

3.0. REVIEW OF LITERATURE

Several authors have made an attempt to convert the used biological wastes to generate compost for other purposes by using microorganisms or earthworms. The developments of compost from biological wastes were also used for the growth and development of agricultural crops and other tree species as a biofertilizers. They are detailed as follows:

Year	Author(s)	Aspect(s) studied
1899	Eisen	Notes on North American earthworms of the genus <i>Diplocardia</i>
1928	Smith	An account of changes in the earthworm fauna of Illinois
1941	Puh	Beneficial influence of earthworms on some chemical properties of the soil
1941	Lyon	Responses of two species of tomatoes and the F1 generation to sodium sulphate in the nutrient medium
1945	Bray and Kurtz	Determination of total, organic and available forms of phosphorus in soils
1946	Hopp and Henry	Earthworms fight erosion
1946	Hopp and Hopkins	The effect of cropping systems on the winter population of earthworms
1947	Macnab <i>et al.</i>	An introduction to Oregon earthworms with additions to the Washington list
1947	Slater and Hopp	Relation of fall protection to earthworm populations and soil physical conditions
1948	Dawson	Earthworm microbiology and the formation of water stable soil aggregates
1948	Guild	Studies on the relationship between earthworms and soil fertility

1955	Satchell	Some aspects of earthworm ecology
1959	Youngberg	The influence of soil conditions, following tractor logging, on the growth of planted douglas fir seedlings
1959	Barley	The influence of earthworms on soil fertility
1961	Rodale	The challenge of earthworm research
1962	Stebbins and James	Endemic-exotic earthworm competition in the American Midwest
1962	Raw	Studies of earthworm populations in orchards
1963	Gavrilov	Earthworms, producers of biologically active substances
1964	Langmaid	Some effects of earthworm invasion in virgin podsoles
1965	Murchie	A new earthworm from north Carolina (Oligochaeta: Megascolecidae)
1965	Walter	Calcium and magnesium in methods of soil analysis (chemical and microbiological properties)
1966	Ghabbour	Earthworms in agriculture
1968	Choudhuri	Effect of soil salinity on germination and survival of some steppe plants in Washington
1969	Gerard	Factors affecting earthworms in pastures
1969	Madge and David	Field and laboratory studies on the activities of two species of tropical earthworms
1969	Crump	Earthworms-a profitable investment
1970	McKey-Fender and Dorothy	Concerning native earthworms from south-western Washington and north-western Oregon (Oligochaeta, Acanthodrilidae)
1971	Younis and Hatata	Studies on the effects of certain salts on germination, on growth of root, and on metabolism, effects of chlorides and sulphates of sodium, potassium and magnesium on gemination of wheat grains

1972	Reynolds	Earthworms in medicine
1972a	Gates	Toward a revision of the earthworm family Lumbricidae IV
1972b	Gates	Earthworms an introduction to the systematic and biology of Megadriliae Oligochaeta with special reference to Southeast Asia
1972	Ljungstrom and Per-Olof	Introduced earthworms of South Africa. On their taxonomy, distribution, history of introduction and on the extermination of endemic earthworms
1972	Edwards and Lofty	Biology of earthworms
1973	Reynolds	Earthworms (Annelida : Oligochaeta) ecology and systematics
1973	Vimmerstedt and Finney	Impact of earthworm introduction on litter burial and nutrient distribution
1973	Poincelot and Day	Rates of cellulose decomposition during the composting of leaves combined with several municipal and industrial wastes and other additives
1974	Nordstrom and Rundgen	Environmental factors and lumbricid associations in southern Sweden
1975	Ehlers	Observations on earthworm channels and infiltration on tilled and untilled loess soil
1976	Watanabe <i>et al.</i>	Seasonal changes in size class and stage structure of Lumbricid <i>Eisenia foetida</i> population in a field compost and its practical application as the decomposer of organic waste matter
1976	Curry	Some effects of animal manures on earthworms in grassland
1977	Martin	Guide to the lumbricid earthworms of New Zealand pastures
1977	Reynolds	The earthworms (Lumbricidae and Sparganophilidae) of Ontario
1977	Vinceslas-Akpa and Loquet	Organic matter transformations in lignocellulosic waste products composted or vermicompost <i>Eisenia foetida</i>

1977	Yatazawa	Cycling of mineral nutrients in agricultural ecosystems
1977	Van Rhee	A study of the effect of earthworms on orchard productivity
1977	Adachi <i>et al.</i>	Primitive and inhibitory effects of rice straw application on rice plant growth in pot and field experiments
1978	Jennifer and Hill	Earth Worms, the Agriculturalist's friends
1978	Mehlich	New extractant for soil test evaluation of phosphorus, potassium, magnesium, calcium, sodium, manganese and zinc
1978	Sabine	The nutritive value of Earthworm meals
1979	Makarda <i>et al.</i>	Performance of growing and laying chickens fed diets containing earthworms (<i>E. fetida</i>)
1979	Gerard and Hay	The effect on earthworms of ploughing, tined cultivation, direct drilling and nitrogen
1979	Chatterjee <i>et al.</i>	Organic manures as substitute for chemical fertilizers for high yielding rice varieties
1979	Springett and Syers	The effect of earthworm casts on ryegrass seedlings
1979	Syers <i>et al.</i>	Cycling of nitrogen by surface casting earthworms in a pasture ecosystem
1979	Barnes and Ellis	Effects of different methods of cultivation and direct drilling and disposal of straw residues on populations of earthworms
1980	Cotton and Curry	The effects of cattle and pig slurry fertilisers on earthworms (Oligochaeta, Lumbricidae) in grassland managed for silage production
1980	Reynolds and John	The earthworm family Sparganophilidae (Annelida, Oligochaeta) in North America
1980	Reinecke and Visser	The influence of agricultural land use practices on the population density of <i>Allolobophora trapezoides</i> and <i>Eisenia rosea</i> (Oligochaeta)

1980	Andersen	The influence of farmyard manure and slurry on the earthworm population (Lumbricidae)
1980	Senapati <i>et al.</i>	Observation on the effects of earthworms in the decomposition process in soil under laboratory conditions
1980	Edwards and Lofty	Effects of earthworm inoculation upon the root growth of direct drilled cereals
1981	Bridgens	The importance of the earthworms
1981a	Yeates	Soil nematode population by the earthworm <i>Lumbricus terrestris</i> with special reference to apple leaves
1981b	Yeates	Soil nematode populations depressed in the presence of earthworms
1981	Badlock <i>et al.</i>	Legume and mineral N effects on crop yields in several crop sequences in the Upper Mississippi Valley
1981	Rush and Epstein	Comparative studies on the sodium, potassium and chloride relations of a wild halophytic and domestic salt-sensitive tomato species
1981	Singh and Pradhan	Determination of nitrogen and protein by Kjeldahl method
1982	Kale <i>et al.</i>	Potential of <i>Perionyx excavatus</i> for utilizing organic wastes
1982	Edwards and Brown	Use of grassland plots to study the effects of pesticides on earthworms
1982	Olsen and Sommers	Methods of soil analysis
1982	Bremner and Mulvaney	Methods of soil analysis in total nitrogen
1982	Nelson and Sommers	Total carbon and organic carbon and organic matter
1982	Keeney and Nelson	Nitrogen inorganic forms in method of soil analysis
1982	Edwards and Lofty	Nitrogenous fertilizers and earthworm populations in agricultural soils
1982	Stockdill	Effects of introduced earthworms on the productivity of New Zealand pastures

