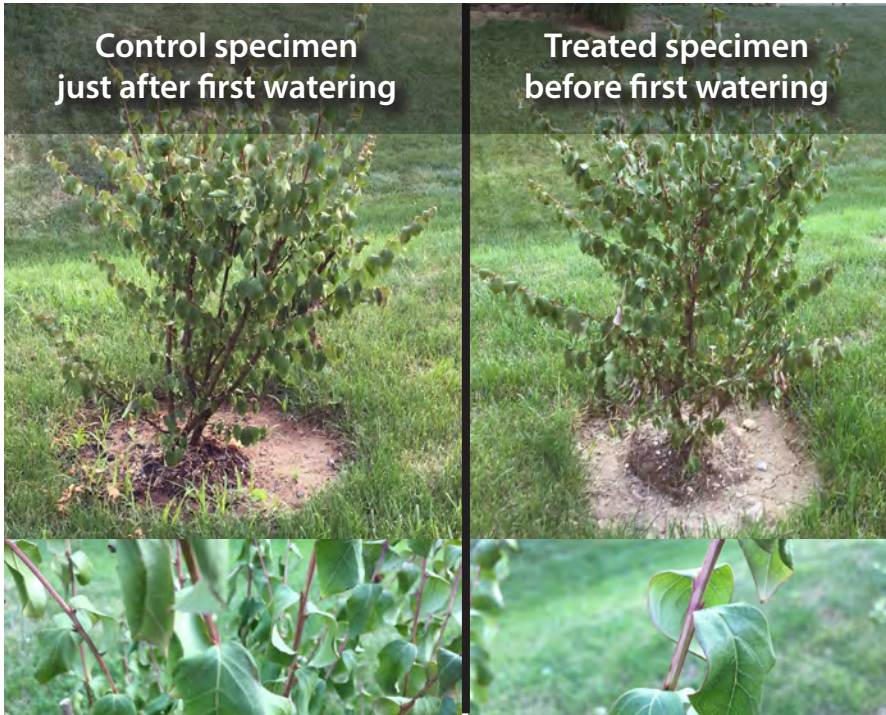


Field Study: Woody Ornamentals



Two virtually identical specimens

A few days after planting in June, 2017, there was a hot dry spell. Foliage shows some wilting due to conditions just prior to the first watering 36 hours after planting.

June 15, 2017

Two crepe myrtle shrubs were purchased at a local nursery in Lancaster County, PA. They were grown as part of the same nursery lot with identical treatment up to this point. The appearance was virtually identical.

The plant on the left received tap water only. The plant on the right was treated with 4 tablespoons of FOUNDATION Soil & Plant ProBiotics at planting, dissolved in 2.5 gallons of tap water.

Neither plant was fertilized. The treated plant was inoculated with FOUNDATION Probiotics. The treatment was repeated once on August 15, 2017.

Soil was poor "builder's soil" that had been disturbed during construction.

Background and Context

- Plant hardiness zone 6B (-5° to 0° F)
- Two specimens of Crepe Myrtle planted June 15, 2017, in Lancaster County, PA, in the southeastern part of the state.
- Soil is backfill from construction of a townhouse development built in 2004.
- Soil is heavy clay, a mix of subsoil and topsoil.
- Specimens were planted keeping the container root balls intact.
- Specimen on the left was the control. Specimen on right chosen for treatment.
- The plantings were approximately 15 feet apart.
- At the time of planting dry soil conditions were prevalent, as seen in the beginning stages of leaf wilt, as shown in the detail images.
- Plants were watered 36 hours after transplanting with 2.5 gallons of water.
- The control plant received water only. Neither was fertilized.
- The plant on the right was treated with 2 tablespoons of the FOUNDATION microbial product added to 2.5 gallons of water.



July 27, 2017
Visual response as weather warms

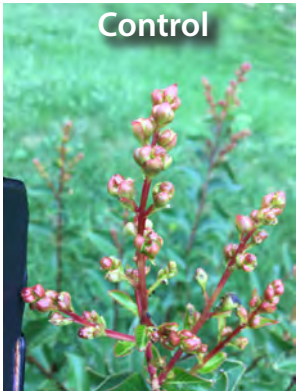
After 42 days, first responses to treatment were noted in the more advanced blooming of the treated plant, compared to the control specimen. Both plants maintained a vigorous appearance due to adequate soil moisture at this time.



August 15, 2017
Second and final treatment

Blooms appeared earlier on the treated specimen than on control. A second treatment of FOUNDATION Probiotics was given to the selected specimen. The control plant received only water.

