SRA Strategic Planning Industry Forums 2017
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### Executive summary

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| 2.9 | Southern region - Bundaberg |
Sugar Research Australia (SRA) is an Industry Owned Company that invests in and manages a portfolio of Research, Development and Adoption projects that drive productivity, profitability and sustainability for Australian sugarcane.

SRA is currently developing its Strategic Plan for 2017/18 - 2021/22. The Strategic Plan sets out a strategic agenda positioning SRA to facilitate and deliver research, development and adoption activities that will meet the short, medium and long-term needs of its investors.

As part of the development process nine regional consultation forums were held with SRA members between 30th January 2017 to 10th February 2017.

The objective of the regional forums were to:

- Discuss key industry issues affecting the industry as a whole and each specific region.
- Provide input into research priorities and desired outcomes for the ensuing plan period, as well as for medium and longer-range horizons.

This report summarises the outcomes from the nine regional consultation forums.
### Executive summary

## Summary of attendees

211 people attended the SRA regional consultation forums. The graphs below show the breakdown by forum and attendee type.

### Number of attendees by forum

<table>
<thead>
<tr>
<th>Location</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gordonvale</td>
<td>37</td>
</tr>
<tr>
<td>Tully</td>
<td>20</td>
</tr>
<tr>
<td>Ingham</td>
<td>30</td>
</tr>
<tr>
<td>NSW</td>
<td>30</td>
</tr>
<tr>
<td>Mackay</td>
<td>33</td>
</tr>
<tr>
<td>Mackay (Invited Only)</td>
<td>15</td>
</tr>
<tr>
<td>Ayr</td>
<td>12</td>
</tr>
<tr>
<td>Ayr (Invited Only)</td>
<td>11</td>
</tr>
<tr>
<td>Bundaberg</td>
<td>23</td>
</tr>
</tbody>
</table>

### Number of attendees by type

<table>
<thead>
<tr>
<th>Type</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grower</td>
<td>103</td>
</tr>
<tr>
<td>Miller</td>
<td>22</td>
</tr>
<tr>
<td>Productivity Services</td>
<td>35</td>
</tr>
<tr>
<td>Government</td>
<td>7</td>
</tr>
<tr>
<td>Delegates</td>
<td>3</td>
</tr>
<tr>
<td>SRA Staff</td>
<td>32</td>
</tr>
<tr>
<td>Other*</td>
<td>9</td>
</tr>
</tbody>
</table>

*Other* includes Private Consultant, Researcher, Agri Services, and Journalist.
The approach for the regional consultation forums was based on four steps as shown in the diagram below. This allowed a structured review of key issues, opportunities and priorities for each region.

1. **Initial thoughts**
   - Open discussion to collect feedback from 2016 season, their projection for 2017 and challenges & opportunities facing the region.

2. **Industry & Region snapshot**
   - Overview of the sugarcane industry covering global, Australian and regional perspectives.
   - Regional perspectives were based on feedback from delegates meeting and grower survey 2016.

3. **Industry value chain**
   - Discussion on outcomes and overall industry value chain.
   - Group activity to identify key priority areas in each step of the value chain.

4. **KFA – Portfolio split**
   - Individual activity where each participant had the opportunity to allocate $100 across the 8 KFAs.
The following two slides summarise the key themes raised during the regional consultation forums.

<table>
<thead>
<tr>
<th>Extension model</th>
<th>Communication &amp; Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>- There is no clear role and responsibilities for SRA and Productivity Services. SRA to address duplication of roles and remove gaps.</td>
<td>- SRA is still running a research company and not concerned about their members.</td>
</tr>
<tr>
<td>- New extension model should integrate extension with research and consider more one on one with members.</td>
<td>- Involve industry in research journey, instead of handing over final results. Researchers should have dedicated time allocation to industry interaction.</td>
</tr>
<tr>
<td>- Extension model work plans should have common goals, but flexibility to achieve goals in individual regions.</td>
<td>- SRA need a platform for growers to provide direct feedback to SRA.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Soil health</th>
<th>Knowledge &amp; Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>- SRA to provide more research and extension on soil health and soil nutrition efficiency.</td>
<td>- Succession planning is not only an issue for farmers, but for the whole industry and SRA.</td>
</tr>
<tr>
<td>- Improve communication on current knowledge regarding marginal soils.</td>
<td>- SRA staff need on-field experience.</td>
</tr>
<tr>
<td>- Loss of cane land to other crops (e.g. macadamia and horticulture).</td>
<td>- SRA needs to support the industry to build the skills and capability (e.g. traineeships).</td>
</tr>
<tr>
<td>- Improve collaboration with other regions and industries that have improved soil health (e.g. South Australia and horticulture).</td>
<td>- Set up a mentoring network between industry and new SRA adoption staff.</td>
</tr>
<tr>
<td></td>
<td>- Risk of losing people to the mining sector.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Varieties</th>
<th>Pest &amp; Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Variety selection should have more emphasis on CCS.</td>
<td>- Northern regions are facing issues with rats and pigs.</td>
</tr>
<tr>
<td>- SRA should recall varieties if not performing in field and communicate to growers.</td>
<td>- Pachymetra, soldier fly, RSD and cane grub were highlighted in some of the regions.</td>
</tr>
<tr>
<td>- SRA to focus on local varieties (e.g. Central region).</td>
<td>- YCS was not a major issue across most of the regions, but SRA should continue research. Questions were raised regarding the impact of YCS on CCS.</td>
</tr>
<tr>
<td>- Growers and millers levy payers should have the same say/weight in variety selection decisions.</td>
<td></td>
</tr>
<tr>
<td>- Release of new varieties should consider standover trials.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Productivity</th>
<th>Farming practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Low / static CCS was a common theme across most of the regions, in particular the Northern ones.</td>
<td>- Growers need more resilient farming systems to handle diverse conditions (e.g. climate).</td>
</tr>
<tr>
<td>- Growers want to see the benefits in dollars per hectare.</td>
<td>- SIX EASY STEPS™ needs to be calibrated to the regions.</td>
</tr>
<tr>
<td>- Approach of breeding should be focused on profitability not just productivity.</td>
<td>- Sub-surface drip irrigation. SRA to support with data analysis on how to use it properly.</td>
</tr>
<tr>
<td></td>
<td>- Growers don’t have a good understanding of the cost structure / financial management.</td>
</tr>
<tr>
<td>Initial thoughts: key themes (2/2)</td>
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<tr>
<td>-----------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Executive summary</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Harvesting</strong></td>
<td></td>
</tr>
<tr>
<td>- Current harvesting practices and commercial arrangements are driving productivity losses (e.g. speed, loss on road, overfilling of bins).</td>
<td></td>
</tr>
<tr>
<td>- Ensure harvest best practice program is still on track and growing for bigger participation.</td>
<td></td>
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<tr>
<td>- SRA needs to provide more data and support extension on harvesting practices.</td>
<td></td>
</tr>
<tr>
<td>- Increase use of automation (e.g. speed regulator and GPS guidance).</td>
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</tr>
<tr>
<td><strong>Milling</strong></td>
<td></td>
</tr>
<tr>
<td>- Mill infrastructure needs improvement. There is no excess capacity in the milling sector.</td>
<td></td>
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<tr>
<td>- Season length is too long, affecting productivity.</td>
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<tr>
<td>- SRA needs dedicated milling research, researchers and adoption officers.</td>
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<tr>
<td>- Improve capability and training across the industry, in particular in milling.</td>
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</tr>
<tr>
<td><strong>Product diversification</strong></td>
<td></td>
</tr>
<tr>
<td>- Whole plant compensation model should benefit both growers and millers.</td>
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</tr>
<tr>
<td>- Most of participants agreed that the industry can’t rely only on sugar in the long term.</td>
<td></td>
</tr>
<tr>
<td>- SRA should provide more information on the economic viability of alternative products from sugarcane.</td>
<td></td>
</tr>
<tr>
<td>- Opportunities to learn from other countries that make a better use of the plant.</td>
<td></td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td></td>
</tr>
<tr>
<td>- New technologies need more emphasis to reduce production costs (e.g. weed sensing technology).</td>
<td></td>
</tr>
<tr>
<td>- GPS soil profiling to support harvesting calibration and control (e.g. Brazil).</td>
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</tr>
<tr>
<td>- NIR technology needed to measure cane quality and provide feedback to growers.</td>
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</tr>
<tr>
<td>- Continue research on GM cane to grub control, cheaper cane and easier growing.</td>
<td></td>
</tr>
<tr>
<td><strong>Industry image</strong></td>
<td></td>
</tr>
<tr>
<td>- Social license to operate was a concern in some of the regions.</td>
<td></td>
</tr>
<tr>
<td>- Queensland election may impact on the reef discussion.</td>
<td></td>
</tr>
<tr>
<td>- The human nutrition debate was raised in some of the regions, but the participants are not sure about the role of SRA in this area.</td>
<td></td>
</tr>
<tr>
<td><strong>Research investment process</strong></td>
<td></td>
</tr>
<tr>
<td>- SRA to provide more transparency on research investments and governance model.</td>
<td></td>
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<tr>
<td>- Projects should be funded all the way through.</td>
<td></td>
</tr>
<tr>
<td><strong>Constitutional</strong></td>
<td></td>
</tr>
<tr>
<td>- SRA to provide more clarification on SRA IP’s stance (open access to research vs commercial optimisation from IP).</td>
<td></td>
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<tr>
<td>- Members want to access SRA’s IP.</td>
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<tr>
<td><strong>Industry model</strong></td>
<td></td>
</tr>
<tr>
<td>- Duplication of roles / effort (e.g. industry bodies, productivity services etc)</td>
<td></td>
</tr>
<tr>
<td>- Industry and SRA’s measures of success.</td>
<td></td>
</tr>
<tr>
<td>- Industry vision.</td>
<td></td>
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</tbody>
</table>
Executive summary

Industry & Region snapshot

The graphics below provide a high level snapshot of each regional environment that were used to provide additional input to the discussions. The information was based on feedback from delegates meeting and grower survey 2016.

