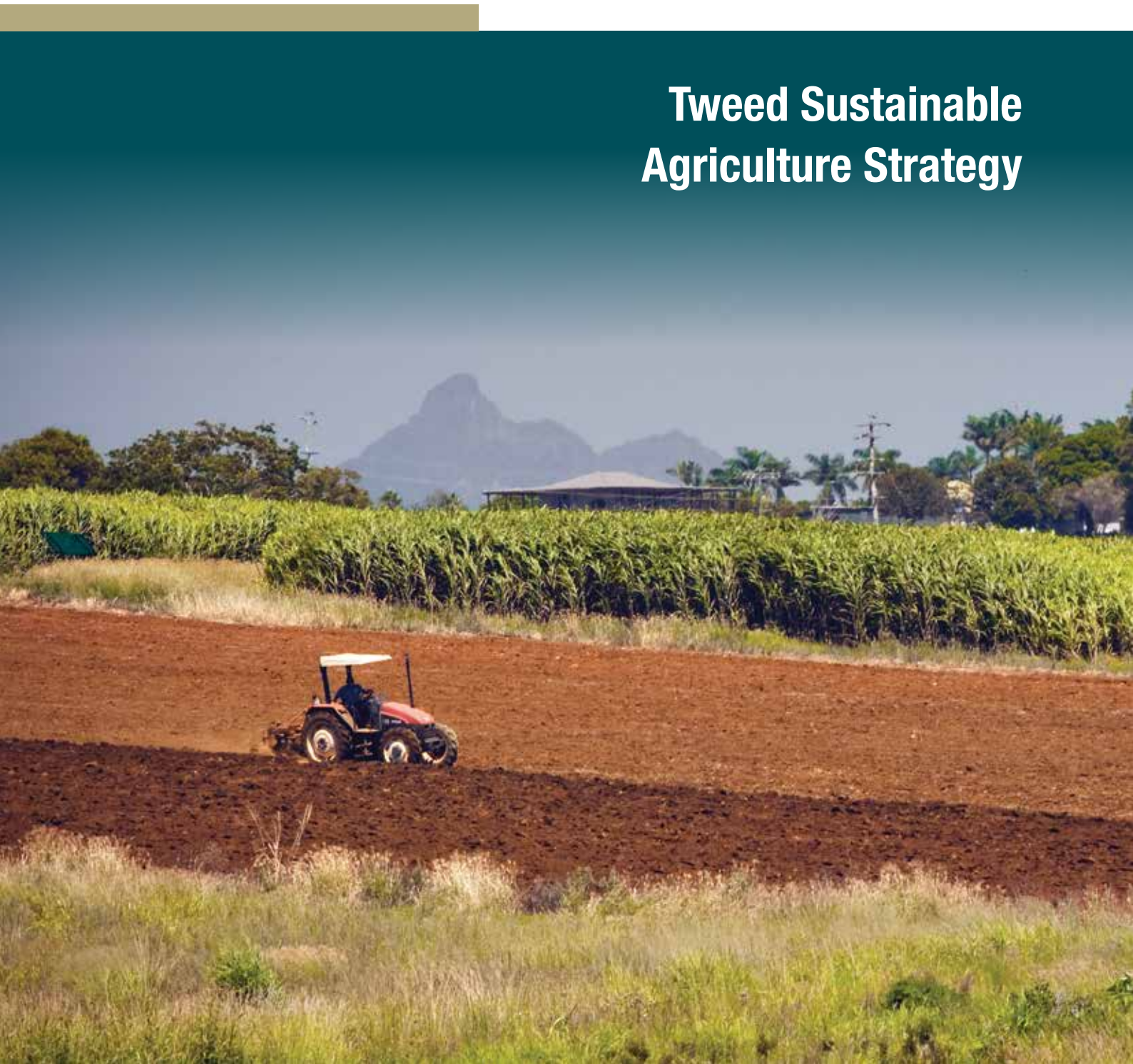


# Tweed Sustainable Agriculture Strategy

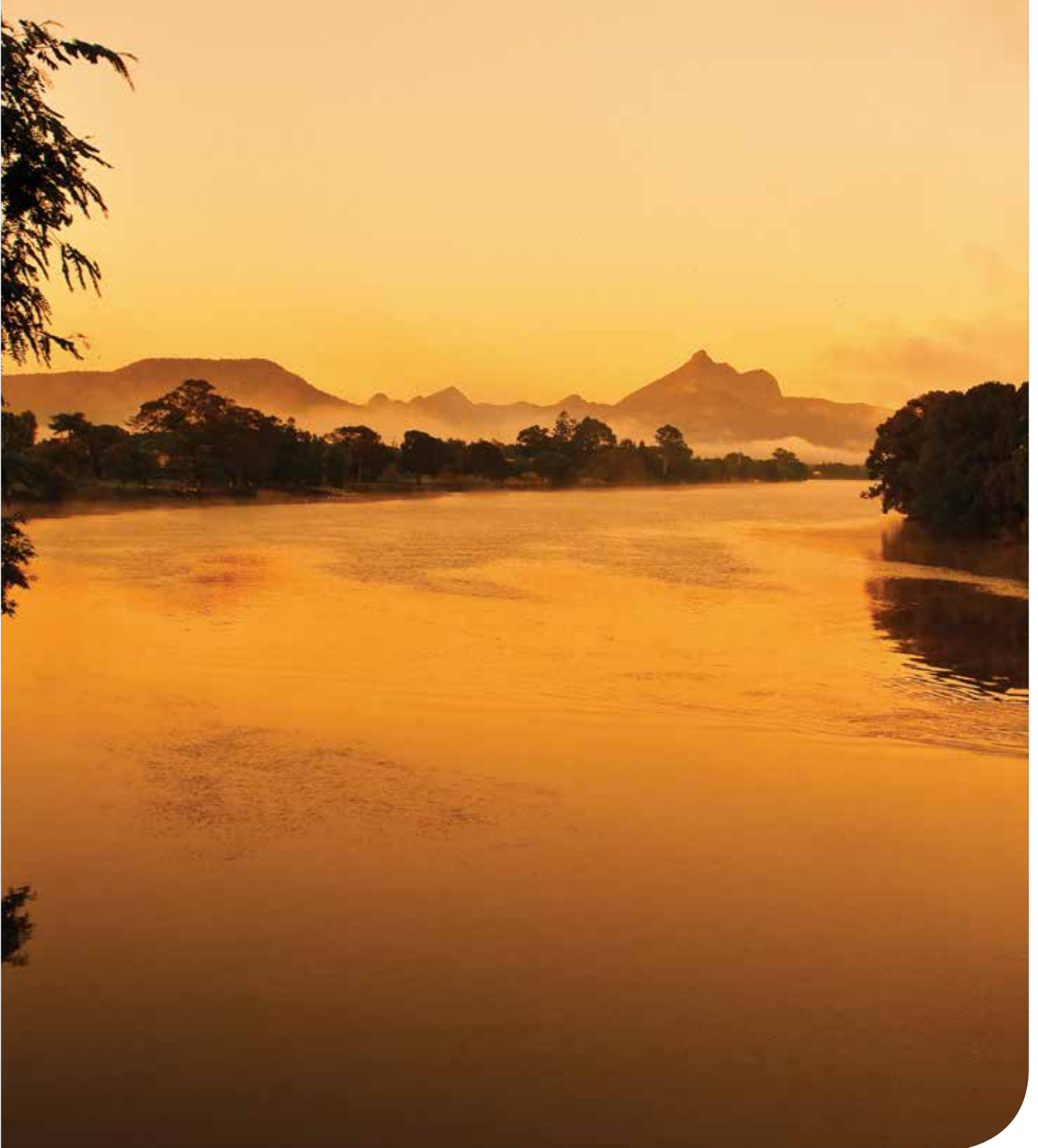


## Definitions

- o Biodiversity – the diversity of all living things including crop diversity, soil biology and indigenous plants and animals.
- o Ecosystem services – benefits obtained from ecosystems including soil fertility, nutrient recycling, pollination, food supply, water purification and biodiversity.
- o Sustainable agriculture – farming within the land’s capability, to conserve natural resources such as soil and water that are essential for productive and viable agriculture without causing permanent damage.
- o Viability – the economic feasibility of an activity.
- o Diversification – the reallocation of some of a farm’s productive resources, such as land, capital, equipment or paid labour, into new activities such as new crops, provision of services to other farmers, non-farming or value-adding.
- o Land capability – the land’s ability to sustain given land uses and management practices in the long term without degradation to soil, land, air, water and other resources.
- o Natural processes – processes, actions and cycles existing in or produced by nature such as weather, decomposition, erosion and natural disasters.
- o Natural resource base – farm resources that exist in nature including soils, waterways, plants and animals and their habitats.
- o Prime agricultural land – land classified as state or regionally significant farmland under the Northern Rivers Farmland Protection Project or Biophysical Strategic Agricultural Land as determined by the New South Wales Department of Planning.
- o Resilience – the ability to recover quickly from a change in circumstances.
- o Value-adding – increasing the profitability of a product by adding value such as food processing, retail or agritourism.

