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## Compost Nutrients

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79 citations from AGRICOLA  
by  
Joe Makuch  
Water Quality Information Center

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### COMPOST NUTRIENTS

1. Agronomic effectiveness of poultry manure composts.  
Mahimairaja, S.; Bolan, N. S.; Hedley, M. J.

Commun-soil-sci-plant-anal v.26, p.1843-1861. (1995).  
Includes references.

Descriptor: brassica-oleracea-var; -capitata; zea-mays;  
composts-; poultry-manure; rock-phosphate; sulfur-; urea-;  
comparisons-; crop-yield; nitrogen-; use-efficiency; phosphorus-;  
nutrient-uptake; recovery-; nitrate-; leaching-;  
residual-effects; ammonium-nitrogen; nitrate-nitrogen;  
movement-in- soil; sulfocomposts-; phosphocomposts-

Abstract: Two field experiments were conducted to examine the agronomic value of poultry manure composted in the presence of

both phosphate rock (PR) and elemental sulphur (So) (sulphocompost) and PR alone (phosphocompost). Winter cabbage and summer maize were used as test crops. For the first season's winter cabbage, the phosphocompost and sulphocompost were approximately 12% and 60% as effective as urea and both composts were equally effective as urea for the second season's maize crop. The greater agronomic effectiveness of sulphocompost could be attributed to the improved nitrogen (N)-use efficiency increased PR dissolution and improved S nutrition. Distribution of nitrate-nitrogen (NO<sub>3</sub>-N) in the soil profile of field plots indicated greater potential for winter leaching of N from urea than poultry manure which could be the reason for the improved residual value of the manure reflected in summer maize yields. The results from the field experiments indicated that composting poultry manure with So and PR not only reduces environmental pollution associated with manure application, but also increases the agronomic effectiveness of manure.

NAL Call No.:S590.C63

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2. Amended and composted log yard fines as a growth medium for crimson clover and red top grass.

Campbell, A. G.; Folk, R. L.; Tripepi, R. R.

Commun-soil-sci-plant-anal v.25, p.2439-2454. (1994).

Includes references.

Descriptor: trifolium-incarnatum; agrostis-alba; growing-media; logs-; residues-; composting-; compound-fertilizers; nitrogen-; sulfur-; cattle-manure; physicochemical-properties; stability-; growth-; log-yard-residues

NAL Call No.:S590.C63

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3. Apparent availability of nitrogen in composted municipal refuse.

Iglesias Jimenez, E.; Alvarez, C. E.

Biol-fertil-soils v.16, p.313-318. (1993).

Includes references.

Descriptor: lolium-perenne; refuse-compost; nitrogen-; nutrient-availability; nutrient-uptake; pot-experimentation; waste-disposal; canary-islands

NAL Call No.:QH84.8.B46

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4. Application of natural zeolites for the reduction of ammonia emissions during the composting of organic wastes in a laboratory composting simulator.

Bernal, M. P.; Lopez Real, J. M.; Scott, K. M.

Bioresource-Technol v.43, p.35-39. (1993).

Includes references.

Descriptor: composting-; straw-; pig-slurry; mixtures-; ammonia-; emission-; nitrogen-; losses-; zeolites-; adsorbents-

NAL Call No.:TD930.A32

\*\*\*\*\*

5. Assessing the impact of composting yard trimmings.

Cole, M. A.

Biocycle v.35, p.92-94, 96. (1994).

Includes references.

Descriptor: litter-plant; yards-; composts-; composting-;  
heavy-metals; nutrients-; pesticides-; pollutants-; leaching-;  
water-pollution; risk-; assessment-

NAL Call No.:57.8-C734

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6. Bacteriology of composting.

Golueke, C. G.

BioCycle. Emmaus, Pa. : J.G. Press. Jan 1992. v. 33 (1) p. 55-57.

Descriptor: composting-; microbial-activities; microorganisms-;  
nutrients-; carbon-; nitrogen-

NAL Call No.:57.8-C734

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7. Blending composts with fertilizers.

BioCycle. Emmaus, Pa. : J.G. Press. Feb 1993. v. 34 (2) p. 71.

Descriptor: triticum-aestivum; nitrogen-; sugarcane-bagasse;  
composts-; fertilizers-; jute-; agricultural-wastes; usa-;  
pakistan-

NAL Call No.:57.8-C734

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8. Carbon-13 CPMAS NMR and FTIR spectroscopic analysis of organic matter transformations during composting of solid wastes from wineries.

Inbar, Y.; Chen, Y.; Hadar, Y.

Soil-Sci v.152, p.272-282. (1991).

Includes references.

Descriptor: grape-seeds; grape-skins; mixtures-; waste-treatment;  
composting-; decomposition-; organic-wastes; chemical-analysis;  
chemical- composition; carbon-; nitrogen-;  
cation-exchange-capacity; fiber-; organic-matter; lignin-;  
cellulose-; time-; spectral-data;  
cross-polarization-magic-angle-spinning; magnetic-resonance;  
fourier-transform-infrared-spectroscopy

NAL Call No.:56.8-S03

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9. Carbon- and nitrogen-containing compounds in composted urban refuses.

Gonzalez Prieto, S. J.; Carballas, M.; Villar, M. C.; Beloso, M. C.; Cabaneiro, A.; Carballas, T.

Bioresour-technol v. 45, p.115-121. (1993).

Includes references.

Descriptor: refuse-; refuse-compost; chemical-composition;  
organic-compounds; carbon-; nitrogen-; spain-

Abstract: The composition of the organic matter of four composted urban refuses (one of them amended with CaCO<sub>3</sub> in the composting process) from Spanish industrial composting plants was studied. Fundamental components and C-bearing compounds (humic substances) were assessed by classical fractionation methods; N-bearing compounds were determined by acid step-wise hydrolyses. Cellulose and hemicelluloses largely predominated over lignin, which was the second important component, followed by water-soluble compounds, the content of lipids being very low. Water-soluble compounds represented 3-14% of the organic C. Alkali-soluble compounds were quite low since humic compounds (humic and

fulvic acids) only represented about 17% of the organic C (24% in the amended compost); humic acids predominated over fulvic acids, the most polymerized compounds being higher than the less polymerized ones. The predominant fraction (about 70% of the organic C) was the insoluble one which comprised unhumified compounds, insolubilizable humin, microbial humin (1.4-9.0% of the organic C) and residual humin (20-40% of the organic C). The extraction percentage was very low whereas the degree of humification was close to 50%. About 85% of the organic N was hydrolysable. Hydrolysable unidentified-N was the predominant organic N form, followed by alpha- aminoacid-N. NH<sub>4</sub><sup>+</sup>-N from organic compounds and hexosamine-N were very small and amide-N was not detectable. According to the percentage of humification the four composted. NAL Call No.:TD930.A32

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10. Carbon and nitrogen mineralization in an acid soil fertilized with composted urban refuses.

