FEEDING AN EMPIRE STATE

CALS responds to rising demand for local foods.

Hudson Valley farmer Sam Simon is a marketing marvel. Riding the tide of a national consumer and social trend—the "buy local" movement—Simon built a thriving, expanding, environmentally friendly business in one of the oldest trades on earth: selling milk.

BY LAUREN CHAMBLISS

Five years ago, Simon formed Hudson Valley Fresh (HVF) with the help of Cornell Cooperative Extension, then-state assemblyman Patrick Manning, and five Dutchess County dairy farmers to market a high-quality, environmentally friendly fresh milk that moves from cow to supermarket shelf in less than two days and sells at a substantial premium to conventional milk. Expected to sell 1.5 million pounds this year, HVF is meeting consumer demand, increasing farm profits, and encouraging sustainable food systems. And by keeping some 800 cows and 5,000 acres in production, HVF is also holding back New York City sprawl, which has gobbled up an increasing amount of Hudson Valley's agricultural landscape in the past decades.

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From left, CALS researchers Todd Schmit, Margaret Smith, Miguel Gomez, and Christian Peters visit the Ithaca Farmers Market to assess the local produce.

"When you buy our milk, you also buy 5,000 acres of open space and a way of life," says Simon.

No wonder, then, that policymakers from Albany to Washington are attempting to craft policies that would encourage production and promote distribution of fresh local products, from apples to beef to zucchini. Governor David Paterson's Food Policy Council is leading the charge in the New York government to identify ways to strengthen the connection between local food products and consumers. Recently, the Food Policy Council members traveled to Cornell to meet with faculty, extension experts, and students who are working hand-in-hand with businesses large and small to identify the opportunities and challenges entailed in feeding the state's 19.5 million citizens with more of the food that is grown here.

"Our research in the North Country showed that 'local' carries much more value with consumers than even 'organic,' and those findings are consistent with other studies across the nation," says Todd Schmit MS '94, PhD'93, an assistant professor in the Department of Applied Economics and Management (AEM). "The interesting thing is that it isn't just quality and environmental factors that motivate buyers, but the idea that they are supporting local farmers and contributing to the local economy."

Indeed, the "local" label has gained such cachet with consumers that national food giants, including Frito-Lay, Tropicana, and some large-scale farming concerns, recently launched marketing campaigns around the theme. For example, Frito-Lay is running ads in Florida that show local potato farmers' connection to the chips sold in area supermarkets. Closer to home, Wegmans, a regional grocer headquartered in Rochester, N.Y., has longstanding relationships with local farmers, large and small, to supply fresh produce in season.

Local Motive

Economists agree that from an economic standpoint, it is a win-win for a local economy if consumers spend their money on products produced and sold close to home, keeping dollars in circulation in the population that first earned them. But there is far less scientific certainty about whether limiting "food miles"–the distance food travels–is always the most sustainable option from an environmental standpoint.

One might think that an apple bought from a nearby orchard would have less of a carbon footprint than one shipped coast to coast. (Carbon dioxide is the greenhouse gas most closely linked with global climate change.) But recent studies suggest a tractor-trailer packed with 40,000 pounds of apples traveling 2,500 miles from the Pacific Northwest to New York City may actually have fewer carbon emissions than New York farmers driving bushels of apples in pickups to a local city market, says AEM assistant professor Miguel Gomez.

"From an efficiency and environmental sustainability standpoint, we cannot make the claim that in all instances, local is better," says Gomez. "If we really want to assess a food system's sustainability, we have to look at multiple dimensions, including the impact on the local economy, food miles, nutrition, efficiency, and environmental consequences, including greenhouse gas emissions. Right now, this information simply doesn't exist." Gomez, in his first year at CALS, dreams of establishing a center for sustainable food systems, which would combine the expertise of Cornell economists, plant breeders, engineers, nutritionists, soil scientists, and extension experts to fill in the current knowledge gaps.

Two things are clear: consumers care more than ever about where their food comes from, and it is theoretically possible for major urban areas to get substantially more of their

food from local and regional sources than they currently do. A recent landmark "foodshed" study showed that even large cities such as Albany, Buffalo, and Rochester could derive most of their food, by weight, from regional sources. The study was conducted by Gary Fick, a professor in the Department of Crop and Soil Sciences (CSS); Jennifer Wilkins, a senior extension associate in the Department of Nutritional Sciences; and Christian Peters MPS '02, PhD '07, a CSS postdoctoral associate.

Professor Fick says it is important to look at a regional geographic area—or foodshed—rather than a specific mile target when assessing the sustainability of food systems. For example, New York City is too large to locally source the diets of its 8 million inhabitants. On the other hand, the state's second-largest city, Buffalo, which is surrounded by farmland, could meet most of its 1.2 million residents' nutritional needs within an average distance of a mere 30 miles, though to do so would require a significant change in American consumption trends to a less meat-intensive diet. The foodshed study was financed with Hatch funding administered through the Cornell University Agricultural Experiment Station.

"We knew that this state could never meet all its own food needs, but what was surprising was that our research showed it could meet far more than we anticipated while minimizing food miles," says Peters. "Our model didn't allow for strawberries in the middle of winter, but it did include fruits and veggies in the required quantities for a nutritional and balanced diet."