During the first summer, the overall size of both plants was equivalent. The treated specimen showed more blooms, however, which persisted throughout the balance of the summer of 2017.



Detail, August 15, 2017

The most advanced buds on the control specimen are shown compared to the fullest blooms on the treated specimen.



But Then, A Severe Winter

The 2017-18 winter in southeastern PA was particularly cold, and snowfall pushed records. Day after day of cold, dry winds accompanied the storms as they pushed through the area repeatedly.



Control



Treated

One new stem

19 new stems



One new stem in the control specimen was healthy but small.

The treated specimen had 19 new stems with larger leaves.

June 15, 2018

Did these warm climate plants survive a brutal winter?

Following the severe winter of 2017-18, we were not confident that either plant survived. Well known as a warm climate-loving species, the crepes took a beating. They had been left uncovered and otherwise unprotected, exposed to harsh blasts of winter winds funneled between two townhouse units.

Winds at the location also created snow drifts 4.5 to 5 feet in depth more than once during the winter, which may have helped prevent total desiccation.

Both specimens appeared completely dead through the spring of 2018. Tips of branches snapped off easily. However, June 2018 brought welcomed warm weather. The treated plant began to respond with vigorous new growth, comprising 19 new stems.

The control specimen also showed new growth, but with only a single new stem with leaves.

In 2018, neither plant was fertilized.



After the harsh winter, many of the stems on both specimens were completely desiccated, easily snapping to reveal the dead woody elements within, as the bark split and fell away like paper.



July 10, 2018

Encouraging signs that the crepe myrtles not only survived, but it appears there may be some blooms before too long.

This back-lit image definitively shows the comparison in new growth between the control and the treated specimens. Both plants have new stems growing, but the treated specimen was far ahead on its way to the blooming stage, which typically begins in August in Zone 6B.

Neither specimen was pruned during the trial so as not to stimulate new growth response. The only difference was the 2017 treatment with FOUNDATION, *the year before* these pictures were taken.





August 2, 2018

Vigorous growth in the 2017 treated specimen continues to impress

At this growth cycle stage, just entering the annual flowering stage, the treated specimen shows signs of continued strong health and vigor.

The control specimen is gamely recovering, but still – one year following planting – has not had any fertilizer or treatment of any kind.

The only difference between the two specimens is that the treated plant had two applications of the product, one at planting, and another two months after, both in the summer of 2017, one year earlier than when these photos were taken.

Detail





August 9, 2018

The show of blooms homeowners expect from their crepe myrtles

Every attempt is made here to show equivalent scale in detail photos shown here. At this growth cycle stage, just entering the annual flowering stage, the treated specimen shows signs of continued strong health and vigor.

The control specimen is gamely recovering, but still - one year following planting - has not had any fertilizer or treatment of any kind.

August 9, 2018 The control plant was finally given a single treatment of the product to help build plant health and strength in preparation for the upcoming fall and winter seasons. We felt sorry for it.

August 16, 2018 One week after treating the control specimen, additional blooms are seen on the control plant on the left, as the treated specimen on the right continues its colorful show. It had been treated only in 2017.

The only difference between the two specimens is that the treated plant had two applications of the product, one at planting, and another six weeks after, both in the summer of 2017, one year earlier than these photos were taken.



August 16, 2018

The control specimen responds to the product application made one week earlier with an apparent jump in plant vigor, as seen in the increase in bloom number and size.



Apples-to-Apples Comparison



Summary: Dramatic Results that Persistent Year Over Year

New growth emerges from heavily damaged crepe myrtle almost one year after the last prior treatment.

Placed in poor "builder's soil", two identical crepe myrtles were planted side by side. Neither specimen received fertilizer. The specimen on the right was inoculated with Legacy BioSolutions FOUNDATION Organic Soil & Plant Probiotics two times. Once at planting in July 2017, and again six weeks later.

To the surprise of the observer, the treated plant not only survived the winter ordeal, but responded vigorously to the warm June weather of 2018.

Recall: The treated plant was treated only twice in the summer of 2017, virtually one year earlier – once at planting, and once at two months, both with 2 tablespoons of product mixed into 2.5 gallons

of tap water. The treatment appears to have provided a persistent benefit with only two treatments virtually one year earlier.

We attribute this to the healthier and more active biology in the rhizosphere in the treated plant, which seemed to be sufficient to survive lower soil temperatures of a harsh winter, and to respond to the new growth of living roots.

Though neither specimen was fertilized, it is likely that the clay and mineral content in the poor quality "builder's soil" held enough nutrients bound in it for the active beneficial microbes in the product to convert it to plant available forms.

