



Conservation News

Harrison County Soil and Water Conservation District

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Winter/Spring 2019

Alliance of Sustainable Farms Field Days



Rock Woods, Regional Director and Felicia Bell, Agriculture Specialist with National Center for Appropriate Technologies Gulf States at the "Square Foot Gardening" field day.

The District and NRCS had the opportunity to attend a field day at PJ Farm in Saucier, focusing on "Improving Soil Health, Benefits of Herbs, and Beekeeping". PJ Farm is the only 'USDA Certified Organic' farm in Harrison County. They had a record crowd, and among the speakers were Tyree Harrington, NRCS District Conservationist and Dirk Dedeaux, FSA County Executive Director, who both spoke on the various programs offered to farmers and landowners.

The District and NRCS also participated in the 34th Street Wholistic Gardens, "Square Foot Gardening – Intensive Planting Field Day". Executive Director James Franklin and FoodCorps Team Leader Jara Lee work with Master

Gardeners and various volunteers to teach gardening and maintain the crops. This non-profit endeavor is on City of Gulfport property. If you haven't gone by, it's quite impressive, and they have a 'work day' every Saturday morning. Gardens are located at 808 34th Street, right by the Knights of Columbus facility and Bark Park. I have been several times and am amazed by how organized and full of life this huge garden is.

To learn more information about the Alliance of Sustainable Farms, visit National Center for Appropriate Technologies (NCAT) www.ncat.org and for 34th Street Wholistic Gardens, visit www.34thstreetgardens.com.

Emergency Watershed Protection Tour



NRCS District Conservationist Tyree Harrington gave a tour of Harrison County EWP sites in Gulfport and D'Iberville, to representatives of Hancock County.



Hancock & Harrison County District and NRCS staff joined NRCS South Area staff in hosting a tour of Emergency Watershed Protection (EWP) sites for the Hancock County Road Dept. and Hancock County Board of Supervisors. We visited EWP sites in Gulfport and D'Iberville.

NRCS Area Engineer Norman Patterson and NRCS Area Conservationist Dennis Jones answered questions about the EWP process, and provided a packet of before/after pictures, along with a drawn layout of the projects. Everyone had received a power-point of the EWP process prior to the tour.

Hancock County SWCD coordinated this tour to better inform decision-makers how the EWP process works. This was a really good team effort and successful tour.

Aldo Leopold - The Father of Wildlife Conservation

Joe Buckley, Deputy Commissioner

Any mention of wildlife conservation today cannot be made without some reference to the teachings of Aldo Leopold. Though many may not know his name, we all have seen some implementations of his observations about nature and how mankind relates to it.

Leopold's benchmark book, *A Sand County Almanac*, has been a primary reference for wildlife conservationists since its first publication in 1949. It is separated into three parts. The first part centers on the months of the year at his farm. His farm, it turns out, was a "cheap" farm (as he describes it) with worn out soil and seasonal flooding. Leopold observed, through his farm returning to its more natural state, a beauty. In a philosophical expression, he used the seasons to describe his experiences.

The second part of the book is called "Sketches Here and There." It describes different areas of the continent and his personal observations of wildlife and habitat. These observations are also expressed in a very philosophical prose that leaves the reader with a sense of seeing what

Leopold was experiencing. The last part of the book is called "The Upshot." To me, this is the part that brings the rest of the book together. Leopold explains that the earth, nature in particular, is a biotic community. Land ethics dictate that humans must see the soil as alive and treat it as such. Land owners must see that that this ethic also applies to others as their actions affect their human community. Wildlife is a valuable resource that is vital to the wellbeing of humans.

These are just some of the teachings of Aldo Leopold. Though he is no longer with us, his thoughts and observations appear to be more relevant than ever. His rejection of linear practices such as the killing of predators by ranchers has been seen as advantageous by the National Park Service in reintroduction of predators in our national parks.