## Traditional owner acknowledgement

We wish to recognise the generations of the local Aboriginal people of the Bundjalung Nation who have lived in and derived their physical and spiritual needs from the forests, rivers, lakes and streams of this beautiful valley over many thousands of years as the traditional owners and custodians of these lands.





## Message from the Mayor

**The Tweed Sustainable Agriculture Strategy is a leadership action of Tweed Shire Council and the farming community, providing a vision and**

**roadmap for a sustainable agriculture future. Sustainability rests on the principle that we must meet the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable agriculture is farming within the lands capability to conserve natural resources such as soil, water and biodiversity, enabling the efficient and profitable production of agricultural commodities.**

The face of agriculture and rural land is changing and the long-term viability of farming depends on an ability to adapt to change. Council recognises the importance of agriculture to the region and wants to see an innovative and adaptable farming community that can deal with threats such as pests, weeds and climate change and be able to take advantage of opportunities such as new farming techniques and market opportunities.

A growing awareness of agricultural-related environmental issues, such as sustainable land management, food miles and mining impacts on agricultural land, is spreading throughout the wider community. So too is an awareness that food security and eating clean and green food benefits us directly, and that supporting locally grown and value-added food is important to local and regional economies.

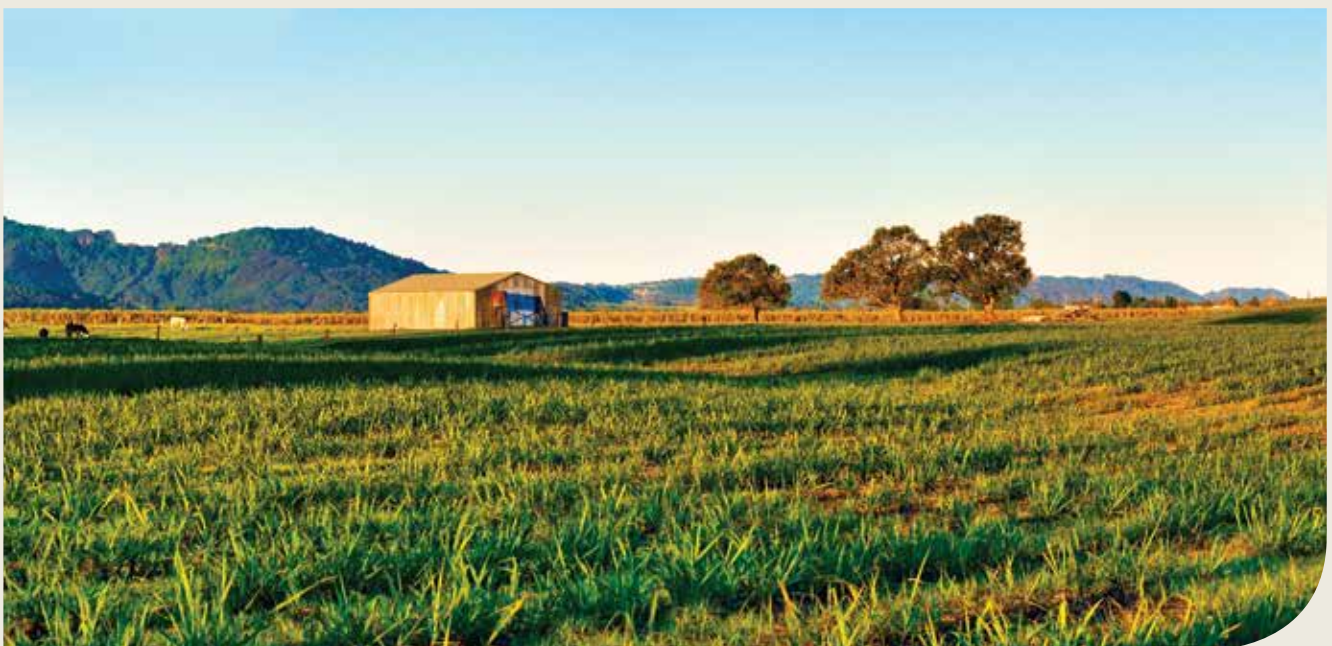
Our subtropical climate and fertile soils are suitable for growing a diversity of crops, including production outside peak times to fill niche markets. In 2011, agriculture generated almost \$58 million and at least 800 jobs in Tweed Shire, not to mention the flow-on effects for small businesses and other services that support agriculture.

Our aim is to foster sustainable behaviour and cultivate a vibrant and diverse farming community. To achieve this vision, we must continue to protect and enhance our farmland, support farmers to adopt flexible and restorative farming practices, continually engage with the community and educate about the benefits of local food.

This strategy promotes sustainable management of natural resources for primary production and identifies the need to integrate biodiversity management into the farming system. By implementing this strategy, farmers will encourage biodiverse ecosystems on their land, undertake biological cycling of wastes and nutrients and control pests and diseases with natural predators. By recognising synergies between productive ecosystems and landscape health, farmers will be better placed to respond to challenges, legislation amendments or the emergence of new competitors or production problems.

The future of the Tweed will depend upon an agricultural sector providing increased employment and career opportunities, economic stimulus and stewardship of the natural environment. Sustainable agriculture is good for the environment, profitable and socially responsible. It is the natural resource base that supports community wellbeing and a strong economy – healthy landscapes are productive landscapes.

**Katie Milne  
Tweed Mayor**



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**ABOUT THE  
TWEED  
SUSTAINABLE  
AGRICULTURE  
STRATEGY**

**The strategy has been guided by the sustainability principles of enhancing quality of life, social and intergenerational equity, maintaining and enhancing the environment, and enabling participation, while aligning with Council's Community Strategic Plan.**

This strategy provides a vision and framework for practical actions. It highlights key issues affecting farm sustainability and identifies practical steps to overcome existing and perceived future challenges. It defines Council's involvement with the farming sector and provides necessary direction towards achieving Council's corporate objectives.

The strategy guides Council's involvement with agricultural industries and individual Tweed producers. It provides a framework for sustainable agriculture based on effective resource management, community involvement and local food economies. It is an aspirational plan to bring the community, farmers, government researchers and others together to address challenges and take advantage of opportunities for improved prosperity and quality of life for Tweed residents, businesses and industry. Everyone can profit from the strategy's aspirations; after all, we all eat and we all benefit from a healthy environment.

**The strategy identifies actions that will increase the level of sustainable agriculture in the Tweed including:**


- o Conserving and restoring productivity and environmental values on farmland.
- o Remediating past adverse impacts on farmland and the community.
- o Responding to current and predicted pressures on agricultural land.
- o Building capacity through education and stakeholder engagement.
- o Leveraging funding for strategy delivery.

**The strategy consists of four outcomes:**

1. Prime agricultural land is preserved for sustainable primary production and land-use conflicts are avoided or managed.
2. Agricultural landscapes are farmed to maintain and enhance the natural resource base with minimal impacts on the environment.
3. Farmers are well informed and equipped with the skills, knowledge and networks required to farm sustainably.
4. Local sustainable agricultural production is valued by the community with widespread consumption of local products.

The strategy includes a series of key objectives and practical actions to realise these outcomes.

## VISION



**A sustainable agriculture system supported by a strong partnership between government, industries, farmers and the community, working together to boost the economic viability of farming and protection and enhancement of the natural resource base.**

**TWEED SHIRE'S  
AGRICULTURAL  
INDUSTRIES**





**Tweed's favourable subtropical climate, coastal location and range of soil types support a diversity of agriculture, dominated by sugarcane, beef and dairy, sweet potato and other horticulture. Some date back to the late 1800s. Some industries have declined in scale over recent decades, including bananas and dairy as a result of production issues, increased competition and deregulation. Tweed Shire also has a number of newer agricultural industries such as organic vegetables, agritourism and specialty products such as finger limes, dorper sheep and alpaca wool.**

Tweed's most important and productive agricultural land occurs on the rich red volcanic soils of the Cudgen plateau and the alluvial soils of the coastal floodplain, which support intensive horticulture and sugar cane respectively. Beyond these localities lie extensive areas that are predominantly grazed, while bananas are still grown on some of the elevated, steeper slopes. The remaining rural landscape supports agricultural activities and businesses of varying scales, including a resurgence of small fruit and vegetable growing and a diverse range of other industries including poultry, tea, coffee, tea tree and native bush foods.

