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Wood Ashes as a Garden Fertilizer

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At one time wood ashes were a chief source of potassium and much used in farming and horticulture. While not an important fertilizer anymore, wood ashes have become plentiful around many homes as more people turn to wood burning stoves and fireplaces for heat.

Gardeners with a supply of wood ashes often want to know if ashes are useful as a fertilizer of soil amendment. The questions most generally asked are:

Are Wood Ashes Beneficial?

It depends on your soil. Generally, ashes can be beneficial: they contain potassium, a major plant nutrient plus a number of minor nutrients.

Can Ashes be Harmful?

Yes, if too much is used. Ashes contain chemicals which are very alkaline with a pH of 10 to 12. They are harmful at high rates, especially in soils that are already alkaline. Since about 80 to 90 percent of wood ashes are water-soluble mineral matter, high rates can cause salts to build up in soils resulting in plant injury.

What Minerals Do Wood Ashes Contain?

Wood ashes contain all the mineral elements that were in the wood. Potassium, calcium, and magnesium carbonate or oxide are present in comparatively large quantities giving the ashes a strongly alkaline reaction which can neutralize acid soils. However, the value of wood ashes as a plant food depends mostly on the potassium content.

In general, wood ashes contain 5 to 7 percent potassium and 1 1/2 to 2 percent phosphorus. They also contain 25 to 50 percent calcium compounds. Hardwood ashes contain more potassium than those from softwood.

Wood ashes lose much of their nutrient value if they stand in the rain, because potassium and other water-soluble nutrients leach out with water. Generally, if leached, the less soluble carbonates remain, leaving the ashes alkaline.

How Much Should be Applied?

An average application is 5 to 10 pounds per 100 square feet scattered on a freshly tilled soil and raked in. For a pre-plant treatment, it is best to apply ashes 3 to 4 weeks in advance of planting. They also can be sidedressed around growing plants or used as a mulch.

In order to avoid problems of excess salinity, alkalinity, and plant nutrient availability, you should limit the application of ashes to 5 pounds per 100 square feet of soil per year.

Avoid contact between freshly spread ashes and germinating seeds or new plant roots by spreading ashes a few inches away from plants. Ashes that settle on foliage can cause burning. Prevent this by thoroughly rinsing plants after applying ashes.

Because ashes are alkaline, avoid using them around azaleas, camellias and other acid-loving plants. Wood ashes are very low in nitrogen and cannot supply your plants' needs for this element. You will need to follow your normal nitrogen fertilizer schedule when ashes are applied.