Northern Region - Gordonvale and Tully

Herbert Region - Ingham

NSW Region - Ballina

Central Region - Mackay

Burdekin Region - Ayr

Southern Region - Bundaberg
Executive summary

Industry value chain

The diagram below summarises the proposed industry outcomes and value chain.

Outcomes

- **Productivity**
- **Profitability**
- **Environmental & Social Sustainability**
- **Capability**

Value Chain

- **Farming**
  - Economic viability
  - Varieties
  - Efficiency
  - Environmental responsibility
  - Farming practices
  - Biosecurity
- **Harvesting**
  - Minimise losses
  - Harvesting practices
  - Harvest Equipment
  - Commercial arrangement
  - Harvesting schedule
- **Milling**
  - Maximise return on capital
  - Sugar recovery
  - Efficiency / utilisation
  - Training
  - Season length
- **Products**
  - Maximise crop value
  - Co-generation
  - Fibre/ trash
  - Knowledge
  - Industry ownership
  - Milling Innovation
  - Energy costs
  - Milling Innovation
  - Co-generation
  - Fibre/ trash
  - Knowledge
  - Industry ownership
  - Product Innovation

Drivers

- **Farming**
  - Economic viability
  - Varieties
  - Efficiency
  - Environmental responsibility
  - Farming practices
  - Biosecurity
- **Harvesting**
  - Minimise losses
  - Harvesting practices
  - Harvest Equipment
  - Commercial arrangement
  - Harvesting schedule
- **Milling**
  - Maximise return on capital
  - Sugar recovery
  - Efficiency / utilisation
  - Training
  - Season length
- **Products**
  - Maximise crop value
  - Co-generation
  - Fibre/ trash
  - Knowledge
  - Industry ownership
  - Product Innovation

Enablers

- **Strategic Basic Research**
  - Adoption
  - Capability
  - Collaboration

**KFAs**

- Optimally adjusted varieties, plant breeding and release
- Soil health and nutrient management
- Pest, disease and weed management
- Farming systems and production management
- Milling efficiency and technology
- Product diversification and value addition
- Knowledge and technology transfer
- Capability development attraction & retention

**Key**

- Productivity
- Profitability
- Environmental & social sustainability
- People
The groups had the opportunity to discuss the priority areas facing the industry and regions in each step of the value chain. The diagram below summarises the outcomes from all regional consultation forums.

**Executive summary**

**Industry value chain: priority areas**

The diagram below summarises the outcomes from all regional consultation forums.

### Value Chain

#### Farming: Economic viability
- **Soil health**: 9
- **Varieties**: 8
- **Farming practices**: 7
- **Efficiency - water/energy**: 4
- **Biosecurity**: 3
- **Farming innovation**: 2
- **Environmental responsibility**: 1

#### Harvesting: Minimise losses
- **Harvest losses**: 7
- **Harvesting innovation**: 7
- **Harvesting practices**: 7
- **Harvest equipment**: 3
- **Commercial arrangement**: 3
- **Transport systems**: 3
- **Harvest schedule**: 2

#### Milling: Maximise return on capital
- **Milling innovation**: 8
- **Efficiency / utilisation**: 7
- **Season length**: 7
- **Sugar recovery / cane quality**: 7
- **Co-generation**: 2
- **Industry ownership**: 2
- **Knowledge / Training**: 2
- **Fibre / trash**: 1

#### Products: Maximise crop value
- **Product diversity**: 6
- **Whole plant use**: 6
- **Product economics**: 6
- **Plant knowledge**: 4
- **Product innovation**: 3
- **Bioproducts**: 2
- **Industry image**: 2
- **Develop markets**: 2
- **Support infrastructure**: 1

### Additional comments

- **Farming practices in particular related to environmental issues.**
- **Financial management / business skilling is a space that SRA could provide support (e.g. Agricultural Economist).**
- **Industry needs a step change in harvesting and not small incremental changes (Disruptive research).**
- **More harvesting loss research is needed to demonstrate where the opportunities are. This data underpins the changing of commercial arrangements.**
- **Industry needs to be able to influence harvest manufactures.**
- **The current payment system between growers and harvesters doesn’t drive efficiency and innovation.**
- **Separating trash from cane in field would be more efficient.**
- **Ensure harvest best practice program is still on track and growing for bigger participation.**
- **Season was too long in most of the regions.**
- **Mill efficiency/utilisation underpins the majority of the issues.**
- **SRA should be more involved in milling researches / innovation.**
- **Commercial arrangements between growers, harvesters and millers need to reviewed as in the future the mills will probably be doing many other products from the cane.**
- **Sugar recovery is directly linked to the cane quality.**
- **Benchmark of mill performance.**
- **Improve capability and training across the industry, in particular in milling.**
- **Growers have not been involved in any discussion about diversification.**
- **Whole plant compensation model should benefit both growers and millers.**
- **SRA should provide more information on the economic viability of alternative products from sugarcane.**
- **Products pre milling (alternative processing before mill).**
- **Opportunities to learn from other countries that make a better use of the plant.**
- **Industry image, in particular related to human nutrition and environmental issues.**
- **Other countries like Brazil have already made progress in GM technology.**

- **Climate variability responses. Regional response mapping depending on climate patterns (e.g. varieties, pests etc).**
- **Soil health, environment, farming equipment and practices shouldn’t be looked in isolation.**
- **Soil health researches should include marginal soil.**
- **Efficiency should be extended to all inputs, not only water and energy.**

- **Growers have not been involved in any discussion about diversification.**
- **Whole plant compensation model should benefit both growers and millers.**
- **SRA should provide more information on the economic viability of alternative products from sugarcane.**
- **Products pre milling (alternative processing before mill).**
- **Opportunities to learn from other countries that make a better use of the plant.**
- **Industry image, in particular related to human nutrition and environmental issues.**
- **Other countries like Brazil have already made progress in GM technology.**
Executive summary

KFA portfolio split

The chart below shows the proposed portfolio split based on industry feedback across the 8 KFAs compared to the current SRA budget. Although the industry feedback indicates a significantly reduced amount allocated to varieties, it is still the number one priority. However, the industry would like to see increased investments in areas such as soil health, farming systems, milling efficiency, product diversification and capability development.
The bubble chart below shows the number of times a specific dollar amount was allocated to each KFA. In general the participants allocated higher amounts for the first 4 KFAs and lower amounts for the last 4. There were also cases where some of the participants allocated all $100 in one particular KFA.
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<th>Executive summary</th>
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<tbody>
<tr>
<td>2</td>
<td>Regional outcomes</td>
</tr>
<tr>
<td>2.1</td>
<td>Northern region - Gordonvale</td>
</tr>
<tr>
<td>2.2</td>
<td>Northern region - Tully</td>
</tr>
<tr>
<td>2.3</td>
<td>Herbert region - Ingham</td>
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</tr>
<tr>
<td>2.6</td>
<td>Central region ï Mackay (Invited Only)</td>
</tr>
<tr>
<td>2.7</td>
<td>Burdekin region - Ayr</td>
</tr>
<tr>
<td>2.8</td>
<td>Burdekin region ï Ayr (Invited Only)</td>
</tr>
<tr>
<td>2.9</td>
<td>Southern region - Bundaberg</td>
</tr>
</tbody>
</table>
Northern region - Gordonvale

Gordonvale Forum

Forum date: 30\textsuperscript{th} January 2017

Attendance:
- 27 growers
- 3 millers
- 7 SRA local staff
## Northern region - Gordonvale

### Summary of Gordonvale forum

<table>
<thead>
<tr>
<th>Low / static CCS</th>
<th>Outcome focused</th>
</tr>
</thead>
</table>
| ▪ Low CCS especially in Mossman and Tablelands.  
▪ Variety selection should have more emphasis on CCS. | ▪ Growers want to see the benefits in dollars per hectare.  
▪ Harvesting and levy costs should be taken into considerations for new varieties.  
▪ Approach of breeding should be focused on profitability not just productivity. |

<table>
<thead>
<tr>
<th>Season length</th>
<th>Product diversification</th>
</tr>
</thead>
</table>
| ▪ Non optimised maturity level of the crops due to early harvest.  
▪ There is no excess capacity in the milling sector.  
▪ Mulgrave had a late finish in 2016. | ▪ Whole plant compensation model should benefit both growers and millers.  
▪ The group agreed that the industry can only rely on sugar in the long term. |

<table>
<thead>
<tr>
<th>Knowledge &amp; Capability</th>
<th>Pest and disease</th>
</tr>
</thead>
</table>
| ▪ There is no succession planning for researchers and technicians across the industry (e.g. mill technologists / engineers in Mulgrave mill).  
▪ Lack of expertise in productivity service organisations. | ▪ The region is currently facing problems with rats and pigs.  
▪ Industry is not facing the issue about rats and pigs.  
▪ YCS was not a key theme across all participants. |