Today, agriculture is conducted predominantly on small farms, with the majority of rural land holdings being less than 40 hectares.

**Tweed's agricultural industries have already made major steps towards sustainability:**

- The sugar industry using modified floodgates for tidal flushing and revegetating cane drains to manage acid sulfate soils, while controlling aquatic weeds and improving fish habitat.
- Reusing biosolids as a soil conditioner in broad acre farming.
- Dairies improving their effluent management to retain valuable nutrients, enhancing soil and pasture health and reducing the costs of applying inorganic fertilisers.
- Small vegetable producers joining forces to supply local customers with quality, nutritious organic food.
- Larger-scale vegetable producers adopting biological farming practices, using cover crops, organic soil amendments such as compost, and minimising tillage to improve productivity and reduce topsoil erosion.
- Beef producers fencing waterways to exclude cattle and using more strategic pasture management to maintain productive groundcover, reduce runoff and improve the health of their livestock.
- The banana industry rolling out best management practice guidelines and encouraging vegetated inter-row plantings for better soil health and erosion management.

#### VALUE OF AGRICULTURAL PRODUCTION

	2010/11	2005/06	
Commodity	\$	\$	% Change
Broadacre crops	17,139,070	16,240,674	5.5
Sugar cane	16,878,965	16,099,239	4.8
Soybeans	240,635	122,914	95.8
Other crops	19,470	18,521	5.1
Nurseries & cut flowers	8,174,306	12,477,426	-34.5
Nurseries	5,909,724	10,949,912	-46.0
Cut flowers	190,771	620,670	-69.3
Cultivated turf	2,073,810	906,843	56.3
Crops for hay	93,560	106,110	-11.8
Vegetables	7,244,937	3,956,525	83.1
Potatoes	695,797	171,251	306.3
Herbs	155,493	124,917	24.5
Tomatoes	152,033	698,745	-78.2
Other vegetables	6,241,614	2,474,177	152.3
Citrus Fruit	48,445	61,681	-21.5
Limes	19,855	11,428	73.7
Oranges	11,506	29,355	-60.8
Other citrus fruit	17,084	20,898	-18.3

	2010/11	2005/06	
Commodity	\$	\$	% Change
Other Fruit	11,230,474	12,328,807	-8.9
Bananas	5,304,073	9,454,588	-43.9
Passionfruit	2,824,841	0	0
Avocados	1,375,152	666,874	106.2
All other fruit	1,726,408	2,207,345	-21.8
Nuts	193,987	230,706	-15.9
Macadamia nuts	176,534	223,924	-21.2
Pecans	17,338	6,432	169.6
Milk	3,378,709	3,380,788	-0.1
Eggs	110,315	10,856	916.2
Livestock slaughterings	10,183,416	7,033,387	44.8
Cattle & calves	9,911,689	6,601,243	50.1
Pigs	231,032	429,212	-46.2
Poultry	21,878	64	34085.0
Other livestock	18,816	2,868	556.1
Total	57,814,625	55,835,679	3.5

**Source:** Australian Bureau of Statistics, Value of Agricultural Commodities Produced, Australia, 2010-11. Cat. No. 7503.0 <http://www.id.com.au>

# WHY A SUSTAINABLE AGRICULTURE STRATEGY IS NEEDED

**Local, national and international forces continue to bring rapid change in agriculture, related industries and communities. In Tweed Shire, the effects of urban development and rural land use change, environmental factors and an increasing population are all impacting on agriculture, farmland and rural communities. Conversely, great opportunities exist for local agriculture based on sustainable resource management.**

Council released its 10-year Community Strategic Plan in 2011, outlining the community's vision and directions for Tweed Shire from 2011 to 2021. Through the plan, residents emphasised the importance of agriculture: as an industry, as part of the community and as a defining element of the Tweed's beautiful landscapes. The Tweed Sustainable Agriculture Strategy identifies actions to deliver the Community Strategic Plan's objectives.

The need for strategic direction towards sustainable agriculture is recognised in other Council documents, including the Waste Management Strategy, Integrated Water Cycle Management

Strategy, Economic Development Strategy, Environmental Sustainability Prioritisation Strategy, and the Rural Land Strategy. The need for sustainability initiatives has been identified in industry plans, and state and commonwealth strategies and policies.

Council has a critical role to ensure sustainable agriculture benefits the economic and social wellbeing of producers, meets consumer needs and conserves our natural environment. Council will play a pivotal role as facilitator and leader, by providing strategic direction and the right policy environment and by fostering partnerships and collaboration between stakeholders. Council can bridge the gap between knowledge and implementation.

Significant community benefits can arise from implementing this strategy. It is in the community's interest to help farmers produce more sustainably, to avoid landscape degradation, soil and nutrient loss into waterways and impacts on biodiversity. It can increase food security, support for locally produced food and manage conflicts between farmers and the community.



# CHALLENGES & OPPORTUNITIES FOR SUSTAINABLE AGRICULTURE

**Industrialisation of agriculture during the past half century has created significant challenges for farmers, the environment and the sustainability of agriculture. Trends toward monoculture specialisation, heavy reliance on mechanisation, synthetic fertilisers and chemical inputs, and increases in economies of scale have directed farmers down a path of high productivity at the expense of the most important component of their farming enterprises – the natural environment.**

Conventional practices have left farmers increasingly dependent on a cycle of costly and sometimes ineffective inputs that don't provide longer-term solutions for sustained farm productivity and resilience. Such practices can create greater exposure to economic and environmental risk and leave farmers struggling to adequately invest in the future needs of their farms. Farmers often find it difficult to break the cycle and practice more sustainable agriculture if an immediate return on investment cannot be guaranteed.

Farmers face a range of environmental challenges that impact on their operations, including acid sulfate soils, water quality and availability, pests and weeds, floods and climate change. In many areas of the Tweed, poor or declining soil health is impacting on productivity and the future of agriculture.

Economic pressures pose challenges for Tweed landholders, particularly the viability of small-scale farms. A decline in terms of trade has increased on-farm costs, without corresponding improvements in profits. Farmers often find it difficult to compete with large-scale producers and the convenient food culture has left many farm businesses in a state of decline. Variable returns and a lack of capital for reinvestment stymie innovation and business growth and leave many farms reliant on supplementary off-farm income.

Agricultural land is under increasing pressure from development and has been lost from production because of cessation of farming, abandonment due to lost productivity and rural

residential expansion including rural lifestyle living. This can cause land use conflict and limit farm expansion. The price of farmland and high start-up costs can also be prohibitive for young or new farmers entering the agriculture sector, while poor returns and outlooks prevent succession of farms by younger generations.

Social and cultural factors also shape strong farming and food communities. A growing disconnect between consumers and the food system has devalued fresh local produce and caused an overreliance on convenience, out-of-season, packaged and processed foods.

Despite all the challenges there are numerous opportunities for farming and agribusiness in the Tweed. While much of its soils and farmland have degraded over time, there are opportunities to improve soil health, utilise natural processes and improve management to restore the farm's inherent, productive capabilities.

Freshness, product integrity and proximity to markets also create opportunities. There is a growing market for locally grown, good quality, organic and sustainably produced food, to be tapped into by growers and retailers. This is coupled with the Tweed's close proximity to large urban centres and the growing popularity of the area as a food and farm stay destination.

There are opportunities to improve networking and information exchange, to further educate and up-skill the farming community. The Tweed has outstanding examples of farmers practicing sustainable agriculture, transforming their farms into profitable local businesses. While some farmers and specific industries are struggling to remain viable, there are examples of successful farms based on diversification, value-adding and good land management. They demonstrate it is possible to provide a balanced environment, sustained yields, improved soil health and natural pest regulation through diversified agroecosystems and low-input technologies.

