RESOLUTION 95 - 28

A RESOLUTION SETTING FORTH A STRATEGIC PLAN FOR CLOSURE AND POST-CLOSURE MAINTENANCE, YARD WASTE MANAGEMENT, WASTE TIRE MANAGEMENT, AND SOLID WASTE OPERATIONS.

WHEREAS, the Board of County Commissioners is required by the Florida Department of Environmental Protection to set forth Strategic Plans for closure and Post-Closure Maintenance, Yard Waste Management, Waste Tire Management, and Solid Waste Operations for Nassau County.

NOW, THEREFORE, BE IT RESOLVED, this 14th day of December, 1994, by the Board of County Commissioners of Nassau County, Florida, that Strategic Plans shall be as follows:

1. YARD WASTE MANAGEMENT

Yard Waste Management began in Nassau County with the banning of yard waste from the landfill before the January 1, 1992, effective date. Yard waste brought to the Nassau County Solid Waste Department Landfill is place in roll-off containers for transport off-site to a yard waste processing area. Nassau County is currently planning and developing a composting facility where this type of material will be processed in the future. (See Attachment 2).

a. Goals and Objectives:

(1) Develop a Strategic Plan for Nassau County that specifies the overall goals and objectives of the Yard Waste Management. These goals must be compatible with all long-term goals of the Nassau County Solid Waste Management Department, all Nassau County ordinances and resolutions, and Florida

Administrative Code (FAC) requirements.

(2) Identify the short, intermediate and long-term actions necessary to achieve these goals and to develop a timeframe for implementing these goals.

(3) Address all areas of yard waste generation including seasonal changes in generation rates.

(4) Include the education of all yard waste generators in the County from residential homeowners to large businesses.

(5) Apply a County-wide approach to the yard waste problem with emphasis on cooperative efforts.

b. Strategies:

(1) Evaluate the current status of all yard waste management in the County and determine all future possibilities.

(2) Evaluate the current generation rate, collection methods, options, and alternate management methods.

(3) Coordinate with all other governmental agencies to develop an overall County strategy.

(4) Evaluate all educational requirements necessary to inform the general public of available programs.

(5) Evaluate any other programs that may impact yard waste management opportunities and develop appropriate alternative programs.

2. WASTE TIRE MANAGEMENT

Waste tires are currently banned from disposal in the Nassau County Solid Waste Disposal Facility. Waste tires have been

collected, stored for transport in an enclosed trailer, and transported to a facility for recycling since July 1, 1989. (See Attachment 1)

a. Goals:

(1) Develop a comprehensive Strategic Plan for Nassau County that specifies the overall goals of the Waste Tire Management. These goals must be compatible with the long- term goals and objectives of the Solid Waste Management Department, Nassau County ordinances, and Florida Administrative Code (FAC) requirements.

(2) Identify the short, intermediate and long-term steps to achieve these goals and to develop a timeframe necessary for implementing these goals.

(3) Address all areas of waste tire generation including residential, commercial, institutional and industrial with respect to reduction, re-use, and recycling.

(4) Include the education of all waste tire generators in the County from private citizens to large industries.

(5) Apply a County-wide approach to the waste tire problem with emphasis on cooperative efforts.

b. Strategies:

(1) Evaluate the current status of all areas of waste tire management and determine all future possibilities.

(2) Evaluate the current waste stream, collection methods, options, and available disposal alternatives.

(3) Work with others to coordinate efforts to

develop an overall County strategy.

(4) Evaluate the educational needs to inform the general public of available programs.

(5) Evaluate other opportunities that impact the waste tire disposal programs and develop appropriate alternative programs.

3. CLOSURE AND POST-CLOSURE MAINTENANCE

Nassau County has constructed a final cover system having a permeability no greater than 1 x 10^{-5} cm/sec, an infiltration layer that contains a minimum of 18" of earthen material and contains an erosion layer of 6" of earthen material capable of sustaining native plant growth, as described in our written closure and post-closure plan submitted to be approved by the FDEP.

a. Goals:

(1) Develop a Strategic Plan for Nassau County that specifies the goals of closure and post-closure maintenance for all County-owned landfills. These goals must be compatible with the overall goals and objectives of the Solid Waste Management Department, Nassau County ordinances, and Florida Administrative Code (FAC) requirements.

