

# 'Low carbon diet' a healthy option for Earth

March 30 2009, By Suzanne Bohan

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A hungry student at the University of San Francisco earlier this month couldn't find a few college staples at the campus eatery -- a juicy hamburger and a cheesy slice of pizza.

March 10 was "Low Carbon Diet Day," and beef and cheese were off the menu.

With 18 percent of the world's greenhouse gases emitted by livestock raised for meat and dairy products -- more than cars, trucks, ships and planes combined, according to a United Nations report -- more food purveyors are launching initiatives to lower their "food carbon footprint."

Bon Appetit, a food service company in Palo Alto, Calif., that runs the USF cafeteria and 400 other institutional cafes, is leading the charge. It's set a goal of reducing its meat and cheese offerings by 25 percent.

Sodexo, a multinational food service provider, in two months will release its goals for reducing the carbon output of its operations, in part by promoting more vegetarian and vegan items, said Arlin Wasserman, vice president of corporate citizenship.

Hospitals are joining the action, too. Physicians for Social Responsibility's Bay Area chapter last month launched its "Balanced Menu" initiative at Kaiser Permanente, John Muir, UC San Francisco and Veterans Affairs medical centers, among other hospitals. The menu scales back on meat items, with cost savings used to buy higher-quality

meats also thought to leave a lower carbon footprint, such as grass-fed beef.

"We see this as real [climate change](#) mitigation for hospitals," said Lucia Sayre, program director for the physicians' organization. "And they see it that way, too."

With the burgeoning knowledge that [greenhouse gas emissions](#) are linked to all aspects of food production, it's becoming clear that buying locally isn't enough to make a major dent in carbon emissions.

Bon Appetit, for example, for years has given purchasing priority to farmers growing crops within a 150-mile radius of the Bay Area.

But cloven-hoofed, cud-chewing animals, so-called ruminants like cows, sheep and goats -- raised for meat and dairy products -- release copious amounts of methane and nitrous oxide during their digestion processes. So the company has expanded its focus beyond simply buying from nearby sources, because only about 5 percent of a food's carbon footprint comes from transportation emissions, according to studies.

"The highest priority is the reduction of livestock that are ruminants, and all products made from cheese," said Helene York, director of the Bon Appetit Management Company Foundation and developer of the firm's "Low Carbon Diet" initiative. Greenhouse gases linked to food production, such as methane, are sometimes measured as "carbon equivalents," and efforts to reduce these emissions use "carbon" in their monikers.

According to a 2006 United Nations report, "Livestock's Long Shadow," the livestock sector is responsible for 37 percent of human-caused methane release, which is 23 times more potent a heat-trapping gas than carbon dioxide. Livestock emit 65 percent of all human-caused nitrous

oxide, which is nearly 300 times the potency of carbon dioxide.

Yet with the world's growing population, demand for meat is expected to more than double by 2050 from 2000 levels, and dairy production almost as much. The U.N. report notes that demand needs to drop 50 percent by 2050 to simply maintain current levels of greenhouse gas emissions linked to dairy and meat livestock.

But it doesn't have to be a dull endeavor of adapting to a diet of tofu and beans for protein. In fact, York said some of Bon Appetit's clients don't believe that human-caused climate change is under way, but they still go along with the program.

"They don't mind the changes to the menu, because it tastes good and it costs less," she said.

On "Low Carbon Diet Day" at USF, turkey burgers replaced beef burgers, and the event provided an opportunity to showcase tasty alternatives, York said. Instead of putting cheese on the free-range-grown turkey burgers, students scooped on guacamole, salsa, onion and cucumber relish or chipotle sauce.

The cheeseless pizza featured such toppings as eggplant and onion, and spiced chicken. "We try to put other flavors out front," said chef Jon Hall. On days when the cafeteria does serve cheese pizza, it's limited to about 5 ounces per pizza, he added.

At Sodexo, which runs 29,000 food-service venues worldwide for corporate and institutional clients -- serving 10 million people daily -- the company assumes full responsibility for lowering its greenhouse gas emissions, so customers can choose any offerings with a clean conscience, said Wasserman, the Sodexo executive.

"There's a lot of discussion about hamburgers and global warming," he said. "But a lot of people are not going to get very mobilized by it."

With the company focused on tightening its operations and selecting suppliers that are also reducing emissions, greenhouse gas declines happen behind the scenes.

"Whatever choice they make, customers will get a year-over-year reduction, whether or not they choose a salad or a hamburger," Wasserman said.

Meat and dairy industry representatives defended their products against the climate-change rap against their sectors.

Andrea Garen, a registered dietitian with the California Dairy Council, counseled consumers to consider nutritional needs, since the federal government advises regular dairy consumption in its food pyramid.

"There's a lot of room for individuals to make their own choices, ones that reflect their values," she said. "But as soon as you eliminate an entire group of food, you affect nutrition."

A National Cattlemen's Beef Association spokeswoman said that critics of beef production's ecosystem effect fail to factor in the environmentally beneficial role of grazing cattle. That includes pastureland absorbing carbon dioxide as it regrows after grazing.

That's debatable, said Gail Feenstra, a food systems analyst with the University of California Davis who's embarking on a project to measure greenhouse gases linked to all aspects of producing agricultural products in California, including feed, fertilizer, energy, transportation and numerous other facets.

Perhaps if cattle were grazing only on unfertilized grasslands, they might provide a net carbon benefit. "However, the proportion of cattle raised in this manner is extremely small," Feenstra said.

And while the United States starts to catch up with Europe, Japan and other countries in assessing the carbon footprint of its food system, Bon Appetit's York said there's still enough known to justify a focus on meat and dairy.

"Meat and cheese are high carbon foods, no matter how you look at it," she said.

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## GREENHOUSE GASES BY THE NUMBERS

The livestock sector accounts for 18 percent of global greenhouse gas emissions, and cattle are the largest contributor.

Producing a kilogram of beef creates 16 kilograms of carbon dioxide equivalents. That's four times higher than pork, and 10 times higher than poultry.

By swapping chicken for beef, greenhouse gases generated by the meat's production drop 70 percent.

Source: Nathan Pelletier, Dalhousie University, Canada

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