# **SUSTAINABLE AGRICULTURE FARMING FOR THE FUTURE**

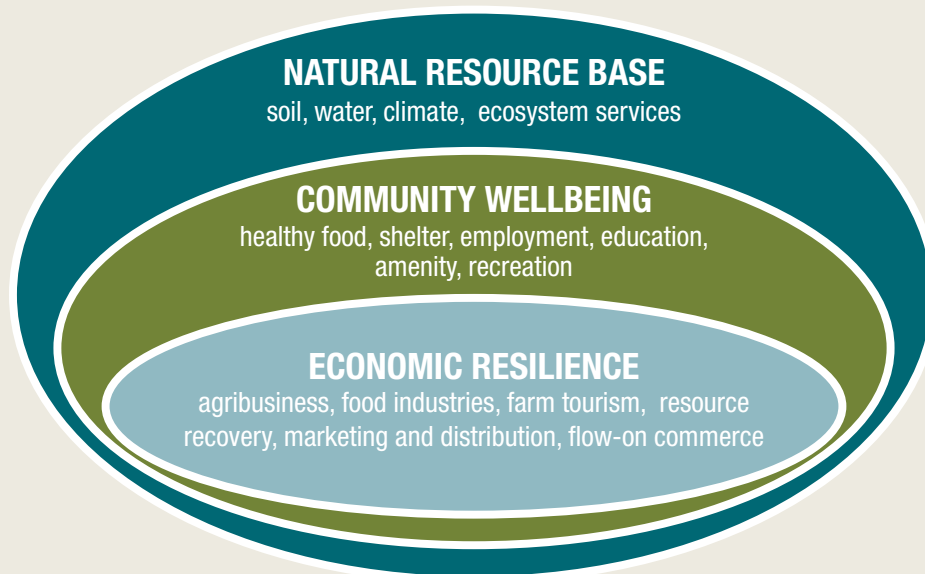


**Agriculture is integral to the Tweed's cultural identity and its rural landscapes. It is an important contributor to the local economy, with income from agriculture helping to sustain numerous family farms, support services and associated industries. Agriculture provides food for residents, while farmers are leading stewards of the environment. To continue and prosper, agriculture must sustain the natural resources it relies upon for productivity.**

Sustainability rests on the principle that we must meet the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable agriculture is farming within the land's capability, to conserve natural resources such as soil, water and biodiversity, enabling the efficient and profitable production of agricultural commodities.

Sustainable agriculture practices enable landholders to build farm resilience and financial viability. Farmers can pass on to future generations all the elements required to provide healthy food and agricultural products while ensuring ecosystem services are valued and maintained.

Sustainable agriculture is the product of farmers addressing their environmental, social and economic challenges. This holistic view incorporates wider-scale issues such as agricultural leadership, education and capacity building, along with cultural and social factors that affect the growing and eating of food and development of agricultural products (See Figure 1).



**Figure 1. A framework for sustainable agriculture.**

Understanding agriculture from an ecological perspective is a key step towards sustainability, particularly utilising natural processes to optimise cycling of nutrients, provide biological control of pests and diseases and help produce clean air and water.

Council, through this strategy, will help farmers conserve and enhance the productive capabilities of their farmland, promote environmentally sustainable agricultural practices and empower the community to support local food producers. It will help new farmers enter the sector by facilitating connections with older farmers, and providing the information they need to achieve economically viable and environmentally sustainable farming systems.

The Tweed has a number of progressive farmers who have adopted more sustainable approaches such as harvesting sugar cane green, converting to organic vegetable growing or integrating native vegetation into livestock production. Council will work with all farmers striving for sustainability and continual process improvement and will highlight the economic, social and environmental benefits of their practices.

# HOW THE STRATEGY WAS DEVELOPED

**This strategy draws on the knowledge and experiences of Tweed farmers, residents, business people and policy-makers to enhance sustainable farming in the Tweed Shire. Industry, community groups and state government agencies with knowledge and interest in agriculture have been central to developing this strategy.**

The need for a strategy was recognised in 2011 and issues affecting Tweed farmers have been analysed since then, initially

culminating in the release of a discussion paper in September 2011.

Since then, there has been a series of consultations including a shopfront, community forums and engagement with industry. More than 150 farmers, food businesses, agricultural leaders, industry bodies and residents have provided their input on directions for Tweed farming and food. This was followed up by an industry leaders forum and community-based survey in late 2015.

# WHAT THE COMMUNITY TOLD US



**The Tweed community has spoken passionately about key issues for farming and food. Some envision a future in which all Tweed residents have access to fresh, healthy food produced locally by a viable and fulfilled farming community, in ways that maintain and enhance the natural environment. They want to support local producers when it is convenient and avoid the long, highly centralised and environmentally costly supply chains currently dominating food distribution.**

Many respondents want agricultural land to remain intact and protected from further development, and to be farmed by a new generation of young farmers using the latest innovations and best practices. The community wants a reinvigorated and thriving agricultural sector dominated by small and family farmers who maintain stronger connections with the wider community. Others indicated a desire for opportunities to subdivide rural land to provide much needed capital and alternative accommodation options for workers and family looking to stay on the farm.

Rural landholders are seeking new ways to utilise their land and more innovative ways to sell to the community, including better policies for roadside stalls and more accessible farmers markets. Others are looking for new forms of share farming and cooperatives.

Tweed residents are concerned about a broad range of environmental and agricultural issues, including the burning

of sugar cane, nutrient and chemical runoff from agriculture, removing native vegetation and erosion caused by inappropriate agricultural activities in steep country and along waterways. Instead of extractive industries and urban-style development in rural areas, residents want environmentally sustainable forms of agriculture.

Agricultural producers highlighted their struggles to raise capital to invest in more sustainable practices, the pressures of rising land and input costs, management of pests and weeds, competition and the impact of local government policies on their ability to diversify and value-add. Farmers feel they are not being consulted about policy changes and development decisions that affect them. Many comments reflect the here and now, rather than longer-term challenges such as farm succession and climate change, reflecting the urgent and immediate needs of our farming community. Farmers and other Tweed residents want:

- on-farm ecosystems enhanced
- noxious and environmental weeds managed more effectively
- nutrient cycles enhanced
- soil, water and catchment health improved
- agricultural monocultures reduced and more on-farm diversity



# OUTCOMES AND ACTIONS

**This document provides strategic direction with four key outcomes, to be achieved through a series of actions. Each outcome relates to principles and priorities for sustainable agriculture, based on landscape regeneration and community involvement.**



## Outcome 1: Prime agricultural land is preserved for sustainable primary production and land-use conflicts are avoided or managed

Farmland is a precious resource that warrants protection for the use of current and future generations. Sustainable agriculture depends on the continued availability of agricultural land suitable for primary production. The Tweed Local Environmental Plan 2014 protects state and regionally

significant farmland from incompatible development, including subdivision for purposes not related to agriculture. The Northern Rivers Farmland Protection Project identified State and Regionally Significant Agricultural Land in 2005, with the intention of protecting important farmland from urban and rural residential development; most notably the Cudgen Plateau and cleared areas of the coastal floodplain. Biophysical Strategic Agricultural Land has been defined by the NSW Department of Planning and Environment, for the purposes of the Strategic Regional Land Use Policy, and receives similar protection.

