

Computer assisted weed management workshop

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The Computer Assisted Weed Management Workshop will present a range of aids from websites for weed information, to databases of plants and herbicides, weed identification, mapping, models for management and models for economic analysis. These include:

- **WIN Weed Information Network** *Neville Marchant* This network is designed to provide a framework for surveillance and documentation of weed infestations. Training of community groups to gather weed information based on voucher specimens is a priority. Information on biology and control will also be captured.
- **FloraBase** *Terry Macfarlane* FloraBase is an internet accessed database of the plants in the WA Herbarium. It includes plant descriptions, locations, photos and line drawings. It has label details of the 500,000 herbarium specimens including 19,000 alien plant specimens.
- **HerbiGuide** *John Moore* HerbiGuide is a CD based program to assist weed control in broadacre crops and pastures. It provides herbicidal and insecticidal control information as well as data on the weeds, pests and chemicals.
- **HerbiRate** *David Minkey* HerbiRate is an excel spreadsheet for determining the rates of herbicide required for weed control in wheat with four herbicides. Data on environmental conditions and plant growth are entered and the rates calculated.
- **Multi-species RIM** *Marta Monjardino* Multi-species RIM is a bio-economic model that simulates the population dynamics of annual ryegrass and wild radish over a 20-year period. The model presents details of the biology of weeds, crops and pasture as well as the financial costs and returns. The outputs are weed density and profit. This is a decision-support tool designed for the evaluation of various management strategies to control co-existing herbicide resistant weeds in Australian dry-land agriculture.
- **Radish bioeconomic** *Randall Jones* This is an excel spreadsheet for investigating the effects of various management options on the prevalence and economic effects of wild radish in farming systems.
- **WREM** *Ken Young* A process based emergence model for wild radish.
- **WeedEm** *Mike Walsh* WEEDEM is a program that currently contains the predictive emergence models for wild radish, wild oats and annual ryegrass. The cumulative emergence of these weed species is forecast using inputs of daily rainfall, maximum and minimum temperatures.
- **A 2 gene model for glyphosate and triazine resistance** *Art Diggle, Patrick Smith and Paul Neve* This model predicts the development of resistance to glyphosate and triazine herbicides in wheat, lupin and canola rotations over a 30 year timespan when triazine tolerant or Roundup Ready™ crops are included in the rotations.
- **HerbiKey** *John Moore* This is a weed identification program for approximately 400 naturalised plants.
- **Weed ID** *Sheldon Navie* An interactive identification and information CD to the *Noxious Weeds of Australia*, which is being developed using *Lucid*. This CD will be an up to date resource for those managing declared weeds and has links to other online resources.
- **Weed Mapper** *John Bruce* Weed Mapper is a web based mapping program designed to map weeds. This was developed by the University of Oregon and is being modified for use in Australia. Users can access maps to determine weed distribution and record new weed infestations or control conducted on line. It is currently being used to map Blackberry and Gorse in the Albany region.
- **CRC Weed Management website** *Michael Moerk* A website that includes most of the activities of the CRC and lots of resource material.
- **WA Department of Agriculture and web links** *Sandy Lloyd* A wealth of information and links to other sites with weed science related images and data.
- **Global Compendium of Weeds** *Rod Randall* This database allows rapid determinations of weed histories for most species and aids in determining a plant's origin, where it has naturalised, if it is used in the horticultural trade and numerous other useful bits of data. This database has 25,000 weedy entries out of the 402,000 taxa considered. There are complete flora lists for Australia and North America and naturalised species lists from dozens of countries.
- **WIP and SAPIA** *Lesley Henderson* The Weeds and Invasive Plants Website (WIP), incorporating the Southern African Plant Invaders Atlas (SAPIA) Database can be accessed at: www.agis.agric.za/agisweb/wip. Information available at WIP includes declared weeds and invaders with fact sheets. 180 species have photos and line drawings. Distribution maps of all species in the SAPIA database are available. The SAPIA database has 48,000 locality records of 500 naturalised alien plants species. Detailed information from SAPIA is not available at WIP but can be obtained from Lesley Henderson.