

THE EARTHWORMER

EARTHWORM INTEREST GROUP OF SOUTHERN AFRICA

SPRING/SUMMER 2008 ISSUE

RE-THINK : RE-USE : RE-CYCLE : RE-DUCE : RE-GENERATE

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Left: Waiting for Hennie to start his talk

Right: Tea break Hennie talking to some of the guests.



KEN'S KONCERNS

Ken Reid [kareid@iafrica.com]

Dear Members

We are getting large numbers of emails from new members but very little from those of you who have been members for some time. Does this mean that you have learnt all there is to know about working with worms, are you too busy, or have you lost interest?

If the first—how wrong you are! Even the greatest authorities on the subject learn new things about vermiculture all the time.

If the second, I suggest that you make the time. We have said it repeatedly and will say it again:- Every person on this planet *needs* to do something (and *can* do something) to reduce the impact of carbon emissions into the atmosphere. One of the best ways to do this is to use every item of matter we come across until it no longer has any use, after which we should consider all possibilities these items have for recycling before we discard them. Almost all organic matter can be fed to our little friends *Eisenia fetida*, who will convert it to black gold in the form of vermicompost, which can then be used to revitalise the soil and produce healthy and health-giving plants. And the amazing thing is that this can be achieved without expensive, high-tech equipment. Furthermore, you do not have to be a genius to build simple yet efficient systems yourself. We are able to supply the plans for basic units at a small cost to you. And then the cherry on the top—none of these systems take long to build and they require very little attention once they are working. *So tell me who is too busy to do his or her bit to help maintain life on earth?*

If the third option, please shake off your apathy. This is not one of those things where we can say : *“Oh my neighbours are all doing it, so why should I?”* The world has reached the stage (some think it has already past it) where it needs every human to work to save our the environment. If 6 billion of us become more aware of what is needed to ensure some form of future life on our planet, and start doing simple things like common sense environmental management in our own living space, a huge amount can be achieved. Those who remain apathetic are imposing tremendous strain on the planet's resources.

So I appeal to you not to consider working with worms as a passing phase. Saving water and working sparingly with electricity are both very important to our future growth in this country. Re-using and recycling our own waste is even more important globally.

On a somewhat brighter note, EIGSA membership continues to grow apace. Articles in the media, regional workshops and seminars, television programmes and radio talks, etc have all contributed to this growth. In the Albany and East London regions this has resulted in us forming a new Regional Group, under the leadership of Alan Hattingh (East London) and Sharon Richner (Albany.) We thank you both for your interest and enthusiasm and hope that we will hear from you that you plan regular events to teach the public in your areas how they can work with worms successfully.

In Gauteng the EIGSA workshops this year have been enormously successful. The three regular workshops attracted over 350 people from as far afield as Kroonstad, Nelspruit and even Botswana. We have to thank Bill Kerr and Hennie Eksteen for the part they played in ensuring the success of these workshops.

Michelle Sholto-Douglas, Barbara Jenman Patrick Dowling and Ronald Thompson continue to do sterling work in the Cape Town Region. Don Blacklaw does the same in KZN and Eastern Free State. He also had an excellent article in the September issue of *The Gardener*.

The National Committee obviously cannot keep abreast of all articles published in magazines or newspapers. We appeal to all members who come across any article pertaining to earthworms to send them to us. If the article warrants it, we will try to forward it to all members. This is a great way to expand our knowledge (and yours!)

We really would like to have more news about the events in all regions. Please do not wait for your Regional Convenor to set up such events—Nag him/her and offer to help. Also, please send us your impressions of any events you have attended. All these things help us to make our Interest Group more successful and more interactive.

At this point I would like to thank all those who have worked to make this such a successful year (those already thanked in the above included.). It is very gratifying to know that more and more people are becoming actively involved in EIGSA and other related activities. Please keep it up and help us to develop EIGSA into a strong, bonded unit which has the respect of all who have anything to do with it.

Finally, the members of Natcom wish all our Christian members a very happy Christmas and all our members a very satisfying 2009. May your wealth grow with your vermicompost!

My very best regards to you all.
Ken.

