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How Early Should I Apply Organic Materials To My Rose Beds?

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From the Greater Atlanta Rose Society, The Phoenix, March 2010, Bobbie Reed, Master Rosarian, Editor, with permission.

Bacteria are the most abundant of the soil organisms (>100 million per teaspoon of soil), and the most important within the top 6 inches of soil. They are responsible for many key biological reactions such as nitrogen fixation and sulfur oxidation, which make these nutrients available to plants. Bacteria are most active between 50° and 96°F, and prefer a pH range of 5.5 to 8.0. Their activity decreases with decreasing soil temperature until near freezing, when most activity ceases. Soil bacteria populations, therefore, fluctuate with the season, with largest populations in the spring, early summer, and fall. Due to a quick generation time (as fast as 20 minutes between cell divisions), bacteria can quickly colonize and exploit organic materials once conditions become favorable for growth. Since our rose soils normally contain adequate moisture, and are kept within the range that is favorable for bacterial growth, we only need to make certain the soil temperature is favorable before applying organic material in the spring.

If you do not own a soil temperature probe an approximate value can be obtained at the web site maintained by the Georgia Automated Environmental Monitoring Network located at www.griffin.uga.edu/aemn. At 2:15pm on March 4, 2010, the soil temperature at 4 inches at Johns Creek was

43.3° F.

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