

What is Sustainable Agriculture?- Case Study for Australia

Introduction

Australia is oldest continent on earth and has one of the most fragile and least fertile soils. Other than Antarctica, Australia is the driest continent on this planet, with over 80% of our land arid and infertile. It has one of the least understood ecological systems in the developed world and there are new species of plants and animals discovered every year in Australia.

Yet for over 150 years we have been using "European Style" farming techniques with little regard to the fact that European soils are far more fertile and are often silt based, providing fertile soils every year.

Since the Second World War, the state of agricultural decay has increased dramatically with the "Great Agricultural Push in Australia", in areas that were simply not suited for long-term agricultural use. Mechanisation, fertilisers, pesticides, herbicides as well as push to standardise products in order to increase yields (productivity) has led to extensive environmental catastrophes.

One example that clearly comes to mind is the vast lands in SW Australia (East of Perth), where people were fooled to believe that they could run agricultural operations over a long period of time.

Our land is still being **deforested** at a rapid rate leading to high levels of **salinity**, **over-grazed** leading to **desertification** and **land degradation** through **bad soil management** techniques.

Its water courses altered, dammed drained straightened etc. Whilst 95% of Victorian rivers lie in some state of decay, with fish breeding grounds lost, flows reduced, swamps drained etc. Our water management practices have in the past been inadequate. Just take a look at our open channel irrigation systems, which stretch across a vast reach of Australia. It loses a third of its volume through evaporation.

In 1983 during our last water restrictions the government promised that once the Thompson and Dartmouth Dams were finished that we would never have water restrictions again. Twenty years later it's happening again. What has happened to our vision?

These are just simple examples of where our ignorance and lack of foresight has let us astray. There has been and still is an irresponsible approach to water, soil and forestry management.

Today Australia faces many environmental issues of which the most important are:

1. Water management
2. Land Degradation and poor soil management
3. Deforestation
4. Overgrazing

Yet very little has been addressed. For over 100 years we couldn't even get Victoria South Australia and NSW to sign an agreement for a management plan for the Murray River.

These mistakes have led us to a more contemporary approach to agriculture. No longer are farmers just simply doing what "their fathers did". It simply doesn't work and is a time bomb ready to explode. The explosion being **total desertification and degradation of our land within our lifetime!** This has pushed us to a "big picture" approach to Agriculture, which has made us stop for a moment and think about what we are doing. Over the last 30 years there has been a push into sustainable agricultural practices leading us to better resource management with a long-term view.

Sustainable Agriculture can be described as *resource management based agricultural system that minimises the impact of agriculture produce and practices whilst providing a profitable output or produce at minimal impact to the surrounding environment, both short and long-term, whilst maximising biodiversity.*

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Biodiversity

So what is so important about biodiversity? Biodiversity gives us the “quality of life” that enables us to survive and enjoy life. Life’s wonderful choices! Many choices provide many solutions especially in the random changing realm of Darwin’s Natural Selection. We must maintain biodiversity if the human species is to survive.

Farm Management Plan

An integral part of any Sustainable Agricultural venture is to have a **Farm Management Plan**.

This analyses all the resource to minimise inputs, and provides a suitable output with view to long-term sustainability.

Inputs

These inputs could be but are not limited to the following:

- Water
- Soil
- Fertilisers
- Seeds
- Chemicals including pesticides, herbicides, fungicides
- Labour
- Machinery including fuel

The Farm Management Plan should also incorporate a vision for what you want to achieve, assess the inherent risks and provide contingency plans to minimise all the exposure to risks as part of the plan. It also provide solutions through an Integrated Pest Management (IPM) Plan

A Farm Management Plan should look at all aspects of the current state of the venture and provide any solutions, generally organic based, to rectify any inherent problems occurring or to provide practices that will not lead to long-term problems.

Many of the problems in intensive (monoculture) agriculture can be reversed if all the parameters are understood. The problem in the past has been we have not taken the time to analyse and understand our soils and ecological systems that support us until it is too late. In the past, (and still happening today) there has been a push by big corporations, such as Monsanto, DuPont etc. to buy...buy....buy their agricultural products, whilst their consultants, provided us with the wrong, often biased information leading us to make bad choices over time.

Whilst Sustainable Agriculture is the right step in our approach to resource management we still have a long way to go to change people’s habits and provide them with a greater understanding of our ecological systems which is blocked by our ignorance and apathy from distractions such as terrorism, boat people and war on Iraq. The real issue is resource management, which we alone must take control of and not rely on external states or systems to determine our destiny or freedom of choice.

References Used

No references were used. All knowledge has been gained through years of research and understanding of ecology and environmental issues within Australia
Background to Tibor Nagy:

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