FRUIT AND VEGETABLE CONSUMPTION AND PRODUCTION

Increasing fruit and vegetable consumption is great for our health. The fruit and vegetable sectors have both been leaders in engaging environmentally aware consumers, with offerings that are certified organic, locally produced, low in greenhouse gases, or some combination of these qualities.

However, our interest in eating more fruits and vegetables is not yet showing up in the hard numbers reflecting the current total national consumption and production. This sobering fact has appeared consistently across multiple sources.

Per capita food supply data from the Economic Research Service of the U.S. Department of Agriculture (USDA) shows that much food is available from production and net imports. In 2016, the most recent data available, the American food supply offered a per capita annual total (in fresh-weight equivalent, after adjustment for losses in distribution and preparation) of 165 pounds of vegetables and 117 pounds of fruit, in both cases barely higher than the previous year. A decade earlier, the corresponding per capita annual total was much higher, at 173 pounds of vegetables and 130 pounds of fruit, so long-term trends have not been favorable. The downward trend from 2006 to 2016 is observed whether or not one uses USDA’s loss-adjusted estimates to account for food waste. Also, the downward trend in vegetables is observed even if one excludes potatoes from chips, dehydrated products, or frozen (such as for fries). According to a study of multiple rounds of the National Health and Nutrition Examination Survey (NHANES) from 2003 to 2014, Americans made many improvements in the healthfulness of their food intake—more whole grains, less sugar-sweetened beverages, and a higher total diet score, for example—but no significant improvement in daily consumption of fruits and vegetables. The study found that fruit and vegetable intake was somewhat higher for high-income people than for lower-income people and participants in the Supplemental Nutrition Assistance Program (SNAP), but that all income strata fell short of recommendations. The NHANES data are used in the federal government’s “Healthy People 2020” monitoring, which likewise shows no progress toward meeting goals for fruits and vegetables.

Though one frequently hears that prices or U.S. agricultural production constraints are to blame, neither of these potential barriers provides a fully persuasive explanation. For potatoes, the largest vegetable by volume, U.S. production rose from 2005 to 2015, but exports also increased, so per capita availability for consumers fell. The total land area assigned to other fruit and vegetable crops is smaller and not increasing much. In the Census of Agriculture, conducted once every five years, U.S. cropland harvested rose by 5 million acres from 2012 to 2017 (an increase of 1.6 percent). During this time, land in vegetable production fell by 0.2 million acres (a decline of about 5 percent).

Simultaneously, farmland for soybeans, which are heavily used in meat production, grew by 14 million acres (an increase of 18 percent). All things considered, demand constraints rather than supply constraints are most limiting for U.S. fruit and vegetable consumption.

Restaurants and the non-commercial foodservice sector both respond to and influence patterns in food supply and demand. In their 2018 forecast of food and beverage trends for restaurants, the consultants Baum and Whiteman listed “the rapid consumer shift to ‘plant-based’ foods” as the #1 trend of that year. The National Restaurant Association’s 2019 Culinary Forecast ("What’s Hot") noted, “Plant-based and veggie-centric foods are no longer just for vegetarians,” and ranked veggie-centric/vegetable-forward cuisine number 8 out of 140 trends, thanks in large part to chefs experimenting with new techniques to make vegetables enticing and worthy of the center of the plate. And increasingly, food media celebrate dishes where vegetables substitute in for animal-based protein—jackfruit for barbecue, rutabaga for pork belly, carrots for hot dogs—for their ingenuity rather than decrying them for what they are not.

Fast casual operations have dominated the plant-forward space, and in recognition of this movement, QSR magazine, in collaboration with the CIA, released a plant-forward watch list in its May issue (see page 15). Even legacy fast food brands, such as Taco Bell, Carl’s Jr., and White Castle have made bold moves this past year to appeal to more vegan and vegetarian consumers with separate menus and sophisticated plant-based meat burgers, as well as flexitarians who use these designations as a shorthand for health and sustainability. Amidst the volatile meal kit and food delivery space, services such as Thistle and Purple Carrot continue to see further market potential in focusing their offerings on vegan, vegetarian, and flexitarian consumers. Large non-commercial foodservice providers, including Compass, Sodexo, Aramark, and Guckenheimer, are also increasing their plant-forward offerings and internal staff trainings in response to customer demand.

At a high level, chefs and foodservice operators have two simple ways to influence consumers’ attitudes around fruits and vegetables: use more of them, and make them more appealing. It’s no longer enough to offer only one vegetarian entrée consisting of pasta or roasted vegetables, or an afterthought fruit salad for dessert. Vegetables have begun driving single menus and entire operations, from fine dining to fast casual, showing their wide creative and entrepreneurial potential. Consumers seeking to eat more fruits and vegetables generally know about these restaurant concepts; it is likely that they will continue to proliferate, since the trend is far from peaking, and in the process these establishments may grow diners’ interest in a wide variety of preparations and ingredients. In operations that are not labeled veg-centric (which is still the vast majority), chefs should look for inspiration among those menus and seek to create dishes tailored to their customer base that nonetheless use a wider range of produce in more exciting preparations. As demonstrated by research from Stanford University and the World Resource Institute’s Better Buying Lab, attention to menu labeling that offers the same amount of details when it comes to vegetables as to other types of dishes or components will also contribute to diners selecting them because they feel equally special; spices, condiments, and cooking techniques are all elements that can be added to vegetables’ descriptions to make them more enticing. Beyond adding more vegetable dishes on menus and more vegetables as a garnish around an animal protein, chefs can also use blended dishes, from burgers (beef with mushroom) to mashed (potatoes with cauliflower) to cake (chocolate with beet), to enable diners to eat more fruits and vegetables in every dish. The dessert flip concept, using more fruit and smaller portions of indulgent favorites, offers an opportunity to hit upon all of these key points and can further reinforce Menus of Change principles by ensuring that these come from local and seasonal sources. With any plant-forward dish, well-crafted descriptor language on menus is essential.

SCORE: 4

Interest among trend-leading chefs, large non-commercial foodservice operators, and their customers in plant-forward menus—including fruits and vegetables—is surging. With younger generations accelerating this trend, we hope to see measurable increased consumption data around fruits and vegetables in future years indicating widespread change in American food choices.

IN SUMMARY:

• Food supply data and food intake data both show little change in consumption of fruits and vegetables. The federal government’s “Healthy People 2020” monitoring report found no recent progress toward meeting goals for fruits and vegetables.

• On the supply side, it is feasible to increase U.S. fruit and vegetable production, if the demand is there and the price is adequate.

• Vegetarian, vegan, and plant-forward dishes generally have become more common across all foodservice sectors in response to consumer demand, setting up possible future shifts in broad, mainstream food choices.