



Harmony Valley Farm

An update for our Community Supported Agriculture Members - Since 1993

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Alliums to Fight Cancer

By Laurel Blomquist

Welcome back to our newsletter series on an anti-cancer diet! You may have noticed that a Harmony Valley Farm CSA share always includes garlic and an allium (onions, chives, leeks, etc) every week. It is widely known that garlic and onions are the building blocks of flavor. However, as you may recall, Drs. Beliveau and Gingras, authors of *Foods to Fight Cancer*, also recommend alliums as some of the strongest plants available to fight cancer, especially esophageal, stomach, prostate, kidney, colon, lung and breast cancer. Just to refresh your memory, alliums also combat neurological, immunological, gastrointestinal, cardiovascular and metabolic disorders, as well as the process of aging.

Garlic in particular has been mentioned throughout history as a medicinal food more than any other plant that we regularly consume. Sumerian tablets contain references to garlic as early as 3000 BC. (*Anti-Cancer*, p. 135) The Ancient Egyptians were known to consume garlic in great numbers. Tutankhamen's tomb contained garlic. *The Codex Ebers*, a medical papyrus from 1500 BC, lists over 20 garlic-based remedies for such vast symptoms as headaches, worms, high blood pressure and tumors. (p. 79)

The Ancient Greeks and Romans also used garlic. Pliny the Elder wrote in *Natural History* no less than sixty-one garlic cures for infections, respiratory problems, digestive issues and lack of energy. In the Middle Ages, garlic was used to fight the plague, and in the 18th century, scurvy and asthma. In 1858, Louis Pasteur proved that garlic has powerful antibiotic capabilities. (p. 80) During WWII, Russian soldiers used so much garlic that it was nicknamed "the Russian penicillin." (*Anti-Cancer*, p. 135)

The rest of the allium family has a storied pedigree as well. Onions, natives of Eurasia, have been revered in ancient cultures. Egyptians thought they invoked strength and power for the eater. For the Chinese, they were a symbol of intelligence. Leeks, probably originating in the Middle East, were thought to strengthen the voice. Aristotle wrote of this, which convinced Nero (the Roman emperor) to eat leeks in such large amounts that he was known as the "porrophage" ("Leek Emperor" in Latin). Leeks are the national emblem of Wales, which they celebrate every March 1st by wearing leeks and eating cawl, a traditional soup featuring leeks. Shallots originated in the ancient Palestinian coastal city of

This Week's Box

ITALIAN GARLIC: Want to quickly peel your garlic? Place the garlic on your cutting board and use a flat surface (large chef's knife, bottom of a bowl or pot) to firmly smash the clove. The skin should slip right off.

SWEET SPANISH ONIONS: The sugar content in a sweet onion lends itself particularly well to being caramelized. Once caramelized, it makes a great topping for everything from grilled meat or poultry to pizza.

CAULIFLOWER OR BROCCOLI: With its high fiber content, cauliflower is an inventive substitute pizza crust ingredient. Whether your goal is to eat less bread or to eat more vegetables, a cauliflower crust can be a good way to enjoy a healthy take on a familiar comfort food.

ZUCCHINI: Enliven your appetizer selection with some fresh zucchini fritters. You can add variety by using a range of toppings from sour cream to sweet & sour sauce or even a fresh tomato salsa.

CUCUMBERS: See the Cucumber Tahini Soup in this week's newsletter.

CARROTS: The carotenoid building block that gives the carrot its vibrant color has been associated with a reduced risk of heart disease as well as cancer, etc. Since carotenoids are fat-soluble, your body is able to absorb them more easily if you consume your carrots with a bit of oil. Sauté away!

GREEN BEANS: Remember to blanch your beans before putting them in the freezer if you plan to save them for later use. By blanching you'll extend the texture and nutrition of your beans for longer.

GREEN BELL PEPPERS: Combine your share's first bell peppers with your sweet onions to make the base for an excellent western omelette. If you have leftover Sunday briskett, you can also sauté your bell peppers and onions for a hearty cheesesteak sandwich.

NEW POTATOES: New potatoes are best enjoyed soon after you get them. The thin skin makes cooking a breeze, but it isn't ideal for long-term storage.