Beloso, M. C.; Villar, M. C.; Cabaneiro, A.; Carballas, M.; Gonzalez Prieto, S. J.; Carballas, T.

Bioresour-technol v. 45, p.123-129. (1993).

Includes references.

Descriptor: refuse-; refuse-compost; organic-fertilizers;

acid-soils; carbon-; biological-activity-in-soil; spain-

Abstract: The C- and N-mineralization kinetics of a Cambisol over granite fertilized with four composted urban refuses (one of them amended with CaCO<sub>3</sub> in the composting process) as well as the degradation kinetics of the wastes themselves were studied. The C-mineralization was determined by incubation of the samples for 42 days at 28 degrees C in a thermostat bath and measurement of the CO<sub>2</sub> evolved from the samples. The N-mineralization was performed by aerobic incubation in an incubator at the same temperature and for the same time as in the case of C. Addition of the composts to the soil significantly increased the C-mineralization rate. About 30% of the organic C of the composts (only 16% in the amended compost) was mineralized after 6 weeks incubation. Most mineralization took place in the first 3 weeks for only about 3% of the organic C (0.9% in the amended compost) was mineralized between weeks 3 and 6. The amended compost was the only one that stimulated the soil N-mineralization rate. The other composts provoked N-immobilization (or denitrification) during the incubation and although an increase of the net inorganic-N production was detected after week 2, the net N-mineralization rate was almost nil at the end of the incubation. Net nitrification predominated over net ammonification in the soil with or without addition of composts. The non-amended compost behaviours seem to show that they had not undergone enough stabilization; as for the amended composted refuse its singular behaviour could be due to its high carbonate content. NAL Call No.:TD930.A32

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11. Change in N fractions during composting of wheat straw.

Bannick, C. G.; Joergensen, R. G.

Biol-fertil-soils v.16, p.269-274. (1993).

Includes references.

Descriptor: wheat-straw; composting-; nitrogen-; amino-acids;

amino-sugars; composts-; decomposition-

NAL Call No.:QH84.8.B46

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12. Changes in ATP content, enzyme activity and inorganic nitrogen species during composting of organic wastes.

Garcia, C.; Hernandez, T.; Costa, F.; Ceccanti, B.; Ciardi, C.

Can-J-Soil-Sci v.72, p.243-253. (1992).

Includes references.

Descriptor: composting-; sewage-sludge; refuse-; comparisons-; organic-wastes; waste-utilization; organic-matter; mineralization-; phosphoric- monoester-hydrolases; proteinases-; urease-; enzyme-activity; atp-; microbial-flora; biomass-; microbial-activities; ammonium-nitrogen; nitrate- nitrogen; casein-hydrolyzing-proteinases; n-alpha-benzoil-l-argininamide-hydrolyzing-proteinases

NAL Call No.:56.8-C162

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13. Changes in microbial population numbers during the composting of pine bark.

Davis, C. L.; Hinch, S. A.; Donkin, C. J.; Germishuizen, P. J.

Bioresource-Technol. Essex : Elsevier Applied Science Publishers. 1992 (pub. 1991). v. 39 (1) p. 85-92.

Includes references.

Descriptor: pine-bark; composting-; microorganisms-; bacterial-count; temperature-; effects-; composts-; stabilizing-; fungi-; heat-tolerance; nitrogen- content; south-africa

NAL Call No.:TD930.A32

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14. Changes in physical and chemical properties of a loamy sand soil when amended with composted poultry litter.

Warren, S. L.; Fonteno, W. C.

J-environ-hortic v.11, p.186-190. (1993).

Includes references.

Descriptor: sandy-soils; soil-amendments; composts-; poultry-manure; soil-physical-properties; soil-chemistry; application-rates; soil-ph; cation- exchange-capacity; phosphorus-; nutrient-availability; exchangeable-calcium; exchangeable-magnesium; exchangeable-potassium; porosity-; soil-density; bulk-density; available-water-capacity; north-carolina

NAL Call No.:SB1.J66

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15. Chemical and biological changes in compost of wood shavings, sawdust and peat moss.

N'Dayegamiye, A.; Isfan, D.

Can-J-Soil-Sci v.71, p.475-484. (1991).

Includes references.

Descriptor: composting-; sawdust-; wood-shavings; peat-; mosses-; cattle-manure; on-farm-production; composts-; growing-media; vicia-faba; zea- mays; growth-; dry-matter-accumulation; carbon-nitrogen-ratio; absorbance-; ph-; carbon-; nitrogen-content; temperature-; temporal-variation; nitrate-nitrogen; microbial-flora; populations-; respiration-;

time-; humification-; optimization-

NAL Call No.:56.8-C162

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16. Comparison of chemical and microbiological methods for the characterization of the maturity of composts from contrasting sources.

Forster, J. C.; Zech, W.; Wurdinger, E.

Biol-Fertil-Soils v.16, p.93-99. (1993).

Includes references.

Descriptor: bark-compost; barley-straw; composts-; rape-straw; refuse-compost; straw-disposal; wheat-straw; ammonification-; arginine-; enzyme- activity; fulvic-acids; humic-acids; immobilization-; nitrogen-; oxidoreductases-; soil-enzymes; soil-fertility

NAL Call No.:QH84.8.B46

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17. Composition of toxicants and other constituents in yard or sludge composts from the same community as a function of time-of-waste- collection.

Lisk, D. J.; Gutenmann, W. H.; Rutzke, M.; Kuntz, H. T.; Doss, G. J.

Arch-Environ-Contam-Toxicol v.22, p.380-383. (1992).

Includes references.

Descriptor: yards-; wastes-; sewage-sludge; composts-; chemical-analysis; toxic-substances; nutrients-; polychlorinated-biphenyls; new-york; time-of-delivery

NAL Call No.:TD172.A7

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18. Compost as a partial nutrient source.

Werf, P. v. d.

BioCycle. Emmaus, Pa. : J.G. Press. Feb 1993. v. 34 (2) p. 79.

Descriptor: poa-; composts-; fertilizers-; nitrogen-; phosphorus-; potassium-; lawns-and-turf; ontario-

NAL Call No.:57.8-C734

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19. Compost extract added to microcosms may simulate community-level controls on soil microorganisms involved in element cycling.

