Wood ashes make a valuable contribution to the soil. A tree's root goes deep into the earth to pull up the nutrients it needs. Many years of growing have left minerals in the wood. These are not destroyed by fire, but are still in the ash. The word "potash" reveals its origin, the results of combustion, and it is the root of the name given to the element potassium. Plants require potassium; it is the "K" on NPK. Ashes contain about 4 to 5% potassium.

Calcium is the other macronutrient in ash wood. Both calcium and potassium are cations, positively charged ions. This means they are alkaline and raise the soil pH. They're good for acid soils, which ours tend to be. Calcium is also found in limestone, as calcium carbonate.

Ashes are caustic, and it's not good for you to get them on your skin. Lye soap is made from wood ash. Because of its caustic nature, ash is not mixed with manure, as its chemical action drives the ammonia from the manure into the air. We want the oxygen that's in the ammonia to stay in the soil.

Trace elements are also found in wood ash. These are nutrients that plants need in small amounts. I imagine different species of trees have various amounts of the different trace elements.

Only dry ashes are valuable, rain leaches out the nutrients. I clean out the wood stove into an ash bucket and wait until the coals are cold; which can be a few days.

One gallon of wood ash covers about 1000 square feet of garden. The ash bucket looks like it holds about two gallons, and I fling it 10 feet on either side of me as I walk about 100 feet through the garden. I sprinkle it on as if I was putting black pepper on my eggs. I spread lime on about five times thicker, as if it were salt on my eggs. Don't put it on too thick, it is caustic and can alter your pH too much (and don't put ash and lime on your eggs).

We've been burning brush piles, and then spreading the ash on our fields. The black charcoal is also valuable, but for a different reason. It is carbon, the unburned residue, and has lots of air space in it. When incorporated into the soil, these air spaces become safe havens and homes for soil microbes. Recent archeological excavations in South America indicate that pre-columbian civilizations there made charcoal to use for building soil. We can learn a lot by studying how ancient peoples kept their land fertile. Wood ashes and charcoal were, and still are, important soil amendments, and easy to make from your own farm.