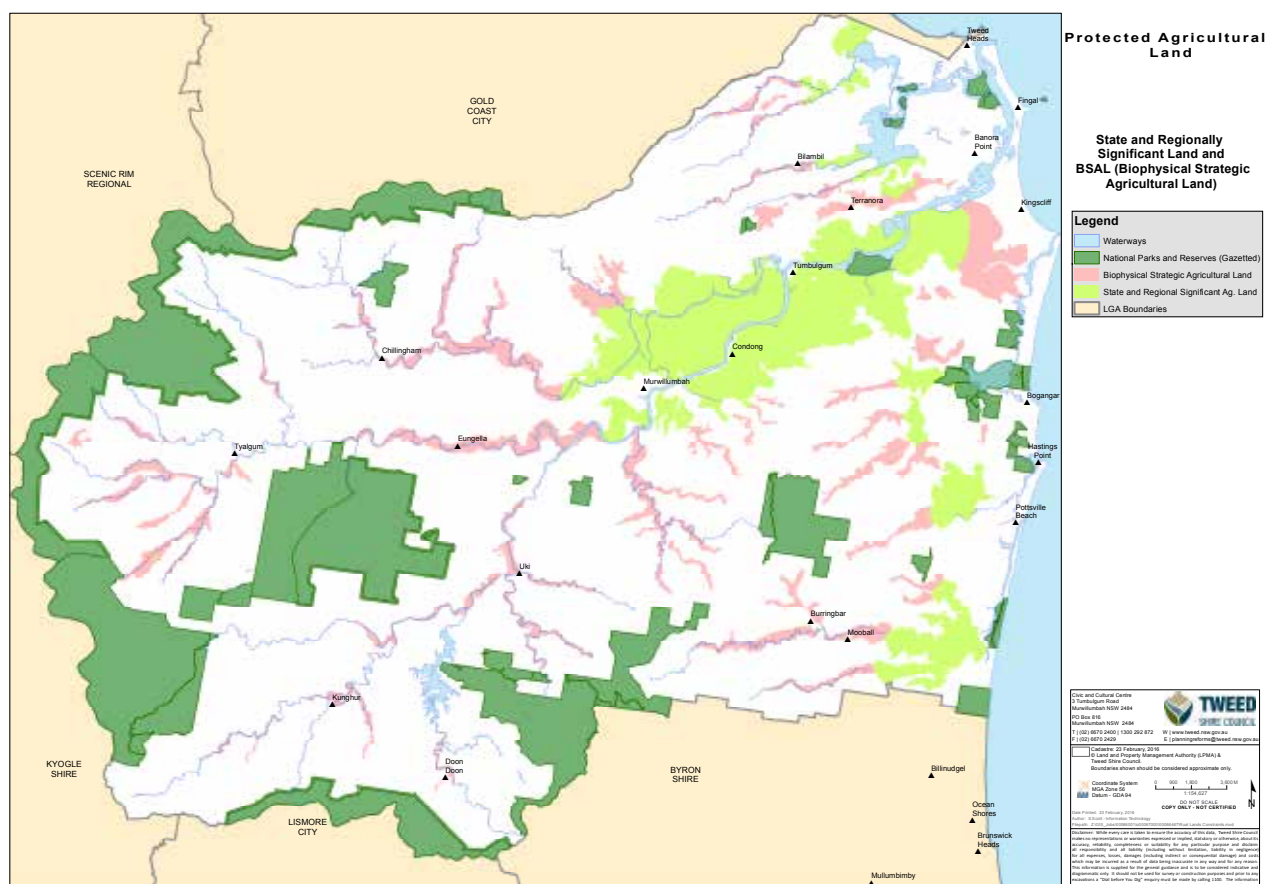


Figure 2. Prime agricultural land in the Tweed.

While these important areas are protected, there are other areas where sustainable and viable agriculture is occurring and could occur, even though they are not formally protected. Opportunities for sustainable agriculture must remain available for current and future generations, irrespective of current land condition or zoning.

Increasing demand for rural land for non-agricultural uses, including residential development, threaten the viability of Tweed agriculture. Strong civic leadership is vital to ensure rural residential development does not jeopardise the productive use of land and that sustainable agriculture and related uses are encouraged as part of planning proposals and developments.

### Objective 1.1 – Ensure the on-going protection of prime agricultural land

The rural landscape is highly fragmented as a result of past planning decisions. Most agriculture occurs on relatively small lots, within a mosaic of differing land uses and biophysical characteristics. Governments must ensure prime agricultural land is protected from inappropriate development that fragments the landscape and threatens the productive use of land and water.

#### Actions:

- Develop guidelines to ensure the development of prime agricultural land is appropriately evaluated consistent with current environmental planning instrument objectives.
- Periodically review farmland status to identify additional areas that warrant protection and prime agricultural land status.
- Ensure all available actions to prevent coal seam gas activities on prime agricultural land.

### Objective 1.2 – Minimise land use conflicts between agriculture and other land uses

Rural land is increasingly being purchased for lifestyle purposes which reduces opportunities for agriculture and has potential to generate land use conflicts between farmers and people new to rural areas. Similarly, new rural landholders are seeking opportunities to utilise their often small parcels of land for productive purposes, which can also lead to disagreements between landholders.

Conflict can result from misunderstandings about the realities of agricultural production and community expectations about how agriculture should be conducted. Council must give due consideration to the impacts of development on agriculture when assessing development applications and has a responsibility to ensure land use conflict is minimised.

#### Actions:

- Implement actions identified in the draft Rural Land Strategy to address conflicts at the rezoning and subdivision stage, including preparing a specific chapter in the DCP about land use conflict, buffers and setbacks to farmland.
- Increase the awareness, capacity and skill of lifestyle land owners to manage their land sustainably so that it does not degrade the environment or impact on adjacent farmers.
- Raise awareness and appreciation of rural activities, including agricultural practices, among new and existing landholders living close to agricultural production.
- Help industry adopt more sustainable agricultural practices.

### Objective 1.3 – Increase utilisation of prime agricultural land for agricultural purposes

Underutilisation of prime agricultural land because of speculative purchasing for potential future residential use inhibits sustainable development and progression of industries, limits potential for alternative productive uses and creates barriers for new farmers. The cost of rural land is often beyond the reach of people seeking a future in agriculture and development pressure can further increase the cost and decrease the availability of agricultural land. This restricts young people with new skills and ideas from contributing to a sustainable future for Tweed agriculture.

Sugar cane production is periodically affected by natural flooding, which is likely to worsen as the climate changes. The sugar industry has identified a need to improve existing drainage, consistent with environmental best practice, to better respond to flooding and improve farm productivity.

Landholders have expressed frustration about difficulties obtaining planning approvals for farm diversification, value-adding and intensification. The perceived regulatory burden on agricultural development deters many landholders from pursuing agritourism and other agribusiness opportunities.

#### Actions:

- Promote farming sharing, cooperatives, leasing and other initiatives to make productive and underutilised land available for sustainable agriculture.
- Assist floodplain-based industries to obtain funding to model floodplain hydrology, to improve understanding of land capability and help design improved drainage infrastructure consistent with environmental best practice.
- Help farmers understand the capability and the most suitable use of their land.
- Review planning procedures and 'red tape' in accordance with the draft Rural Land Strategy and Economic Development Strategy.

### Objective 1.4 – Ensure the protection of Aboriginal sites within agricultural landscapes

The Tweed has a rich cultural heritage of Indigenous management, utilisation and respect for land. Farmland containing Indigenous cultural heritage values requires ongoing protection and care.

#### Actions:

- Provide workshops and information about cultural heritage and landowners obligations under relevant Acts and guidelines.
- Ensure Aboriginal cultural heritage is protected when assessing new rural developments.

## Outcome 2: Agricultural landscapes are farmed to maintain and enhance the natural resource base with minimal impacts on the environment

A fundamental aim of this strategy is to ensure natural assets and key ecosystem services are maintained and improved to sustain primary production and maintain and enhance the natural resource base. Today's farmer must focus on both short-term productivity and the long-term security of their natural resource assets, to remain viable.

The future for sustainable Tweed agriculture is development and adoption of new production methods, more efficient use of inputs, and increased use of natural processes. The challenge lies in determining the most suitable approaches for each farmer's situation and giving farmers the tools they need to transition to improved farming systems.

### Objective 2.1 – Remediate past agricultural land use impacts

**Previous agricultural activities, many of which were promoted by agricultural extension have left many landscapes unproductive and in need of urgent remediation. Opportunities exist for significant productivity gains and improved environmental outcomes through rehabilitation of degraded land.**

Organic carbon is the basis of healthy and productive soils and has declined over time, impacting on the fertility and productivity of many Tweed landscapes. Soil organic carbon levels need to increase to improve soil fertility, increase water infiltration, prevent soil erosion and improve resilience to drought. Agricultural soils also have an important role to play in capturing and storing atmospheric carbon to better regulate climate.

#### Actions:

- Identify, monitor and remediate acid sulfate soil hotspots on agricultural land using best practice, in collaboration with affected landowners and industry.
- Explore regulatory options where there is significant environmental harm from activities and an unwillingness of landholders to work collaboratively to address the problem.
- Support and conduct soil conservation projects on farmland in priority catchments.

- Help farmers sequester carbon emissions in soils and vegetation by accessing information, technology and funding to improve land management.
- Fence waterways where practical to reduce manure input and damage by stock, provide off-stream water and revegetate banks.

### Objective 2.2 – Minimise the loss of soil, nutrients, pesticides and other pollutants to the environment

**Healthy soils are essential for good plant growth, increased crop yields, livestock carrying capacity and reducing pest and disease problems. Good soil structure increases water and nutrient infiltration and retention, making farms more resilient to drought and reducing run-off into waterways. Farms lose nutrients through natural processes such as denitrification, through soil cultivation, effluent from livestock, farm run-off and removal of animals and crops. There is potential to improve on-farm retention and re-use of nutrients, particularly in intensive industries such as dairying. All farms have organic waste that could be recycled back into the soil for productive agriculture use.**

Many agricultural industries have best management guidelines to help producers improve the long-term profitability of their enterprise and minimise their environmental footprint. Best management practices often improve soil and ecosystem health at no additional cost to producers. Uptake of industry best practice in the Tweed is not well understood, though there is an identified need to assist producers to overcome financial, technical and social barriers to change.