Janzen, R. A.; Cook, F. D.; McGill, W. B.

Soil-biol-biochem v.27, p.181-188. (1995).

Includes references.

Descriptor: soil-bacteria; azospirillum-; bacillus-; azospirillum-brasilense; sulfate-reducing-bacteria; composts-; extracts-; nitrogen-fixation; denitrification-; sulfate-; reduction-; phosphorus-; nutrient-uptake; phosphorus-solubilization

Abstract: Interactions among populations of soil microorganisms might alter soil microenvironments sufficiently to allow populations collectively to inhabit sites which individually they could not inhabit. We tested the hypothesis that soluble microbial products in soil microenvironments mediate commensalistic interactions among populations involved in N<sub>2</sub>-fixation, denitrification, sulfate reduction and P

solubilization. We measured the growth of bacteria in microcosms amended with sterile compost extract. Of the 7 Azospirillum isolates tested, 3 fixed more N<sub>2</sub> when amended with 50 micrograms compost extract-C ml<sup>-1</sup> medium. Fixation of N<sub>2</sub>, by one isolate amended with NH<sub>4</sub>Cl or compost extract decreased with increasing concentrations (0.15-15 micrograms N ml<sup>-1</sup> medium) of NH<sub>4</sub>Cl, but not with increasing concentration of compost extract. Optical density of cultures of Bacillus sp. increased 6-fold with addition of 11 micrograms compost extract-C ml<sup>-1</sup> medium under denitrifying conditions. Adding 6 micrograms compost extract-C ml<sup>-1</sup> medium stimulated the growth of all 10 sulfate-reducing enrichment cultures, and three did not grow without compost extract. Addition of 10 micrograms compost extract-C ml<sup>-1</sup> medium, however, increased microbial-P in only one of the 10 cultures in P-limiting medium. This evidence is consistent with the hypothesis that exchange of growth factors among populations in microenvironments contributes to control of microorganisms involved in element cycling. NAL Call No.:S592.7.A1S6

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20. Compost impact on groundwater.

Maynard, A. A.

BioCycle. Emmaus, Pa. : J.G. Press. Apr 1993. v. 34 (4) p. 76.

Descriptor: composts-; groundwater-pollution; nitrates-; soil-fertility; application-rates; application-date; connecticut-  
NAL Call No.:57.8-C734

\*\*\*\*\*

21. Compost production from Greek domestic refuse.

Kapetanios, E. G.; Loizidou, M.; Valkanas, G.

Bioresource-Technol v.44, p.13-16. (1993).

Includes references.

Descriptor: refuse-; composting-; nitrogen-content; greece-  
NAL Call No.:TD930.A32

\*\*\*\*\*

22. Composted turkey litter. II. Effect on plant growth.

Tyler, H. H.; Warren, S. L.; Bilderback, T. E.; Perry, K. B.

J-environ-hortic v.11, p.137-141. (1993).

Includes references.

Descriptor: cotoneaster-dammeri; hemerocallis-; container-grown-plants; growing-media; composts-; litter-; turkeys-; waste-utilization; pine-bark; irrigation-scheduling; available-water; water-stress; nutrient-uptake; water-use; soil-fertility; soil-amendments  
NAL Call No.:SB1.J66

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23. Composted vs. uncomposted organics.

Garcia, C.; Hernandez, T.; Costa, F.

BioCycle. Emmaus, Pa. : J.G. Press. Nov 1992. v. 33 (11) p. 70-72.

Includes references.

Descriptor: crops-; organic-wastes; refuse-compost; sewage-sludge; nutritive-value; comparisons-; growth-; crop-yield; plant-analysis; nutrient-content; heavy-metals  
NAL Call No.:57.8-C734

\*\*\*\*\*

24. Composting--environmental effect of leachates.  
Berner, A.

Agricultural alternatives and nutritional self-sufficiency for a sustainable agricultural system that respects man and his environment proc of the IFOAM Seventh Int Scientific Conference, Ouagadougou, January 2-5, 1989. [Witzenhausen?] : Ekopan, c1990.. p. 307-316.

Includes references.

Descriptor: composting-; composts-; leachates-; environmental-impact; nutrients-; losses-; solubility-; soil-analysis; nitrate-; denitrification-; nitrification-; nutrient-content; potassium-; nitrogen-; soil-chemistry; oxygen-; soil-air; leaching-; groundwater-; surface-water; water-pollution; risk-; switzerland-

NAL Call No.:S605.5.I45-1989

\*\*\*\*\*

25. Composting in greenhouses for heat, CO2 enrichment, and nutrient economy.  
Fulford, B.

Global perspectives on agroecology and sustainable agricultural systems proceedings of the sixth international scientific conference of the International Federation of Organic Agriculture Movements. Santa Cruz, CA : Agroecology Program, University of California, c1988.. p. 337- 344b.

Includes references.

Descriptor: composting-; energy-sources; heat-production; greenhouses-; composts-; carbon-dioxide-enrichment; biological-filtration; nitrogen-; ammonia-; structural-design; components-; waste-utilization; applications-; biothermal-heating

NAL Call No.:S605.5.I45-1986

\*\*\*\*\*

26. Composting of poultry wastes: implications for dead poultry disposal and manure management.  
Sims, J. T.; Murphy, D. W.; Handwerker, T. S.

J-sustain-agric v.2, p.67-82. (1992).

Includes references.

Descriptor: chickens-; carcass-disposal; composting-; composts-; nitrogen-; mineralization-

NAL Call No.:S494.5.S86S8

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27. Cumulative effects of sludge compost on crop yields and soil properties.

Bevacqua, R. F.; Mellano, V. J.

Commun-soil-sci-plant-anal v.25, p.395-406. (1994).

Includes references.

Descriptor: allium-cepa; lactuca-sativa; festuca-arundinacea; festuca-arundinacea; sewage-sludge; composts-; application-rates; timing-; spring-; autumn-; stand-establishment; crop-yield; plant-tissues; heavy-metals; soil-; nutrient-content; soil-ph; salts-in-soil; soil-organic-matter; eucalyptus-; litter-plant; growth-; suppression-

NAL Call No.:S590.C63

\*\*\*\*\*  
28. Determination of compost biomaturity. II. Optical density of water extracts of composts as a reflection of their maturity. Mathur, S. P.; Dinel, H.; Owen, G.; Schnitzer, M.; Dugan, J.

Biol-agric-hortic v.10, p.87-108. (1993).

Includes references.

