



Pontchartrain Basin Update #1

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Understanding the Environmental Impacts of Cypress Mulch

Cypress mulch is a popular choice for the home garden, but with Louisiana's cypress swamps in severe decline, what is the ultimate impact of using cypress mulch in your landscaping? The Lake Pontchartrain Basin Research Program (PBRP) takes a look at some common misconceptions about cypress mulch and the health of cypress forests in southern Louisiana.

1. Mulch is beneficial to gardens and flowerbeds.

True. Mulch has many benefits. It suppresses the growth of weeds and reduces water usage in the garden by preserving soil moisture.

2. Cypress is better than other types of mulch because it is resistant to termite infestation and rot.

False. Cypress mulch is nearly always made from trees that are too young to have resistance properties that are characteristic of only old growth cypress heartwood^{[1][2]}. Cypress mulch derived from young trees is no better than other mulches such as pine straw, pine bark, eucalyptus, etc.

3. Cypress mulch will not float.

False. Cypress mulch, even if marketed as “no float”, will float and wash away during heavy rains. Pine straw is a much better choice for gardeners concerned about floating mulch. Pine straw packs down in a manner that resists movement even in heavy downpours. This helps guard against erosion of garden soil and makes it a better weed suppressant.

4. Cypress is just as sustainable as other forest products.

False. Unfortunately, in southeast Louisiana, cypress logging is not a sustainable operation. A scientific panel commissioned by Governor Kathleen Blanco in 2005 estimated that 70-80% of Louisiana's cypress forests could not regenerate if logged, even if they are replanted with cypress trees^[3]. Many factors, such as the presence of levees along the Mississippi River and the construction of spoil banks from logging operations and oil and gas drilling, combine to create stagnant and salty swamp ecosystems that are unable to sustain cypress. Once cut, these areas will no longer regenerate without restoration activities because cypress seedlings are unable to grow. If large stands of cypress trees cannot regenerate, even with plantings, it is not a sustainable or renewable forest product.

To see the dramatic effects of cypress logging, just view either side of the I-55 Manchac bridge to see what once was old-growth cypress swamps. After being logged in the early 1900s, most of the cypress failed to regenerate and the area converted to open marsh. Of the few cypress trees that do remain, many are classified as “ghost trees”, which are dead or dying trees that the loggers did not fell. Some cypress trees may be spotted growing along the spoil banks of canals. Their growth and sustainability



is a direct result of the higher elevation of these areas. Cypress swamps serve as very effective physical buffers in the protection of southeastern Louisiana from hurricane storm surges, and are more valuable than marshes in saving property and lives whenever major storms strike our coast. The Lake Pontchartrain Basin Foundation has listed these wetlands as a critical component in their “multiple lines of defense”^[4]. Cypress forests are also a valuable resource to Louisiana wildlife, tourism, recreation, and culture. PBRP sponsored research indicates that the Maurepas swamp area contains at least 240,000 pairs of breeding songbird, an “Important Bird Area” that needs special consideration. Since birds preferentially seek out cypress forests over open marsh during spring and fall migrations, the presence of healthy cypress forests is very important because so many of North America’s migratory birds must pass through Louisiana during their annual migrations. Cypress forests are also a vital habitat for the threatened Louisiana black bear.

5. It is OK to buy cypress mulch as long as it does not come from Louisiana.

False. It is not possible to determine the origin of a bag of cypress mulch, and other states are experiencing similar problems. Since alternatives are available, it is probably best to steer clear of any cypress mulch.

6. Cypress mulch is a by-product of other cypress logging operations. Only the tops and small branches are ground into mulch.

False. Many operations have included the grinding entire stands of young trees straight into mulch. When large trees are logged, the wood is too valuable to grind into mulch; instead, it is milled into planks for fine furniture and other products. However, when small cypress (less than 200 years old) are logged, the entire tree is often ground into mulch^[5]. U.S. Army Corps of Engineers records reveal that some companies have applied for permits that would allow them to cut approximately 50,000 acres of cypress trees solely for mulch. The permits include some cypress swamps in southern Louisiana.

7. Does this mean I can never use cypress mulch again? What about mulch derived from sustainable logging operations?

Although alternatives to cypress mulch exist, such as pine straw, eucalyptus, pine bark, lawn clippings and leaves, cedar, recycled sugar cane, pecan shells, and melaleuca, some people enjoy using cypress mulch for aesthetic reasons. A certification system, such as that developed by the Forest Stewardship Council ^[6], would allow gardeners to use mulch in confidence, knowing that they did not destroy critical ecosystems in order to improve their gardens. Citizens can encourage the use of a certification system by contacting their local stores and elected officials.

References:

[1] Sylvia K. Beauchamp. **Cypress: from wetlands and wildlife habitat to flowerbeds and front yards.** UF/IFAS Educational Media & Services <http://www.napa.ufl.edu/oldnews/mulch.htm>

[2] M. L. Duryea, J. B. Huffman, R. J. English, and W. Osbrink 1999 **Will subterranean termites consume landscape mulches?** Journal of Arboriculture 25(3): 143-150 <http://www.treelink.org/joa/1999/may/04duryea.pdf>

[3] Chambers, J.I.; Conner, W.h.; Day, J.w.; Faulkner, S.p.; Gardiner, E.s.; Hughes, M.s.; Keim, R.f.; King, S.I.; Mcleod, K.w.; Miller, C.a.; Nyman, J.a., And Shaffer, G.p. 2005. **Conservation, Protection and Utilization of Louisiana’s Coastal Wetland Forests. Final Report to the Governor of Louisiana from the Coastal Wetland Forest Conservation and Use Science Working Group.** 121p. Available from <http://www.coastalforestswg.lsu.edu/>.

[4] **Lake Pontchartrain Basin Foundation Pontchartrain Coastal Lines of Defense Program** available at http://www.saveourlake.org/lod_strat.htm - overview <http://www.saveourlake.org/pdfs/JL/MLODSfullpt2-06.pdf> - full report

[5] Paul Fisette. 2005. University of Massachusetts Building Materials and Wood Technology. **Wood Myths: Facts and Fictions About Wood Setting the record straight on common misbeliefs about the material we use everyday.** http://www.umass.edu/bmatwt/publications/articles/wood_myth.html

[6] Certification principles laid out in the **FSC Principles Criteria**, available from the Forest Stewardship Council, 1155 30th St. NW, Ste 300, Washington DC 20007 or at http://www.fscus.org/images/documents/FSC_Principles_Criteria.pdf

Other Resources: Black, R., E. Gilman, G. Know, and K. Ruppert. 1993. **Mulches for landscapes.** Fl. Coop. Ext. Serv., Univ. Florida, Gainesville. ENH 103.

Ewel, K.C., H.T. Davis, and J.S. Smith. 1989. **Recovery of Florida cypress swamps from clearcutting.** South. J. Appl. For. 13(3):123-126.

Circular 1186-University of Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences **Cypress: Florida’s Majestic and Beneficial Wetlands Tree** Mary L. Duryea and L. Annie Hermansen.