

# PROTECTED CROPPING



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# Executive Summary

Australia is one of the driest continents on Earth, yet many of our irrigation practices and techniques are inefficient and wasteful of such a precious resource. The hydroponic and greenhouse industries (protected cropping) are models of efficiency when we look at production levels for the relatively small environmental footprint they occupy. Despite these efficiencies, protected cropping is still in its infancy in Australia, with Europe and North America leading the way in greenhouse technology.

At present Australia has significant skills deficiencies in the Protected Cropping Industry. Skills to manage the overall environment within the greenhouse are:

- Access to suitable skills and knowledge to collect and record data for crop registration of a variety of crops (benchmarking)
- Physiology and manipulation of the growing plant and its relationship to number, size and quality of fruit (such as tomato or strawberry) and other products (edible foliage, roots)
- Knowledge of latest techniques and technologies and the ability to evaluate/adapt to Australian growing environments
- Understanding of the role of nutrients and their affect on number, size and quality of fruit and other products

The threat of global warming and climate change makes it imperative that Australia is prepared for possible water shortages and extreme weather conditions. Taig believes that protective cropping offers a viable, productive growing system that meets the financial, environmental and social requirements of the future.

Australian growers have very little access to current skills and knowledge of hydroponics and greenhouse growing. Hydroponics is an extremely cost effective way of producing a range of fresh produce, however comparisons of yields between European and Australian growers in many greenhouse crops indicate that we still have a long way to go.

The Fellowship was partly undertaken in conjunction with 15 growers from the Australian Hydroponic and Greenhouse Association 2007 Greenhouse Study tour. Together this group participated in five days training at the Practical Training Centre Plus (PTC+) in Ede, Netherlands, visited a number of growers, research facilities, and allied enterprises, as well as attending the Horti Fair over two days. In addition, prior to and immediately after the tour, meetings were held with representatives from PTC+ and nearby Wageningen University.

It is important for the industry to not only catch up with current technology but to stay abreast of new and emerging technologies. Initially the skills and knowledge in hydroponic and greenhouse management acquired will be passed on directly to growers, their staff, horticulture students and other TAFE teachers, improving yields and the overall wellbeing of the industry. However, the greater long term benefit will be the relationships initiated with organisations like PTC+, Wageningen University, representatives of AHGA, and the opportunity to establish specialist centres in Australia.