<table>
<thead>
<tr>
<th>Environmental concerns</th>
<th>NIR technology</th>
</tr>
</thead>
</table>
| ▪ Social license to operate.  
▪ SRA should be more involved in reef issues / social license to operate / chemistry.  
▪ The pressure to grow the same tonnes on less nitrogen quickly and still be productive and profitable. | ▪ SRA should get more involved in NIR technology.  
▪ SRA’s constitution should not block NIR development if it is needed. |

<table>
<thead>
<tr>
<th>Feedback to SRA</th>
<th></th>
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</thead>
</table>
| ▪ SRA needs to engage more with growers and improve the communication approach.  
▪ SRA needs to make sure they are supporting the industry in the long term (e.g. succession planning).  
▪ SRA should plan for contingency spending and communicate this to industry.  
▪ Members would like to see a draft of the Strategic Plan before finalised. |
### Initial thoughts

#### Northern region - Gordonvale

<table>
<thead>
<tr>
<th>2016 season:</th>
<th>2017 projection:</th>
<th>Challenges &amp; Opportunities:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Low CCS.</td>
<td>- Growers productivity will be impacted by current milling structure. There is no excess capacity in the milling sector.</td>
<td>- Low / static CCS.</td>
</tr>
<tr>
<td></td>
<td>- Too much rain.</td>
<td>- Social license to operate.</td>
</tr>
<tr>
<td></td>
<td>- Long season (from May to Dec).</td>
<td>- Improve collaboration with other regions and industries that have improved soil health (e.g. South Australia and horticulture).</td>
</tr>
<tr>
<td></td>
<td>- Questionable mill performance.</td>
<td>- NIR technology.</td>
</tr>
<tr>
<td></td>
<td>- Issues with rats and pigs.</td>
<td>- Benefits to be measured in dollars per hectare.</td>
</tr>
<tr>
<td></td>
<td>- Harvesting equity (scheduling - transport / location).</td>
<td>- Region needs better extension and more one on one contact.</td>
</tr>
<tr>
<td></td>
<td>- Environmental issues with water allocation.</td>
<td>- Varieties need to be developed according to SIX EASY STEPS® guidelines and then communicated better, including dollar/hectare and net cost advice.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Research seed planting technology (e.g Brazil).</td>
</tr>
</tbody>
</table>
Feedback on regional snapshot

Northern region - Gordonvale

Feedback:
- Low / static CCS was a common theme across the participants and should be considered under the challenges for the region.
- Succession planning should include SRA staff / researchers, technicians and other industry experts.
- SRA needs to improve the communication and engagement with growers (e.g. partnership model with Productivity Boards).
- Outcome to be measured in dollars per hectare.
- Generation handover should consider issues with subdividing land.
- New technologies to consider not only farm operations, but also harvesting and milling.
- Pest and disease should be considered under factors constraining productivity, in particular rats and pigs.
- Region needs a simple / user friendly fertiliser calculator app.

Thoughts about the future of our industry (based on feedback from our regional delegates):
- Ability to maintain the social license
- New chemistry for pesticides and new biocide/nature-based chemistry
- Water availability and electricity costs
- Expansion of residential areas
- Growers moving into alternative crops as rotations and as replacement crops
- Controlled areas

How will these changes impact our businesses?
- We will need...
  - To improve environmental stewardship through programs such as SIR EASY STEPS™ to maintain the social license
  - Efficient, cheaper and more rapid planting technology
  - Considerable investment to help improve farming systems and restructure/enlarge businesses
  - To improve coordination between SRA and regional productivity organisations

Feedback / advice for SRA:
1. Adoption Officers should have regular contact with productivity services organisations
2. SRA can’t be held responsible for fixing all industry challenges
3. Focus on regional requirements
4. Seek and act on delegate feedback

Practice change over the past 2 years:
- Fertiliser application or regime: 56%
- Efficient use of chemicals: 44%
- GPS and/or matched wheel spacing: 100%
- Reduced tillage: 100%
- New species/crop rotation: 100%
- Equipment or machinery upgrades: 100%
- New varieties: 99%
- Improved soil health: 89%

Current opportunities and challenges:
1. Driving yield
   - Operational through improved soil health and cropping practices
2. Improving collaboration & demonstration
   - Establishing collaborations with regional productivity organisations to deliver more effective programmes/interventions
3. Understanding & managing costs
   - Economic fundamentals - understanding and comparing costs/returns

Here in the Northern region

Our sugarcane production in 2016
- Regional strengths: Moderate level of adoption in modern farming practices
- Factors constraining productivity: Based on grower survey 2015 - % respondents per factor:
  - Poor soil health (39%)
  - Inadequate fertiliser (39%)
  - Harvesting practices (33%)
  - Irrigation issues (9%)
  - Environmental, regulatory (9%)
  - Off-PI (7%)

<table>
<thead>
<tr>
<th>Factors</th>
<th>50%</th>
<th>35%</th>
<th>25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variety</td>
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<td>Climate</td>
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<td>Costs</td>
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</table>

Our practice change by type (Survey summary 2018):
- Practice change in practice
- Practices changed in practice
## Northern region - Gordonvale

### Priority areas - value chain

<table>
<thead>
<tr>
<th>Priority #01</th>
<th>Priority #02</th>
<th>Priority #03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming</td>
<td>Harvesting</td>
<td>Milling</td>
</tr>
<tr>
<td>Varieties</td>
<td>Harvesting Innovation</td>
<td>Efficiency / utilisation</td>
</tr>
<tr>
<td>Environmental responsibility</td>
<td>Harvesting practices</td>
<td>Season length</td>
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<tr>
<td>Harvesting practices</td>
<td>Harvesting losses</td>
<td>Miling innovation</td>
</tr>
<tr>
<td>Soil health</td>
<td>Harvest losses</td>
<td>Co-generation</td>
</tr>
</tbody>
</table>

### Additional comments:
- Climate / weather and pest & disease should be added under the farming value drivers.
- New varieties that improve CCS.
- Harvesters don't listen to SRA.
- Harvesting is old technology (dinosaur). Industry needs a revolution in harvesting practices.
- Questions on SRA interaction with CASE / JOHN DEERE.
- Transport efficiency should also be considered under the milling efficiency / utilisation value driver.
- SRA should be more involved in milling innovation.
- Growers have not been involved in any discussion about diversification.
- SRA should provide more information on the economic viability of alternative products from sugarcane.
- Developing marketing is also an issue for diversification.
Key take away messages

- KFA 1 has significantly dropped compared to existing budget allocation.
- KFA 2 has doubled compared to existing budget allocation.
- KFA 8 has significantly increased compared to existing budget allocation.
- A total of 4 credit cards allocated in KFAs 2, 3, 4 and 7.
Northern region - Tully

Tully Forum

Forum date: 31\textsuperscript{th} January 2017

Attendance:
- 6 growers
- 3 millers
- 5 productivity services
- 2 private consultants / researchers
- 4 SRA local staff
## Summary of Tully forum

<table>
<thead>
<tr>
<th>Category</th>
<th>Notes</th>
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<tbody>
<tr>
<td><strong>Climate</strong></td>
<td>- Climate is considered a bigger productivity constraint compared to varieties.</td>
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</tbody>
</table>
| **Pest and disease**      | - The region is currently facing problems with rats, pigs and pachymetra.  
- YCS was not a key theme across all participants.                                 |
| **Knowledge & Capability**| - Succession planning needs to consider SRA and other industry experts.  
- SRA staff need on-field experience.  
- SRA needs to support the industry to build the skills and capability (e.g. traineeships).  
- Set up a mentoring network between industry and new SRA adoption staff.        |
| **Environmental concerns**| - Social license to operate.  
- Investment in farming practices should focus on environmental issues related to the reef. |
| **Productivity**          | - Low / static CCS.  
- The region needs late sugar maturing cane to support the long season.  
- Growers want to see the benefits in dollars per hectare.                        |
| **Harvesting**            | - Current harvesting practices and commercial arrangements are driving productivity losses.  
- Other countries like Brazil have better harvest technology.  
- Improve participation in SRA harvest program.                                   |
| **New technologies**      | - New technologies need more emphasis (e.g. weed sensing technology and variable rate technology).  
- GPS soil profiling to support harvesting calibration and control (e.g. Brazil). |
| **Product diversification**| - Revenue model should benefit both growers and millers.  
- Concerns about developing marketing for new products.                           |
| **Feedback to SRA**       | - Involve industry in research journey, instead of handing over final results (e.g. research trial open days).  
- SRA researchers should have dedicated time allocation to industry interaction (Researchers are constrained by funding cycle).  
- SRA is becoming isolated and needs more time with growers.                    |
## Initial thoughts

### Northern region - Tully

### 2016 season:
- Good weather, crop, productivity and price.
- Low CCS.
- Long season.
- Later plant for 2017 due to wet winter.
- Higher bin weights.
- Issues with rats and pigs.
- Issues with pachymetra.

### 2017 projection:
- Low yield.
- Flooding.
- Early / heavy flowering.
- Long season and potentially standover cane.
- Later plant.

