (kWh) of energy per year, which could cost more than \$1,000 in electricity bills. As energy costs increase, investing in energy efficiency is the best way to protect your business. Reduce energy consumption across all kitchens by following these cost saving tips:

- 1 CUT IDLE TIME** Don't leave equipment on when not in use as it drives up costs. Implement a startup/shutdown plan to ensure kitchen staff use only the necessary equipment.
- 2 MAINTAIN AND REPAIR** Don't let everyday wear and tear drive up energy bills. Leaky walk-in refrigerator gaskets, broken freezer doors, knob-less cooking appliances—all these “energy leaks” waste money each month.
- 3 COOK WISELY** Ovens tend to be more efficient than rotisseries and griddles more efficient than broilers. Examine cooking methods and menus in all kitchens to find ways to incorporate more energy-efficient appliances.
- 4 RECALIBRATE TO STAY EFFICIENT** Kitchen equipment performance changes over time. Thermostats and control systems can fail, become uncalibrated, or be readjusted. Check your thermostats on all appliances regularly and reset them to the correct operating temperature.
- 5 BUY ENERGY STAR CERTIFIED APPLIANCES** When buying new equipment, think in terms of life-cycle costs, which include purchase price, annual energy costs, and other long-term costs. High-efficiency appliances may cost more upfront, but they significantly lower utility bills to make up for the price difference. Be sure to ask vendors for ENERGY STAR-certified equipment.

COOKING APPLIANCES

When replacing old appliances or buying new ones, look beyond the sticker price. Buying and installing ENERGY STAR equipment could trim hundreds of dollars from your annual utility bills. In order to realize the most savings from your ENERGY STAR equipment, train your staff to follow good operating practices.

BROILERS

Broilers require a great deal of energy and have simple, non-thermostatic controls. This combination can make the broiler the most energy-intensive appliance in the kitchen. For example, one gas

broiler can use more energy than six gas fryers. Newer broilers incorporate better controls that limit the overall burner output, allowing the broiler to get the job done with about 25 percent less energy. Cut preheat time, turn off unneeded sections, reduce idle time, and replace missing knobs to save on operating costs.

RANGES

The range top is one of the most widely used pieces of equipment in restaurant kitchens. Ranges are manually controlled and can guzzle energy depending on how they are operated. Induction ranges offer a potential

alternative. These ranges are more expensive but they offer very high efficiency, rapid heat up, precise controls, and low maintenance. Cut costs by maintaining and adjusting burners, using a lid, and cutting idle time.

STEAMERS

Steam cookers provide an effective way to cook food in batches, but generating steam is an energy-intensive process. ENERGY STAR steamers have a sealed cooking cavity that consumes less energy and water than traditional open systems. In many cases the dollar savings are so great that it makes sense to replace an existing steamer.

Save money by looking for ENERGY STAR models, close the door, use a timer, cut idle time, maintain, and repair. Good practices can save \$250 to \$350 in annual energy costs for a traditional, electric, open-system steamer by eliminating an hour of idle time per day. In addition to saving energy, ENERGY STAR-certified steam cookers are extremely water efficient. Certified models use an average of three gallons of water per hour, compared to 40 gallons per hour for standard models.

Buy an ENERGY STAR connectionless steamer and save \$1,000 in water and

sewer costs annually, \$1,100 in gas or electricity annually (gas or electric steamers). Kitchens with high commercial sewer costs can see an annual savings of hundreds more.

FRYERS

Through advanced burner and heat exchanger designs, ENERGY STAR fryers offer shorter cook times, faster temperature recovery times, and ultimately higher pound-per-hour production rates. Some models also offer an insulated fry pot, which reduces standby losses for a lower idle energy rate.

Save money by looking for ENERGY STAR models, use a timer, cut idle time, turn off back-up fryers when possible, and recalibrate. Good practices can save \$250 annually by cutting up to four hours of idle time per day. Buy an ENERGY STAR fryer and save \$100 on electricity annually (electric fryer), or \$450 on gas annually (gas fryer).

CONVECTION OVENS

Convection ovens are the industry standard because of their faster cook-times produced by increased hot air movement inside the oven cavity. In addition, convection ovens are now eligible for ENERGY STAR certification.

Cut operating costs by using ENERGY STAR appliances, cutting idle time, turning off back-up ovens when possible, fully loading the oven when cooking, replacing seals, and tightening hinges. ENERGY STAR convection ovens can save \$190 on electricity annually (electric oven), or \$360 on gas annually (gas oven).

GRIDDLES

Griddles are versatile, workhorse appliances found on most kitchen lines. Variations in efficiency, production capacity, and temperature uniformity make it important to choose wisely when shopping for a griddle. Many energy-efficient griddles can deliver both high production capacity and excellent temperature uniformity.

Save money by using ENERGY STAR products, cutting idle time, and recalibrating. ENERGY STAR-certified griddles can save \$190 in electricity annually (electric griddle), or \$175 in gas annually (gas griddle). Good practices can save \$250 annually by cutting up to three hours of idle time per day.

