Weeds are everyone’s property

Evaluation of the Tackling Weeds on Private Land initiative with the Garden industry in Victoria

EMAPi9 Conference
September 2007

Cattriona King
Introduction – Tackling Weeds on Private Land Initiative

- 3 year, $9m state wide initiative delivered by DPI on behalf of DSE

- Initiative goal:
  
  *Key Stakeholders accept and act on their weed management responsibilities in a collaborative manner.*

- Project participants (stakeholders):
  - CMAs
  - Municipal Councils
  - Linear Managers (road and rail)
  - **Garden industry**
  - Fodder industry
Engagement Strategies

- Jointly developed with garden industry peak bodies
- Relationship building
- Communications products
- Forums - information sharing and networking
- Media (Horticultural Media)
- Grant (funding for “Grow Me Instead” brochure)
• To determine the effectiveness of the project through measurement of garden industry’s changes in awareness and actions of weed management/prevention.
Methods – Adoption Model

Aware, Accept, Act model of adoption
Methods – Domains of Change

What would success look like?

- Not selling or promoting declared weed species
- Preventing the spread of weeds resulting from business operations (e.g., invasive plants, weed seeds in soils, etc.)
- Reporting new, potential high risk species -> weeds of tomorrow
- Working with other industry members in a coordinated approach to weed management
Methods - Data Collection

• Conducted at baseline, mid and end project

• Both quantitative and qualitative data

• Survey Sample (end project):

<table>
<thead>
<tr>
<th>Garden Industry segment</th>
<th>Estimated population size</th>
<th>% of total industry</th>
<th>Completed surveys</th>
<th>% of total survey sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail nurseries</td>
<td>760</td>
<td>47%</td>
<td>125</td>
<td>50%</td>
</tr>
<tr>
<td>Wholesale nurseries</td>
<td>600</td>
<td>37%</td>
<td>92</td>
<td>37%</td>
</tr>
<tr>
<td>Landscapers</td>
<td>250</td>
<td>15%</td>
<td>33</td>
<td>13%</td>
</tr>
<tr>
<td>Total</td>
<td><strong>1610</strong></td>
<td><strong>100%</strong></td>
<td><strong>250</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Standard Error of the survey sample of 250 at 95% confidence level is ± 5.7%
### Methods – Data Analysis

*Responses to dichotomous questions grouped:*

<table>
<thead>
<tr>
<th>Domain of Change</th>
<th>Aware</th>
<th>Accept</th>
<th>Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Not selling or promoting declared weeds,</td>
<td>$\sum 3$ questions</td>
<td>$\sum 1$ questions</td>
<td>$\sum 2$ questions</td>
</tr>
<tr>
<td>2. Prevent the spread of weeds resulting from their business operations</td>
<td>$\sum 3$ questions</td>
<td>$\sum 3$ questions</td>
<td>$\sum 3$ questions</td>
</tr>
<tr>
<td>3. Report new weed species</td>
<td>$\sum 3$ questions</td>
<td>$\sum 2$ questions</td>
<td>$\sum 1$ question</td>
</tr>
<tr>
<td>4. Work with other land managers in a coordinated approach to weed management</td>
<td>$\sum 1$ questions</td>
<td>$\sum 2$ questions</td>
<td>$\sum 2$ question</td>
</tr>
<tr>
<td><strong>Total all Domains</strong></td>
<td><strong>$\sum 10$ questions</strong></td>
<td><strong>$\sum 8$ questions</strong></td>
<td><strong>$\sum 8$ questions</strong></td>
</tr>
</tbody>
</table>
Attitudes

- 94% believe it is important to the community to prevent weed spread
- 87% believe the garden industry has a responsibility to reduce weed spread (significant increase since baseline)
- 80% believe they have a role in educating customers about invasive garden plants & guiding plant choices
Drivers & Barriers

• Drivers:
  – Passion for gardening; “clean & green” reputation, and care for the environment

• Barriers toward acting on weed management responsibilities:
  – Confusion over weed lists
  – Concern re lack of notice for new plant declarations
  – Feeling “under siege” - blamed for majority weed introductions
  – Lack of awareness of some segments of industry about pathways of spread
Results (3)

Reaction to project interventions

• 76% had some form of contact with project
• 44% of these said that project had some impact on the way they deal with weed issues.

"It makes us look more critically at plant lists to see if there is potential for invasiveness"

"I will now make customers aware of the weed issue and the selection of plants"

• Increased level of trust in State Government established through partnership approach:
  – Peak body involved in policy development re new weed declarations
  – Peak body moved from resisting to actively supporting compliance operations
Results (4)

Results of AAA adoption model - Awareness

* - statistically significant increase
Results of AAA adoption model - Acceptance

Results (5)

Change in Acceptance

<table>
<thead>
<tr>
<th>Category</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Selling weeds</td>
<td>(2%)</td>
</tr>
<tr>
<td>Prevention of Spread</td>
<td>(4%)</td>
</tr>
<tr>
<td>Reporting New Weeds</td>
<td>(6%)</td>
</tr>
<tr>
<td>Partnerships</td>
<td>(8%)</td>
</tr>
<tr>
<td>All Areas Combined</td>
<td>(10%)</td>
</tr>
</tbody>
</table>

* - statistically significant change
Results of AAA adoption model - Actions

- statistically significant change

<table>
<thead>
<tr>
<th>Action</th>
<th>% change</th>
</tr>
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<tr>
<td>Not Selling weeds</td>
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* - statistically significant change
Results (7)

Garden industry segment differences

<table>
<thead>
<tr>
<th></th>
<th>Wholesalers</th>
<th>Retailers</th>
<th>Landscapers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware</td>
<td>81%</td>
<td>77%</td>
<td>71%</td>
</tr>
<tr>
<td>Accept</td>
<td>67%</td>
<td>72%</td>
<td>56%</td>
</tr>
<tr>
<td>Act</td>
<td>48%</td>
<td>46%</td>
<td>40%</td>
</tr>
</tbody>
</table>
Discussion - Attribution

**Evidence for attribution to project intervention**
- Participants rated project engagement strategies as having an impact.
- Participants demonstrate increased trust of State Govt and willingness to work together to address weeds.
- New partnerships between peak bodies formed which are unlikely to have happened without project.

**Evidence for practice change despite project**
- High personal and industry motivation to care for the environment (pre project).
- The practice change “ask” was not very high.

*Project likely to have increased rate of change*
Rate and Scope of Adoption

- **n₂**: Increased number of potential adopters
- **n₁**: Potential adopters

Voluntary Instruments, such as extension or small incentives can increase the **rate** of change but not the **scope** of change – i.e., greater population of adopters.

Obligatory Instruments that require compliance can increase the **scope** of change – i.e., greater population of adopters.

Adoption without intervention (slower)

- **t₂**: Faster time to adopt
- **t₁**: Time to adopt without intervention

*Chris Linehan, DPI Vic.*
Conclusion

• Significant gains in weed management by the Garden industry driven by partnership building and increasing awareness.

• Aware, Accept, Act adoption model effective for both project delivery planning and for measuring attitudinal and behavioural shifts when used in conjunction with qualitative data to explore context and causal links.

• Important to maintain the momentum!
Further Information

- **Tackling Weeds on Private Land Stakeholder Attitudes reports** (Garden Industry, Fodder Industry, Municipal Councils, Linear Managers, CMAs).


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