Farming into the future – protecting our soils.

Dr Mary Cole, Agpath Pty Ltd & Faculty of Veterinary & Agricultural Sciences•

Changing climate is impacting on the ability of farmers to organise their annual programme with the certainty of the past. Rainfall is less certain and often more violent. Pasture growth and stocking rates now are not as regular.

Farmers are now more interested in soil conditions and on-farm management than in the past. Regenerative agriculture, no-till methods, biological farming are gaining traction with many farmers as they understand that their most valuable resource is their soil and it needs to be protected if productivity is to be maintained. Protecting and understanding the role of soil microbes in soil and plant health is essential along with a move to improving soil organic matter and carbon sequestration through rotational grazing and attention to plant diversity cover. Minimising or eliminating synthetic chemistry and replacing them with organic inputs and microbial nutrients leads to greater nutrient density in plants, healthier animals, and improved soil resilience. Increased use of quality thermal aerobic compost, compost teas as foods for the soil biology results in a decreasing dependence on pesticides, fungicides, and herbicides in the agricultural system. Success from biodynamic, biological and organic agriculture shows that these systems can improve plant and animal health and can increase productivity while decreasing input costs to farmers. Australia does not pay for quality but rather quantity. If an emphasis were to be placed on quality, less food would be needed to feed the world, and populations of people and animals would be healthier overall. Less toxic chemicals would be present in the environment and fewer health issues over all would have a positive outcome for all.

Publications:

National & International webinars:

Mary Cole. The Importance of the fungal Kingdom to healthy soils. 21/05/21. Australian National Field Days, Orange NSW AIHA regenerative Agriculture. https://us02web.zoom.us/rec/share/qBx5UaRlw8kQ5JqYQt1hSHDK0Ndly33gLnBWfvOCNRBeW0MOgp6VzPo1XN-0EtZY.wd86x61gUWfZkxWR?startTime=1620547289000

Mary Cole. Compost tea to manage broad leaf weedy species in agricultural systems. A case Study. Soil Science Australia & the New Zealand Society of Soil Science Joint Conference 30 Nov – 4 Dec 2020. Cairns, Australia.

Mary Cole. Fungal pathogens – are they of our own making. Soil Regen Summit – hope for the Future, 2022.

Mary Cole, Peter McCoy, Dr Elaine Ingham. SFW webinar. Panellist for Fungal Fun.

Mary Cole. Soil microbiology and weed control. Podcast Regen Ray. Farming Secrets. https://omny.fm/shows/secrets-of-the-soil-podcast/7-soil-microbiology-weed-management-with-compost-t.

Mary Cole, Dr Elaine Ingham, Colin Andrews Farming in the World of Shifting Weather Patterns. https://webinar.soilfoodweb.com/webinar-ed-farming-in-the-world-of-climate-change

Mary Cole. Remediating a depleted soil. City of Hume City Council. Youtube.

Mary Cole. Bioloigcal Farming basics. Microstart Pty Ltd.

Mary Cole. Smartsoil Ground cover. Farming the soil. Youtube.



Dr Mary Cole, with the help of her company Agpath Pty Ltd, has spent her career encouraging farmers and students by example to care for life in the soil allowing the best possible response from plants and animals above the soil. Improving soil biota by minimising soil disturbance and minimising or eliminating, in most cases, synthetic chemistry by use of compost and mulch leading to greater resilience and potential for land to withstand the impact of a changing climate and overall greater nutritional value to the crop whatever it may be. By showing that nothing that once grew is 'waste' but a 'resource' has given Mary the opportunity to take her message around Australia and the world. Healthy soil provides healthy plants and animals which leads ultimately to a healthy gut biome. Mary is also an Honorary Senior fellow, Faculty of Veterinary & Agricultural Sciences, The University of Melbourne.

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