

# Great Barrier Reef

Report Card **2011**

**Reef Water Quality Protection Plan**

## Management practice results



Australian Government



Queensland Government

## **Factors affecting agricultural industries in 2011**

Changing management practice can be a long and complex process that requires new or expanded knowledge and skills, and sometimes significant capital investment. An agricultural business' capacity to afford such an investment is typically closely related to climatic and market forces beyond the landholder's control. Recent challenges for landholders are detailed below.

### **Sugarcane**

An historically strong trading position entering 2008 was undermined by above average rainfall from 2008 to 2010. Subsequently, there were many growers unable to take full advantage of good sugar prices and a relatively low Australian dollar. In February 2011 Cyclone Yasi caused severe sugarcane crop damage with the hardest hit areas generally between Tully and Sarina. Crop losses due to Cyclone Yasi reduced the overall value of production. Direct loss of plant and ratoon crops, and inability to harvest and replant due to ongoing wet conditions, will also continue to impact on production in the 2011-2012 year.

### **Horticulture**

The years 2008 to 2010 were generally poor for most fruit and vegetable producers due to very low commodity prices. Bananas were the exception with growers obtaining good prices in 2008-2009 (following the total losses caused by Cyclone Larry in 2006). However, natural disasters continued to challenge horticultural producers in 2010-2011. Cyclone Yasi (February 2011) resulted in significant losses of crops and farm infrastructure, especially for tropical fruit growers north of Mackay. In the Fitzroy and Burnett Mary regions, major wet season flooding brought about losses to production and physical damage to farm land.

### **Dairy**

Dairy producers in central and northern Queensland experienced generally favourable market and climatic conditions from 2008 to 2010. Good seasonal conditions meant reduced demand for feedgrains and lower feedgrain prices, while milk prices were relatively strong. However, 2010-2011 was quite difficult for most, with wet season flooding and Cyclone Yasi combining to reduce production through feed shortages, loss of power supply and animal health issues. At the same time, sharp discounting of fresh milk prices by major retailers affected the price received by producers.

### **Grains**

The 2010-2011 year was generally very poor with most grain growers suffering financial losses due to continued wet weather and flooding. Areas planted to both summer and winter crops were reduced due to the inability to control weeds and to get planting equipment onto the ground. Crops that were planted benefited from good rainfall, but most were lost or downgraded in tonnage and quality due to weather and flood damage.

### **Grazing**

In 2010-2011, the majority of graziers experienced average or above average rainfall and production conditions, except for frontage properties in areas that experienced livestock and infrastructure losses due to flooding. Cyclone Yasi also caused significant damage to infrastructure. Prices were generally improved on those from the previous three to four years.

## Great Barrier Reef-wide

### Grazing



17%  
Moderate

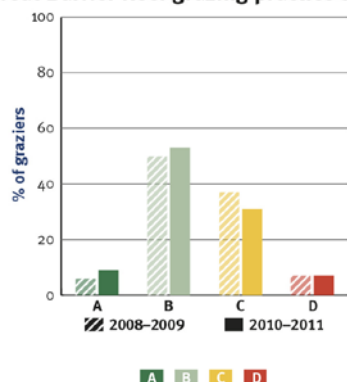
**Target:** 50 per cent by 2013.

From 2009 to 2011, 17 per cent of graziers (1453) adopted improved land management practices. The greatest adoption of improved practices was in the Mackay Whitsunday region (36 per cent).

There are 8545 graziers managing 322,891 square kilometres of land across the Great Barrier Reef catchment.

By June 2011, 62 per cent of graziers were using (A or B) management systems that are likely to maintain land in good to very good condition or improve land in lesser condition.

Great Barrier Reef grazing practice systems



Major sources of adoption of improved practices were:

- Regional Natural Resource Management bodies, through the Reef Rescue program, facilitated management system improvements by providing incentives to 521 grazing businesses.
- Training and targeted extension through the Queensland Government influenced management practice improvements in 129 grazing businesses. In addition, training provided by AgForward is estimated to have contributed to management practice improvements in 173 grazing businesses.
- The Australian Government's FarmReady program is an important contributor to services in the grazing industry, through subsidising the cost (with a cap) of training provided by registered private consultants and training firms. An estimated 488 graziers adopted improved practices through training directly relevant to Reef Plan objectives with the support of the Australian Government's FarmReady program.