"Perhaps such a shift of values can be achieved by reappraising things unnatural, tame, and confined in terms things natural, wild, and free." Aldo Leopold

Liming To Correct Soil Acidity

Tim Ray, MSU Extension Agent

Many of the soil test results that come through my office recommend adding lime to increase the soil pH. Soil pH (potential hydrogen) is an indicator of acidity on a scale of 1-14 with 7 being neutral and above 7 being alkaline. Positively charged hydrogen ions (H+) may be added to the soil by decomposition of plant residues and organic matter, or because nitrification of ammonium occurs when fertilizer or manure is applied. This can result in an increase of acidity (lower pH) due to the increase of hydrogen ions.

When soil pH is too low (or too high) some nutritional elements aren't available to the plant. Therefore, it's a good practice to maintain the proper soil pH. When soil tests indicate the need for lime, be sure to follow the recommendations carefully. You can apply lime any time in the year, but you should apply no more than can be dissolved and absorbed at a given time. For lawns, apply no more than 50 pounds per 1,000 square feet to actively growing turf, therefore, several applications may be necessary to apply the total amount recommended by the soil test report.

Is there an ideal time to apply lime? Yes. In general, lime takes a few to several months to break down enough to change the pH so allow yourself plenty of time for this transition. So, if you get your garden soil tested in February or March, it's going to be a while before the plants can reap the benefits of a liming application unless it's for a fall garden. Likewise, lime your pasture this year for next years' forage crop.

Two common sources of lime are calcitic lime (ground agricultural lime containing calcium) and dolomitic lime (dolomite containing magnesium). Calcitic lime is the most widely used because of its easiness to apply and is beneficial in most situations. Dolomitic lime is used most often when there is a magnesium deficiency which can occur in more sandy soils. Maintaining a proper pH for your lawn, garden, or pasture is more important than just adding fertilizer itself since nutrient availability depends on it. A soil test will provide you with recommendations for liming application depending on your soil type, but remember, it takes time for the liming application to work. For more information, contact Tim Ray at 228-865-4227 or tim.ray@msstate.edu.

Living Shorelines: Protecting Our Coast

Eric Sparks, MSU Extension Service

We love our coast. We love relaxing at the beach, fishing, birdwatching, eating seafood, along with a multitude of other coastal activities. All of our favorite activities are made possible by our beautiful coastal ecosystems, including our wetlands, beaches, and coastal waterways. In addition to providing habitat for aquatic animals and seafood, these systems also protect our communities from storms, improve water quality, and prevent erosion along our shorelines. However, shoreline hardening threatens these ecosystems and their benefits to us.

For small shoreline properties, hardened structures, such as bulkheads and rip-rap walls, have been the standard for preventing erosion for decades. However, these hardened structures can do more harm than good. Shoreline hardening destroys critical intertidal marsh (the shoreline area that has standing water at high tide and no water at low tide), can actually increase shoreline erosion over time, and is vulnerable to failure. A natural alternative for shoreline hardening is “living shorelines”.

These “living shorelines” got their name by utilizing natural elements, such as plants and/or oyster shells, to provide numerous benefits. Like hardened structures,

living shorelines prevent erosion, but they do so by using plant roots to anchor the sediment in place. Unlike hardened ones, these shorelines also increase water quality by using nutrient pollution as fuel, preventing it from entering the waterway and powering more plant growth. By keeping the shoreline healthy and intact, the intertidal marsh acts as important nursery habitat for juvenile fish and invertebrate species, like shrimp, blue crab, red drum, and speckled sea trout. Furthermore, living shorelines can act as a buffer against storm surge and are adaptable to environmental changes, allowing them to self-maintain after the initial implementation. In short, living shorelines can do what hardened shorelines can and so much more.

If you are interested in learning more, then consider attending one of our living shorelines workshops, hosted by the MSU Extension Service. If you would like to be placed on the email list for upcoming workshops or if you have any questions, contact Eric Sparks, an assistant professor with the MSU Extension Service and coastal ecology specialist with the Mississippi-Alabama Sea Grant Consortium, at eric.sparks@msstate.edu or 228-546-1025.



