

2.9. AGRICULTURE

Although agriculture is an intensive land use, it represents less than two percent of the total Mitchell River catchment area. It is mainly limited to the Upper Walsh portion of the Mareeba-Dimbulah Irrigation Areas (MDIA) and the Upper Mitchell Catchment north of Mareeba at Biboorha, Julatten and Mayfarms. These limitations are due to geographical distribution of soil types, reliability of water supply, and human settlement. The MDIA receives its reliable water supply from Tinaroo Dam in the Barron River catchment. Julatten and Mayfarms both benefit by being near the wet tropical conditions along the Great Dividing Range forming the Mitchell's eastern boundary. Because agriculture occurs across these important headwaters, agricultural development has the potential to impact the catchment as a whole.

Crops grown in the area include:

tobacco	tea tree
peanuts	sugar cane
avocado	navy beans
banana	citrus
grass seed	mango
stone fruit	macadamia nuts
coffee	grapes

Tourism in the form of Farmstays and property tours also provide income diversification.

Intensive agriculture can impact its surrounding environment and downstream waterways in several ways. Land clearing can increase erosion and reduce wildlife habitat. It can cause changes to catchment hydrology through water extraction, changes in vegetation cover, and the addition of irrigation water. Potential exists for serious environmental harm through poor management of farm chemicals and fertilisers.

Many of these potential impacts can be reduced through sound planning and developing the capability to recognise and address a variety of management needs. Property management planning requires consideration of the landholder's ambitions, economic realities, resource capabilities, production efficiency, environmental impacts and other reasonable concerns of the wider community.

Property planning can also become an effective tool for coordinated management needs such as drainage design, weed and pest control and on farm water management. Farmers need a wide variety of skills, from business and production management through to agricultural and ecological sciences. The property planning process helps to identify and address skill

requirements. In terms of integrated catchment management, property planning should seek to avoid or minimise impacts on neighbouring land uses, values and resources, and endeavour to develop sustainable production methods on farm.

A good example of a developing cooperative approach to meeting watershed management objectives is occurring in a Walsh River subcatchment in the MDIA. Cattle Creek, near Mareeba, produces cane on its alluvial flats, and variety of tobacco, tropical fruit and other field crops on the catchment slopes. A potential for ground water salinity problems was identified by the DNR, which has since endeavoured to work with the local community to avoid resource degradation. An action plan was prepared by local growers, industry representatives and a variety of activities have resulted from this work.

Extensive investigations into ground water sources, irrigation practices and management options are continuing. This work is involving the Landcare group, staff from DNR, Bureau of Sugar Experiment Stations (BSES), CSIRO, and the University of Queensland. Land managers in the Cattle Ck catchment have placed a high priority on ground water management. The cooperative approach by landholders, industry groups and government agencies must be sustained for effective mitigation of this problem.

Some growers are taking part in programs such as *Waterwatch* and *Landcare* to proactively monitor water quality and to improve their awareness of the effects of farm chemicals on the environment.



Figure 17 *In the Wet Season the vegetation is lush and green but intensive agriculture is only viable with a reliable water source to irrigate the crops through the Dry Season*

Goal:

*A sustainable and economically viable
agricultural industry*

Objectives:

- Improve capability of land managers to recognise potential problems
- Sustainably manage agricultural land with best land management practices
- Improved information sharing between land managers, local government and state government departments
- Best management of agriculturally affected land of significant conservation value
- Greater use of Property Management Planning on agricultural land

Strategies:

Education

- AG1 Encourage the development and training of agricultural skills and best management practices
AG2 Promote the efficient use of natural resources within the agricultural sector

Information and Communication

- AG3 Involve the community in natural resource monitoring programs

Improving Resource Management

- AG4 Compile agricultural land suitability information for the Mitchell River Catchment
AG5 Ensure the protection and best management of riparian zones and other areas of significant conservation value
AG6 Encourage property management planning within the agricultural sector

Adopting a Cooperative Approach

- AG7 Develop links with Landcare Groups and Barron River Catchment Coordinating Committee (BRCCC)
AG8 Provide information and support to areas under agricultural development projects

Outcomes:

Achievement of these strategies will result in the following outcomes:

- Educated land managers able to identify production risks before they become urgent
- Sustainable agricultural practises which are suited to the capability of the land
- The adoption of efficient natural resource use methods
- A coordinated approach to agricultural landuse

Strategy AG1

Encourage the development and training of agricultural skills and best management practices

