



Research File: Sustane® 8-4-4
Fertility Trial, Rudbeckia Goldsturm
(Rudbeckia fulgida var. sullivantii
 'Goldsturm')

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Rydal, Georgia – 2009

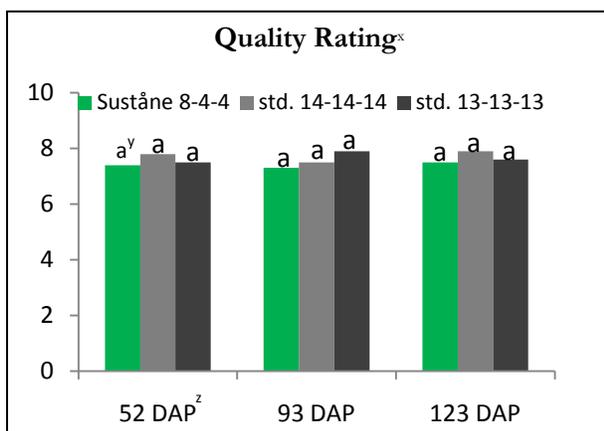
More than 25% of growers surveyed in 2007 reported managing fertility as the biggest challenge in organic production of ornamental crops, second only to pest management (Burnett and Stack, 2009)¹. Therefore, Sustane® 8-4-4, an all natural fertilizer made from aerobically composted turkey litter was evaluated for use on Rudbeckia Goldsturm. The trial followed plant performance over 135 days and compared Sustane 8-4-4 (45 day) to two industry-leading controlled release fertilizers, a 13-13-13 (T70) and a 14-14-14 (3-4 mo.). Each fertilizer was incorporated at a rate of 0.85 pounds of nitrogen per cubic yard; at 55 days after planting a top dress application equivalent to 0.425 pounds of nitrogen per cubic yard of 8-4-4 was applied to supplement the nutrient source. The potting medium was a 50:40:10 mix (by volume) of pine bark, peat and perlite.

Picture taken at 113 days after planting during the summer of 2009 in Rydal, Georgia.



Sustane	Standard	Standard
8-4-4	14-14-14	13-13-13

Results: At 52, 93 and 123 days after planting, plant quality rating was equal for all treatments. At 129 days after planting, growth index, calculated as the sum of plant-width1, -width2 and -height divided by 3, was equal for all treatments and averaged 48.9 cm. Additionally, at trial completion root quality and shoot fresh weight was equal for all treatments.



^x plants rated on a scale of 1-9, 9=best

^y means within a measurement date followed by different letters indicates significant differences, according to Duncan ($\alpha=0.05$)

^zDAP corresponds to days after planting

Conclusions: Rudbeckia Goldsturm fertilized with Sustane 8-4-4 all natural slow release fertilizer resulted in equal plant performance compared to plants fertilized with industry-leading controlled release fertilizers, standard 13-13-13 (T70) and standard 14-14-14 (3-4 mo.). The trial results show Sustane 8-4-4 can provide nursery growers with an all natural fertilizer option without effecting plant quality.

¹Burnett, E.B., L.B. Stack. 2009. Survey of the Research Needs of the Potential Organic Ornamental Bedding Plant Industry in Maine. HortTechnology 19(4)743-747.