NATURE'S WAY RESOURCES
an organically based service company

www.natureswayresources.com

JOHN'S CORNER:

The Story of our Incredible NATIVE HARDWOOD MULCH Composted (Aged)

The story starts back in 1992 after I left the oil industry to start my own landscaping business. I started reading about the problems pine bark and hardwood bark mulches were causing in the landscape industry, hence I wanted to find out why they were causing problems.

I learned that the aged (composted) barks that had been used for decades had all been used up and only fresh bark was available. As I studied the problem, I found that fresh bark has very different chemical and biological properties (kills good microbes), it also looked different than aged bark. Hence, to make the bark look dark companies were adding toxic waste to the bark to chemically burn it black to make it look like composted bark. Since I wanted to use only organic and sustainable methods, I had to find an alternative.

For years I had an electric grinder that I used to grind up all my tree trimmings, pruning's, downed limbs from storms, etc. which I used as a mulch in some areas. My own yard originally was a nasty black gumbo clay soil, but in the areas, where I had used the ground up branches, I noticed something happening. The clay had broken down into rich loam that was loose and crumbly, it was full of very large earthworms, there was all types of soil life present on and in the mulch, the soil stayed moist even in the hot summer without irrigation, the plants grew extremely well and without insect or disease problems. A very different response than the areas where I had used pine or hardwood bark mulches.

Over 25 years ago, I was at a trade show and met a man named Malcomb Beck whom owned a compost company in San Antonio and he had similar experiences in using ground up branches

and limbs that he just referred to as "Native Mulch". I became fascinated and excited as I had a possible solution, hence, I started researching this type of mulch. This was before the internet days so I spent a lot of time going through horticultural and soil science journals at our university libraries looking for research papers on this type of mulch but there was very little information to be found. However, the organic waste recycling movement was just beginning in the USA and universities started studying how to use this ground up material. A new model of soil health and fertility called the "soil food web" was also being developed that explained why this type of mulch worked so well.

As a sidebar, when I started my composting business, recycling brush and leaves into our now famous "leaf mold compost" and into an aged (composted) "native mulch" they would not sell at first. As folks tried the leaf mold compost and got excellent results it started selling, but the mulch did not even though it was extremely high quality. So, I had an idea and renamed the mulch from "Native Mulch" to "Native Hardwood Mulch" and it started flying out the door as the fad at the time was hardwood bark mulch. Folks started using it and it quickly became the standard for high quality mulches.

This experience started a journey on studying all types of mulches and how they compare to each other and how to use them. There is a whole world of information on mulches in the scientific literature that most folks are not aware of. As I studied and learned over the years, I continued to improve the quality and benefits. During the drought of 2011 many homes burned to the ground due to the mulch on their flowerbeds as many are highly flammable. Universities studies have shown that the aged (composted) native mulches are extremely fire resistant.

The other day I was listening to both of our gardening radio shows and both hosts recommended placing compost down first and then the native mulch. This is the best way to mulch our flowerbeds as it copies the way God does it in nature.

At Nature's Way Resources we produce our coarse ground aged (composted) native mulch to naturally have a lot of compost in it. After listening to the garden shows I was curious as to how

much compost is in our mulch, so I decided to find out.

First, we only use the small branches and limbs of trees to make our native mulch. The reason deer, squirrels, beavers and other animals eat branches and limbs for food is that it is full of vitamins, proteins, minerals, etc. When one uses this type of material to make the native mulch it makes a very nutrient rich mulch. If you notice in the picture below there is lots of leaves and small limbs. The leaves and the cambium layers of the branches rapidly turn into a rich compost. The woody pieces turn a dark chocolate brown as the age up due to the composting process. The composting process shrinks the material which increases the nutrient density of the mulch and concentrates the nutrient content.

To find out how much compost was in our "Native (Hardwood) Mulch" I took a small bucket nine inches deep to use as a container.

I filled the bucket with the coarse ground native mulch till full. I then hand screened all the mulch in the bucket through a ¼ inch mesh hardware cloth.

I then poured the fines that were collected back into the original bucket and measured the amount. It turns out our Native Hardwood Mulch is over 50% microbe enriched compost (humus).

For years I have noticed that earthworms get huge when living in the native mulch, many times larger than normal. The large amount of compost content explains why. Most earthworms eat microbes living on the organic matter. Earthworms can easily ingest the compost fines in the native mulch that are full of microbes. Since the microbes are feeding on a nutrient rich material, they are full of nutrients, hence one gets very large fat and healthy earthworms.
Another benefit of Native Mulch the way we make it, is that the microbes that feed on it will also break apart heavy dense sticky clay and turn it into beautiful loamy soils that all plants love.
When used on one's flowerbeds the composted mulch fines turns into rich humus that holds water, nutrients and minerals in the soil preventing leaching. The humus formed is a mixture of humates, fulmates, humins, and other compounds that make the soil healthy.

The fines in the native mulch are much denser than the larger pieces, hence when it is applied to one's landscape beds they naturally settle to the bottom and the woodier pieces float to the top. This recreates the mulch layers that God uses in nature. The soil is covered with 1-2 inches of dark brown to almost black crumbly organic matter (a compost layer) and then 1-3 inches of brown leaves, twigs, etc. the woody layer.

Research funded for over 30 years by Canada's Department of Forestry at Lavelle University, from studies all over the world have found this type of mulch is the quickest and most cost effective to improve soil whether sand or clay!

Benefits of our Native (Hardwood) Mulch:

- The heat from the composting process kills the weed seeds and plant pathogens

- Our native mulch is *ALIVE* as it contains huge amounts of beneficial microbes that create healthy fertile soil and prevent disease

- Our native mulch since it is composted is naturally stabilized, preventing nitrogen tie-up when applied

- Our native mulches improve soil quality faster than any other method and at lower cost

- Due to the tremendous density of beneficial microbes, native mulches prevent many types of plant diseases

- Native mulches increase plant growth rates and increase yields of vegetables and fruits.

- Native mulches prevent soil compaction as they provide food for earthworms and food for trillions of microbes that create soil structure

- Native mulches feed and fertilize the soil as they are many times higher in nutrients than traditional barks.

- Native mulches made from tree materials that have a high percentage of buds, shoots, leaves, and cambium layers in them. These materials are rich in protein, vitamins, enzymes, minerals and other nutrients.

- The humus particles (fines) attract water molecules and can actually absorb them from the humidity in the air and then store the water for plants to use later

- Studies at Tx A&M University has found that native mulches are the best at reducing erosion. The material tends to physically lock together and it is full of beneficial fungus fibers that glue mulch fragments together and to the soil (glomalin's). Hence, they do not float off in a hard rain as easily as most barks do. Native mulch is also full of bacteria that also produce glues (polysaccharides) that glue the particle to each other and the soil.

- Native mulches make an excellent potting medium or rooting medium for many species of plants.

- The use of native mulches completes the recycling loop. It helps save valuable landfill space by recycling grass, leaves, trees limbs and other woody material that would have created large amount of greenhouse gasses in the landfill. As it turns into humus it sequesters carbon into the soil.

- Many beneficial insects hide in the coarse mulch during the day and come out at night to eat pest insects like aphids.