

Introduction

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The significance of environmental issues has been increasingly recognised over the last decades. The focus of these issues includes: protection of the dwindling 'natural' ecosystems, assuring air and water quality, and sustaining agricultural resources. This symposium was held in order to clarify the context of 'soil quality' within this more generalised debate. As this is the first time that soil quality has been addressed in Australia, the scope of the symposium was selected to cover a range of topics from technical definition to the need for policy. All of the oral papers were presented at the invitation of the organisers who selected the best available speakers from within Australia and from overseas.

Globally, and regionally, there is an urgency to develop guidelines for protection and monitoring of the quality of soil and land resources. The completion of this task is confounded by the apparent complexity and diversity of soil ecosystems in combination with a wide range of land uses imposed on those systems. Ultimately, the protection of soil quality will only be ensured by appropriate actions at the level of the farmer and land manager, hence, the theme was adopted for the symposium that - *Soil Quality is in the hands of the land manager*.

However, if the capacity to positively control soil quality is to be truly in the hands of the land manager, there are questions that need to be answered at many levels, and by different players. Land managers need good technical support in the form of interpreted research results that can be applied to improving their management systems. Research needs the support of government and industry in the form of funding, but is also in need of strategic support with policies in place that give priority to the types of research that will answer the most urgent questions. Policy makers need good advice from technical specialists so that sound policy is developed in the framework of the known and the knowable, and not just in response to a political whim or panic.

Altogether, a partnership is needed between three, often discrete, groups; the land managers, the policy makers, and the scientists or researchers. Such a partnership needs facilitation, so an enormous effort is needed to develop suitable extension programs in which extension personnel are well versed in the science, industry practice, and government policies affecting soil quality, and who are able to increase the capacity of managers to change and monitor their systems appropriately. The task of developing extension programs depends largely on understanding the foundation of science, current management practice, and policy.

Accordingly, the symposium was established with the following aims:

- Provide an international forum for debate on the science of soil/land quality.
- Improve understanding of functions, processes, attributes, and indicators of soil/land quality.
- Examine the practical application of the soil quality concept in land management and land use policy making, especially in areas expressed by the following questions:
 - How can soil quality concepts based on ecological 'function' be used by the land manager to better manage land, especially in agro-ecosystems?
 - What soil properties can serve as practical measures or attributes of soil chemical, physical, and biological quality?
 - Are there differences in the assessment of functions in agro-ecosystems, compared to natural ecosystems?
 - Can functions be managed or manipulated by land managers to better manage land and obtain sustainable land management?
- Update land quality indicators.

The papers contained in this document comprise edited, extended abstracts of the 23 invited oral papers. In addition, short abstracts of poster papers that were brought to the symposium have been included, but not edited.