

with drainage and other soil conditions, and may not be well timed to crop needs, especially early, short season crops. Annual crops need N most intensely about three to four weeks after emergence or transplanting. Therefore, sidedressing, or spreading soluble N along the crop row, at this time is most efficient. Because soluble organic N fertilizers are expensive, it is advisable to use lower rates than recommended for synthetic fertilizers. A sidedressing of 25 lb/acre of actual N is reasonable for many crops growing in a fairly fertile soil. That requires 200 lb dried blood, 400 lb soy or cottonseed meal, or the equivalent from other sources of N.

Rock powders can be used, along with organic matter, to build up and balance soil reserves of plant nutrients. However, these are not very soluble nutrient sources, and are not effective for treating short-term nutrient deficiencies. Using some soluble

fertilizers may be advisable while building soil reserves of plant nutrients with rock powders and organic matter.

Limestone is a widely used rock powder. It raises the soil pH and provides calcium (Ca) and varying amounts of magnesium (Mg). When Mg tests below about 100 lb/acre, high-Mg limestone, or dolomite, should be used for liming. If Mg is above about 150 lb/acre, use calcite, or low-Mg lime. Choose your fertilizer materials considering the desired 20:4:1 base saturation ratio of Ca:Mg:K in the soil, but remember, this goal is only a ballpark figure and is definitely secondary to establishing the proper pH of 6 to 7 for most crops and supplying nutrients shown to be deficient by a soil test (see page 1).

Magnesium is best applied as dolomitic lime, but when liming is not required, other Mg sources

Table 6. Nutrient recommendations for small fruit crops.

Crop	Age	Amount/Timings (actual N)	N source	Comments
STRAWBERRIES				
	0	30 lb/A early June, 30 lb/A early Sept.	calcium nitrate ammonium nitrate or calcium nitrate	Be sure plants are growing well prior to application
	1+	70 lb/A at renovation, 30 lb/A early Sept.	ammonium nitrate or urea	Adjust fall amount based on leaf analysis
RASPBERRIES (summer bearing)				
	0	25-35 lb/A 4 weeks after planting	calcium nitrate	Avoid touching plants with fertilizer
	1	35-55 lb/A in May, or split between May and June	urea, ammonium nitrate	Use higher amount on sandier soils or if irrigation is used
	2+	40-80 lb/A in May, or split between May and June	urea, ammonium nitrate	Use higher amount on sandier soils or if irrigation is used
RASPBERRIES (fall bearing)				
	0	25 lb/A 4 weeks after planting and 25 lb/A in August	calcium nitrate	Avoid touching plants with fertilizer
	1	50-80 lb/A split between May and June	urea, ammonium nitrate	Use higher amount on sandier soils or if irrigation is used
	2+	70-100 lb/A split between May and June	urea, ammonium nitrate	Use higher amount on sandier soils or if irrigation is used Adjust with leaf analysis
BLUEBERRIES				
	0	Do not fertilize newly planted blueberries		
	1	15 lb/A	ammonium sulfate or urea	Soil should be adjusted to pH=4.5 prior to planting
	2	20 lb/A		
	3	25 lb/A		
	4	35 lb/A		
	5	45 lb/A		
	6	55 lb/A		
	7+	65 lb/A		

Source: Cornell University