(2) Identify the short, intermediate, and long-term approach for accomplishing these goals and develop a timetable for the implementation of these goals.

(3) Address all areas of closure and post-closure care including closure plan, contracts, permits, coordination and cooperation with FDEP, environmental monitoring, costs, land

surface care, inspection and recordkeeping, leachate collection and treatment, Landfill Gas management, preventive maintenance, and administration.

b. Strategies:

(1) Review and evaluate the current operating permits for closure requirements including end uses, final cover design, and financial assurance. Nassau County has established and fully funded all required Financial Assurance accounts as required by FAC.

(a) The account names, numbers, and balances as of August 30, 1994, are as follows:

Bryceville	#231002	$ 98,512.40
Lofton	#231003	$217,786.35
West Nassau (includes old site as well as funding for new site for both closure and post-closure)	#231004	$211,245.32

(2) Evaluate necessary approaches to achieve final site topography, drainage, and cap integrity.

(3) Identify source of cover materials for closure and post-closure care.

(4) Establish maintenance plan for long term care and environmental monitoring.

4. SOLID WASTE OPERATIONS

Nassau County has implemented landfill operating criteria to include the following:

(a) the exclusion of hazardous waste by random inspections, training and record-keeping;

(b) daily cover to control disease vectors, fires, odors, blowing litter and scavenging;

(c) explosive gas control by implementing a routine monitoring program;

(d) no open burning of solid waste;

(e) the prevention of unauthorized vehicular traffic and illegal dumping of wastes by using either artificial or natural barriers;

(f) prevent discharge of pollutants and non-point source of pollutants to surrounding waters;

(g) no disposal of bulk liquids in the landfill; and

(h) recordkeeping as required by the FDEP.

a. Goals:

(1) Develop a Strategic Plan for Nassau County that specifies the goals for Solid Waste Operations. These goals must be compatible with the overall goals and objectives of the Solid Waste Management Department, Nassau County ordinances and procedures, and Florida Administrative Code (FAC) requirements.

(2) Identify the short, intermediate and long-term approach for accomplishing these goals and develop a timeline for the implementing them.

(3) Address all areas of operations including contracts, Solid Waste management permits, operational plan, site management, training, record keeping, contingency plans, waste composition, leachate and MSSW management, inspections and reports.

b. Strategies:

(1) Review and evaluate the current Solid Waste Management facility operating procedures.

(2) Review and evaluate all current permits. Insure all permits are up-to-date and facilities are in compliance with permits.

(3) Coordinate with other governmental agencies to develop overall County strategies.

(4) Evaluate all opportunities that impact the County's integrated Solid Waste Management programs.

BOARD OF COUNTY COMMISSIONERS
NASSAU COUNTY, FLORIDA

JOHN A. CRAWFORD
Its: Chairman

ATTEST:

T. J. GREESON
Its: Ex-Officio Clerk

Approved as to form by the
Nassau County Attorney

MICHAEL S. MULLIN

7/b:s-w.res

BFI Tire Recyclers

BFI Tire Recyclers of Georgia, Inc.

Recycled paper

Attachment 1

received
2-2-94

January 27, 1994

Nassau County
Department of Solid Waste
Rt. 1 Box 178
Calhoun, FL 32011

Attention: Mr. Dunn

RE: Lofton Creek Landfill

Dear Mr. Dunn:

Thank you for your past business given to BFI Tire Reyclers of Georgia, Inc. As you are aware, we are located in Jackson, GA, approximately 30 miles south, southeast of Atlanta. We have been operational since 1991. Our facility process whole tires into TDF fuel chips and crumb rubber. All tire entering the plant are completely recycled with no landfill exposure. The chips are sent to various paper plants and cement kilns. The crumb rubber, recyclable steel from the bead and belts is used in a wide range of manufacturing in producing new products.

We are bonded and offer our customers a manifest for each load picked up and deliver to our plant. We comply with all state regulations which govern our recycling operation.