MOTHER EARTH WORMS

Stacey Rosochacki [staceyk@mweb.co.za]

VERMICAST - COMPARISON AND ANALYSIS FEBRUARY 2008

PARAMETER	WORMING CO. GEORGE - ZA	MOTHER EARTH WORMS - SOUTH AFRICA
PH	6.8	6.7
Phosphorous (%)	0.82	2.28
Potassium (%)	2.55	20.06
Calcium (%)	0.97	3.85
Sodium (%)	0.02	1.94
Magnesium (%)	0.5	2.84
Oxygen (%)	32.8	39.78
Silica (%)	0.66	0.47
Sodium (%)	1.35	1.94
aluminium (%)	0.46	0.66
Sulphur (%)	1.54	0.82
Carbon (%)	57.24	33.59

* Testing for Mother Earth Worms Vermicast done at the University of Fort Hare, South Africa

The benefits of vermicompost (vermi – from the Latin vermes, meaning worm) relative to other forms of compost is well known, and valued, as high potency, microbe-rich “soil food”. When compared with soil, worm cast, on average contains:

- 5 x more nitrogen
- 7 x more phosphorous
- 1.5 x more calcium
- 11 more potassium
- 3 x more exchangeable magnesium

- up to 35% increase in organic carbon
- up to 24 times nitrogen-fixing bacteria
- up to 21 times more phosphate solubilizing microbes
- up to 19 times more beneficial mycorrhizal fungal spores

These casts are also very abundant in humic acids, are PH neutral, and have plant growth stimulating properties, similar to sea weed. The casts (poops) act as a bonding medium for minerals, elements, microbes and nitrogen – which is released in slowly back into the soil, as a high-value humus – which prevents water leaching from the soil by up to 35%.

Vermicast is highly prized for its aromatic educing qualities, as the casts provide stable nutrient uptake via the nutrient roots – thereby allowing maximum photosynthesis and flavor producing action within the plant. The value of vermicast for the growing discerning organic market, indicates an awareness of the myriad of benefits – notably the demand for recreating the “full cycle” from seed, into food, back into earth, as opposed to food on dump sites!

APPLICATION RATES FOR MOTHER EARTH WORMS VERMICAST:

Potted Plants, Seeds, Seed Beds (new plants incl. herbs and veggies)	1:3 VC / potting soil mix. Water in apply every 2 – 3 weeks
Potted, Window, Herbs, Veggies (established / general garden)	1 to 2 T VC on top of soil. Water in apply every 4 – 6 weeks
Lawns & Golf Courses (new/shady/difficult to grow areas)	1 dm3 (±500g) per 2m ² : Sprinkle onto soil, mix in grass seeds. Lightly mulch, water apply every 3-4 weeks
Lawns & Golf Courses (established)	1dm3 (+_ 500g) per 2m ² : sprinkle onto soil, water in, apply every 4 – 6 months NB: especially spring/autumn!
Trees, Bushes, Fruit Trees (newly transplanted / ill)	2 C VC / soil or compost per plant, mix into dug hole, NB: at roots! Apply every 6 – 8 weeks
Trees, Bushes, Fruit Trees (established / nearing bearing)	1 C VC / soil or compost per plant, sprinkle around plant. Water in, apply every 4 – 6 months / as bear
Perennials, small shrubs, bushes	2 cups VC per 15 – 20 plants, sprinkle at base, water in, apply at start of each season
Roses	2 cups per rose every 3-4 months
Bulbs and flowerbeds	1 cm scattered onto top soil, water in, use every 2 – 3 months

For more information in the use and application or sale of vermicast,
 call Stacey at Mother Earth Worms at
 +2773 2669 202, (044) 388 4835,
 or info@motherearthworms.com .

A FEW THINGS I FOUND OUT ABOUT IN CAPE TOWN JUST RECENTLY

Beryl Saunders [saundersb@telkomsa.net]

In our local rag “The Tatler” there was an article about the Mount Nelson worm project. I spent a most enjoyable morning there with a whole lot of interested people viewing their (the worms) luxury accommodation a few months ago. The latest article mentions that there is a fee of R95 to be told, usually by Roger Jaques or Mary Murphy of Recycle about worms & their uses.

