

# TALK *of the* TOWNE'S

THE TOWNE'S HARVEST GARDEN WEEKLY NEWSLETTER JULY 21, 2010

Towne's Harvest Garden has begun its transition into the fall season, although, rest assured, summer certainly has not. I spoke with Chaz about his fall season planting schedule. He told me that his main considerations are agronomical. Will the plants feasibly grow in our unpredictable fall season? Do we have enough day length left for the plants to reach maturity? These are the kinds of questions that go into planning for summers last, lingering breathe before winter. As I have been under the weather for the last week, unbeknownst to me, the planting was already done and in the ground when I visited the farm earlier this week. Another round of leafy greens, broccoli, kohlrabi, kale, spinach, arugula, and mixed greens were planted, giving the cool season crops one more shot at filling your plates. We also planted bok choy and basil in the raised beds within the high tunnels, hoping that the enclosed environment will protect them against flea beetles. And, to the pleasure of those amongst us who love root crops, more radishes, carrots, and turnips are in the ground, waiting for the first frost to turn them sweet.



The most interesting part about transitioning, whether it is into the fall harvest or fall semester, is that it gives you a few moments of reflection. On a diversified, small scale farm, being able to reflect, rather than having to always react, is so important in recognizing what the production cues of the land are telling you. It is a gift akin to water dowsing or horse whispering, this deep awareness of ecological cause and effect, and our first year steward and gentleman farmer, Chaz Holt, seems to possess it.

He calls this year his investigation year. It is his year of note taking, trial and error, and of listening very quietly to things that don't talk very loud, albeit very clearly: climate, soils, plants, and nutrients. Every row and every block is a conversation that will lead to a more measured action next season.

J.T.

## WHAT TO EXPECT THIS WEEK...

summer squash, broccoli, sugar peas, kohlrabi, parsley, basil, cilantro, dill, spinach, salad mix, kale, chard, and green onions.



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# THE SCIENCE BEHIND DRIP IRRIGATION

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Last issue I mentioned we finished our irrigation system. However, I was in the throws of Rocky Mountain Spotted Fever and wasn't in the mood to really expand upon my thoughts, so I thought that I might go into a little more detail about certain aspects of that system. After springs thorough soaking, we installed (and have finally finished) a drip irrigation system. We run a low volume, high frequency, daily watering routine in all 6 blocks, keeping the soil constantly saturated. Last week, I walked up and down the rows, checking out the line as I realized that drip irrigation was slightly more complex than I originally thought.



What spurred my confusion was that while I was walking down a row of beans, I noticed that the drip irrigation was watering in between the rows, but not the beans themselves. The soil was completely saturated, but not where I thought that it should be, namely by the plants. After digging next to a bean plant, I found that the soil around the plant was moist, even though it hadn't rained in over a week and a half. Here is how science describes this occurrence.

Water leaves the drip tube into the soil once a day. Once the water percolates down into the subsurface it is referred to as soil storage water. Some of this water drains through the soil and is cycled back into the watershed. Some rises back up to the surface through capillary rise, where it either evaporates into the atmosphere or is used by the roots of the plants. This capillary rise can be problematic because as the water evaporates near the surface, it leaves behind salts, which can accumulate, negatively effecting plant growth. If driving around this summer, look around for agricultural ground with bare patches of soil that look like they have been crusted over with salt. This is known as a saline seep and is the result of exactly what I am talking about. To prevent these on our farm, we use the black plastic mulch as a guard against excessive evaporation.

Once the water becomes available to the plant via the soil, there are several things that determine if the plant is going to absorb the water into its roots. Water potential is one of those driving forces. Stated as simply as possible, water potential is the tendency of water to move from an area of high water potential to an area of low water potential. You can think of it as the tendency of water to move high pressure to low pressure. It is affected by gravity, the interaction between ions and salts (needed by the plant for growth), and the interaction between water and the soil itself.



This kind of explanation moves us from the realm of newsletter and dangerously close to the realm of soil science. So I will just say that water potential is just another example of nature's great thermodynamic engine endlessly searching for energy equilibrium. If the plant roots have a lower w.p. than the moist soil they are encased within, then the water permeates through the roots and moves up into the plant where it is used by the cells for a number of purposes. Having the drip irrigation keep the soil saturated at a constant rate throughout the summer keeps that potential at a constant so the plant roots don't have to continually fluctuate between wet and dry conditions.



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Marcy has a brilliant post on her blog, <http://cookingrut.blogspot.com/2009/07/cooking-vegetables.html>, on the proper way to cook sugar peas.

*“When cooking green vegetables like sugar snap peas, broccoli, or asparagus, it is wise to blanch them first in salted water before sauteing them... Blanching these vegetables in salt water for 2-3 minutes will brighten the green color...”*

1. Place a bowl of ice water next to the stove.
2. Wash and prepare your sugar snap peas (or other green vegetables)
3. Bring a pot of water to a boil. Add a hefty pinch of salt.
4. Add the vegetables and boil for 2-3 minutes, just until the green really starts to pop. If you boil the vegetables too much longer, they run the risk of turning grayish-green. Ew.
5. Strain the vegetables and then add them to the bowl of ice water. This is called “shocking” the vegetables and stops the cooking process, keeping the peas or broccoli a nice bright green color.
6. In a saute pan, melt a tablespoon of butter or olive oil. Mince a clove of garlic and a shallot. Add it to the pan. Saute for a minute to soften. Add the vegetables. Saute for 1-2 minutes, coating well with the garlic mixture. Season with salt and pepper.



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## VEGETARIAN LASAGNA

### Ingredients:

- 1/4 cup olive oil
- 1/4 cup minced onion
- 3 1/2 cups tomato sauce
- 2 tsp fresh basil
- 2 tsp fresh parsley
- 1/2 tsp fresh oregano
- 1 garlic clove, finely minced
- Ground black pepper
- 1/2 cup thinly sliced mushrooms
- 2 1/2 cups of fresh spinach
- 2 cups chopped zucchini
- 1 cup chopped broccoli
- 8 oz ricotta or cottage cheese
- 4 oz grated mozzarella
- 1/2 lb of lasagna noodles

### Directions:

1. Sautee onion in olive oil in a medium skillet until onion is tender.
  2. Add sauce, basil, parsley, oregano, garlic, mushrooms, zucchini, and broccoli to pan.
  3. Combine chopped spinach to ricotta cheese.
  4. Cook noodles until tender, drain.
  5. Lightly oil a large baking dish (9\*13)
  6. Arrange in layers in baking dish: noodles, spinach mixture, veggie mixture, grated cheese.
  7. Repeat layering until ingredients are gone, end with cheese on top.
  8. Bake at 375 for 20-30 minutes or until hot and bubbly.
- Makes 6 servings.