The charges for our service is $55.00 per ton for passenger and truck tires, FOB Jackson, Georgia. All off road tires are $200.00 per ton FOB Jackson, Georgia.

If you wish us to spot a 45' dry van trailer at your location, we will be happy to comply. Once the trailer is loaded, you will call us and we will exchange the full trailer for a clean empty trailer. The cost for this service would be $85.00 per ton. In the past we have picked up at your landfill with an open top trailer which we loaded with our grappler from the stockpile of tire you had accumulated. After conversation with our Operations Manager, Doug Bernhardt, I discovered we are loading approximately 2 tons of mud and debris in each load that comes from your landfill. To alleviate this some of the cost your county is incurring, we are suggestion that the county look at using a van trailer spotted at

138 SHERREL AVENUE • P.O. BOX 559 • JACKSON, GEORGIA 30233 • (404) 775-6107 • FAX: (404) 775-4304

your landfill so tires may be loaded as they are received. By so doing, you will lessen the amount of debris and mud being shipped to BFI for processing. I feel the county will show a considerable savings with this method. I have included some diagrams for a possible van tailer placement and loading dock.

BFI offers you and our environment total recycling of all your tires. By recycling your tires you should be able to claim credits according to the mandated recycling in your state.

Again, thank you for recycling your tires with BFI Tire Recyclers of Georgia, Inc. It is a good feeling to know you are helping the environment for the generations to come.

Sincerely,

BFI TIRE RECYCLERS OF GEORGIA, INC.

Harry Griede

Harry Griede
Sales Representative

HG:mh

10/1/94

NASSAU COUNTY
BOARD OF COUNTY COMMISSIONERS

P. O. Box 1010
FERNANDINA BEACH, FLORIDA 32035-1010

PAGE: 1 OF 1

VENDOR NAME/ADDRESS

BFI TIRE RECYCLERS
P.O. Box 557
138B SHERREL AV
JACKSON GA 30233

DEPARTMENT: SOLID WASTE

REQUISITION SW045

B. McINTYRE
REQUISITION BY:

VENDOR NUMBER	PURCHASE ORDER NUMBER	PURCHASE ORDER DATE	PURCHASE ORDER TOTAL	DISCOUNT TERMS

ITEM NO.	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT	FUND ACCOUNT NUMBERS
1	DISPOSAL OF WASTE TIRES				7035$-53401
	10/1/94 - 9/30/95				10/5/94 J008637 Same as FY93-94
					10/29 (CORR.) J008689 10-96-182

APPROVED BY:

9-16-94

WHITE - Finance Copy
YELLOW - Requisitioners Copy

☐ Subtotal
☐ Total

have all the makings of a fabulous recycling facility right in own backyard. All it takes are leaves, grass clippings and a rake.

the back of this card is a list of materials that you uld and should not include in your compost pile. Cut ut and post it in your kitchen where you can refer to it ly. Keep a covered container by the sink so you can ect approved kitchen waste and dump it on your npost pile when the container is full.

NASSAU COUNTY
COOPERATIVE EXTENSION SERVICE
11 NORTH 14TH
BOX 4
FERNANDINA BEACH FL 32034

Place
Stamp
Here

4. PRIVATE WASTE HAULER

Curbside pickup is still an option, but there will be an additional fee. The cost of collecting, hauling and handling yard trash is a large share of the solid waste management expense. Cost averages around 20% annually, but jumps to as much as 50% when grass clippings and leaves are collected as waste. If you choose to have your yard waste picked up at curbside, it is strongly recommended to use biodegradable bags.