1983	Lavelle	The structure of earthworm communities
1983a	Lofs-Holmin	Earthworm population dynamics in different agricultural rotations
1983b	Lofs-Holmin	Reproduction and growth of common arable land and pasture species of earthworm (Lumbricidae) in laboratory cultures
1983	Bouche	The establishment of earthworm communities
1983	Tomlin	The earthworm bait market in North America
1983	Satchell	Earthworm ecology from Darwin to vermiculture
1983	Edwards	Earthworm ecology in cultivated soils
1983	Baker	Distribution, abundance and species associations of earthworms (Lumbricidae) in a reclaimed peat soil
1983	Springet	Effect of five species of earthworms on some soil properties
1983	Lavelle <i>et al.</i>	Interactions between earthworms, soil organic matter and microflora in an African savannah soil
1983	Andersen	Nitrogen turnover by earthworms in arable plots treated with farmyard manure and slurry
1983	Hand	The microbiological ecology of cow slurry in vermiculture beds
1983	Hoogerkamp <i>et al.</i>	Effect of earthworms on grassland on recently reclaimed polder soils in the Netherlands
1983	Baker	Distribution, abundance and species associations of earthworms (Lumbricidae) in a reclaimed peat soil in Ireland
1984	Walther and Snider	Techniques for sampling earthworms and cocoons from leaf litter, humus and soil
1984	Syers and Springett	Earthworms and soil fertility
1984	Curry and Bolger	Growth, reproduction and litter and soil consumption by <i>Lumbricus terrestris</i> in reclaimed peat

1984	Satchell and Martin	Phosphate activity in earthworm
1984	Ma	Sublethal toxic effects of copper on growth, reproduction and litter breakdown activity in the earthworm <i>Lumbricus rubellus</i> , with observations on the influence of temperature and soil pH
1984	App <i>et al.</i>	Estimation of the nitrogen balance for irrigated rice and the contribution of phototrophic nitrogen fixation
1984	Janssen	A simple method for calculating decomposition and accumulation of "young" soil organic matter
1985	Lee	Earthworms and their ecology and relationships with soils and land use
1985	Brooks <i>et al.</i>	Chloroform fumigation and the release of soil nitrogen a direct extraction method to measure microbial biomass nitrogen in soil
1985	Clarholm	Possible roles for roots, bacteria, protozoa and fungi in supplying nitrogen in plants
1985	Jenkinson <i>et al.</i>	Interactions between fertilizer nitrogen and soil nitrogen
1985	Knollenberg <i>et al.</i>	Consumption of leaf litter by <i>Lumbricus terrestris</i> (Oligochaeta)
1985	Mackay and Kladivko	Earthworms and rate of breakdown of soybean and maize residues in soil
1986	Finstein <i>et al.</i>	Waste treatment composting as a controlled system
1986	Hennuy and Gasper	Treatment of wastes by worms
1986	Hartenstein	Earthworm biotechnology and global biogeochemistry
1986	Lofs-Holmin	Occurrence of eleven earthworm species (Lumbricidae) in permanent pastures in relation to soil pH
1986	Haimi and Huhta	Capacity of various organic residues to support adequate earthworm biomass for vermicomposting
1986	James and Seastedt	Nitrogen mineralization by native and introduced earthworms

1986	Bostrom	The effect of soil compaction on <i>Lumbricidae</i> in a heavy clay soil
1986	Kladivko <i>et al.</i>	Earthworms as a factor in the reduction of soil crusting
1986	Svensson <i>et al.</i>	Potential for higher rates of denitrification in earthworm casts than in the surrounding soil
1986	Davidson <i>et al.</i>	Distinguishing between nitrification and denitrification as sources of gaseous nitrogen production in soil
1986	Simek and Pizl	The effect of earthworms (<i>Lumbricidae</i>) on Nitrogenase activity in soil
1986	Spiers <i>et al.</i>	Effects and importance of indigenous earthworms on decomposition and nutrient cycling in coastal forest ecosystems
1986	Bostrom and Lofs-Holmin	Growth of earthworms (<i>Allolobophora caliginosa</i>) fed shoots and roots of barley, meadow fescue and lucerne
1986	Hirai <i>et al.</i>	Effect of compost maturity on plant growth
1986	Bressani and Elias	Seeds quality and nutritional goals in pea, lentil, faba bean and chickpea breeding
1986	Muhammad	Effect of Na/Ca and Na/K ratios in saline and saline sodic soils on the growth, mineral nutrition and salt tolerance of some rices
1987	Reinecke and Venter	Moisture preference, growth and reproduction of the composting worm <i>Eisenia foetida</i> (<i>Oligochaeta</i>)
1987	Viel <i>et al.</i>	Optimisation of agricultural, industrial waste management through in-vessel composting
1987	Tomati <i>et al.</i>	The presence of growth regulators in earthworm
1987a	Scheu	Microbial activity and nutrient dynamics in earthworm casts (<i>Lumbricidae</i>)

1987b	Scheu	The role of substrate feeding earthworms (Lumbricidae) for bioturbation in a beechwood soil
1987	Beyer and Hensler	Relation of pH and other soil variables to concentrations of Pb, Cu, Zn, Cd and Se in earthworms
1987	Christensen	The effect of earthworms on nitrogen cycling in arable soil
1987	Grappelli <i>et al.</i>	Earthworm casting effect on <i>Agaricus bisporus</i> fructification
1988	Daugbjerg <i>et al.</i>	Earthworms as bio indicators of cultivated soils
1988	Edwards and Fletcher	Interactions between earthworms and microorganisms in organic-matter breakdown
1988	Bostrom	Growth and cocoon production by the earthworm <i>Aporrectodea caliginosa</i> in soil mixed with various plant materials
1988	Price	Development of a vermicomposting system, agricultural waste management and environmental protection
1988	Shipitalo <i>et al.</i>	Effect of diet on the feeding and casting activity of <i>Lumbricus terrestris</i> and <i>L. rubellus</i> in laboratory culture
1988	Chan and Griffiths	The vermicomposting of pre treated pig manures
1988	James and Samuel	The post fire environment and earthworm populations in tallgrass prairie
1988	Stewart <i>et al.</i>	Earthworms and structure rehabilitation in subsoils and in topsoils affected by opencast mining for coal
1988	Mather and Christensen	Surface movements of earthworms in agricultural land
1988	Haukka	Effect of various cultivation earthworm biomasses and communities on different soil types
1988	Neuhauser <i>et al.</i>	The potential of earthworms for managing sewage sludge

1988	Callahan	Earthworms as ecotoxicological assessment tools
1988	Lavelle	Earthworm activities and the soil system
1988	Ruz Jerez <i>et al.</i>	The role of earthworms in nitrogen release from herbage residues
1988	Christensen	The direct effects of earthworms on nitrogen turn over in cultivated soils
1988	Tomati <i>et al.</i>	The hormone like effect of earthworm casts on plant growth
1988	Siminis <i>et al.</i>	Humic substances from compost affect nutrient accumulation and fruit yield in tomato
1988	Sharma and Mitra	Effect of combination of organic materials and nitrogen fertilizer on growth, yield and nitrogen uptake
1989	Lavelle <i>et al.</i>	Management of earthworm population in agro ecosystem
1989	Zachmann and Linden	Earthworm effects on corn residue breakdown and infiltration
1989	Shipitalo and Protz	Chemistry and micro morphology of aggregation in earthworm casts
1989	Joschko <i>et al.</i>	Assessment of earthworm burrowing efficiency in compacted soil with a combination of morphological and soil physical measurements
1989	Reinecke and Hallatt	Growth and cocoon production of <i>Perionyx excavatus</i> (Oligochaeta)
1989	Cortez <i>et al.</i>	C and N transfer in soil with or without earthworms fed with ¹⁴ C and ¹⁵ N-labelled wheat straw
1989	Edwards <i>et al.</i>	Water and nitrate movement in earthworm burrows within longterm no fill cornfields
1989	Kemppainen	Nutrient content and fertilizer value of live stick manure with special reference to cow manure
1989	Weltzien	Some effects of composted organic materials on plant health
1989	Senesi	Composted materials as organic fertilizers

