

Strategic Plan for Sustainable Agriculture

Sydney region



NSW Agriculture

ACRONYMS

ABARE	Australian Bureau of Agricultural Resource Economics
ABS	Australian Bureau of Statistics
BMP	Best Management Practice
CMC	Catchment Management Committee
DCP	Development Control Plan
DLWC	Department of Land & Water Conservation
DUAP	Department of Urban Affairs & Planning
EPA	Environment Protection Authority
ESD	Ecologically Sustainable Development
GMR	Greater Metropolitan Region
GWSEDB	Greater Western Sydney Economic Development Board
HNCMT	Hawkesbury Nepean Catchment Management Trust
LEP	Local Environmental Plan
LG	Local Government
LGA	Local Government Area
MACROC	Macarthur Regional Organisation of Councils
NASAA	National Association for Sustainable Agriculture Australia
PEP	Protection of Environment Policy
REP	Regional Environmental Plan
SEPP	State Environmental Planning Policy
SREP 20	Sydney Regional Environmental Plan No. 20, Hawkesbury-Nepean River
TCM	Total Catchment Management
UWS	University of Western Sydney

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FOREWORD

This document, the *Strategic Plan for sustainable agriculture—Sydney region*, is the result of a whole of government and community approach to dealing with the important issue of determining the role of sustainable agriculture in the Sydney region and realising the potential outcomes of that role.



The Hon. Richard Amery, Minister for Agriculture and Minister for Land & Water Conservation, opening the community workshop in May 1996.

In August 1995 I released an Issues Paper for public discussion titled *Sustainable agriculture in the Sydney Basin*. The issues in the paper had been determined through an education and awareness program conducted by NSW Agriculture during the previous two years. A summary of the responses to that Issues Paper was provided to all participants of a community workshop, at the University of Western Sydney – Hawkesbury, which I officially opened in May 1996.

The objectives of the workshop were first to establish the principles that would enable agriculture to become sustainable, and second to use those principles to determine the priority order of the issues in the Strategic Plan. Seventy-six people participated representing environmental, land development, farming, local government, state government, economic development and social interests.

In June 1997 I launched the *Sustainable agriculture in the Sydney region*, draft Strategic Plan. More than 2800 copies of that draft Plan were distributed to interested individuals, groups and organisations in both the private and public sectors. The responses to that draft have been taken into consideration and changes made to produce the *Strategic Plan for sustainable agriculture—Sydney region*. My involvement in the process reflects my personal commitment, and that of the Government, to sustainable agricultural practices, improved land and water resources and good land use planning.

Sydney is under an increasing spotlight both nationally and internationally. Government and non-government institutions are planning for its future. The community consultation process has validated sustainable agriculture and associated lands as credible and worthy components of the mixed pattern of human activity and land use by recognising its potential to contribute a great deal to the socio-economic and environmental sustainability of the Sydney region. This is illustrated by the increasing recognition of these components and their benefits in planning documents such as the Metropolitan Strategy and the Central Coast Regional Planning Strategy.

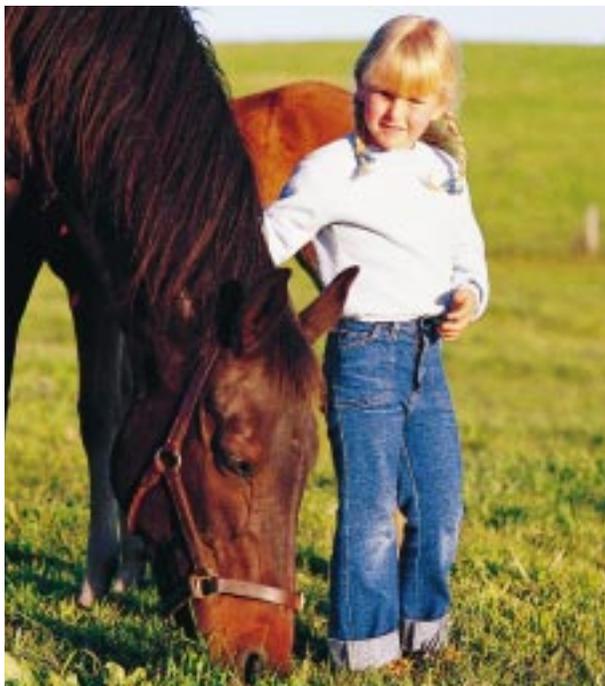
Finally I would like to commend those people, groups and organisations who have participated in the development of this Strategic Plan. In particular I wish to thank the members of the Working Group who have given much time and effort to ensuring that the views of the community have been captured and expressed in the document.

A handwritten signature in black ink, appearing to read 'R. Amery'.

The Hon. Richard Amery MP
Minister for Agriculture and Minister for Land and Water Conservation
11.5.98.

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Agricultural lands provide an opportunity for people of all ages to enjoy animals and associated leisure activities.

THE VISION

- Sustainable agriculture in the Sydney region.
- Recognition of agriculture as a part of the lifestyle in the Greater Metropolitan Region.
- Recognition of agriculture's significant environmental, economic and social benefits and opportunities.

