

**Eco-Efficiency Agreement**

**Between**

**The Commonwealth of Australia  
Represented by Environment Australia**

**and**

**The Fertilizer Industry Federation of Australia**

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### **1. Parties to the Agreement**

This is a three year Agreement between: the Fertilizer Industry Federation of Australia, and the Commonwealth – represented by Environment Australia

The parties agree that the implementation of eco-efficiency will improve the efficiency and competitiveness of organisations as well as improving environmental performance. The Fertilizer Industry Federation of Australia (the Federation) declare their commitment to promote eco-efficiency to their members.

This three year Agreement with the Commonwealth details specific activities that will be undertaken to achieve this. The activities outlined in this Agreement will be undertaken and managed by the Fertilizer Industry Federation of Australia.

### **2. Background**

Eco-efficiency is a concept that links environmental and financial performance. Through the implementation of eco-efficiency, companies can achieve better environmental outcomes, reduced costs and increased competitiveness. Eco-efficiency essentially means doing more with less – using environmental resources more efficiently in economic processes.

The World Business Council for Sustainable Development considers that eco-efficiency is reached by the delivery of competitively priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impact and resource intensity throughout the life cycle, to a level at least in line with the earth's carrying capacity. To improve their eco-efficiency, companies can:

- Reduce material intensity of goods and services;
- Reduce energy intensity of goods and services;
- Reduce toxic emissions;
- Enhance material recyclability;
- Maximise use of renewable resources;
- Extend product durability;
- Increase the service intensity of goods and services.

Eco-efficiency is often pursued through approaches and “tools” such as cleaner production, environmental management systems, life cycle assessment and design for the environment. These tools help companies identify opportunities to improve resource efficiency and reduce environmental impacts.

### 3. Federation Profile

The Fertilizer Industry Federation of Australia, Inc. (FIFA) is the industry association representing manufacturers, importers and distributors of fertilizer in Australia and associated service industries. FIFA members supply over 95% of the fertilizers used in Australia. Fertilizers are one of the major physical inputs to Australian agricultural production and account for over 12% of the value of material and services inputs used. In 1999 Australian farmers used around 5.25 million tonnes of fertilizer products with a value of approximately \$2 billion. The value of the fertilizer industry to the Australian economy is conservatively estimated at \$8 billion.

Our Mission Statement is *"To maintain public consent for the responsible contribution of our industry to the growth of Australian agriculture for the benefit of the Australian fertilizer industry and its customers"*.

FIFA’s role is to effectively manage issues that are common to members, where an industry wide approach is likely to be more effective than the actions of individual companies. Our operating principles are to maintain an effective public profile in areas of interest to members by actively contributing to public policy debate and involving external stakeholders in the development of FIFA programs.

FIFA has identified three strategic platforms and will focus on priority areas within each in order to provide clear value to members.

<b>Platform</b>	<b>Priority</b>	<b>Outcome</b>
Environment and food safety.	Reduce environmental risk at the end user level through an industry wide product stewardship program.	Maintain an effective position in the public debate on environmental issues and regulation relating to the fertilizer industry by demonstrating the industry’s responsibility and commitment.
Import and logistics	Improve quarantine policy and procedures through involvement with government at both the operational and policy level.	Reduced risk and associated costs for imports of fertilizers and raw materials.
Regulatory affairs	Reform of State legislation controlling the sale, description and labelling of fertilizers.	Uniform legislation across all jurisdictions with fertilizer broadly defined to cover all products sold as plant nutrients or soil amendments.

Plant nutrients are constantly being "exported" from the farm in the form of plant and animal products. Even in the best-managed agricultural systems with efficient nutrient cycling, losses are inevitable. This means that the addition of plant nutrients in the form of fertilizers is necessary to maintain or enhance a soil's productive capacity.

The Australian industry is made up of manufacturers, importers, blenders, retail distributors or agents, and contract applicators. It should be noted however, that all manufacturers import significant quantities of manufactured fertilizers.

Both manufacturers and importers market through dealers and/or agents who provide farmers with a local service point and often employ advisory agronomists. Many manufacturers also operate regional distribution and blending service centres.

#### **4. Environmental Issues:**

The fertilizer industry has a significant domestic manufacturing and import processing base in Australia. There are a range of “traditional” environmental issues that are being addressed by the industry including emissions, energy use and water use efficiency as well as transport and logistical efficiency in handling five million tonnes of product per annum.

The fertilizer industry also recognizes the significant potential for fertilizer products to contribute to environmental impacts throughout the supply chain and particularly at the point of use. In general, negative environmental impacts from fertilizer application represent inefficiency of resource use. The greater the uptake efficiency of fertilizers by crops and pastures the less potential for environmental impact.

**Eutrophication** of inland and coastal waterways is the issue of greatest concern, which can also lead to environmental impacts on marine environments. There is particular public and scientific concern about these effects on the Great Barrier Reef and adjacent coastal environments but the issue has received public attention throughout the Murray Darling Basin and in the catchment of the Peel Estuary in Western Australia.