I was so annoyed about the R95 that I phoned Cheryl Pickup on 021-483-1948 at the Mount Nelson to express my views on having to pay R95 to look at the worm shed when we are trying to encourage the public to start worm farms. She agreed with me and asked in which paper the article appeared. She said that she would approach the editor and I hope will succeed in explaining to them that the R95 is for persons being given tea and a tour of their delightful gardens. Otherwise to hear about the worms is free.

A good news article is about a gentleman living at the Haven in Wyberg (Cape Town) a place for homeless people. He started keeping worms on the premises in an old bath found on a landfill. He now has 9 baths with worms and grows vegetables for the other inmates of the Haven. He has just won the Worm Farmer of the Year award from Soil for Life. Isn't that great?

Just by coincidence I telephonically had a conversation with Pat Featherstone who has a lot to do with "Soil for Life" and runs workshops about worms and growing your own vegetables. All this in Constantia (Cape Town). My daughter & I hope to visit her shortly at Pats invitation. I was given a page or two from a magazine by another worming friend & that's how I came to contact Pat. Her contact number is 021-794-4982 for further information.

DON'T WASTE WASTE! (Part 1)

Ronald Thomson [ronmar65@hotmail.com]

Do you resent throwing out all your kitchen and garden organic rubbish? Do you think you should be doing more to help the environment? Would you like a constant supply of excellent-quality liquid and solid compost – at no cost to yourself? If the answer is yes to even one of these questions, then read on.

Most of us have seen or heard of the movie produced by Al Gore, "An Inconvenient Truth". This movie pointed out that we are producing large amounts of lethal gases like carbon dioxide and methane which is causing the "greenhouse effect" and this, in turn, is warming the earth with observable catastrophic effects. But it is not only the Eskom's and Sasol's of this world that are at fault – we are all just as guilty! For decades we have bundled all our waste, both organic (garden and food waste) and inorganic (packaging etc.) into plastic bags for the 'bucket men' to remove. Hundreds and thousands of these black bags are thrown into holes in the ground and left to rot in anaerobic (without oxygen) conditions. The rotten elements dissolve into liquid and soak into the ground water system or vaporise into carbon dioxide and methane gases that escape into the atmosphere. What this means is that the crust of pizza you threw out of your kitchen some years ago has quite possibly contributed a few molecules of methane gas to the gases threatening life on earth.

Governments around the world have woken up to this problem and many European countries have either banned or are in the process of banning ANY rubbish being thrown into holes in the ground. Recycling of inorganic materials has reduced the amount of rubbish being thrown out but this still leaves huge amounts of organic rubbish to be disposed of. Disposal is a headache for everybody and, where local governments actually remove the rubbish, the originator of the rubbish pays a heavy price for this. In fact, rubbish removal in Europe is a very expensive business indeed.

Is there perhaps a way of reducing the amount of organic waste being produced and finding its way into the waste-stream? Not really, people and animals have to eat and excrete. But means have to be found to reduce the amount of organic waste coming INTO the waste-stream. The only possible method (not counting methods such as incineration) is to convert this organic waste into compost. By so doing we return to the earth that which was removed. The system now in use in Europe is that the polluter must get rid of his or her own waste AT SOURCE.

DON'T WASTE WASTE! (Part 2)

Part one stated that here, in South Africa, we must start recycling our organic waste at source just as we recycle (or should) our inorganic waste. Now, what is organic waste? Quite simply it is anything that was once alive but is now dead and that can be decomposed into compost! This includes all fruit and vegetable matter, plate scrapings after a meal, straw, grass cuttings, sawdust, animal manures and the dead animals themselves, newspaper and cardboard, egg-shells, tree bark. How do ordinary individuals, like you and me, make compost from a constant, daily, supply of organic material from kitchen, garden or farmyard? The short answer is: with great difficulty.

