

## FOOD FOR THOUGHT

A ONCE AND FUTURE  
*Dairy*  
State?

BY LAURA SAYRE

*Consumer interest in local, organic and raw milk could offer fresh hope for dairying in New Jersey—if it's not too late.*

Jared Weeks could represent the future of dairy farming in New Jersey. The Ringoes-area native got into dairying through 4-H, started working for a neighboring dairy farmer when he was still in junior high and purchased his first 15 cows in 2005.

Today, at the age of 21, Weeks milks 50 cows on 200 acres, selling some of his milk wholesale and sending the rest to be made into cheese, which he markets locally through small-town grocery stores. For further diversification, he also grows summer vegetables for sale to local markets. By any measure, Weeks's Hun-Val Farm is a success.

But anyone who knows New Jersey agriculture will tell you that the odds are stacked heavily against this young farmer. Although wholesale milk prices are high at the moment, farmers' costs—from seed to diesel to fertilizer to supplemental feed—have more than kept pace. Weeks's business has grown in part by relying on free labor provided by

a loyal group of friends and family, instead of regular paid employees. And whether he'll ever be able to buy land of his own—all the land he farms currently is rented—is an open question. "When you bid on farmland in New Jersey," he observes, "you're not bidding against other farmers—you're bidding against developers and investors."

New Jersey was once considered good dairy country—rich grazing land managed by top-notch farmers within easy reach of major population centers. In the 1950s, one writer described dairying as a characteristic feature of the most scenic parts of the state, "the rolling mountains and broad valleys of Sussex and Warren, the handsome hills of Hunterdon, Somerset and Morris; the lush level pasturelands of Monmouth, Burlington and Salem."<sup>1</sup> But decades of razor-thin profit margins, rising land and labor costs and ever-stricter food safety regulations have decimated New Jersey's dairy sector. The number of dairy farms in the Garden State has fallen from a peak of around 15,000 in the 1940s and '50s to fewer than a hundred today. As recently as 1964, there were 3,500 dairy farms in New Jersey; 25 years later, a gut-wrenching nine out of ten of these had gone out of business. You can still see the remnants of that legacy here and there along our older roads: derelict barns, half-buried in vines and brambles, their windows vacant, their ridgepoles sagging. Each one represented somebody's life work, somebody's family, a crucial piece of a local community.

Advocates of local food and farming are keen to reverse that mournful trend, to help revitalize the Garden State's agricultural landscape by connecting her remaining farmers more closely to her abundant consumer population. For some, a vital link in this chain is the proposed legalization of on-farm sales of raw milk. New Jersey

Photograph: Debra Thisher

Assemblywoman Marcia Karrow, a Republican from the 23rd District (which includes Warren County and most of Hunterdon County), introduced a bill to the House earlier this year that would do just that, prompting supporters and opponents to start marshaling their testimony for possible committee hearings. A grassroots coalition called Garden State Raw Milk, organized by the Blairstown-based nonprofit Foodshed Alliance ([foodshedalliance.org](http://foodshedalliance.org)) with support from the Weston A. Price Foundation (the leading national organization championing raw milk), has been responding to questions from consumers and farmers alike.

Nationwide, raw milk has also been getting a lot of press attention lately. Articles on raw milk have appeared in publications as diverse as *USA Today* and *Harper's Magazine*. Advocates of raw milk contend that pasteurization destroys key enzymes and other substances that make milk healthful and wholesome. A growing body of evidence suggests that children reared on raw milk are less likely to suffer from allergies, and there are dozens of anecdotal reports of raw milk curing a range of chronic conditions such as irritable bowel syndrome and arthritis. The U.S. Food and Drug Administration, on the other hand, maintains that raw milk is dangerous because it may contain pathogenic bacteria such as "*Salmonella*, *E. coli* O157:H7, *Listeria*, *Campylobacter* and *Brucella*," to quote a 2007 FDA press release.

What is less well known is that New Jersey played a starring role in the history of milk pasteurization—and its alternatives. In the late 19th century, at the same time that pasteurization was first being proposed as a corrective for milk-borne illness, an alternative solution was advanced by a group of physicians: a network of "certified" raw milk providers conforming to detailed specifications regarding breeding, feeding, access to pasture, milking protocols, bacterial counts, employee hygiene and more. The first such certified farm in the country was in Caldwell, in Essex County. Some years later, the Walker-Gordon Laboratory farm in Plainsboro (see sidebar) became one of the largest certified raw milk producers in the country, delivering 6,500 gallons a day to customers throughout the region. In view of the current interest in raw milk, it's worth looking back on this interesting history to see what light it may shed on the future.

