

Bedding plant preparation/fertilization tips

■ Vibrant displays of bedding plants require healthy soil that contain adequate quantities of water, air space and nutrients. Since bedding plants have such small root systems—compared to woody plants—these three requirements must be uniform in the top 8 to 10 inches in the soil.

Unfortunately, not all soils provide good growing conditions for bedding plants. Sub-standard soils can be improved with the addition of soil amendments and nutrients.

For instance, sandy or coarse-textured soils provide pore space for oxygen and drain well. That, of course, means they don't hold water very well. The addition of peat moss, humus, or properly processed compost will allow the soil to hold more water.

Clay soils are comprised of much smaller particles meaning they hold water well. Characteristically these soils compact easily and drain slowly, between 4 to 20 times slower than sandy soils. Additions of pine bark humus or compost (make sure it's fully composted) can improve these soils. For best results incorporate at least 2 inches of the amendment into the top 6 inches of the soil. You can add more amendment, up to about 50 percent. More than that is a waste of time and money.

After adding the amendments a soil test may be in order. It will reveal if phosphorus, potassium, calcium or magnesium are needed.

It will also measure the soil's pH. Or you can make your own preliminary finding with a portable pH meter. The soil pH for bedding plants should be between 5.5-6.5. To raise the pH of the bedding plant soil, use ground limestone; to lower it, elemental sulfur.

Providing bedding plants with the proper nutrients and in the proper amounts isn't just a matter of putting down fertilizer.

For instance, the challenge in applying nitrogen—the element that accelerates plant growth—lies in not applying so much that plants are



Bedding plants provide a more colorful display when properly fertilized.

damaged.

Water-soluble fertilizers, for instance, can generally be applied every 4-8 weeks throughout the plant season, applying no more than 4-6 lbs. N per 1000 sq. ft. of bed area during the growing season. Or, slow-release fertilizer can be incorporated into the bed just before planting. Broadcast a second application about mid-season. Again, 4-6 lbs. of N per 1000 sq. ft. of bed per season should give good results.

Once the bed has been prepared and fertilized and the flowers planted, they must get adequate amounts of water. The nature of the soil, whether it's primarily sand, loam or clay, determines how often the bed should be irrigated. Beds maintained in sandy conditions may need to be watered 2 or 3 times a week whereas a bed that's been established in clay may only need a weekly dosing.



Suggested nitrogen sources, application methods, intervals between applications and application rates for bedding plants in the landscape (Nitrogen recommendations based on seasonal total of 4 lbs. N/1000 sq. ft. bed area)

—by Douglas A. Bailey, Stuart L. Warren, William C. Fonteno, North Carolina State University.

Nitrogen source	Effect on soil pH	Dry broadcast over bed surface			Liquid 1 quart per sq. ft. of bed area at each application		
		Weeks between applications, # of apps per season			Weeks between applications, # of apps per season		
		4 wks. (5 apps)	6 wks. (3 apps)	8 wks. (2 apps)	1 wk. (18 apps)	2 wks. (9 apps)	4 wks. (5 apps)
		lbs/1000 sq. ft. for each app.			lbs./100 gallons of solution		
Ammonium nitrate (33.5-0-0)	mod. acid	2 lbs. 6 oz.	4 lbs.	6 lbs.	4.5 oz.	9 oz.	1 lb.
Ammonium sulfate (20-0-0)	very acid	4 lbs.	6 lbs. 11 oz.	10 lbs.	7 oz.	14 oz.	1 lb. 10 oz.
Calcium nitrate (15.5-0-0)	mod. basic	5 lbs. 3 oz.	8 lb. 10 oz.	12 lbs. 14 oz.	9 oz.	1 lb. 2 oz.	2 lbs. 1 oz.
Potassium nitrate (13-0-44)	slight acid	6 lbs. 2 oz.	10 lbs. 4 oz.	15 lbs. 6 oz.	11 oz.	1 lb. 6 oz.	2 lbs. 7 oz.