

What's in Season from the Garden State

Biweekly Highlights from Cooperative Extension, a unit of Rutgers New Jersey Agricultural Experiment Station

September 24, 2009

New Jersey Department of
Agriculture's Jersey Fresh &
Seafood Availability Report

Tomato Taste Tests – What They Tell Us

The first thing the tomato taste tests tell us is that people (New Jerseyans?) love to taste tomatoes. Of the hundreds and hundreds of people that show up for tomato tasting events around New Jersey, including the Rutgers sponsored taste tests, they will endure long lines for many hours of sampling dozens of varieties of tomatoes – and then come back for more.

While these informal tests can give us an indication of what stand out as the popular varieties, or wow consumers with aesthetic appeal – exotic colors or shapes, what these studies *don't* tell us is a reality that requires another kind of study: scientific taste testing. Why after having hundreds of tasters at public tastings does it not result in a lot of scientific data to provide conclusive evidence of what consumers prefer?

While the Rutgers public taste testings do incorporate surveying strategies, there are a few uncontrollable variables that come into play at the public tastings. Outdoor taste tests often occur on hot sunny days, which make for a delightful event, but depending how long those tomatoes have been cut open, the hundreds of volatile compounds that comprise tomato flavor are quickly lost to the elements. Public tastings are a fun event for family and friends – but a true measure of one's perceptions may be tainted by outside influences such as, "George – you gotta try this one!" or "Eww – it looks like a rotten potato!"

So, how can taste tests give us the hard data we need to really know what people like? Scientific taste tests, or "sensory evaluation" is tasting samples in a controlled environment, following a strict protocol. Rutgers professor of food science, Dr. Beverly Tepper contrasts the sensory evaluation laboratory environment to an informal tasting. The lab booth (complete with a little sliding window) offers samples in cups with code numbers so tasters cannot identify names of tomato varieties. Lab tasters are not subject to outside distractions and can spend more time answering detailed questions about their taste preferences and consuming/buying habits.

The first thing that these sensory evaluations tell us is (same thing concluded from public tastings) – people (New Jerseyans?) love to taste tomatoes! Tepper notes that when e-mail notices to recruit for tomato tasters are sent to the college, "we get responses back literally three seconds later. The tomato tastings only rival in popularity to tastings for cookies and ice cream."

But where the rubber meets the road for the sensory evaluations is the development of the data. Tepper's lab evaluation results don't just identify which varieties are favored in their taste and texture qualities, the analysis is linked to people's background information (age and sex) as well as personal preferences and buying habits. This type of analysis gives an inside look at not only what people prefer, but who prefers them.

While these taste testings are more revealing, the *Rediscovering the Jersey Tomato* project (<http://www.njfarmfresh.rutgers.edu/JerseyTomato.html>) has only been able to conduct a few of these controlled tastings. The old time tasty varieties of the Jersey Tomato have been evaluated, along with other flavorful alternatives

Continued on page 2



Apples	Bluefish
Arugula	Bunker (Menhaden)
Basil	Fluke
Beets	Mackerel, Spanish
Cabbage	Sea Scallops
Cantalope	(Day Boat)
Cilantro	Swordfish
Collards	Farm Raised
Cucumbers	Hard Clams &
Dandelions	Oysters
Dill	Littlenecks/Middlenecks
Eggplant	Cherrystones,
Escarol & Endive	Chowders, Topnecks
Kale	Cape May Salt
Leeks	Oysters
Lettuces	Delaware Bay
Mint	Oysters
Nectarines	
Parsley	
Peaches	
Peppers	
Radishes	
Spinach	
Squash	
Sweet Corn	
Swiss Chard	
Tomatoes	
Turnips	
White Potatoes	

Forecast:

Cranberries - end of Sept.

RUTGERS

New Jersey Agricultural
Experiment Station



such as grape tomatoes (see article below for the scoop on a super sweet grape tomato). The factor limiting the frequency of tomato tasting studies and other research involving factors influencing tomato flavor is cost – research requires funding.

This consumer-driven research has been resonating with people who want tasty tomatoes – especially in New Jersey, home of the Jersey Tomato. We are now offering the opportunity for tomato lovers to help support these efforts. If you would like to become a *Jersey Tomato Advocate* by supporting us, your tax deductible donation to our tomato research fund can help us continue this type of research. For further information, visit our Jersey Tomato Advocate web page: <http://njfarmfresh.rutgers.edu/BecomeaJerseyTomatoAdvocate.htm>

Introducing the Jersey Jems™ Grape Tomato for Tomato Lovers

Jack Rabin and Peter Nitzsche, Rutgers Cooperative Extension

Consumers seeking flavor that standard round shipping tomato varieties fail to provide have turned to alternatives. Over the last decade, improved grape tomato varieties emerged as a tasty, convenient phenomenon. They are naturally “hand-food” packaged for healthy snacking. They are portion controlled. They serve easy and hold well. Tomato lovers chose with their mouths and voted with their wallets.

Most importantly, when measured, the standout varieties of grape tomatoes in our Rutgers tests frequently have more of everything tomato lovers want. More sweetness. More tartness. More flavor intensity. While there are certainly disappointing grape tomato varieties, the best grape tomatoes are attractive because they have more of everything people love in a good tomato.

Identifying great tomatoes from farm to fork is our goal. In our Rutgers field trials and taste tests we identified a fabulous grape tomato; well adapted to New Jersey growing conditions and stunning in its culinary quality. To help local farmers, and protect tomato lovers' ability to reliably identify the best when selecting locally grown grape tomatoes at their favorite markets, we created Trademark brand label identification for farmers to use when growing fine grape tomatoes. We introduce to you Jersey Jems™, and hope you will look for them at your favorite farmers or other markets in 2010 (they are being pilot marketed in select markets in 2009).

The attraction of grape tomatoes is more than just natural packaging and convenience. In our sensory evaluations at Rutgers, we simply let people respond to tomato quality experiences, and tell us their preferences, in order to incorporate tomato lover information into production recommendations for farmers.

Keeping your Grape Tomatoes Tasting Great

Even though most consumers know to not store round tomatoes in the refrigerator, it is common practice to pop the plastic clamshell packs of grape or cherry tomatoes right in the refrigerator. Grape tomatoes are similar to other market tomatoes: eating quality is best when stored at about 60°F after harvest. However, grape tomatoes may have a shorter useable shelf life than traditional round tomatoes. They easily lose moisture, weight, visual quality, red color, and shrivel when held too long. The maximum life for a ripe grape tomato is about 6 days (unrefrigerated), and 6 days is likely pushing it too long. Grape tomato quality declines, becoming measurably evident at 3 days.

A fact of life in the food service industry is grape tomatoes are frequently used in preparation of vegetable and other refrigerated food trays; it is common for us to eat grape tomatoes which have been stored at 40°F, or possibly lower, for short or extended periods. They will hold appearance at these temperatures, but soon after removal the cold temperature chilling injury reveals itself and the grape tomato tastes off from chilling injury or decay.



Samples of grape and cherry tomatoes are among the numerous varieties of tomatoes at Rutgers public taste testings, (top) but it was a laboratory sensory evaluation study that helped distinguish the grape tomato now marketed as Jersey Jems as a real winner (bottom).

Where to find Jersey Fresh? Ask for it where you shop or dine or go to: <http://www.jerseyfresh.nj.gov>

To receive these reports by e-mail: njfarmfresh@njaes.rutgers.edu

Web: <http://www.njfarmfresh.rutgers.edu>

For your county Rutgers Cooperative Extension office go to:

<http://www.njaes.rutgers.edu/county>