#### Actions:

- Determine priorities for on-ground works by monitoring the impacts of farm management practices on water quality and soil health in various catchments.
- Work with industry to benchmark existing management practices for sugar cane, dairy, beef, bananas, vegetables and other agricultural enterprises.
- Provide technical advice and support and conduct on-ground works to address low productivity and degradation processes caused by agricultural activities.
- Support farmers to reduce their greenhouse gas emissions from agricultural enterprises, including reducing reliance on non-renewable resources and improved waste management systems.
- Support research, monitoring and demonstration projects showcasing the environmental, social and economic benefits and costs of land management practices.
- Promote and facilitate uptake of best practice effluent management and reuse on dairies, piggeries and other intensive animal production systems.
- Promote practices that increase nutrient retention and recycling on-farm and reduce the loss of nutrients and organic carbon to the environment, including crop rotations, green cane harvesting, stubble retention, sustainable pasture management, livestock effluent re-use and composting.
- Help farmers improve fertiliser and chemical use by assisting them to develop nutrient budgets and integrated pest management programs.
- Promote dung beetle population management in grazing land alongside off-stream water provision and revegetation of creeks and river banks.

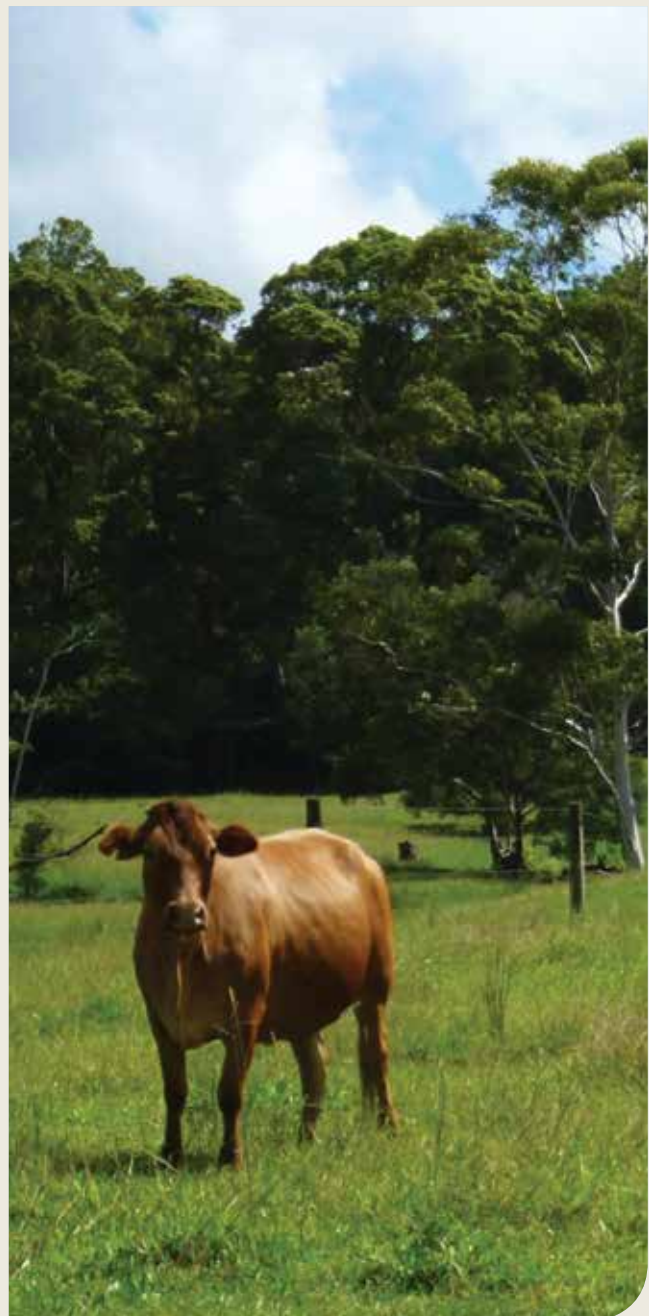
### Objective 2.3 – Increase utilisation of natural processes and biodiversity in productive, sustainable farming systems

**Farming systems that utilise natural processes rather than compete with them are likely to be the most profitable, environmentally friendly and most resilient to new and emerging threats.**

Reliance on finite off-farm inputs is a risk. Modern farming practices rely on fossil fuel-based energy and agrichemicals and are vulnerable to decreasing availability and effectiveness and increasing costs of these products. Sustainable agriculture practices can reduce reliance on off-farm inputs and make greater use of existing nutrient cycling and pest control processes provided free of charge by the natural environment.

Landholders and farmers can realise the benefits of good riparian land management, understand the regulatory requirements for activities in waterways and on riparian land and recognise the benefits of biodiversity and its contribution to sustainable and profitable farming.

Farmers are responsible for managing significant areas of land and need the skills and support to sustain the natural areas the community values and depends on for quality of life. Building farmers' capacity in natural resource management is essential to ensure agricultural systems are highly productive and environmentally sustainable.



**Actions:**

- Conduct workshops, field days and training sessions to give landholders strategies to enhance biodiversity and farm productivity and utilise natural processes.
- Research and showcase local projects that integrate biodiversity and agriculture.
- Promote existing support mechanisms for riparian management and biodiversity conservation (i.e. River Health Grants, Biodiversity Grants, Land for Wildlife).
- Identify the barriers to the uptake of sustainability incentive programs such as Biodiversity and River Health Grants.
- Develop and implement an incentive program for farmers who protect and enhance environmental assets and farm with minimal environmental impact.

**Objective 2.4 – Increase utilisation of recoverable resources**

**Waste is increasingly recognised as a resource that can be utilised for better productivity. Non-traditional nutrient sources such as municipal green waste and biosolids are largely underutilised and expensive to dispose of. Used correctly, they are ideal sources of organic matter and nutrients to restore agricultural soil health and reduce farm input costs.**

**Actions:**

- Enable agricultural use of soil ameliorants derived from the Tweed's recoverable resources, including food organics, green waste and biosolids.
- Increase agricultural demand for local, carbon-rich soil amendments through advocacy and demonstration.
- Identify opportunities to minimise, reuse, recycle and divert farm waste from landfill.

**Objective 2.5 – Reduce impacts from predatory pest animals and weeds**

**Pest animals and weeds have the potential to harm livestock and native fauna, increase soil and stream bank erosion and inhibit restoration of farmland. Pest animals and weeds also cost landholders time and money to manage and impact on farm productivity. Landholders are obliged to control noxious weeds and listed pests and will benefit from training and support to assist them with these activities.**

**Actions:**

- Build farmers' capacity to identify and control predatory pest animals and noxious and environmental weeds by participating in hands-on training programs and by developing education and awareness raising materials.

## Outcome 3: Farmers are well informed and equipped with the skills, knowledge and networks required to farm sustainably

Successful farming requires a diverse skill set with expertise in everything from day-to-day farming to business planning, risk management and product marketing. Just as important is an understanding of industry research and development findings and the latest technology and innovations. Such knowledge and skills are essential to enable farming businesses to remain viable in the face of local, national and global pressures.

Tweed farm businesses are often small, making it difficult for individual farmers to dedicate time to improve their skills and knowledge and keep up with industry advances and developments. Many producers are not supported by overarching industry bodies that provide technical information and extension support. Many farmers rely on informal networks to maintain their knowledge base. It is important these land managers are given the technical support they need to increase the economic position and environmental sustainability of their enterprises.

Agricultural producers benefit from a collaborative environment and use networks to share information, facilitate research and development, investigate opportunities such as cooperatives, and provide a collective voice to influence policy makers and foster change. Networks and partnerships provide opportunities

to share alternatives and progressive or new methods that otherwise might not be contemplated. This strategy will increase accessibility to information by promoting and supporting information sharing networks.

### Objective 3.1 – Support the development and succession of a skilled agricultural workforce

Careers in farming and agriculture lack popularity, causing a range of skill shortages that impact on farmers. The average age of farmers in the Tweed is increasing because younger generations are leaving the farm to pursue other opportunities.

#### Actions:

- Provide training opportunities for students and volunteers in delivering practical on-ground projects.
- Support and promote educational opportunities for existing and aspiring agriculturalists and land managers.
- Partner with local schools, tertiary and vocational organisations to provide technical and educational support in sustainable agriculture.
- Support initiatives that enable young farmers to access land, including start-up farm programs, a register of landholders requiring share farmers, and connecting young and aspiring farmers with holders of rural land.
- Capture and disseminate the knowledge, skills and stories of our industry champions and progressive farm elders to younger generations.