Descriptor: composts-; maturation-; stability-; determination-; colorimetry-; absorbance-; wavelengths-; extracts-; solubility-; organic-matter; carbon-; biochemical-oxygen-demand; ammonium-nitrogen; nitrate-nitrogen; nitrogen-content; ash-; moisture-content; environmental-temperature; aerobiosis-; oxygen-; ammonia-; hydrogen-sulfide; lepidium-sativum; seed-germination; composting-; humification-; farmyard-manure; waste- paper; dissolved-organic-carbon; biostability-

NAL Call No.:S605.5.B5

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29. Determination of compost biomaturity. III. Evaluation of a colorimetric test by <sup>13</sup>C-NMR spectroscopy and pyrolysis-field ionization mass spectrometry.

Schnitzer, M.; Dinel, H.; Mathur, S. P.; Schulten, H. R.; Owen, G.

Biol-agric-hortic v.10, p.109-123. (1993).

Includes references.

Descriptor: composts-; maturation-; stability-; determination-; evaluation-; colorimetry-; extracts-; spectral-analysis; carbon-; organic-compounds; structure-; aromatic-compounds; heterocyclic-nitrogen-compounds; humification-; composting-; farmyard-manure; waste-paper; mass- spectrometry; nuclear-magnetic-resonance-spectroscopy; biostability-; humic-substances; aliphatic-compounds

NAL Call No.:S605.5.B5

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30. NAL Call No.: HD1401.S73-no.93-7

An Economic comparison of composted manure and commercial nitrogen with imperfect information.

Berends, P. T. Manhattan, Kan. : Dept. of Agricultural Economics, Kansas State University, [1993] 17 p..

"January 1993."

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31. Effect of annual amendments of compost on nitrate leaching in nursery stock.

Maynard, A. A.

Compost-sci-util v.2, p.54-55. (1994).

Paper presented at the symposium, "Spent Mushroom Substrate, March 11-14, 1994, Philadelphia, Pennsylvania.

Descriptor: refuse-compost; application-rates; nitrate-nitrogen; leaching-; groundwater-; water-quality; soil-amendments; waste-utilization

NAL Call No.:TD796.5.C58

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32. Effect of composted manure on soil chemical properties and nitrogen use by grain sorghum.

Schlegel, A. J.

J-Prod-Agric v.5, p.153-157. (1992).

Paper presented at a symposium on "Ecology and Management of Grazing Systems" presented at the annual meeting of the American Association for the Advancement of Science, January 14-19, 1991, San Francisco, California.

Descriptor: sorghum-bicolor; cattle-manure; composts-; nitrogen-fertilizers; nutrient-sources; comparisons-; application-rates; soil-chemistry; phosphorus-; potassium-; nutrient-content; sodium-; soil-organic-matter; nitrate-nitrogen; use-efficiency; crop-yield; kansas-NAL Call No.:S539.5.J68

\*\*\*\*\*  
33. Effect of composting on short-term transformations in soil of 15N-labelled plant residues.  
Crippa, L.; Zaccheo, P.

Soil-biol-biochem v.27, p.247-250. (1995).

Includes references.

Descriptor: soil-flora; biological-activity-in-soil; organic-amendments; lolium-perenne; plant-residues; composts-; ammonium-nitrogen; nitrate-nitrogen; ammonium-sulfate; mineralization-; nitrogen-; isotope-labeling; stable-isotopes  
NAL Call No.:S592.7.A1S6

\*\*\*\*\*  
34. Effect of composting on the chemical and biological changes in peat and in wheat straw.  
Baur, A. J.

J-Am-Soc-Agron v.26, p.820-830. (1934).

Includes references.

Descriptor: wheat-straw; peat-; composting-; decomposition-; biodegradation-; straw-; chemical-composition; muck-soils; nitrates-; ammonia-; ph-; bacteria-; fungi-; nitrites-; lime-; calcium-carbonate; ammonium-sulfate; superphosphate-; potassium-chloride; manures-; rose-; montezuma-; cicero-; sphagnum-peat

Abstract: An experiment showing the result of composting two mucks, a peat, and a straw has been described. Fertilizer salts, lime, and manure inoculum were used as supplements. Chemical and biological changes in the variously treated composts were studied by determining the amount of nitrate and ammonia nitrogen and the number of heterotrophic micro-organisms at various intervals. Hydrogen-ion concentration was also determined. The well-decomposed Rose and Montezuma mucks were not greatly affected by any of the treatments. The use of lime alone caused no significant chemical or biological change. Superphosphate plus potassium chloride with and without lime decreased nitrates, but had no effect on the number of heterotrophic micro-organisms. Some of the composts received ammonium sulfate either alone or with a complete fertilizer. Nitrate accumulation was high in these cases due mainly to the nitrification of part of the applied ammonium sulphate. The use of ammonium sulfate alone or with superphosphate, potassium chloride, and lime temporarily increased the number of bacteria but decreased the fungi. The manure inoculum had very little effect, but any differences noted were in favor of increased nitrates and micro-organisms. The control composts showed a rapid accumulation of nitrates, a low content of ammonia, and large numbers of bacteria and fungi. An application of lime to the poorly decomposed Cicero peat caused

nitrate accumulation. This effect was not demonstrated consistently by any of the other treatments. Lime alone or with nitrogen, phosphorus, and potassium greatly increased the number of bacteria during the first part of the incubation period. All of the treatments except lime alone and manure increased the ammonia content and the number of fungi in these composts. The application of complete fertilizer with lime hastened the decomposition of straw by immediately increasing the number of micro-organisms. Nitrates accumulated in these composts. Lime decreased and the fertilizer salts increased acidity in the composts. Potassium chloride depressed the accumulation of nitrates in the Rose and Montezuma mucks. It proved to be toxic to the development of autotrophic organisms. This effect was not observed when either potassium sulfate or dipotassium acid phosphate were used. NAL Call No.:4-AM34P

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35. Effects of coal fly ash-amended composts on the yield and elemental uptake by plants.

Menon, M. P.; Ghuman, G. S.; James, J.; Chandra, K.

J-Environ-Sci-Health-Part-A-Environ-Sci-Eng v.27, p.1127-1139. (1992).

Includes references.

Descriptor: composts-; coal-; fly-ash; zea-mays; sorghum-bicolor; nutrient-uptake; crop-yield

NAL Call No.:TD172.J6

\*\*\*\*\*

36. Estimation of phosphorus availability in composts and compost/peat mixtures by different extraction methods.

Alt, D.; Peters, I.; Fokken, H.