INTRODUCTION

This Strategic Plan is the result of a process of community consultation. The words you read here were prepared by a Working Group facilitated by NSW Agriculture. Twenty-two representatives from many sectors of the community, including state and local government, agricultural industry, growers, catchment management committees/trusts, environment groups and UWS were actively involved in the Working Group.

The Working Group was guided by the community through 53 submissions to an Issues Paper on sustainable agriculture in the Sydney region; the attendance of 76 delegates at a community workshop; and the responses received to the Draft Strategic Plan, of which more than 2800 copies were distributed.

A list of the members of the Working Group appear in Appendix 1 of this booklet.

This Strategic Plan is about 'sustainable agriculture'; but what exactly do we mean by this term? For the purposes of this Strategic Plan sustainable agriculture could be considered as: *Agriculture that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.*

Agriculture must operate within the capacity of available resources to better secure the sector's

long-term viability. To be ecologically sustainable, agriculture must:

- respond to consumer needs for food and fibre products which are healthy and of high quality;
- take full account of the costs of production, including environmental costs, with the ultimate objective that the pricing reflects these costs;
- protect and restore the natural resource base on which agriculture depends and prevent adverse off-site impacts on the environment and any other sector of the community; and
- be financially viable.



A large investment in buildings and equipment (infrastructure) is a part of some forms of intensive agriculture, such as the cut flower industry.

COMMUNITY CONSULTATION

From the beginning of this century NSW Agriculture has provided research, advisory, and regulatory services which have contributed toward making the Sydney region one of the most productive in the State. The Department still maintains these traditional services.

Early in 1992 NSW Agriculture began to respond to the changing social and environmental pressures, and community needs in the Sydney region. To help growers and their industries meet these needs, the Department has facilitated the development of this Strategic Plan.

A process of consultation with the community has resulted in the development of:

- An Issues Paper for sustainable agriculture in the Sydney region which was released by the Hon. Richard Amery, Minister for Agriculture,

in August 1995. These issues were part of the outcomes of an education/awareness workshop ‘Agriculture and the Environment’ held at Tocal Agricultural College in July 1993.

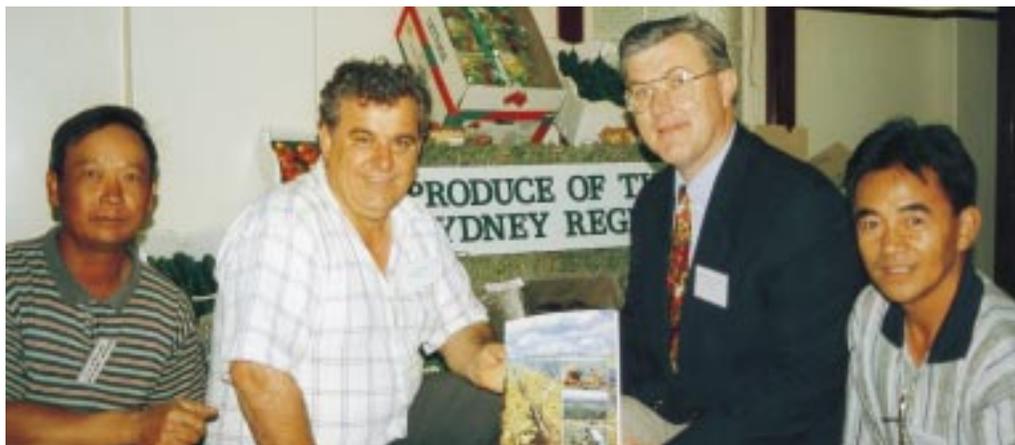
- A Working Group (see Appendix 1) whose membership included a wide range of stakeholders and representatives from the community;
- A summary of the 54 responses to the Issues Paper provided a working paper for a community workshop held in May 1996.
- A draft Strategic Plan for sustainable agriculture in the Sydney region which was released by the Minister for Agriculture in June 1997 for public comment. This document was based on the prioritised issues arising from the May 1996 workshop.

- This Strategic Plan for sustainable agriculture—Sydney region. This is a community document, the development of which was facilitated by NSW Agriculture. A number of responses to the draft Strategic Plan stated the importance of ongoing community consultation so that the Plan is relevant to the current situation at all times.

In this context NSW Agriculture will maintain its facilitative role and work with the community and authorities to develop processes and mechanisms that will enable the document to reflect the current state of sustainable agriculture in the Sydney region including indicators of sustainability. One of the options to achieve this is the establishment of a partnership network of people, groups and organisations who have the necessary interest and expertise.

Action plans identifying clear objectives, time frames, milestones and responsibilities will need to be developed and implemented by NSW Agriculture, industry and other stakeholders in order to achieve the Vision promoted by the Strategic Plan.

Mechanisms will also be developed so that the general community can register its thoughts not only on the Strategic Plan but also for the actions for specific issues.



The Hon. Richard Amery, Minister for Agriculture and Minister for Land & Water Conservation, with growers when he released the *Best Management Guidelines for growing vegetables* in November 1997.



OTHER STRATEGIC PLANNING INITIATIVES

The working group is aware of a number of other Strategic Planning initiatives operating in the Sydney region. The following are some of the key activities being undertaken by government and the community.

