



Evaluation of Erthfood® Organic Fertilizer on the Growth of Perennials and Woody Ornamentals

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Background:

In the plant industry new, higher analysis fertilizers have replaced organic fertilizers. However, there is resurgence of interest in the use of organic fertilizers, particularly as these fertilizers are often “slow-release,” benefitting growing plants over time. These organic materials are readily available and may afford a readily useable alternative to high cost commercial fertilizers.

Purpose of Study:

To determine if Erthfood® compost (EFC) can perform as part of a conventional nursery mix and replace some conventional fertilizers.

Design of Study:

This experiment was set up as a completely randomized block design using four replications of six plants per treatment. One-gallon containers were used for the study.

Three soil mixes were used in this study.

- 1 - Standard McCorkle's mix
- 2 - Standard McCorkle's mix plus 15 %Erthfood®
- 3 - Standard McCorkle's mix plus 30 %Erthfood®

Six ornamentals were planted in each replication—four herbaceous and two woody.

Agastache 'Blue Fortune'
Coreopsis grandiflora 'Sunray'
Gaura 'Corey's Gold'
Hibiscus moscheuto 'Disco Belle Pink'
Azalea Kurume 'Pink Pearl'
Loropetalum 'Sizzling Pink'

Evaluation:

The 15% EFC *Gaura* 'Corey's Gold' (Table 3) treatment produced significantly greater TDW (top dry weight) over the SM (standard mix). Also, there was no significant difference in the TDW of the

standard mix and the 30% EFC treatment for the *Loropetalum* 'Sizzling Pink' (Table 6). All other treatments were none significant from the SM.

Significance to the Industry:

The results of this research suggest that Erthfood® may be added to certain container grown plants, *Gaura* 'Corey's Gold' and *Loropetalum* 'Sizzling Pink' at the rates used in the test.

Table 1. *Agastache* 'Blue Fortune' Top Dry Weight

| Treatment | Mean Dry Weights(g) | Non-Significant Range* |
|--------------|---------------------|------------------------|
| 15% Erthfood | 37.2 | A |
| 30% Erthfood | 35.8 | A |
| Standard Mix | 31.8 | A |

*Numbers within columns followed by the same letter are not statistically different based upon Tukey's HSD means separation test and P=0.05

Table 2. *Coreopsis grandiflora* 'Sunray' Top Dry Weight

| Treatment | Mean Dry Weights(g) | Non-Significant Range* |
|--------------|---------------------|------------------------|
| 15% Erthfood | 44.3 | A |
| 30% Erthfood | 42.2 | A |
| Standard Mix | 38.9 | A |

*Numbers within columns followed by the same letter are not statistically different based upon Tukey's HSD means separation test and P=0.05

Table 3. *Gaura* 'Corey's Gold' Top Dry Weight

| Treatment | Mean Dry Weights(g) | Non-Significant Range* |
|--------------|---------------------|------------------------|
| 15% Erthfood | 26.9 | A |
| 30% Erthfood | 20.9 | B |
| Standard Mix | 18.6 | B |

*Numbers within columns followed by the same letter are not statistically different based upon Tukey's HSD means separation test and P=0.05

Table 4. *Hibiscus moscheuto* 'Disco Belle Pink' Top Dry Weight

| Treatment | Mean Dry Weights(g) | Non-Significant Range* |
|--------------|---------------------|------------------------|
| 15% Erthfood | 14.5 | A |
| 30% Erthfood | 13.9 | A |
| Standard Mix | 12.2 | A |

*Numbers within columns followed by the same letter are not statistically different based upon Tukey's HSD means separation test and P=0.05

Table 5. *Azalea Kurume* 'Pink Pearl' Top Dry Weight

| Treatment | Mean Dry Weights(g) | Non-Significant Range* |
|--------------|---------------------|------------------------|
| 15% Erthfood | 30.4 | A |
| 30% Erthfood | 19.9 | B |
| Standard Mix | 22.9 | B |

*Numbers within columns followed by the same letter are not statistically different based upon Tukey's HSD means separation test and P=0.05

Table 6. *Loropetalum* 'Sizzling Pink' Top Dry Weight

| Treatment | Mean Dry Weights(g) | Non-Significant Range* |
|--------------|---------------------|------------------------|
| 15% Erthfood | 37.9 | B |
| 30% Erthfood | 40.8 | AB |
| Standard Mix | 55.3 | A |

*Numbers within columns followed by the same letter are not statistically different based upon Tukey's HSD means separation test and P=0.05