MEDIA TEST REVIEW

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Test Parameter or Nutrient	Actual	Recommended	Acceptable	Toxic
pH	6.1	6.2-6.8	6.0-7.0	>7.4
Soluble Salts (SS)	26	70-90	60-100	>120
Nitrates (NO_3)	15	150-250	100-350	>400
Ammonium (NH_4)	10	0-10	0-15	>15
Phosphorus (P)	<1	10-15	5-20	>80
Potassium (K)	8	50-100	30-120	-
Calcium (Ca)	108	50-200	25-300	>400
Magnesium (Mg)	27	40-50	30-60	-
Sodium (Na)	9	10-40	5-60	>70
Iron (Fe)	.56	.20-.50	.10-.70	>5.0
Manganese (Mn)	.54	.50-1.50	.30-1.75	>5.0
Zinc (Zn)	.03	.10-.50	.05-.75	>2.0
Boron (B)	.06	.05-.25	.02-.50	>1.0

The calcium level is adequate at this time, and should remain in a good range if calcium nitrate is used as a part of your fertilizer program.

The media test results shown above are from a sample early in a poinsettia crop. The grower isn't experiencing any particular problems, but is running an early test to help monitor the crop and see where the plants may need some nutritional help. As would be expected on an early test, the nutrient levels are generally low. This will be amended as the plants are fertilized.

This test shows a very good starting pH, as long as it can be maintained. Acidification of the water may be necessary to help maintain the media pH in the recommended range for the entire growing season.

Generally calcium nitrate and potassium nitrate will be used to supply nitrogen, potassium and calcium. Early in the season it is acceptable to use a fertilizer containing ammonium since there is less likely to be a problem with ammonium toxicity. Be sure to watch the weather to determine if it's time to switch away from ammonium based fertilizers. As the weather cools down and the skies cloud up ammonium can build up and cause problems with yellowing and dropping leaves. Do not use ammonium based fertilizers after October 15th. The level on this test is acceptable, but should be watched closely to avoid problems.

The phosphorus level is low and can easily be remedied. If you are acidifying water using phosphoric acid you will probably be supplying enough phosphorus through the growing season for the plants. If you aren't acidifying, or if you use another type of acid, an application of starter fertilizer, such as 9-45-15, will provide a boost of phosphorus to the plants for help with root growth. By monitoring fertility regularly you will be aware of the nutrient levels and if any additional phosphorus will be necessary.

One micronutrient that we don't test for at the university and that you need to be concerned with in poinsettias is molybdenum.

The calcium level is adequate at this time, and should remain in a good range if calcium nitrate is used as a part of your fertilizer program. The magnesium level is low and an application of epsom salts (magnesium sulfate) should be considered. The application rate is 8 ounces of epsom salts per 100 gallons of water, final solution. This will help maintain a 3:1 ratio of calcium to magnesium, which will help make both elements more readily available to the plants.

The micronutrients are generally acceptable, and with monitoring you can see if and when an application may be necessary. One micronutrient that we don't test for at the university and that you need to be concerned with in poinsettias is molybdenum. Be sure that you are applying molybdenum as a part of your fertilizer program. The rate of application is 0.1 ppm of molybdenum. To make a stock of this, mix 1 lb. of sodium or ammonium molybdate in 5 gallons of water. Use 1.5 fl. oz. of this stock in 1000 gallons of water (final solution). This will provide adequate molybdenum for your poinsettia crop.

Early in the season, 250-0-250 is recommended for fertilization. Be sure that as the season progresses you drop the fertilization rate to help 'harden' the plants for longer post-harvest life. Plants should not receive any fertilizer during the last

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