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Ms Jeanette Radcliffe
Committee Secretary
Senate Select Committee on Agriculture and Related Industries
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600



Dear Ms Radcliffe

Please find enclosed my submission to the Senate Select Committee on Food Production in Australia.

INTRODUCTION:

- The current global financial crisis further highlights the importance of sufficient, reliable food supplies to a nation's sustainable welfare.
- In an urban, high tech society, growing crops for feed, not for greed is an obvious national requirement.
- Australia has long been at the leading edge of high quality, economical food production, constantly developing better varieties and increased yields.
- Recognised as the driest continent on earth, it is time to step back, absorb all previous lessons learnt, proven relevant new technologies available, and with a visionary but common sense approach, plan and execute the best way forward with a truly national integrated plan .

All too often, decisions in the past have been driven by a narrow, partisan agenda.

- **Australia's food production is most limited by the availability of a reliable supply of suitable fresh water.**
- **Irrigation is a key component to sustainable, economic production of preferred food stocks.**
- Proven technology now exists [mostly Australian] to grow more than we have ever produced using 50% of the water previously required!!
- Australia should start to trade water for technology to maximise our sustainable production potential, the combination will result in sustainable, lower cost production of essential food crops.
- **The Murray-Darling basin has long been the major food bowl of Australia.** It is now in serious trouble because of prolonged drought and a variety of other circumstances.
- Obviously, the return of more reliable rainfall is a prerequisite to a full recovery of future crop production, both in the basin and other areas of Australia.

- However the many billions of dollars allocated by federal and state governments to alleviate the problems of the basin and elsewhere, appear to be based on applying old solutions that too often have been unsuccessful or inadequate.

Evaporation is the single biggest cause of loss of surface water- more than 40% is commonly lost. High winds and temperatures only increase these losses. There are a number of proven technologies that can alleviate this problem. They include;-

- Replace surface irrigation with sub-surface irrigation, both conventional and capillary [KISSS technology: www.kiss.net.au] . This can give savings of 50% plus. The cost to install compared to a centre pivot or lateral move sprinkler system is quite comparable and the water savings, reduced energy and maintenance costs are considerable. **Watering the root zone is the key.**
- Covered delivery channels to irrigation areas significantly reduce evaporation losses-current programmes need to be expanded
- Australian developed soil moisture monitoring equipment has been used to provide substantial water savings in a variety of crops.
- It has been shown that recycled water from a variety of situations can be stored independently in some underground aquifers. Where applicable this can reduce reliance on dam storage, and lower demand for new water.

It would seem logical and prudent to **plan a comprehensive programme to replace inefficient irrigation with superior systems** – trading water for technology. For instance the government could better utilise the CSIRO or another expert panel to assess the current irrigation systems and give them a **rating of say one to three stars.**

Using the rating system, the government would then offer an incentive package of grants, tax concessions and lease funds to farmers, the funding amounts to be governed by a multiplier of hectares to be irrigated and the water savings made.

With each application, the farmer could receive a \$2,000.00 grant to offset the cost of preparing the required conversion and irrigation plan. Start with a decision to phase out flood irrigation over 5 years and offer a choice of say-

One star rating: conversion to centre pivot or equivalent.

Two star rating: conversion to conventional drip system

Three star rating: conversion to capillary sub surface irrigation or equivalent.

CONCLUSIONS:


1. The primary national objective should be to achieve recognition as the most **efficient water users in agriculture in the world.** We have the technology, the soils and the people to outperform all other producers to maximise the dollar return per megalitre of water used. This will require strong federal government and national industry leadership, but the results will be well and truly justified. Ultimately, the price of water will drive the technology led changes to future food production.

2. **Southern Australia has the existing infrastructure to continue to grow the bulk of the nations food requirements.** By concentrating on the areas with the water, the best soils, infrastructure etc., and adopting the relevant technologies available, we can grow all the food on significantly reduced acreage.
3. **Northern Australia has the inherent rainfall and climate to produce out of season horticultural crops for the domestic market, open the door to expanding the huge export market in south east Asia, and grow more of the traditional grain and food crops.** It will be essential to be aware of the increased incidence of insect, plant and soil diseases due to the absence of southern winter cold temperatures.
4. In the next few years **Australia faces the banning of many of the commonly used chemicals** to control insects, weeds and soil and plant diseases.
5. **Precise root zone irrigation, accelerated development of superior root stocks etc . will be the technology - led path to sustainable increased food production.** For example , in NSW a few years ago, by using a controlled environment and the use of ebb and flow irrigation, production of new improved, certified seed potatoes were marketed in two years, instead of the normal six
6. Similarly, **using shelter, wheat can be grown in half the usual time with greater yields.** Common sense, visionary applications are the way of the future. Other examples of accelerated fodder production are available.
7. Existing anomalies that currently seriously inhibit a national approach to future food production **include lack of cooperation between states** in the Murray Darling basin, the fact that 30% of suitable land in the WA Ord scheme lies in the Northern Territory and there appears to be no immediate plans to develop it, etc.etc.

An enlightened, truly national strong approach is so important to secure Australia's food future.

I am keen to appear at any future Senate hearings into Food Production to outline my vision and share my concerns.

Yours sincerely



DAVID SHEIL