Curbside service for landfill disposal will be available with a call to your hauler, for:

- Yard waste
- Metals
- White goods
  (refrigerators, hot water tanks)

Other recycling services available at landfills:

- Oil igloo
- Newsprint bin
- Aluminum bin
- Glass bin
- Paint cans dried, without lids
- Tires

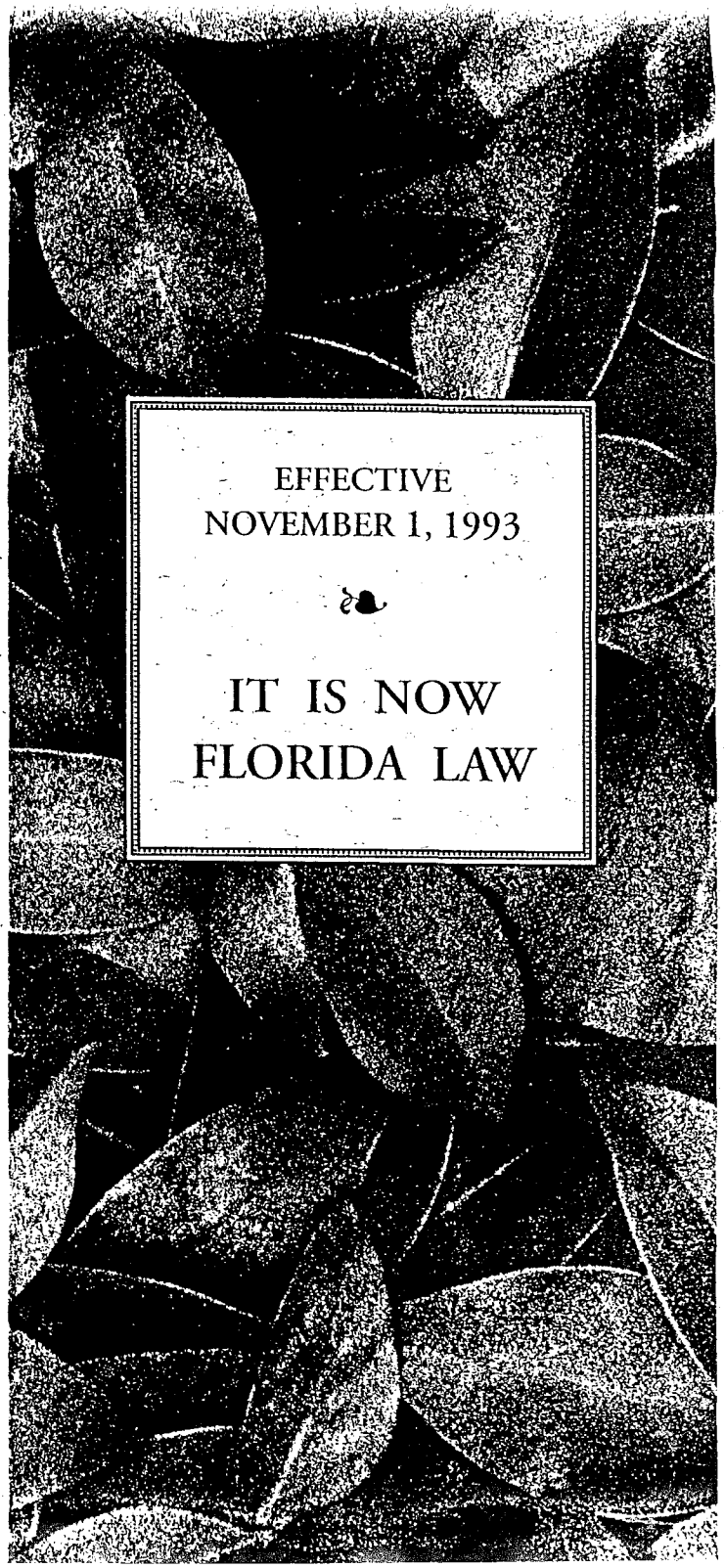
UNIVERSITY OF FLORIDA
Institute of Food and Agricultural Sciences

PLEASE CALL IF YOU HAVE ANY ADDITIONAL QUESTIONS:

(904) 321-5730 or (904) 879-1019

Information provided by
Nassau County Cooperative Extension Service

Printed on recycled paper



EFFECTIVE
NOVEMBER 1, 1993

IT IS NOW FLORIDA LAW

ATTACHMENT 2

IT IS NOW FLORIDA LAW . . .

Grass clippings and other yard trimmings and debris can no longer be combined with regular household waste and left at the curb for garbage pickup. As of November 1, 1993, that's simply the state law. The result will be a dramatic reduction in the amount of landfill space necessary to dispose of Florida's garbage. Clippings, leaves and other yard trash account for up to 20 percent of the total municipal waste produced in our state annually.

