

TOP REASONS TO CUT DOWN ON MEAT AND ADD MORE PLANT FOODS IN YOUR FACILITY

1. IT'S WHAT YOUR CUSTOMERS WANT.

Food Trends for 2017 emphasize plants and sustainability. From the National Restaurant Association to the James Beard Foundation, sustainability in food is one of the most common predictions for this year. Increasingly, people want to know where their food comes from, how it was produced, and how it affects the environment; and meat is at the center of this discussion.

Although red meat consumption may have increased slightly over the past year or two, overall, there has been a downward trend in consumption since the 1980s. Some of the most recent consumer trends are all about plant based proteins. Vegetables are taking lead roles, and more people are open to plant based meals using new and different ingredients and global recipes.¹ Not just tofu and meat look-alikes, but beans, lentils, nuts and high-protein grains.

Many of the trends focus on foods that keep us healthy and make us feel good, but also thinking “out of the box.” People are finding flexible ways to eat “cleaner” or “healthier,” and they’re discovering the mix of foods that make them feel best without having to be so stringent about it. Diners are going vegan before 6pm, eat “paleo” on weekdays, go Meatless on Monday, or become pescatarians who eat the occasional burger.

Nutrition experts agree. In a survey by Ketchum’s Global Food and Beverage Practice, sustainability and plant-based proteins surfaced as the most important food trends for 2017 with health being a major driver for why diners choose plant-based foods.²



Leading consumer insights firms like the Hartman Group, Technomics and Nielsen all have found that consumers are interested in eating a more diverse diet including more plant-based foods and lesser amounts of meat. (Changing Tastes)



A series of studies by Changing Tastes and the Kellogg School of Management at Northwestern University found that the price of meat is becoming more volatile compared to other foods, and harder to predict and control.³

2. LESS MEAT IS BETTER FOR YOUR BOTTOM LINE AND YOUR FOOD COSTS.

Meat is expensive, and you drive up food costs if your menu is heavy in animal-based foods. Plant-based protein foods generally cost less than meat even compared to specialty products like organic tofu and soy sausage.

- For example, on average, boneless chicken breasts sell for \$3.30 per pound nationwide, while tofu costs around \$2 per pound, and dried beans less than \$1.50 per pound. Boneless pork averages \$3.95 per pound, and the cheapest ground beef averages \$3.74 per pound.⁴

Meat prices are difficult to predict. Meat prices are volatile and reflect many factors including demand, supply, weather forecasts, trade agreements, cost of feed, the latest news about diet and health, and even bird flu or mad cow disease. This volatility makes it harder to predict and manage food costs when you serve a lot of meat.

3. LESS MEAT IS BETTER FOR THE PLANET.

Producing meat uses a disproportionate amount of water. In fact, the water footprint of any animal-based food is larger than the water footprint of many plant-based foods with similar nutritional values. Taking into account all stages of production, one kilogram of beef requires nearly 40 times more water compared to the same amount of vegetables!⁵

Raising animals for food uses 30 percent of the entire land surface on the earth. In order to meet the demand to produce more meat, the pressure to clear forests and valuable land increases, thus contributing to land degradation, deforestation and the loss of important rainforests.⁶

Raising animals produces climate changing greenhouse gases, including methane, carbon dioxide and nitrous oxide. In fact, more greenhouse gases are produced from animal production than from the transportation sector.⁷

4. LESS MEAT IS BETTER FOR YOUR CUSTOMERS' HEALTH.

Less meat, more vegetables = lower disease burden. People who include more plant-based foods in their diet weigh less and have lower risk of heart disease, cancer, diabetes and stroke.^{8,9} In one study, substitution of plant protein for animal protein, especially that from processed red meat, was associated with lower mortality.¹⁰



Eating less meat and more plants could double the food production while greatly reducing environmental harm.