### Objective 3.2 – Improve farm planning and preparedness for climate change and other threats

Farm planning is an essential component of sustainable agriculture. It involves farm design and management based on environmental, financial and social considerations. Planning requires self-reflection to identify individual farm aspirations, resource challenges and opportunities and farmers' strengths and weaknesses to achieve longer-term production goals. Critical components of farm planning include identifying natural resources and management issues and integrating agricultural and ecological systems, monitoring, adaptation, risk analysis and production requirements and farming within the land's biophysical capabilities. Understanding and preparing for the potential risks of climate change and climate change policy – including climatic variability, biosecurity risks and fluctuations in non-renewable energy costs – are important for farm planning.

#### Actions:

- Support the development and implementation of whole-farm management plans based on sustainable agriculture principles.
- Assist with biosecurity planning and adoption of on-farm biosecurity measures.
- Conduct regular climate change and energy forums for farmers, including climate conditions, carbon markets, farm management planning, energy efficiency and renewable energy.
- Provide advice and promote sustainable and cost-effective use of energy, including uptake of energy efficiency initiatives and renewable energy sources.
- Support research and development to better understand the local rate of change and adaptation options associated with the risk of climate change.
- Integrate farms to biodiversity corridor enhancement projects to provide resilience and adaptation to climate change impacts.
- Help farmers understand the inherent productive capability of their land and make the right farming choices, through farm extension and provision of advice.

### Objective 3.3 – Improve collaboration and information exchange within and between industries and agencies

The gradual decline in government provision of extension services has left many producers reluctant to seek advice on a fee-for-service basis. Many farmers lack an industry support body while research effort is often directed towards larger production areas outside the Tweed. Local farmers

rely on a range of information sources such as industry and government agencies, literature including the internet and, importantly, from other farmers in their networks. Farmers require up-to-date and relevant information to improve their operations and there is scope for greater information exchange and resource sharing between all stakeholders. Indigenous knowledge of land management, including farming, is underutilised and there is potential for Indigenous partnerships in sustainable agriculture.

#### Actions:

- Establish a Sustainable Agriculture Roundtable to ensure collaboration on sustainable agriculture initiatives.
- Develop and share knowledge through industry events, farm field days, and community meetings.
- Inform farmers of the latest industry and landholder support schemes and grants.
- Provide opportunities for Indigenous partnerships in sustainable agriculture, including Indigenous farm programs.
- Recognise and promote Aboriginal culture and farming practices.
- Foster leadership and industry champions to drive the paradigm shift from conventional to sustainable farming.
- Ensure the strategic outcomes and objectives of this strategy are recognised and integrated into relevant local, state and commonwealth policies and strategies.



## Outcome 4: Local sustainable agricultural production is valued by the community with widespread consumption of local products

**Food is a powerful tool for bringing communities together and consumers closer to the producer. However, most food consumers remain disconnected from the realities of food production, which leaves farming detached from the broader community and the environment. There is a need to reconnect farmers with consumers, with what they eat and how it is produced. While most people no longer have direct links to farming, they all have direct links to food.**

Our region boasts a steadily growing group of 'food citizens' looking for sustainably produced fresh, local produce. In particular, there is growing demand for organic, in-season products, opening up business opportunities for agricultural producers. Increasingly, consumers demand assurances of environmental stewardship, animal welfare and social equity along the supply chain – and they are often prepared to pay a premium price, empowering producers to make more sustainable choices.

The Tweed is well positioned geographically to service the large, culturally diverse and expanding consumer needs in northern NSW and south east Queensland. However, farmers will only focus on growing crops for local consumption when there is

a demand and there is an efficient supply chain. Making the Tweed a food destination and developing a brand based on the locality are emerging as important activities to reinvigorate the agricultural sector. Generating demand for local product, ensuring its supply and distribution and providing sufficient retail options are challenges that require collaboration and commitment from a number of stakeholders.

### Objective 4.1 – Increase agribusiness opportunities

**Diversification and value-adding can provide significant economic benefits to farm businesses, industry and the community. The regulatory environment around farming and food, particularly the establishment of value-adding and farm diversification enterprises, can be a difficult, time consuming and costly process for landholders. Local government and multiple state agencies have different roles and responsibilities in accordance with state legislation and existing council policies, including many which are important and not easily changed. However, there is a need to review current local government policies to determine scope to reduce the regulatory burden on business.**

Strong civic leadership can provide a path through an often complex array of policies, guidelines and approval processes. Council can partner with other agencies, organisations and industries to facilitate, support and encourage such development within existing policy constraints, effectively guiding rural landholders and food entrepreneurs through the regulatory regime.





**Actions:**

- Implement actions identified in the Economic Development Strategy to build a resilient agricultural sector, including a review of 'red tape', investigating development of a food processing cluster, and investigate and further promote opportunities in organics.
- Facilitate, support and encourage vertical integration by providing information and support and highlighting agricultural diversification examples, trends, innovations and opportunities with potential for local application.
- Better evaluate local agriculture by using farm health surveys and reporting on economic, environmental and social circumstances of the agricultural sector.
- Work with industry to attract research and development funding and investment to enhance productivity and scope for employment growth.
- Hold regular agribusiness forums to give local producers and retailers the latest advice and market opportunities and to showcase local success stories.



## Objective 4.2 – Increase community demand, access to and consumption of local sustainably produced food.

**Increased consumption of local produce is a great way to help growers improve their viability and sustainability credentials and reduce consumers' ecological footprint.**

Direct sale options such as farmers markets, farm and roadside stalls, food co-ops, community supported agriculture or box schemes can provide affordable, fresh local food, while providing better returns to farmers. Farmers markets are growing in popularity and stock an increasing range of fresh, locally grown and manufactured products, but they are not well located or operated at times convenient to most people in the Tweed.

There is a need to continue to support the growth of farmers markets, farm and roadside stalls and ensure more local products are stocked in retail outlets, to improve consumer access to local food. There are opportunities for smaller communities in the Tweed to initiate farmers markets as a way to attract local business and community involvement. Equally, there might be opportunities for smaller towns and villages to capitalise further on the food tourism industry, such as self-drive culinary tours, tasting sheds and farm stays.

Brands are important marketing tools and opportunities abound for branding of local products. Many consumers want

to understand the origins of their food and have indicated a willingness to buy more products branded as locally grown. Work is already underway through Destination Tweed and the Tweed Economic Development Strategy to establish a unique local brand. Such initiatives will require on-going support and involvement from all stakeholders:

### Actions:

- Help farmers promote and market local products, including support to develop local food marketing and branding initiatives, strengthening links between local growers and local retailers and identifying and removing impediments to local food marketing, distribution and sale.
- Support food initiatives that showcase local, sustainably produced foods and other agricultural products.
- Promote direct sale options such as farmers markets, farm and roadside stalls, marketing alliances, cooperatives and community supported agricultural schemes.
- Develop a Tweed food/farm gate trail to showcase and give the community and visitors easy access to local products.
- Collaborate on local and regional food initiatives involving producers, value adders, retailers, consumers and other agencies to address supply chain issues such as the distribution of local produce to local consumers, and food marketing and branding.

