BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF STABILIZING AND EXPANDING MARKETS FOR YARD DEBRIS COMPOST BY DESIGNATING PRODUCT STANDARDS	)))))	RESOLUTION NO. 94-1889 Introduced by Rena Cusma Executive Officer

WHEREAS, It is in the interest of Metro and its constituents to stabilize and increase markets for yard debris compost; and

WHEREAS, A goal of the Regional Solid Waste Management and Waste Reduction Plan is to promote waste reduction through composting; and

WHEREAS, Potential purchasers of large amounts of compost, like plant nurseries and landscapers, are not certain of product characteristics of compost; and

WHEREAS, Technical experts on Metro's Yard Debris Compost Standards Committee have deliberated for six months and determined standards for the following parameters of compost: pH, heavy metals, pesticide residue, plant nutrients, foreign materials, salts and viable seeds; and

WHEREAS, Metro's Yard Debris Compost Standards Committee has determined protocol for testing samples of compost; and

WHEREAS, Metro will act as independent third party to review and confirm that compost test results meet or exceed standards; and

WHEREAS, The resolution, for the purpose of designating product standards for yard debris compost was submitted to the Executive Officer for consideration and was forwarded to the Council for approval; now, therefore,

BE IT RESOLVED,

That Metro adopts standards and a testing program for yard debris compost as described in Exhibit A.

ADOPTED by the Metro Council this 27th day of January, 1994.

Judy Wyers, Presiding Officer

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S/SHARE/ETTL/REPORT/SW941889.RES
January 5, 1994

"Exhibit A"

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STANDARDS FOR YARD DEBRIS COMPOST PRODUCTS

December 1993

Overview

Yard debris compost products from the Metro area differ in consistency and quality from season to season and between processors. Potential purchasers cannot be certain of product characteristics because of this variability. In addition, increased curbside collection and other recovery programs for yard debris have resulted in a greater amount of material for composting than ever before. As a result, more processors have opened their doors and are selling compost products.

In order to stabilize and increase the markets for yard debris compost and to provide greater assurance that it will cause no harm to the environment or human health, Metro identified the need for technical standards and a uniform testing program. In June, Metro formed a committee of experts, which included the two major yard debris processors in the area, to develop these standards and a testing protocol. Technical specialists were invited to the meetings to provide additional information on pesticide residue, plant nutrients and the maturity/stability of compost. The agenda and minutes of the standards committee were mailed to all Metro region processors and 55 interested parties.

The committee reviewed the compost standards from other areas, including Iowa, California, Florida, Washington and British Columbia. The results from Metro's yard debris testing program conducted on samples from Grimm's Fuel and McFarlane's Bark between 1986 and 1993 were also examined. These test results were interpreted and compared to those from the Cedar Grove facility near Seattle.

After deliberating for six months, the committee agreed to the standards and implementation process described in this summary report. The standards and testing program are voluntary. Yard debris processors that choose to participate will be able to promote their compost as an *Earth-Wise* product.

Required Standards to be Designated "Earth-Wise" Compost

Compost samples must meet the following technical standards to receive "Earth-Wise" designation.

Testing Parameter	Standard+
pH	between 5.0 and 8.0
Heavy (trace) metals	
Cadmium (Cd)	not to exceed 3 ppm
Lead (Pb)	not to exceed 150 ppm
Pesticide residue	
Penta-chlorophenol	not to exceed 0.3 ppm
Chlordane	not to exceed 0.3 ppm
Plant Nutrients	
Boron (B)	not to exceed 7 ppm
Calcium (Ca)	not to exceed 50 meq
Magnesium (Mg)	not to exceed 12 meq
Copper (Cu)	not to exceed 750 ppm
Zinc (Zn)	not to exceed 1400 ppm
Other	
Foreign materials*	not to exceed 5% foreign materials, including 1/2% plastics, by weight
Salts	not to exceed 4 mmhos
Seeds	not to exceed 1 viable seed/sample

ppm= parts per million
meq= milliequivalents
mmhos= a conductivity unit that measures how well electricity passes through liquids
+Laboratory methods and sample sizes available upon request.
*Foreign materials: plastic, metal, glass, rocks and other inorganic materials

Definition of Compost

* * *

Compost is the stabilized and sanitized product of composting which is suitable for plant growth. It has undergone an initial, rapid stage of decomposition and is in the process of humification (curing). Compost, as defined for this program, is made only from yard debris, and is not blended with any other product.