### Challenges & Opportunities:
- Communicate weather forecast changes during season (seems that they will have a similar season as 2010).
- Manage and communicate new varieties regionally.
- Improve alignment of process through the chain.
- Improve harvesting performance and control over operators.
- Improve participation in SRA harvest program.
- Queensland election may impact on the reef discussion.
- Improve engagement and communication between SRA and grower, in particular researchers contact with growers.
Feedback on regional snapshot

Feedback:

- Climate is even bigger productivity constraint than varieties ("Too much rain in the region").
- More interest from the region in fallow crops to supplement income.
- Low / static CCS was a common theme across the participants.
- Outcome to be measured in dollars per hectare.
- Pest and disease should be considered under factors constraining productivity, in particular rats, pigs and pachymetra.
- Succession planning should include SRA and other industry experts.
- SRA needs to improve communication and engagement with growers and focus more regionally.
- Growers want to have more interaction with SRA board.

Thoughts about the future of our industry (based on feedback from our regional delegates):

- Ability to maintain the social license
- Generational handover, succession planning and attraction of young farmers
- Adoption of new technology in farm operations
- Control of pests and storage

- New chemistry for pesticides and new biosecurity threats
- Water availability and electricity costs
- Expansion of residential areas
- Growers moving into alternative crops as rotations and as replacement crops

How will these changes impact our businesses?

We will need...
- To improve environmental stewardship through programs such as SIR EASY STEPS™ to maintain the social license
- Efficient, cheaper and more rapid planting technology
- Considerable investment to help improve farming systems and restructure/enlarge businesses
- To improve coordination between SRA and regional productivity organisations

Feedback / advice for SRA

1. Adoption Officers should have regular contact with productivity services organisations
2. SRA can’t be held responsible for fixing all industry challenges
3. Focus on regional requirements
4. Seek and act on delegate feedback
## Priority areas - value chain

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<tr>
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<tr>
<td><strong>Farming</strong></td>
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<tr>
<td>▪ Farming practices</td>
<td>▪ Harvesting practices</td>
<td>▪ Cane quality</td>
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<td><strong>Products</strong></td>
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<td>▪ Whole plant use</td>
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<tr>
<td>▪ Harvesting losses</td>
<td>▪ Milling innovation</td>
<td>▪ Product economics</td>
</tr>
<tr>
<td><strong>Soil health</strong></td>
<td><strong>Milling</strong></td>
<td><strong>Co-generation</strong></td>
</tr>
<tr>
<td>▪ Harvesting equipment</td>
<td>▪ Co-generation</td>
<td>▪ Develop markets</td>
</tr>
</tbody>
</table>

### Additional comments:
- Variety and biosecurity are given.
- Farming practices in particular related to environmental issues.
- Efficiency should be extended to all inputs, not only water and energy.
- Commercial arrangement between growers and harvesters is an issue, but it is recognised that it is not SRA’s role.
- Whole plant compensation model should benefit both growers and millers.
- SRA should provide more information on the economic viability of alternative products from sugarcane.
- Opportunities to learn from other countries that make a better use of the plant.
Northern region - Tully

Portfolio split of $100

Key take away messages

- KFA 1 has significantly dropped compared to existing budget allocation.
- KFA 2 has significantly increased compared to existing budget allocation.
- KFA 8 has significantly increased compared to existing budget allocation.
- One credit card allocated on KFA 6 for investment on co-operation across sectors.
Herbert region - Ingham

Ingham Forum

Forum date: 1st February 2017

Attendance:
- 19 growers
- 5 productivity services
- 1 other Natural Resource Management
- 4 SRA local staff
- 1 Miller
# Summary of Ingham forum

## Herbert region - Ingham

### Low / static CCS
- Good productivity, but low CCS.
- Region needs early CCS varieties.

### Varieties
- SRA should recall varieties if not performing in field and communicate to growers.
- New varieties performing poorly comparing to old ones.
- Region needs ratoonability in cane varieties in dry conditions.

### Harvesting
- Current harvesting practices and commercial arrangements are driving productivity losses.
- Ensure harvest best practice program is still on track and growing for bigger participation.
- Improve quality of the product arriving at the mill.

### Milling
- Mill infrastructure needs improvement.
- Season length is too long, affecting next season’s crop.
- Benchmark of mill performance.
- Concerns about bin weights.

### Pest and disease
- The region is currently facing problems with rats and pachymetra.
- SRA needs to investigate rat baiting.
- YCS is still affecting the area even though symptoms are not seen.

### New technologies
- NIR technology needed to measure cane quality and provide feedback to growers.
- Growers need to be educated in new technology.
- Growers need more resilient farming systems to handle diverse conditions (e.g. climate).

### Environmental concerns
- Environmental issues regarding nitrogen and pesticides need to be better understood.
- Regulations from government will have a greater impact on the industry.

### Product diversification
- Revenue model should benefit both growers and millers.

### Feedback to SRA
- SRA delegates should be a conduit of regional issues to board.
- SRA delegates should have more regional tours.
- SRA need a platform for growers to provide direct feedback to SRA.
- Replication trials are too small and not in the right place.
## Initial thoughts

### 2016 season:
- Good productivity, but low CCS.
- High price.
- New varieties performing poorly comparing to old ones.
- Current variety is too "skinny" and fall out from the bin.
- Seen improvements in plant breeding.
- Long season.
- Mill capacity and condition impacted cane crushing.
- Higher bin weights.
- Issues with rats and pachymetra.
- YCS was camouflaged last year because of the rain, but it is still an issue in the region.

### 2017 projection:
- There is no contract in place for 2017 season.
- Continue to see improvements in plant breeding program.
- Improve quality of the product arriving at the mill.
- Too much extraneous matter ("rubbish") in the bins. It could potentially reduce the season length if less extraneous matter in the bins.
- NIR technology needed to measure cane quality and provide feedback to growers.

### Challenges & Opportunities:
- Industry needs to look to the whole value chain.
- Ensure harvest best practice program is still on track and growing for bigger participation.
- Improve harvesting performance and control over operators.
- Review harvesting payment system.
- Benchmark of mill performance.
- SRA should recall varieties if not performing in field and communicate to growers.
- Environmental issues regarding nitrogen and pesticides need to be better understood.
- Growers need more resilient farming systems to handle diverse conditions (e.g. climate).
Feedback on regional snapshot

Herbert region - Ingham

Feedback:

- Low / static CCS was a common theme across the participants.
- Higher production cost in Australia than in other countries, for both farming and milling.
- Adopt new technology to remain profitable and competitive. Growers need to be educated in new technology.
- Aging grower population with younger growers unable to buy land (unable to subdivide land).
- Outcome to be measured in dollars per hectare.
- Herbert region doesn’t have early CCS variety.
- Interest from the region in supplement income (more rotational cropping).
- Regulations from government will play a greater role.
- SRA needs strong relations with productivity services.
- SRA needs to be more strategic about adoption officers placement.

Here in the Herbert region

- Our sugarcane production in 2016
- Regional strengths
  - Relatively high level of adoption of modern farming practices
- Factors constraining productivity
  - Varieties
  - YCS
  - Other factors
    - Poor soil quality (21%)
    - Crop failures (16%)
    - Inadequate harvesting (13%)
    - Changing practices (12%)
    - Irrigation issues (10%)

Current opportunities and challenges

1. Driving yield
   - Opportunities through improved soil health and irrigation practices
2. Improving collaboration & demonstration
   - More regional demonstration sites closer to new growers
3. Understanding & managing costs
   - Changes in sugar price and policy influences farm income.

Thoughts about the future of our industry

What’s likely to change in the next 5-10 years?

- Size of farms will change (‘growers getting larger to remain profitable’)
- Smaller growers will end up contracting farm work or leasing
- Size of harvesting groups will increase

How will these changes impact our businesses?

- We will need...
  - Considerable investment to help improve farming systems and restructure/expand businesses
  - Efficient, cheaper and more rapid planting technology
  - Business focus (‘growers treating farming as a livelihood and not as a business’)
  - Changes to farming systems to further improve soil health and productivity

Our practice change over the past 2 years

- Fertiliser application or megro-
- Reduced tillage
- GPS and/or matched wheel spacing
- Efficient use of chemicals
- Mould board
- Improved soil health
- Equipment or machinery upgrades
- Row spacing
- Crop rotation
- New varieties

Feedback / advice for SRA

1. Delegates need to be more actively involved i.e. used as a sounding board for regional issues / SRA farm advice.
2. Every two months SRA delegate tour of farm and regional trials.
3. Seek and act on delegate feedback

Practical change types (Survey 2018)

- Changed Practice: 72%
- No change in practice: 28%
**Herbert region - Ingham**

**Priority areas - value chain**

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<tr>
<td>Varieties</td>
<td>Commercial arrangement</td>
<td>Season length</td>
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<td>Efficiency / utilisation</td>
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<th><strong>Milling practices</strong></th>
<th><strong>Whole plant use</strong></th>
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<td>Whole plant use</td>
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<td>Transport systems</td>
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<td></td>
<td></td>
<td>Whole plant use</td>
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</table>

**Additional comments:**
- Pest and disease should also be included under farming.
- More harvesting loss research is needed to demonstrate where the problems are. This data underpins the changing of commercial arrangements.
- Mill efficiency/utilisation underpins the majority of the issues.
- Environmental responsibility should be considered in both farming and milling.
- Relationship between growers and millers is an issue, but the group understands that is not under SRA's responsibility.
- YCS is a proof that the industry still doesn't know enough about the plant.
- Whole plant compensation model should benefit both growers and millers.
- Include "Building products" to Product value drivers.
Herbert region - Ingham

Portfolio split of $100

Key take away messages

- KFA 1 has dropped compared to existing budget allocation.
- KFA 4 and 8 have significantly increased compared to existing budget allocation.
- KFA 7 has significantly decreased compared to existing budget allocation.
- One credit card of $10 allocated on KFA 6.
NSW region

NSW Forum

Forum date: 3rd February 2017

Attendance:
- 16 growers
- 11 millers
- 3 SRA local staff
## Summary of NSW forum

### Extension model
- Current extension model is not working. There is no clear role for adoption officers.
- New extension model should integrate extension with research.
- Network between sugarcane regions has been lost.