### SAVING THE LAST HUNDRED

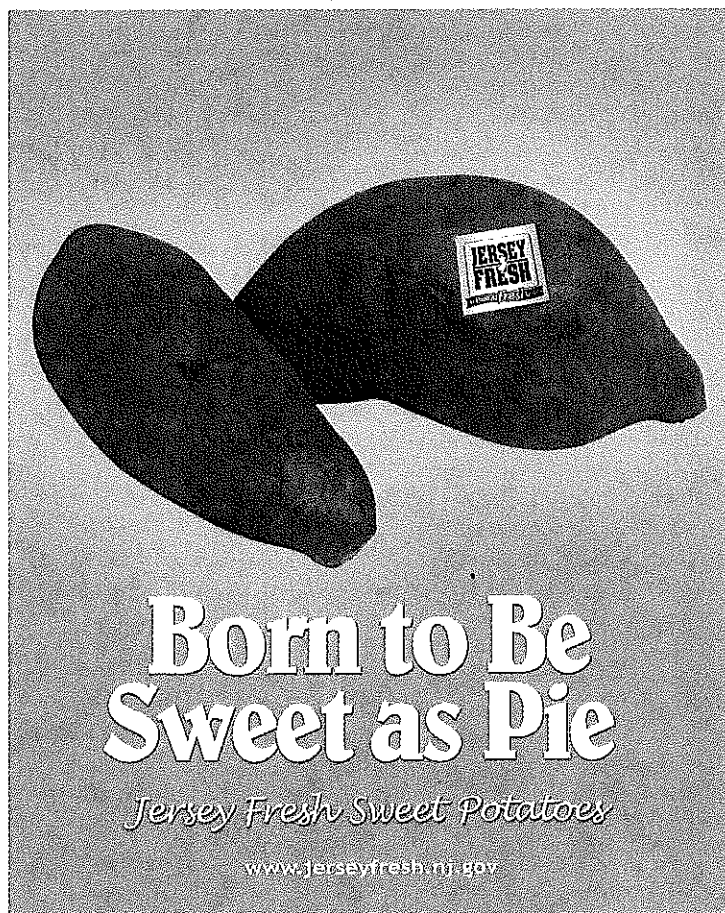
The history of dairy farming in New Jersey is a tale of continual readjustment. In the early days, cattle were multipurpose animals, providing meat as well as milk for domestic consumption or sale. Increasing demand for veal and beef in the early 19th century led to a brief feeder-cattle boom in northwestern New Jersey, but this was quickly displaced by the invention of the refrigerated railcar in the 1880s and the resulting arrival of less expensive beef from out West. As a result, New Jersey cattle farmers turned to dairying.

The late 19th century brought the creamery revolution, with small, often cooperatively owned village creameries taking the place of on-farm butter and cheese production. Farmers would bring their milk to the creamery, get paid for the butter fat and take the skim milk home to fatten a few pigs. But this arrangement too was rapidly overthrown, this time by expanding markets for fluid milk, particu-

larly to urban areas made newly accessible by a widening railroad network, the introduction of the glass milk bottle around 1880 and—eventually—widespread pasteurization.

New Jersey's fluid-milk dairy sector arranged itself into three territories, with the northern and western counties supplying New York City, southern counties supplying Philadelphia and middle counties supplying New Jersey's own expanding urban centers. Twentieth-century federal milk marketing and price-support systems are mind-numbingly complicated, but suffice it to say that the past century has seen dramatic consolidation within all segments of the industry. Since the 1970s, the rise of mega-dairies out West has put intense pressure on Eastern dairy farmers to expand, diversify or get out of the business.

Not even Michael Westendorf, Rutgers University extension specialist for livestock and dairy, is overly optimistic about the future of dairying in the Garden State. Since he arrived on the job 15 years ago, Westendorf says, over half the dairy farms making up his constituency have disappeared. "In terms of the New Jersey [dairy] industry, I think it is going to continue to contract," Westendorf says today. "There are some relatively large farms, 300 to 400 milking cows, in the southern part of the state; they'll probably last another 20 years or so. In the middle section, there are only two or three producers remaining," and these are "not necessarily traditional dairies. There are 60 or so dairies in Warren and Sussex that potentially could become organic, with the only caveat being do they have enough land for grazing."