- Metropolitan Strategy
- Sydney Regional Environmental Plan No. 20 Hawkesbury Nepean River (No 2 – 1997)
- The Action Plan of the Hawkesbury-Nepean Environmental Planning Strategy, 1997
- Team West Final Project Report 1997
- Draft Hawkesbury-Nepean Catchment Strategy
- Greater Western Sydney Planning & Transport Review and Priorities Study
- Draft Report of the Healthy Rivers Commission Independent Inquiry into the Hawkesbury Nepean River System, 1997
- Central Coast Agriculture Development Plan prepared by the Agriculture Group of the Central Coast Regional Development Corporation Inc.

(Left) Many farmers in the Sydney region are from a non-English speaking background. A Premier's Taskforce was established to determine the needs of this important agricultural group.

(Right) Free range egg production is increasing in the Sydney region in response to changing consumer preferences.

- Central Coast Regional Planning Strategy.

This Strategic Plan has been developed to complement these other initiatives, and it has been formally incorporated into the 'Enhancing Environmental Management' Action Plan of the Metropolitan Strategy.



THE STRATEGIC PLAN

Two fundamental principles identified at the community workshop as prerequisites for agriculture to become ecologically sustainable were security and equity. These principles have determined the priority of the issues dealt with by this Strategic Plan.

Planning is essential to ensure a direction for the future that meets the needs of the community.

This Strategic Plan was developed from the issues identified by the community through written submissions and workshops. These issues can be divided into the following six broad groups based on the priorities determined by the whole community. Education is a component of all the issues, but also is important as an independent issue.

Planning

- strategic planning; for people involved in agricultural industries
- planning for land use
- planning for the constraints to agriculture.

The benefits of sustainable agriculture

- food and floral product security (ensuring an adequate supply of high quality food and floral products)
- landscape and aesthetics
- cultural heritage

- financial contribution
- employment
- investment in agricultural infrastructure (e.g. buildings and equipment)
- diversity of lifestyle
- recreation
- recycling of organic urban and agricultural waste
- an improved environment
- inter-generational equity (preserving and enhancing natural resources and ecosystems for future generations)
- social/spiritual.

Information

- government held data
- land use
- land suitability and/or capability (for an explanation of these terms, see the glossary in this publication)
- privately held data.

Incentives and equity

- enhancement of existing agriculture within the region
- attraction of ancillary industries
- communal versus private good
- incentive and equity programs and mechanisms

- inter- and intra-generation equity (balancing the needs for future generations against the needs of the current generation; and balancing the needs of individuals within the current generation).

Education and promotion

- awareness
- change.

Agricultural resource management

- use of agricultural resources (e.g. soil, water and vegetation)
- best management practices for sustainability
- environmental impacts.

Each of these issues was developed into objectives for this Strategic Plan.

1. Planning

Three objectives for planning must be met if we are to achieve our vision for sustainable agriculture in the Sydney region:

- Strategic planning to provide for the long term security of the human and capital investment in agriculture as well as natural resources (see Section 6 for the objectives relating to natural resources).
- Land use planning to provide for a balance between sustainable agriculture and other uses of land.

- Recognition of the planning constraints to agriculture achieving the identified vision.

Agriculture is a significant business in the Sydney region. It is yet to achieve its full social, environmental and economic potential. This will only be achieved if existing and potential producers believe that their investment of time, energy and money, based on best management practices, is financially rational. Investors in environmentally responsible agricultural activities have to be confident of their long term security against external factors such as urban

encroachment. In the case of intensive agricultural activities, investors also need to have confidence in other factors such as a reliable supply of quality water. It is not reasonable to expect growers to change their methods without providing them with the long term security to make it worthwhile.

Urban and rural residents also need to feel that their lifestyle and environment will be safeguarded against degradation. Sydney's natural resources represent a long term investment for the welfare of the community. Agriculture has a legitimate right to be considered as an activity that will maintain or enhance those natural resources.

Planning is without doubt the most important factor in realising the potential of those social, economic and environmental investments and benefits. Land suitable for agriculture is no different to a species of flora or fauna. Once gone, it is lost forever.



Effective planning, for example providing buffer zones, can minimise the conflict that arises where agricultural land adjoins urban development.

1. Planning			
Objective 1.1: Strategic planning: Security of the human and capital investment in agriculture is provided for in Strategic Plans.			
Implementation strategy	Policy action	Time frame	Sources of expertise
1. Ensure that agriculture is given recognition/emphasis in all strategic planning for the Sydney region.	1.1 Input into Strategic and Corporate Plans of <ul style="list-style-type: none"> • government agencies • local government • industry groups • environment and community groups. 1.2 Input into political parties' Corporate and Strategic Plans and agendas.	Short to medium	Primary: NSW Agriculture Secondary: Government agencies Local government Industry groups Environment and community groups CMCs Landholders Political parties



Planning that includes agriculture can create a greater range of lifestyle options, such as the rural village.