SWEET CORN: If you love sweet corn but don't care for shucking, try grilling your corn in the husk instead of boiling. Not only will you avoid heating up the kitchen, but the corn silk comes off so easily after it has been grilled. If the husk feels a little dry, soaking can help steam the kernels and avoid flare ups. Remember to put your corn in the fridge as soon as you get home, and keep it cool until you are ready to use it.

EGGPLANT OR TOMATOES: Whether you get eggplant or tomato(es), you'll taste the sunshine in this week's share. If your box features eggplant, you can't go wrong with the classic eggplant parmesan. For the tomato folks, how about a nice weekend BLT?

AMARANTH GREENS: Amaranth pairs very nicely with many of the summer vegetables in your share this week. Check out the recipe database on our website for ideas such as Amaranth and Corn Sauté.

SWEET SARAH MELON: Sweet Sarah has made her debut! This is our favorite cantaloupe variety - smooth, sweet, delicious. Slice it into wedges for brunch or a picnic.

CHOICE--SWEET ITALIAN BASIL: While pesto is a popular way to use basil, you can enjoy this summer herb without pulling out the food processor. Thinly sliced basil can be added as a garnish to finished pastas and pizzas.

Ashkelon. Crusaders returning from the Holy Land in the 12th Century most likely brought them to France. Chives were used in China at least 2000 years ago, both as a food and as a medicine to treat bleeding and poisoning. Marco Polo brought chives with him to Europe. (p. 81)

Garlic and onions are powerful because they contain sulfur molecules. While a garlic clove remains intact, it is storing and accumulating a compound called alliin. When the clove is crushed, chopped or chewed, the enzyme alliinase is released, mixes with the alliin, and changes into alliin. Alliin is what you smell when you macerate garlic. Alliin is the cancer-fighting molecule that we are interested in. (p. 81)

The best way to maximize stable alliin in your body is to eat garlic raw,

however we all know that this is not always preferable. Researchers in Wisconsin and Argentina found that letting chopped garlic stand for 10 minutes before adding it to cooked dishes allowed enough time for the alliin to stabilize so that it doesn't break down during the cooking process. So chop your garlic, prep something else, and add it to your dish 10 minutes later. (Cavagnaro, et al.) In addition, the most effective way to increase your body's absorption of alliin is by mixing it with oil. And you thought this was because it tastes good!

Onions and other alliums contain similar sulfur molecules. Two of these compounds, DAS (diallyl sulfide) and DADS (diallyl disulfide) are thought to be the main compounds that contribute to the prevention of cancer. These compounds

fight cancers caused by nitrosamines the best. Nitrosamines are formed in our intestines from nitrites, a preservative found in pickled foods and cured meats such as sausage, bacon or ham. (p. 83) Nitrosamines can also be found in charred meat and by burning tobacco. (*Anti-Cancer*, p. 135) Nitrosamines can trigger mutations in cell DNA, which is the essential process that causes cancer. DAS and DADS prevent nitrosamine formation. (p. 83) DAS and other compounds also inhibit enzymes which activate carcinogens, opting instead to stimulate elimination of these carcinogens.

DAS and other compounds also activate cancer cell apoptosis, which is a ritual suicidal process for cells known to have damage at the DNA level. These compounds may also make it more difficult for cancer cells to resist chemotherapy drugs. (p. 84)

Onions have some very special molecules as well. They contain polyphenols such as quercetin, which prevents cancer cells from growing by interfering with their development. The authors add that the compound which causes the user to cry, propanethial S-oxide, is not essential to the anti-cancer process. Don't rinse your onions to alleviate crying, however, as this will wash away the beneficial compounds.

Another way alliums help to fight cancer is by regulating blood sugar levels when combined with other foods. Maintaining balanced blood sugar is important for reducing insulin secretion and IGF (Insulinlike Growth Factor). When we consume a lot of glucose, our bodies release insulin and IGF to allow the glucose to enter our cells. IGF stimulates cell growth. Unfortunately, too much insulin and IGF promote inflammation, feed tumors, increase a tumor's ability to invade neighboring tissue, and make cancer cells less susceptible to chemotherapy. (*Anti-Cancer*, p. 67)

How much garlic and/or onions or other alliums we need to eat in order for these compounds to be effective is currently under study. Researchers in Italy, Switzerland and China showed reductions in cancer growth in people who ate 1 clove of garlic or ½ a cup of onions per day (Collins).

With this in mind, you can see why we at Harmony Valley Farm make sure to include garlic and one allium in your CSA box every week. To your health!