HOLDING CABINETS

ENERGY STAR hot food holding cabinets typically feature improved insulation—so heat stays in the cabinet and out of the kitchen. An insulated ENERGY STAR holding cabinet uses about half the energy of an uninsulated cabinet. Other potentially energy-saving features include magnetic door gaskets, auto-door closers, and Dutch doors.

Save money by shutting off holding cabinets overnight, using the timer, replacing missing or worn out control knobs, and purchasing ENERGY STAR cabinets. ENERGY STAR certified holding cabinets save, on average about \$300 in electricity annually. Good practices can save \$500 annually by turning off an uninsulated holding cabinet when the kitchen is closed.

COMBINATION OVENS

The combination oven is an extremely versatile cooking platform, which includes a self-cleaning feature. Operating a combination oven in “steam” or “combination” mode typically uses more energy and water than traditional convection mode. Program the oven to properly control different cooking modes to maximize energy and cost efficiency. Do your homework when buying a combination oven: the most efficient models will use about half as much energy and water as the inefficient models. Good practices can save \$400 to \$800 annually by cutting out two hours of idle time per day.

REFRIGERATION SYSTEMS AND ICE MACHINES

REACH-IN REFRIGERATORS AND FREEZERS

Commercial refrigerators and freezers that have earned the ENERGY STAR are on average 40 percent more energy efficient than standard models because they are designed with components such as ECM evaporator and condenser fan motors, hot gas anti-sweat heaters, or high-efficiency compressors, which will significantly reduce energy consumption and utility bills.

Cut operating costs by buying ENERGY STAR appliances, turn off door heaters when possible, clean coils, set defrost timers, replace worn gaskets.

WALK-IN REFRIGERATORS

Walk-in refrigerators are extremely important to any successful restaurant. Improve this appliance’s energy performance with a

few inexpensive upgrades and good practices, such as swapping out incandescent light bulbs for ENERGY STAR LED light bulbs can keep temperatures lower by generating considerably less heat. Add strip curtains and automatic door closers to your walk-in refrigerator—they are inexpensive and easy to install. Strip curtains can cut outside air infiltration by about 75 percent. Installing electronically commutated motors (ECM) on evaporator and condenser fans reduces energy consumption by approximately two-thirds. Save on operating costs by allowing air circulation, insulating suction lines, checking refrigerant charge, repairing and realigning doors, and cleaning coils.

ICE MACHINES

ENERGY STAR commercial ice machines are on average 15 percent more energy efficient and 10-20 percent more water efficient than standard models. Cut down on your daytime electricity demand by installing a timer and shifting ice production to nighttime off-peak hours. Bigger ice machines are typically more efficient than smaller ones, yet the price difference is usually negligible. Choose wisely and you could get twice the ice capacity at half the energy cost per pound of ice. Avoid water-cooled ice machines because of their high water cost. Cut costs by keeping the lid closed, adjusting the purge water timer, cleaning the coils, and buying ENERGY STAR models.

Chapter 8

INSPIRING ACTION BY FANS*

The food that is healthiest for you—fresh, unprocessed, high in nutrients instead of empty calories—is often also the healthiest for the planet. Food production and life ultimately depend on the integrity of our water, energy, air, soil, land, and biodiversity. Fresh, whole foods can be produced using more sustainable methods. Conversely, high-fat, sugared, processed foods and industrial livestock often require the most pesticides, fertilizers, and antibiotics, and tend to be the most energy and water intensive, taking the greatest toll on the planet.

Consumers have leverage in the marketplace. In recent years, sales of organic products have grown, trans-fats have been removed from cookies and crackers, and more and more sports venues are sourcing items locally and more responsibly. Encourage your fans to follow these eight simple steps to help build and support a healthier and more sustainable food system.

1. EAT LESS, BETTER MEAT

From an environmental standpoint, not all protein sources are equal. Shifting your daily intake away from the “less-efficient” proteins (beef) to the “more-efficient” ones (vegetarian or ecologically raised chicken, or non-threatened fish options) is better for health and also reduces pressure on the earth’s resources.

Furthermore, antibiotics are used regularly at large industrial farms to promote growth in dirty, cramped barns and feed yards. The overuse of antibiotics kills weak bacteria, but stronger bugs survive and reproduce, creating antibiotic-resistant Superbugs that can infect people and are becoming harder and harder to treat. As a result, medically important antibiotics are losing their effectiveness to treat humans. Buy meat and poultry labeled “Organic” or “No Antibiotics Administered” to avoid contributing to this problem.

According to the U.N. Food and Agriculture Organization (FAO), in 2007 the average American ate 90.64 pounds of beef a year, or a McDonald’s Quarter Pounder every day. This daily intake of red meat exceeds the dietary recommendations (no more than 2.5 oz. red meat per day, 17 oz. per week) of the Scientific Advisory Commission on Nutrition and also puts a lot of stress on the planet’s life-sustaining systems.

Agriculture contributes about 30 percent of all global greenhouse gas emissions, with beef alone contributing between 14 and 22 percent. According to the FAO, a quarter pound of ground beef releases four times as much greenhouse gases as are released in the production of the same amount of pork, 14 times as much as chicken, and 50 to 60 times as much as fruits and vegetables. This is particularly true when the animals are raised in Concentrated Animal Feedlot Operations (CAFOs) where they are fed corn or soybeans, since these crops are particularly resource intensive. If all Americans eliminated just one quarter-pound serving of beef per week, the reduction in greenhouse gas pollutant emissions would be equivalent to taking 4 to 6 million cars off the road.

