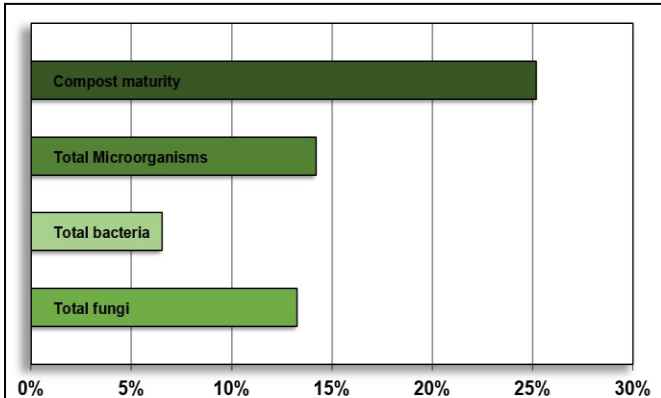


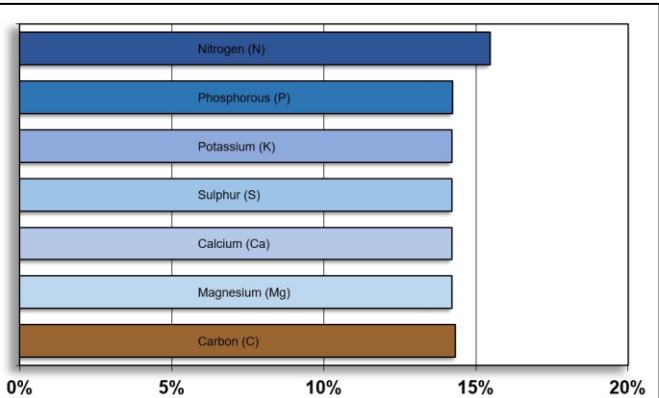


## MULTIKRAFT PROBIOTIC INOCULUM PRODUCTS FOR USE IN AGRICULTURAL COMPOSTING

Agricultural feedstock comprising a blend of manure and woodchip was provided as raw material. This was equally divided between conventional compost control system for 12 weeks, and the Multikraft fermented system for 8 weeks. At trial completion batch samples were sent for analysis to Microbiology Laboratories Australia (South Australia). Compost maturity was ~25% greater in compost treated by Multikraft inoculum products compared to untreated controls. Total microorganism populations increased by ~14% overall, with bacteria increasing by ~7% and fungi populations increasing by ~13% (see figure 1). Nutrients held in microbes are ~14-15% higher in compost treated by Multikraft inoculum products compared to untreated controls. This is an indicator of microbial activity and metabolism of bound nutrients into bioavailable forms (see figure 2). Thus time required for composting is decreased whilst microbial activity and nutrient bioavailability are enhanced.

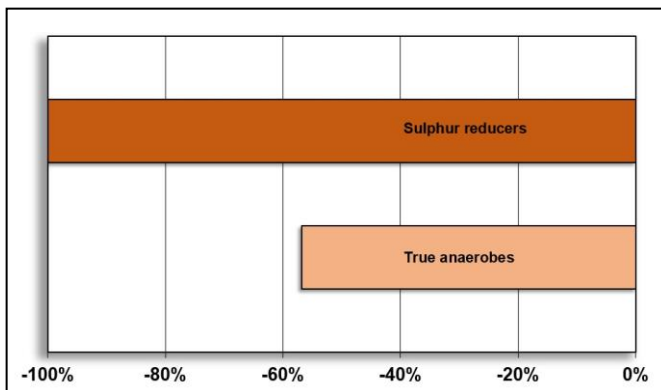


**Fig1:** Compost maturity and microbial populations Percentage increase versus control compost

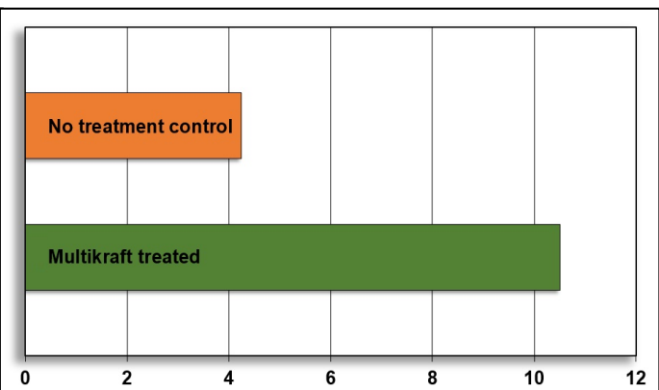


**Fig2:** Nutrients held in microbes Percentage increase versus control compost

Sulphur reducers decreased by ~100% (no sulphur reducers detected) and true anaerobes decreased by ~57% in compost treated by Multikraft inoculum products compared to untreated controls (see figure 3). This means that the compost will have less of an acrid odour, and even more importantly beyond the decreased odour profile this reduction in toxic gases (e.g. hydrogen sulphide) allows other microbe populations to thrive. Populations of beneficial mycorrhizal fungi increased ~147% in compost treated by Multikraft inoculum products compared to untreated controls. This equates to populations being a total of two and a half times greater in supporting soil and plant health (see figure 4). Protozoa that are responsible for secondary composting and nutrient mobilisation were a remarkable ~1239% higher (>12-fold). This elevation in higher eukaryotes is an important indicator that the microbial life of the compost is far more active, and that nutrient bioavailability and disease suppression are significantly increased.



**Fig3:** Reduction in sulphur reducers and anaerobes Percentage reduction versus control compost



**Fig4:** Increase in mycorrhizal fungi 147% increase versus control compost