Efficacy Data for Vital Force Soil Energizer

The following details the results from a variety of applications in which Vital Force Soil Energizer was applied to a range of plants grown in containers and in ground in natural soil. To make comparison more meaningful, variables were kept to a minimum with the only variable being whether or not a plant received Soil Energizer. For container plants, the same brand of commercial potting soil was used with the same bag being used for each type of plant being evaluated. For in ground cultivation, fertilizer was applied where noted at label recommended rates regardless of whether Soil Energizer was used or not. Plants that were used for the evaluation include various flowering and vegetable plants including the following.

Flowering/Ornamental:

- 1. Rose of Sharon
- 2. Vincas
- 3. Marigolds
- 4. Geraniums
- 5. Daylilies
- 6. Coffee Houseplant

Vegetables:

- 1. Potatoes
- 2. Leafy Greens (Lettuce, Spinach, Kale)
- 3. Green Beans
- 4. Hot Peppers
- 5. Bell Peppers
- Rose of Sharon. Five bare root plants were obtained from the Arbor Day Foundation and planted in 4 inch containers using Sta Green potting soil (Fig 1). Three plants received 1 tablespoon of Soil Energizer applied directly in the planting hole, while the other two did not. No other additions were made and plants were grown outside. As can be seen in Figs 2 and 3, the plants that received the Soil Energizer had more robust growth and the

leaves were noticeably greener compared to the control plants which exhibited signs of chlorosis. Additional Soil Energizer was applied to the treated plants only during transplanting into larger containers and fertilization was applied using a soluble Miracle Gro style fertilizer at label rates every two weeks. Enhanced growth and leaf greenness was still observed with the treated plants compared to the controls (Figs 4 and 5).

- 2. Coffee Houseplant: Two identical in size coffee houseplants were purchased from a home improvement store and transplanted into 4 inch pots using Sta Green potting soil. One plant had 1 tablespoon of Soil Energizer placed into the transplant hole and the other did not, no other additions were made. Both plants were grown indoors next to the same window and growth monitored. As with the Rose of Sharon, the inoculated plant exhibited enhanced growth and also had greener leaves (Figs 6-9). Plants were transferred into 8 inch pots with the treated plants receiving another tablespoon of Soil Energizer in the transplant hole. Plants are continuing to be monitored for effects. Thus far the treated plant has continued to outperform the control plants (not shown).
- 3. Geranium: Geraniums were purchased from a local nursery and transplanted into 16 inch containers using Sta Green potting soil. Three geraniums were placed into each container with one receiving 2 tablespoons of Soil Energizer layered on the soil surface prior to placing the plants in the container and the other serving as the control. No other additions were made and the plants grown outdoors. Once again, the inoculated plants outperformed the control plants growing faster, taller, and with greener leaves (Figs 10-13). Fertilizer was applied 6 weeks after planting using a soluble Miracle Gro style fertilizer as per label recommendations at two-week intervals to both. Overall flowering was also more pronounced with the inoculated plants compared to the control (Fig 13), which continued up through Fall.
- Potatoes: Kennebec starter potatoes were purchased from a home improvement store and grown in plastic whiskey barrel style containers. Three starts were placed into each container with two tablespoons of Soil

Energizer spread evenly on the soil surface prior to adding the potato starts while the control did not. Sta Green potting soil was used, and no other additions were made. Results were noticeable almost immediately, with the inoculated plants emerging first and exhibiting enhanced growth and leaf greenness compared to the control (Figs 14 and 15). Additional potting soil was added to keep up with plant growth to help stimulate tuber formation. Fertilizer was applied 6 weeks after planting using a soluble Miracle Gro style fertilizer as per label recommendations at two-week intervals to both. The treated plants continued to outperform the control, both in plant height, fullness and leaf greenness (Fig 16).

- 5. Vincas: Vincas were purchased from a local nursery and transferred into 4 inch containers. Each container received one plant with three inoculated with 1 tablespoon of Soil Energizer into the transplant hole and three were not. Sta Green potting soil was used with no other additions. Plants were roughly identical at the start (Fig 17) with differences noted soon after transplanting (Fig 18). While all plants seemed to lag a bit, the untreated plants began to exhibit signs of severe chlorosis (Fig 18). Fertilizer was applied 6 weeks after planting using a soluble Miracle Gro style fertilizer as per label recommendations at two-week intervals to both. While the control appeared to gradually recover, growth still did not keep pace with the treated plants, and all plants were eventually placed into a raised bed and left to grow with no further monitoring.
- 6. Daylilies: Two daylilies were purchased from a local Nursery and planted in ground in natural soil. One plant received 1 tablespoon of Soil Energizer placed directly into the transplant hole and the other did not. No other additions were made. There was a dramatic response with the inoculated plant outperforming the control with enhanced growth and flowering (Fig 19) lasting for the entire season.
- 7. Leafy Greens: Lettuce, Spinach and Kale were evaluated in both containers (Figs 20 and 23) and in raised bed situations. For the raised bed, seeds of Green Leaf Lettuce were sown in two rows in raised bed soil at label recommended depth and spacing. One row was treated by lightly applying