### Sugarcane



34%  
Good

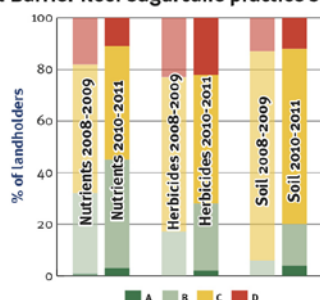
**Target:** 80 per cent by 2013.

From 2009 to 2011, 34 per cent of sugarcane growers (1281) adopted improved land management practices. The greatest adoption of improved practices was in the Burnett Mary region (42 per cent).

There are 3777 sugarcane growers managing 4032 square kilometres of land across the Great Barrier Reef catchment.

By June 2011, cutting-edge (A) or best management (B) practice systems were used by 45 per cent of sugarcane growers for nutrients, 28 per cent for herbicides and 20 per cent for soil.

**Great Barrier Reef sugarcane practice systems**



Major sources of adoption were:

- Regional Natural Resource Management bodies, through the Reef Rescue program, directly facilitated management system improvements in 1281 sugarcane growing businesses.
- A total of 767 businesses improved nutrient management systems through training and extension funded by the Reef Rescue program, in combination with the introduction of Queensland Government regulations.
- Herbicide management system improvements are estimated to have taken place in 431 sugarcane growing businesses.
- A total of 575 sugarcane growers improved soil management systems.

## Horticulture



25%

Moderate

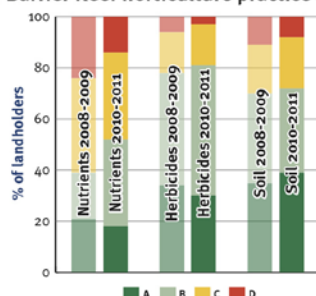
**Target:** 80 per cent by 2013.

From 2009 to 2011, 25 per cent of horticulture producers (242) adopted improved land management practices. The adoption rate varied across regions and ranged from moderate to very good.

There are 970 horticulture producers managing 595 square kilometres of land across the Great Barrier Reef catchment.

By June 2011, cutting-edge (A) or best management (B) systems were used by 52 per cent of horticulture producers for nutrients, 81 per cent for herbicides and 72 per cent for soil.

**Great Barrier Reef horticulture practice systems**



All 242 horticulture producers implemented improved practices with the support of Reef Rescue Water Quality Grants, facilitated by regional Natural Resource Management bodies and the Growcom Farm Management System program. Of these, 152 completed nutrient management projects, 40 completed herbicide management projects and 69 completed soil management projects.

## Dairy



33%

Very good

**Target:** 80 per cent by 2013.

From 2009 to 2011, 33 per cent of dairy producers (102) adopted improved land management practices.

There are 306 dairy producers across the Great Barrier Reef catchment, with the majority in the Burnett Mary and Wet Tropics regions.

Drivers of management practice change included:

- The Australian Government's Reef Rescue program, facilitated by Terrain Natural Resource Management, Burnett Mary Regional Group and the DBnBR program:
  - At least 73 farmers implemented actions arising from soil and nutrient management plans. Of these, 36 farmers also accessed Reef Water Quality Grants to assist with capturing and re-using sediment and effluent, protecting riparian areas and purchasing machinery suited to minimum tillage cropping.
  - There is no data available on management system change by the remaining 65 plus dairy farmers who participated in the Reef Rescue program. Therefore, the stated improvements are likely to be conservative estimates.
- The Queensland Government's Rural Water Use Efficiency program, through the Dairy and Fodder Water for Profit program, assisted an additional 29 producers to implement improved irrigation and water recycling practices.