Beef production is also more water- and feed-intensive than other protein sources. It takes an estimated 2,000 gallons or more of water to produce one pound of beef. At the same time, beef cattle consume much more feed than other animals to grow. Only 5 percent of feed is converted in cattle to protein, as compared to poultry and sole, which have conversion rates of 25 and 30 percent respectively. Grass-fed animals also produce a healthier type of fat. A corn-fed cow does develop well-marbled “intramuscular” flesh, but this is simply saturated fat that can’t be trimmed. Grass-fed meat, on the other hand, is lower both in overall fat and in artery-clogging saturated fat. Like seafood, grass-fed meat also provides more omega-3 fats, which are necessary for healthy brain function and development and are a key ingredient in joint and skin health. In addition to its higher healthy omega-3s, meat from grass fed cattle is also up to four times higher in vitamin E than meat from feedlot cattle, and much higher in conjugated linoleic acid (CLA), a nutrient associated with lower heart disease and cancer risk.

2. IF YOU DO EAT ANIMAL PROTEIN, EAT A VARIETY OF FISH, FAVORING THOSE THAT ARE WILD, LOWER ON THE FOOD CHAIN, NOT ENDANGERED AND SUSTAINABLY HARVESTED

The USDA recommends consumption of 8 ounces or more a week of seafood—more than twice what the average American eats—and 12 oz. for pregnant women (salmon, trout, and anchovies, among other options are recommended). Although pregnant women need to be careful about which type of fish they can eat, eating fish can be a smart alternative to meat. It’s a lean protein with great health benefits. But seafood can be contaminated with high mercury or polychlorinated biphenyls (PCBs), which cause negative health effects. And some varieties of seafood have been overfished or caught in ways that may cause lasting damage to our oceans and marine life.

FIVE QUICK TIPS FOR FANS WHEN GROCERY SHOPPING

1. **LOOK FOR FRESH, WHOLE FOODS** with the fewest steps from farm to plate. Freezing, packaging, processing, cooking, transporting, and refrigerating food all increase energy use.
2. **BUY ORGANIC** or other sustainably produced eco-labeled foods that are third party verified (see the Glossary for more information).
3. **CHOOSE ANTIBIOTIC-FREE** when you do eat meat or poultry (see the Glossary for more information).
4. **CUT BACK ON FOOD WASTE** wherever possible. Be careful not to buy more than you will consume. Use leftovers creatively, or freeze them.
5. **EAT LOCALLY** grown and produced food whenever available.



Choose seafood based on safety and sustainability. Herbivorous fish, which are smaller and lower on the food chain, tend to be plentiful and healthier because they contain less mercury. Great small seafood choices include squid, mackarel, tilapia, catfish, oysters, mussels, and barrimundi.

Wild fish are almost always better for your health and the environment than farm-fished of the same variety, though interest in aquaculture is growing and there are some systems—above ground, closed loop—that don't harm the environment or wild species.

Knowing seafood origins and how it is caught is very important. American seafood isn't perfect, but U.S. seafood is generally a better choice than its imported counterpart because we have stricter fishing and farming standards. In fact, you're usually better off eating the most local variety instead of fish from across the country, or from across the world, unless that species has been depleted in local waters. Even out of season, local fish that has been frozen is preferable, since fresh fish must be transported by air, the most energy-intensive shipping method. There are diverse methods of harvesting fish, some more sustainable than others. Hook and line is a low-impact method that does not damage the seafloor and allows fishermen to throw unwanted species back, usually in time for them to survive.

3. EAT ORGANIC PRODUCE WHERE IT COUNTS THE MOST

In 2002 the U.S. Department of Agriculture (USDA) issued the first national organic standards and provided a product seal that identifies and verifies food grown on "certified organic" farms. Those standards established the methods, practices, and substances that can be used to produce and handle certified organic crops, livestock, and processed agricultural products. No synthetic pesticides may be used on organic crops unless they

are on a list of approved substances. Similarly, to be certified organic, animals must be fed 100-percent certified organic feed, and cannot be treated with hormones or antibiotics.

There are health benefits associated with eating organic foods. According to the National Academy of Sciences, more than 80 percent of the most commonly used pesticides have been classified as potentially carcinogenic, and many have been linked to increased risk of birth defects and human reproductive problems. Infants and children are particularly vulnerable to pesticides' harmful effects, which are especially worrisome given that some 20 million U.S. youngsters age five and under consume a daily average of eight pesticides in their food. Unfortunately, organic food is simply not always available or affordable. So buy organic where it counts the most, such as when the conventional variety is known to contain high levels of pesticides, or when the pesticide is sprayed directly onto the food you will eat.