**Born to Be  
Sweet as Pie**

*Jersey Fresh Sweet Potatoes*

[www.jerseyfresh.nj.gov](http://www.jerseyfresh.nj.gov)

## FULL CIRCLE

Remembering New Jersey's largest raw milk producer

Many people of a certain age who grew up in the greater Princeton area remember being taken as schoolchildren to see the Walker-Gordon Farm's Rotolactor in Plainsboro. The Rotolactor was a circular, rotating milking parlor originally developed as a labor-saving device, but perhaps even more successful as a publicity tool. Twice a day, Walker-Gordon's 1,650 cows would leave their barns and walk by covered passageways to the Rotolactor building, where they stepped on to the rotating platform to be attached to the milking machines. Each cow would be milked out in the 12 minutes it took for the platform to make a full revolution, and then step off through a hatchway to return to her stall.

As many as 2,000 visitors a week viewed the operation from a central, elevated observation room decorated with specially commissioned murals by ceramicist Herman Mueller. The company was widely regarded as a model of progressive dairy management, pioneering a long series of innovations from the mechanical drying of alfalfa to the careful nutritional analysis of milk. It also explored novel business management methods, developing a decentralized system in which individual local farmers were given ownership of groups of 50 cows, receiving a guaranteed price for their milk. Other farmers were contracted to care for calves, grow crops and provide replacement heifers. There was a company clubhouse for unmarried employees and a popular restaurant on Route 1 serving fried chicken and ice cream.

In the long run, however, not even Walker-Gordon could escape the forces of contraction and consolidation shaping New Jersey's dairy sector. Despite its many successes, the company struggled to remain profitable. In 1929, it was acquired by the Borden Company, one of the largest dairy distributors of the period; 15 years later, Borden was forced to sell its certified-milk division as part of an antitrust action. The Plainsboro operation soldiered on for nearly three more decades, finally giving way to escalating land values and the cultural shift from home milk delivery to "supermarket" milk.

From the perspective of the early 21<sup>st</sup> century, Walker-Gordon comes across as a strange mixture of anachronism and futurism, an old-fashioned idea elaborated with the latest technology the period had to offer. It existed because a group of philanthropists and medical men were committed to the idea of clean, safe raw milk and sought to make it available on a large scale. Today's raw milk enthusiasts would object to Walker-Gordon's housing of the cows indoors and to the farm's heavy reliance on silage as opposed to fresh pasture. Had it survived, however, the company would doubtless have found ways to respond to the latest thinking.

"If Walker-Gordon were still in business today, I guarantee you they would still be selling certified raw milk," says Hunterdon County veterinarian Edward Tindall, whose father worked for Walker-Gordon and who co-wrote a book about the company in 1998. "It was the best milk in the world."

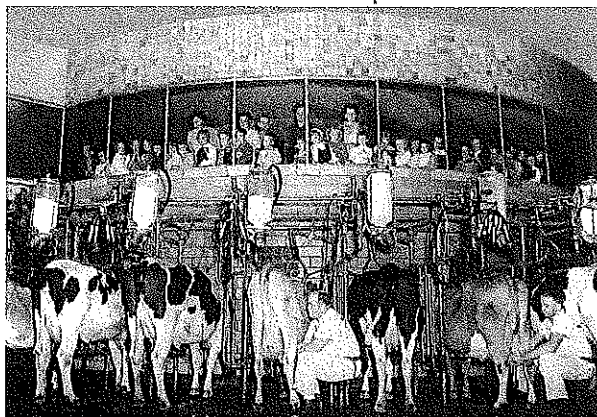
A ONCE AND FUTURE  
Dairy  
State?

Transitioning to organic production offers one possible way for dairy farmers to boost profitability by getting more money for their milk. According to Erich Bremer, organic certification program supervisor for the NJ Department of Agriculture, New Jersey got its first certified organic dairy farmer earlier this year, in Sussex

County. A couple of other farms are transitioning. A milk processor in Union County was certified this year, although at the moment all the organic milk they handle comes from New York State.

