If you study the current literature on sustainable plant growth, you will encounter the above terms from time to time.

You will also read how electro-magnetic radiations (EMRs) from the atmosphere are attracted to paramagnetic materials in the soil and in specially made towers of power.

These paramagnetic materials, after collecting their EMRs convert them into a different type of energy that is then re-directed into the surrounding soil. These new radiations encourage massive growth of soil microbes and plant roots thus increasing plant productivity, especially when there is plenty of compost in the soil.

When I first heard about all these things, I ran them through my mental 'bulldust meter'. Was it all talk by the lunatic fringe or was it on the cutting edge of sustainable agriculture?

Practical examples of working towers of power include the ancient round towers of Ireland and many towers on Australian farms. Made of plastic pipes filled with paramagnetic stones, these pipe towers project vertically out of the ground to a height of a few metres. It must be admitted while many of these pipes work very effectively, some however do not, and the reasons are not yet apparent even when experienced dowsers select the sites.

To ascertain if there was anything in this latest philosophy, I decided to duplicate an experiment I read about in a book entitled *Paramagnetism* by Phil Callahan PhD.

### The experiment

I started with two identical plastic pots filled with potting mix from the same batch. Inserted into one pot was a ‘tower’ as shown in the photographs. This tower consisted of a shrub branch 40mm diameter and 190mm long, covered with sandpaper on the top 120mm with a sandpaper conical hat on top.

The uncovered part of the branch was buried in the potting mix to a depth of 70mm. In each pot, 4 radish seeds were planted 6mm deep at each of the N, S, E and W compass points, i.e. 4 seeds at each point. Watering of each pot was the same every time. The only differences were the presence of the tower in one and corresponding reduction in volume of potting mix due to the volume of tower base inserted in the mix.

The seeds were planted on January 10, 2000 and the two pots were spaced 2 metres apart in the garden in full sun.
The results

The plants were pulled from the pots in their bundles of four, roots and all. The roots entrapped potting mix in proportion to their growth so the weight of each plant batch and soil was an indication of root growth. Each batch of plants was photographed and weighed.

<table>
<thead>
<tr>
<th>Compass point</th>
<th>N</th>
<th>E</th>
<th>W</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control pot</td>
<td>Didn’t</td>
<td>7.5</td>
<td>12.5</td>
<td>25</td>
</tr>
<tr>
<td>weight in Grams</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tower pot</td>
<td>20</td>
<td>85</td>
<td>62.5</td>
<td>55</td>
</tr>
<tr>
<td>weight in Grams</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Not bulldust
These results convinced me that this paramagnetic effect must be taken seriously. The abrasive particles in the sandpaper being paramagnetic, and aided by the shape of the tower, collected EMRs from the atmosphere. These radiations are produced by lightning flashes in the atmosphere and are fairly constant. Around the world there are up to 6000 lightning bolts per minute. These keep the atmosphere lit up with all the EMR frequencies needed to fuel the growth effect on plants*.

The sandpaper tower of power attracted the radiations from the atmosphere, transformed them into a different radiation and directed this new energy into the soil. This enabled the surrounding plants to outperform the control plants by a considerable margin.

The Potato Trial
Following these results, I established a tower of power in one of my potato beds. It consisted of 17 inverted clay pots stacked on top of each other (clay pots are paramagnetic) to a total height of 1200mm.

Tower of power just visible above the massive potato haulms.
The next crop of potatoes, harvested in January 2003, was the best I have ever grown. The total number of potatoes was higher than usual and the potato sizes were consistently larger.

As a result of these trials and the work done by Boral (see article in the last newsletter entitled Paramagnetism in the Garden) as well as general reading on the subject I now use paramagnetic basalt rock dust:
1. in my hot compost heaps
2. in vegetable bed preparation
3. in the making of seed raising/potting mixtures

Conclusion
The three necessities of sustainable growing can be listed as
1. Composting
2. Soil organisms
3. Paramagnetism

Without these items under control, sick plants will result, and sick plants (as well as old ones) are attacked by insects – nature’s scavengers.
These radiations are all around us too and are necessary for our well-being, but they exist only in the atmosphere. When man first ventured into outer space, he acquired what was then termed space sickness. Installing radiation generators in the space station, to duplicate the missing atmospheric radiations produced by lightning, subsequently prevented this.

Editor's note: The following is an extract from a previous article by Bill Nicholson on rock dust and paramagnetism -

Professor Phillip Callahan has shown that particles of paramagnetic blue metal in soil act as antennae to draw electromagnetic radiation from the atmosphere into the soil. These same particles then transmit further radiations into the soil and increase cell division in both plants and beneficial microbes. This activity greatly benefits plant growth.