NRCS Accepting Environmental Quality Incentives Program Applications

Tyree Harrington, NRCS District Conservationist

The USDA Natural Resources Conservation Service (NRCS) is providing financial assistance through the Environmental Quality Incentives Program (EQIP) to help Mississippi producers, farmers and ranchers implement conservation practices.

NRCS strives to help producers and landowners enact environmentally friendly activities such as improving water and air quality, building healthier soils, improving grazing and forest lands, enhancing organic operations and conserving energy. EQIP provides financial assistance for a variety of conservation programs, which include irrigation water management, tree/shrub planting, field buffers, rotational grazing systems, and erosion control practices. All programs are voluntary and offer science-

based solutions that benefit both the landowner and the environment.

“The Environmental Quality Incentives Program offers producers a variety of options to conserve natural resources on their properties,” stated Kurt Readus, NRCS State Conservationist for Mississippi. “This conservation investment helps to improve environmental health and the economy of Mississippi’s communities.”

To qualify for EQIP, an applicant must be an individual, entity or joint operation that meets eligibility criteria. Applications for EQIP and all NRCS financial assistance programs are accepted on a continuous basis with specific sign-up deadlines being established to rank, contract and fund qualified tracts of land.

Agricultural Producers Conservation Stewardship Program

Tyree Harrington, NRCS District Conservationist

Agricultural producers wanting to enhance current conservation efforts are encouraged to apply for the Conservation Stewardship Program (CSP).

Through CSP, USDA’s Natural Resources Conservation Service (NRCS) helps private landowners build their business while implementing conservation practices that help ensure the sustainability of their entire operation.

Through CSP, agricultural producers and forest landowners earn payments for actively managing, maintaining, and expanding conservation activities like cover crops, ecologically-based pest management, buffer strips, and pollinator and beneficial insect habitat – all while maintaining active agriculture production on their land. CSP also encourages the adoption of cutting-edge technologies and new management techniques such as precision agriculture applications, on-site carbon storage and planting for high carbon sequestration rate, and new soil amendments to improve water quality.

Some of these benefits of CSP include:

- Improved cattle gains per acre;
- Increased crop yields;
- Decreased inputs;
- Wildlife population improvements; and
- Better resilience to weather extremes.

NRCS recently made several updates to the program to help producers better evaluate their conservation options and the benefits to their operations and natural resources. New methods and software for evaluating applications help producers see up front why they are or are not meeting stewardship thresholds, and allow them to pick practices and enhancements that work for their conservation objectives. These tools also enable producers to see potential payment scenarios for conservation early in the process.

Contact Tyree Harrington at 228-831-0881 or email tyree.harrington@ms.usda.gov.

Arbor Day - Friday, February 8
Harrison County Soil & Water Conservation District

Tips to Increase Survival of Pine Seedlings

Jim Barnes, NRCS Area 3 Forester

Most landowners and forest managers choose artificial regeneration using transplanted pine seedlings as the preferred method of reforestation. To be successful there are several steps in the planting process that need to be monitored closely in order to achieve good survival.

Pine seedlings are perishable and proper care of the seedlings from the time they leave the nursery until the time they are planted is critical. Dry weather and freezing temperatures are the most common causes of seedling failure. There must be adequate soil moisture when planting seedlings or planting should be delayed. Pine seedlings should be planted as soon as possible after they leave the nursery, preferably within 2-3 weeks. Seedlings should be kept in a cold storage facility with a temperature range of 34 – 40 degrees F and a relative humidity of 90% or greater. If a cold storage facility is not available, then seedlings should be stored in a cool, shady place or outbuilding and planted as soon as possible, preferably within 3-5 days. Most seedlings will be packed in bags and should be arranged in a way that encourages air circulation to prevent overheating. Seedlings should also not be allowed to freeze.

