KOMEHO NAMIBIA DEVELOPMENT AGENCY

Promoting green technology program

16 April 2014

A demonstration garden was established at Kaisosi ARTC for research trails and demonstration during the capacity building training to targeted participants. Since when the garden was established, research trials on EM were carried out to see how the soil responds to added beneficial microorganisms.

So far research trial was conducted on tomatoes, Onion and carrots.
An open field experiment on tomato was conducted from September 2013- January 2014. The experiment was to test the soil amendment applied to infertile sandy soil of Kaisosi in order to be able to see which one is useful applied in the soil. Soil amendement applied were Biochar, Bokashi EM, and Old manure (control). The results presented a significate difference in yield harvest from the biochar and EM applied plot. However, there was some nematods observed in control plot.

Figure 1: shows the containers of EM and Molasses when irrigating

Figure 2: Shows watering of tomatoes plant with a wateringcan

Figure 3: caring of tomatoes plants

Figure 4 : Some harvest from tomatoes experiment plot as per treatment

Second field experiment was conducted on carrots and tomatoes from December 2013 to April 2014. Looking at how these vegetables has grown, the ones watered with EM grown bigger, bright and stronger compared to the tomatoes and carrots which was not watered with EM. However, nematodes affected the carrots.

Figure 5a : EM applied to carrots three times a week

Figure 6b: No EM applied to this at all

Figure 7 : shows how the onions has grown

Figure 8: Shows how onions are grown in a line

Lastly, the nematodes are noted to be a challenge because they feed on the plants roots, thereby reducing the plant water and nutrients uptake and the plant become so susceptible to diseases. The possible solution we have in mind is to add more organic matter to the soil using cover crops in particular beans and make EM compost manure. That will increase the organic matter in soil and encourage the growth of numerous fungi, bacteria and beneficial nematodes that provide some level of biological control for root-knot nematodes.

Figure 7: shows tomatoes from a control plot were no EM applied affected by nematodes

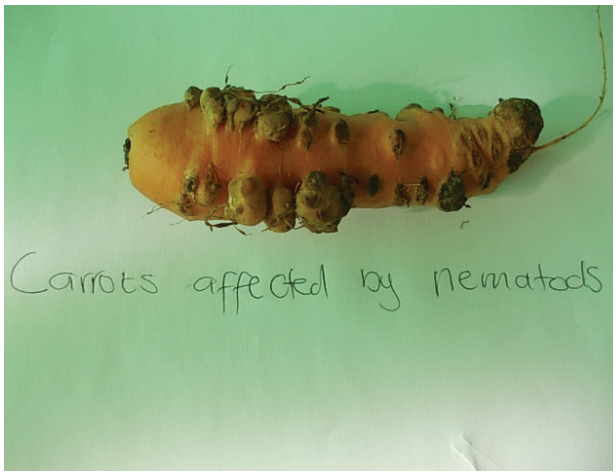

Figure 8: Shows carrots from a plot were no EM applied affected by nematodes

In conclusion, we positively believe EM can improve the infertile sandy soil of Kaisosi and this will be a good programme (intiative) to roll over to community members or farmers to adopt and improve their crop harvest that will lead to self food sufficient in a near future.