Objective 1.2: Land use: There is an adequate balance between sustainable agriculture and other uses of land.			
Implementation strategy	Policy action	Time frame	Sources of expertise
1. Recognise that agricultural land in the Sydney region is a finite resource.	1. Ensure appropriate identification and management of agricultural land. 2. Use and expand on the Local Environmental Planning process to: <ul style="list-style-type: none"> • identify agricultural zones based on the productive/sustainable capacity and existing land uses • identify land for other rural uses (which is not necessarily land identified in policy action 1). 	Short	Primary: NSW Agriculture Local government Industry groups Secondary: Department of Urban Affairs and Planning Department of Land & Water Conservation Other Government agencies
2. Provide for appropriate allocation of land through the zoning process.	In rural areas give priority to continued agricultural use of suitable lands which have not been identified for future urban use in the Urban Development Program.	Short	Primary: NSW Agriculture Department of Urban Affairs and Planning Local government



Historic Belgenny farm, the home of sheep industry pioneers, Elizabeth and John Macarthur. Our links with the past help us to set our directions for the future. Preservation of heritage sites also creates tourist attractions, contributing to local economies.

Objective 1.2: Land use: There is an adequate balance between sustainable agriculture and other uses of land (continued).			
Implementation strategy	Policy action	Time frame	Sources of expertise
3. Minimise the fragmentation of existing holdings and land within agricultural areas.	Develop guidelines and processes for agency and community action in consultation with all stakeholders through the Environment Planning & Assessment process.	Short to medium	Primary: Department of Urban Affairs and Planning Local governments Landholders Secondary: NSW Agriculture Department of Land & Water Conservation Planners Real estate industry
4. Recognise that the responsibility for reducing conflict between land uses predominantly rests with the use that is introducing change.	1. Reduce potential conflict through design (separation distances, use of vegetation). This is to occur on land where a different use or an intensification of the existing use is proposed. 2. Advocate to the legal and Real Estate profession the need for appropriate duty of care disclosure to intending land and housing purchasers.	Short	Primary: Local government Department of Urban Affairs and Planning Secondary: Planning profession Legal profession Agriculture industry Real Estate industry Community

Proximity to Sydney International Airport provides export opportunities for a range of native and ornamental flowers produced in the Sydney region.



Objective 1.3: Constraints: Agriculture is recognised as a legitimate and long term land use.

Implementation strategy	Policy action	Time frame	Sources of expertise
1. Identify the bio-physical, social and economic constraints to agriculture.	1. Carry out a review of the bio-physical, social and economic constraints to agriculture in the Sydney region. 2. Ensure calculation of rates reflects agricultural use of land.	Short to medium Short to medium	Primary: NSW Agriculture Secondary: Regional Economic Development Organisations Universities Department of Land & Water Conservation Local Government Department of Urban Affairs and Planning Valuer Generals Office Department of Local Government



Agricultural industries, such as turf growing provide employment. In the Sydney region turf growing has a farmgate value greater than \$50m a year.

Objective 1.3: Constraints: Agriculture is recognised as a legitimate and long term land use (<i>continued</i>).			
Implementation strategy	Policy action	Time frame	Sources of expertise
2. Recognise that growth management of residential and industrial land uses in the Sydney region needs to be balanced with the necessity to maintain agriculture.	1. Advocate to the Urban Management Committee of Cabinet to acknowledge the role of agriculture as an essential component of the land use infrastructure in the Sydney region.	Short to medium	Primary: Minister for Agriculture
	2. Prepare appropriate planning policies and practices to ensure that this occurs.	Short to medium	Primary: Ministry for Urban Infrastructure Management Department of Urban Affairs and Planning Local government Secondary: Ministry for Agriculture NSW Agriculture Department of Land & Water Conservation Industry Community
3. Have the planning profession, state agencies and local government recognise the biophysical, social and economic values of agriculture.	Develop an education and communication package. (Refer to section 5).	Short to medium	Primary: NSW Agriculture Secondary: Peak planning organisations

2. Benefits of sustainable agriculture

The objective is to develop programs to substantiate and communicate the benefits of sustainable agriculture to the community. This will raise the profile of agriculture by identifying those characteristics or values associated with agriculture that contribute to or have the potential to contribute to the quality of life of the community.

The benefits of sustainable agriculture in the Sydney region to the community are extensive. They include:

- Economic returns from highly productive lands which benefit local, state and national economies. For example, according to industry estimates the annual farmgate value of production is at least \$1 billion, with flow-on effects to the economy of \$2 billion to \$3 billion.
- Reliable supply and availability of fresh produce to the residents of the Sydney region. For example, 85% of mushrooms, 70% of tomatoes and 95% of spring onions produced in NSW are grown in the Sydney region (source: Wollondilly Shire Council agricultural lands study 1993).
- Minimal freight costs (financial and environmental).
- Provision of employment opportunities (seasonal and specialised).

- The opportunity for the integration of diverse agricultural activities, e.g. use of spent mushroom compost in nurseries.
- Reduced potential of environmental degradation when the use of land is matched to its agricultural suitability.
- Capacity to provide waste absorption that is environmentally sensitive and economically viable.
- Maintenance of cultural heritage.
- Support for cultural diversity of the community.
- Provision of a 'green belt' with scenic value, lifestyle and recreational opportunities.

Awareness of these and other benefits plays an important part in the process of achieving a sustainable agriculture sector.



Mushroom farming is also a source of employment in the Sydney region, with a farmgate value greater than \$60m a year.