Transportation of the seedlings should be done in a manner that avoids exposure to direct sunlight. Seedlings should be covered with a tarp and any damaged bags should be sealed. Only transport enough seedlings to the site for one day's planting. While planting the seedlings, it is important that the planter does not carry more than one seedling at a time in their hands, as this can allow the roots to be exposed and dry out. Weather conditions

should be monitored as high temperatures around 80 degrees or freezing temperatures can be lethal. Relative humidity below 30% can also be lethal to the seedlings. Combine these conditions with winds around 15 m.p.h and you are asking for trouble.

Improper supervision of planters can also lead to problems. Trees should be planted at the same depth or slightly deeper than they were grown in the nursery, (depending on soil type). Root pruning of lateral roots should not be done unless they exceed 8 inches. J-rooting or U-rooting should not be allowed. Seedlings should be firmly packed in the ground to eliminate air pockets, which can cause the roots to dry out.

It is also important to know your seed source when planting seedlings. Loblolly pine seedlings planted in south Mississippi should come from a coastal seed source. You should not plant a piedmont or north Mississippi loblolly in south Mississippi. Longleaf seed to plant in south Mississippi should come from south Mississippi or south Alabama.

Container grown seedlings tend to have increased survival, especially when facing drought conditions. They are more expensive to plant, usually around \$40-\$50 more per acre. But when you consider the added expense of replanting, as well as the loss of one year's growth, they can be a viable option. Container grown seedlings are also easier to plant, and tend to have fewer planter errors.

For more information please refer to NRCS Conservation Practice Standard 612 Tree/Shrub Establishment.

Useful Landowner Websites

<http://hcswcd.co.harrison.ms.us>

www.ms.nrcs.usda.gov

www.msucares.com

www.mswcc.state.ms.us

www.ltmcp.org

www.fsa.usda.gov

www.mfc.ms.gov

www.deq.state.ms.us

www.co.harrison.ms.us

www.dmr.state.ms.us

www.mdac.state.ms.us

Harrison County Soil & Water Conservation District

Natural Resources Conservation Service

MS State University Extension Service

MS Soil & Water Conservation Commission

Land Trust for the MS Coastal Plain

Farm Service Agency

MS Forestry Commission

MS Dept. of Environmental Quality

Harrison County

MS Dept. of Marine Resources

MS Dept. of Agriculture and Commerce

Opossums - Our Best Defense Against Ticks

Opossums might be some of the weirdest looking animals to grace our streets in areas of urban sprawl but these critters may be one of the best defenses we have against Lyme disease. According to research by ecologists and environmentalists opossums, which are America's only pouched marsupials, meticulously groom themselves and, in the process, consume and destroy the ticks that carry *Borrelia burgdorferi*.

This southern species of mammal has gradually made its way north through a process of adaptation and helped by climate change, just as ticks have gradually spread north. Opossums have been around since the age of the dinosaurs and are known for snuffing out tasty morsels wherever they go, eating grubs and insects, and even mice when they get the chance.

Playing Possum - Not When it Comes to Lyme Disease

Now it seems that they also attract the black-legged ticks that carry Lyme disease bacteria, but rather than acting as a serious host reservoir for the infectious disease, they actually work as net killers of Lyme bacteria by picking the ticks off their fur and eating them.

Opossums - Efficient Tick-Killers

One opossum can get through around 5,000 ticks in just one season, according to researchers who looked at the

effect of six species of animals on tick populations. White-footed mice, as we know, are the primary host reservoir for ticks carrying Lyme disease in the US, while chipmunks, squirrels, and catbirds may also act as hosts for ticks. Opossum were found to be much more effective at eradicating ticks than any of these other animals, demonstrating that just because an animal can act as a host for ticks does not make it a net promoter of Lyme disease.

Foxes - Net Defenders Against Lyme

The same can be said of foxes, who likely carry ticks on their fur but who are also primary predators of white-footed mice, helping to make our towns and cities safer in regards to Lyme disease. Opossums pick up a lot of ticks and some of these will feed on the animals' blood, spreading infection. However, the opossums lick the ticks off their fur and eat them, with around 90% of the ticks they do pick up ending up being eaten, killed, and excreted in their feces.