### Constitutional
- Constitution needs capacity to commercialise.
- Concerns were raised about IP with current constitution.

### Harvesting
- SRA needs relationship with harvesters manufactures to influence market.
- Step change needed in harvesting and not small incremental changes (Disruptive research).

### Milling
- Milling technology needs more emphasis.
- SRA needs dedicated milling research, researchers and adoption officers.

### Knowledge & Capability
- Improve capability and training across the industry, in particular in milling.
- Succession planning is not only an issue for farmers, but for the whole industry and SRA.
- Financial management / business skilling is a space that SRA could provide support (e.g. Agricultural Economist).

### Product diversification
- SRA should increase focus and investment on product diversification.
- Industry needs to move to a more diverse portfolio.
- Consider uses of fibre and trash as a viable diversification product in the mills.

### Feedback to SRA
- The region needs more contact with SRA board and management (disappointment about not having any directors present).
- SRA to improve engagement and communication with members.
- Region is very concerned about current extension model.
- SRA to provide more clarification on SRA IP’s stance (open access to research vs commercial optimisation from IP).
**Initial thoughts**

<table>
<thead>
<tr>
<th><strong>2016 season:</strong></th>
<th><strong>2017 projection:</strong></th>
<th><strong>Challenges &amp; Opportunities:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Good planting season, successful / profitable.</td>
<td>- Hope for repeat of 2016.</td>
<td>- Current extension model is not working. There is no clear role for adoption officers.</td>
</tr>
<tr>
<td>- Good CCS.</td>
<td>- Not enough in 2017 so far.</td>
<td>- New extension model should integrate extension with research.</td>
</tr>
<tr>
<td>- No frost.</td>
<td>- Crop promising / Good establishment.</td>
<td>- Network between sugarcane regions has been lost.</td>
</tr>
<tr>
<td>- Varieties were considered satisfactory in NSW.</td>
<td>- Wet harvest in 2015 is effecting 2017 season.</td>
<td>- Competition for land with other crops (e.g. macadamia).</td>
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<tr>
<td>- Refinery operations (sugar recovery) were good, but challenged with market issues from Wilmar.</td>
<td>- Good sugar price forecast.</td>
<td>- Constitution needs capacity to commercialise.</td>
</tr>
<tr>
<td>- Technology required to reduce production cost.</td>
<td>- Mills are looking at diversification options.</td>
<td>- Concerns were raised about IP with current constitution.</td>
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<td>- Improve capability and training across the industry, in particular in milling.</td>
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<td>- Lack of feedback about weed control for NSW region.</td>
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</tbody>
</table>
Feedback on regional snapshot

Here in the New South Wales region

Our sugarcane production in 2016

- Regional strengths: Production has increased over the past 5 years
- Factors constraining productivity: (based on grower survey) - NSW - No respondents

Current opportunities and challenges

1. Making the right change
   - Growers investing in new technologies and new farming systems may see a return
   - Agribusiness industry in a sustainable environment

2. Improving collaboration & demonstration
   - More networking between the industry and other stakeholders
   - More plant adaptation and use in collaboration

3. Understanding costs
   - Cost of equipment and other investments

Thoughts about the future of our industry (based on feedback from our regional delegates)

What’s likely to change in the next 5-10 years?

- More pressure from alternative crops (e.g., macadamia)
- Succession planning and attraction of young farmers
- Residential development and lifestyle leading to loss of sugarcane country
- Increasing community and regulatory pressure

How will these changes impact our businesses?

We will need:

- To demonstrate strong leadership on environmental issues
- Multi-purpose cane varieties (‘efficient screening / disease resistance / milling properties’)
- Extension training and support of advisory sector’s succession plan (next generation advisors)
- Considerable investment to help improve farming systems
- More harvesting, milling, haulage engineering R&D

Feedback / advice for SRA

1. Support a more open, honest and transparent dialogue with members
2. District leaders (i.e., innovative growers) participation in R&D projects
3. More specific demonstration / research trials
4. Focus on regional requirements

Feedback:

- Outcome to be measured in dollars per hectare.
- Milling technology needs more emphasis.
- Succession planning is not only an issue for farmers, but for the whole industry and SRA.
- Development of capability in industry is missing.
- Age of growers is used as an excuse for not changing practices.
- Industry used to receive reports about technology from overseas.
- SRA needs relationship with harvesters manufacturers to influence market.
- Environmental pressures related to cane burning.
- SRA to review current adoption model.
- SRA needs dedicated milling research, researchers and adoption officers.
- SRA to provide more in field tours.
- SRA should increase focus and investment on product diversification.
**NSW region**

**Priority areas - value chain**

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<tr>
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<tr>
<td>Varieties</td>
<td>Soil health</td>
<td>Biosecurity</td>
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<tr>
<td>Farming</td>
<td>Harvesting</td>
<td>Harvesting</td>
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**Additional comments:**
- Good collaboration across value chain in NSW.
- Pest and disease should also be considered under biosecurity.
- Financial management and weed control were also mentioned as Farming priorities.
- Financial management / business skilling is a space that SRA could provide support (e.g. Agricultural Economist).
- Drainage is NSW issue under climate.
- Step change needed in harvesting and not small incremental changes (Disruptive research).
- Industry needs to be able to influence harvest manufactures.
- Separating trash from cane in field would be more efficient.
- Season length in NSW is related to harvesting, not as much to milling.
- Move fibre/trash from Milling to Products and use as a viable diversification product in the mills.
- Developing markets was also mentioned as a priority under Products.
NSW portfolio split of $100

- KFA 1: Optimally-adapted varieties, plant breeding and release
- KFA 2: Soil health and nutrient management
- KFA 3: Pest, disease and weed management
- KFA 4: Farming systems and production management
- KFA 5: Milling efficiency and technology
- KFA 6: Product diversification and value addition
- KFA 7: Knowledge and technology transfer
- KFA 8: Capability development, attraction and retention

**Key take away messages**

- NSW portfolio split is relatively balanced across all KFAs.
- KFA 1 has significantly dropped compared to existing budget allocation ($45).
- KFAs 5 and 6 have significantly increased compared to existing budget allocations.
- No credit cards were allocated.
Central region - Mackay

Mackay Forum

Forum date: 6th February 2017

Attendance:
- 15 growers
- 3 agri services (Wilmar)
- 2 delegates
- 3 government (DAF)
- 4 productivity services
- 6 SRA local staff
## Summary of Mackay forum

### Central region - Mackay

| Varieties | Shortage of new varieties for Central region.  
|           | SRA to focus on local varieties (e.g. to address pachymetra and smut).  
|           | Region needs ratoonability in cane varieties. |
| Harvesting | Harvesters need to work together with growers.  
|            | Currently there are losses due to harvesting practices (e.g. harvesting during wet periods).  
|            | SRA needs to provide more data and support extension on harvesting practices. |
| Pest & Diseases | Lower YCS symptoms, but it is still an issue in the region.  
|           | Spread of soldier fly / Cane grub control. |
| Feedback to SRA | The region needs more contact with SRA board and SRA board should have more growers.  
|            | SRA to improve engagement and communication with members.  
|            | Region is very concerned about current extension model and the link between SRA and Productivity Services. |
| Extension model | Current extension model is not working. There is no clear role and responsibilities for SRA and Productivity Services. |
| Milling | Standover cane due to milling performance (‘Evidence that the mill can handle 5.8-6 MTf’).  
|           | Improve return to growers with current structure. |
| Product diversification | Whole plant compensation model should benefit both growers and millers.  
|                          | Industry image, in particular the nutrition debate.  
|                          | Sugar from sugarcane seems to be more "natural" than the one from beets as it is not genetic modified. |
### Central region - Mackay

**Initial thoughts**

#### 2016 season:
- Ideal conditions and varieties performed well under these conditions.
- Lower YCS symptoms, but it is still an issue in the region.
- Standover cane due to milling performance (Evidence that the mill cannot handle 5.8-6 MT).  
- Poor harvesting conditions.

#### 2017 projection:
- Crop growing well despite late finish.
- Weed pressure in late cuts.
- Better mill performance / reliability.
- Important to keep grower motivation and enthusiasm up to ensure continued good management of crop.
- Lack of new varieties for Central region. SRA to focus on local varieties (e.g. to address pachymetra and smut).