## Cape York

### Grazing



33%  
Very good

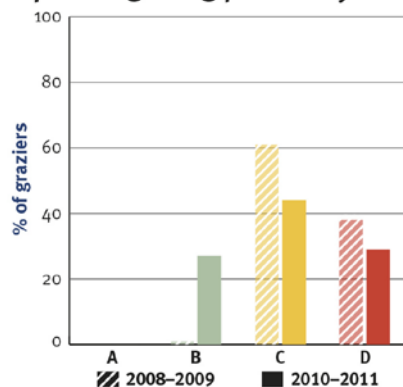
**Target:** 50 per cent by 2013.

From 2009 to 2011, 33 per cent of graziers (16) adopted improved land management practices.

There are 48 graziers managing 21,618 square kilometres of land in the Cape York region.

By June 2011, 27 per cent of graziers were using B practice systems that are likely to maintain land in good condition or improve land in lesser condition.

### Cape York grazing practice systems



All 16 graziers who implemented improved practices were supported by the Reef Rescue program, facilitated by Cape York Sustainable Futures. Of these, five graziers completed Savannah Plan training (through the Queensland Government) and eight graziers implemented fencing and watering improvements to help manage riparian and frontage country.

### Horticulture



40%  
Good

**Target:** 80 per cent by 2013.

From 2009 to 2011, 40 per cent of horticulture producers (12) adopted improved land management practices.

There are 30 horticulture producers managing 30 square kilometres of land in the Cape York region.

## Wet Tropics

### Sugarcane



37%

Good

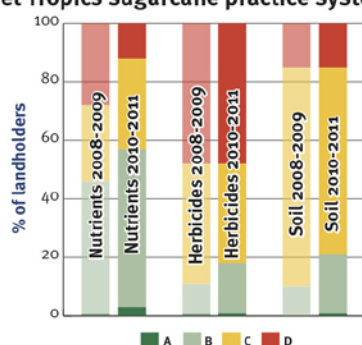
**Target:** 80 per cent by 2013.

From 2009 to 2011, 37 per cent of sugarcane growers (501) adopted improved land management practices.

There are 1343 growers managing 1364 square kilometres of land in the Wet Tropics region.

By June 2011, cutting-edge (A) or best management (B) practice systems were used by 57 per cent of sugarcane growers for nutrients, 18 per cent for herbicides and 20 per cent for soil.

**Wet Tropics sugarcane practice systems**



Of the 501 growers who implemented improved practices, 289 completed Reef Rescue Water Quality Grants projects facilitated by Terrain Natural Resource Management:

- 171 growers implemented improved nutrient management practices
- 98 growers implemented improved herbicide management practices
- 144 growers adopted improved soil management practices.

The remaining 212 growers were estimated to have progressed from D level nutrient management systems to C level nutrient management systems through a combination of concerted Reef Rescue program extension efforts from a range of sources (Terrain Natural Resource Management, BSES Ltd and local agronomic services providers) and the introduction of the Queensland Government's regulations.

### Grazing



16%

Moderate

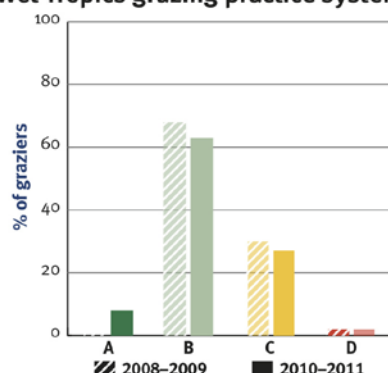
**Target:** 50 per cent by 2013.

From 2009 to 2011, 16 per cent of graziers (152) adopted improved land management practices.

There are 935 graziers managing 6983 square kilometres of land in the Wet Tropics region.

By June 2011, 71 per cent of graziers were using (A or B) practice systems that are likely to maintain land in good to very good condition or improve land in lesser condition.

