

# WESTERN AUSTRALIAN APPROACH TO THE DEVELOPMENT AND ADOPTION OF PERMANENT RAISED BED FARMING

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## Introduction

*“Tell me and I’ll forget  
Show me and I may remember  
Involve me and I’ll understand”*  
(Unknown author)

This quotation, the origin of which is unknown, is the maxim by which the raised bed work in Western Australia is being undertaken. It really relates to ownership and the synergy that results when people with a shared vision and complementary expertise work together.

It has and is being applied to all aspects of the work. Beneath it there has been a structured approach which takes account of the stages that both work and individuals must pass through in order to progress:

- awareness
- knowledge of the problem/opportunity
- analysis of the available information
- formulation and testing of potential solutions
- trial and refinement of solutions
- demonstration and reward of success
- encouragement and support - (the provision of expert advice and assistance)

## Technology development

Development of the technology to overcome winter waterlogging has gone through the following stages:

- Climatic analysis of rainfall and evaporation patterns for the agricultural area
- Water balance analysis of the soil-climate interaction and an analysis of the frequency and duration of waterlogging throughout the agricultural area
- Drainage analysis of the soil properties and drain spacing needed to drain excess water from soil quickly enough to prevent plants from suffering waterlogging stress
- Review of the soil management R&D literature to establish the feasibility of creating and maintaining the soil properties required to ensure drains work
- Review of eastern states farmer and machinery experience, to establish the practicality of applying the technology to broad area dryland farming
- R&D to test the system of raised beds and soil management practices to create and maintain the required soil properties

- R&D to assess the runoff and groundwater implications of the systems application on a broad scale
- R&D with machinery companies to develop and test machinery suited to the atypically good soil conditions in raised beds at a farm scale and to ensure equipment known to operate successfully on a system of raised beds is available

### **Adoption**

Throughout the work from the beginning of R&D to test the ability of raised beds to prevent waterlogging, farmers have been involved in genuine partnership arrangements in which they literally own the results - the crop yield - since they carry the input costs. Beyond this, they have all been selected for their interest and cooperative nature. This work has involved:

- Paddock scale trials on farmers' properties to demonstrate and involve farmers and their peers in the assessment of the system's success
- Large scale demonstrations on farmers' properties to gain experience with the design and layout of raised beds on a broad scale
- Involvement of farmers and technical staff with the large scale demonstrations, to train infrastructure support services for the initial adopters
- Media releases and field days featuring co-operating farmers
- Display of machinery adaptations at major farm machinery field days
- Encouragement and assistance for farmers prepared to implement a raised bed farming system on their properties
- Investment analysis of the costs and benefits of implementing a raised bed farming system, including cashflow projections over the first 5 - 10 years
- A newsletter informing farmers, machinery dealers and professionals of developments and farmer experience with the system
- Intra and inter-state bus tours of interested and involved farmers

### **Progress**

- 1996 First successful trial of raised beds. Five year R&D project approved
- 1997 Four demonstration trials and one research site established. Several farmers expressed intentions to purchase a bed forming machine. Lots of publicity and casual interest. One farmer committed to purchase and adoption
- 1998 One farmer purchased bed former and achieved good results. Other farmers interested. One more farmer has ordered bed former. Three other farmers committed to large scale demonstrations. One of these is installed. The other two to be installed for the 1999 crop season

## **Plans**

- Tours with interested farmers from other states and within WA
- Talks to farmers initiated by machinery dealers
- Installation of two more large scale demonstrations, and no more beyond this.
- Demonstrate machinery adaptations of bed-former, seeder and harvester
- Set up a newsletter to committed/interested farmers and commercial companies
- Publish investment allowance and encourage farmers to talk to farmers and purchase their own machines

## **Conclusions**

Many farmers have passed the sceptical/disbelieving stage where they sat back and watched the results.

Signs are emerging that quite a number will purchase bed formers and proceed on their own initiative. Efforts will be made to encourage these farmers and assist them to develop their own networks. In addition, training on the layout and design requirements will be undertaken within AgWA to ensure local expertise is available for farmers.

Next year, 1999, ought to see a small number of practising farmers. No doubt these will stimulate further adoption which will increase exponentially.

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