MEDIA TEST REVIEW

Debra Schwarze
University of Minnesota

Test Parameter or Nutrient	Actual	Recommended	Acceptable	Toxic
pH	6.3	6.2-6.8	6.0-7.0	>7.4
Soluble Salts (SS)	123	70-90	60-100	>120
Nitrates (NO_3)	104	150-250	100-350	>400
Ammonium (NH_4)	1	0-10	0-15	>15
Phosphorus (P)	8	10-15	5-20	>80
Potassium (K)	53	50-100	30-120	-
Calcium (Ca)	126	50-200	25-300	>400
Magnesium (Mg)	33	40-50	30-60	-
Sodium (Na)	13	10-40	5-60	>70
Iron (Fe)	.26	.20-.50	.10-.70	>5.0
Manganese (Mn)	.24	.50-1.50	.30-1.75	>5.0
Zinc (Zn)	.17	.10-.50	.05-.75	>2.0
Boron (B)	.09	.05-.25	.02-.50	>1.0

This particular media test is from a hanging fuchsia basket. Since most hanging baskets will require more time in your greenhouse than other bedding plants, the nutritional requirements will be greater. Generally, fertilizer with 200 ppm of nitrogen and potassium from the time the baskets are planted. This will provide adequate nutrition for most baskets throughout the growing season.

One other point on hanging baskets. Since most growers raise their hanging baskets in the upper portions of the greenhouse, you need to take into account the warmer temperatures and additional water that the baskets will require. Because of this it is important to monitor the media and run media tests on a regular basis to make sure the appropriate nutrition is being maintained.

On this media test, of a soilless mix, the soluble salts are rather high. High soluble salts, generally over 100, can cause damage to the roots and this damage can lead to problems with the above ground portions of the plant. Typical damage will be die-back and browning of the roots followed by necrosis of leaf edges. To help remedy the problem, leach the plants thoroughly to reduce the salts level.

While the salts are high, nitrogen and potassium levels are not. This is not unusual for media early in the fertilization schedule. After leaching to reduce the salts levels, the nutrient levels will drop even lower. Therefore, follow up the leaching with a heavier fertilizer application. If you generally feed your hanging baskets with 200 ppm N and K, a single follow-up feeding of 300 ppm N and K will be beneficial. Following this watch the N:K ratio to try to keep it about 3:1. The 3:1 ratio will help make the nitrogen and the potassium available to the plants in the proper proportion.

The 3:1 ratio is also important when evaluating levels of Ca and Mg. In the case of this test, it looks like the plants are about due for an application of epsom salts to help raise the Mg level so that is about 1/3 that of the Ca. The rate of application for epsom salts is 8 ounces per 100 gallons of water. Often micronutrients are applied at half rate at the same time. Remember not to mix the epsom salts with other fertilizers (other than micronutrients) to avoid precipitation in your stock tank. In this case the micronutrients are in the acceptable range and addition is not necessary at this point. Since the plants are actively growing, micronutrients may be needed before the crop is ready to go out.

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