Commun-soil-sci-plant-anal v.25, p.2063-2080. (1994).

Includes references.

Descriptor: dendranthema-; phosphorus-; nutrient-availability; determination-; composts-; peat-; mixtures-; testing-; extraction-; extractants-; comparisons-

Abstract: A trial was carried out with compost and compost/peat mixtures to test several extraction methods for the estimation of availability of phosphorus (P). The test plant was *Dendranthema grandiflorum*. All composts had a high pH and salt content. Amounts of P extracted by different extraction methods decreased in the order: Formate < CAL < NH<sub>4</sub>-acetate < CaCl<sub>2</sub>/DTPA < CaCl<sub>2</sub>. Dilution of compost with peat decreased pH and increased availability of P. The better availability of P caused by dilution with peat was not reflected by the Formate-, CAL-, and NH<sub>4</sub>-acetate method. These acid and well-buffered extraction solutions overestimate P, and are therefore not suited to estimate availability of P in composts and compost/peat mixtures. Weak extraction solutions, like CaCl<sub>2</sub> and CaCl<sub>2</sub>/DTPA, gave results which showed a good correlation with P content of plants and P uptake. The advantage of the latter method compared with CaCl<sub>2</sub> is the extraction of amounts of P comparable to amounts taken up by the plants. Therefore, of all the extraction methods tested, the CaCl<sub>2</sub>/DTPA method showed the best suitability to estimate the availability of P in composts and compost/peat mixtures. NAL Call No.:S590.C63

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37. Evaluating garbage compost.  
Levi Minzi, R.; Saviozzi, A.; Riffaldi, R.

BioCycle. Emmaus, Pa. : J.G. Press. Mar 1992. v. 33 (3) p. 75-77.  
Includes references.

Descriptor: municipal-refuse-disposal; composting-;  
nutritive-value; nutrient-content; italy-

NAL Call No.:57.8-C734

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38. Evaluation of city refuse compost maturity: a review.  
Jimenez, E. I.; Garcia, V. P.

Biol-Wastes v.27, p.115-142. (1989).

Includes references.

Descriptor: refuse-; composting-; maturity-; application-to-land;  
anaerobic-conditions; rhizosphere-; nitrogen-; deficiency-;  
crops-; adverse-effects; phytotoxicity-; reviews-

NAL Call No.:TD930.A32

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39. NAL Call No.: SB87.D4B47-nr.S2254

Evaluering af komposteret kildesorteret husholdningsaffald :  
kvaelstofvirkning = Evaluation of composted source-graded  
household refuse : nitrogen effect. Evaluation of composted  
source-graded household refuse.

Kjellerup, V. [Kobenhavn?] : Landbrugsministeriet, Statens  
planteavlfsforsog, 1993. 38 p. : ill..

Summary in English.

\*\*\*\*\*

40. Fate of 2,4,6-trinitrotoluene in a simulated compost system.

Pennington, J. C.; Hayes, C. A.; Myers, K. F.; Ochman, M.;  
Gunnison, D.; Felt, D. R.; McCormick, E. F.

Chemosphere v.30, p.429-438. (1995).

Includes references.

Descriptor: explosives-; organic-nitrogen-compounds;  
polluted-soils; composting-; microbial-degradation;  
chemical-reactions; carbon-; isotope- labeling; radionuclides-;  
bioremediation-; microbial-transformation; degradation-products;  
soil-decontamination; rdx-; hmx-

NAL Call No.:TD172.C54

\*\*\*\*\*

41. Fly ash-amended compost as a manure for agricultural crops.  
Menon, M. P.; Sajwan, K. S.; Ghuman, G. S.; James, J.; Chandra,  
K.

J-environ-sci-health,-Part-A,-Environ-sci-eng. New York, Marcel  
Dekker. 1993. v. 28 (9) p. 2167-2182.

Includes references.

Descriptor: brassica-oleracea; brassica-juncea;  
phaseolus-vulgaris; capsicum-frutescens; solanum-melongena;  
fly-ash; composts-; nutrient-uptake; dry- matter-accumulation;  
nutrients-; crop-yield

NAL Call No.:TD172.J6

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42. Growth of perennials and leaching of heavy metals in media  
amended with a municipal leaf, sewage sludge and street sand  
compost.

Bugbee, G. J.; Frink, C. R.; Migneault, D.

J-Environ-Hortic v.9, p.47-50. (1991).

Includes references.

Descriptor: aster-novi-belgii; onagraceae; sedum-telephium;  
container-grown-plants; perennials-; growing-media; mixtures-;  
waste-utilization; refuse- compost; leaf-mold; sewage-sludge;  
sand-; topsoil-; peat-; liquid-fertilizers; nutrient-solutions;  
leachates-; heavy-metals; ph-; cadmium-; chromium-; copper-;  
manganese-; nickel-; lead-; zinc-; risk-; assessment-;  
pollutants-; growth-rate; soil-physical-properties; connecticut-;  
gaura-lindheimeri; styrofoam-pellets

NAL Call No.:SB1.J66

\*\*\*\*\*

43. Growth of Rudbeckia and leaching of nitrates in potting media amended with composted coffee processing residue, municipal solid waste and sewage sludge.

Bugbee, G. J.

Compost-sci-util v.2, p.72-79. (1994).

Includes references.

Descriptor: rudbeckia-hirta; growth-; leaching-; nitrates-;  
growing-media; amendments-; composts-; coffee-; processing-;  
residues-; solid-wastes; refuse-; sewage-sludge; wood-chips;  
wood-ash; liquid-fertilizers

NAL Call No.:TD796.5.C58

\*\*\*\*\*

44. Horticultural uses of municipal solid waste composts.

Rosen, C. J.; Halbach, T. R.; Swanson, B. T.

HortTechnology v.3, p.167-173. (1993).

Paper presented at the "Workshop on Waste Product Utilization and Disposal in Horticultural Crops", held at the 89th American Society for Horticultural Science, August 5, 1992, Honolulu, Hawaii.

Descriptor: horticultural-crops; crop-production;  
waste-utilization; refuse-compost; municipal-refuse-disposal;  
solid-wastes; heavy-metals; salts-; boron-; nitrogen-; quality-;  
soil-amendments; soil-properties; phytotoxicity-

NAL Call No.:SB317.5.H68

\*\*\*\*\*

45. How compost fertilization affects soil nitrogen and crop yield.

Buchanan, M.; Gliessman, S. R.

BioCycle. Emmaus, Pa. : J.G. Press. Dec 1991. v. 32 (12) p. 72-77.