2. Benefits of sustainable agriculture			
Objective 2.1: Programs substantiate and communicate the benefits of sustainable agriculture to the community.			
Implementation strategy	Policy action	Time frame	Sources of expertise
1. Recognise that sustainable agriculture has the following potential benefits: <ul style="list-style-type: none"> • food and floral product security • landscape/rural character/aesthetics • cultural heritage • financial contribution • employment • investment in agricultural infrastructure • diversity of lifestyle • recreation • recycling of urban and rural wastes • improved environment, e.g. biodiversity and water quality • intergenerational equity • social/spiritual. 	1. Identify the nature and extent of benefits. 2. Develop programs to enhance the benefits. 3. Publicise the benefits.	Short to medium	Primary: NSW Agriculture Secondary: All stakeholders

For more information on implementing practices that minimise environmental impact refer to Section 6.

Local production makes an important contribution to the supply of fresh wholesome food. The Sydney region produces 80–100% of these displayed vegetables consumed by Sydney residents.



3. Information

The objective is to collect information and fill existing information gaps to improve the implementation of this Strategic Plan.

The four steps to doing this are:

- Finding out what information or data exists.
- Analysing the information/data and determining the critical issues or factors.
- Developing strategies to deal with each issue or factor.
- Undertaking action to improve the situation.

When information/data is obtained for agricultural planning, it must be:

- easy to use
- easy to understand
- collected in a consistent way.

Consistency in definitions and expressions is also essential to allow a common understanding of the terminology that is being used (see the glossary in this booklet). As the process develops, more and more people will become involved, providing the opportunity for increased understanding of what is meant by certain words, terms and concepts.



On-farm research allows farmers to become directly involved, increasing the rate of adoption of new technology.



Production of poultry meat in the Sydney region has a farmgate value of more than \$300 m a year. Proximity to the market place ensures a fresh product for consumers.

3. Information			
Objective 3.1: Information is collected and gaps are filled to improve the implementation of the strategy.			
Implementation strategy	Policy action	Time frame	Sources of expertise
1. Invite stakeholders to identify information they need and to provide information they have, to implement the strategy.	<ol style="list-style-type: none"> 1. Identify and collate data sources. 2. Ensure that all agencies, organisations, and people have access to the information required to implement the strategy. 	<p>Short</p> <p>Short to medium</p>	All stakeholders
<ol style="list-style-type: none"> 2. Provide adequate information on agriculture and its impacts, and the impacts on it. 3. Ensure that identified gaps in existing information are filled. 	<ol style="list-style-type: none"> 1. Provide an adequate data base on agriculture in the Sydney region. 2. Collate identified gaps in existing information. 3. Coordinate all collected data for integrity/validity and security. 4. Provide for compatibility and portability of information. 5. Ensure that agricultural land studies prepared by Local Government are consistent in their approach and data production. 6. Develop and adopt a methodology which will allow for the identification of the costs and benefits (public and private) of agricultural production systems to the community. 	<p>Short to medium</p>	<p>Primary: NSW Agriculture Local government</p> <p>Secondary: ABARE/ABS All Stakeholders</p> <p>Local government Regional Organisations of Councils</p>

4. Incentives and equity

In providing for incentives and equity there are two primary objectives. The first is provision of incentives for the further development of existing agriculture within the Sydney region and for the attraction of ancillary industries.

The second, is the provision for intra- and inter-generational equity through recognition of

communal and private good. This applies to not only the overall role that agricultural lands play in contributing to the quality of life of the community, but also to the landowners' and farmers' rights to be treated equitably. Farmers can be disadvantaged by altered community expectations when the land use surrounding their farms changes.

The issue of equity for farmers/landowners as managers of large areas of natural resources which benefit the whole community, for example as a scenic asset, also needs to be recognised by the community and addressed by government.

The concept of equity is grounded on ESD (Ecologically Sustainable Development) principles, which are outlined in Appendix 4.

4. Incentives and equity			
Objective 4.1: Incentives are provided for the further development of existing agriculture within the Sydney region and for the attraction of ancillary industries.			
Implementation strategy	Policy action	Time frame	Sources of expertise
1. Encourage diversification in agriculture	1. Provide further research and development for agriculture and alternative agricultural systems and products. 2. Provide for the continuation of farmgate sales.	Short	Primary: NSW Agriculture Local government Secondary: Industry Groups Government Marketing Authorities Department of Land & Water Conservation Greater Western Sydney Economic Development Board Central Coast Regional Development Corporation State and Regional Development
2. Provide for value adding	1. Develop and implement marketing strategies. 2. Identify funding opportunities for value adding.	Short	Primary: NSW Agriculture Secondary: Industry Groups Government Marketing Authorities Greater Western Sydney Economic Development Board Central Coast Regional Development Corporation State and Regional Development

Objective 4.2: Intra- and inter-generational equity is provided for by recognition of communal and private good.

Implementation strategy	Policy action	Time frame	Sources of expertise
1. Identify and promote programs that provide incentives to encourage the retention of agriculture in the Sydney region.	1. Identify the various incentive programs.	Short	Primary: NSW Agriculture Secondary: All stakeholders
	2. Investigate the incentive programs relevant to the Sydney region.	Short	
	3. Adapt and/or develop appropriate incentive programs.	Medium	
	4. Adopt and promote the incentive programs.	Medium	

(Right) The principle of inter-generational equity aims to ensure that future generations will not be disadvantaged by the activities of past and present generations.

