

## BARRIERS TO THE ADOPTION OF EMERGING TECHNOLOGY

Dear Committee,

23-9-15

Thank you for the opportunity to submit some personal and collective ideas to your enquiry into the role of technology in increasing agricultural productivity in Australia. Responding to one of your terms of reference:

### ***The barriers to the adoption of emerging technology in Australian agriculture.***

Vital to Australia's relationships with agricultural technology is for farmers to hold a complete understanding, beyond mere knowledge, of their unique sense of place in their individual landscapes. Their place in nature is fundamental to their own long term survival and future profitability in Australia's agro-business world. Two barriers to the adoption of appropriate technology in Australian agriculture are:

#### **1 NATURE IS NOT ACCOUNTED FOR IN OUR NATIONAL ACCOUNTING SYSTEM.**

The Wentworth Group of Concerned Scientists produced a study, "Accounting for Nature – A model for building the national environmental accounts of Australia."

This paper is written by a swarth of eminent Australian scientists proposing ten design principles.

A further paper from the Wentworth Group of Concerned Scientists: Blueprint for a Healthy Environment and a Productive Economy, is a pathway for individuals and organisations to enable them to create immersive and imaginative technologies that will connect nature, people, agriculture and the economy. Nature is an externality of our economy and until it is accounted in our national accounts, our profitability and health as an inclusive society is limited.

[http://issuu.com/wentworthgroup/docs/blueprint\\_for\\_a\\_healthy\\_environment](http://issuu.com/wentworthgroup/docs/blueprint_for_a_healthy_environment)

#### **2 THE UNDERSTANDING AND EFFECTS OF ESSENTIAL AGRO-CHEMICALS FOR CROP PRODUCTION ON OUR ECOSYSTEM, ARE NOT FULLY UNDERSTOOD.**

Neonicotinoids are are a class of insecticides which act on acetylcholine receptors (AChR) in the nervous system of insects. This insecticide is an essential part of a farmers tool kit and has been very successful in lifting production of a multitude of agricultural crops the world over. However this insecticide has been banned in France and was banned on the winter oil seed rape crop in the south of England last year. No 100% evidence has been found that this chemical causes Colony Collapse Disorder in bees, this is certainly not the case in Australia. However this chemical is readily available throughout Australia and has significant usage across our precious landscape. A paper published in the international publication Nature: "Declines in insectivorous birds are associated with high neonicotinoid concentrations." This paper has found large declines in insectivorous birds in Holland owing to the chemical's use. Apparently this chemical is not responsible for any decline in insectivorous birds or bee populations in Australia. I draw this matter to your attention and have included a poster our organization has recently printed in a posted copy of our on line application.

<http://www.nature.com/nature/journal/vaop/ncurrent/full/nature13531.html>

Natural capital could be a must have ingredient for our 21<sup>st</sup> century without it there will be many ***barriers to the adoption of emerging technology in Australian agriculture.***

Thank you for your attention.

Yours faithfully

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