

ORGANIC? BIOLOGICAL? NATURAL FARMING?

By NT Snyman B.Sc. Agric (Agron.)

ARTICLE 3

IMPROVEMENT OF SOIL BIOLOGY

Because this complex spectrum exists, it does not help to have a limited number of organisms. eg. Suppose someone starts a game ranch; he is not going to be able to maintain an ecological balance if he does not have a variety of grazers, bush eaters and predators (to ensure balance the practice of burning yearly on the ranch, should not take place). Also for example if the jackals and genets are killed to protect the small buck, the rats start to take over.

A whole soil micro-organism complex must therefore be acquired. It can be obtained from a place where healthy soil occurs (where, for at least 15 years the soil has never been disturbed or burned); the upper 10cm of the soil and organic matter is removed and is mixed with more organic matter and is then applied to depleted soil. We can thus obtain these micro-organisms and use them as the 'seed' to repopulate the soil. These micro-organisms and organic matter must be mixed into the top 200mm of soil. (Organic matter can be anything such as crop residues, manure, bedding from broiler chickens but not compost).

A simple solution to acquiring a complete soil micro-organism mix in liquid form at a very reasonable price is to source it from a Bio bank and to then blend the liquid directly together with organic material into the topsoil.

DEEP NUTRITION OF PLANTS

Dr. Cloete, after much research with orchards of apples, citrus, mangoes, peaches and bananas discovered that trees and plants feed far deeper than the 400mm oxygen portion of the ground.

This discovery which deserves the Nobel Prize in Agriculture, is that the most important nutritional contribution to plants, located deeper than 500mm, is from organisms which do not thrive in oxygen. (There is no literature nor are there experts who have knowledge of such an

anaerobic life which exists underground and which is able to feed plants).

These deep microbes in question are available through the bio-bank of Andre van Rensburg (**and can be buried with organic material directly deep into the ground, at a depth of 500mm – 800mm under the planting row, over which planting can immediately occur**).

For the last six years I have worked on maize and have based my conclusions on good observations but academically, it is not yet confirmed. I'll be very glad if someone could correct me as to where I'm wrong. So far I still cannot get the LNR and other agencies to do any research on this aspect.

It is clear to me that the deep nutrition aspect from maize can contribute more than 50% of the yield. A yield of 25 tonnes per hectare under irrigation is easy with the availability of modern hybrids. It must, however, in both cases occur with the help of compost and chicken manure together with the bio-organisms because modern hybrid maize cannot grow with humus.

The old open pollinated hybrids grow very well in humus and deep nutrition but do not have a high yielding potential. In light of above facts, it is clear that no machinery exists to run such a commercial farm industry. On small and test site based plots, unbelievable results are been obtained with both methods, shallow and deep.

PERCEIVED EFFECTS OF HEALTHY SOIL

1. High yields are obtained; 25 tons of maize and more per hectare on irrigation.
2. If a plant is completely fed, plant diseases are minimal or disappear altogether eg. Gray leaf spot and termites.
3. Some highly cultivated varieties cannot grow without chemical feeding and have lost the ability to feed on humus. Seed should therefore first be tested.
4. Lower-order plants will not grow well when humus is around; - feeding probably chemically eg. Cabbage, turnips, beets, ephorbias, brassicas, herbs, eg. khaki weed, wandering jew.

5. Weed pressure virtually disappears, ie. the more weeds on the land the more soil biological destruction there is.
6. When humus can be produced from dry field grass or maize stalks in two months without application of micro-organisms then the soil biology has fully recovered.
7. Andre van Rensburg's aerobic commercial mixture's main objective is to produce humus and give the most humus with dry field grass that contains a lot of cellulose and lignin.



The black spots in the upper soil layers are compost and deeper down (the level showing the deep black spot with roots) contains a layer of chicken manure and anaerobic bacteria at 70cm.



Some hail and bird damage

BIOBANK

The bio-bank, compiled by Dr. Pieter Cloete, is now run by André van Rensburg. These micro-organism mixtures are alive and should not be left out in the sun nor should they be administered with high pressure pumps.

Interviews with farmers of the soil aerobic micro-organisms' effect on cattle and wildlife after applying treatment through drinking water, reported amazing results.

Contact André van Rensburg for more information

André is the bio-bank manager of Grow-Agra, situated, near Naboomspruit. Call him on: (082) 431-5065

Additional contact details

Janie Snyman

gentracsnyman@mtnloaded.co.za

Cell: (076) 600-6196