Real compost is made from strict recipes that include such details as layering a heap with materials of different carbon or nitrogen percentages, ensuring adequate moisture, turning the heap occasionally and waiting at least six months for the materials to decompose and mature. During this process internal temperatures of the heap can get up to 70°C – high enough to kill all pathogenic (ie disease-causing) microbes and also all weed seeds. This process is called thermophilic (high temperature). The final result is a black, crumbly, damp, living compost literally teeming with millions upon millions of saprophytic (ie able to eat and digest dead organic material) microorganisms – and it is these microorganisms that, when added to the soil, provide the necessary nutrients for optimum plant growth.

Some people with large enough gardens throw all their organic waste onto a pile and hope that compost will result - this is slightly better than useless but, in any case, people in flats, large restaurants, farmers etc. do not have this facility. So that was the problem: large amounts of organic waste and no realistic way of getting rid of it at source. Then a lady in America had a brain-wave! There is a little worm that spends its life on the surface of the earth under a thick layer of wet, rotting, organic materials whose excrement is, to all intents and purposes, excellent-quality compost. It was also found that these worms could be kept in captivity. Thus began the industry known as VERMICOMPOSTING (vermes is the Latin for worm). It should be noted here that these worms, although they are of the earthworm FAMILY, DO NOT live in the soil.

This special worm has the Latin name *Eisania fetida* (I-see-nee-a fet-ee-da) and is the worm most used in South Africa for vermicomposting. Common names are red wrigglers, brandlings, manure worm, tiger worm. The worms do not actually eat the organic waste but rather graze on the millions upon millions of microorganisms actually devouring the waste. These saprophytic decomposers are mainly bacteria, fungi, protozoa and moulds - exactly the same microorganisms that are found in matured thermophilic compost!

Some Worm Facts:

Eisania fetida are hermaphrodite (are both male and female at the same time). Two worms have to mate to spread their male sperm to the female oviducts of each other. Capsules are produced (two to three per worm per week) and each capsule can have many young worms - up to 12 have been recorded! From egg to sexual maturity is roughly 78 days when the entire cycle begins again. It has been asked how the worms, with their fecundity, have not covered the earth by this time. The answer to this is three-fold. Their habitat of surface-dwelling under thick wet organic material is very scarce; living on the surface they are prey to every carnivore and bird around and they cease breeding if the food supply runs out.

Part three of this series will provide more facts about this extremely important animal. This will be published in our next news letter or you can follow this six part series on <http://greenflavour.blogspot.com/>.



Left: Helpers fresh in the morning.

Right: Helpers early afternoon when all have gone home.



HENNIE EKSTEEN PAID US A VISIT YET AGAIN

EIGSA's last open day held in October had us hosting Hennie Eksteen once again. After last year's interesting talk and slide show it was decided, with his vast knowledge, to invite Hennie once again. There was an excellent turn out and a lot of enthusiasm shown by all who attended. Hennie discussed the advantages of no-til vegetable gardens where the earthworms do all the work for you, as well as the use of vermicasts as a fertiliser instead of chemical fertilisers. In his slide show we were shown the various crops he had planted with huge success and with more crops grown per hectare than his neighbours using chemical fertilisers. Then there was a bit about various countries overseas e.g. Russia and what all they are doing with earthworms, etc. Let us rather make a long story short, it was a very interesting talk and as with the one last year even some of us EIGSA committee members have learnt the odd new thing not known before. For all who attended, thank you for making it a pleasurable day and hope to see you at one of our other open days. (See photos above)

QUESTIONS AND ANSWERS

We are starting a "Questions and Answers" section so please send us any questions you want answered and one or more of our experts will give you an answer. Please send your questions to Patrick Dowling at Patrick@tops.org.za.

- Q. Karen Townshend: The real reason I am emailing you is to ask about wood lice and worms – there are more woodlice each time I open the bin, but thankfully no ants any more. Are woodlice harming the worms or are they just part of the system of decomposing material?
- A. Ken Reid: The woodlice are not a problem. They eat woody material, so they actually help the worms break down the ingredients in the bin.

WORMERIES FOR SALE

Anybody looking for a wormery please email Patrick Dowling at Patrick@tops.org.za and he'll put you in touch with the person nearest you.

**LASTLY HERE IS WISHING EVERYBODY A
MERRY CHRISTMAS
AND A
HAPPY NEW
FROM ALL OF US AT EIGSA**