4. EAT FIRST FROM YOUR FOODSHED

On average, our food travels 1,500 to 2,500 miles to our plates, and this journey guzzles gas and releases greenhouse gases and toxic emissions along the way. Do as much of your grocery shopping at local farmer's markets as possible. The Leopold Center for Sustainable Agriculture at Iowa State University, a think tank that researches the impact of "food miles," contends that local food tends to be picked closer to peak ripeness and is less likely to be treated with the post-harvest chemicals to prevent spoilage during shipping.

A typical American meal contains ingredients from five foreign countries, and even domestically grown produce travels an average of 1,500 miles before it is sold. Buying locally can help reduce the pollution and energy used during transporting, storing, and refrigerating this food—that's especially true for food that is imported by airplane, including perishables such as cherries, blueberries, blackberries, raspberries, tomatoes, bell peppers, and asparagus.

GREENER TAILGATING

With the growth of the sports greening movement, environmentally conscious practices will be the next big innovation in tailgating. As more and more professional sports leagues, teams, and venues make more efficient, healthy, and ecologically intelligent hospitality choices they are encouraging their tailgating fans to do the same.

Some teams (like the Philadelphia Eagles) provide recycling bags to tailgaters, and some leagues (like the National Hockey League) collect recyclables from tailgating parties. Many teams and leagues are also educating their fans about the importance of making more sustainable food choices, composting leftover food, and reducing waste, as well as leading by example.

If the leadership of sports icons isn't enough motivation, worries about costs, cholesterol, contaminated meat, dwindling sea life, and the future of America's ecosystems provide additional incentives.

Here are some tips for greener grilling:

1. ADD FRUIT AND VEGETABLES TO THE MIX: what's not to love about having more reasons to grill more kinds of food? Grilling offers very tempting options for vegetables—whether it's searing thick-cut portobellas or skewering bite-sized chunks of onion and green pepper. Of course, there's also traditional grilled corn; just add a dash of salt and lime juice or chili powder to balance the natural sweetness.

2. CHOOSE SUSTAINABLY PRODUCED MEAT (INCLUDING CHICKEN AND FISH): Look for products with the USDA Organic seal, which ensures a higher standard. By buying it, you support farmers who raise healthier animals.

3. USE PROPANE TO AVOID BURNING YOUR FOOD: Use propane instead of charcoal because it provides an unmatched level of heat control and evenness over the grill's surface—and that means less burnt food and food waste, and more importantly for your health, less undercooked food.

4. KNOW WHEN YOU'RE FULL ENOUGH AND STORE LEFTOVERS FOR LATER TO REDUCE FOOD WASTE: Consider portion sizes why buying and preparing food to avoid food waste and save money. The environmental cost of wasted food is staggering: 25 percent of all fresh water and 4 percent of all oil consumed in this country is used to produce food that is never eaten.

5. BRING REUSABLE SERVICEWARE AND CONTAINERS, AND CLOTH NAPKINS TO CUT WASTE: Pack reusable utensils to reduce waste (and cost). Don't forget to collect recyclables and compost in separate bags.

Chefs have long favored local foods because they taste better and help keep regional culinary traditions alive. Chefs and consumers can more easily contact—or even visit—local farms to see how the food is produced. Finally, when you support local farms financially, you save them from the developer's bulldozer, an all-too-common fate these days.

Relying on locally produced foods also means eating in sync with the seasons; for example, in some locations, root vegetables and preserved produce may be the best options during cold weather. Choose local food when possible and avoid purchasing food imported by airplane.

5. EAT WHOLE FOODS

Nutritionists suggest that a healthy daily diet would include at least 70 to 80 percent whole foods. Environmentally, the less a food item is processed en route from farm to table, the fewer resources are used. Why is a whole grain better than a fragment, meaning the bran or the germ? According to researchers, whole grains better protect against chronic diseases.

One of the major benefits of eating whole grains is that they slow down the digestive process, thereby allowing better absorption of the nutrients. Their fiber content also regulates blood sugar by slowing down the conversion of starches into glucose. Whole grains make favorable changes in the intestines, allowing healthy bacteria to regulate disease-producing bacteria; they have strong antioxidant properties to help protect the body against free radicals, and they contain phyto-estrogens and phytochemicals that break down carcinogenic substances.

6. "BIO-DIVERSIFY" YOUR DIET

While pre-industrial agriculture depended on 80,000 plant species globally, industrial agriculture now provides most of our food from just 15 to 30 species of cultivated plants. Our current food system relies on just a few plants—primarily corn, wheat, rice—to provide nearly 60 percent of the average American's calories.

The loss of diversity renders our food supply more vulnerable. Disease spreads quickly through a field planted with the same crop. Pesticides, and large amounts of them, are the only defense against mono-crop field devastation. The rapid spread of the 2009 tomato blight is a case in point. This incident demonstrated how in a highly centralized system—with lots of tomatoes grown in one place and distributed by a few large retailers—a "failure" can quickly multiply. The recent spike in food-borne illnesses is another example of the problems associated with an overly consolidated food chain. *E. coli* has been around for a long time; what's new is how quickly and widely it spreads when there are only a few big meat producers. "Healthy, natural systems," wrote Dan Barber in the *New York Times*, "abhor uniformity. We need, then, to look to a system of food and agriculture that values and mimics natural diversity. The five-acre monoculture of tomato plants next door might be local, but it's really no different from the 200-acre one across the country: both have sacrificed the ecological insurance that comes with biodiversity."

