Due to increased environmental awareness and escalating costs of quality control release fertilizers greenhouse production is in need of alternative nutrient sources, preferably derived from sustainable resources. Therefore, Sustâne® 8-4-4, an all natural fertilizer made from aerobically composted turkey litter was evaluated for use on “Inca II Orange” marigold. The trial compared Sustâne 8-4-4 (45 day) to two industry-leading control 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. The potting medium was a 50:40:10 mix (by volume) of pine bark, peat and perlite.

At 42 days after planting shoot fresh weight of marigolds grown with Sustâne 8-4-4 was 22.3 grams compared to 23.8 and 28.4 grams for plants grown with the standard 13-13-13 and 14-14-14 control release fertilizers, respectively. Quality ratings of plants grown with Sustâne 8-4-4 taken at 8, 15, 22, 29, 36 and 42 days after planting were equal to the quality ratings of plants grown with the standard 13-13-13 and 14-14-14 control release fertilizers.

**Conclusions:** For all parameters measured “Inca II Orange” marigold bedding plant material performed best when grown with Sustâne 8-4-4 compared to two control release fertilizers with an N-P-K ratio of 1-1-1. The trial results show Sustâne 8-4-4 can provide greenhouse growers with the same performance as current industry-leading synthetic control release fertilizers.

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