

What's in Season from the Garden State

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

August, 2011



Kentucky Wonder and Romano pole beans have pale green colored bean seeds in their green pods. Along with other changes breeders assembled into the famous Bush Blue Lake bean (forerunner of many fresh, frozen, and canned snap beans of today) was a change to white seed coat from pale green. We assume these natural variants have absolutely no impact on taste or nutrition, but enabled the beans to maintain a nicer appearance when canned. Since variety is the spice of life, today there are also garden bean varieties with purple seeds, e.g., Provider. The purple color is from healthy water-soluble anthocyanins, so the beans' underlying green is revealed as soon as they are cooked.

Today's Tender Snap Beans Were Once Tough String Beans

Jack Rabin, Associate Director for Farm Services, Rutgers NJAES

It was not so many decades ago that today's delicious nutritious green bean, a.k.a. snap bean, was called a string bean. The stringy name was aptly descriptive a century ago, just as the equally apt tender snappy name describes green beans today.

The driving force to improve green bean cultivars with fibrous stringy pods to the tender flavorful snap beans of today came from frozen food and canning processors working with university plant breeders after WW II. Today, we too often read about consumer dissatisfaction with tastes and textures of fresh fruits and vegetables as the driving force for culinary improvements. We need to remind ourselves that for nutritious vegetables like snap bean, tender better eating quality came from industry. Yes, it came from the food industry.

Most people take for granted the benefits of long-term visionary public university plant breeding. But, the delightful advance from string to snap beans opened up new ways for us to enjoy them: fresh in salads, marinated, and lightly sautéed or steamed to enjoy all their flavor in a newfound tender glory. Prior to the 1960's we would never consider enjoying snap beans prepared this way. The snap bean fiber that university plant breeders got rid of was tough, fibrous and inedible. The softer fleshy snap bean pod we enjoy today is still healthy and still has ample dietary fiber, it's just more edible.

Along with the snappy improvements came the genetic improvement adapting vining pole bean plants, which required 65-75 days to mature, to compact bush bean plant genotypes maturing in 50-55 days. Some old timers claim that old (pre-1950s) garden pole bean varieties like Kentucky Wonder or Romano had a beanier nutty flavor (see sidebar). While we have no data to defend or refute claims and laments, these varieties, while not disease resistant, and lower yielding, remain available for home gardeners. Pole bean vines are a tremendous disadvantage to commercial farmers who depend on a once-over destructive mechanical harvest. But pole bean vines remain an advantage in the garden due to space saving vertical production and longer harvest season.

Snap bean farmers in New Jersey were one of the earliest adopters of Integrated Pest Management (IPM). Continuing today, Joseph Mahar of the Rutgers Cooperative Extension IPM program provides boots on the ground management of an extensive black light trap network on farms. Rising counts of adult moths attracted to the light at night warn farmers, crop consultants, and processors before eggs are laid and small worms bore into and destroy the pods. Importantly, the Rutgers black light trap network also tells us when there are no worms present, and no treatments are needed. In the absence of this IPM monitoring network, farmers would be forced to spray all the time to protect and deliver unblemished snap beans to your table.

In our rightful concern for improving school lunch nutrition, and also improve the link between local farms, foods, healthy eating lifestyle habits, and community we should pay attention to what frozen snap beans can offer. Frozen snap beans

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New Jersey Agricultural
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New Jersey Department of
Agriculture's Jersey Fresh
Availability Report

Arugula	Radishes
Baby Arugula & Baby Spinach	Snap beans
Basil	Spinach
Beets	Squash
Cabbage	Sweet corn
Cantalopes & Melons	Swiss Chard
Cilantro	Tomatoes
Collards	Turnips
Cucumbers	White potatoes
Dandelions	Forecast:
Dill	Lettuces - mid-September
Eggplant	Sweet potatoes - mid-September
Escarole & Endive	
Kale	
Leeks	
Mint	
Nectarines	
Parsley	
Peaches	
Peppers	



are local. Because they are quick frozen, they maintain their nutritional quality along with low calorie density and good fiber. They are one of few green, truly local, items available on the plate that fit into school lunch programs year round. They are easy to store, versatile to prepare, stable in a food service hot table environment, and quick and easy to serve in portion control. To all the kids who would say, "Ew!," my reply would be frozen local snap beans once or twice a week are far better tasting and versatile than the canned green beans we grew up with. Learn to love them at school and at home.

My kids' favorite snap bean recipes all involve par boiling for one minute and then light sautéing in some butter and olive oil with different seasonings. Lemon pepper is good. Garlic is good. Asian spices work well. Sliced almonds are popular. You can introduce a lot of low calorie variety with snap beans.

Did you know?...

- Jersey Fresh snap beans can be found all summer long, from mid to late June through August.
- Snap beans are botanically a fruit. The seed is an embryo and the pod is its protective ovary. This technically makes the bean in its pod a "fruit" of the legume plant.
- Processing varieties of snap bean can be grown in the home garden. In fact, commercial farm processing varieties are frequently superior to eat – in our opinion - because they are bred to not develop fiber until a later stage of maturity. Simply, they stay tender, longer. Fiber may help the snap bean pod maintain its shape, appearance, and avoid bruising while shipping to fresh markets, but it otherwise impairs the delicious eating quality of a less fibrous snap bean destined for a freezing or canning plant. All snap bean varieties, even so-called old-time or heirloom varieties, have been influenced by breeding for less fibrous pods.
- New Jersey farmers grow somewhere around 2,500 to 3,000 acres of snap beans every year. At 3-4 thousand pounds per acre yield, that's in the neighborhood of a whopping 10,000,000 pounds of tender green beans a year! Most are destined for processing by quick freezing, which maintains their nutritional and culinary quality better than most people believe, at Seabrook Bros. and Sons in Seabrook, NJ. The family has been growing and processing snap beans for a century in our state: <http://www.seabrookfarms.com>. Recently, they installed a 21 acre photovoltaic solar electricity generation project to sustainably power the vegetable processing.
- Snap beans are native to the Americas, not the old world. Central and South American vegetable gifts to the world, like potato, tomato, corn, squash, and snap beans is prodigious. Conversely, fava beans and soybeans are not only old world, they are some of the oldest food crops known to humankind.
- Snap beans are very flexible about where they can grow while lima beans, a different species, are much more climate-specific and finicky. New Jersey has good locations for growing both.



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>

Whole foods has a detailed nutritional profile of snap beans: <http://whfoods.org/genpage.php?tname=foodspice&dbid=134#nutritionalprofile>