Includes references.

Descriptor: brassica-oleracea-var; -italica; nitrogen-;  
use-efficiency; crop-yield; soil-fertility; composts-;  
agricultural-wastes; refuse-; ammonium-sulfate; superphosphate-;  
application-rates; physicochemical-properties; california-

NAL Call No.:57.8-C734

\*\*\*\*\*

46. Humic substances in straw compost with rock phosphate.

Singh, C. P.; Amberger, A.

Biol-Wastes v.31, p.165-174. (1990).

Includes references.

Descriptor: wheat-straw; composting-; waste-treatment;  
waste-utilization; rock-phosphate; phosphorus-; calcium-;  
retention-; capacity-; humic-acids; fulvic-acids; molasses-;  
incorporation-

NAL Call No.:TD930.A32

\*\*\*\*\*

47. Improving nutrient and moisture retention in pine bark  
substrates with rockwool and compost combinations.

Bilderback, T. E.; Fonteno, W. C.

Acta-hortic p.265-272. (1993).

Paper presented at the International Symposium on "Horticultural  
Substrates Other Than Soil In Situ," September 5-11, 1992,  
Florence, Italy.

Descriptor: cotoneaster-dammeri; substrates-; rockwool-;  
composts-; refuse-; turkeys-; broilers-; litter-; sand-;  
physicochemical-properties; growth-; electrical-conductivity;  
nutrient-retention; phosphates-; foliar-diagnosis

NAL Call No.:80-Ac82

\*\*\*\*\*

48. Increasing plant-available phosphorus in an ultisol with a  
yard-waste compost.

Hue, N. V.; Ikawa, H.; Silva, J. A.

Commun-soil-sci-plant-anal v.25, p.3291-3303. (1994).

Includes references.

Descriptor: ultisols-; acid-soils; tropical-soils;  
mineral-deficiencies; phosphorus-; nutrient-availability;  
composts-; yards-; litter-plant; triple- superphosphate;  
application-rates; gypsum-; lime-; sorption-isotherms; shoots-;  
nutrient-content; growth-; dry-matter-accumulation;  
phosphorus-sorption-capacity

NAL Call No.:S590.C63

\*\*\*\*\*

49. Influence of compost maturity on nutrient status of  
sunflowers.

Baca, M. T.; Delgado, I. C.; De Nobili, M.; Esteban, E.; Sanchez  
Raya, A. J.

Commun-soil-sci-plant-anal v.26, p.169-181. (1995).

Includes references.

Descriptor: helianthus-annuus; composts-; sugarcane-bagasse;  
olive-cake; poultry-manure; maturity-; nutrient-availability;  
iron-; zinc-; boron-; trace- element-deficiencies;  
plant-nutrition; mineral-nutrition; immobilization-; nitrogen-;  
phosphorus-; nitrification-; crop-yield; soil-fertility;  
nutrient- uptake; mineral-uptake

NAL Call No.:S590.C63

\*\*\*\*\*

50. Influence of MSW derived compost on Rhizobium trifolii and  
the VA mycorrhizal endophyte Glomus Mosseae in a low fertility  
soil.

Leporini, C.; Pera, A.; Vallini, G.; Picci, G.; Giovannetti, M.

Acta-Hortic p.385-390. (1992).

In the series analytic: Compost Recycling of Wastes / edited by

C. Balis, M. De Bertoldi, G.L. Ferrero, V. Maniow, and E. Kapetanios. Proceedings of an International Symposium, October 4-7, 1989, Athens, Greece.

Descriptor: refuse-; solid-wastes; sewage-sludge; trifolium-pratense; sorghum-bicolor; rhizobium-trifolii; glomus-mosseae; nodulation-; nitrogen- fixation; italy-  
NAL Call No.:80-AC82

\*\*\*\*\*

51. Leaching of nitrates from potting media containing composted sewage sludge and municipal solid waste.  
Bugbee, G. J.

Yank-nurs-q. Storrs, CT : University of Connecticut, Dept. of Plant Science, 1991-. Spring 1994. v. 4 (1) p. 13-14.

Includes references.

Descriptor: composts-; sewage-sludge; solid-wastes; growing-media; nitrates-; leaching-; carbon-nitrogen-ratio  
NAL Call No.:SB118.48.Y26

\*\*\*\*\*

52. Loss of nitrogenous compounds during composting of animal wastes.  
Martins, O.; Dewes, T.

Bioresource-Technol v.42, p.103-111. (1992).

Includes references.

Descriptor: composting-; mixtures-; chopping-; straw-; liquid-manures; poultry-manure; pig-manure; cattle-manure; nitrogen-; losses-; leachates-; gases- ; emission-; ph-; nitrogen-balance  
NAL Call No.:TD930.A32

\*\*\*\*\*

53. Microbiological characterization of four composted urban refuses.  
Diaz Ravina, M.; Acea, M. J.; Carballas, T.

Biol-Wastes v.30, p.89-100. (1989).

Includes references.

Descriptor: refuse-compost; microbial-flora; populations-; nitrites-; oxidants-; nitrogen-fixation; spain-; soil-microbial-population  
NAL Call No.:TD930.A32

\*\*\*\*\*

54. Mineralization of composted 15N-labelled farmyard manure during soil incubations.  
Cheneby, D.; Nicolardot, B.; Godden, B.; Penninckx, M.

Biol-agric-hortic v.10, p.255-264. (1994).

Includes references.

Descriptor: silty-soils; nitrogen-; carbon-; mineralization-; nutrient-availability; composts-; farmyard-manure; soil-organic-matter; decomposition-  
NAL Call No.:S605.5.B5

\*\*\*\*\*

55. Municipal solid waste compost use in tomato/watermelon successional cropping.  
Obreza, T. A.; Reeder, R. K.

Proc-Soil-Crop-Sci-Soc-Fla. [S.l.] : The Society. 1994. v. 53 p. 13-19.

Meeting held September 22-25, 1993, Gainesville, FL.

Descriptor: lycopersicon-esculentum; citrullus-lanatus; sequential-cropping; refuse-; poultry-manure; composts-; application-to-land; application-rates; npk-fertilizers; crop-yield; growth-; irrigation-; soil-water-content; soil-water-retention; soil-ph; nutrient-availability; florida-NAL Call No.:56.9-So32

\*\*\*\*\*

56. Nitrate movement beneath a beef cattle manure composting site.

Nienaber, J. A.; Ferguson, R. B.

