Plastic Waste Challenge Report

How can we repurpose the plastic waste produced by farming? (reduce / reuse / recycle)

This challenge event was part of:

Funded by: Supporting:

And run in partnership with:
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Figure 1 Photo from Sunray Farm field trip
# 1 Workshop Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>7:15</td>
<td>Meet at Caboolture Hub</td>
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<tr>
<td>7:30</td>
<td>Bus leaves</td>
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<tr>
<td>8:00</td>
<td>On-farm Demonstration at Sunray Farm</td>
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<td>9:30</td>
<td>Bus returns</td>
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<tr>
<td>10:00</td>
<td><strong>Challenge Workshop Part One</strong></td>
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<td></td>
<td>Workshop overview</td>
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<td></td>
<td>Objectives</td>
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<td></td>
<td>Revisiting the briefing</td>
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<td>What solutions exist?</td>
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<tr>
<td></td>
<td>o Stephen Richards</td>
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<td></td>
<td>o Georgina Davis</td>
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<td>10:30</td>
<td>Morning Tea</td>
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<td>10:45</td>
<td><strong>Challenge Workshop Part Two</strong></td>
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<td></td>
<td>Real solutions on-farm</td>
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<td>o Ideas</td>
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<td>o Discussion</td>
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<td>o Voting</td>
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<td>12:15</td>
<td>Lunch</td>
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</table>
12:30  **Challenge Workshop Part Three**

- Development of solutions
- Solution presentations
- Support and next steps
  - Regional Development Australia
  - Department of Environment and Heritage Protection
  - Department of Science, Information Technology and Innovation
  - Queensland Strawberries

*Figure 6 Participants during Overview and Briefing*
2 Ideation: Ideas Captured on Post-it Notes

Participants shared ideas related to the challenge by writing them on post-it notes. In group discussion, preliminary duplicates were combined and additional ideas were recorded. These were categorised into themes.

Over 97 ideas and idea fragments were presented within 13 themes. Participants were asked to vote on themes using stickers and 5 themes were developed further.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Votes</th>
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</thead>
<tbody>
<tr>
<td>Decontamination and Cleaning</td>
<td>30</td>
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<tr>
<td>Technologies for Disposal</td>
<td>24</td>
</tr>
<tr>
<td>Plastic Industry Engagement and R&amp;D</td>
<td>23</td>
</tr>
<tr>
<td>Education and R&amp;D Trials</td>
<td>22</td>
</tr>
<tr>
<td>Alternatives to Plastics On-Farm</td>
<td>22</td>
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<tr>
<td>Investment/Stewardship (Whole of Supply Chain)</td>
<td>22</td>
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<tr>
<td>Regional Economics and Collection</td>
<td>18</td>
</tr>
<tr>
<td>Removal and Cleaning</td>
<td>10</td>
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<tr>
<td>Market</td>
<td>9</td>
</tr>
<tr>
<td>New Plastic or Biodegradable Products</td>
<td>9</td>
</tr>
<tr>
<td>Change</td>
<td>4</td>
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<tr>
<td>R&amp;D LCA Cost/Benefit</td>
<td>3</td>
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<tr>
<td>Others</td>
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</tbody>
</table>

Figure 7 Ideation in progress

Figure 8 Top 5 themes selected
3 Opportunity Statements

Based on voting and further discussion with participants Opportunity Statements were developed for 5 themes. The below subsections are direct transcriptions from the Opportunity Statement posters created in groups.

Groups were asked to create statements with the following elements:

- Name
- What will it do?
- How will it work?

3.1 Cleaning Plastic

1. Clean on farm techniques
2. Education and inventives
3. Tools or machinery
4. Storage and handling off farm

1. Proven technology
2. Cost effective
3. Quality control / material: re-use applicability

3.2 Technologies

What will it do?

- Reuse on farm
- Local production – jobs!
- Material eff.

How will it work?

- Funding
- R&D
- Techno economics analysis
- Life cycle analysis

Process to be remoulded to be put back into the local community

- Seats
- Rubbish bins
- Crates
- Strawberry picking carts
- Canopy shade
- Pedals and tanks
3.3 Industry Engagement and R&D

What will it do?
- Cohesive supply chain
- Reduce costs
- Learning from others -> realise opportunities
- Design for purpose and reprocess

How will it work?
- Link to #2 and #3
- Broad national issue / regional issue
- Community engagement
  - On-farm best management practice
  - Industry quality assurance
  - ISO
  - Green credentials

3.4 Education, Alternatives and On-Farm Trials Pilot

What will it do?
- Identifying needs and benefits of plastic mulch
  - Clean fruit
  - Water conservation
  - Weed control
- Identify alternative products to meet needs
- Evaluate cost benefits and practicality
- Explore alternative farming processes

How it will work?
- Literature research
- Evaluate options and alternatives
- Engage with industry an viability
- Engage with other industries/groups (eg. Plastics)
- Research funding/grant opportunities
- Industry education of current practice shortfalls
- On-farm trials and field days/farm walks

3.5 Investment and Stewardship – Whole Supply Chain

Investment

Government - due to the health benefits of produce produced offset against cost of producing the products. Either subsidise a facility to process or assist with cost overseas processing.
If a levy was introduced ultimately the cost would be more expensive to produce.
Food security and ecology + environmental

*Please note that the above opportunity statements were created as a part of the activity do not necessarily reflect the intention of government or any other organisation.*
4 Next Steps

To maintain momentum it is recommended that the following steps be undertaken for the opportunities:

1. A leadership group is formed (already started on the day as instigated by Anthony Dow)
   - this is intended to consist of a diverse, motivated sub-set of the workshop participants
2. Leadership group to meet, review the ideas & outcomes from the day and identify viable project/s
3. Project champions to be selected from the leadership group or sourced externally by the group
4. Brief project plans to be developed for each of the projects that cover:
   a. project objective,
   b. activities to support/execute the project,
   c. personnel and other resources,
   d. timeline for activities.
5. Funding opportunities for the selected projects to be discussed with the Department of Environment and other suitable funding bodies

Once project plans are prepared then a series of monitoring and review activities will be required to make decisions as to if these opportunities should continue to be progressed.