But going organic is no panacea for the challenges facing dairy farmers in New Jersey or indeed anywhere in the densely populated East. "One thing that scares producers off is the length of time to transition," says Westendorf, referring to the three-year period required from the last use of prohibited inputs to the first sale of certified organic product. "With the price of feed what it is, going totally grass is their best option, but they may not have the land to do that." Prices for organic milk are higher, but costs can be higher too. The price premium for organic milk has narrowed as conventional milk prices have risen.

Another strategy for dairy farmers seeking to add value to their product is by making cheese. (See "Nurturing Tradition," *Edible Jersey*, Spring 2008.) But cheesemaking is not for everyone—it requires investing in specialized equipment and developing a different set of marketing tools, not to mention hiring a cheesemaker or learning how to make cheese yourself. Shouldn't some dairy farmers—maybe even *most* dairy farmers—be able to just produce milk and still make a living?



### THE LOCALVORE FACTOR

There are signs that the milk industry is attempting to respond to consumers' mounting interest in local foods. Last year, Wallington-based Consolidated Dairies (marketer of Welsh Farms and Farmland milk) introduced a branded product called "Jersey Fresh Skim Free" milk, sourced from five dairies in south Jersey and priced at about 50 cents more per half-gallon than regular milk. Unfortunately, the experiment was not a success, and the line was discontinued. In 2006 the NJ Department of Agriculture proposed that school districts be required to purchase New Jersey milk if available—but availability is so low as to render this little more than a nice idea.

In the absence of the Jersey Fresh label, one way to find out where the milk you drink is coming from is by paying attention to Interstate Milk Shipping numbers. By federal law, all commercial retail milk containers must indicate the plant where the milk was processed. This can take one of two forms: either the plant number and location are simply stated on the label, or they appear as a five- or six-digit code stamped on the top tab of the carton or the side of the plastic jug. The first two digits correspond to the state: New Jersey is 34; New York is 36; Pennsylvania is 42; Delaware is 10; Virginia is 51. Different milk plants process different types of milk products, so specialty items like buttermilk, half-and-half or chocolate milk are more likely to come from further away. Keep in mind, though, that milk is not

always processed in the same state where it was produced—some milk from southern New Jersey is processed in Pennsylvania; some milk processed in New Jersey comes from farms in New York.

But if the raw milk enthusiasts are any indication, advocates of buying local are more likely to be interested in a milk-sourcing system that sidesteps the mainstream dairy processing industry, rather than one that merely tweaks it. Ideally, that's what a legalization of on-farm sales of raw milk would offer: a way for consumers to purchase milk directly from local farmers.

Sales of raw milk are regulated at the state level. Twenty-nine states—mostly in the Northeast, Midwest and West—permit the sale of raw milk under carefully specified conditions, although four of these only allow sales of raw goats' milk, not cows' milk. A handful of additional states allow sales of raw milk "for animal consumption" only. (A state-by-state rundown of regulations can be found on the Weston A. Price Foundation website, [realmilk.org](http://realmilk.org).)

Currently, the easiest way to get raw milk in New Jersey is to drive to Pennsylvania, where on-farm and retail sales of raw milk are legal provided the farmer (or retailer) has obtained a permit from the state. (Similar systems for on-farm sales exist in New York and Connecticut; raw milk sales are illegal in Maryland and Delaware.) No one knows how many New Jerseyans travel to Pennsylvania to buy raw milk on a regular basis, but the number is certainly in the hundreds and possibly in the thousands. Many people organize carpools to bring milk back for groups of neighbors and friends. "A week doesn't go by without someone asking me where they can get raw milk," says Pam Schoenfeld, co-organizer of the Garden State Raw Milk campaign ([gardenstaterawmilk.org](http://gardenstaterawmilk.org)) and a former chapter leader for the Weston A. Price Foundation. Upwards of two thousand people signed a Garden State Raw Milk petition in favor of a new raw milk law.

Assemblywoman Karrow's raw milk bill, which is based largely on the Pennsylvania model, specifies that farmers holding raw milk permits be required to submit to semiannual inspections, have their milk tested for bacteria, antibiotics and somatic cell count levels (an indicator of milk quality), and post signs warning consumers of the potential hazards of consuming raw milk. The bill would also allow "cow shares"—an arrangement in which a group of consumers become the legal owners of a cow, paying the farmer for its care—as an alternative to permits.

