



Transition stages from chemical to biological management:

Biological farming is a balance between the 3 M's

= Minerals, Microbes and Management

1. **Avoid costly production losses through building on local knowledge** - Find a mentor: a successful farmer, biological consultant or join a discussion group.
2. **Education:** books, courses, workshops
3. **Benchmark:** measure where you are now; soil mineral, biology, leaf tests and photographs.
4. **First do no harm:** reduce and then eliminate products that blow the microbial bridge; soluble N and P, glyphosate.
5. **Observe:** pests, weeds and diseases are all indicators for imbalances.
6. **Address major limitations; air, water, foods and minerals:** 1. Drainage, 2. Soil structure
3. Review soil chemistry.
7. **Apply** broad-spectrum products which feed biology and address major nutrient deficiencies, i.e. Lime, RPR, guano, seaweed, fish, seawater, compost, vermicast, sugar etc.
8. **Health:** Ensure crop and animal health needs are being met, if not, use free choice minerals and foliar sprays.
9. **Implement** practices that increase photosynthesis, rooting depths and soil carbon; grazing timing, avoid bare soil at all times.
10. **Monitor and observe changes:** Bric, EC, pH, photographs. Adjust programme if required.
11. **Encourage biodiversity above and below ground:** herbal leys, fodder crops, shelter belts, interplanting.
12. **Strategic long term planning:** land use choices. Farming for resilience.
13. Now you can see your successes, **mentor others!**

This document was created from brainstorming sessions with over 300 biological farmers, growers, researchers, educators and service companies, during the ABF national roadshow, June 2010. Compiled by Nicole Masters and Christine Jones during the Cromwell Soils First Conference, 30th June 2010.

This document is live, so any suggestions and discussions are welcome info@biologicalfarmers.co.nz
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