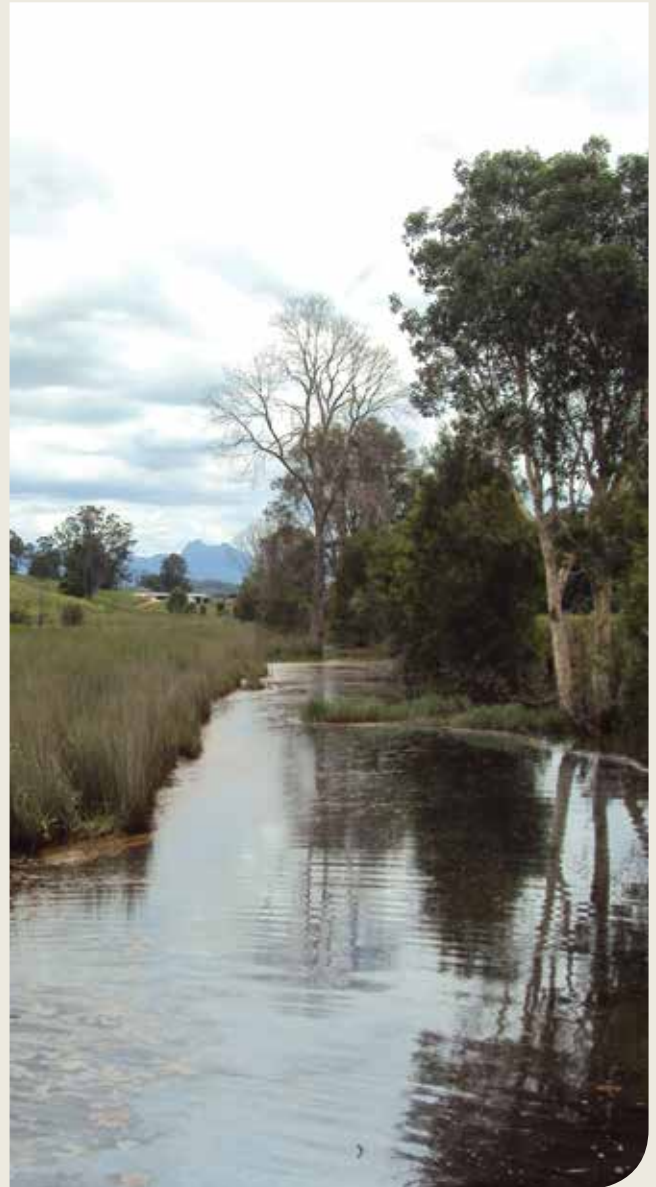


### Objective 4.3 – Increase community appreciation of local agriculture

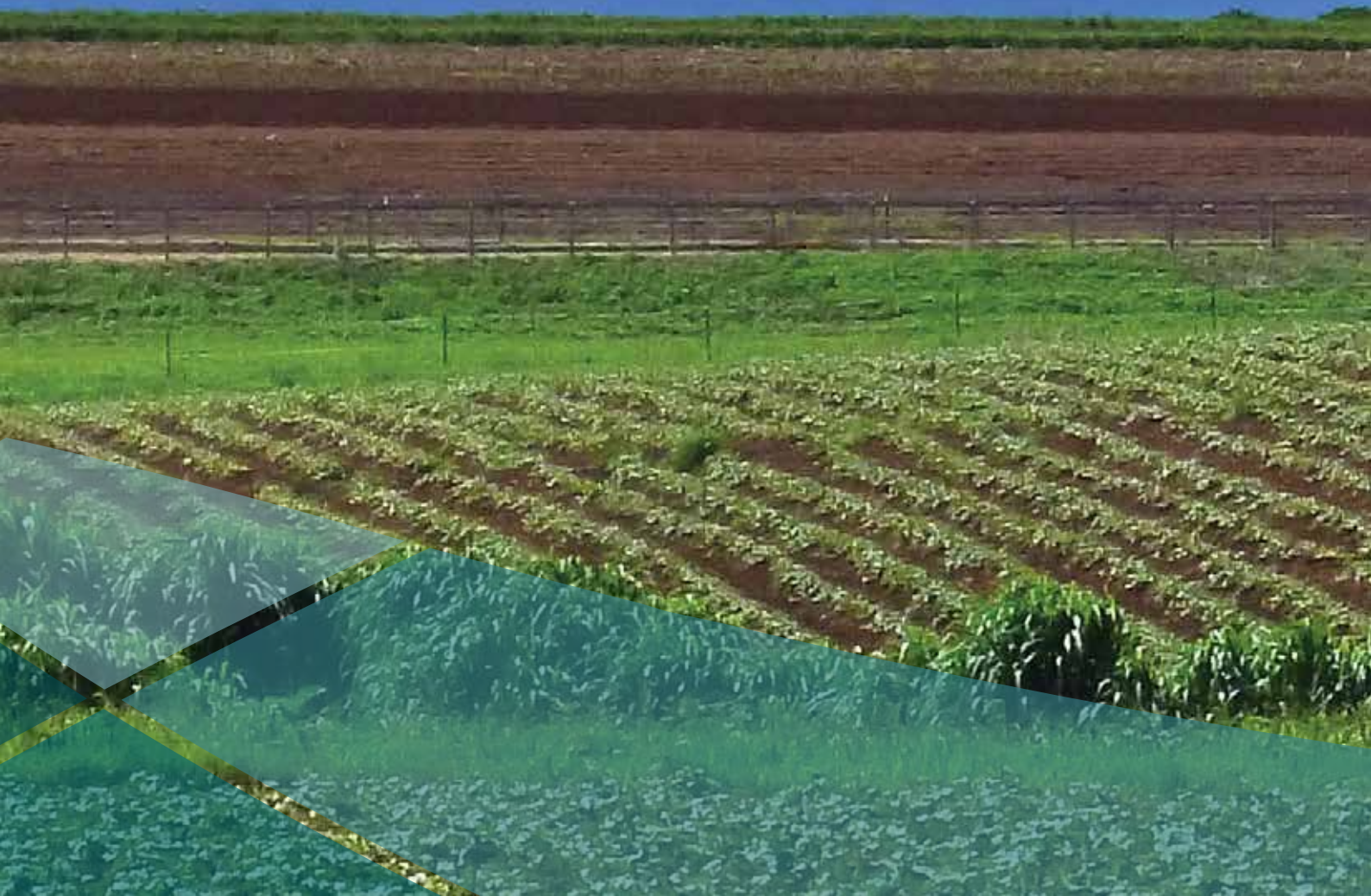
Consumers expect fresh, quality product all year round but lack appreciation for or understanding of agricultural production and the ecological consequences of their food choices. Community understanding of the different aspects of the local food system is required, including production practices, seasonal availability and environmental impacts, to foster responsible local consumption and appreciation for sustainable practice.

#### Actions:

- Promote the benefits of local agricultural industries, their products, services and contribution to the community through farm open days, participation in community events and by supporting community gardens, edible streetscapes and other urban sustainability initiatives.
- Help establish and showcase sustainable farms, progressive farmers and best management practices by publishing case studies and holding farm field days and other events.
- Help farmers achieve environmental and stewardship credentials through environmental management systems and assurance schemes.
- Acknowledge sustainable agriculture operators through a sustainable agriculture award program.
- Celebrate past, present and future sustainable agriculture practices and local farming stories in the Tweed Regional Museum and Sustainable Living Centre.
- Raise awareness of sustainable food production and local food purchasing through school tours and visits and provide links to training schemes and local employment opportunities.



# **DELIVERING THE SUSTAINABLE AGRICULTURE STRATEGY**



**Implementation of the strategy will be led by Council in collaboration with industry, other government and non-government agencies and the community over a five-year period (2016 – 2021). Realising the vision is a shared responsibility and does not rest on the efforts of a select group of stakeholders. Successful implementation will require financial and in-kind resources from Council, industry, landholders and community groups with an interest in the strategic actions.**

**The Tweed Sustainable Agriculture Strategy will be delivered through a combination of:**

- Research and development.
- On-ground works.
- Technical support.
- Education.
- Policy development and implementation.
- Monitoring, evaluation and reporting.

One of the actions identified in this strategy is the formation of a Sustainable Agriculture Roundtable, comprising a diverse range of stakeholders with an interest in sustainable agriculture initiatives in the Tweed. A Sustainable Agriculture Action Plan will be prepared annually, in consultation with the Sustainable Agriculture Roundtable, to guide this strategy's implementation, taking into account current priorities, resources and funding available for implementation. The Action Plan will include costings, anticipated sources of funding and responsibilities for the priority actions.

**Action:**

- Prepare an annual Sustainable Agriculture Action Plan to guide strategy implementation.



# HOW WE WILL MEASURE & REPORT ON PROGRESS



**Monitoring and evaluating the strategy's implementation is important to ensure resources are directed towards priority actions and the intended outcomes are realised. An annual report will be prepared to inform the community about implementation of the strategy. The annual report will focus on progress towards implementing the various strategic actions, rather than attempting to measure success according to a series of key indicators. Such broad indicators will not be measurable over a short time frame and are more suited to review after a 5 or 10-year period. Annual reporting and review of the Sustainable Agriculture Action Plan will enable adaptive management and feedback from the roundtable and other community members, to ensure the strategy remains relevant and capable of addressing the farming community's needs.**

**Key indicators of success include:**

- Producers committed to long-term sustainability by embracing change and continually updating techniques and practices to increase productivity and ensure they farm within the land's capability.
- Farmers recognise and greater utilise natural processes in their production systems, effectively reducing the need for costly inputs and being better placed to withstand the shocks of extreme weather events and other environmental pressures.
- Increased use of previously underutilised land for agricultural production.

- Growth in agricultural employment, financial turnover and investment.
- Sustainable agricultural production is supported by the community, which appreciates the value of farming in the Tweed for its tourism and job opportunities and its contribution to the character of the rural landscape.
- The community buying and creating greater demand for locally produced food.
- Ongoing and increased farmer uptake of council incentive programs.

Actions in the strategy include improving the local knowledge base: to generate a better understanding of agricultural land uses, current management practices and the economic and social position of our farmers. This will help define a baseline to determine progress towards the strategic objectives and outcomes.

**Action:**

- Prepare an annual report highlighting progress with strategy implementation.
- Review the strategy, its aims, objectives and outcomes after five years of implementation.





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