YOU HAVE SOME OPTIONS

1. LET THE CLIPPINGS FALL.

That's right. Just mow your lawn regularly when it's dry, so the clippings won't accumulate in clumps, and let them lie on the ground. Leaving the clippings there actually helps recycle nutrients. A bag of clippings contains about 1/4 of a pound of organic nitrogen that could be useful to your lawn. In fact, leaving the clippings on the ground after you mow will reduce the amount of time and money you spend on lawn care.

2. USE YOUR FREE MULCH.

Fallen leaves, pine needles and shrub prunings may be used as mulch for tree and shrub beds. This "free mulch" placed 3 to 4 inches thick will reduce water evaporation, conserve soil and reduces the need for purchased mulch.

3. START BACKYARD COMPOSTING.

What is composting? Composting is a natural process of degeneration that turns organic material into a dark, rich, crumbly substance called humus, which conditions the soil and improves its quality.

Why should I compost? Composting helps you add nutrients to your soil so you can grow healthy flowers, shrubs and vegetables next season. It improves soil texture by breaking up heavy clays. It's a practical way to recycle grass clippings, leaves and organic kitchen waste into a natural, no-cost lawn and garden resource.

Is composting difficult? It is very easy to learn the basics and turn your own backyard into a convenient recycling center! All it takes to start is your decision, a rake and a small area to stock pile your yard waste. If you want to get elaborate, you can build an enclosure.

What can be composted? Just about anything that's organic – that decomposes. That means non-woody yard debris, such as grass clippings, leaves, trimmings, spent annuals, vegetable and fruit scraps, eggshells, coffee grounds and wood ashes. You can include twigs and branches if you break them up into small pieces. Don't use diseased plants, which could spread pathogens, or weeds with seedheads, which may flourish!

Does composting smell? No. Composting works through aerobic (with air) decomposition, so there's no odor if you're using approved ingredients and covering the kitchen scraps. Composting won't attract varmints, either.

WHAT'S IN:

BROWNS (carbon)

- Leaves
- Hay
- Straw
- Wood chips and sawdust
- Shredded newspapers
- Chipped brush

GREENS(nitrogen)

- Grass clippings
- Prunings
- Cow or horse manures (fresh or dried)
- Old plants, wilted flowers

WHAT'S OUT:

- Diseased plants
- Weeds gone to seed or grass clippings heavy with crabgrass, sorrel, plantain or other weeds
- Ivy, succulents and plants such as morning glory or buttercups
- Grasses with rhizomatous root systems, such as quack grass
- Cat and dog manures
- Meat and fish leftovers, bones or greasy and fatty foods such as butter and cheese

FOR MORE INFORMATION . . .

Complete and mail this card to learn more about composting as you consider your options in complying with the new law. And please return it even if you don't need more information to help us determine how many in our county are committed to composting.

NAME:

ADDRESS:

HOME PHONE: DAY PHONE:

- I plan to start using yard waste as mulch; please send me information.
  ☐ Yes ☐ No
- I would be interested in attending a yard waste management workshop; please send me information on the dates and time of the classes.
  ☐ Yes ☐ No
- Have you composted in the past?
  ☐ Yes ☐ No
- Have you used yard waste in the past

What is Composting?

Composting is nature's way of breaking down vegetative matter into a nutrient-rich soil additive and conditioner. Composting can be as simple as placing your grass clipping and other leafy waste in a pile in the corner of your yard and letting nature take its course.

Why compost?

Composting is the most practical and convenient way to handle your yard wastes. It can be easier and cheaper than bagging these wastes and taking them to the curb for pick-up. If you are in the county it will cost you more to have your private waste hauler pick up your yard waste.

Compost also helps to improve your soil and the health of your plants. by using compost, you return organic matter to the soil in a usable form. Organic matter in the soil improves growth by: helping to break heavy clay soils into better texture; adding water and nutrient-holding capacity to sandy soils and by adding essential nutrients to any soil. Improving your soil is the first step towards improving the health of your plants.