The finer the particles the faster the soil microbes can break down the blue metal to plant food, thus fine dust is best for this purpose. This activity is greatly increased when plenty of compost is present in the soil. Australian company Boral is now selling rock dusts with high paramagnetism in four grades under the name Nusoil.

Bill Nicholson recommends about a kilogram (an old jam tin full!) of rock dust per square metre.

.. and from the permaculture rock dust for soil conditioning forum on the Internet one writer summed it up this way –

*I have just read a book called "Organic Growing with Worms"
* it was great for a whole bunch of reasons but.... David Murphy (the author) mentions regularly the benefits of rock dust as a soil conditioner. It is good because unlike NPK crap fertilizers it is insoluble and thus will not wash out of your soil with the rain and pollute the ground water or local river. The minerals in the powdered rock become available when coated with the enzymes created by the bacteria in healthy soil (actinomycetes is one type) worms love it too for grinding food in their gizzards. The theory, if I have read correctly, of why Australian soils are mineral deficient is because we missed out on the last ice age and thus the ground up powdered rock created by the glacial flows from the mountains is not in our soil.


Oct/Nov 2005

Internet sources of information about rock dust from Helen Modra

I was talking to Steve Findlay recently about rock dust. After buying some from him (see Organifieds) I decided to see what else I could find out about it. (So many GOG members swear by the stuff!) Firstly I checked the ABC because I knew that presenters on Gardening Australia had mentioned it. Then I did a quick Google search, and found heaps of resources of course, but the following ones looked useful to me, so I thought that other members might find them a help, too.

http://www.remineralize.org/
The website of a U.S. organization called 'Remineralize the Earth'.
http://forums.permaculture.org.au/archive/o_t_t_750_start_15__index.html
From the Permaculture Research Institute of Australia.
http://www.abc.net.au/gardening/stories/s237476.htm
http://www.abc.net.au/catalyst/stories/s350770.htm#contacts

Jerry Coleby-Williams and Josh Byrne in particular are presenters whom I've noticed seem really keen on rock dust. Intentional "re-mineralizing" is an idea I'm not familiar with, as I only started to get into gardening a few years after I moved to Geelong. However I am very interested in building on my existing efforts to improve the soil in my garden. ....... Helen Modra
Paramagnetism in the garden by Bill Nicholson

Professor Callahan has shown that particles of paramagnetic blue metal in soil act as antennae to draw electromagnetic radiation from the atmosphere into the soil. These same particles then transmit further radiations into the soil and increase cell division in both plants and beneficial microbes.

This activity greatly benefits plant growth.

Note the following:

1. Different samples of blue metal show varying degrees of paramagnetism from zero to very high.
2. All blue metal is useful as a very slow release fertiliser irrespective of paramagnetism.
3. The finer the particles the faster the soil microbes can break down the blue metal to plant food, thus fine dust is best for this purpose. This activity is greatly increased when plenty of compost is present in the soil.
4. The larger the particles, the greater the paramagnetic action, therefore for best results in the garden, a mix of particle sizes is desirable (see later).
5. I have used rock dust from Fyansford Quarry which has a low paramagnetic value and a fine particle size, also from Local Mix Quarry (near Anakie) which has a high paramagnetic reading and a good spread of particle sizes.
6. This blue metal dust is known variously as: rock dust, blue metal dust, stone dust, basalt dust. However when buying ensure that the original rock was basalt, also called blue metal.

Blue metal aggregates are the materials used in concrete and road making but are much larger pieces than those used in farming or gardening.

7. Australian company Boral is now selling rock dusts with high paramagnetism in four grades under the name Nusoil. They range from Nusoil Micro which looks like cement dust to Nusoil 4 (from 4mm to the finest powder).

Boral is also using a lime product called Sweetpit, a combination of lime and sugars. Sugar is also a great food for soil microbes. These products are best dug in to plant root level to achieve maximum benefit without unduly affecting soil microbes and earthworms.

8. Sweetpit is diamagnetic and when used in combination with paramagnetic dust the two products generate a harmonic energy field. This has shades of the Oriental philosophy of Yin & Yang.

9. Boral is also using added microbial treatments in some trials. However for home gardeners using stacks of hot compost or Biodynamic compost there should be sufficient microbes to feed on the added rock dust.

For further information read Paramagnetism by Phillip Callahan supplied by Acres Australia, and Acres Australia, May '00 p 12-16.

For electromagnetic radiation see Exploring the Spectrum by Phillip Callahan