



MULCH CORNER

NATIVE MULCHES

By John Ferguson

Last week we talked about Redwood mulches available in Houston area and along the Gulf Coast. This week we are going to look at the best type of mulch "Native Mulch".

For years gardening experts have claimed that this was the best mulch of all and scientific research has backed them up. "Native" mulch is made from recycled fresh green tree and brush material that was recently alive and comes directly from a grinding operation. The Texas Association of Nurserymen (TAN) recognized "Native Mulches" as a separate class of mulches from barks and other materials in their 1997 product directory. Native mulches are available as fresh ground or aged (composted) and in many variations.

Native mulches started becoming available in recent years as society became aware of the importance of recycling brush and tree trimmings instead of burning them or placing them in a landfill. Recent research has found that mulches made from recycled native trees are the highest quality available. They are also among the lowest in cost by offering real value since they are made locally and do not have high transportation costs associated with them.

Local native mulch is produced from a mixture of native trees (primarily hardwoods), conifers, brush and any other species growing in a given area with bark, wood and sometimes leaves included. Native mulches have a high percentage of buds, shoots, leaves, and cambium bark layers in them. These materials are rich in protein and other nutrients which is why deer and other animals eat them as a food source. These native mulches are many times higher in nutrients than barks. Native mulches encourage biodiversity of beneficial microbes and earthworms in the soil and feed plants as they decompose.

Years ago consumer awareness was the only negative, since the appearance is different than pine bark or shredded hardwood bark. However as these mulches have become more available this perception has changed. Studies and market acceptance have shown that most people prefer the native mulch since it actually looks more natural than barks or other alternatives.

Composted or aged Native Mulch?



Native mulch that is aged or composted first before application is of the highest quality. The heat generated during the composting process kills any pathogens and weed seeds that might have been present. The composting process also concentrates the nutrients contained in the raw material and stabilizes nitrogen. Additionally, the composting process breaks down the lignin and cellulose contained in the raw material rendering a less attractive home for termites and many pathogens after it is applied. The composting process allows very high levels of beneficial microbes to develop and grow in the mulch increasing its value.

Screened composted native mulch is also an excellent amendment to use in soil mixes as it supplies energy to the soil (stored in its chemical makeup) in the right form for beneficial soil organisms to use. Grinding and screening (particle size) will determine the appropriate usage. A two year study from Texas A&M University (TAMU) has found that native mulch and compost out performed all other erosion control methods. It was also the lowest cost! Research in Florida has confirmed TAMU's work. Research at the Ohio Agricultural Research and Development Center has found that plants grown in substrates rich in biodegradable organic matter (such as found in Native mulches) support microorganisms that induce systemic resistance to disease (American Nurseryman, October 1, 1997).

As a bonus for those in the South dealing with imported fire ants, using a quality composted native mulches may reduce mound density. Many landscapers, gardeners and others have observed and reported a reduction (not elimination) in the number and size of fire ant mounds on areas where composted native mulches were used. It is believed that the native mulches increase the density of organisms that attack and prey on the fire ants reducing their numbers. This has not been confirmed by rigorous research and would be an interesting area of study for our universities.

In general, a 3-4" thick layer should be used on ornamental beds and 4-6" layer around trees and shrubs. It comes in many formulations and sizes. It is sometimes blended with shredded hardwood bark to obtain a familiar appearance (lowers quality) or with compost to increase the quality even higher. It has been used as a potting media in container grown plants, to root cuttings and often works better than bark for many species of plants.

General benefits: Economical, the composting process concentrates nutrients and stabilizes nitrogen, the heat kills weed seeds and pathogens, improves plant and soil health, sets up quickly to resist blowing or washing out, reported to prevent many plant diseases, encourages microbial biodiversity in the soil, reported to increase tree and plant growth rates. Subject to less freight cost and less transportation that causes pollution hence much more environmentally sensible. The usage of native mulch also saves valuable landfill space or air pollution from burning since it is made from recycled materials.



Using native mulch also helps reduce greenhouse gasses. When organic materials are placed in a landfill they undergo anaerobic decomposition producing methane which contributes 23 times more to global warming and some nitrogen oxide which contributes 200X more than carbon dioxide. Also since native mulches are made from recycled materials they qualify for points in the Sustainable Sites Initiative (future LEED landscaping guidelines).

Note: Course ground and unscreened composted (aged) native works best from a physical, chemical and biological perspective. However, a screened version is more cosmetically appealing and works better as a soil amendment. Sometimes available in a double ground form that looks similar to some shredded barks.