

Growing a Great Garden Self-Watering Grow Boxes

A Note on Fertilizer

Because we are using a soil-less mix in our growing containers, we will need to add nutrients. Nitrogen (N), Phosphorus (P) and Potassium (K) are considered macro-nutrients and are needed in greatest supply by plants. These nutrients will be added through the addition of fertilizer. Many other nutrients are required in smaller quantities and are termed micro nutrients. One important micro nutrient in peat-based soils is Calcium (Ca), which will be added through the addition of dolomite lime. Dolomite is essential in peat-based soils to maintain a neutral soil pH, balancing out the natural acidity of the peat. **It is important to note that some potting soils (often termed pro-mix) come with the fertilizer and dolomite lime already blended in. Check your bag! If you have fertilizer already added to your soil, just prep your growing containers and you're ready to plant! Please take note of what type of potting soil you are using.**

A Note on Dolomite Lime

When you first set up your Container Gardening System, we recommend using dolomite to add calcium and magnesium to the growing media to help raise the pH. This helps to combat Blossom End Rot (BER). **We DO NOT recommend using hydrated lime, pickling lime, or granular lime in place of dolomite.** Generally, agricultural lime should not be used in the self-watering systems because it does not contain enough magnesium.

Organic fertilizer and dolomite lime are dry, powdery substances that can cause skin and/or respiratory irritation. Have students wear gloves if they handle these products. Ensure your growing media is moist when these products are mixed in, and mix in a slow, methodical manner to reduce the amount of dust generated.



Fertilizer and Lime Rates for Your Containers

Depending on the strength of fertilizer that you are using, your application rates will vary. Please see the information provided to you from your coordinator for specific fertilizer rates. These figures are meant to be a guide.

GrowBox (filling hole in the side)

VOLUME = 1.5 CUBIC FEET OF SOIL

We recommend using 1.5 cups of a dry, granular fertilizer. Use 2.25 cups if using an organic fertilizer. Add $\frac{3}{4}$ cup of dolomite lime.

EarthBox Original (filling tube at top)

VOLUME = 2 CUBIC FEET OF SOIL

We recommend using 2 cups (or 1 lb.) of a dry, granular fertilizer. Use 3 cups if using an organic fertilizer. Add 1 cup of dolomite lime.

EarthBox Junior (filling tube at top)

VOLUME = 1 CUBIC FOOT OF SOIL

We recommend using 1 cup (or .5 lbs.) of a dry, granular fertilizer. Use 2 cups if using an organic fertilizer. Add $\frac{1}{2}$ cup of dolomite lime.

For best results, we recommend using a fertilizer with NPK analysis numbers between 5 and 15.

- Fertilizer application to the Earthbox system as per the instructions above is designed to provide sufficient plant nutrition for one growing season. However, variables exist that can impact the actual uptake of plant nutrients – be sure to monitor your plants for any sign of nutrient deficiency.
- Additional application of fertilizer is best done in liquid form. Please keep basic records so you can share your experience with other teachers!

N - P - K

Nitrogen Phosphorus Potassium