

Rotating Extension Column  
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## **Bring Back Good Tasting Tomatoes**

Good tasting tomatoes have gone the way of lazy afternoons on the porch swing. Some complain that they have not enjoyed a truly tangy, sweet and juicy tomato since the 1970s. Instead, consumers are calling those that are found at certain times in grocery stores bad names such as “cardboard” or “plastic tomatoes”. Obviously, few topics stir as much passion as the desire for good tasting tomatoes.

So if they were so much better in the olden days, what happened? Where did the good taste go? Are different kinds of tomatoes being produced? Are they being grown differently or are they simply not allowed thorough ripening before harvest. Some researchers and plant breeders are studying this phenomenon and interesting theories and maybe even facts are emerging. I have become engrossed in the subject and anxious to report the results of my study so far. My report will be in two parts, because the subject of good tasting tomatoes deserves more than that provided by a single article.

### **Part One – Have Tomato Varieties Changed That Much?**

Life would be simpler for tomato lovers if rediscovering that wonderful flavor could be accomplished by simply bringing back the old varieties. It is apparently more complicated than that. It's true that breeding for better shipping more disease resistant varieties has been responsible for harder, less flavorful tomatoes over the past two decades, but there have been other changes. Further investigations are needed to determine if changes in fertilization, soil types, ripeness when picked and other factors have also had their effects.

The search for a truly flavorful tomato variety alone is enough of a challenge. The New Jersey legislature has been so interested in bringing back the true “Jersey

Tomato" that until recently Rutgers University received a small stipend each year specifically dedicated to this quest.

The Jersey tomato is renowned for having a sweet/tart taste. This is due to a near perfect balance of sugars (for sweetness) and acids (for tartness) in addition to certain aromatic volatiles. While trying to rediscover this taste, researchers found it in two older varieties – "Ramapo" and "Rutgers". "Ramapo" was released by Dr. Bernard Pollack of Rutgers University in 1968 and it soon became a favorite of gardeners and local commercial growers. Despite its popularity, commercial seed companies eventually stopped offering it in favor of higher yielding more modern varieties. In 2008, forty years after its introduction, Rampano seed was re-released and has been well received by both home gardeners and commercial growers.

Work at Rutgers has also resulted in the field testing of 145 different heirloom tomato varieties in search of great flavor. After years of seed collection, growing and taste testing, Rutgers has published a list of Heirloom "Tomato All-Stars". The list includes well known old varieties such as Brandywine, Cherokee Purple and Mortgage Lifter as well as some lesser known ones like Eva Purple Ball, Box Car Willie and Arkansas Traveler.

Before we start throwing stones at tomato breeders, let's consider the complexity of the industry. For the past twenty or thirty years the concern has been tomato size, color, yield, firmness and resistance to disease. According to Dr. Jay Scott, a tomato expert with the University of Florida, "to do flavor and get all of the other characteristics is very difficult."

There is a lot about tomato flavor that researchers don't yet know. Three factors are involved – sugars, acids and aromatic volatiles. There are literally hundreds of volatiles in the chemistry of tomatoes and about 17 of them are known to be important to good tomato taste.

**Note to Florida Tomato Growers:** All of the tomato varieties mentioned above are very difficult to produce under conditions found in the Deep South. Most were developed as open pollinated varieties with little or no resistance to now common

diseases in the area such as tomato spotted wilt, fusarium wilt and tomato leaf curl virus.

Some day maybe we can have both – disease resistant tomatoes that also have that old time flavor. Large buyers and marketers still determine the varieties of tomatoes that are marketed, but consumers can have influence with their purchasing power.

More about good tasting tomatoes can be found at:

<http://njfarmfresh.rutgers.edu/JerseyTomato.html>

Watch for **Part Two**: We will compare the tomato growing methods of yesteryear with those used today. For one thing, we are using a different source of nitrogen these days. For another, sodium and chlorine might be the missing ingredients. Learn how one horticultural researcher is even applying sea salt to his plants to add flavor.