1990	Boyle	The ecology of earthworms (<i>Lumbricidae</i>) in grassland on reclaimed cutover peatland and their impact on soil physical properties and grass yield
1990	Price and Phillips	An improved mechanical separator for removing live worms from worked organic wastes
1990	James and Samuel	Oligochaeta, Megascolecidae and other earthworms from Southern and Midwestern North America
1990	Werner and Dindal	Earthworm community dynamics in conventional and low-input agroecosystems
1990	Hallatt <i>et al.</i>	The life cycle of the oriental compost worm <i>Perionyx excavatus</i> (Oligochaeta)
1990	Elliott <i>et al.</i>	Denitrification in earthworm casts and soil from pastures under different fertilizer and drainage regime
1990	Zajonc and Sidor	Use of some wastes for vermicompost preparation and their influence on growth and reproduction of the earthworm <i>Eisenia fetida</i>
1990	Wendt and Larink	Computer-aided analysis of earthworm burrows of sectioned soil columns
1990	Sharma and Mitra	Complementary effect of organic, bio and mineral fertilizer in rice based cropping system
1990	Boyle	The ecology of earthworms (<i>Lumbricidae</i>) in grassland on reclaimed cutover peatland and their impact on soil physical properties and grass yield
1990	King	Soil nutrient management in the United States in sustainable agricultural systems
1990	Bacon	Effects of stubble and N fertilization management on N availability and uptake under successive rice (<i>Oryza sativa</i> L.) crops

1990	Parmelee <i>et al.</i>	Earthworm and enchytraeids in conventional and no-tillage agroecosystems, a biocide approach to assess their role in organic matter breakdown
1990	Kladivko and Timmenga	Earthworms and agricultural management
1990	Matthew	Earthworm ecology and sustaining agriculture
1991	Lane	16S/23S rRNA earthworm sequencing
1991	Daniel	Leaf-litter consumption and assimilation by juveniles of <i>Lumbricus terrestris</i> L. (Oligochaeta, Lumbricidae) under different environmental conditions
1991	Mackenzie	Earthworms fear to bread
1991	Butt	The effects of temperature on the intensive production of <i>Lumbricus terrestris</i>
1991	Holmstrup <i>et al.</i>	The relationship between temperature and cocoon incubation time for some lumbricid earthworm species
1991	James	Soil nitrogen, phosphorus and organic matter processing by earthworms in tallgrass prairie
1991	Sharma and Mitra	Direct and residual effect of organic materials and phosphorus fertilizer in rice based cropping system
1992	Fragoso and Lozano	Resource allocation strategies imposed by caudal amputation and soil moisture in the tropical earthworm <i>Pontoscolex corethrurus</i>
1992	Chang	Study of earthworm activities effects of surface soil infiltration
1992	Viljoen and Reinecke	The temperature requirement of the epigeic earthworm species <i>Eudrilus eugeniae</i> (Oligochaeta)
1992	Cluzeau <i>et al.</i>	Effects of intensive cattle trampling on soil plant earthworms system in two grassland types

1992	Butt <i>et al.</i>	The intensive production of <i>Lumbricus terrestris</i> L. for soil amelioration
1992	Bing Zhou <i>et al.</i>	Ceramide glycanase from the earthworm, <i>Lumbricus terrestris</i>
1992	Lee	Some trends opportunities in earthworm research
1992	Reinecke <i>et al.</i>	The suitability of <i>Eudrilus eugeniae</i> , <i>Perionyx excavatus</i> and <i>Eisenia fetida</i> (Oligochaeta) for vermicomposting
1992	Hendrix <i>et al.</i>	Abundance and distribution of earthworms in relation to landscape factors on the Georgia Piedmont
1992a	Edwards <i>et al.</i>	Earthworm populations under conservation tillage and their effects on transport of pesticides into groundwater
1992b	Edwards <i>et al.</i>	Role of <i>Lumbricus terrestris</i> L. burrows on quality of infiltrating water
1992	Buckerfield	Earthworm populations in dry land cropping soils under conservation tillage in South Australia
1992	Ruz-Jerez <i>et al.</i>	Laboratory assessment of nutrient release from a pasture soil receiving grass or clover residues, in the presence or absence of <i>Lumbricus rubellus</i> or <i>Eisenia fetida</i>
1992	Lavelle and Martin	Small scale and large-scale effects of endogeic earthworms on soil organic matter dynamics in soils of the humid tropics
1992c	Edwards <i>et al.</i>	Rainfall intensity affects transport of water and chemicals through macropores in no-till soil
1992	Poier and Richter	Spatial distribution of earthworms and soil properties in an arable loess soil
1992	Garcia <i>et al.</i>	Characterization of humic acids from uncomposted and composted sewage sludge by degradative and non-degradative techniques
1992	Inbar <i>et al.</i>	Characterization of humic substances formed during the composting of solid wastes from wineries

1992	Kale <i>et al.</i>	Influence of vermicompost application on the available macro nutrients and selected microbial population in a paddy field
1992	Wani and Lee	Biofertilizers role in upland crops production
1992	Reinecke <i>et al.</i>	The suitability of <i>Eudrilus eugeniae</i> , <i>Perionyx excavatus</i> and <i>Eisenia fetida</i> (Oligochaeta) for vermicomposting in Southern Africa in terms of their temperature requirements
1993	Inbar <i>et al.</i>	Recycling of cattle manure, the composting process and the characterization of maturity
1993	Murphy	Earthworms in Australia
1993a	Mathur <i>et al.</i>	Determination of compost biomaturity
1993b	Mathur <i>et al.</i>	Determination of compost biomaturity II. Optical density of water extracts of composts as a reflection of their maturity
1993	Senapati and Julka	Selection of suitable vermicomposting species under Indian conditions. Earthworm resources and vermiculture
1993	Barois <i>et al.</i>	Transformation of the soil structure through <i>Pontoscolex corethrurus</i> (Oligochaeta) intestinal tract
1993	Miller	Composting as a process based on the control of ecologically selective factors
1993	Hauser	Distribution and activity of earthworms and contribution to nutrient recycling in alley cropping
1993	Trigo and Lavelle	Changes in respiration rate and some physicochemical properties of soil during gut transit through <i>Allolobophora molleri</i> (Lumbricidae, Oligochaeta)
1993	Butt	Utilisation of soild paper-mill sludge and spent brewery yeast as a feed for soil-dwelling earthworms
1993	Szczech <i>et al.</i>	Suppressive effect of a commercial earthworm compost on some root infecting pathogens of cabbage and tomato

1994	Butt <i>et al.</i>	The life cycle of the earthworm <i>Lumbricus terrestris</i> in laboratory culture
1994	Holmstrup	Physiology of cold hardiness in cocoons of five earthworm taxa (Lumbricidae: Oligochaeta)
1994	Terhivuo <i>et al.</i>	Genetic and morphological variation in the parthenogenetic earthworm <i>Eiseniella tetraedra</i> (Sav.) (Oligochaeta, Lumbricidae)
1994	Logsdon	Worldwide progressing in vermicomposting
1994	Aquino <i>et al.</i>	Earthworms (Oligochaeta) reproduction in manure and sugarcane bagasse
1994	Blair <i>et al.</i>	Influences of earthworms on biogeochemistry
1994	Basker <i>et al.</i>	Changes in potassium availability and other soil properties due to soil ingestion by earthworms
1994	Parkin and Berry	Nitrogen transformations associated with earthworm casts
1994	Deibert and Utter	Earthworm populations related to soil and fertilizer management practices
1994	Didden and Marinissen	Effects of Oligochaete worms on soil aggregates and implications for organic matter dynamics
1994	Bhiday	Earthworms in agriculture
1994	Edwards <i>et al.</i>	Earthworms in agroecosystems
1994	Stephens <i>et al.</i>	Field evidence for reduced severity of <i>Rhizoctonia</i> bare-patch disease of wheat, due to the presence of the earthworms <i>Aporrectodea rosea</i> and <i>Aporrectodea trapezoids</i>
1995	Butt <i>et al.</i>	An earthworm cultivation and soil inoculation technique for land restoration
1995	Tomati <i>et al.</i>	Bioremediation of olive mill waste waters by composting
1995	Fischer <i>et al.</i>	<i>In situ</i> analysis of the bacterial community in the gut of the earthworm <i>Lumbricus terrestris</i>