Agriculture provides scenery that is an asset for residents in the Sydney region.



5. Education and promotion

The objective is for all people who have an interest in the Sydney region, to become aware of the issues associated with sustainable agriculture. This requires two actions:

- An exercise essentially in marketing, to identify and promote the needs of the community and the ways in which they can be satisfied by agriculture.
- Development of value based programs for change when agriculture has something to contribute toward improving a situation. For example there is a strong link between the general state of community health and good nutrition. In the USA there is a growing recognition of the value of establishing links between the consumers, food handlers and food producers at the community level to increase access to and the consumption of locally produced fresh, clean and wholesome foods. Such an outcome requires a change in what people value in the food they eat.

The first step is to create awareness. Depending on the desired outcomes the process then can move into any one or a combination of disciplines such as marketing, research, extension, adult education, communication, strategic planning and regulation.

5. Education and promotion			
Objective 5.1: All people who have an interest in the Sydney region are aware of the issues, benefits and opportunities associated with sustainable agriculture.			
Implementation strategy	Policy action	Time frame	Sources of expertise
1. Identify appropriate education and communication mechanisms.	1. Take a holistic approach to a two phase communication package directed at key stakeholders and the wider community that: <ul style="list-style-type: none"> • is broad ranging and succinctly covers all issues • provides for a two-way flow of information • allows for adequate networking • tailors and targets to get the most benefits • ensures access for people from non-English speaking backgrounds. 	Short and ongoing	Primary: NSW Agriculture Secondary: Department of Land & Water Conservation Industry groups Greater Western Sydney Economic Development Board Regional Development Organisations Local Economic Development Boards Local government Universities, TAFE and schools Other agencies

6. Agricultural resource management

In agricultural resource management there are three clear objectives:

- Managing the impacts of agriculture on the environment as well as the external factors which impact on agriculture.
- Ensuring the use of agricultural resources complies with ESD (see Appendix 4) and Total Catchment Management (TCM) principles (see Glossary).
- Ensuring farmers carry out best management practices to achieve ecologically sustainable development.

The first objective identifies the impacts and provides for the management of those impacts. The second deals with sustainable agriculture and how that can be achieved. The third deals with the practicalities of implementing best management practices.

An important consideration relating to the final objective is that state agencies and other bodies need to recognise when best management practice has been developed and is in place. Best management practice necessarily involves the monitoring of progress towards management goals. The use of recognised indicators of farming system sustainability will need to be employed to give the public confidence that farms are operating under best management practice.

Pastures and native vegetation help to safeguard water quality in the Hawkesbury-Nepean River system.



6. Agricultural resource management

Objective 6.1: Environmental impacts: The impacts of agriculture upon the environment and the external factors that impact on agriculture are recognised and appropriately managed.

Implementation strategy	Policy action	Time frame	Sources of expertise
1. Identify the impacts that agriculture has upon the environment. (Note cross reference with 6.3 on best management practices.)	1. Identify the impacts. 2. Prioritise these impacts.	Short Short	NSW Agriculture Agriculture Industry groups Environment Protection Authority Department of Land & Water Conservation
2. Ensure that the agricultural sector is aware of impacts.	1. Inform the agricultural sector of impacts. 2. Develop and disseminate information on BMP	Short to medium	NSW Agriculture Industry
3. Identify the external environmental factors that impact upon agriculture.	1. Collect information on factors that impact upon agriculture.	Short	NSW Agriculture Industry
4. Inform the general community of these factors.	1. Inform the general community.	Short to medium	NSW Agriculture Industry Hawkesbury–Nepean Catchment Management Trust Catchment Management Committees
5. Incorporate controls in planning documents (PEP, SEPP, REP, LEP and DCP) to help ensure the environmental impacts of agriculture are minimised.	Develop or amend planning instruments and DCPs.	Short to medium	Primary: Local Government Department of Urban Affairs and Planning Environment Protection Authority Secondary: NSW Agriculture Hawkesbury–Nepean Catchment Management Trust Department of Land and Water Conservation

Objective 6.2: The use of agricultural resources complies with Ecologically Sustainable Development principles.			
Implementation strategy	Policy action	Time frame	Sources of expertise
1. Integrate Ecologically Sustainable Development principles into agricultural resource management decision making and practices.	Educate, regulate, advocate, develop and create processes for participation.	Short and ongoing	Primary: NSW Agriculture Department of Land & Water Conservation Environment Protection Authority Industry groups Universities, TAFE and schools Secondary: All stakeholders
2. Apply Total Catchment Management principles to agricultural resource management.	1. Educate, advocate, develop and create processes for participation. 2. Investigate a strategy for a ‘bottom up’ approach to land and water management; and create processes to facilitate self regulation and peer appraisal, communication, monitoring and sanctions.	Short and ongoing	All stakeholders



Spreading treated sewage biosolids on suitable agricultural land reduces the need to transport it to other parts of the State or to put it into landfill.

