

Microbial Fertilizers will have a place, but make NO extravagant claims.

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This discussion hosted by Prof. Dharmawardana has been very useful to many of us, and hopefully to the scientists working in Sri Lanka. It got off to a rather abrasive start because of Dr. Dharmakirti's initial statement bordering on a conspiracy theory of accusing the DOA scientists of obstructing microbial fertilizers and not using green-algae in paddy fields to provide the needed nitrogen. When Professor Dharmawardana drew on Kulasooriya-MaganaArachchi review article and other publications, and replied Dharmakirti point by point, it was surprising to find Dr. Kulasooriya coming forward to defend Dharmakirti and claim that expatriate scientists are an ignorant lot.

However, once all that was settled, we had an excellent and very useful discussion. Dr. Chandrasena from Australia sent in a survey of the microbial fertilizer field from a global perspective. Meanwhile, the extreme claim made by the BFBF people since 2016 that they can cut down conventional fertilizer (CF) use down to 50% and add some BFBF to recover the 100% CF yield or even more, based on a publication in the Commonwealth Agriculture Bulletin Journal (CABJ) was exposed to be based on false data.

This claim still continues, and it is stated in its defence that new data to be released in the near future will prove the validity of the claims, made mainly by Dr. Gamini Seneviratne, Kulasooriya and associates. A similar claim seems to exist for Rhizobia inoculations in Dr. Kulasooriya's publications.

Although the product has not been proven in green house experiments, it has been sold to farmers. I believe that this has been done in good faith by Sri Lankan scientists in their enthusiasm for their products, **and not as a scam**. Nevertheless, in most countries such market intrusions will not be tolerated by consumer protection acts. A company to market rhizobial inoculates (microbes in coir dust), and another to market biofilm-biofertilizer (BFBF) had been set up and BFBF had been used in 7500 ha during (the Yahapalanaya-Ven. Ratana push for a) "toxin-free nation" project which was a failure.

The complete lack of a declaration of conflict of interest in the publications where the products are discussed, and published in CABJ and in the National Science Foundation journal was a shocking revelation to many of us. Fortunately, it seems that a memorandum of agreement exists between the NISF and the microbial scientists who hold patents and market rights for the products.

Then the use of biochar came up, and its principal proponent, Dr. Ben **Basnayake claimed that one kilo of biochar is equal to one kilo of urea in fertilizer action**. When such hyperbole was rightly questioned by Professor Metika Vithanage, Basnayake took refuge in claiming that the biochar will stimulate the soil bacteria to develop the nitrogen!

He even felt that biochar fertilizers will usher in a social revolution, rightly question by Prof. Vijaya Kumar who has a better grasp of politics. The biochar people have so far not published greenhouse results comparing controls against biochar plots to demonstrate increased microbial biomass, increased bioavailable nitrogen, bioavailable P and K, as well as increased harvests. However, they have made big claims. They do seem to have a sound grasp of the scientific principles, but only a poor concept of how to do experiments with controls?

So there is a lot of promise but no definitive data. Allegedly, the biochar is being tested out with the help of TRI scientists. Let us hope that these are INDEPENDENTLY assessed experiments, where the results are published in the Tea Journal for the scrutiny of the scientific community.

Dr. Basnayake seems to make biochar using coconut shells in a land where even firewood has become scarce!

Meanwhile, we have individuals like Dr. Ranil Senanayake continuing to live *in cuckoo land*, and advocating returning to the pre-industrial age, while he himself goes about criss-crossing the land in a high-power motor vehicle, using internet and other modern technologies. None of the many articles written by Dr. Senanayake mentions the yield obtained per hectare from his organic agriculture, the cost of a plate of organic food, or the need to feed population of Sri Lanka, let alone the world.