AGGRAND[®] NEWS

Summer 2014

Grower Gets High Yield with SIP System

Direct Jobber Harry Rakfeldt of

Belfair, Wash. uses AGGRAND fertilizers and innovative planting techniques to grow highly-productive tomato plants in a small space.

Rakfeldt constructed a sub-irrigated planter (SIP) to make the most use of his limited space. The system allows him to use less than half of the water he would need in a more traditional garden bed.

"There's a 60 percent to 80 percent decrease in water use in a plant-to-plant comparison vs. a typical garden," Rakfeldt said. "It also doubles the production of a garden, and is virtually weed free."

Sub-irrigation System Can be Large or Small

Fertilizer

1.

The SIP is a form of a raised bed that contains a self-watering irrigation system. Water is stored in the bottom of the bed and is wicked up to the growing medium via capillary action. SIPs can be designed into many different containers from large to small.

This type of planter typically is used in container gardening and commercial landscaping. A SIP is any method of watering plants where the water is introduced from the bottom, allowing the water to soak upward to the plant.

Rakfeldt first used the SIP system during the 2013 growing season. "This year, as last year, I only raised tomatoes," he said. "My two raised beds are narrow (max 19" wide) to fit into the available space on my terraced hillsides. I planted nine different varieties this year and included: Celebrity, Early Girl, Sweet Million (cherry), Super Bush, First Lady, Big Boy, Health Kick, one unknown and Better Boy."

He has good southern exposure for one of the raised beds. "Except for very early in the morning

and later afternoon it gets full sun," Rakfeldt said. "The bed in the front of the house has sun only about four to five hours daily. Yet, the constant availability of moisture, a scheduled feeding following the AGGRAND feeding recommendations and the lack of competing weeds resulted in robust plants that have continued to produce since around July 10. Tomatoes this year were planted April 14."

AGGRAND Mix Brings Prolific Yields

Rakfeldt is a fan of AGGRAND fertilizers. "I started using AGGRAND with enthusiasm about eight or so years ago," he said. "Until last year it was limited to flowers in the ground and pots. I converted my wife from Miracle-Gro to AGGRAND. It took time, but she agrees AGGRAND really works better."

Both years Rakfeldt broadcast an AGGRAND mix several days before planting. AGGRAND fertilizer was applied after planting; fertilizing is done on a 10- to 14-day schedule.

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From Walt's Corner



Vegetable Studies Help Determine AGGRAND Fertilizer Effectiveness

BY WALT SANDBECK | FERTILIZER SPECIALIST AT AGGRAND

Have you ever wished that you could put a monitoring device on a customer's field, "log on," and find out exactly how AGGRAND is influencing a particular crop or garden?

Welcome to the AGGRAND Vegetable Productivity Study. That's what we have been doing south of the AGGRAND plant for the past five years: checking crop development and quality — sometimes on a daily basis — as well as monitoring and archiving weather data (rainfall, soil temps, soil moisture and wind speed).

This spring found us looking out over large snowbanks in the AGGRAND parking lot as we took the soil samples from each garden plot. The soil has to thaw out to at least 6 inches to get a good sample. A cup of each sample is sent to Midwest Labs for yearly analysis so we can develop a trend in nutrient accumulation or loss for each of the six plots: three Research and Development plots, and the three competitive plots. A smaller portion of each sample is set aside for soil respiration testing, where each sample is dried, and then re-wetted with a discrete amount of water, and the carbon dioxide (CO₂) output of the activated soil bacteria is then measured after 24 hours.

Thus begins the seasonal data generation. The results consistently show that the AGGRAND-fertilized soils maintain a higher level of biological activity than chemically-fertilized or non-fertilized soils.

Next, the plots are roto-tilled, and the windscreen is draped around the perimeter of the plot area. The garden crops are protected from the wind by a 60 percent screen material. The screen also captures and holds heat on sunny days, creating a warmer microclimate that buys us a few extra heating-degree days during the growing season. Since this part of northern Wisconsin gets an average of only 114 frost-free days every year, we need all the help we can get.

It's not until early June that the tomatoes are planted in the plots. After the beds were tilled and raked this year, rows were laid for the onions since they can be planted in cooler soil. This spring saw ample rain, but not enough warm weather. Soil temps were up to 59°F, but plummeted back down to 55°F following one rainstorm.

A frequent question is whether the AGGRAND studies are "scientific," meaning using the scientific method of randomized, replicated growth plots. AGGRAND does not have the space to do that kind of study, so we have simply set up the growth plots to demonstrate how well AGGRAND fertilizers can grow a crop in comparison to a control plot and a plot fertilized with a competitive product. Detailed observation generates data for an in-house testimonial, if you will.

AGGRAND fertilizers applied as specified in the AGGRAND Gardening Guide (G-1292), so Dealers and customers have an idea of what to expect if they follow the guide. Competitors' products are applied according to the manufacturer's label or website instructions.

I've been asked if the vegetable studies are fair, since the AGGRAND program uses a combination of three or four different inputs. The whole point of having the auxiliary products is to get the most you can out of a crop. If other products had a garden guide for their assorted products, we'd use it.

Sure, you can get good production simply using AGGRAND Natural Fertilizer or AGGRAND Organic Series, but the Natural Liquid Lime, Natural Liquid Bonemeal and Natural Kelp and Sulfate of Potash are included in the garden guide because plants need a different balance of nutrients: more liquid lime for cabbage and herbs; kelp and sulfate of potash for carrots, potatoes and foliar applications, and bonemeal for tomatoes and roses, to give just a few examples. This is how we grow with AGGRAND, so the annual Vegetable Productivity Study will continue to represent that.

We've also been engaged in ongoing solo trials with Natural Fertilizer and Organic Series Fertilizer against a control, to generate comparison data between the two products. Again, we're applying according to the schedule in the Gardening Guide, but using only those two AGGRAND products. Last year's results showed a negligible difference in performance.

This year, we'll be looking for any carryover effects from the first year's application of Organic Series Fertilizer.There's a chance there may be more residual slow-release phosphorus as a benefit of adding the rock phosphate. We'll see.

To learn more about the benefits of working with AGGRAND, contact 715-399-6419 or by email at info@aggrand.com. Continued from page 1





Tomatoes Thrive in SIP Environment

Rakfeldt uses AGGRAND Natural Fertilizer 4-3-3, Natural Kelp and Sulfate of Potash and Natural Bonemeal at an average per-gallon mix ratio of 2:1:1, respectively. "I increased the mix when the plants were putting on strong growth. All feedings this year were in-ground."

He bought a rich, custom-made mushroom compost soil mix for the gardens, he said. "I'm sure the garden mix is a good part of my success," Rakfeldt said. "Last year on the initial fill I added a 25 percent mix of chips and shredded maple leaves. The chips and leaves are produced on my property and had aged for six months and then were re-shredded before adding as an amendment. Over the year there has been some settling of the soil, and I will amend it again before use next year."

The photos on this page show Rakfeldt's tomatoes from the 2013 and 2014 growing seasons.







AGGRAND application rates and experiences featured here have been submitted by sources independent of AGGRAND. Individual experiences may vary. Optimal application rates can vary due to soil condition, crop type, weather patterns and many other factors. AGGRAND recommends and supports soil analysis to determine optimal application rates.

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