1995	Blair <i>et al.</i>	Manipulation of earthworm populations in field experiments in agroecosystems
1995a	Bohlen <i>et al.</i>	Earthworm community structure and diversity in experimental agricultural watersheds in Northeastern Ohio
1995b	Bohlen <i>et al.</i>	Efficacy of methods for manipulating earthworm populations in large-scale field experiments in agroecosystems
1995	Bohlen and Edwards	Earthworm effects on N dynamics and soil respiration in microcosms receiving organic and inorganic nutrients
1995	Ismail	Earthworms in soil fertility management
1995	Tomati and Galli	Earthworms, soil fertility and plant productivity
1996	Edwards and Bohlen	Biology and ecology of earthworms
1996	Chen and Shih	A preliminary study of earthworms in Fushan botanical garden
1996	Elvira <i>et al.</i>	The growth of <i>Lumbricus rubellus</i> and <i>Dendrobaena rubida</i> in cow manure mixed cultures with <i>Eisenia Andrei</i>
1996	Auserwald <i>et al.</i>	Influence of soil properties on the population and activity of geophagous earthworms after five years of bare fallow
1996	Klok and de Roos	Population level consequences of toxicological influences on individual growth and reproduction in <i>Lumbricus rubellus</i> (Lumbricidae, Oligochaeta)
1996	Daniel <i>et al.</i>	Weight gain and weight loss of the earthworm <i>Lumbricus terrestris</i> L. at different temperatures and body weights
1996	Chefetz <i>et al.</i>	Chemical and biological characterization of organic matter during composting of municipal solid waste
1996	Steinberg <i>et al.</i>	Earthworm abundance and nitrogen mineralization rates along an urban- rural land use gradient

1996	Orozco <i>et al.</i>	Vermicomposting of coffee pulp using the earthworm <i>Eisenia foetida</i> , effects on C and N contents and the availability of nutrients
1996	Bernal <i>et al.</i>	Carbon and nitrogen transformation during composting of sweet sorghum bagasse
1996	Paredes <i>et al.</i>	Nitrogen transformation during the composting of different organic wastes
1996	Insam <i>et al.</i>	Changes in functional abilities of the microbial community during composting of manure
1996	Bhadauria and Ramakrishnan	Role of earthworms in nitrogen cycle during the cropping phase of shifting agriculture
1996	Daniel <i>et al.</i>	Weight gain and weight loss of the earthworm <i>Lumbricus terrestris</i> at different temperatures and body weights
1997	Dominguez and Edwards	Effects of stocking rate and moisture content on the growth and maturation of <i>E. anderi</i> in pig manure
1997	Wong <i>et al.</i>	Feasibility of using coal ash residue as co-composting materials for sewage sludge
1997	Doube <i>et al.</i>	Influence of mineral soil on the palatability of organic matter for Lumbricid earthworms
1997	Jensen and Holmstrup	Estimation of earthworm cocoon development time and its use in studies of <i>in situ</i> reproduction rates
1997	Ismail	The Biology of Earthworms
1997	Gandhi <i>et al.</i>	Composting of household wastes with and without earthworms
1997	Manna <i>et al.</i>	Growth and reproduction of the vermicomposting earthworm (<i>Perionyx excavates</i>)
1997	Hartenstein <i>et al.</i>	Reproduction potential of earthworm <i>Eisenia foetida</i>

1997	Datar <i>et al.</i>	Vermicomposting a technological option for solid waste management
1997	Butt	Reproduction and growth of the earthworm <i>Allolobophora chlorotica</i> in controlled environments
1997	Zhigunov and Simakov	Composition and properties of humic acids separated from decomposing plant residues
1997	Frederickson <i>et al.</i>	Combining vermiculture with traditional green waste composting systems
1997	Mitchell and Edwards	The production of vermicompost using <i>Eisenia fetida</i> from cattle manure
1997	Sunitha <i>et al.</i>	Evaluation methods of vermicomposting under open field conditions
1997	Elvira <i>et al.</i>	Vermicomposting of wastewater sludge from paper-pulp industry with nitrogen rich materials
1997	Palm <i>et al.</i>	Combined use of organic and inorganic nutrient sources for soil fertility maintenance
1997	Vinceslas-Akpa and Loquet	Organic matter transformation in lignocellulosic waste products composted or vermi composted (<i>Eisenia fetida andrei</i>)
1997	Eghball <i>et al.</i>	Nutrient, carbon and mass loss during composting of beef cattle feedlot manure
1997	Masciandaro <i>et al.</i>	Soil agro ecological management, fertirrigation and vermicompost treatments
1997	Blair <i>et al.</i>	Changes in soil N pools in response to earthworm population manipulations in agro ecosystems with different N sources
1997	Bohlen <i>et al.</i>	Effects of earthworms (<i>Lumbricus terrestris</i>) on the carbon and nitrogen dynamics of decomposing surface litter in corn agro ecosystems
1997	Schindler wessells	Earthworm effects on soil respiration in corn agro ecosystems receiving different nutrient inputs

1997	Schrader and Zhang	Earthworm casting and stabilization or destabilization of soil structure
1997	Lachnicht <i>et al.</i>	Characteristics of macro porosity in a reduced tillage agro ecosystem with manipulated earthworm populations
1997	Bouche <i>et al.</i>	The earthworm role in the nitrogen cycle
1997	Reeves	The role of soil organic matter in maintaining soil quality in continuous cropping systems
1997	Springett and Gray	The interaction between plant roots and earthworm burrows in pasture
1997	Jadhav <i>et al.</i>	Influence of the conjunctive use of FYM, vermicompost and urea on growth and nutrient uptake in rice
1997	Stinner <i>et al.</i>	Earthworm effects on crop and weed biomass and N content in organic and inorganic fertilized agro ecosystems
1997	Ketterings <i>et al.</i>	Effects of earthworms on soil aggregate stability and carbon and nitrogen storage in a legume cover crop agro ecosystem
1997	Yang and Chang	Effect of fertilizer application on methane emission/production in the paddy soils of Taiwan
1997	Ahmed <i>et al.</i>	Utilization of biofertilizers in field crop production. Yield response of groundnut to inorganic and biofertilizers
1998	Zaller and Arnone	Earthworm and soil moisture effects on the productivity and structure of grass land communities
1998	Edwards	Breakdown of animal, vegetable and industrial organic wastes by earthworms
1998	Kale	Earthworms nature's gift for utilization of organic wastes
1998	Saxena and Chauhan	Vermicomposting from non-organic fly ash wastes
1998	Butt	Interactions between selected earthworm species, a preliminary, laboratory based study
1998	Appelhof <i>et al.</i>	Domestic vermicomposting systems

