



Evaluation of Cricket Droppings Residue on the Growth of Perennials and Woody Ornamentals

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Background:

“Slow-release” organic fertilizers benefit growing plants over time. These organic materials are readily available and may afford an readily useable alternative to high cost commercial fertilizers.

Georgia is the home of the largest cricket producer; cricket droppings, a byproduct of this industry, offers a potential source of organic fertilizer for the green industry.

Purpose of Study:

To determine if cricket droppings can perform effectively as part of a conventional nursery mix and partially replace 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 % cricket droppings
- 3 - Standard McCorkle's mix plus 30 % cricket droppings

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 treatment of 15% cricket droppings yielded more top dry weight (TDW) of *Agastache* 'Blue Fortune' (Table 1), *Gaura* 'Corey's Gold' (Table 3), *Hibiscus moscheuto* 'Disco Belle Pink' (Table 4), and *Loropetalum* 'Sizzling Pink' (Table 6) than the standard mix (SM). The 30% cricket droppings

treatment of *Hibiscus moscheuto* 'Disco Belle Pink'(Table 4) also produced more TDW than the SM. There was no significant difference between the cricket droppings treatment and the SM for *Coreopsis grandiflora* 'Sunray' (Table 2) and *Azalea Kurume* 'Pink Pearl' (Table 5) for TDW.

Significance to the Industry:

The results of this experiment indicates that cricket droppings can be used to reduce the use of standard fertilizers with some ornamental plants grown in container production. In most instances the 15% cricket droppings treatment provided improved growth for the plants tested.

Table 1. <i>Agastache</i> 'Blue Fortune' Top Dry Weight		
Treatment	Mean Dry Weights(g)	Non-Significant Range*
15% Cricket droppings	48.8	A
30% Cricket droppings	36.2	B
Standard Mix	32.9	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 2. <i>Coreopsis grandiflora</i> 'Sunray' Top Dry Weight		
Treatment	Mean Dry Weights(g)	Non-Significant Range*
15% Cricket droppings	53.1	A
30% Cricket droppings	45.4	A
Standard Mix	40.1	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. <i>Gaura</i> 'Corey's Gold' Top Dry Weight		
Treatment	Mean Dry Weights(g)	Non-Significant Range*
15% Cricket droppings	41.3	A
30% Cricket droppings	28.5	B
Standard Mix	21.5	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% Cricket droppings	26.9	A
30% Cricket droppings	27.0	A
Standard Mix	20.7	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 5. *Azalea Kurume* 'Pink Pearl' Top Dry Weight

Treatment	Mean Dry Weights(g)	Non-Significant Range*
15% Cricket droppings	26.6	A
30% Cricket droppings	24.0	A
Standard Mix	21.7	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 6. *Loropetalum* 'Sizzling Pink' Top Dry Weight

Treatment	Mean Dry Weights(g)	Non-Significant Range*
15% Cricket droppings	68.1	A
30% Cricket droppings	57.5	B
Standard Mix	51.6	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