7. MINIMIZE WASTE

The U.S. Department of Agriculture (USDA) estimates that people in the United States waste 40 percent of all edible food produced, bought, and sold in this country. Add up all the losses that occur throughout the food chain, and people across the U.S., on average, waste 1,400 calories a day per person. That's the equivalent of about two full meals.

The consequences of our wastefulness are staggering: 25 percent of all freshwater and 4 percent of all oil consumed in this country are used to produce food that is never eaten. Based on data from the Environmental Protection Agency, the 30 million tons of food deposited in landfills may also be responsible for about one-tenth of all anthropogenic methane emissions. According to NRDC's "Wasted" report, getting food from the farm to our fork eats up 10 percent of the total U.S. energy budget, uses 50 percent of U.S. land, and swallows 80 percent of all freshwater consumed in the United States. Yet, 40 percent of food in the United States today goes uneaten. This means that Americans are throwing out the equivalent of \$165 billion each year.¹

Consumers can do the most good by embracing the "Three Rs": Reduce, Reuse, Recycle. Reduce how much "take out" food you buy each week. Plan meals better. Reuse leftovers creatively (turn them into lunch to take to work, in reusable containers, of course), and focus on making just enough. And Recycle your food scraps by composting.

Food recovery programs play an important role by collecting surplus food from supermarkets, dining halls, and restaurants and delivering it to food banks and homeless shelters. Apple cores, potato peels, and other inedible food scraps can be composted at home and, in a handful of places, on the municipal level.

When shopping, "vote" with your dollars by giving priority to healthy food that is packaged in recycled-content packaging which is also recyclable. Buy foods in bulk and from bins. Bring back bags for re-use. Avoid plastic wrap, which may transfer harmful chemicals to food. Annually, Americans consume 189 billion beverages from glass, plastic, and aluminum—that's two per day per person. Reduce your share by buying frozen concentrates and making your own drinks in reusable containers.

8. MAKE MEALS FROM SCRATCH

Cook your own meals at home starting with fresh whole foods. By buying your own whole foods, preferably organic, you have the more control over how the ingredients in your meals are "processed." Meals cooked from scratch also tend to be less expensive and less wasteful.



Slow Food USA®

NOSE-TO-TAILGATING²

In 2014, Slow Food USA hosted the first Slow Meat Symposium and came away determined to give better meat a sporting chance. So the #Nose2Tailgate was born. In November, a crew of tailgaters gathered outside MetLife Stadium to cheer on the Giants, eat amazing food, and advocate for "Better Meat, Less" inside stadiums.

The fun spread across the country, culminating on Super Bowl Sunday when the nationwide #Nose2Tailgate Party—people cooking and sharing the kind of sustainable food they want to see in stadiums—reached over 90,000 people via social media.



Chapter Source: Natural Resources Defense Council, Smarter Living Eating Well "Good Food Essentials: Shop Wisely, Cook Simply, Eat Well", 2010 <http://www.nrdc.org/living/eatingwell/food-essentials.asp>.

¹ Natural Resources Defense Council, Wasted: How America Is Losing Up to 40 Percent of Its Food from Farm to Fork to Landfill", August 2012, <http://www.nrdc.org/food/files/wasted-food-ip.pdf>.

² Slow Food USA, 2015.

AFTERWORD

*By Will Witherspoon, 12-Year NFL Player;
Founder & Owner of Shire Gate Farm*

You are what you eat. As a football player in the NFL for 12 years, I was constantly focused on the impact of my food on my physical performance. I still am. Today, the focus on fair competition has raised the level of scrutiny about what athletes put into their bodies. In the NFL—as with all professional leagues—players are held responsible for everything they put into their bodies. As athletes continue to break records, our collective interest in whether it was done within the bounds of fair competition has grown. By contrast, the guiding principles of what we put into our shared environmental ecosystem, including our food, are not as clear.

Becoming a father led me to focus on the food I bring to the dinner table (and breakfast and lunch tables too) and what my kids eat. I remember visiting my great-grandma's farm as a child and cherishing her old-fashioned wholesome meals grown right there in Florida. I want to share that experience with my children. Ultimately, I want all kids to grow up healthy and more in touch with the natural environment.

Today's earth supports the largest human population in all of history. Mankind is putting enormous, unprecedented pressure on the planet to produce more food to feed more and more people. We're already suffering the consequences of the decisions we make today. The land we cultivate to grow our food just ten years from now will be less productive if we don't change current agricultural practices. Not to mention, eating healthy food, produced in an ecologically intelligent way, is one of the best ways to leave our children an environmentally and socially responsible food system for their future, and for our grandchildren.

My one-man movement toward healthy, more sustainable food began on a piece of property that I purchased in 2007 to board my horses in Central Missouri. Soon after, I decided I also wanted to raise cattle, but I wanted to do so in the best and most sustainable way. As a football player, I couldn't even take over-the-counter cold medicine without letting my trainer know about it, so why would I want my kids eating beef from cattle fed daily with hormones or antibiotics?