#### Challenges & Opportunities:
- Structural yield decline (#01 economic impediment).
- Region needs ratoonability in cane varieties.
- Spread of soldier fly / Cane grub control.
- Soil health (Something in there holding productivity back).
- Reduction of MAPS levy.
- Current extension model is not working. There is no clear role for adoption officers.
- Improve accuracy and communication of weather forecast (+- 2 weeks).
- Growers don’t see SRA anymore on the ground and they want one on one extension.
- Disconnection between SRA and Productivity Services.
Feedback on regional snapshot

Central region - Mackay

Our sugarcane production in 2016

Feedback:

- SRA to focus on local varieties.
- SRA to review current adoption model.
Central region - Mackay

Priority areas - value chain

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<td>Biosecurity</td>
<td>Harvest schedule</td>
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<td>Product economics</td>
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Additional comments:
- Pest and disease should also be considered under biosecurity, in particular smut resistant varieties.
- There is a link between soil health, environmental responsibilities and farming practices and the group suggested to combine them as one area.
- Traffic management, including weight/measurement on farm, trucks and bins.
- Industry integration should be another value driver under milling.
- Harvesters need to work together with growers. Currently there are losses due to harvesting practices (e.g. harvesting during wet periods).
- SRA needs to provide more data and support extension on harvesting practices.
- There were questions on how the milling can improve the return to growers with current structure.
- Whole plant compensation model should benefit both growers and millers.
- Industry image, in particular the nutrition debate.
- Sugar from sugarcane seems to be more "natural" than the one from beets as it is not genetic modified.

* The group also suggested how SRA should prioritise their activities across the value chain. This is represented by the percentages under each step of the value chain.
Central region - Mackay

Portfolio split of $100

<table>
<thead>
<tr>
<th>KFA 1: Optimally-adapted varieties, plant breeding and release</th>
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Key take away messages

- Main changes were in KFAs 1, 2 and 3.
- KFA 1 has significantly dropped compared to existing budget allocation.
- KFAs 2 and 3 have significantly increased compared to existing budget allocations.
- No credit cards were allocated.
Central region ï Mackay (Invited Only)

Mackay (Invited Only) Forum

Forum date: 6th February 2017

Attendance:
- 5 growers
- 1 delegate
- 1 government (DAF)
- 5 productivity services
- 3 SRA local staff
# Summary of Mackay forum

## Central region

### Varieties
- Shortage of new varieties for Central region.
- SRA to focus on local varieties.
- Growers and millers levy payers should have the same say/weight in decision making (e.g. variety selection).

### Harvesting
- SRA to support the application of Best Practice Harvesting manual.
- SRA needs to support extension of harvesting practices.
- Increase use of automation (e.g. tracking for trucks and weights).

### YCS
- YCS went down in Central, but up in Plane Creek.
- Questions were raised about the impact of YCS in CCS?

### Extension model
- Clear guidelines regarding roles and responsibilities for SRA and Prod. Services.
- SRA to address duplication of roles and remove gaps.
- Importance of Prod. Services to prove concept / demonstrate results.

### Milling
- Unresolved milling issues in both Mackay and Plane Creek.
- There is no more milling research in the region. SRA should address this area.

### Product diversification
- SRA is currently not looking to human nutrition, but the group understand that this is more a market issue rather than research.
- Concerns were raised regarding GM technology as other countries like Brazil have already made progress in this area.

### Feedback to SRA
- SRA to provide a preliminary / simplified version of the strategic plan to the members.
- Region is very concerned about current extension model and the link between SRA and Productivity Services.
- SRA has lots of good ideas, but can’t seem to sell them to farms. SRA needs to convince the growers.
**2016 season:**
- Unresolved milling issues in both Mackay and Plane Creek.
- YCS went down in Central, but up in Plane Creek.
- How much is YCS affecting CCS?
- Low CCS and recoverable sugar.
- Season was too long.
- Wet weather.
- Good price, but growers need a good crop to take advantage.
- Early purity in irrigated areas, but opposite in dryland.

**2017 projection:**
- SIX EASY STEPS® in Plane Creek.
- Resolve milling issues. Complete crush without standover.
- Shortage of good varieties in the region. Release new varieties for the region.
- Focus on farm management (e.g. "primitive" irrigation setup).
- Maintain high sugar price.
- Improved CCS.
- There is no supply contract in place for Plane Creek.
- Improve cost of inputs.

**Challenges & Opportunities:**
- Improve accuracy and communication of weather forecast.
- High turnover of SRA staff / variety officers.
- Growers and millers levy payers should have the same say/weight in decision making (e.g. variety selection).
- Improve extension model.
- SRA to support the application of harvesting manual.
- Many smaller farms don’t have investment capability to make change.
- Clear guidelines regarding roles and responsibilities for SRA and Productivity Services.
- RSD test needs to be more efficient.
- Environmental and social requirements.
- Whole use of plant.
Feedback on regional snapshot

Central region – Mackay (Invited Only)

Feedback:

- Change ñinadequate fertiliser to efficient fertiliser in factors constraining production.
- Milling performance and season length should also be considered under factors constraining productivity.
- Growers agreed that it is easier to blame varieties even though the issue is in other areas (e.g. farming practice and soil health).
- Region needs more relevant trials to prove concept.
- Outcome to be measured in dollars per hectare.
- Growers need availability of resources to change.
- Increased use of automation (e.g. tracking for trucks and weights).

Feedback / advice for SRA

1. Allocation of research funding needs increased focus on outcomes
2. SRA needs to work with mills and industry groups to recruit more members
3. Continued extension to improve adoption of harvest best practices to minimise losses
4. Greater support is required through the process of SMARTcane/ Bonuacro accreditation

Thoughts about the future of our industry (based on feedback from our regional delegates)

- Broader adoption of best management practice systems
- Continued decline in soil health ('100 years of farming the same ground has an effect')
- Adoption of new technology to manage all aspects of the value chain

How will these changes impact our businesses?

- We will need...
  - To demonstrate strong leadership on environmental issues
  - Changes in skill sets for mill employees, growers and advisors
  - To improve coordination across the industry ('working together as an industry')
  - Changes to farming systems to further improve soil health and productivity
  - Efficient, cheaper and more rapid planting technology

Practice change over the past 2 years

- Fertiliser application or in-row
- Reduced staking
- Improved soil health
- Precise use of chemicals
- GPS and/or matched wheel spacing
- Row spacing
- Crop rotation
- Equipment or machinery upgrades
- Adopted precision agriculture
- New varieties

Practice change type (Summer Survey 2016)

Current opportunities and challenges

1. Technology: maximise efficiencies, reduce costs, improve soil health
2. Drying yield: opportunity through improved soil health and genetics assessment
3. Improving communication: better communication to drive adoption across all areas

Central sugarcane production in 2016

- Regional strengths
  - Moderate level of adoption in modern farming practices
  - Factors constraining productivity
    - Reduced staking: 41%
    - Improved soil health: 34%
    - Precise use of chemicals: 47%
    - GPS and matched wheel spacing: 56%
    - Row spacing: 64%
    - Crop rotation: 38%
    - Equipment or machinery upgrades: 39
    - Adopted precision agriculture: 47%
    - New varieties: 7%
### Central region – Mackay (Invited Only)

#### Priority areas - value chain

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<td>Knowledge</td>
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<td>Farming practices</td>
<td>Biosecurity</td>
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### Additional comments:
- Profitability has been affected by high costs of water and energy. Improving farming practices may help to reduce/optimise these costs.
- The term innovation is very broad and should be linked to specific issues (e.g. innovation on farming practices).
- Commercial arrangement between growers and harvesters is an issue. Harvesters productivity should be measured by quality instead of tonnes.
- There is no more milling research in the region.
- SRA should provide more information on the economic viability of alternative products.
- SRA is currently not looking to human nutrition, but the group understand that this is more a market issue rather than research.
- Concerns were raised regarding GM technology as other countries like Brazil have already made progress in this area.
- Although growers don’t need GM technology at the moment, SRA should continue to invest in this area.
Central region – Mackay (Invited Only)

Portfolio split of $100

$45

$23

$10 $15

$14 $16

$9 $12

$5 $12

$4 $8

$11 $10

$2 $4

KFA 1: Optimally-adapted varieties, plant breeding and release
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KFA 6: Product diversification and value addition
KFA 7: Knowledge and technology transfer
KFA 8: Capability development, attraction and retention

Key take away messages

- Mackay (Invited Only) portfolio split is relatively balanced across all KFAs.
- KFA 1 has significantly dropped compared to existing budget allocation.
- KFAs 2 and 5 have significantly increased compared to existing budget allocations.
- No credit cards were allocated.
Burdekin region ï Ayr

