

Too Much of a Good Thing!

My Grow'n Growers class recently conducted an experiment on fertilizer treatments on squash plants. The squash seeds were planted in 3 inch pots (the small green ones). Students were asked to provide the same kind of potting soil for each pot, the same amount of water, and the same amount of light, by placing them in the sun together.

From just after planting the seeds, the amount of water, soil, and light remained the same. What differed was the amount of fertilizer. Treatment one received only water; no fertilizer.

Treatment number two received the recommended amount of fertilizer, which was tablespoon of fish emulsion to one gallon of water. The Fish Emulsion Fertilizer had a nutrient ratio of 5-1-1 (Five parts nitrogen to one part phosphorus and one part potassium).

Treatment number three received three times the recommended amount of fertilizer, or three tablespoons of fish emulsion per gallon of water. And, you guessed it, treatment number four received four times the recommended fertilizer, at four tablespoons of fish emulsion to one gallon of water.

So, how did they perform? In the first treatment, with only water, plants emerged and put on two new leaves. The second treatment, receiving the recommended amount of fertilizer, took off quickly and more than doubled in growth and leaf production, compared to the first one. Treatment three, receiving three times the recommended amount of fertilizer reached approximately the same size as treatment one. The health of the plants was obviously different, however, as treatment number three suffered fertilizer burn on the tips of the leaves. The seed in treatment number four tried to put out roots and a shoot, but died after receiving its doze of fertilizer at four times the recommended amount!

It seems to be our nature to think that if a little works well, a little bit more will work better. This little experiment proved to the class that they need not waste their money by applying three or four times the amount recommended. If you doubt the instructions, conduct a small trial, as was done here, and then when you apply a product to your crop, you can do so with confidence and without wasting money, because too much of a good thing might be harmful, rather than beneficial.

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