As I looked into healthy ways to raise cattle, I learned about the failure of our industrial cattle system and that industrial beef operations have become one of the largest sources of pollution in this country. I educated myself on better grazing practices, and how healthy cows and healthy land can coexist. I learned that a well-managed herd can actually improve soil health and grassland productivity.

I brought my knowledge back to the locker room and shared it with my teammates. Oh, by the way, did I mention that professional football players like to eat meat? So we talked about the health benefits of safer foods and good beef-raising practices. In 2012, I took the conversation national and testified in front of Congress about the need to reform our livestock production system. Our dependence on synthetic additives is yielding drastic consequences for our land and health. And then, the St. Louis Rams, my former team, began serving the beef that I produce right here in Missouri beginning in 2014. To educate yourself on the story of food and how it gets to your plate is to hold the power of choice. Our adherence to a system that inspires better practices in food production and supports a healthy planet is central to the continued existence of life on Earth. What better place to communicate this message than within one of mankind's greatest cultural unifiers—professional sports?

Yes, the sustainable food movement is growing rapidly and through my own personal journey I seek to inspire a call to action: now is the time for teams to extend the bar of excellence beyond performance on the playing field to the fields of food production. Support better food practices inside and outside of your stadiums and arenas by serving organic, antibiotic-free food to your fans. It's better for the earth, it's better for our children and it's a better way to do business.



A handwritten signature in black ink, appearing to read 'Will Witherspoon'.

Will Witherspoon, 12-Year NFL Player;
Founder & Owner of Shire Gate Farm



GLOSSARY

AMERICAN GRASSFED ASSOCIATION (AGA) STANDARD requires that animals eat grass only and if they receive antibiotics due to illness, they must be removed from AGA-certified production. The AGA standard also prohibits growth hormones. As of 2015, AGA is the only guarantee that the beef you are buying is “grass-fed” using a 100 percent grass diet for the entirety of a cow’s life.

For more information, visit the American Grassfed Organization’s website: americangrassfed.org/about-us/our-standards.

ANIMAL WELFARE APPROVED is a third party-verified meat and poultry production standard that focuses on the healthy and humane treatment of livestock and poultry. It is the only food label that requires pasture access for all animals. The AWA standard has management criteria that address the entire lifecycle of an animal from birth to death. Animal Welfare Approved has standards for all commonly domesticated farmed animals, including beef cattle, dairy cattle, bison, sheep, dairy sheep, goats, dairy goats, pigs, laying hens, meat chickens, turkeys, ducks, geese, and rabbits.

For more information, visit the Animal Welfare Approved Website: animalwelfareapproved.org/standards.

ANTIBIOTIC-FREE animal products are those that have been raised without the use of antibiotic medication over the entire course of the animal’s life. As of 2014, this is the only guarantee that antibiotics have not been administered irresponsibly to animals. The Centers for Disease Control and Prevention (CDC), the Food and Drug Administrations (FDA), and the U.S. Department of Agriculture (USDA) have all concluded, and testified before Congress, that there is a link between the daily feeding of antibiotics to industrial livestock (chicken, pork, beef) and the rise of antibiotic resistance in humans. These organizations have all called for ending the practice of using antibiotics on livestock for non-therapeutic purposes.

For more information, visit the Natural Resource Defense Council’s antibiotics page: nrdc.org/food/saving-antibiotics.asp.

BIODEGRADABLE is not the same as compostable; it may mean only that a product will eventually break down, but not necessarily within a specified timeframe or to a specified particle size. While biodegradability is an important requirement for some purchases, such as cleaning products mixed with water, it is not an environmental asset for products such as food serviceware or anything else that might be destined for a landfill, where biodegrading produces methane. Compostability (compliant with ASTM D6400 or ASTM D6868 specifications) is the certification that should be prioritized in serviceware.

For more on the difference between compostable and biodegradable as well as the ASTM standards, please see NRDC’s “Guide to Composting at Sports Venues” report: nrdc.org/greenbusiness/guides/sports/files/sports-venue-composting-guide.pdf.

CAGE-FREE EGGS are produced by laying hens not kept in cages. They can engage in many of their natural habits, including walking, bedding, and spreading their wings. This does not mean that the birds have access to the outdoors and a third party audit is not required to use this label.

For more information about cage-free eggs visit the Humane Society’s “cage free” webpage: humanesociety.org/issues/confinement_farm/facts/cage-free_vs_battery-cage.html?credit=web_id97092905.

“CARBON NEUTRAL” is an operations achievement claim that should be avoided and that implies having a net zero carbon footprint. This is an aspirational concept based on balancing a measured amount of carbon released (the total amount related to a project) with an equivalent amount sequestered or offset. In practice, carbon neutrality is unattainable because it is not feasible to identify and offset all of the carbon impacts associated with a given activity. A claim related to carbon neutrality requires a comprehensive, correctly performed greenhouse gas inventory (and subsequent offsetting or elimination) of the carbon emissions associated with every stage of raw material acquisition, transport, production, use, and disposal for all related goods and services. This is impossible to achieve for every item or service associated with an event because accurate data for each stage of production are not available for the majority of goods and services, including carbon impacts associated with the manufacture, use, and disposal of most plastics, paper, solid wood products, textiles, chemicals, and vehicles. As a consequence, NRDC advises against using the term “carbon neutral” and instead recommends stating precisely which carbon emissions have been offset or avoided—for example, “All the electricity used to power the stadium was supplied by renewable energy” or “All the electricity used to power the stadium was offset by RECs.” Saying “we are playing in a carbon neutral stadium” or “This is a carbon neutral event” would be a misleading and inaccurate claim.