Ayr Forum

Forum date: 8th February 2017

Attendance:
- 9 growers
- 1 government (DAF)
- 1 productivity services
- 1 SRA local staff
## Summary of Ayr forum

| Varieties | SRA need to look at varieties that require less water.  
|           | High CCS varieties.  
|           | YCS was not a big issue, but SRA should continue research. |
| Harvesting | Harvest losses (e.g. speed, loss on road, overfilling of bins, delivery of bins).  
|           | Lack of maintenance on harvesting equipment.  
|           | Increase use of automation (e.g. speed regulator and GPS guidance).  
|           | Current payment system doesn’t drive efficiency and innovation. |
| Farming practices | Soil health, environment, farming equipment and practices shouldn’t be looked in isolation.  
|           | SRA to communicate in a way and in terms that growers can implement.  
|           | Climate variability responses. Regional response mapping depending on climate patterns (e.g. varieties, pests etc). |
| Extension model | Clear guidelines regarding roles and responsibilities for SRA and Prod. Services.  
|           | There are different levels of Prod. Services - 2 high functioning and 2 barely functioning. SRA to adjust approach accordingly.  
|           | More one on ones with growers. |
| Milling | Millers feel that they are not getting any benefit from SRA.  
|           | Issues with milling performance and maintenance.  
|           | Season was too long. |
| Product diversification | Investigate products pre milling (alternative processing before mill).  
|           | Endorse SRA focus on GM.  
|           | Most of product diversification researches are kept with Millers. |
| Feedback to SRA | SRA is still running a research company and not concerned about their members.  
|           | Region is very concerned about current extension model and the link between SRA and Productivity Services.  
|           | SRA needs to look at holistic approach across the value chain and impacts on the bottom line.  
<p>|           | SRA needs to improve communication. Too much e-mail and hearing the same information through different channels. |</p>
<table>
<thead>
<tr>
<th><strong>2016 season:</strong></th>
<th><strong>2017 projection:</strong></th>
<th><strong>Challenges &amp; Opportunities:</strong></th>
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</thead>
<tbody>
<tr>
<td>Low CCS, heavy crop and high rainfall.</td>
<td>SRA need to look at varieties that require less water.</td>
<td>Products pre milling (alternative processing before mill).</td>
</tr>
<tr>
<td>High fibre issue.</td>
<td>High CCS varieties.</td>
<td>Two crops in one year.</td>
</tr>
<tr>
<td>YCS was not a big issue, but SRA should continue research.</td>
<td>Concerns about crop given late harvest in 2016.</td>
<td>Endorse SRA focus on GM.</td>
</tr>
<tr>
<td>Perception that YCS has become a ‘lifestyle’ project.</td>
<td>High input costs — electricity, fuel, fertiliser etc.</td>
<td>SRA to communicate in a way and in terms that growers can implement. Need the ability to talk to the right people (one on one).</td>
</tr>
<tr>
<td>Harvest losses (e.g. speed, loss on road, overfilling of bins, delivery of bins).</td>
<td>More research on YCS. How much is it affecting yield?</td>
<td>Improve soil health.</td>
</tr>
<tr>
<td>Season was too long.</td>
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<td>High turnover in SRA staff.</td>
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<td>Environmental pressures.</td>
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<td>Adoption process is broken.</td>
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### Initial thoughts

**Burdekin region – Ayr**

<table>
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</table>
Feedback on regional snapshot

The global market

Sugar price (cents)
11 - 23c
Price variation in past 5 months (RCE)
G suite ergo.png.png

Emerging influences & opportunities

In Australia

Our sugarcane production in 2016

Factors constraining productivity (based on Grower Survey 2016: N=10 respondents)

Regional strengths
Relatively high level of adoption of modern farming practices

North: Tassie (22%)
South: Queensland (18%)
Western: Western Australia (26%)
Northern: Northern Territory (17%)

Highlights
Improved yields (60%)
Improved quality (58%)

Thoughts about the future of our industry (based on feedback from our regional delegates)

What's likely to change in the next 5-10 years?

- More efficient / economical farming systems
- Opportunities for more income through diverse products
- Reduced production area and number of growers
- Adoption of new technology in farm operations (e.g., NIR technology)

How will these changes impact our businesses?

- Reduced tillage
- Fertiliser application or input
- Efficient use of chemicals
- Crop rotation
- Improved soil health
- GPS and/or machine controlled irrigation
- Equipment or machinery upgrade
- New varieties
- Adapted precision agriculture

Our practice change over the past 2 years

78% Changed practice
22% No change in practice

Current: opportunities and challenges

1. Making the right changes
   - Need right mix of policy and research.
   - RCEs need more access to facts.

2. Driving yield
   - Variety development to increase economic gains, improving productivity and profitability.
   - Need to manage the value chain efficiently.

3. Understanding & managing costs
   - Farming paradigms are fixed and there is not significant change or improvement.

Feedback/advice for SRA

1. More interaction with delegates and other growers and millers
2. SRA needs transparency and soon as unbiased
3. There is actually some great work happening from SRA, but the message is not getting out to the industry
4. Focus on regional requirements (e.g., varieties)
### Priority areas - value chain

#### Priority #01
- Varieties
- Harvesting practices
- Harvest losses
- Sugar recovery (quality)
- Season length
- Develop markets

#### Priority #02
- Farming innovation
- Commercial arrangement
- Efficiency / utilisation
- Product innovation

#### Priority #03
- Farming practices
- Soil health
- Harvesting equipment
- Fibre / trash
- Industry ownership
- Industry image

### Additional comments:
- Soil health, environment, farming equipment and practices shouldn’t be looked in isolation.
- Lack of maintenance on harvesting equipment.
- The current payment system between growers and harvesters doesn’t drive efficiency and innovation.
- SRA should provide more data and information to support decision making on commercial arrangements with harvesters.
- Questions were raised regarding the ownership of the sugar (Growers or Millers).
- There was a suggestion to move Products to be before Milling as they don’t want to be dependent on the Mills for diversification.
- SRA should provide more information on the economic viability of alternative products.
- Most of product diversification researches are kept with Millers. SRA should support the industry to get the information across.
- SRA should support the discussion around human nutrition and environment.
Burdekin region – Ayr

Portfolio split of $100

Key take away messages

- Ayr portfolio split is relatively balanced across all KFAs.
- KFA 1 has significantly dropped compared to existing budget allocation.
- KFAs 2, 6 and 8 have significantly increased compared to existing budget allocations.
- Soil health to consider also climate.
- No credit cards were allocated.
Burdekin region ï Ayr (Invited Only)

Ayr (Invited Only) Forum

Forum date: 8\textsuperscript{th} February 2017

Attendance:
- 2 millers
- 1 government (DAF)
- 6 productivity services
- 1 private sector
- 1 SRA local staff
## Summary of Ayr forum

### Varieties
- Variety program is working well in the region (best post smut).
- SRA to provide data regarding varieties reaction when standover. Release of new varieties should consider standover trials.

### Farming practices
- SIX EASY STEPS needs to be calibrated to the region.
- Growers don’t have a good understanding of the cost structure / financial management.
- SRA to investigate new technologies to reduce cost (e.g. GPS system).

### Knowledge & Capability
- Risk of losing people to the mining sector.
- Succession planning is not done well in the region across all sectors of industry.
- SRA to work closely to education providers to build the capability in the industry.

### Extension model
- Research is only going to get any value if growers implement.
- Extension should be integrated to research.
- SRA needs to improve the relationship with Productivity Services.
- Local trials have not been done properly in the region.

### Industry image
- Questions were raised on how SRA can help the industry build their image and reputation.
- SRA should support the discussion around human nutrition and environment.

### Investment process
- SRA to provide more transparency on research investments and governance model.
- Investment and research shouldn’t be under SRA.

### Feedback to SRA
- SRA needs to improve the engagement and communication approach. It should be a 2 ways communication.
- Role clarity across different industry bodies, particularly extension.
- It used to be easier to access people from BSES and people still call SRA as BSES.
### Initial thoughts

#### 2016 season:
- Thank God is over!
- Wet weather.
- Good yield, but low CCS.
- Issues with mill performance.
- Loss of experience staff in milling.
- Improved irrigation schedule.
- Variety program is working well in the region (best post smut).
- Cane supply quality is driving losses across the value chain.
- Seeing changes in nutrient management (reduced N rates).
- Environmental issues were not too bad last year.
- If mining sector rump up again, there is a risk for the region to lose people. 200 jobs already advertised in the mining.

#### 2017 projection:
- Finish rationing on 14th October 2017.
- SRA to provide data regarding varieties reaction when standover. Release of new varieties should consider standover trials.
- New technologies to reduce cost (e.g. GPS system).
- Later ratoons could affect 2017 season.

#### Challenges & Opportunities:
- Resistance in SRA to look at new technologies and concepts outside of SRA.
- SIX EASY STEPS™ needs to be calibrated to the region instead of using the generic approach.
- Succession planning is not done well in the region.
- Local trials have not been done properly in the region (e.g. trials without speaking to adoption officer or senior industry officer).
- SRA is not communicating trial results (e.g. N trials).
- It used to be easier to access people from BSES and people still call SRA as BSES.
- Role clarity across different industry bodies, particularly extension.
- Other industries are more concerned about the capability aspect. SRA should look more into this area (e.g. traineeships).
Burdekin region – Ayr (Invited Only)

Feedback on regional snapshot

The global market

Sugar price (cents)
11 - 23c
Price variation is part of season (MYR)
Source: sugar.gov.au

7 million tonnes more sugar was consumed than produced in 2015-16

In Australia

Our outputs
4.8M tonnes of sugar produced in 2015
80% sugar
$1.8B in revenue

Producers
4,000 cane farming businesses
24 blade
8 rolling companies

Sugar production

Here in the Burdekin region

Our sugarcane production in 2016

Regional strengths
- Relatively high level of adoption of modern farming practices

Factors constraining productivity
- High evaporation
- Irrigation issues
- Cost
- Variety

Current opportunities and challenges

1. Making the right changes
- High networked and untrained workforce
- Farmers need more access to stable

2. Driving yield
- Variety development to leverage technology growth, improving productivity and profitability

3. Understanding & managing costs
- Farmers need access to full history of development of varieties and comparators

Thoughts about the future of our industry

What's likely to change in the next 5-10 years?
- More efficient / economical farming systems
- Opportunities for more income through diverse products
- Reduced production area and number of growers
- Adoption of new technology in farm operations (e.g. NR/technology)

How will these changes impact our businesses?