Pap-Am-Soc-Agric-Eng. St. Joseph, Mich. : American Society of Agricultural Engineers, . Winter 1992. (92-2611/92-2629) 12 p. Paper presented at the "1992 International Winter meeting sponsored by the American Society of Agricultural Engineers," December 15- 18, 1992, Nashville, Tennessee.

Descriptor: profiles-; cattle-manure; nitrate-NAL Call No.:290.9-Am32P

\*\*\*\*\*

57. Nitrogen availability for corn in soils amended with urea, cattle slurry, and solid and composted manures.

Paul, J. W.; Beauchamp, E. G.

Can-j-soil-sci v.73, p.253-266. (1993).

Includes references.

Descriptor: liquid-manures; cattle-manure; composts-; urea-; cattle-slurry; nitrogen-; nutrient-availability; nutrient-uptake; zea-mays; nitrogen-content; seeds-; maize-stover; crop-yield; ammonium-; nitrate-; soil-fertility

NAL Call No.:56.8-C162

\*\*\*\*\*

58. Nitrogen mineralization in soils amended with composted and uncomposted poultry litter.

Tyson, S. C.; Cabrera, M. L.

Commun-soil-sci-plant-anal v.24, p.2361-2374. (1993).

Includes references.

Descriptor: sandy-soils; sandy-loam-soils; poultry-manure; composting-; nitrogen-; mineralization-; release-; nitrate-; leaching-; pollution-; risk-

NAL Call No.:S590.C63

\*\*\*\*\*

59. Nitrogen mineralization study in compost.

Navarro, M.; Pujola, M.; Soliva, M.; Garau, M.

Acta-Hortic p.279-294. (1992).

In the series analytic: Compost Recycling of Wastes / edited by C. Balis, M. De Bertoldi, G.L. Ferrero, V. Maniow, and E. Kapetanios. Proceedings of an International Symposium, October 4-7, 1989, Athens, Greece.

Descriptor: composts-; refuse-; application-to-land; nitrogen-; mineralization-; biological-activity-in-soil

NAL Call No.:80-AC82

\*\*\*\*\*

60. Nitrogen transformations during poultry manure composting.  
Hansen, R. C.; Keener, H. M.; Marugg, C.; Dick, W. A.; Hoitink,  
H. A. J.

Pap-Am-Soc-Agric-Eng. St. Joseph, Mich. : American Society of  
Agricultural Engineers, . Summer 1991. (914014) 16 p.  
Paper presented at the "1991 International Summer Meeting  
sponsored by the American Society of Agricultural Engineers,"  
June 23-26, 1991, Albuquerque, New Mexico.

Descriptor: poultry-manure; composting-; ammonia-; nitrogen-;  
nitrification-

NAL Call No.:290.9-Am32P

\*\*\*\*\*

61. Nutrient and pollutant content in sewage sludge and flowing  
muds, refuse and refuse composts. Nahr- und Schadstoffgehalte in  
Klar- und Flussschlammen, Mull und Mullkomposten : Datensammlung  
und Bewertung : VDLUFA- Projekt 1985 : Datenerhebung im Auftrage  
des Bundesministeriums fur Ernährung, Landwirtschaft und Forsten.  
Ulken, R. Darmstadt : VDLUFA-Verlag, c1987. 95 p..

Includes bibliographical references (p. 45-50).

NAL Call No.: S542.G3V4-Heft-22

\*\*\*\*\*

62. Optimizing physical properties of a study soil for higher  
productivity using town refuse compost in Saudi Arabia.

Sabrah, R. E. A.; Abdel Magid, H. M.; Abdel Aal, S. I.; Rabie, R.  
K.

J-arid-environ. London, New York, Academic Press. Feb 1995. v. 29  
(2) p. 253-262.

Includes references.

Descriptor: desert-soils; sandy-soils; refuse-compost;  
application-rates; soil-water; field-capacity;  
resistance-to-penetration; pore-size-distribution;  
triticum-aestivum; crop-yield; dry-matter-accumulation; roots-;  
growth-; nutrient-uptake; water-use-efficiency; saudi-arabia

NAL Call No.:QH541.5.D4J6

\*\*\*\*\*

63. Pilot study of coal ash compost.

Beaver, T.

Compost-sci-util v.2, p.18-21. (1994).

Includes references.

Descriptor: coal-; ash-; composting-; composts-; mixtures-;  
waste-treatment; temperature-; ph-; electrical-conductivity;  
soil-fertility; lycopersicon- esculentum; biomass-production;  
hordeum-vulgare; crop-yield; triticum-aestivum; seed-germination;  
metals-; nutrient-content

NAL Call No.:TD796.5.C58

\*\*\*\*\*

64. Planning to use compost? ask these questions.

Richard, T.

St-Lawrence-Cty-Agric-News. Canton, N.Y. : Agricultural Division,  
St. Lawrence County Cooperative Extension Association. June 1993.  
v. 77 (6) p. 10.

Descriptor: composts-; wastes-; soil-structure; nutrient-content;  
phytotoxicity-; plants-

NAL Call No.:S544.3.N7S3

\*\*\*\*\*

65. Recycling of seastar (*Asterias amurensis*) waste by composting.

Line, M. A.

Bioresour-technol v.49, p.227-229. (1994).

Includes references.

Descriptor: echinodermata-; wastes-; waste-disposal; composting-; eucalyptus-; bark-; sawdust-; nutrient-availability; nutrient-content; soil-fertility; lactuca-sativa; lycopersicon-esculentum

NAL Call No.:TD930.A32

\*\*\*\*\*

66. Response of container-grown nursery crops to raw and composted paper mill sludges.

Chong, C.; Cline, R. A.

Compost-sci-util v.2, p.90-96. (1994).

Includes references.

Descriptor: paper-mill-sludge; composts-; bark-compost; mixtures-; growing-media; cornus-alba; cotoneaster-dammeri; weigela-; container-grown-plants; shoots-; roots-; biomass-production; leaves-; nutrients-; nutrient-uptake

NAL Call No.:TD796.5.C58

\*\*\*\*\*

67. Response to differently amended wool-waste composts on yield and uptake of nutrients by crops.

Tiwari, V. N.; Pathak, A. N.; Lehri, L. K.

Biol-Wastes v.28, p.313-318. (1989).

Includes references.

Descriptor: wool-production; wastes-; waste-treatment; composting-; composts-; application-to-land; carbon-nitrogen-ratio; additives-; farmyard-manure; rock-phosphate; crop-yield; nutrient-uptake; triticum-aestivum; cicer-arietinum

NAL Call No.:TD930.A32

\*\*\*\*\*

68. Short-term nitrogen dynamics in soil amended with fresh and composted cattle manures.

Paul, J. W.; Beauchamp, E. G.