References:

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Servan-Schreiber, David *Anti-Cancer: A New Way of Life*, 2009. (cited as *Anti-Cancer*, page number)

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Collins, Karen, "Onions and Garlic for Your Health," *AICR.org*. American Institute for Cancer Research, Feb. 26, 2007.

Vegetable Feature: Onions & Garlic

We've always known it is important to include onions and garlic in our diets daily, at least that's what our gut instinct told us. Laurel's article in this week's newsletter gives us just a glimpse into the science about why they are important and how they work in our bodies. We do try to include a vegetable from the garlic and onion families in every CSA box, starting with ramps in the spring and finishing the season with cured garlic and storage onions.

We select our varieties of onions very carefully to help us make the progression through the season. This week we are harvesting some of our sweet onion varieties. Sweet onions bridge the gap in the season between some of our early season fresh onions, mainly scallions and fresh Cipollini onions, and our storage onions. Sweet onions mature more quickly, so they are ready to harvest ahead of the storage onions. They do not store as well because they have higher sugar content and much thinner skins. They are meant to be eaten fresh and you'll find them to be very mild. In fact Farmer Richard says they're so mild you can "eat them like an apple!"

Very soon we will start bringing in the remainder of our onions. They'll "cure" in the greenhouse to help develop their skins so they will store longer throughout the winter. You should store "cured" onions and garlic in a cool, dry location with good ventilation and away from direct sunlight. The onions in your box this week may be stored in the refrigerator to help lengthen their shelf life, given they have not been cured yet.

Zucchini & Onion Gratin

Yield: Serves 2 comfortably if it's the only side dish; Serves 3 to 4 if there are some other options

- 1 large onion, thinly sliced
- 4 Tbsp olive oil, divided
- 1 cup fresh bread crumbs
- ½ cup grated Pecorino or Parmigiano Reggiano or whatever you have on hand
- Salt and freshly ground black pepper, to taste
- 2 zucchini (large or small), thinly sliced (2 to 3 cups)

1. Heat 2 Tbsp oil in a medium ovenproof skillet over medium heat. Add onion; cook, stirring occasionally, until onions are soft and starting to caramelize, 10 to 15 minutes. *Note: if you have time to really allow the onions to caramelize at a slow pace, do so; if you don't, just sauté the onions until they are soft.* Season with salt and pepper.
2. Meanwhile, toss breadcrumbs with cheese and remaining 2 Tbsp oil; season with salt and pepper. Top onions with squash (this can be a single layer or two or three layers) and breadcrumb mixture. Bake at 350°F until squash is tender and breadcrumbs are golden brown, 20-25 minutes.

This recipe borrowed from www.alexandracooks.com.

Chilled Cucumber-Tahini & Herb Soup with Cumin-Spiced Roasted Chickpeas

Yield: 4-6 servings

Soup

- 2 medium cucumbers, peeled and chopped into ½-inch chunks
- ¼ cup tahini
- 2 Tbsp extra virgin olive oil
- 3 ½ Tbsp fresh lemon juice
- 3 cloves of garlic, minced
- ¼ cup fresh dill, plus more for garnish
- ¼ cup fresh basil, plus more for garnish
- ¼ cup parsley, plus more for garnish
- ½ tsp crushed red pepper flakes
- ½ tsp cayenne pepper
- ½ tsp sea salt, plus more to taste
- Sprinkle of black pepper, to taste
- 4-6 ice cubes
- ¼ cup water to thin if necessary

Cumin-Spiced Chickpeas

- 1-15 oz can chickpeas, rinsed, drained and patted dry
- 1 tsp ground cumin
- 1 tsp fine sea salt
- 2 Tbsp olive oil

1. Place all the ingredients for the soup (except water) in a high speed blender and whirl away until smooth. Stop to scrape down the sides. If necessary add a little water to help get things moving. Taste test and adjust seasonings as needed.
2. Preheat the oven to 425°F. Toss chickpeas with cumin, salt and olive oil. Place on a well-greased baking sheet and bake until browned and crisp on all sides. About 15-20 minutes. Toss chickpeas halfway through cooking.
3. Serve soup with chopped fresh herbs, roasted chickpeas and a drizzle of extra virgin olive oil. Enjoy!

Recipe borrowed from Andrea Bemis' blog, dishingupthedirt.com. Check out Andrea's blog for other interesting vegetable-centric recipes!