- We will need...
  - To demonstrate strong leadership on environmental issues
  - Considerable investment to help improve farming systems and restructure/enable businesses
  - To reduce production costs and source alternative streams of income
  - To address farming as a whole system - compaction, nutrients, irrigation, soil health, harvesting etc
  - To improve knowledge base, especially for new farmers

Our practice change over the past 2 years

- Reduced tillage
- Fertiliser application or input
- Efficient use of chemicals
- Crop rotation
- Improved soil health
- GPS and/or machine and tracking irrigation upgrades
- Equipment or machinery upgrade
- New varieties
- Adopted precision agriculture

Feedback / advice for SRA

- More interaction with delegates and other growers and millers
- SRA needs transparency and access to unbiased
- There is actually some great work happening from SRA but the message is not getting out to the industry
- Focus on regional requirements (e.g. varieties)
## Priority areas - value chain

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### Additional comments:
- SRA should look to whole value chain instead of doing research in isolation.
- Investigate controlled traffic / farming systems package in Burdekin (e.g. tillage, permanent beds).
- Farming practices should also consider financial management as growers need to understand the costs involved. Part of the extension should be able to explain the costs involved on changing practices.
- There are lots of economics already done regarding harvesting practices, but they have not been understood.
- SRA needs to engage with harvest operators.
- The appropriate term for season length is season finish.
- SRA should provide more information on the economic viability of alternative products.
- Biofuel, bioproducts and whole plant use should be integrated to product diversity.
- Outcomes should be measured in dollars per hectare.
### Burdekin region – Ayr (Invited Only)

### Portfolio split of $100

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**Key take away messages**
- KFA 1 has significantly dropped compared to existing budget allocation.
- KFAs 4, 7 and 8 have significantly increased compared to existing budget allocations.
- No credit cards were allocated.
Southern region ï Bundaberg

Bundaberg Forum

Forum date: 10th February 2017

Attendance:
- 5 growers
- 3 millers
- 1 government (DAF)
- 9 productivity services
- 1 Bundaberg Sugar
- 1 journalist
- 3 SRA local staff
## Southern region – Bundaberg

### Summary of Bundaberg forum

<table>
<thead>
<tr>
<th><strong>Pest &amp; Disease</strong></th>
<th><strong>Irrigation</strong></th>
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</table>
| - Issues with soldier fly and RSD testing.  
  - YCS was not a major issue in the region, but SRA should keep research in this area. | - Sub-surface drip irrigation. SRA to support with data analysis on how to use it properly.  
  - Growers need investment in irrigation. |

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<tr>
<th><strong>Harvesting</strong></th>
<th><strong>Strategic basic research</strong></th>
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| - Harvesting is one area where the industry can make a step change. SRA to help to identify where the losses/opportunities are.  
  - Improve cane quality through improvements on chopper drums and slow down.  
  - No return for participation in harvest best practice trial. | - SRA to pick a direction for strategic basic research and stick with it (it needs to be courageous).  
  - Continue research on GM cane to grub control, cheaper cane and easier growing. |

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<th><strong>Extension model</strong></th>
<th><strong>Soil health</strong></th>
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| - Extension model work plans should have common goals, but flexibility to achieve goals in individual regions.  
  - Extension model approach should consider differences between regions and prod services.  
  - Enormous overlap of roles in the region.  
  - Document growers adoption examples. | - SRA to provide more research and extension on soil health and soil nutrition efficiency.  
  - Improve communication on current knowledge regarding marginal soils.  
  - Loss of cane land to other crops (e.g. macadamia and horticulture).  
  - SRA to research on nutrients technology. |

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<thead>
<tr>
<th><strong>Feedback to SRA</strong></th>
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</table>
| - SRA needs to improve the engagement and communication approach. It should be a 2 ways communication.  
  - SRA board needs more growers and millers representatives to get a better understanding of industry needs.  
  - SRA to provide a copy of the consultancy report on extension review. |
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Initial thoughts

2016 season:
- Good year, reasonable price, better than average crop.
- CCS went down, but high biomass.
- Varieties performed well across soil types and conditions.
- Issues with soldier fly and RSD testing.
- Harvest losses.
- YCS was not a major issue in the region, but SRA should keep research in this area.

2017 projection:
- Instability due to marketing issues.
- Right varieties for climate and soil type.
- Sub-surface drip irrigation. SRA to support with data analysis on how to use it properly.
- SRA to pick a direction for strategic basic research and stick with it (needs to be courageous).
- SRA needs to get back in touch with growers (No presence of SRA in growers community).
- Improve milling technology. SRA needs a milling expertise.
- Improve succession planning for growers.
- Continue research on GM cane to grub control, cheaper cane and easier growing.
- Set new varieties parameters.

Challenges & Opportunities:
- Soil health and water efficiency are key for profitability.
- Harvesting is one area where the industry can make a step change. SRA to help to identify where the losses/opportunities are.
- Loss of cane land to other crops (e.g. macadamia and horticulture). Need more information on marginal soils.
- SRA needs to listen to industry and productivity services. Current extension and knowledge transfer are not working.
- Levy payers are not seeing value for money.
- Projects should be funded all the way through.
- Competitive and core funding ratio.
- Research and trials in isolation. Need to consider other aspects (e.g. calcium, phosphate).
- Social license to operate.
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Feedback on regional snapshot

The global market

- Sugar price (c/sus)(11 - 23)
- Price evolution in past 18 months (USc)
- 7m. tonnes more sugar was consumed than produced in 2015-16

Here in the Southern region

- Our sugarcane production in 2016
- Regional strengths: Moderate level of adoption of modern farming practices
- Factors constraining productivity: Disease
- Costs
- Varieties

Current opportunities and challenges

1. Making the right changes
- Inoculation practices & technology
- Improving water management

2. Driving yield
- Opportunities for increased yield through improved irrigation and soil health

3. Understanding & managing costs
- Inoculation costs, understanding and measuring costs of production

Thoughts about the future of our industry (based on feedback from our regional delegates)

What’s likely to change in the next 5-10 years?

- Broader adoption of best management practice systems
- Soil health improvement and better irrigation will be major yield drivers
- Opportunities for more income through diverse products
- Adoption of new technology in farm operations
- Environmental concerns will be a major factor in crop management decisions
- Broader adoption of harvesting practices
- Generational handover, succession planning and attraction of young farmers
- Increased competition for land

How will these changes impact our businesses?

- We will need...
  - Considerable investment to help improve farming systems and structure/size businesses
  - To demonstrate strong leadership on environmental issues
  - Efficient, cheaper and more rapid planting technology
  - Multi-purpose cane varieties
  - Changes to farming systems to further improve soil health and productivity
  - Good knowledge of sustainable and efficient management systems

Feedback / advice for SRA

1. Focus on outcomes (don't just react to industry demands)
2. Be proud of SRA's research outcomes and drive adoption
3. Focus on regional requirements and help find solutions to production issues
4. Take positive research all the way to commercial trials and share the economics that show the value of practice change

In Australia

- Our outputs
  - 4.8M tonnes sugar, 8m. tonnes cane
  - 1.8B in value
- Produced by 4,000 cane farming businesses
- 24 mills
- 8 sugar refineries

Our practice change over the past 2 years

- 66% Changed Practice
- 34% No change in practice
- Irrigation upgrades
- NEW variety widespread use of chemicals
- GPS and other online seeding
- Reduced costs
- Crop rotation
- Improved soil health
- New varieties
- Equipment or machinery upgrades
- Adoption of precision agriculture

Industry needs to support SRA and allow it to work to a plan - we've forced SRA to be too reactionary.
Southern region – Bundaberg

Priority areas - value chain

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<tr>
<th>Priority #01</th>
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<th>Priority #03</th>
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<td>Farming</td>
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<td>Milling</td>
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<td>Varieties</td>
<td>Harvesting practices</td>
<td>Sugar recovery</td>
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<td>Soil health</td>
<td>Harvesting innovation</td>
<td>Season length</td>
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<td>Efficiency i water/energy</td>
<td>Harvesting schedule</td>
<td>Milling innovation</td>
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Additional comments:
- Soil health researches should have a particular focus on marginal soil.
- SRA should have an Economic Advisor as growers need to have a better understanding of the cost structure and costs of changing practices (e.g. FEAT usage).
- SRA should improve relationship with CASE and JOHN DEERE in order to facilitate discussion regarding harvesting practices.
- Commercial arrangements between growers, harvesters and millers need to be reviewed as in the future the mills will probably be doing many other products from the cane.
- Sugar recovery is directly linked to the cane quality.
- Early maturity sugarcane varieties may help with the longer season.
- The group agreed that SRA shouldn't be spending much time on product diversification as there are many other providers doing research in the area.
- Whole plant compensation model should benefit both growers and millers.
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Portfolio split of $100

Key take away messages
- KFA 1 has significantly dropped compared to existing budget allocation.
- KFAs 2 and 3 have significantly increased compared to existing budget allocations. KFA 2 has also passed KFA 1 by 1%.
- KFAs 7 has significantly dropped compared to existing budget allocations.
- No credit cards were allocated.