What can be composted?

Yard wastes such as fallen leaves, grass clippings, twigs and other gardening leftovers make excellent compost. Anything that was once alive can be composted. Woody yard waste can be clipped, run through a shredder and incorporated into a compost pile.

Care should be taken when composting kitchen scraps. Vegetable and fruit scraps, coffee grounds and egg shells may be added to the pile but should be thoroughly incorporated into the soils to avoid odors. Meat, bones and fatty foods (cheese, salad dressing and cooking oils)should not be put into the compost. These items attract animals, create odors, are slow to decompose and may carry disease-causing organisms.

Uses for compost.

A layer of compost 1-3 inches thick may be worked into the the garden soil as a soil amendment. When incorporated in this way compost serves to :

* Increase sandy soil's ability to retain moisture
* Improves soil drainage and aeration
* Supply small amounts of essential elements
* Increase the biological activity of soil organisms.

Compost can be used to enrich the flower and vegetable garden, to improve the soil around trees and shrub.

This information was provided to you by Nassau County Extension Services. If you would like more information, please call either 904-879-1019 Callahan, or 904-321-5730 Fernandina Beach.

The Essentials of Composting

Rapid decomposition requires an environment in which micro-organisms will thrive. Optimum, aeration, particle size, and nitrogen levels are important for efficient composting. With these principles in mind, everyone can make excellent use of their organic wastes.

Biology

The compost pile is really a teeming microbial farm. Bacteria starts the process of decaying organic matter. They are the first to break down plant tissue and also the most numerous and effective composter. Fungi and protozoans soon join the bacteria and, somewhat later in the cycle, centipedes, millipedes, beetles and earthworms do their part.

Moisture & Aeration

All life on earth needs a certain amount of water and air to sustain itself. The microbes in the compost pile are no different. they function best when the compost materials are about as moist as a wrung-out sponge usually 40%-60%. At this moisture level, microbes are also provided with many air passages.

Microbes active in composting require oxygen to efficiently break down organic matter. The pile should periodically be turned or mixed to incorporate oxygen into the pile.

Nitrogen Level

Everything organic has a ratio of carbon to nitrogen (C:N) in its tissues. A ratio of 30 : 1 is ideal for the activity of compost microbes. This balance can be achieved by mixing two parts grass clippings with one part fallen leaves . Layering can be useful in arriving at these proportions, but a complete mixing of ingredients can also be used, such as weeds and garden waste. through the C : N ratio of 30 :1 is ideal for a fast, hot compost, a higher ratio will be adequate for a slower compost.

Particle Size

Reduction in the size of particle of raw materials will increase the speed of the composting process. The more surface area the micro-organisms have to work on, the faster the materials are decomposed. Chopping your garden waste with a shovel or machete or running them through a shredding machine or lawn mower will speed their composting.

Temperature

Heat is generated by the microbes during the decomposition process. Pile turning is important to shift the cooler part of the pile to the hotter center. Pile turning should occur if the temperatures at the center of the pile reach 140 F. As a rule of thumb, the hotter the pile, the faster the composting. If you use materials with a proper C : N ratio, provide a large amount of surface area, with a big enough volume, and see that moisture and aeration are adequate, you will have a hot, fast compost.

Composting Structures

To save space, hasten decomposition, and keep the yard looking neat, construct some sort of structure for the compost pile. Composting structures can consist of a variety of materials and can be as simple or complex as desired. There are many options available that can be tailored to individual needs. Below are a few suggestions.

Barrel Drum Composter.

A barrel-drum composter generates compost in a relatively short period of time and provides an easy mechanism for turning. This method requires a barrel of at least 55 gallons with sure lid. Be sure that the barrel was not used to store toxic chemicals. Paint barrels are a good choice, as the inside already has a protective coating. Drill several rows of 1/2 inch holes over the length of the barrel to allow for air circulation and drainage of excess moisture. Place the barrel upright on blocks to allow bottom air circulation, and fill 3/4 full with organic waste material and about one quarter cup of high nitrogen-containing fertilizer. If needed, apply water until moist. Every few days, turn the drum on its side and roll it around the yard to mix and aerate the compost. The lid can be removed after turning to allow for air penetration. The barrel composter is an excellent choice for the city dweller with a relatively small yard.