Less meat, more vegetables = a healthier gut. Eating less meat and more vegetables, whole grains and fiber supports a healthier gut microbiome. And research shows that a healthy and varied mix of bacteria in the gut results in optimal metabolism of food – better utilization of nutrients, healthier body weight and possibly lower risk of chronic disease. (Even better, gut health is another strong trend according to nutrition experts!)



Less meat = keeping antibiotics effective for human health. In order to compensate for unhygienic conditions of raising animals in crowded spaces, antibiotics and other antimicrobials are routinely given to animals to prevent disease. In fact, nearly 70% of medically important antibiotics for humans are used in animals.¹¹ Bacteria present in animals and in the production environment may become resistant to antibiotics, which means that infections caused by these bacteria will become difficult or impossible to treat. People come into contact with these bacteria through contaminated meat and also exposure from working in and living near animal production sites.

5. LESS MEAT IS BETTER FOR ANIMALS AND THE PEOPLE WHO WORK WITH THEM.

Raising enough animals to meet the current demand for meat has led to the rise of industrial food animal production. This means that large numbers of animals are raised in very close proximity and in very harsh conditions. The result is unhygienic environments that are ideal breeding grounds for bacterial and viral pathogens. Some of the worst human working conditions are in meatpacking and processing plants. Residents living near these operations have higher rates of respiratory illnesses, stress and other sicknesses.

Meeting the growing interest in eating less meat as well as meat raised in more humane and sustainable ways while offering meals that keep all your guests happy can be a challenge. As people are dining out more frequently and asking us to simplify their food choices, we can be part of the solution by offering people healthier and more sustainable menus.

Every burger makes a difference!

One 1/4 -Pound Hamburger	Veggie burger made with soy ¹
	
425 gallons of water ^{2,3}	30 gallons
91 square feet of land ⁴	.04 square feet of land ⁵
6.2 pounds of CO2 equivalents ⁶	0.5 pounds of CO2 equivalents ⁷
5.3 pounds of feed ⁸	< 1 pound of soybeans ⁹

1 Ercin, A.E. and Aldaya, M.M. and Hoekstra, A.Y. (2011) The water footprint of soy milk and soy burger and equivalent animal products. http://waterfootprint.org/media/downloads/Ercin-et-al-2012-WaterFootprintSoy_1.pdf
2 <http://www.journalofanimalscience.org/content/71/4/818.full.pdf>
3 Mekonnen, M.M. and Hoekstra, A.Y. (2010) The green, blue and grey water footprint of crops and derived crop products, Value of Water Research Report Series No. 47, UNESCO-IHE, Delft, the Netherlands.
4 <http://www.sciencedirect.com/science/article/pii/S0308521X10000399>
5 USDA National Agricultural Statistics Services; https://www.nass.usda.gov/Newsroom/Executive_Briefings/2016/09_12_2016.pdf
6 <http://www.sciencedirect.com/science/article/pii/S0308521X10000399>
7 Castanheira ÉG, Freire F. Greenhouse gas assessment of soybean production: implications of land use change and different cultivation systems. J Clean Prod 2013;54:49–60. (0.335grams/pod; 1725 pods/ft²; 25 grams soybean needed to make soy burger; 25 grams=74 pods; 74 pods= 0.04 ft²)
8 <http://iopscience.iop.org/article/10.1088/1748-9326/8/3/034015/pdf>
9 Based on 0.65 product yield of the .025 kg soy used in the 150 g soy burger in the above article

Comparing protein sources

	Lentils (boiled)	Chicken breast (roasted, boneless)	Pork Chop (broiled, boneless)
Serving size ⁱ	1/2 cup	3 ounces	3 ounces
Protein ⁱ	9 grams	26 grams	22 grams
Cost ^{ii,iii,iv}	\$0.18	\$0.86	\$0.88
Calories ⁱ	115	140	160
Water Footprint ^v	246 liters	389 liters	539 liters

i USDA Food composition database

ii https://www.bls.gov/regions/mid-atlantic/data/AverageRetailFoodAndEnergyPrices_USandMidwest_Table.htm Based on calculations using price per pound and cooking yields.