Can-j-soil-sci v.74, p.147-155. (1994).

Includes references.

Descriptor: zea-mays; nitrogen-; nutrient-uptake; nutrient-availability; cattle-manure; composts-; ammonium-nitrogen; mineralization-; immobilization-; soil-temperature

NAL Call No.:56.8-C162

\*\*\*\*\*

69. Silkworm litter: use as nitrogen replacment for vegetable crop cultivation and substrate for mushroom cultivation.

Madan, M.; Vasudevan, P.

Biol-Wastes v.27, p.209-216. (1989).

Includes references.

Descriptor: waste-utilization; silkworms-; litter-;  
nitrogen-fertilizers; raphanus-sativus; vegetable-growing;  
mushroom-compost; pleurotus-sajor-caju; chemical-composition;  
crop-yield; india-

NAL Call No.:TD930.A32

\*\*\*\*\*

70. Soil fertility improvement and pollution risks from the use  
of composts referred to N, P, K and C balance.

Lionello, B.; Francesco, D. Z.

Acta-Hortic p.51-62. (1992).

In the series analytic: Compost Recycling of Wastes / edited by  
C. Balis, M. De Bertoldi, G.L. Ferrero, V. Maniow, and E.

Kapetanios. Proceedings of an International Symposium, October  
4-7, 1989, Athens, Greece.

Descriptor: composts-; application-rates; nutrient-balance;  
pollution-; risk-; soil-fertility; zea-mays; italy-

NAL Call No.:80-AC82

\*\*\*\*\*

71. Soluble phosphorus in a forest soil Ap horizon amended with  
municipal wastewater sludge or compost.

James, B. R.; Aschmann, S. G.

Commun-Soil-Sci-Plant-Anal v.23, p.861-875. (1992).

Includes references.

Descriptor: forest-soils; phosphorus-; solubility-; a-horizons;  
soil-amendments; sewage-sludge; orthophosphates-;

organophosphorus-compounds; composts-; leaching-; forest-litter

NAL Call No.:S590.C63

\*\*\*\*\*

72. Source separated composts analyzed for quality.

Spencer, R. L.

Biocycle v.35, p.30-33. (1994).

Includes references.

Descriptor: refuse-compost; quality-; heavy-metals;  
nutrient-content

NAL Call No.:57.8-C734

\*\*\*\*\*

73. Suppression of dollar spot on creeping bentgrass and annual  
bluegrass turf with compost-amended topdressings.

Nelson, E. B.; Craft, C. M.

Plant-Dis v.76, p.954-958. (1991).

Includes references.

Descriptor: poa-annua; agrostis-stolonifera-var; -palustris;

sclerotinia-homoeocarpa; fungal-diseases; golf-green-soils;

golf-courses; composts-; organic-fertilizers; top-dressings;

plant-disease-control; biological-control; suppression-;

fungicidal-properties; nutrient-availability

NAL Call No.:1.9-P69P

\*\*\*\*\*

74. Survey of toxicants and nutrients in composted waste  
materials.

Lisk, D. J.; Gutenmann, W. H.; Rutzke, M.; Kuntz, H. T.; Chu, G.

Arch-Environ-Contam-Toxicol v.22, p.190-194. (1992).

Includes references.

Descriptor: wastes-; composting-; surveys-; nutrient-content;  
toxic-substances; usa-

NAL Call No.:TD172.A7

\*\*\*\*\*

75. Uptake of multielements by corn from fly ash-compost amended soil.

Ghuman, G. S.; Menon, M. P.; Chandra, K.; James, J.; Adriano, D. C.; Sajwan, K. S.

Water-air-soil-pollut v.72, p.285-295. (1994).

Includes references.

Descriptor: zea-mays; nutrient-uptake; mineral-uptake; fly-ash;  
composts-; application-to-land; mineral-content; potassium-;  
magnesium-; copper-; growth-; dry-matter-accumulation;  
application-rates

NAL Call No.:TD172.W36

\*\*\*\*\*

76. The use of bottom-ash coal-cinder amended with compost as a container medium in horticulture.

Chen, Y.; Gottesman, A.; Aviad, T.; Inbar, Y.

Acta-Hortic p.173-181. (1991).

Paper presented at the "Second Symposium on Horticultural Substrates and their Analysis," September 10-14, 1990, Guernsey, United Kingdom.

Descriptor: ornamental-plants; substrates-;  
container-grown-plants; industrial-wastes; ash-; composts-;  
mixtures-; physicochemical-properties; nutrient- content;  
coal-fired-power-plants; coal-fired-industrial-boilers

NAL Call No.:80-AC82

\*\*\*\*\*

77. The use of spent mushroom substrate (SMS) as an organic manure and plant substrate component.

Maher, M. J.

Compost-sci-util v.2, p.37-44. (1994).

Paper presented at the symposium, "Spent Mushroom Substrate, March 11-14, 1994, Philadelphia, Pennsylvania.

Descriptor: mushrooms-; mushroom-compost; peat-; mixtures-;  
organic-fertilizers; application-rates; lolium-; lycopersicon-;  
seedling-growth; phosphorus-; potassium-; magnesium-;  
electrical-conductivity; nitrate-nitrogen; biomass-production;  
dry-matter; leaching-; waste-utilization

NAL Call No.:TD796.5.C58

\*\*\*\*\*

78. The use of waste materials as potting media in fruit tree production.

Burroni, F.; Ponzio, C.; Tafani, R.; Tattini, M.

Acta-hortic p.612-619. (1994).

Paper presented at the International Symposium on New Cultivation Systems in Greenhouse held April 26-30, 1993, Cagliari, Italy.

Descriptor: olea-europaea; prunus-persica; growing-media;  
refuse-compost; sewage-sludge; composts-; dairy-wastes; bark-;  
forest-litter; crop-residues; container-grown-plants;  
nutrient-content; mineral-content; phosphorus-; potassium-;

nitrogen-content; humic-acids; fulvic-acids

NAL Call No.:80-Ac82

\*\*\*\*\*

79. Using compost in landscape beds and nursery substrates.

Bilderback, T. E.; Powell, M. A.

AG-NC-Agric-Ext-Serv. Raleigh : North Carolina Agricultural  
Extension Service, . Sept 1993. (473-14) 4 p.

Descriptor: composts-; landscape-gardening; nurseries-;

nutrient-content; application-rates; north-carolina

NAL Call No.:S544.3.N6N62

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