1998	Butt <i>et al.</i>	The intensive production of <i>Lumbricus terrestris</i> L. for soil amelioration
1998a	Edwards	Earthworm ecology
1998b	Edwards	The use of earthworms in the breakdown and management of organic wastes
1998	Elvira <i>et al.</i>	Vermicomposting of sludge from paper mill and dairy industries with <i>Eisenia andre</i>
1998	Bernier	Earthworm feeding activity and development of the humus profile
1998	Saetre	Decomposition, microbial community structure, and earthworm effects along a birch-spruce soil gradient
1998	Albanell <i>et al.</i>	Chemical changes during vermicomposting (<i>Eisenia foetida</i>) of sheep manure mixed with cotton industrial wastes
1998	Subler and Kirsch	Spring dynamics of soil carbon, nitrogen and microbial activity in earthworm middens in a no till cornfield
1998	Jegou <i>et al.</i>	Effects of four ecological categories of earthworms on carbon transfer in soil
1998	Binet <i>et al.</i>	Significance of earthworms in stimulating microbial activity
1998	Burtelow <i>et al.</i>	Influence of exotic earthworm invasion on soil organic matter, microbial biomass and denitrification potential in soils
1998	Parmelee <i>et al.</i>	Earthworms and nutrient cycling processes intergrating across the ecological hierarchy
1998	Hendrix	Earthworms in agroecosystems
1998	Doube and brown	Life in a complex community and functional interactions between earthworms, organic matter, microorganisms and plant growth
1998	Shabala <i>et al.</i>	Salinity effect on the bioelectric activity, growth, Na ⁺ accumulation and chlorophyll fluorescence of maize leaves

1998	Devi and Agarwal	Performance of sunflower hybrids as influenced by organic manure and fertilizer
1999	Zaller and Arnone	Interactions between plant species and earthworm casts
1999	Landgraf <i>et al.</i>	Characterization of humic acids from vermicompost of cattle manure composting
1999	Hsi-Te Shih <i>et al.</i>	A review of the earthworms (Annelida: Oligochaeta) from Taiwan
1999	Holmstrup	Cocoon production of <i>Aporrectodea longa</i> Ude and <i>Aporrectodea rosea</i> Savigny (Oligochaeta; Lumbricidae) in a Danish grass field
1999	Lowe and Butt	Interspecific interactions between earthworms
1999	Ndegwa <i>et al.</i>	Effects of stocking density and feeding rate on vermicomposting of bio solids
1999	Decaens <i>et al.</i>	Carbon and nitrogen dynamics in ageing earthworm casts in grasslands of the eastern plains of Colombia
1999	Fang <i>et al.</i>	Assessing bioindication with earthworms in an intensively farmed rural landscape
1999	Fragoso <i>et al.</i>	Earthworm communities of tropical agroecosystems
1999	Barois <i>et al.</i>	Ecology of earthworm species with large environmental tolerance and extended distribution
1999	Langmaack <i>et al.</i>	Quantitative analysis of earthworm burrow systems with respect to biological soil structure regeneration after soil compaction
1999	Morgan	The accumulation of metals (Cd, Cu, Pb, Zn and Ca) by two ecologically contrasting earthworms species
1999	Talashilkar <i>et al.</i>	Changes in chemical properties during composting of organic residues as influenced by earthworm activity

1999	Paoletti	The role of earthworms for assessment of sustainability and as bioindicators
1999	Schmidt and Curry	Effects of earthworms on biomass production, nitrogen allocation and nitrogen transfer in wheat-clover intercropping model systems
1999	Robertson <i>et al.</i>	Soil carbon and nitrogen availability, nitrogen mineralization, nitrification and soil respiration potentials
1999	Parkin and Berry	Microbial nitrogen transformations in earthworm burrows
1999	Monedero <i>et al.</i>	Relationships between water soluble carbohydrate and phenol fractions and the humification indices of different organic wastes during composting
1999	Thompson and Nogales	Nitrogen and carbon mineralization in soil of vermicomposted and unprocessed dry olive cake ('Orujo seco') produced from two stage centrifugation for olive oil extraction
1999	Simek <i>et al.</i>	Biological and chemical properties of arable soils affected by long-term organic and inorganic fertilizer applications
1999	Spurgeon and Hopkin	Life history patterns in reference and metal exposed earthworm populations
1999	Panda <i>et al.</i>	Accumulation of zinc and its effects on the growth, reproduction and life cycle of <i>Drawida willsi</i> (Oligochaeta), a dominant earthworm in Indian crop fields
1999	Chen <i>et al.</i>	Stimulation of plant growth by humic substances
1999	Boyer <i>et al.</i>	Effects of efoil cover crop and earthworm inoculation on maize crop and soil organisms in Reunion Island
1999	Karmegam <i>et al.</i>	Effect of vermicompost on the growth and yield of greengram (<i>Phaseolus aureus</i> Rob.)
1999	Brown <i>et al.</i>	Effects of earthworms on plant production in the tropics

2000	Edwards and Dominguez	Vermicomposting of sewage sludge effect of bulking materials on growth and reproduction of the earthworms <i>E. andri</i>
2000	Wu <i>et al.</i>	Comparison of methods for evaluating stability and maturity of biosolids compost
2000	Karmegam and Daniel	Effect of biodigested slurry and vermicompost on the growth and yield of <i>Vigna unguiculata</i> (L.)
2000	Masciandaro <i>et al.</i>	Kinetic parameters of dehydrogenase in the assessment of the response of soil to vermicompost and inorganic fertilisers
2000	Sreenivas <i>et al.</i>	Vermicompost, a viable component of IPNSS in nitrogen nutrition of ridge gourd
2000	Bansal and Kapoor	Vermicomposting of crop residues and cattle dung with <i>Eisenia foetida</i>
2000	Benitez <i>et al.</i>	Isolation by isoelectric focusing of humic urease complexes from earthworm (<i>Eisenia foetida</i>) processed sewage sludges
2000	Kale	An evaluation of the vermitechnology process for the treatment of agro, sugar and food processing wastes
2000	Atiyeh and Dominguez	Changes in biochemical properties of c[low manure during processing by earthworms and the effect on seeding growth
2000	Nedgwa and Thompson	Effect of C to N ratio on vermicomposting in the treatment and bioconversion of biosolids
2000	Tuomela <i>et al.</i>	Biodegradation of lignin in a compost environment
2000	Ranganathan and Parthasarathi	Enhanced phosphatase activity in earthworm casts is more of microbial origin
2000	Whalen and Parmelee	Earthworm secondary production and N flux in agro ecosystems, a comparison of two approaches

2000	Reider <i>et al.</i>	Yields and nutrient budgets under composts, raw dairy manure and mineral fertilizer
2000a	Atiyeh <i>et al.</i>	Earthworm processed organic wastes as components of horticultural potting media for growing marigold and vegetable seedlings.
2000b	Atiyeh <i>et al.</i>	Effects of vermicomposts and composts on plant growth in horticultural media and soil
2000	Rodriguez <i>et al.</i>	The effect of vermicompost on plant nutrition, yield and incidence of root and crown rot of gerbera (<i>Gerbera jamesonii</i> H Bolus)
2001	Barrera and Andres	Sewage sludge application on soils effects on two earthworms species
2001	Callaham <i>et al.</i>	Different behavioral patterns of the earthworms <i>Octolasion tyrtaeum</i> and <i>Diplocardia</i> sp. in tallgrass prairie soils
2001	Keener <i>et al.</i>	Composting and value-added utilization of manure from a high-rise swine finishing facility
2001	Kostecka and Butt	Ecology of the earthworm <i>Allolobophora carpathica</i> in field and laboratory studies
2001	Stephen <i>et al.</i>	Metal ion trafficking in earthworms
2001	Herlihy	Vermicomposting of organic wastes
2001	Hassen <i>et al.</i>	Microbial characterization during composting of municipal solid waste
2001	Dominguez <i>et al.</i>	The biology and population dynamics of <i>Eudrilus eugeniae</i> (Kinberg), (<i>Oligochaeta</i>) in cattle waste solids
2001	Gajalakshmi <i>et al.</i>	Potential of two epigeic and two anecic earthworm species in vermicomposting of water hyacinth
2001	Ndegwa and Thompson	Integrating composting and vermicomposting the treatment and bioconversion of biosolids