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Educate land managers in early detection of indicative changes to natural resources	DNR, DPI, MRWMG, Tert Ed. Institutions		★	LD3
Develop extension information on reasons for soil loss; treatment and prevention methods linking with existing programs	DPI, DNR, MRWMG		★★	LD1
Promote efficient use of water, fertilisers and agricultural chemicals	DPI, DNR, BSES, Tert Ed. Institutions		★	WQ2

Strategy AG2

Promote the efficient use of natural resources within the agricultural sector

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Promote efficient irrigation systems through the media and agricultural bodies	DPI, DNR, MRWMG, LCG	2 radio year, 2 newspaper/yr	★	WQ1
Develop extension information to display on field days	MRWMG, BSES, Grower groups, LCG		★	WQ1
Identify areas where irrigation is unsuitable	DNR, DPI		★	LD1
Map areas of irrigation suitability on GIS	DNR	Map showing degree of suitability	★★	
Educate landholders of the benefits of minimum tillage agriculture through media, bus tours and field days	DPI, DNR, MRWMG, LCG	2 articles/ year	★	LD2
Hold field days on properties where natural resources are best managed	MRWMG, LCG	1/year	★★	LD5

Strategy AG3

Involve the community in natural resource monitoring programs

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Invite all stakeholders to a meeting where resource monitoring programs can be discussed to ascertain interest in such programs	DNR, Waterwatch, LCG,		★	
Encourage the community to develop, support and monitor trial resource sampling sites	MRWMG, DNR, DPI, LCG, Waterwatch		★★	LD3 WQ1 GM3

Strategy AG4

Compile agricultural land suitability information for the Mitchell River Catchment

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Collect and compile all current information, eg, MDIA information	DNR, DPI, Lgov, LCG	Inventory of information	★★	LD4
Investigate the possibility of funding and the advantages of obtaining land suitability/capability information for the whole catchment	MRWMG, LCG		★★	

Priorities Achieved By:

★ 1 - 2 years

★★ 2 - 3 years

★★★ 3 - 5 years

Strategy AG5

Ensure protection and best management of riparian zones and other areas of significant conservation value

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Promote the importance of the retention of existing natural vegetation on waterways and steep land – linked at catchment scale	MRWMG, Bushcare, LCG		★	WQ6 FI4
Promote rehabilitation of degraded and unproductive land for farm forestry and wildlife corridors	DPI, EPA, Bushcare, LCG, Greening Australia	Visible decrease in abandoned land	★★	LD2
Identify areas of significant conservation value to protect and manage accordingly	EPA, MRWMG, LCG	Inventory of areas	★★	NC2,NC3,FI4
Investigate and promote incentives to increase the retention of significant habitat areas	EPA, MRWMG, Bushcare, LCG		★★	NC4 FI4

Strategy AG6

Encourage Property Management Planning within the agricultural sector

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Encourage the use of PMP by individual landholders	DPI, MRWMG, LCG		★	GM4
Ensure all relevant agencies are involved on PMP processes	DPI, MRWMG, LCG		★★	GM4
Investigate and promote the incentives required for adoption of PMP and make recommendations to government	MRWMG, LCG		★★	
Publicise to landholders the tax incentives available for works associated with land degradation	MRWMG, LCG	2 radio /year 2 newspaper/ year	★	LD4 LD5
Provide continuing support to ensure implementation of PMP	MRWMG, LCG		★★	

Strategy AG7

Develop links with Landcare Groups and the Barron River Catchment Coordinating Committee (BRCCC)

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Invite representatives of CC Landcare, BRCCC to MRWMG meetings and workshops	MRWMG, BRCCC, LCG	BRCCC rep. at meetings with Ag on agenda	★	
Ensure that the LCG, BRCCC and the MRWMG are each involved in plans affecting both catchments	MRWMG, BRCCCC, LCG		★	
Provide networks and support to the Landcare group in Cattle Creek	MRWMG, LCG		★	WQ6
Seek funding for a works program for ground water management in Cattle Creek	DNR, MRWMG		★★	WQ6

Strategy AG8

Provide information and support to areas under agricultural development projects

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Contact Agrisector groups	BSES, CSIRO, MRWMG		★	
Survey landholders in new agricultural development areas to ascertain knowledge level of area	Landholders, DNR	All landholders surveyed	★	

Priorities Achieved By:

★ 1 - 2 years

★★ 2 - 3 years

★★★ 3 - 5 years