### Wet Tropics grazing practice systems



Forty-four graziers who implemented improved practices completed Reef Rescue Water Quality Grants projects facilitated by Terrain Natural Resource Management. The Reef Rescue program directly supported a further 58 graziers to complete relevant training through the Queensland Government. An additional 50 graziers completed training in grazing management through private sector consultants with the support of the FarmReady program and through extension programs run by the Queensland Government.

### Horticulture



24%

Moderate

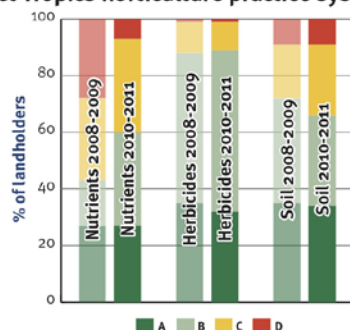
**Target:** 80 per cent by 2013.

From 2009 to 2011, 24 per cent of horticulture producers (78) adopted improved land management practices.

There are 330 horticulture producers managing 198 square kilometres of land in the Wet Tropics region. Bananas are the dominant sector, with 250 growers accounting for nearly 60 per cent of this total area.

By June 2011, cutting-edge (A) or best management (B) systems were used by 60 per cent of horticulture producers for nutrients, 89 per cent for herbicides and 66 per cent for soil.

### Wet Tropics horticulture practice systems



All 78 horticulture producers who implemented improved land management practices did so with the support of Reef Rescue Water Quality Grants, facilitated by Terrain Natural Resource Management and the Growcom Farm Management System program. Of these, 58 completed nutrient management projects and 20 completed soil management projects.



## Burdekin

### Grazing



20%  
Good

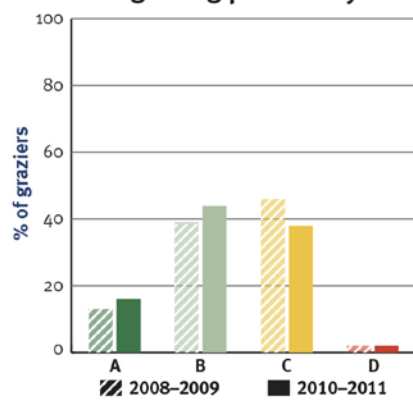
**Target:** 50 per cent by 2013.

From 2009 to June, 20 per cent of graziers (199) adopted improved land management practices.

There are 983 graziers managing 135,753 square kilometres of land in the Burdekin region.

By June 2011, 60 per cent of graziers were using (A or B) practice systems that are likely to maintain land in good to very good condition or improve land in lesser condition.

#### Burdekin grazing practice systems



Seventy-four of the graziers who implemented improved practices completed Reef Rescue Water Quality Grants projects facilitated by NQ Dry Tropics. The remaining 125 completed relevant training through AgForward, private sector consultants (supported by the FarmReady program) and the Queensland Government.

### Sugarcane



28%  
Moderate

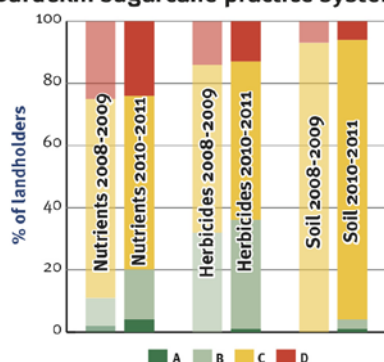
**Target:** 80 per cent by 2013.

From 2009 to 2011, 28 per cent of sugarcane growers (155) adopted improved land management practices.

There are 556 growers managing 829 square kilometres of land in the Burdekin region.

By June 2011, cutting-edge (A) or best management (B) practice systems were used by 20 per cent of sugarcane growers for nutrients, 36 per cent for herbicides and four per cent for soil.

#### Burdekin sugarcane practice systems



The 155 growers who implemented improved practices completed Reef Rescue Water Quality Grants projects facilitated by NQ Dry Tropics. Of these, 95 improved nutrient management, 40 improved pesticide management and 51 improved soil management.