iii <http://www.reluctantgourmet.com/bean-conversions/>

iv https://www.ars.usda.gov/ARSUserFiles/80400525/Data/retn/USDA_CookingYields_MeatPoultry.pdf

https://www.fsis.usda.gov/wps/wcm/connect/8c78c3bc-4647-4e20-96ee-17a2ad90728f/Pork_Lamb_Nutrition_Facts.pdf?MOD=AJPERES

v <http://waterfootprint.org/en/water-footprint/product-water-footprint/water-footprint-crop-and-animal-products>

References

- <http://www.nationalgeographic.com/people-and-culture/food/the-plate/2016/12/5-food-trends-to-watch-in-2017/>
- Crawford, E.; [Nutrition experts predict sustainability 'most important' trend for 2017](#); Ketchum's Global Food and Beverage Practice and supported by Ketchum Global Research and Analytics. 09-Jan-2017; <http://www.foodnavigator-usa.com/Markets/Nutrition-experts-predict-sustainability-most-important-trend-for-2017>
- <http://changingtastes.net/changing-tastes-kellogg-school-of-management-at-northwestern-university>
- Bureau of Labor Statistics, Average Retail Food and Energy Prices, U.S. and Midwest Region; https://www.bls.gov/regions/mid-atlantic/data/averageretailfoodandenergyprices_usandmidwest_table.htm
- Mekonnen, M.M. and Hoekstra, A.Y. (2010) The green, blue and grey water footprint of farm animals and animal products, Value of Water Research Report Series No. 48, UNESCO-IHE, Delft, the Netherlands http://waterfootprint.org/media/downloads/Report-48-WaterFootprint-AnimalProducts-Vol1_1.pdf
- Livestock's Long Shadow - Environmental Issues and Options*. Food and Agriculture Organization. 2006. Chapt. 2. ISBN 92-5-105571-8. <ftp://ftp.fao.org/docrep/fao/010/A0701E/A0701E00.pdf> and Foley, J. et al, *Solutions for a cultivated planet*; Nature 478, 337-342 (20 October 2011) doi:10.1038/nature10452
- Gerber PJ, Steinfeld H, Henderson B, et al. *Tackling Climate Change through Livestock - A Global Assessment of Emissions and Mitigation Opportunities*. Rome: Food and Agriculture Organization of the United Nations; 2013.
- Pan A, Sun Q., Bernstein AM, Schulze MB, Manson JE, Stampfer MJ, Willett WC, Hu FB. Red meat consumption and mortality: results from 2 prospective cohort studies. *Arch Intern Med*. 2012; 172(7):555-63.
- Wang Xia, Ouyang Yingying, Liu Jun, Zhu Minmin, Zhao Gang, Bao Wei et al. Fruit and vegetable consumption and mortality from all causes, cardiovascular disease, and cancer: systematic review and dose-response meta-analysis of prospective cohort studies. *BMJ* 2014; 349:g4490. | Boeing H, Bechthold A, Bub A, Ellinger S, Haller D, Kroke A et al. Critical review: vegetables and fruit in the prevention of chronic diseases. *European Journal of Nutrition*. 2012; 51(6):637-63. | Hartley L, Igbinedion E, Flowers N, Thorogood M, Clarke A et al. Increased consumption of fruit and vegetables for the primary prevention of cardiovascular diseases. *Cochrane Database of Systematic Reviews*. 2013
- Protein and Mortality, *JAMA* August 2016 | Sung M, Fung T et al.; Association of Animal and Plant Protein Intake Intake with All-cause and cause -specific Mortality, *JAMA Intern. Med*. 2016. 176 (10):1453-63
- 2012 Summary Report on Antimicrobials Sold or Distributed for Use in Food-Animal Production. Food and Drug Administration, Department of Health and Human Services, September, 2014 <http://www.fda.gov/downloads/ForIndustry/UserFees/AnimalDrugUserFeeActADUFA/UCM416983.pdf>. Accessed July 1, 2016