2001	Leonard and Dolfing	Cadmium uptake by earthworms as related to the availability in the soil and the intestine
2001	Thimm <i>et al.</i>	Contribution of the earthworm <i>Lumbricus rubellus</i> (Annelida, Oligochaeta) to the establishment of plasmids in soil bacterial communities
2001	Gigliotti <i>et al.</i>	Composition changes of soil humus after massive application of urban waste compost
2001	Le Bayon and Binet	Earthworm surface casts affect soil erosion by runoff water and phosphorus transfer in a temperate maize crop
2001	Koutika <i>et al.</i>	Soil organic matter distribution as influenced by enchytraeid and earthworm activity
2001	Semple <i>et al.</i>	Impact of composting strategies on the treatment of soils contaminated with organic pollutants
2001	Jeyabal and Kuppuswamy	Recycling of organic wastes for the production of vermicompost and its response in rice legume cropping system and soil fertility
2001	Ngoc Son <i>et al.</i>	Effect of organic and biofertilizer on quality, grain yield and soil properties of soybean under rice based cropping system
2001	Kumaran	Response of groundnut to organic manure, fertilizer levels, split application under irrigated conditions
2001	Chen	Effects of different N sources on growth, nutrient uptake and ionic balance of <i>Larlix gmelini</i> seedlings
2001	Anthony <i>et al.</i>	Plants and fertilisers as drivers of change in microbial community structure and function in soils
2002	Elorrieta <i>et al.</i>	Composting of different horticultural wastes: effect of fungal inoculation
2002	Scheu <i>et al.</i>	Effects of the presence and community composition of earthworms on microbial community functioning

2002	Bhattacharjee and Chaudhuri	Cocoon production, morphology, hatching pattern and fecundity in seven tropical earthworm species a laboratory based investigation
2002	Atiyeh and Lee	The influence of humic acids derived from earthworm processed organic wastes on plant growth
2002	Lowe and Butt	Growth of hatchling earthworms in the presence of adults, interactions in laboratory culture
2002	Svendsen <i>et al.</i>	Survival and growth of <i>Lumbricus terrestris</i> (Lumbricidae) fed on cattle dung from cattle given sustained-release boluses of ivermectin or fenbendazole
2002	Bolotetskii and Kodolova	Genetic aspects of species structure of the compost worm <i>Eisenia foetida</i> (Sav.) (Oligochaeta, Lumbricidae)
2002	Alfreider <i>et al.</i>	Microbial community dynamics during composting of organic matter as determined by 16S ribosomal DNA analysis
2002	Curry <i>et al.</i>	Intensive cultivation can drastically reduce earthworm populations in arable land
2002	Chaudhuri <i>et al.</i>	Rubber leaf litters (<i>Hevea brasiliensis</i> , var RRIM 600) as vermiculture substrate for epigeic earthworms, <i>Perionyx excavatus</i> , <i>Eudrilus eugeniae</i> and <i>Eisenia foetida</i>
2002	Cardoso and Ramirez	Vermicomposting of sewage sludge
2002	Charest and Beauchamp	Composting of de-inking paper sludge with poultry manure at three nitrogen levels using mechanical turning
2002	Lagerlof <i>et al.</i>	The importance of field boundaries for earthworms (Lumbricidae) in the Swedish agricultural landscape
2002	Sinha <i>et al.</i>	Vermiculture and waste management, study of action of earthworms <i>Eisenia foetida</i> , <i>Eudrilus euginae</i> and <i>Parionyx excavatus</i> on biodegradation of some community wastes in India and Australia

2002	Cheng and Wong	Effects of earthworms on the Zn fractionation in soils
2002	Cahyani <i>et al.</i>	Succession of micro biota estimated by phospholipid fatty acid analysis and changes in organic constituents during the composting process of rice straw
2002	Tiquia	Evolution of extracellular enzyme activities during manure composting
2002	Shuster <i>et al.</i>	Nitrogen source and earthworm abundance affected runoff volume and nutrient loss in a tilled-corn agroecosystem
2002	Tereshchenko and Naplekova	Influence of different ecological groups of earthworms on the intensity of nitrogen fixation
2002	Raj	Biofertilizers for micronutrients
2003	Maboeta <i>et al.</i>	Vermicomposting of industrially produced woodchips and sewage sludge utilizing <i>Eisenia fetida</i>
2003	Baker and Whitby	Soil pH preferences and the influences of soil type and temperature on the survival and growth of <i>Aporrectodea longa</i> (Lumbricidae)
2003	Lowe and Butt	Influence of food particle size on inter- and intra-specific interactions of <i>Allolobophora chlorotica</i> (Savigny) and <i>Lumbricus terrestris</i> (L.)
2003	West <i>et al.</i>	Evidence of interpopulation differences in life history parameters of adult and F1 generation <i>Lumbricus rubellus</i>
2003	Kaviraj <i>et al.</i>	Municipal solid waste management through vermicomposting employing exotic and local species of earthworms
2003	Garcia and Fragoso	Influence of different food substrates on growth and reproduction of two tropical earthworm species (<i>Pontoscolex corethrurus</i> and <i>Amyntas corticis</i>)

2003	Singleton <i>et al.</i>	Identification of uncultured bacteria tightly associated with the intestine of the earthworm <i>Lumbricus rubellus</i> (Lumbricidae: Oligochaeta)
2003	Kaushik and Garg	Vermicomposting of mixed soil textile mill sludge and cow dung with the epigeic earthworm <i>Eisenia foetida</i>
2003	Rossi	Clusters in earthworm spatial distribution
2003	Medina <i>et al.</i>	Immunological and chemical analysis of proteins from <i>Eisenia foetida</i> earthworm
2003	Ma <i>et al.</i>	Remediation of Pb/Zn mine tailings from Guangdong, China, earthworms (<i>Pheretima guillelmi</i>), trees (<i>Leucaena leucocephala</i>), soil nutrition and metal mobility
2003a	Owa <i>et al.</i>	Abundance of earthworms in Nigerian ecological zones, implications for sustaining fertilizer free soil fertility
2003b	Owa <i>et al.</i>	Effect of earthworm casting on growth parameters of rice
2003	Haynes <i>et al.</i>	Casts of <i>Aporrectodea caliginosa</i> (Savigny) and <i>Lumbricus rubellus</i> (Hoffmeister) differ in microbial activity, nutrient availability and aggregate stability
2003	Amir <i>et al.</i>	Characterization of humic acids extracted from sewage sludge during composting
2003	Benito <i>et al.</i>	Chemical and microbiological parameters for the characterisation of the stability and maturity of pruning waste compost
2003	Aira <i>et al.</i>	Effects of two species of earthworms (<i>Allolobophora</i> sp.) on soil systems a microfaunal and biochemical analysis
2003	Caravaca and Roldan	Effect of <i>Eisenia foetida</i> earthworms on mineralisation kinetics, microbial biomass, enzyme activities, respiration and labile C fractions of three soils treated with a composted organic residue
2003	Cooperband <i>et al.</i>	Relating compost measures of stability and maturity to plant growth