#### Horticulture



27%

Moderate

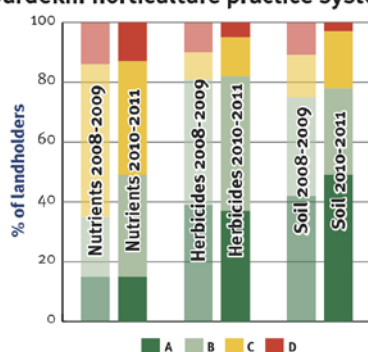
**Target:** 80 per cent by 2013.

From 2009 to 2011, 27 per cent of horticulture producers (52) adopted improved land management practices.

There are 192 growers managing 135 square kilometres of land in the Burdekin region.

By June 2011, cutting-edge (A) or best management (B) practice systems were used by 49 per cent of horticulture producers for nutrients, 82 per cent for herbicides and 78 per cent for soil.

#### Burdekin horticulture practice systems



All 52 horticulture producers who implemented improved practices did so with the support of Reef Rescue Water Quality Grants, facilitated by NQ Dry Tropics and the Growcom Farm Management System program. Of these, 36 completed nutrient management projects, 11 completed herbicide management projects and 12 completed soil management projects.

## Mackay Whitsunday

### Sugarcane



30%  
Good

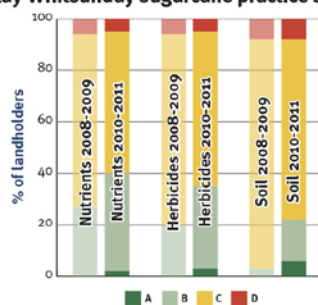
**Target:** 80 per cent by 2013.

From 2009 to 2011, 30 per cent of sugarcane growers (418) adopted improved land management practices.

There are 1380 growers managing 1362 square kilometres of land in the Mackay Whitsunday region.

By June 2011, cutting-edge (A) or best management (B) practice systems were used by 40 per cent of sugarcane growers for nutrients, 35 per cent for herbicides and 22 per cent for soil.

Mackay Whitsunday sugarcane practice systems



All 418 growers implemented improved practices with the support of Reef Rescue Water Quality Grants facilitated by Reef Catchments. A total of 191 growers completed nutrient management projects, 208 completed herbicide management projects and 289 completed soil management projects.

### Grazing



36%  
Very good

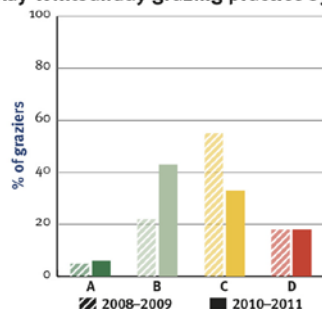
**Target:** 50 per cent by 2013.

From 2009 to 2011, 36 per cent of graziers (148) adopted improved land management practices.

There are 416 graziers managing 3038 square kilometres of land in the Mackay Whitsunday region.

By June 2011, 49 per cent of graziers were using (A or B) practice systems that are likely to maintain land in good to very good condition or improve land in lesser condition.

**Mackay Whitsunday grazing practice systems**



Ninety-six of the graziers who implemented improved practices completed Reef Rescue Water Quality Grants projects facilitated by Reef Catchments. The rest completed relevant training through private sector consultants, supported by the FarmReady program.

## Horticulture



47%

Very good

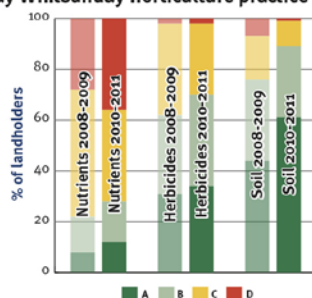
**Target:** 80 per cent by 2013.

From 2009 to 2011, 47 per cent of horticulture producers (15) adopted improved land management practices.

There are 33 horticulture producers managing 24 square kilometres of land in the Mackay Whitsunday region.

By June 2011, cutting-edge (A) or best management (B) practice systems were used by 28 per cent of horticulture producers for nutrients, 70 per cent for herbicides and 89 per cent for soil.

