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EFFICACY OF SOYBEAN-BASE LIQUID FERTILIZER FOR GREENHOUSE CROPS

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□ *A soybean-base liquid fertilizer [Daniels Plant Food, Sherman TX, USA; 10 nitrogen (N):1.8 phophorus (P):2.5 potassium (K)] for petunia was compared for efficacy to two formulations of 20N:4.4P:16.6K with 40 and 70% of the nitrogen in the reduced form. Petunias treated with the soybean-base fertilizer were taller, flowered in 4.5% less time, had the highest plant rating for foliar color and plant form, and did not differ in plant dry weight from the control (40% reduced nitrogen). Foliar nitrogen concentration was not affected by fertilizer source. Also, cyclamen grown with the soybean-base fertilizer had similar plant and corm growth and formed 47% more flowers than the control. Foliar levels of potassium although lower were adequate in the soybean-base fertilized plants. Ammonium toxicity and potassium deficiency symptoms did not occur with either species. While the substrate pH in the high reduced nitrogen soybean-base treatment was expected to be lower, it was higher or similar to the control in each species.*

Keywords: petunia, cyclamen, floriculture, ammonium toxicity, substrate pH, electrical conductivity

INTRODUCTION

Greenhouse floral, vegetable, and seedling crops; a small proportion of woody container nursery plants; and most plants in interior consumer and plant-scape settings are fertilized on a continual basis with water soluble

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