CARBON OFFSET is a quantity of avoided greenhouse gas (GHG) emissions, measured in units (metric tons) of carbon dioxide equivalent (CO₂e), achieved as a result of an investment in a non-carbon-emitting energy technology. The investment is equal in kilowatt-hours (or megawatt-hours) to the amount of carbon emitted by the energy technology typically associated with an event. The emissions avoidance associated with the non-carbon-emitting energy technology can be sold to an event and enable the purchaser to claim those GHG reductions as its own. These reductions can then be claimed to offset any GHG emissions for which the event is responsible.

COMPOSTABLE means that an item is food waste or a produced item (e.g., serviceware) is certified as ASTM 6400 compliant predominantly made of organic materials and can be rendered into compost at a facility. Composting reduces the amount of waste directed to landfills or incinerators by transforming organic waste into useful fertilizer and other soil amendments, cutting the emissions of greenhouse gasses that contribute to climate change.

For more on the benefits of composting, please see NRDC's "Guide to Composting at Sports Venues" report: nrdc.org/greenbusiness/guides/sports/files/sports-venue-composting-guide.pdf.

FOOD ALLIANCE CERTIFIED is a voluntary certification program that encompasses five sustainable food and agriculture standards: (1) crop operations, (2) livestock operations, (3) farmed shellfish operations, (4) nursery and greenhouse operations, and (5) food handling operations. Food Alliance certified farms, ranches, and food processors meet these standards.

For more information, visit the Food Alliance website: foodalliance.org.

FOREST STEWARDSHIP COUNCIL (FSC) is an independent, nonprofit, membership-led organization that sets standards under which forestry practices are certified. The FSC Forest Manager certification provides assurance that forests are being managed to higher environmental and social standards. The FSC Chain of Custody certification provides assurance that products bearing the FSC label directly support more responsible forest management.

For more information, visit the FSC website: us.fsc.org.

FREE RANGE, in the United States, applies only to poultry and is regulated by the USDA. It indicates simply that the animals have been "allowed access to the outside." The USDA does not specify the quality or size of the outside range nor the duration of time an animal has had access to the outside.

GAME CHANGER is an NRDC and Green Sports Alliance report released in 2012 (*Game Changer: How the Sports Industry Is Saving the Planet*) featuring leading examples of professional sports greening successes in North America.

Download the report at nrdc.org/game-changer.

GLOBAL ANIMAL PARTNERSHIP (GAP), similar to Animal Welfare Approved, brings together farmers, scientists, ranchers, retailers, and animal advocates to improve the welfare of animals in agriculture. The GAP standard consists of a "5-Step" rating system that promotes and facilitates continuous improvement and incentivizes producers that use best welfare and environmental practices.

For more information, visit the Global Animal Partnership website: globalanimalpartnership.org.

GREENING refers to the process of reviewing day-to-day operations and procurement policies to reduce environmental impacts. Greening is an ongoing process that incorporates ecologically meaningful considerations into decisions about the products and services purchased and offered, often with due regard for other factors such as cost, product quality, vendor reliability, and availability.

GREENING ADVISOR is a free, comprehensive, web-based environmental guide for the sports industry, including advice on a wide spectrum of environmental issues like greener procurement, energy efficiency, water conservation, paper use, composting, recycling, and transportation. The Greening Advisor earned the U.S. Environmental Protection Agency's (EPA) Environmental Merit Award in 2008. The Greening Advisor for Collegiate Sports earned the EPA's Environmental Champion Award in 2015.

Use this resource at greensports.org.

GREEN SPORTS ALLIANCE (GSA) leverages the cultural and market influence of sports to promote healthy, sustainable communities. GSA inspires sports leagues, teams, venues, their partners, and millions of fans to embrace renewable energy, healthy food, recycling, water efficiency, species preservation, safer chemicals, and other environmentally preferable practices. Since launching nationally in March 2011, the GSA's membership has grown to more than 300 teams, venues, and universities from 20 different leagues and 14 countries, including affiliates in Australia and Europe. GSA was co-founded by NRDC and Paul G. Allen's Vulcan Inc. in February 2010.

Learn more at greensportsalliance.org and @SportsAlliance.

HORMONE-FREE, or "no hormones administered," is a label applied to beef that is considered free from any added hormones over the lifetime of the animal and, therefore, implies that the manufacturer has gone beyond USDA regulations for conventional meat production. The USDA prohibits the use of hormones in raising hogs or poultry. The agency does, however, allow the use of a number of hormones on beef.

LIFE CYCLE ASSESSMENT (LCA) is an analytical technique to assess the environmental aspects and potential impacts associated with a product, process, or service, by: (1) compiling an inventory of relevant energy and material inputs and environmental releases, (2) evaluating the potential environmental impacts associated with identified inputs and releases, and (3) interpreting the results to help you make a more informed decision. This analysis takes into account all production stages, from cradle-to-grave (including raw material acquisition, transport, materials processing, manufacturing, distribution, use, repair and maintenance, and disposal or recycling).