Opossums might look a bit odd, then, but along with myths regarding the animals' susceptibility to rabies (they're immune) it seems that we should also thank these hapless night-lurkers for their part in keeping our streets free of Lyme disease.

Venomous Snakes

Heath Steede, MSU Extension Agent

When it comes to snakes in Mississippi we have plenty of them. Even though they may be scary they also are useful. Snakes feed on rodents that can be very pesky to us humans so that alone makes them beneficial. There are 55 different kinds of snakes in Mississippi, out of those, only six are venomous. So you are way more likely to come in contact with a nonvenomous snake than a venomous snake. Whenever you are enjoying the outdoors always be alert and when you do encounter snakes it is best to leave them alone. Seventy five percent of people bitten by venomous snakes are harassing or trying to kill the snake when they are bitten. Snakes only bite when they feel threatened.

The best way to identify venomous snakes is to become familiar with their color patterns and other characteristics.

There are nonvenomous snakes that have color patterns that are similar to those of venomous snakes. Most of the venomous snakes have a large triangle shaped head except the coral snake which has a narrow head. Head shape is very useful in identification but is never 100 percent accurate. Also, snakes can look different at different ages and regions where they live.

Always remember to keep your property clean, and watch where you walk, sit or place your hands and whatever you do, don't try and pick up a snake. There are many snake repellants on the market, but they do not work. Contact Heath Steede at 601-947-4223 or h.steede@msstate.edu.

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ConservationNews

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Harrison County Soil & Water Conservation District

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The Harrison County Soil and Water Conservation District holds a regular monthly board meeting on the first Thursday of each month. This meeting is open to the public and held at the District Office, 12238 Ashley Dr., Gulfport, at 11:30 a.m. This board meets to administer the program of soil and water conservation in Harrison County. An equal opportunity employer.

For more information about the Harrison County Soil and Water Conservation District, or any District projects and services, please call us at 228-831-1647 or visit our website at <http://hcswwcd.co.harrison.ms.us>.



Harrison County Soil & Water Conservation District



(l-r) Quinn Burns, Claire Cleveland and Isabella Nieves

Watersheds: Our Water, Our Home was the 2018 national theme for the District's annual Stewardship Poster Contest. This contest is open to all students in grades 2nd-6th, and Special Education 2nd-6th.

2nd/3rd Grade Harrison County Winners:

1st Place: Quinn Burns, St. Vincent de Paul;

2nd Place: Claire Cleveland, St. Vincent de Paul;

3rd Place: Isabella Nieves, St. Vincent de Paul

4th-6th Grade Harrison County Winners:

1st Place: Olivia Couvillon, St. Vincent de Paul;

2nd Place: Graceyn Drake, Lizana Elementary;

3rd Place: Taylor Dambrino, Lizana Elementary

Special congratulations to Quinn Burns, St. Vincent de Paul, who's poster went on to win 1st Place in the South Area and 1st Place in Mississippi.

Sweet Potato Cheese Ball Recipe

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|------------------|-------------------------------|
| 1 Pkg. (8 oz.) | Cream cheese, softened |
| 1/2 Cup | Mashed sweet potatoes, cooked |
| 1 Pkg. (2.5 oz.) | Smoked beef, chopped |
| 2 Cups | Shredded sharp cheddar cheese |
| 1/4 Cup | Crushed pineapple, drained |
| 1 Tablespoon | Chopped onion |

Combine cream cheese and sweet potatoes, mixing well. Stir in beef, cheddar cheese, pineapple and onion; mix well. Form into ball and chill. Serve with crackers.

MS Sweet Potato Council information prepared by Nancy Freeman, Consultant, msunancyf@bellsouth.net
Information provided by Farm Families of Mississippi, growingmississippi.org.