

Maintenance Fertilizer Sidedressing Rates

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(Revised 3-06)

Calculations should be based on the expected root zone area; unless the maintenance nutrients are applied broadcast. A first year liner roots may only spread 1 foot, while a 5 year old plant may have roots extending 3 feet in one direction.

It is believed even though the fertilizer will be applied in a narrow band; the rate should be based on the area of the expected root zone.

Root growth begins earlier in the spring than shoot growth. For established plants in the nursery field, maintenance fertilizer applications should be applied 4 to 6 weeks prior to bud break in the spring. To get the maximum benefit from the fertilizer it is very important to make the annual maintenance fertilizer application by mid to late February, and then repeated mid to late June in Tennessee. Delay sidedressing spring transplants two weeks. Never fertilize after August 1st, except liquid. Stop liquid Sept 15.

Rates are calculated on the amount of nitrogen. Sidedress all recent transplants, all shrubs, all conifers, dogwood, *Malus* and *Pyrus* with no more than 50 lbs. of actual nitrogen per acre. After the first application, increase the rate for shade trees to no more than 75 lbs. of actual nitrogen per acre. No growth benefit is realized for additional fertilizer; in fact, higher rates decreased plant growth for most plants in research trials. Rates can be increased to 75 lbs for *Malus* and *Pyrus* for the June application if you think they need it.

When fertilizing by hand: I like the idea of throwing or tossing it maybe 6 feet in front of me to bounce and scatter around the root zone of trees. I might release the fertilizer from waist or chest high on first year transplants and drop it if it will cover the smaller root zone. The soil surface will dictate how to do it. It bounces and scatters on a crusted soil but drops dead into a loose soil. I do not favor bending the back to make a ring. Avoid applying any fertilizer within 6 inches of the stem. Excessive Nitrogen can damage the bark and roots directly below.

For all recent transplants, all shrubs, all conifers, dogwood, and all *Malus* and *Pyrus* (only the spring application on *Malus* and *Pyrus*, to reduce the likelihood of fireblight).

50 pounds of actual Nitrogen can be supplied by:

	lbs/acre	lbs/1000 sq ft or row feet	Ounces/100 sq ft or row feet (by weight)	Cups per 100 sq. ft.
34- 0- 0	150	3.5	5.6	0.75
20-10-10	250	5.7	9.2	1.5
15-15-15	333	7.6	12.1	2.0
13-13-13	385	8.7	14.0	2.0
12-04-08	416			
Sulfur Coated Urea (32-40% nitrogen)	125-140	2.9	5.0	0.66
Osmocote 40-0-0 3-4 month release	125	2.9	5.0	0.66
Osmocote 14-14-14	360	8.25	13.2	2.0
Osmocote 18- 6-12	275	6.3	10.0	1.66
Calcium nitrate (15-0-0)	330	7.6	12.1	2.0

For Shade trees after their first sidedressing:

75 pounds of actual Nitrogen can be supplied by:

	lbs/acre	lbs/1000 sq ft or row feet	Ounces/100 sq ft or row feet (by weight)	Cups per 100 sq. ft.
34- 0- 0	225	5.0	8.3	1.25
20-10-10	375	8.7	14.0	2.00
16-03-06	469	10.8	17.2	2.50
15-15-15	500	11.5	18.5	2.75
15-05-10	500	11.5	18.5	2.75
13-13-13	575	13.0	22.0	3.00
12-04-08	625	14.3	23.0	3.25

Comm/Fertility/50-75 lbs actual N 03-06 rev