Soil Energizer directly over the seeds in the furrow, while the control was not. The seeds were lightly covered with soil and allowed to germinate. Significant differences were observed with the treated row significantly outperforming the control. The treated plants emerged faster, grew faster and were noticeably greener than the control plants (Fig 20). The treated plants continued to exhibit enhanced greenness up to and through harvest. For the container grown plants, starter plants were obtained from a commercial nursery and planted into grow towers (Fig 23). A mixture of Scotts Miracle Gro potting soil, compost and 1 pound Soil Energizer was blended and placed into one tower, while the other had the same blend without the Soil Energizer. The starts (Lettuce, Spinach and Kale) were placed into the individual slots and allowed to grow outdoors. No other additions were made as the potting soil and compost each provides nutrients. Significant differences were noted with the inoculated grow tower compared to the control (Fig 23). Treated plants grew faster, were fuller and exhibited enhanced greenness compared to the control.

- 8. Green Beans: Green Beans were evaluated in the same raised bed soil used to grow the lettuce under # 7 above. Green bean seeds (Bush Lake) were sown in two rows in raised bed soil at label recommended depth and spacing. One row was treated by lightly applying Soil Energizer directly over the seeds in the furrow, while the control was not. The seeds were lightly covered with soil and allowed to germinate. Significant differences were observed with the treated seeds germinating faster and exhibiting faster growth, with fuller development and enhanced leaf greenness (Figs 21 and 22). Damage from squirrels prevented longer term observations and the plants were removed and replaced with the vincas from # 5 above.
- 9. **Marigolds:** Marigold starts were purchased from a local nursery and planted in natural soil. Multiple plants were used for both treated and control purposes. One tablespoon of Soil Energizer was added to each transplant hole prior to placing the start in the hole, while the control plants did not. No other additions were made and the plants were regularly fertilized with a soluble Miracle Gro style fertilizer at label recommended rates and frequency. Significant differences were observed with the treated

plants significantly outperforming the controls with faster growth, fuller development and enhanced flowering compared to the control plants (Fig 24).

- 10. Hot Peppers: Hot Pepper starts were obtained from a local nursery and planted in ground into natural soil. Multiple plants were used for both treated and control purposes. One tablespoon of Soil Energizer was added to each transplant hole prior to placing the start in the hole, while the control plants did not. No other additions were made and the plants were regularly fertilized with a soluble Miracle Gro style fertilizer at label recommended rates and frequency. As with the marigolds, significant differences were observed with the treated plants significantly outperforming the controls with faster growth, fuller development and enhanced flowering and overall yield compared to the control plants (Fig 25).
- 11. Bell Peppers: Bell Pepper starts were obtained from a local nursery and planted in ground into natural soil. Multiple plants were used for both treated and control purposes. One tablespoon of Soil Energizer was added to each transplant hole prior to placing the start in the hole, while the control plants did not. No other additions were made and the plants were regularly fertilized with a soluble Miracle Gro style fertilizer at label recommended rates and frequency. As with the hot peppers, significant differences were observed with the treated plants significantly outperforming the controls with faster growth, fuller development and enhanced flowering and overall yield compared to the control plants (Fig 26).

Results:

Fig 1. Soil Energizer and Rose of Sharon Planted 5-4-18



Back Row: Vital Force Front Row: Control

Fig 2. Soil Energizer and Rose of Sharon 6-10-18



Fig 3. Soil Energizer and Rose of Sharon 6-10-18



Fig 4. Soil Energizer and Rose of Sharon 7-29-18









Fig 5. Soil Energizer and Rose of Sharon Leaf Greenness 8-10-18

Fig 6. Soil Energizer and Coffee Houseplants 5-21-18





Fig 7. Soil Energizer and Coffee Houseplants 5-21-18

Fig 8. Repotted Coffee Houseplants +/- Energizer 11-6-18





Fig 9. Repotted Coffee Houseplants +/- Energizer 11-6-18

Fig 10. Soil Energizer and Geraniums 5-19-18



Planted 5-12-18



Fig 11. Soil Energizer and Geraniums 6-4-18

Fig 12. Soil Energizer and Geraniums 7-9-18





Fig 13. Soil Energizer and Geranium Leaf Greenness 6-18-18

Fig 14. Soil Energizer and Potatoes 5-21-18



Fig 15. Soil Energizer and Potatoes 5-23-18



Fig 16. Soil Energizer and Potatoes 6-4-18



Fig 17. Soil Energizer and Vincas started 6-18-18



Fig 18. Soil Energizer and Vincas 7-8-18



Fig 19. Soil Energizer and Daylilies



Fig 20. Soil Energizer and Lettuce 7-14-18





Fig 21. Soil Energizer and Green Beans 8-27-18

Fig 22. Soil Energizer and Green Beans 8-29-18



Fig 23. Soil Energizer and leafy vegetables in grow tower at Flanner House



Fig 24. Soil Energizer on Marigolds at Flanner House





Fig 25. Soil Energizer on Hot Peppers at Flanner House





Fig 26. Soil Energizer on Bell Peppers at Flanner House





Flanner house statement here