

# Probiotics For Your Garden

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## Locally Made Products Nurture Plant Life

When we moved into our current home, we spent most of the first year just pulling ivy. Eventually an enormous mass of ivy vines covered our old pickleball court end to end, rising higher than the 10-foot tall net stakes. It was a tangled mess and we couldn't even turn it over with garden forks. What next?

To speed its breakdown, I called in my buddy Nick Penovich. Back then, Nick's Port Orchard-based company, The Lawn Jockey, specialized in lawn care. An early adapter of brewed living compost teas, Nick built his own huge tank brewers and made his own nutrient mixtures. Over the past decade or so, Nick worked with soil scientists and attended conferences all over the country to learn more about the emergent field of compost tea technology.

## Getting More With Less

Nick's goal was to create safe and sustainable fertilizers and lawn care products. He started out selling them directly to customers, then branched out to local nurseries. His home-brewed probiotic inoculants boosted soil health and root growth, so plants flourished without chemical fertilizers and pesticides.

Now he wanted to develop shelf-stable, bagged products that gardeners could take home and use on edibles and ornamentals, including native trees and shrubs that don't tolerate chemical treatments well. His idea was to combine natural materials that would promote plant health to the point that less water, less fertilizer, and less pesticide would be needed to keep plants looking great.

## Spray And Go Away

Nick sprayed my ivy mountain with something called Herman III, a combination of cellulose-digesting microbes used to break down crop residues such as corn stalks, rice straw, manures, and paper waste. Herman III comes from a lab in Spokane that makes specialized biological inoculants for onion growers and other farmers who want to promote good soil health and minimize pesticide use.

Such microbial degrader products are sprayed on fields after the harvest is done. Over the next few months, the left over plant "waste" is converted into compost that nourishes the soil and the next crop to be planted. These sprays save field prep time (and thus money) and do their work quietly during the cooler off-season when the land would be fallow anyway. Because the green waste doesn't need to be plowed under, the biotic life teeming in the less-disturbed soil remains healthier.

## Local Company Makes Good (Stuff)

Today my well-rotted ivy mound is less than a quarter of its former size. Today, Nick's expanded company is called Soil Science Products, a five-star EnviroStar business that does a lot more than lawn care. For his commitment to sustainability, Nick won both the 2002 Kitsap County Earth Day Award for Best Hazardous Waste Program and the 2006 Washington State Nursery and Landscape Association Environmental Excellence Award.

As he says, "We do not generate any hazardous wastes and believe sustainability is paramount to the health of our planet." Nick is justifiably proud of his Soil Science products, which include safe and natural fertilizer mixtures. Formulated to increase plant health and root growth, they also build brix, or natural sugar levels, which boosts soil nutrient quality and plant nutrient uptake.

### **Some Like It Sweet**

Adding sugar to plants may seem counter-intuitive, yet studies show that high-brix plants are resistant to many pests. In fact, when cows are fed with high-brix fodder, the milking barns are free of whitefly and houseflies. "That's because higher sugar counts in food stock reduce those populations," Nick notes. "Many insect pests prefer proteins to sugars, so where plant brix is high, you see lots of bees but not many bad bugs."

Soil Science probiotic fertilizers include Bloom Driver 2-5-6, a balanced food source for veggies, roses, and all ornamentals. Rich in humic acid, minerals, Norwegian sea kelp and soybean meal, Bloom Driver promotes beneficial microbial soil life and improves soil quality. For lawns, Emerald City 8-0-0 blends natural nutrients with humate, nitrogen, and iron to promote deep color and sturdy root growth.

### **Sustainable Treatments For Ailing Soils**

Over the past few years, I've found these Soil Science fertilizers to be especially effective for building soil and plant health. Sturdy, healthy plants are naturally more disease and pest resistant and often thrive with less need for watering as well. Not surprisingly, given Nick's early enthusiasms, I especially see good results on funky lawns. Once Nick's products take hold, the grass greens up, turf roots knit more densely together, and weeds are squeezed out.

At first, Nick hoped to use biodegradable bags but could not find a product with an adequate shelf life for retail sales. Today his products come in reusable zip-close bags, and while investigating second-wind uses for them, Nick came up with a clever and sustainable idea. He suggests, "When you use up fertilizer, fill the bags with noxious weeds and wood chips. Add some water, leave them in the sun, and those weeds will turn into good compost for you."

### **Natural Solutions To Pest Problems**

Nick also brews living compost teas for lawns, woody plants, ornamentals and edibles, adding probiotics to create seasonal and situational blends. In fall, tea is boosted with Microguard, a microbial digester that breaks down stubble and organic matter like ivy. For insect pests, he adds *Beauveria bassiana*, a naturally occurring fungus that becomes a fatal parasite on insects like aphids, fleas, termites, fire ants and thrips. "We can spray that around houses when carpenter ants are in flight to knock out their food web and reduce their numbers," he explains.

To find retail sources and to learn more about Soil Science products, visit <http://soilscienceproducts.com/> or see below.

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