

An aerial photograph of a large agricultural area. The landscape is divided into numerous rectangular plots. Many of these plots are covered with a bright blue plastic mulch, which is used for water conservation and weed control. A central road or canal runs through the middle of the area, and there are some green patches of vegetation interspersed among the blue-covered fields. The overall scene depicts a well-organized and modern farming operation.

Use of Crop Models to Manage Water and Salinity in Australia

**D.C.Godwin, E.Xevi, W.S.Meyer and
K.J.Sommer**

THE PROBLEM

Australia has:

- 30 million ha of land affected by salinity
- 2 million ha of irrigated land
- 25-30% of irrigated land is affected by shallow watertables



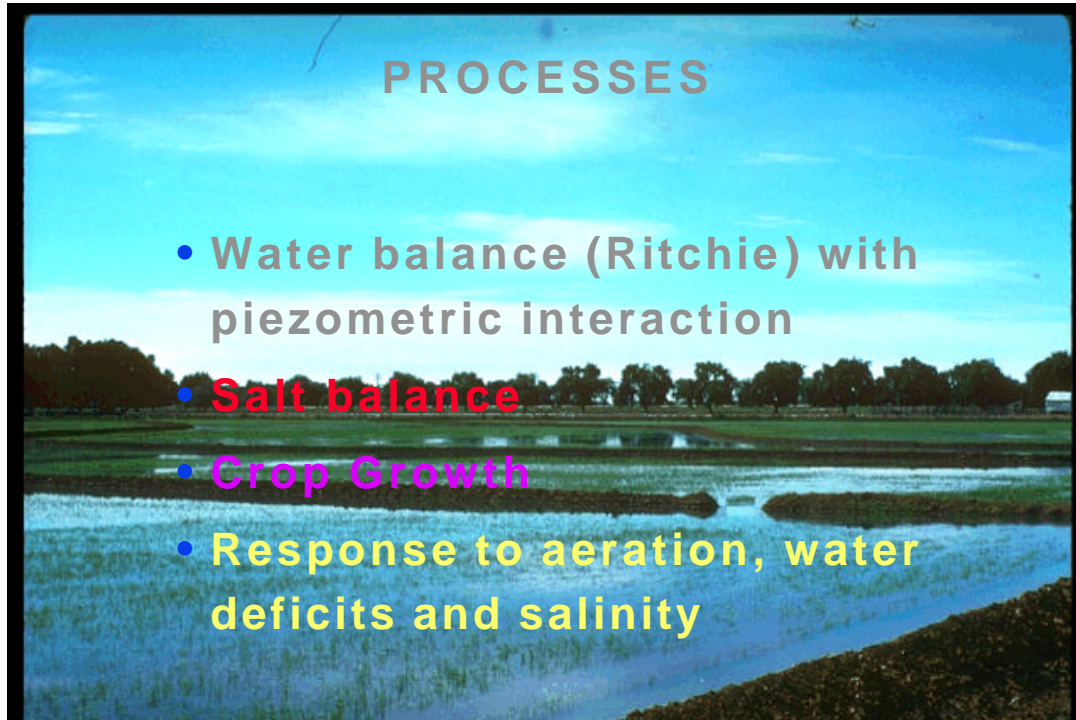


Estimates future trends in:

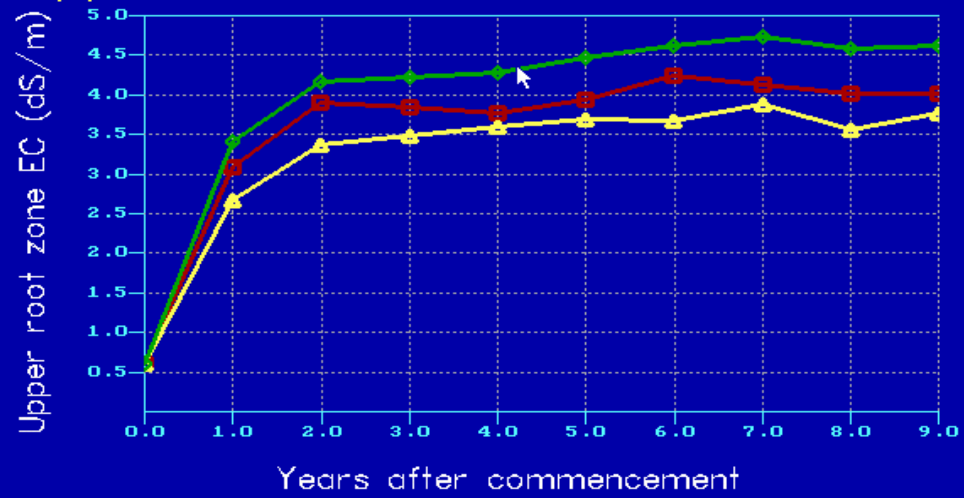
- . crop yields***
- . groundwater levels***
- . salinization***
- . production costs***

PROCESSES

- Water balance (Ritchie) with piezometric interaction
- Salt balance
- Crop Growth
- Response to aeration, water deficits and salinity

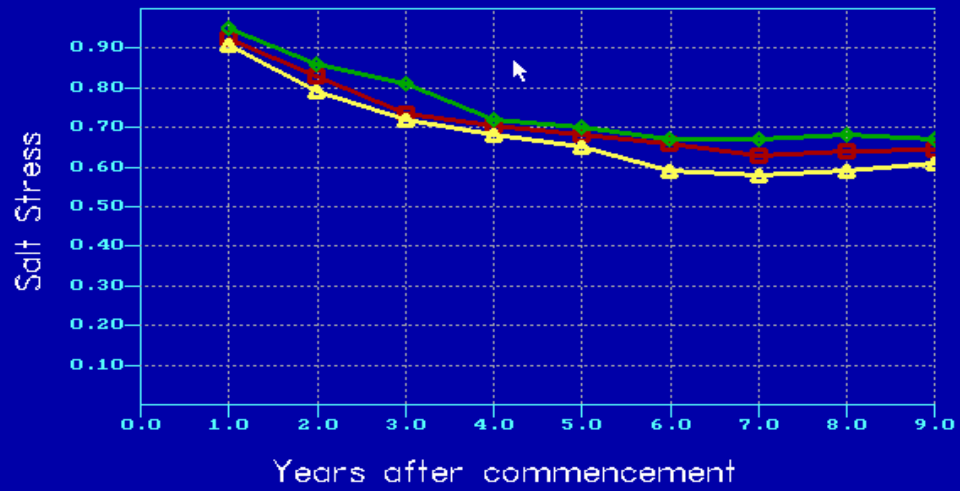


Upper root zone EC at end of season



Median Δ 25 % percentile
75 % percentile

Avg Salt stress during growth



Median Δ 25 % percentile
75 % percentile





DESTINY APPLICATIONS

- **Management Guidelines for irrigation**
- **Education**
- **Research tool**



SWAGMAN DESTINY PACKAGE

VERSION 3.0 for WINDOWS

AVAILABLE 2001