2003	Fraser <i>et al.</i>	Interactions between earthworms (<i>Aporrectodea caliginosa</i>), plants and crop residues for restoring properties of a degraded arable soil
2003	Chaoni <i>et al.</i>	Effects of earthworm casts and compost on soil microbial activity and plant nutrient availability
2003	Decaens <i>et al.</i>	Seed dispersion by surface casting activities of earthworms in Colombian grasslands
2003	Arancon <i>et al.</i>	Effects of vermicomposts on growth and marketable fruits of field-grown tomatoes, peppers and strawberries
2004	Sanchez <i>et al.</i>	Plant influences on native and exotic earthworms during secondary succession in old tropical pastures
2004	Panikkar <i>et al.</i>	Risk management in vermicomposting of domestic organic waste
2004	Anastasi <i>et al.</i>	Isolation and identification of fungal communities in compost and vermicompost
2004	Dominguez <i>et al.</i>	State of the art and new perspectives on vermicomposting research
2004	Curry	Factors affecting the abundance of earthworms in soils
2004	Termorshuizen <i>et al.</i>	The value of compost
2004	Whalen <i>et al.</i>	Quantifying surface and subsurface cast production by earthworms under controlled laboratory conditions
2004	Dlamini and Haynes	Influence of agricultural land use on the size and composition of earthworm communities in northern KwaZulu-Natal
2004	Gajalakshmi and Abbasi	Neem leaves as a source of fertilizer-cum-pesticide vermicompost
2004	Chan <i>et al.</i>	Complementary ability of three European earthworms (Lumbricidae) to bury lime and increase pasture production in acidic soils of southeastern Australia

2004	Pizl and Novakova	Interactions between microfungi and <i>Eisenia andrei</i> (Oligochaeta) during cattle manure vermicomposting
2004a	Owa <i>et al.</i>	Earthworm created micro environments around roots of lowland rice, implication for growth performance
2004b	Owa <i>et al.</i>	Contribution of earthworms to soil temperature and its physiochemical implication on crops
2004	Zaller and Kopke	Effects of traditional and biodynamic farmyard manure amendment on yields, soil chemical, biochemical and biological properties in a long-term field experiment
2004	Dominguez <i>et al.</i>	Earthworms increase nitrogen leaching to greater soil depths in row crop agro ecosystems
2004	Bohlen <i>et al.</i>	Integrating the effects of earthworms on nutrient cycling across spatial and temporal scales
2004	Araujo <i>et al.</i>	Effect of earthworm addition on soil nitrogen availability, microbial biomass and litter decomposition in mesocosms
2004	Kaushik and Garg	Dynamics of biological and chemical parameters during vermicomposting of solid textile mill sludge mixed with cow dung and agricultural residues
2004	Brown <i>et al.</i>	Earthworms affect plant growth, borrowing into the mechanisms
2004	Edwards <i>et al.</i>	The influence of vermicomposts on plant growth and pest incidence
2004	Brown and Doube	Functional interactions between earthworms, microorganisms, organic matter and plants
2004	Jordan <i>et al.</i>	Effects of management practices and cropping systems on earthworm abundance and microbial activity
2005	Loh <i>et al.</i>	Vermicomposting of cattle and goat manures by <i>Eisenia fetida</i> and their growth and reproduction performance

2005	Lowe and Butt	Culture techniques for soil dwelling earthworms
2005	Singh <i>et al.</i>	Effect of initial substrate pH on vermicomposting using <i>Perionyx excavatus</i>
2005	Suthar <i>et al.</i>	Vermicomposting of kitchen waste by using <i>Eisenia fetida</i>
2005	Barne and Striganova	Evaluation of production parameters of earthworms <i>Eiseniella tetraedra</i> Sav. in a laboratory culture
2005	Zhukovskaya <i>et al.</i>	Study of genetic diversity of earthworm <i>Lumbricus rubellus</i> hoff. (Oligochaeta, Lumbricidae)
2005	Benitez <i>et al.</i>	Hydrolytic enzyme activities of extracted humic substances during the vermicomposting of a lignocellulosic olive waste
2005	Tognetti <i>et al.</i>	Composting vs. Vermicomposting
2005	Contreras-Ramos <i>et al.</i>	Vermicomposting of biosolids with cow manure and oat straw
2005	Anastasi <i>et al.</i>	Isolation and identification of fungal communities in compost and vermicompost
2005	Amir <i>et al.</i>	Structural characterization of fulvic acids during composting of sewage sludge
2005	Nair <i>et al.</i>	Occurrence and density of earthworms in relation to soil factors in Benghazi
2005	Nogales <i>et al.</i>	Vermicomposting of winery wastes: a laboratory study
2005	Garg and Kaushik	Vermistabilization of textile mill sludge spiked with poultry droppings by epigeic earthworm <i>Eisenia fetida</i>
2005	Goyal <i>et al.</i>	Chemical and biological changes during composting of different organic wastes and assessment of compost maturity
2005	Jouraiaphya <i>et al.</i>	Chemical and spectroscopic analysis of organic matter transformation during composting of sewage sludge and green plant waste

2006	Daniel <i>et al.</i>	Endogeic earthworms differentially influence bacterial communities associated with different soil aggregate size fractions
2006	Fracchia <i>et al.</i>	Bacterial diversity in a finished compost and vermicompost
2006	Garg <i>et al.</i>	Livestock excreta management through vermicomposting using epigeic earthworm <i>Eisenia fetida</i>
2006	Suthar	Potential utilization of guar gum industrial waste in vermicompost production
2006	Klok <i>et al.</i>	Population growth and development of <i>Lumbricus rubellus</i> in a polluted field soil, consequences for the Godwit (<i>Limosa limosa</i>)
2006	Perreault and Whalen	Earthworm burrowing in laboratory microcosms as influenced by soil temperature and moisture
2006	Kurien and Ramasamy	Vermicomposting of taro (<i>Colocasia esculenta</i>) with two epigeic earthworm species
2006	Lores <i>et al.</i>	Using FAM profiles for the characterization of animal wastes and vermicomposts
2006a	Aira <i>et al.</i>	Changes in microbial biomass and microbial activity of pig slurry after the transit through the gut of the earthworm <i>Eudrilus eugeniae</i>
2006b	Aira <i>et al.</i>	<i>Eisenia fetida</i> (Oligochaeta, Lumbricidae) activates fungal growth, triggering cellulose decomposition during vermicomposting
2006	Sanchez-De Leon <i>et al.</i>	Earthworm populations, microbial biomass and coffee production in different experimental agro forestry management systems in <i>Costa Rica</i>
2006	Sheehan <i>et al.</i>	The effects of earthworm functional group diversity on nitrogen dynamics in soils

2006	Said-Pullicino <i>et al.</i>	Changes in the chemical characteristics of water-extractable organic matter during composting and their influence on compost stability and maturity
2006	Jordao <i>et al.</i>	Effects Of Cu, Ni and Zn on lettuce grown in metal-enriched vermicompost
2006	Le Bayon and Binet	Earthworms change the distribution and availability of phosphorous in organic substrates
2006	Marhan and Scheu	Mixing of different mineral soil layers by endogeic earthworms affects carbon and nitrogen mineralization
2006	Postma-Blaauw <i>et al.</i>	Earthworm species composition affects the soil bacterial community and net nitrogen mineralization
2006	Drake and Horn	Earthworms as a transient heaven for terrestrial denitrifying microbes
2006	Baker <i>et al.</i>	Introduced earthworms in agricultural and reclaimed land, their ecology and influences on soil properties, plant production and other soil biota
2006	Johann	Foliar spraying of vermicompost extracts
2006	Perner <i>et al.</i>	Effect of mycorrhizal inoculation and compost supply on growth and nutrient uptake of young leek plants growth on peat-based substrate
2006	Jack and Thies	Compost and vermicompost as amendments promoting soil health
2006	Ma <i>et al.</i>	Beneficial effects of earthworms and arbuscular mycorrhizal fungi on establishment of leguminous trees on Pb/Zn mine tailings
2006a	Zaller	Foliar spraying of vermicompost extracts, effects on fruit quality and indications of late blight suppression of field grown tomatoes
2006b	Zaller	Vermicompost as a substitute for peat in organic potting media, effects on germination, biomass allocation, yields and fruit quality of three tomato varieties