Yard Debris Compost Standards Committee Members

Dave Adams	Oregon State University, North Willamette Research and Extension Center
Lee Barrett	City of Portland Bureau of Environmental Services
Bill Bree	Department of Environmental Quality
Lauren Ettlin	Metro Solid Waste Department
Jeff Grimm	Grimm's Fuel Company
Wes Jarrell	Oregon Graduate Institute, Department of Environmental Science
Dan and Ann McFarlane	McFarlane's Bark, Inc.
Paul Morris	Oregon Chapter, American Society of Landscape Architects
Lynne Storz	Washington County Department of Health and Human Services
Bob Ticknor	Oregon State University, North Willamette Research and Extension Center
Rick Winterhalter	Clackamas County Community Environment Section

Benefits of Designation as an "Earth-Wise" Compost

Yard debris compost processors can utilize the "Earth-Wise" designation to remind customers that by using yard debris compost they are extending the life of landfills and promoting earth-wise waste management practices. Processors can also advertise their compost has met uniform standards in their effort to promote sales to potential customers like nurserymen and landscapers. All people living in the tri-county area benefit from more yard debris being returned to augment the soil and less hauled to the landfill.

Eligibility

To be eligible for the "Earth-Wise" designation, compost must fit these guidelines:

- Produced within Multnomah, Washington or Clackamas counties
- Yard debris only (such as leaves, grass, woody debris)
- In a stable condition (has undergone a rapid stage of decomposition and essentially completed curing)
- Compost only, no blended products

Implementation Process

A detailed application process will be developed by Metro and yard debris processors.

1. Yard debris processors interested in participating in the program will complete Metro's application form.
2. An independent party under contract to Metro will sample the stable compost product.
3. Contractor will mail samples to appropriate laboratories for testing of the parameters.
4. Laboratories will send copies of the test results to the processor and Metro contractor. Lab services will be paid by the processor (see Costs for Testing).
5. Processor sends copies of test results to Metro.
6. Metro reviews test results and confirms samples meet standards. Processors of approved products are notified of test results. Metro provides information on tested yard debris compost products through Recycling Information, articles in trade magazines and requests for information, and allows processors to use "Earthwise" designation on their products.

Costs for Testing

Samples of compost are taken by a Metro contractor twice per year at the request of the processor. The contractor sends the samples to three laboratories to evaluate the following parameters. Costs for lab testing are paid by the processor and are estimated to be about $1,000 per year.

Tests	Suitable Laboratory	Cost (Sept. 1993)
- Plant nutrients - pH - Salts	OSU Central Analytical Lab Soil Testing	$106 for all three tests
- Seed viability - Foreign materials	OSU Seed Lab	$122 for both tests
- Pesticide residue - Heavy metals (lead and cadmium)	ANTECH Analysis/ Technology Lab	$260 for both tests
TOTAL		$488 for all tests

OSU=Oregon State University

Uses for Compost

Composted yard debris that meets standards can be used as a:

- Top dressing, mulch or control for erosion -- a soil cover that is not plowed under
- Soil amendment -- mixed with soil to improve soil chemistry
- Soil conditioner -- mixed with soil to improve soil structure
- Potting mix -- mixed with soil for house plants and seedling starts

Definitions to Achieve Consistent Product Sizes

The committee surveyed yard debris processors to determine the particle size of non-blended compost products currently produced in the Portland area. Those products were consolidated into these three categories.

- **Fine Compost:** 5/8" minus, with an average of 80% fines*
- **Medium Compost:** 1" minus, with an average of 80% fines*
- **Coarse Composted Mulch:** 1" plus, not to exceed 30% fines*

* Fines = material that is 3/8" or less

Optional Tests for Marketing Compost Products

In order for compost to be competitive with other soil amendments in the Portland area market, the Yard Debris Compost Standards Committee recommends that compost be tested for three plant nutrients: nitrogen, phosphorus and potassium. Nursery owners and landscapers can amend compost to reach desired levels of these nutrients if they know what levels exist in the compost they purchase. Since these nutrients do not harm the environment or human health, standards are optional rather than required.

Testing parameters for nitrogen, phosphorus and potassium:

- Nitrate (NO_3)
- Ammonia (NH_4)
- Phosphorus (P)
- Potassium (K)

Schedule

Compost processors may apply to participate in the program in the fall of 1994 for the 1995 calendar year.

The technical standards and implementation process will be reviewed in December, 1994 by the Yard Debris Compost Standards Committee. Revisions will be made to the program as appropriate.

Glossary of Terms

Fines: Particles that are 3/8 inch in size or smaller.

pH: Measures the alkalinity or acidity of compost on a scale of 0 to 14. Seven is neutral, plants grow best in compost with a pH between 5 and 8.

Stable: Compost is stable when it has undergone an initial, rapid stage of decomposition and has essentially completed the process of humification (curing).

Yard debris: Leaves, grass clippings, woody material, plant stalks, hedge clippings, stumps. Does not include demolition debris, painted or treated wood, animal manure or food waste.

