

FIREPLACE ASHES – The Good, the Bad, and the Ugly

Gardeners are always looking for ways to obtain high yields of healthy produce or beautiful lawns at low cost. Fertilizer is one of the significant costs in gardening. Some sources herald the benefits of the potassium, phosphorus, calcium, magnesium carbonate and lesser minerals of zinc, boron, iron, manganese and copper found in fireplace ash for feeding the garden and thereby reducing fertilization costs. Wood ash, as a plant food, is found chiefly in its potassium content. It is highly recommended that prior to deciding to treat a garden or yard with fireplace ash, a soil sample test be obtained to determine if the garden or yard soil will be benefited or harmed (see footnote for soil testing services).¹

A neutral pH is 7 on a scale of 0 to 14. If a garden has a pH level below this neutral level the soil is on the acidic side. Fireplace ashes may help to increase the alkaline content because the majority of fireplace ash contains the highly alkaline minerals of magnesium and calcium carbonate (containing a pH of 10 to 12). However, some plants, such as tomatoes, carrots, garlic, peppers, squash, pumpkins, cauliflower, azaleas and rhododendrons prefer slightly acidic soil conditions. Tomato growers may find their tomatoes failing to produce and thrive if fireplace ashes are added in too great of a quantity producing an alkaline soil. Wood ash contains about 5-7% potassium and 1½-2% percent phosphorus which are two minerals found in most over-the-counter fertilizer mixes. Soils in Eastern Oklahoma are naturally rich in phosphorus but may be deficient in potassium. Adding phosphorus is usually unnecessary and may create an overload causing poor plant development and hinder the plants ability to absorb micronutrients like zinc and iron and even hasten the plants demise. And, too much potassium may inhibit the absorption of nitrogen. Also, of concern would be that adding wood ash for the beneficial minerals of potassium and phosphorus could backfire as these minerals may leach out over time due to rain and watering and leave behind the highly alkaline and less soluble carbonate salts.

The bottom line - unless gardeners carefully monitor the soil pH, phosphorus and potassium levels, the safest policy is to simply not use fireplace ashes on gardens, flowers, shrubs and lawns. If a potassium deficiency is found to exist, based on a recent soil analysis, do not exceed 15 pounds per 1,000 square feet of garden or lawn and only do this every 10 years. Excessive

¹ Soil should be gathered from the top 6 inches at various points of the garden or yard and mixed in a container. Testing will show pH (acidity or alkalinity), nitrogen, phosphorus and potassium levels and recommendations from the testing lab will be provided. Samples can be brought the Tulsa County Master Gardener office, with the \$10 fee, and test results should be received by mail within 10 to 14 days.

applications may ruin the soil. Finally, avoid applying ash to areas where blueberries, azaleas, or other acid-loving plants are grown and avoid applying ash directly to green plants due to its high pH and salt content.

References: 1) Oklahoma Cooperative Extension Service Fact Sheet PSS-2238, Fireplace Ash for Lawn and Garden use. 2) University of California, Cooperative Extension Division of Agricultural Sciences, Vegetable Research and Information Center, Wood Ashes as a Garden Fertilizer by Ed Perry. 3) HORT COCO – UC Master Gardener Program of Contra Costa County, Wood Ash Not Recommended for Gardens, Published 3/23/15.