Objective 6.3: Farmers carry out the best management practices for sustainable agriculture.			
Implementation strategy	Policy action	Time frame	Sources of expertise
1. Encourage innovation and opportunity.	1. Provide adequate resources to work with the producers and other links in the market chain to develop sustainable practices. 2. Provide educational and research opportunities which foster innovation and new technologies.	Short Short to medium	Primary: NSW Agriculture Secondary: Industry groups Government Marketing Authorities Department of Land & Water Conservation Environment Protection Authority Universities, TAFE and schools
2. Ensure that appropriate management practices are detailed and extended to all levels of the production, distribution and marketing cycle.	Identify and develop best management practices and appropriate actions where required with monitoring and updating.	Short	Primary: NSW Agriculture Secondary: Industry groups Government Marketing Authorities Department of Land & Water Conservation Hawkesbury Nepean Catchment Management Trust Universities, TAFE and schools

Objective 6.3: Farmers carry out the best management practices for sustainable agriculture (continued)			
Implementation strategy	Policy action	Time frame	Sources of expertise
3. Develop and disseminate information about innovative and best management practices.	1. Educate, advocate, develop and resource.	Short	Primary: NSW Agriculture Secondary: Industry groups Government Marketing Authorities Department of Land & Water Conservation Hawkesbury Nepean Catchment Management Trust Universities, TAFE and schools
	2. Provide and implement a measurement system to assess progress towards sustainability.	Short to medium	Primary: NSW Agriculture Secondary: Department of Land & Water Conservation Environment Protection Authority Hawkesbury Nepean Catchment Management Trust CMCs Local Government

APPENDIXES

APPENDIX 1. THE WORKING GROUP

The Working Group was formed in October 1995 following the release of the *Sustainable agriculture in the Sydney Basin Issues Paper*. Over time the membership of the Working Group has changed. The following people have been members of that group:

- Lorraine Banks, formerly Cattai Catchment Management Committee Coordinator.
- Rohan Boehm, Communications Consultant, Kurrajong.
- Steve Bowley, formerly Regional Development Manager, Macarthur Regional Organisation of Councils (MACROC).
- Kerry Brew, Department of Urban Affairs & Planning, Parramatta.
- Graham Clark, Organic Producers Council/NASAA, North Sydney.
- Rebecca Coventry, Natural Resource Officer, Hawkesbury Nepean Catchment Management Trust, Windsor.
- Rob Cumming, Director, Reme Pty Ltd Soil Environmental Consultants, Goulburn.
- Jan Davis, formerly General Manager, Australian Mushroom Growers Association, Windsor; currently Director, Jawin Associates, Windsor.
- Meredith Foley, Senior Policy Officer, Environment Protection Authority, Chatswood.
- Tom Grosskopf, Agricultural Environment Officer, NSW Agriculture, Windsor.
- Michelle Higgins, formerly Natural Resource Officer, Hawkesbury Nepean Catchment Management Trust, Windsor.
- Malcolm Hughes, Director Planning and Assessment, Hawkesbury Nepean Catchment Management Trust, Windsor.
- David Mason, Working Group Convenor and strategic plan facilitator, NSW Agriculture, Windsor.
- Jane Moxon, formerly Executive Officer, Penrith Food Project; currently Manager, Nutrition Program, Western Sydney Health Promotion, Parramatta.
- Neville Pavan, Urban Advisory Specialist, Department of Land & Water Conservation, Penrith.
- Roger Roberts, formerly Senior lecturer, School of Agriculture and Rural Development, UWS-Hawkesbury; currently retired.
- Donna Rygate, Manager Policy Review, Environment Protection Authority, Chatswood.
- Wendy Seckold, Manager Stakeholder Analysis and Liaison, Environment Protection Authority, Chatswood;
- Neil Shedden, Principal of: 'Hadden Farm', Wilberforce; Retailers and Franchisors, Oz Design Furniture; and Hawkesbury, Blue Mountains and Penrith Independents (Local Magazines).
- Ian Sinclair, Manager Strategic Planning, Wollondilly Shire Council.
- Glenda Steain, formerly Project Officer, NSW Agriculture, Windsor.
- Anna Wilmot, Agribusiness Liaison Officer, Growing Regional Opportunities for Work (GROW) Macarthur, Campbelltown.

The Working Group has completed its task with the release of this Strategic Plan. Refer to the section on Community Consultation to see what is being considered for the ongoing review of the strategy and to ensure that accountabilities for actions being undertaken under the strategy are identified.

APPENDIX 2. THE GROUPS REPRESENTED AT THE 4 MAY WORKSHOP

Farmers

Dairy
Bee
Orchard
Organic
Cut flower
Vegetable
Turf
Cattle
Egg
Free range egg
Horse
Nursery

Industry

NSW Milk & Dairy Products Association
Orchard Industry Action Group
Organic Producers Council
National Association for Sustainable Agriculture Australia
Australian Queen Bee Breeders Association
Mushroom Growers Association
Flower Growers Association of NSW
NSW Chicken Growers Association
NSW Free Growers Horticultural Council
Free Range Egg Producers Association
NSW Nursery Industry Association
NSW Egg Producers Association

Community

Rural property owners
South Creek and Cattai Community Monitoring Committees
Urban dwellers
Walking for Pleasure
Cobbity Progress Association
Coalition of Hawkesbury And Nepean Groups for the Environment (CHANGE)
University students
Community action groups

