LAND USE AND FARMING PRACTICES

Several questions arise when considering the relationships between food, land use, and farming practices. In particular, what foods are grown and raised, and in what amounts and proportions? How does agriculture production compare to what is needed for a healthy diet such as the goal of the Harvard Alternative Healthy Eating Index? And is land used to produce food managed in ways that protect and restore soil quality?

In the U.S., we currently have enough farmland and rangelands to produce the food needed for healthy diets for all Americans. However, this capacity is threatened by soil degradation, climate change, and demands on land for other uses (including products not contributing to healthy diets). Aligning production with needs and expanding practices that build soil quality can improve food security and potentially bring other benefits, including climate change solutions. However, realizing such shifts will require new policies and programs that support farmers in transitioning practices, including through technical assistance, financial support, and market development.

Today, we have 655 million acres of grassland and rangeland and 392 million acres of cropland, largely used for feed (e.g., corn, soybeans, hay) and wheat. Current production doesn’t include sufficient fruits and vegetables for healthy diets, and on average our consumption patterns are also far from those needed to promote optimal health. A recent report showed current U.S. agricultural land can support the dietary needs of 130 percent to 261 percent of the current U.S. population depending on dietary patterns. The major determinant is how much meat and dairy products the typical American eats. These require relatively more land to produce but also can take advantage of the western rangelands and perennial pastures, which can support cattle and other ruminants.

National carrying capacity is an important prerequisite to a sustainable food system, but says nothing about where in the U.S.—within a watershed, or on a farm—it could be most beneficial to produce foods to optimize for various attributes (e.g., managing phosphorus, nitrogen, and carbon cycles; water resources; and biodiversity). Also, how food is produced is vital to sustaining soil and water, which agriculture relies on. Building on the 2018 Menus of Change Annual Report, several strategies could improve the U.S. picture with respect to land and farming practices:

- Decrease meat production and consumption overall, and particularly grain-fed livestock production as currently practiced. Soil erosion and nutrient runoff could be reduced dramatically if highly erodible land were taken out of row crop (feed) production and planted into perennial crops (e.g., pasture grasses and legumes), and improving grassland management can in some cases increase carbon sequestration. Switching to animal foods from pasture-based or agroecological operations can address some sustainability challenges, but needs to be combined with substantial reductions in consumption.

- Encourage a more regional and seasonal diet and drive demand away from (and reduce production of) foods that are wildly out-of-step with local ecosystems—for example, water-intensive crops from drier parts of the country (e.g., romaine lettuce in the American Southwest).

- Source products produced using best practices—especially organic and regenerative practices such as cover cropping, planting perennials, and diverse crop rotations. These methods can, under some circumstances, improve soil quality and other ecosystem services. In some cases, such practices lead to lower yields per acre, which means that other strategies must be employed, such as reducing food waste and shifting consumption patterns.

- Leverage technology where possible to optimize achieving and measuring sustainability outcomes on scales from fields to farms to agroecological landscapes. For example, precision farming methods, precision conservation techniques, and remote sensing (including drones) can be used to reduce expensive and damaging overuse of fertilizers, and to design farms that promote biodiversity while protecting bottom lines.

Chefs across industry sectors continue to champion the farm-to-table movement, getting directly involved in what is grown on the farm and under what conditions. Chef Dan Barber’s Row 7 seed company takes this even one step further by cultivating and selling seeds that can be easily grown around the country, produce delicious and nutritious produce, and do so in ways that increase seed diversity, accessibility, and affordability. In 2018, sweetgreen bought into the Row 7 experiment by gifting its farmers the company’s koginut squash seeds, and bought the resulting squash to be featured in its seasonal salad a few months later.

Regenerative agriculture is starting to make inroads in the CPG sector, and may become a harbinger for chefs and operators to meet consumer demand in restaurant and foodservice settings. Patagonia Provisions took a significant step with this in introducing its Long Root Ale, brewed with Kernza® and in May of 2018, Annie’s Homegrown introduced limited-edition lines of its Mac & Cheese and Bunny Grahams, made with organic ingredients grown using regenerative farming practices. Prominent New York chefs gathered later that same year to launch a campaign called “Food Forever,” in partnership with the global seed-saving organization the Crop Trust, to educate eaters about the importance of crop diversity. These chefs are at the forefront of showcasing lesser-known crop varieties and perennial grains in flavorful, nutrient-dense dishes that have potential for revival.

These examples currently remain outliers, however; only a handful of restaurants have entered into the regenerative agriculture space (and those that have are almost exclusively on the higher end), and there continues to be little substantial effort by the restaurant industry or major companies to engage in changing how farm and rangeland is used in the United States.

Chefs need to work on two fronts to ensure that their menus feature products grown according to the most sustainable farming practices. First, they need to communicate regularly with both their local farmers and their national and global purveyors to understand their practices and in turn request and select items that are least damaging (and even beneficial in the case of regenerative agricultural methods) to the environment. Second, they need to share this dialogue with their consumers.

IN SUMMARY:

- U.S. agricultural lands are capable of producing sufficient healthful food for a large population; how large is primarily dependent on meat consumption and competing land uses such as corn ethanol production.

- Thoughtful changes in production patterns and adoption of management practices that improve soil quality could build farm resilience and bring other benefits, but new policies and programs are needed to support farmers in transitioning their operations.

- The need for increased crop diversity and regenerative agricultural practices is just starting to gain traction in the foodservice sector, but there continues to be little substantial effort to engage in changing how farm and rangeland is used in the U.S. on a large scale.

Not all diners will want to know how their food is produced, but the more they understand about sustainable farming practices, the more they can apply the same decision-making process used by restaurant chefs to their purchasing practices for at-home consumption.