LOCAL is defined by the USDA as, "the locality or region in which the final product is marketed, so that the total distance that the product is transported is less than 400 miles from the origin of the product; or the state in which the product is produced."

For more information, visit the USDA website: ers.usda.gov/publications/err-economic-research-report/err97.aspx.

MADE-TO-ORDER FRESH FOOD PREPARATION means that meals are prepared on an order-by-order basis. This reduces the potential for food waste within the service industry by meeting demand more precisely.

MONTEREY BAY AQUARIUM SEAFOOD WATCH has helped consumers and businesses choose seafood that's sourced in ways that sustainably protect sea life and habitats since 1999. Monterey Bay Aquarium Seafood Watch makes consumer recommendations that fall into three categories: (1) Best Choices, (2) Good Alternatives, and (3) Avoid.

For more information, visit the Monterey Bay Aquarium Seafood Watch's website: seafoodwatch.org.

MARINE STEWARDSHIP COUNCIL (MSC) standard has three defining principles: (1) fishery must operate so that fishing can continue indefinitely and is not overexploiting the resources; (2) fishing operations are managed to maintain the structure, productivity, function, and diversity of the ecosystem on which the fishery depends; and (3) fisheries must meet all local, national, and international laws and have a management system in place. Fisheries seeking certification must seek an independent third party accredited certifier to assess their fisheries against the MSC standard.

For more information, visit the Marine Stewardship Council website: msc.org.

"NATURAL" is a frequently misused term whose definition is currently subject to hundreds of lawsuits so it is best to avoid. Ideally, the term would refer to products that do not contain artificial ingredients or added colors and is only minimally processed. Minimal processing means that the product was not fundamentally altered. The label must include a statement on the interpretation of the term "natural" (such as "no artificial ingredients," "minimally processed").

For more information about the "natural" label, view this USDA food safety fact sheet: fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/food-labeling/meat-and-poultry.

NATURAL RESOURCES DEFENSE COUNCIL (NRDC) is an international nonprofit environmental organization with more than 1.4 million members and online activists. Since 1970, NRDC's lawyers, scientists and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. In 2009 NRDC cofounded the Green Sports Alliance.

Learn more at www.nrdc.org and @NRDC.

RAINFOREST ALLIANCE CERTIFIED applies to more than 100 crops throughout the world. Farms that can meet the criteria for responsible farm management are awarded Rainforest Alliance Certification. This certification also maintains specific criteria for fair treatment of farm workers and laborers.

For more information, visit the Rainforest Alliance certification and verification webpage at: rainforest-alliance.org/certification-verification.

SUSTAINABILITY is a widely used but vague term that has most commonly been defined through the concept of sustainable development as established by the Brundtland Commission of the United Nations in 1987: "Sustainable development is development that meets the needs of present generations without compromising the ability of future generations to meet their own needs." Sustainability involves reconciling ecological, social, and economic goals.

SALMON SAFE, is a certification whose mission is to transform land management practices to enable Pacific salmon to thrive in West Coast watersheds. For more information, visit the Salmon Safe website at: www.salmonsafe.org

THIRD PARTY SUSTAINABLE FOOD CERTIFICATIONS are consumer-facing labels that signify credible, scientifically-based sustainable agriculture production standards. These standards focus on continuously improving the environmental and health impacts associated with agriculture products.

For more information on the effectiveness and integrity of these claims, visit the Consumer Reports' Greener Choices Eco-labels webpage: <http://www.greenerchoices.org/eco-labels/eco-home.cfm?redirect=1>.

USDA CERTIFIED ORGANIC label means the meat, produce, and other agricultural products were produced without the use of synthetic additives. Produce is grown without pesticides or chemical fertilizers. Livestock are raised without antibiotics or hormones during their lifetime and given organic feed containing no animal by-products. USDA Organic certification also includes specific requirements about packaging and transport of produce, meat, and dairy.

For more information visit the USDA Organic Website: ams.usda.gov.

VEGETARIAN meals are vegetable-based and do not consist of any meat, fish, or poultry.

WHOLE FOOD is food that is unprocessed and unrefined, or processed and refined as little as possible. It contains no additives or other artificial ingredients. Whole foods—like fruits, vegetables, whole grains, nuts and legumes—are as close to their natural form as possible.

ZERO WASTE is an aspirational concept focused on reducing waste and collecting and routing discarded materials to their ecologically optimal use—usually recycling and composting. "Zero waste" adherents encourage products and processes to reduce or eliminate the volume and toxicity of waste as well as generally avoiding burning materials or sending them to landfills. Businesses and communities that achieve more than 90 percent landfill/incinerator diversion are often considered to be successful in complying with the "zero waste" concept. NRDC and GSA advise that organizations strive to specifically define waste reduction, recycling, and composting achievements where feasible and to use "zero waste" only to indicate an aspirational goal.

For more on Zero Waste, visit: zwia.org/standards/zw-definition.



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