Yard Debris Statistics for the Metro Area

11% of garbage is yard debris*
26% of garbage from homes is yard debris*
45% of yard debris was recycled (75,926 tons), 1992 Metro Recycling Level Survey

*From 1989 Metro Waste Characterization Study, percentages are by weight.

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 94-1889 FOR THE PURPOSE OF STABILIZING AND EXPANDING MARKETS FOR YARD DEBRIS COMPOST BY DESIGNATING PRODUCT STANDARDS.

Date: January 18, 1994 Presented by: Lauren Ettlin

PROPOSED ACTION

Adopt Resolution No. 94-1889, which establishes product standards for yard debris compost.

FACTUAL BACKGROUND AND ANALYSIS

Yard debris compost products from the Metro area differ in consistency and quality from season to season and between processors. Potential purchasers cannot be certain of product characteristics because of this variability. In addition, increased curbside collection and other recovery programs for yard debris have resulted in a greater amount of material for composting than ever before. As a result, more processors have opened their doors and are selling compost products. At this time there are ten processors operating in the Metro region.

In order to stabilize and increase the markets for yard debris compost and to provide greater assurance that it will cause no harm to the environment or human health, Metro identified the need for technical standards and a uniform testing program. In June 1993, Metro formed a committee of experts to develop these standards and a testing protocol. Technical specialists provided information on pesticide residue, plant nutrients and the maturity/stability of compost. The agenda and minutes of the standards committee were mailed to all Metro region processors and other interested parties.

After deliberating for six months, the committee agreed to the standards and implementation process described in the Exhibit A to Resolution No. 94-1889. Participation in the testing program is voluntary. Metro region yard debris processors that choose to participate will be able to promote their compost as an *Earth-Wise* product.

BUDGET IMPACT

Program implementation is planned for fiscal year 1994-95. The Waste Reduction Division has requested $5,000 in the 1994-95 budget to hire a contractor to take compost samples to test for the parameters listed on the attached summary, Exhibit A. Participating yard debris processors will pay for the actual laboratory testing.

EXECUTIVE OFFICER RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 94-1889.

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SOLID WASTE COMMITTEE REPORT

CONSIDERATION OF RESOLUTION NO. 94-1889, FOR THE PURPOSE OF STABILIZING AND EXPANDING MARKETS FOR YARD DEBRIS COMPOST BY DESIGNATING PRODUCT STANDARDS

Date: January 19, 1994 Presented by: Councilor McLain

Committee Recommendation: At the January 18 meeting, the Committee voted 5-0 to recommend Council adoption of Resolution No. 94-1889. Voting in favor: Councilors Hansen, McFarland, McLain, Monroe, and Wyers. Councilor Buchanan was absent.

Committee Issues/Discussion: Lauren Ettlin, Solid Waste Staff, explained that the resolution will establish content standards for yard debris compost and create a voluntary sampling and testing program for processors desiring to meet standards. Those processors who participate in the program can advertise the test results and use the term "earthwise" in marketing their products.

Ettlin noted that the number of yard debris processors had grown from two to ten in recent years and the amount of compost product produced also has grown. Some potential major markets for these products have been underdeveloped due to concerns about the nature and content of the compost products. For example, the nursery industry is particularly concerned about the presence of pesticides, heavy metals and other foreign materials. Without a testing program, such questions are difficult to address.

The testing program and standards outlined in the resolution were developed by a committee that included government, processor and scientific community representation. The committee reviewed testing programs in other states and prior Metro testing efforts.

The program would offer voluntary bi-annual testing of products from participating processors. The products would be tested for PH, heavy metals, pesticides, plant nutrients, foreign materials, salts and weed seeds. Metro would pay for the sampling costs (estimated at $5,000/yr.) and the processors would pay for the testing procedure (estimated at $1,000/test). Metro would review the test results and determine if the products had met the standards required.

Jeff Grimm, compost processor, testified in favor of the resolution. He noted that his company had processed over one million tons of yard debris compost. He indicated that the historic rapid growth in yard debris compost markets has slowed and that the testing program proposed in the resolution will help expand several markets.

Councilor Wyers asked if the testing frequency of every six months was adequate. Grimm responded that the testing costs are

significant and that a requirement of more frequent testing could reduce participation in the program. He also noted that pesticides breakdown quickly during the composting process. Councilor McFarland noted that not everyone agrees that pesticides do breakdown.

Dave Adams, OSU Extension Service, testified concerning the need for uniform products and indicated that such uniformity would help expand markets. Councilor Van Bergen asked about the definition of yard debris and whether it was sufficient to insure that various undesirable or putresible wastes were included. Adams indicated that he thought the definition was adequate.