**Mackay Whitsunday horticulture practice systems**



All 15 horticulture producers who implemented improved practices did so with the support of Reef Rescue Water Quality Grants, facilitated by Reef Catchments and the Growcom Farm Management System program. Of these, four completed nutrient management projects, three completed herbicide management projects and eight completed soil management projects.

## Fitzroy

### Grazing



16%

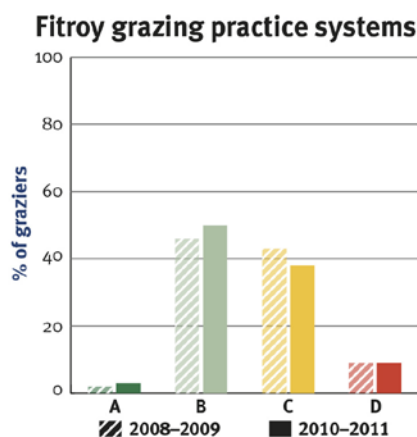
Moderate

**Target:** 50 per cent by 2013.

From 2009 to 2011, 16 per cent of graziers (604) adopted improved land management practices.

There are 3666 graziers managing 126,880 square kilometres of land in the Fitzroy region.

By June 2011, 53 per cent of graziers were using (A or B) practice systems that are likely to maintain land in good to very good condition or improve land in lesser condition.



Of the 604 graziers who implemented improved practices, 156 completed Reef Rescue Water Quality Grants projects facilitated by the Fitzroy Basin Association. A further 381 graziers completed relevant training through AgForward, private sector consultants (supported by the FarmReady program) and the Queensland Government (supported by the Caring for our Country and Reef Rescue programs). Approximately 67 graziers adopted improved management practices through participation in targeted extension projects implemented by the Queensland Government and the Fitzroy Basin Association.

### Horticulture



13%

Poor

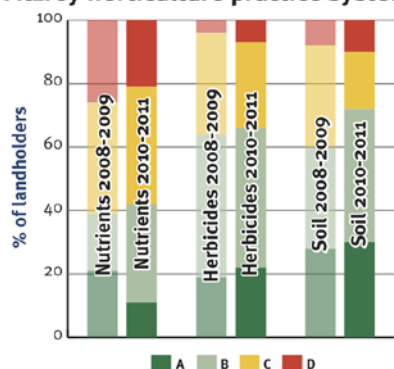
**Target:** 80 per cent by 2013.

From 2009 to 2011, 13 per cent of horticulture producers (14) adopted improved land management practices.

There are 106 horticulture producers managing 76 square kilometres of land in the Fitzroy region.

By June 2011, cutting-edge (A) or best management (B) systems were used by 42 per cent of horticulture producers for nutrients, 66 per cent for herbicides and 72 per cent for soil.

**Fitzroy horticulture practice systems**



All 14 producers who implemented improved practices did so with the support of Reef Rescue Water Quality Grants, facilitated by the Fitzroy Basin Association and the Growcom Farm Management System program. Eleven completed nutrient management projects, eight completed herbicide management projects and eleven completed soil management projects.

## Grains



**18%**  
Moderate

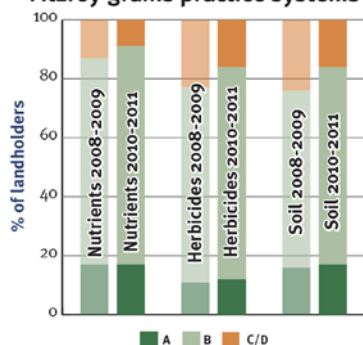
**Target:** 80 per cent by 2013.

From 2009 to 2011, 18 per cent of grain growers (107) adopted improved land management practices.

There are 600 grain growers managing 9146 square kilometres of land in the Fitzroy region.

By June 2011, cutting-edge (A) or best management (B) systems were used by 91 per cent of grain growers for nutrients, 84 per cent for herbicides and 80 per cent for soil.