But even if Buffalo became a city of "locavores"—the name for consumers who focus their food buying on local products—some items, such as coffee, would still have to travel a very long distance.

Farm Aid

Meeting demand for local foods is not always easy. Small farms—of which there are a growing number in New York—find it particularly difficult to market their products through distribution channels that link large farms, agribusinesses, and supermarket chains. Small farms tend to rely more on direct-to-consumer sales, otherwise known as "D2C," which include farmers markets, Community Supported Agriculture farms (CSAs), and farm stands. Since 2002, there has been a 22.3 percent increase in the number of New York farms selling D2C.

"Most new farms today are starting small and marketing local," says Anu Rangarajan, a senior extension associate in the Department of Horticulture. "We need to develop the infrastructure to provide more assistance to these farmers to tap into marketing, distribution, and processing systems and help them identify and produce the right type and right quality of foods for local markets."

She points to livestock marketing as an example of the roadblocks local producers face. Consumer demand for local, free-range meat and poultry is high, but processing plants with certified inspectors are few and far between. Some even have waiting lists.

"In some areas, if you have a hog born in spring, you have to immediately make an appointment to have it butchered in December because the meat processing plants are so backed up," she says.

Rangarajan is director of the Cornell Small Farms Program and coordinates an online training program that has been used by more than 600 new farmers to guide them through the startup phase with strategic planning. The training program helps farmers avoid some of the hit-or-miss moves that can sink early entrants into the local market.

Local More for Locavores

Cornell scientists are also developing local "niche" products that command the premium prices that can revitalize farm

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USDA

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CALS Kitchen Cooks Local Produce on TV

Now in its second season, *From Farm to Table* is a televised cooking show with a twist—the chef cooks up meals that are healthy, tempting, and show audiences the ultimate starting point for the ingredients of all good meals—the farm.

"We want to educate consumers about how food is grown," says Theresa Mayhew, a resource educator for Cornell Cooperative Extension (CCE) of Columbia County and the driving force behind the show. Mayhew partners with the TV network WMHT in the Albany-Capital Region to produce the series, which showcases tasty, easy-to-prepare meals using locally available, in-season ingredients to encourage people to buy and eat local foods.

Each episode opens with a short video clip of the farm where that day's main menu item originated. In one episode, "Wonderful World of Berries," the opening clip begins at a local strawberry field and then moves to the kitchen, where the host of the show, CCE nutrition educator Kim Sopzyk, whips up spinach, strawberry, and walnut salad. Along with nutritional advice, chef Sopzyk offers anecdotes and tips from her own personal experience as a mother trying to overcome her children's picky eating habits.

Shown throughout the Albany area, the upcoming season includes 13 episodes ranging from recipes for root vegetables to making healthy "comfort foods" with less fat, calories, and sodium.

–Isabel Lea Sterne '10

Rob Way

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Entomologists Harvey Reissig (left) and Art Agnello formed a partnership with New England–based nonprofit Red Tomato, which produces its ecologically grown, locally sourced, and sustainably produced "Eco Apples."

economies. Take organic dairy—the fastest-growing portion of the dairy industry—as an example. Most New York organic dairy farmers, including big producers and smaller family farms, import organic feed because not enough is grown in-state. This is partly because organic seed sold by major retailers grows best in drier climes, such as the Midwest. Now, thanks to Cornell corn breeder Margaret Smith '78, PhD '82, a professor in the Department of Plant Breeding and Genetics, New York farmers have two new options for hybrid organic corn seed bred to thrive in their fields.

"There is a big need for seed that will supply the local market and particularly for seed that can withstand New York's shorter growing season, typically poorer soils, and fall weather challenges," says Smith.

Working with New York's agricultural environment is a challenge even for growers of one of the state's most successful products, apples. New York is a major apple producer, but it is very difficult for growers to satisfy demand for one niche that commands premium prices—organic—in a state that has more than a dozen major pests and diseases, according to Harvey Reissig, a professor in the Department of Entomology at Cornell's New York State Agricultural Experiment Station. Still, with integrated pest management techniques developed at Cornell, apple growers can produce fruit with dramatically reduced pesticide use.

Reissig and fellow entomologist Art Agnello '74 recently formed a unique partnership with a New England–based nonprofit, Red Tomato, which promotes local, sustainably grown produce and builds marketing relationships with major retailers, such as Trader Joe's and Whole Foods. Red Tomato's trademarked "Eco Apples" are "ecologically grown, locally sourced, and sustainably produced," says Agnello.

Reissig and Agnello recruited five New York apple growers into the Eco Apple program and are developing protocols for New York that are consistent with the eco-friendly label. Peter Ten Eyck '60, the owner of Altamont, N.Y.–based Indian Ladder Farms, is one of the apple growers in the pilot project. "I'm trying to find kinder and gentler ways to raise apples," says Ten Eyck. "The Eco Apple program shows that we are being thoughtful about the process of pesticide application and that we make growing decisions based on real science. That is about the best you can do."

WEB EXCLUSIVE

Country Cooking

Cornell Cooperative Extension educators serve up seasonal fare from New York state farms on *From Farm to Table*. Check out a recent episode for healthy comfort food recipes perfect for winter.

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