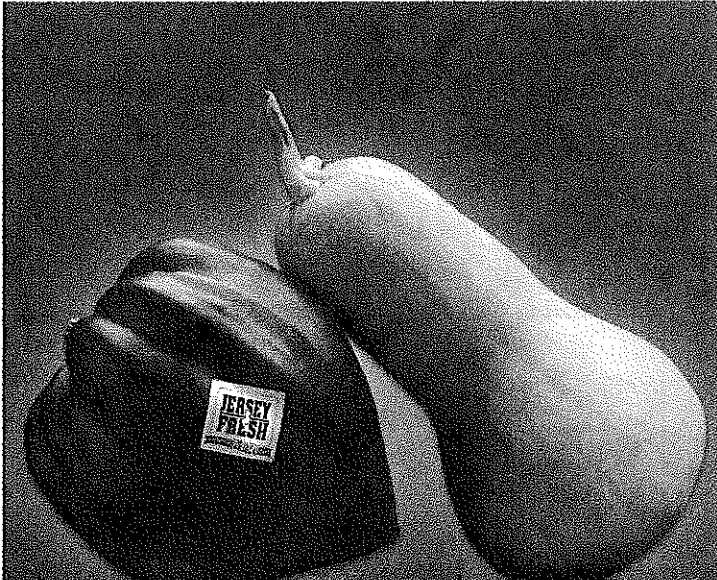
#### THE SECRET HISTORY OF CERTIFIED RAW MILK

Proponents of raw milk point to the historical context of pasteurization to suggest that as a mandatory system, it may have outlived its usefulness. In his book *The Untold Story of Milk: Green Pastures, Contented Cows and Raw Dairy Products* (2003), naturopathic doctor Ron Schmid recounts how in the early 1890s, public officials became alarmed by the high infant mortality rates existing in major cities, especially New York. Fully one-third of all deaths in New York City from 1890 to 1892 were of children under the age of two; children from two to 15 years old accounted for another 12 percent of all deaths. As early as the 1840s, reformers had begun to point to the

city's milk supply as a key culprit in the spread of notorious child-killers like typhoid, cholera, tuberculosis and diphtheria. Of particular concern were the so-called "swill dairies," urban and suburban dairy barns feeding cows on the waste grains and mash that were a by-product of the brewing and distilling industries. In today's terminology, these were unregulated confinement operations, with cows kept indoors for their entire miserable lives, denied pasture, hay, sunlight or any kind of cleanliness. The death rate for the cows rivaled that of the children drinking the milk.

But while there was general agreement that contaminated milk was a serious problem, there was little unanimity on what to do about it. Some argued that "country milk" was healthier; others charged that it could be just as bad given the distances involved and the many hands it passed through on its way to market. Eventually, two opposing strategies emerged: either take steps to insure that milk was produced and handled as carefully as possible from farm to final consumer, or employ the new technique of pasteurization to kill any dangerous microbes that may be present.

Leading the charge for pasteurization was a New York businessman-turned-philanthropist named Nathan Straus. Straus, who was particularly concerned with access to safe milk for the urban poor, established a network of charitable "milk depots" distributing free pasteurized milk. Nearly 600,000 bottles were distributed in 1900 alone. Through this means and others, Straus and his allies spread public awareness of the need to protect children, especially, from the danger of milk-borne illnesses.



**Born To Be Nutty**

*Jersey Fresh Winter Squash*

[www.jerseyfresh.nj.gov](http://www.jerseyfresh.nj.gov)

On the pro-raw milk side was Henry L. Coit, a Newark physician who had himself suffered the loss of a son due to an inability to find clean, fresh milk. In company with other members of the New Jersey State Medical Society, Coit believed that the health-giving properties of fresh, raw milk were important enough to merit special protection. They proposed a set of guidelines for safe milk production overseen by volunteer physicians and including regular inspections, provision of adequate pasture, high-quality feed, meticulous sanitation, responsible manure management, and chemical and bacteriological testing. "The milk produced in this manner," writes one historian, "would be known as Certified Milk, sealed in separate quart containers, and bear the name of the producer and the date of milking."<sup>2</sup>

Even the staunchest advocates of raw milk acknowledge that pasteurization in its early years had dramatic public health benefits. The annual death rate for children under five in New York City fell from 1 in 10 prior to the introduction of milk pasteurization to 1 in 20 in subsequent years. But the certified-milk movement is also credited by historians with raising standards for milk quality overall.