**Fitzroy grains practice systems**



All 107 growers who implemented improved practices did so with the support of the Reef Rescue program. This included 60 growers who improved herbicide management practices through training and purchasing fit-for-purpose equipment.

An absence of data sources and systems to collect data on improved practice adoption outside of the Grains Best Management Program and Reef Rescue program means this is likely to be a very conservative estimate of improved practices.

## Burnett Mary

### Grazing



13%  
Moderate

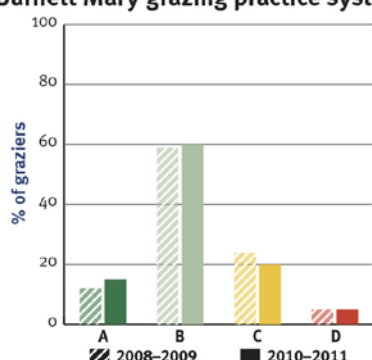
**Target:** 50 per cent by 2013.

From 2009 to 2011, 13 per cent of graziers (334) adopted improved land management practices.

There are 2495 graziers managing 28,618 square kilometres of land in the Burnett Mary region.

By June 2011, 75 per cent of graziers were using (A or B) systems that are likely to maintain land in good to very good condition or improve land in lesser condition.

#### Burnett Mary grazing practice systems



Of the 334 graziers who implemented improved practices, 135 completed Reef Rescue Water Quality Grants projects facilitated by the Burnett Catchment Care Association and the Burnett Mary Regional Group. The majority completed relevant training through AgForward, private sector consultants (supported by the FarmReady program) and the Queensland Government. Another 42 graziers adopted improved management practices through participation in targeted extension projects implemented by Burnett Catchment Care Association and the Queensland Government (supported by the Caring for our Country and Reef Rescue programs).

### Sugarcane



42%  
Very good

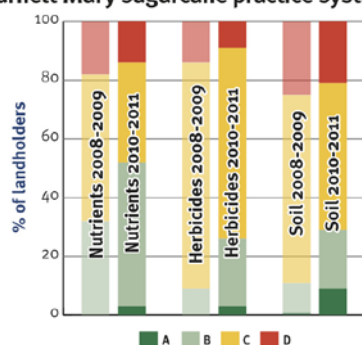
**Target:** 80 per cent by 2013.

From 2009 to 2011, 42 per cent of sugarcane growers (208) adopted improved land management practices.

There are 498 growers managing 476 square kilometres of land in the Burnett Mary region.

By June 2011, cutting-edge (A) or best management (B) systems were used by 52 per cent of sugarcane growers for nutrients, 26 per cent for herbicides and 29 per cent for soil.

**Burnett Mary sugarcane practice systems**



All 208 growers who implemented improved practices completed Reef Rescue Water Quality Grants projects facilitated by the Burnett Mary Regional Group. Of these, 98 improved nutrient management practices, 85 improved pesticide management practices and 91 improved soil management practices.

## Horticulture



25%

Moderate

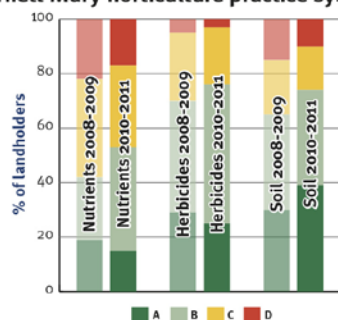
**Target:** 80 per cent by 2013.

From 2009 to 2011, 25 per cent of horticulture producers (70) adopted improved land management practices.

There are 280 horticulture producers managing 160 square kilometres of land in the Burnett Mary region.

By June 2011, cutting-edge (A) or best management (B) systems were used by 53 per cent of horticulture producers for nutrients, 76 per cent for herbicides and 74 per cent for soil.

**Burnett Mary horticulture practice systems**



All 70 horticulture producers who implemented improved practices did so with the support of Reef Rescue Water Quality Grants, facilitated by the Burnett Mary Regional Group and the Growcom Farm Management System program. Of these, 43 completed nutrient management projects, 18 completed soil management projects and 18 completed herbicide management projects.



