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JOHN'S CORNER

ORGANIC FERTILIZERS AND NUTRIENTS - 28:

ASHES

by John Ferguson

I was asked a question this week about using ash from cremated animals as a feedstock for composting and weather it was good or bad.

Hence today's topic on ashes.

There are many types of ashes available both commercially and from our own yards. Some of these can be very good and useful while others may cause problems.

The most common ash is from the burning of wood products. This may be logs in our fireplace or fire pits or ash from the drying of wood by lumber companies. These types of ash differ.

When natural gas prices are high many lumber companies burn their waste bark products for heat to dry the lumber. This ash is typically alkaline and low nutrients since the feed stock (barks) is low in nutrients. When used in small amounts it does not affect the soil pH and will supply a few nutrients. It is sometimes available in large quantities for free as it is a waste product that companies must dispose of. In some areas large amounts of this ash are used to harden and stabilize soil or as an ingredient in plaster or concrete.

The second type of wood ash is from our fireplaces or fire pits in our yards where we burn wood (logs and limbs). This ash has more nutrients than barks and can provide nutritional benefits. I have been using it for years (decades) in my own garden on an alkaline clay soil without any problems. The key is to use only small amounts per square foot of soil and let nature naturally assimilate the nutrients into the soil.

The third type of wood ash is from electrical generating plants where wood chips are burned for energy to make electricity. In general this ash is similar to fireplace ash above. However, generating plants often get

wood from ground up pallets or construction materials that may have contaminants on them that end up in the ash. Occasional usage will not cause in problems as here is a tremendous dilution effect of any toxics and many toxics are destroyed by the heat of burning.

Our next type of ash is from burning charcoal briquettes in our bar-b-que pits. These briquettes have been treated with chemicals to make them burn slowly and evenly. Most of the chemicals are destroyed during the burning but a few remain. I have experimented using this type of ash, comparing it to fireplace ash. In all my tests it seemed to have mild negative effects of soil and plant growth for a few weeks. My recommendation is to avoid using it.

The 5th type of ash is from cremating animals and is a high quality ash. This ash is often available from universities, animal control facilities, animal research facilities, etc. where dead animals are cremated (burned) for health and safety and to reduce the volume of material to be handled and disposed of. All animals from insects to fish and mankind are extremely rich in nutrients. Hence this type of ash can be used as a fertilizer whether applied directly to the soil or as an ingredient in composting.

The next type of ash one may encounter is from the burning of garbage. This is a common disposal method in the country where one does not have access to trash pick-up. The possibility of toxic materials in the ash depends on many factors, but in general, it is very high and one should not use in gardening.

Another ash that is sometimes available occurs when garbage (Municipal Solid Waste or MSW) is incinerated (burned) rather than land filling it. The ash material is toxic and should be avoided.

Our last common ash is from the burning of coal to produce electricity. This ash is extremely alkaline (worse than Drano), full of heavy metals, and often radioactive components found in the coal where all these toxics become concentrated. It should never be used in gardening or horticulture. *WARNING: Many companies that sell mulch products in the Houston and Gulf Coast area use coal ash to chemically burn their products black.*

APPLICATION

Ashes can be sprinkled lightly over our flower beds and watered in. If left on plant leaves very long in may chemically cause burn spots.

One way to apply ash is to make a special spreader. One needs a large plastic coffee container. Use a torch or hot stove and heat up a large nail, and then use it (use pliers to hold the nail so that you do not burn yourself) to melt holes in the lid about one inch apart. Place the ash into your new shaker and close the lid. As one shakes it the fine ash falls out in small amounts and can be spread around the base of plants without getting it on the leaves. When finished there will be pieces of charcoal left in the container. These leftover pieces work good in a soil mix for containers and hanging baskets as they help aerate the soil and hold moisture.

The method I use to apply my fireplace ashes is simple and effective.
I collect the ash from my fireplace and place the ash into a 5 gallon bucket with a lid on it to keep it dry. When there is a breeze and just before it rains, I remove the lid and use my electric blower. I aim the airstream from the blower over the bucket and slowly lower it until it starts sucking out the ash and scatters it into the wind. Note: Do not aim the airstream directly into the bucket or it will get all over you.

The wind will carry a very fine dusting of ash all over the yard. The rain (or sprinklers) will wash the ash into the soil so it does not burn plant leaves. The minerals are returned to the soil where the microbes will make them available to the plants. The later of ash is so small per square foot that it does not affect the pH of the soil.

The next time I need to get rid of ash I wait till the wind is blowing from a different direction so eventually the whole yard is covered. I have been doing this for years with great results.

SUMMARY:

There are many types of ashes available. These ashes can be bad or good depending on the source and type.

PROS:

- source of a few major nutrients
- small amounts of minor and trace elements

- releases nutrients relatively quickly
- helps light sandy soils hold moisture
- inexpensive to free
- recycles a waste product

CONS:

- often very alkaline
- may chemically burn plants
- may release nutrients too quickly
- often dusty when dry
- some type of ash are toxic.