Woven or Welded Wire Bin

Another method composting is to build a pile within a pen of flexible woven wire. The structure may be 3 to 5 feet in diameter and 4 feet high. To turn the pile the wire is disconnected, removed from the pile and set up again close by. The composting materials is then turned with a pitchfork into the new location. This helps to both aerate and thoroughly mix the pile.

The Chamber Bin

A durable structure for rapid decomposition is the three chamber bin. This designs works as an assembly line with the compost in each bin being at a different stage of decomposition. The raw material is started in the first bin and allowed to heat up for 3 to 5 days. It is then turned into the next bin and left for 4 to 7 days while a new batch is starting ion the first bin. Finally, the material in the middle bin is turned into the last bin as finished or nearly finished compost.

Symptoms	Problem	Solution
Bad odor	Not enough air	Turn it
Center dry	Not enough water	Moisten while turning
Warm & damp in middle , but nowhere else	Too small	Collect more materials and mix the old into a new pile
Heap damp and sweet -smelling but will not heat up .	Lacks nitrogen	Mix in a nitrogen source like fresh grass clipping, or fresh manure.

Mulches

Mulches are organic materials spread over the surface of the soil to suppress weeds, keep plant roots cool and moist , and prevent soil from eroding or compacting. Mulches are used around plants in the garden, or as a soft "paving" for paths or play areas. An ideal mulch material costs nothing , is easy to keep in place, and reduces evaporation of soil moisture while permitting rapid penetration of water. There area great variety of organic and inorganic materials that can be used. We will address only organic mulches.

Some compost materials used for mulches include : woodchips, lawn clippings, compost , sawdust, leaves from deciduous trees and shrubs, manure and pine needles. We can also mulch with commercial by-products such as coffee chaff and buckwheat hulls or purchased straw.

All of these materials are suitable for surface mulching around trees, shrubs and other perennial plantings. however, in annual flower and vegetable gardens it is best to mulch with non-woody materials such as lawn clippings, compost, weeds and other green garden trimmings. These materials break down quickly and can then be turned under without competing with plants for nitrogen that bacteria needs to break down woody wastes such as sawdust or woodchips. Woody waste may also be used in the annual garden, but should be pulled aside when tilling, or balanced by adding a high nitrogen source as bloodmeal when turning them under. Non-woody wastes should be fully decomposed when tilled in, or else they too need to be supplemented with a nitrogen fertilizer. When using plants as green manure, let decomposition occur in the soil.

In commercial landscaping the material most commonly used for mulching is ground bark ('Beauty Bark'). A more natural looking alternative is the chipped waste from tree pruning and removable operations. This material can often be obtained free of charge by calling a tree service or if you have tree work done at your home, ask that the chip be left. Any leaves left with the branches will decompose in a short time, adding to the beauty of the variegated mulch. Wood chip makes an excellent path and play area material, as it decomposes slowly and softens the surface.

Need More Help?

Have Questions?

The Nassau County Cooperative Extension Service wants to help you answer any questions that are not covered in this short handout. We hold several classes, yearly, on managing yard waste. This is a very easy way for all of us to help with the landfill issue. Not only does it "stretch" the life of our landfill it enables you to have a nicer yard.

There are two locations of the County Extension. Callahan is at the North East Florida Fair grounds , phone number 904-870-1019.
The Fernandina Beach office is located at 11 North 14th Street, room 115. The phone number is 904-321-5730.

( ) I will be able to attend the January 13th, 7 pm workshop on January 13th at Callahan Fairgrounds, multi-purpose room on managing yard waste.

( ) I will not be able to attend this workshop but would like to attend the next one. Please let me know the date.

( ) I do not want to attend this or any other workshop.

NAME_____

ADDRESS_____

( ) 32034 ( ) 32046 ( ) 32097 ( ) 32009 ( ) 32011

PLEASE RETURN BY 01/07/94

QUESTIONS????? CALL either 904-879-1019 or 321-5730

Compost also helps to