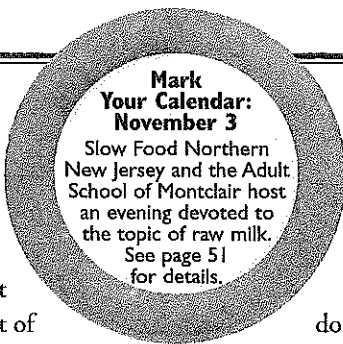
For nearly a century, pasteurized milk and certified raw milk coexisted. When New York City's Board of Health made milk pasteurization mandatory in 1910, certified raw milk was exempted. The introduction of automated milking equipment in the 1920s made contamination by sick milk handlers less likely; testing of herds for diseases like tuberculosis became standard practice. But certified milk was much slower to take hold, selling for twice the price of regular milk and never making up more than 1 percent of the total milk supply. In the end, pasteurization won out largely because it was simpler and cheaper, not because of any clear consensus that it was safer or healthier.

#### A NEW ERA FOR RAW MILK?

Raw milk sales in New Jersey were made illegal in 1987, a year after the U.S. Food and Drug Administration banned all interstate sales of raw milk, including certified raw milk. Interestingly, the FDA ban was secured largely due to the actions of Public Citizen, Ralph Nader's consumer-protection organization. Public Citizen's objections were based on the fact that most certified raw milk in this country had come to be provided by very large dairies and shipped long distances, undermining the benefits consumers were—and are—interested in supporting.

Today, the Weston A. Price Foundation and others emphasize that raw milk should come from small, well-managed, grass-based dairies. For cows, as for people, sunlight, space and fresh air are all excellent disease-fighters. Healthy cows produce healthy milk; healthy pastures produce healthy cows. That was the take-home message offered by Mark McAfee, owner of Organic Pastures, a successful raw milk dairy in California, in a lecture at Rutgers University earlier this year.

According to Assemblywoman Karrow's office, the Garden State dairy farmers they've spoken with are overwhelmingly in favor of a legal raw milk permit system. The NJ Department of Agriculture has indicated its willingness to work on the issue, and the NJ Agricultural



Experiment Station has formed a Raw Milk Working Group to encourage research and education efforts. The anticipated resistance comes from the NJ Department of Health and Senior Services, which is reluctant to deviate from the FDA line.

For some raw milk advocates, the bottom line has to do with consumer freedom. As Pam Schoenfeld puts it, "You can get sick from raw fish too, but no one says you can't buy sushi." But an equally strong argument in favor of legalizing raw milk sales is to support New Jersey dairy farmers, who are more than capable of providing the conditions necessary for safe, clean raw milk.

"You have to realize that the dairy farmers who remain in New Jersey are really good farmers," says Jared Weeks. "They wouldn't have survived this long if they weren't." Legalizing on-farm raw milk sales, he adds, "would help the remaining dairy farmers immensely—that would be like a life preserver." Sussex County farmer Ken Bechtold, who retired from dairying three years ago, underscores that point: "If I could sell raw milk, I would definitely still be milking cows." 🐄

*If you'd like to see on-farm sales of raw milk made legal in New Jersey, call or write to your state representative.*

<sup>1</sup> John T. Cunningham, *Garden State: The Story of Agriculture in New Jersey* (Rutgers University Press, 1955), p. 93.

<sup>2</sup> Manfred J. Wasserman, "Henry L. Coit and the Certified Milk Movement in the Development of Modern Pediatrics," *Bulletin of the History of Medicine* 46:4 (July/Aug. 1972), p. 362. I'm grateful to Dr. Joe Heckman for bringing this article to my attention.

## Jersey Fresh, so close you can taste it.

From the farm to your table, the quality, flavor and freshness are guaranteed because it's grown right here in New Jersey. So take your pick of the best and widest selection of fruits and vegetables New Jersey farmers have to offer. Your family, friends and Jersey farmers will thank you for it.

**It tastes just picked because it is just picked.**



[www.jerseyfresh.nj.gov](http://www.jerseyfresh.nj.gov)

Governor: Jon S. Corzine, Secretary of Agriculture: Charles M. Kuperus  
New Jersey Department of Agriculture  
609-292-8853