2006	Hameeda <i>et al.</i>	Application of plant growth promoting bacteria associated with composts and macrofauna for growth promotion of Pearl millet (<i>Pennisetum glaucum</i> L.)
2007	Sheehan <i>et al.</i>	The effects of earthworm functional group diversity on earthworm community structure
2007	Suthar	Influence of different food sources on growth and reproduction performance of composting epigeics, <i>Eudrilus eugeniae</i> , <i>Perionyx excavatus</i> and <i>Perionyx sansibaricus</i>
2007	Garg <i>et al.</i>	Potential of vermicomposting technology in solid waste management
2007	Ivask <i>et al.</i>	Abundance of earthworm species in Estonian arable soils
2007	Sampedro <i>et al.</i>	Changes in the fatty acid profiles through the digestive tract of the earthworm <i>Lumbricus terrestris</i>
2007a	Aira <i>et al.</i>	Earthworms strongly modify microbial biomass and activity triggering enzymatic activities during vermicomposting independently of the application rates of pig slurry
2007	Said-Pullicino and Gliotti	Oxidative biodegradation of dissolved organic matter during composting
2007	Svensson and Friberg	Changes in active microbial biomass by earthworms and grass amendments in agricultural soil
2007a	Suthar	Vermicomposting potential of <i>Perionyx sansibaricus</i> (Perrier) in different waste materials
2007b	Suthar	Nutrient changes and biodynamics of epigeic earthworm <i>Perionyx excavatus</i> (Perrier) during recycling of some agriculture wastes
2007c	Suthar	Production of vermifertilizer from guar gum industrial waste by using composting earthworm <i>Perionyx sansibaricus</i> (Perrier)

2007	Walkowiak	Effect of selected environmental parameters on sewage sludge vermicomposting
2007	Klok <i>et al.</i>	Influence of clay content and acidity of soil on development of the earthworm <i>Lumbricus rubellus</i> and its population level consequences
2007	Nikita <i>et al.</i>	Impacts of earthworms on soil nutrients and plant growth in soybean and maize agroecosystems
2007	Aira <i>et al.</i>	<i>Eisenia fetida</i> (Oligochaeta: Lumbricidae) modifies the structure and physiological capabilities of microbial communities improving carbon mineralization during vermicomposting of pig manure
2007	Gaind and Nain	Chemical and biological properties of wheat soil in response to paddy straw incorporation and its biodegradation by fungal inoculants and biodegradation
2007	Saha <i>et al.</i>	Nutritional quality of organic rice grown on organic composts
2008b	Suthar	Development of a novel epigeic based polyculture vermireactor for efficient treatment of municipal sewage water sludge
2008a	Suthar and Singh	Vermicomposting of domestic waste by using two epigeic earthworms (<i>Perionyx excavatus</i> and <i>Perionyx sansibaricus</i>)
2008b	Suthar and Singh	Feasibility of vermicomposting in biostabilization sludge from a distillery industry
2008	Tajbakhsh <i>et al.</i>	Recycling of spent mushroom compost using earthworms <i>Eisenia foetida</i> and <i>Eisenia andrei</i>
2008	Karberg and Lilleskov	White-tailed deer (<i>Odocoileus virginianus</i>) fecal pellet decomposition is accelerated by the invasive earthworm <i>Lumbricus terrestris</i>
2008	Anastasi <i>et al.</i>	Bioremediation potential of basidiomycetes isolated from compost

2008	Abouelwafa <i>et al.</i>	The fulvic acid fraction as it changes in the mature phase of vegetable oil-mill sludge and domestic waste composting
2008	Nana-Oseie <i>et al.</i>	Earthworm abundance related to soil physicochemical and microbial properties
2008	Jouraiphy <i>et al.</i>	Structural study of the fulvic fraction during composting of activated sludge plant matter
2008	Lazcano <i>et al.</i>	Comparison of the effectiveness of composting and vermicomposting for the biological stabilization of cattle manure
2008	Aira and Dominguez	Optimizing vermicomposting of animal wastes
2008	Neklyudov <i>et al.</i>	Intensification of composting processes by aerobic microorganisms
2008	Speratti and Whalen	Carbon dioxide and nitrous oxide fluxes from soil as influenced by anecic and endogeic earthworms
2008	Thakuria <i>et al.</i>	Evaluation of rice legume rice cropping system on grain yield, nutrient uptake, nitrogen fixation and chemical, physical and biological properties of soil
2008	Das <i>et al.</i>	Influence of bio fertilizers on the availability of nutrients (N, P and K) in soil in relation to growth and yield of <i>Stevia rebaudiana</i> grown in South India
2008	Ngoc Son <i>et al.</i>	Bioconversion of paddy straw and biofertilizer for sustainable rice based cropping systems
2008a	Suthar	Bioconversion of post harvest crop residues and cattle shed manure into value added products using earthworms <i>Eudrilus eugeniae</i>
2008	Owa <i>et al.</i>	Effect of over seasoned earthworm products on seed germination
2008	Milleret <i>et al.</i>	Root, mycorrhiza and earthworm interactions and their effects on soil structuring processes, plant and soil nutrient concentration and plant biomass

2008	Aseri <i>et al.</i>	Biofertilizers improve plant growth, fruit yield, nutrition, metabolism and rhizosphere enzyme activities of pomegranate (<i>Punica granatum</i> L.)
2008	Saha <i>et al.</i>	Relative changes in phosphatase activities as influenced by source and application rate of organic composts in field crops
2009	Csuzdi and Pavicek	New records of earthworms from Guadeloupe with description of a new species (Oligochaeta: Glossoscolecidae, Acanthodrilidae, Megascolecidae and Eudrilidae)
2009	Perez-Losada <i>et al.</i>	Phylogenetic assessment of the earthworm <i>Porrectodea caliginosa</i> species complex (Oligochaeta: Lumbricidae) based on mitochondrial and nuclear DNA sequences
2009	Langdon <i>et al.</i>	As resistance in laboratory reared F1, F2 and F3 generation offspring of the earthworm <i>Lumbricus rubellus</i> inhabiting an as contaminated mine soil
2009	Chang <i>et al.</i>	Identifying earthworms through DNA barcodes, Pitfalls and promise
2009	Andre <i>et al.</i>	Accumulated metal speciation in earthworm populations with multigenerational exposure to metalliferous soils, cell fractionation and high-energy synchrotron analyses
2009	Jones <i>et al.</i>	Sub cellular compartmentalization of lead in the earthworm, <i>Eisenia fetida</i> , relationship to survival and reproduction
2010	Wang and Shih	Earthworm fauna of Eastern Taiwan, with descriptions of two new species (Oligochaeta: Megascolecidae)
2010	Gong <i>et al.</i>	In silico identification of conserved micro RNAs and their target transcripts from expressed sequence tags of three earthworm species
2010	Joshi and Pal Vig	Effect of Vermicompost on Growth, Yield and quality of Tomato (<i>Lycopersicon esculentum</i> L)

2010	Ansari and Sukhraj	Effect of vermiwash and vermicompost on soil parameters and productivity of okra (<i>Abelmoschus esculentus</i>) in Guyana
2010	Lazcano <i>et al.</i>	Assessment of Plant Growth Promotion by Vermicompost in Different Progenies of Maritime Pine (<i>Pinus pinaster</i> Ait.)
2010	Gandhi and Sivakumar	Impact of vermicompost carrier based bioinoculants on the growth, yield and quality of Rice (<i>Oryza Sativa</i> L.)
2010	Kalantari <i>et al.</i>	The effect of compost and vermicompost of yard leaf manure on growth of corn
2011	Ravikumar <i>et al.,</i>	Bio-inoculation of <i>Sigmodocia carnosa</i> sponge on the growth of sponge associated cyanobacterial symbionts.
2011	Kalaiarasi	Effect of ecofriendly vermicompost from seagrass on the growth, yield and biochemical properties of agricultural crop plants.
2012	Ravikumar <i>et al.,</i>	Effects of saline tolerant <i>Azospirillum</i> species on the growth parameters of mangrove seedlings.