Development

Macarthur Regional Organisation of Councils
North West Sydney Regional Development Organisation
South West Sydney Regional Development Organisation
Greater Western Sydney Economic Development Board
Real estate industry
Private land developers
Tourism industry

Consultants

Environment
Agribusiness, media and marketing
Covered crops and Asian vegetables
Soil conservation
Education, planning and management
Bush regeneration
Turf

Education institutions

James Ruse Agricultural High School
University of Western Sydney —Hawkesbury
The University of Sydney
TAFE

Local government and Government Instrumentalities

Wollondilly Shire Council
Hawkesbury City Council
Gosford City Council
Blacktown City Council
Campbelltown City Council
Penrith Food Project
Moss Vale Rural Lands Protection Board
Sydney Market Authority
Hawkesbury Nepean Catchment Management Trust

State Government Authorities

Environment Protection Authority
Department of Land & Water Conservation
Department of Urban Affairs & Planning
National Parks & Wildlife Service
NSW Agriculture

APPENDIX 3. THE FORMAT OF THE STRATEGIC PLAN

The vision outlines what we are trying to achieve.

The objectives indicate how the vision is achieved.

The implementation strategies expand the objectives and state how they are to be achieved. They point to the policy and actions required.

The policy actions outline the detail of the strategies and provide an indication of what work is required.

The area of expertise is broken into primary and secondary. It is proposed to seek the relevant organisations' endorsement and agreement to participate in the achievement of the objectives.

The time frame is broken into three sections:

- Short (0–2 years)
- Medium (2–5 years)
- Long term (5 years and beyond).

These periods were selected to allow for the time frames to be built into the political process.



Agriculture is part of a diverse pattern of land use in the Sydney region.

APPENDIX 4. ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)

The Commonwealth Government has provided the following information on ESD.

The goal

Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

The core objectives

- To enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations.
- To provide equity within and between generations.
- To protect biological diversity and maintain essential ecological processes and life support systems.

The principles of Ecologically Sustainable Development

- Decision making processes should effectively integrate both long and short term economic, environmental, social and equity considerations.
- Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for

postponing measures to prevent environmental degradation.

- The global dimension of environmental impacts of actions and policies should be recognised and considered.
- The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised.
- The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised.
- Cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms.
- Decisions and actions should provide for broad community involvement on issues which effect them.

(National Strategy for ESD, December 1992)

Legal framework and definitions for ESD

In New South Wales the legislative framework and definitions for ESD are provided by two Acts. They are the:

- Local Government Amendment (Ecologically Sustainable Development) Act, 1997; and
- Protection of the Environment Administration Act, 1991.

Section 6 (2) of the Protection of the Environment Administration Act, 1991 states:

‘...ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

- (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
- (ii) an assessment of the risk-weighted consequences of various options,

b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration.

- d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:
- (i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
 - (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets, and the ultimate disposal of any waste,
 - (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs, to develop their own solutions and responses to environmental problems.’



In the Sydney region, 18,000 dairy cows on 51 farms contribute to the milk supply for the city. Their proximity to the processing plants reduces the distances over which milk is transported, using less energy.



GLOSSARY

Agricultural land

Land on which agricultural activities can take place.

Agricultural land capability

The biophysical ability of land to remain stable under particular land uses. The land capability classification denotes management practices needed to protect the land from soil erosion and other forms of land degradation.

Agricultural land suitability

An assessment of a site's potential for sustainable agricultural production based on the biophysical capability of the land, economic and social factors.

Agricultural extension

Advisory, educational and promotional activities used to facilitate adoption of improved agricultural practices.

Agriculture

The management of biophysical resources for food, fibre and ornamental outputs and the distribution and utilisation of these outputs for economic and social benefits.

Best Management Practices

A holistic approach for farm management and operation practices that prevent or minimise environmental impacts and optimise economic

production. BMPs are generally promoted by means of guidelines or codes of practice.

Buffer zone

A buffer zone is an area of land, set aside to minimise the impacts of land uses on each other.

Community

Consists of those people, groups and organisations who have a stake in the economic, social and environmental outcomes of agricultural activities.

Ecologically Sustainable Development (ESD)

For a discussion of ESD see Appendix 4.

Equity

The fairness in terms of access to, and use of natural resources; and fairness in sharing both the costs and benefits of resource use, for present and future generations.

Extensive agriculture

Agricultural production in which relatively small amounts of capital and labour are invested per hectare, e.g. grazing sheep or cattle, and broadacre wheat farming.

Greater Metropolitan Region

Includes the areas bounded by the Cities of Newcastle, Sydney and Wollongong.

Intensive agriculture

Agricultural production in which comparatively large amounts of capital and labour are invested

per hectare, e.g. mushroom growing, meat chicken production and nurseries.

Sustainability

The ability to ensure a maintenance and continuance of social, economic and environmental benefits.

Sydney region

Is bounded by Wyong LGA (Local Government Area) to the north, Hawkesbury and Blue Mountains LGAs to the west, and Wollondilly LGA to the south.

Total Catchment Management (TCM)

The co-ordinated and sustainable use and management of land, water, vegetation and other natural resources on a water catchment basis in a manner that balances resource utilisation and conservation.