Eutrophication is the process of nutrient enrichment of water. Where nutrient levels in inland waterways and coastal waters increase this creates changes in the ecosystem that can result in significant change in plant and animal species. In inland waterways nutrient enrichment contributes to blue-green algae blooms, which present animal and human health risks. Inappropriate farming practices can result in elevated nutrient levels in inland waterways, which may then also elevate levels in coastal waters. Poor storage, handling or transport practices can result in point source pollution of waterways and oceans.

Monitoring of the Great Barrier Reef Catchment indicates that phosphate levels have increased between 300% and 1500% since 1850 and total nitrogen has risen between 200% and 400%.

“Even more worrying is the fact that almost all pollutant loads are increasing annually and showing no sign of abatement. Of particular concern is the rapid increase in fertilizer delivered nitrogen (nitrate and ammonia) which is the most dangerous to marine ecosystems....” (Great Barrier Reef Catchment Water Quality Action Plan September 2001).

Whilst there are numerous sources of eutrophication it is clear that inappropriate fertilizer use, particularly if combined with inappropriate farm management practices, has the potential to be a significant contributor.

**Impurities** - Some of the naturally occurring and by-product raw materials from which fertilizers are manufactured contain impurities. If the use of the fertilizer product results in increased concentration of the impurity in soil and plants it may affect the marketability of farm produce and potentially impact on human health. Of most interest in fertilizers are the heavy metals, particularly cadmium, and possibly levels of fluorine in phosphatic fertilizers.

Some recent zinc sulphate imports had high enough concentrations of cadmium to be classified a hazardous material yet the supplier's certificate of analysis stated low and acceptable levels for agricultural use. Lead may also be present at unacceptably high concentrations in trace element fertilizers.

**Nutrient depletion** is clearly identified in the National Land and Water Resources Audit as a major issue. The fertilizer industry has a key role to play, and a clear commercial interest in addressing this issue.

The 2001 State of the Environment Report states that "Low nutrient replenishment is as much a concern as overuse of fertilizers" (Australia State of the Environment 2001 pp 54). The loss of nutrients in the manufacture, transport and use of fertilizers may also impact on the environment, while the impurities that fertilizer products contain, may affect food quality and safety.

**For all these issues, the fertilizer industry recognizes the responsibility of product stewardship for the life cycle of its products.**

The fertilizer industry recognizes that Governments in Australia have environmental responsibilities on behalf of the Australian public, and would like to play an active role in developing and implementing public policy that seeks to effectively manage these issues.

Other environmental issues for the fertilizer industry are;

- movement of nutrients and or impurities into groundwater;
- impurities that may lead to food safety or environmental impacts, particularly heavy metals, including effects of long term use on soil accumulation;
- direct and indirect contribution of fertilizers to greenhouse gas emissions;
- management of hazardous wastes within the industry;
- legislation and regulation of fertilizer sales.
- odours produced during manufacturing (organic compounds in raw materials);
- the use of organic, industrial and domestic wastes as fertilizers which can have both positive and negative environmental impacts;
- storm water quality at manufacturing and distribution sites;
- dust at manufacturing and distribution sites (linked to storm water quality);
- groundwater impacts at manufacturing and distribution sites;
- use of local versus imported materials;
- water conservation and use efficiency in manufacturing processes;
- energy use in manufacturing, distribution and storage;
- stack emissions of fluorine and sulphur compounds;
- manufacturing and distribution site contamination with nutrients and impurities;
- solid waste including packaging;
- ship discharge spillage;
- spillage during transport;
- management and siting of temporary farm storages;
- management of truck clean out residues;
- transport mode efficiency road versus rail versus ship;
- appropriate application rates, frequency, method and timing;
- application efficiency and risk minimisation practices; and
- soil acidification.

## 5. Fertilizer Industry Federation of Australia – Activities to date.

**General** - Several members of FIFA operate large manufacturing facilities and have produced environmental reports focussing on these activities and compliance with license conditions.

**Nutrient depletion** - Considerable resource has been directed at providing production based advice on fertilizer use, particularly through the use of soil test based decision support systems.

**Eutrophication** - There is general agreement amongst the scientific community and the fertilizer industry that the mechanisms of fertilizer nutrient contribution to waterways are well understood. The issue is primarily one of management of risk through appropriate product choice, rate, method and timing of application and farm practices at the user level. Strategies to reduce this risk are not generally expensive or difficult to implement and will provide additional efficiency benefits to the user.

FIFA has produced a manual titled “Cracking the Nutrient Code” that will guide catchment or industry groups and individual farmers in developing codes of practice for nutrient management appropriate to local conditions. The manual is available from the Federations’ web site [www.fifa.asn.au](http://www.fifa.asn.au)

Impurities - FIFA has:

- through its members, made changes to sources of supply of phosphate rock that have resulted in significant reductions in the concentration of these metals in our fertilizers;
- instigated a comprehensive review of the issue by the CSIRO that led to the implementation of the National Cadmium Management Strategy, partly funded by the fertilizer industry;
- the review led to the adoption of maximum permissible levels for heavy metals in the State Fertilizer Acts, which had not previously set limits;
- through funding of, and involvement in, the national cadmium minimisation strategy produced targeted advice to industries which have the highest risk profile for cadmium; and
- is currently working with Environment Australia Hazardous Waste and Chemical Policy sections on a purchasing code of practice to address heavy metal levels in imported fertilizers and industrial by products.

FIFA is also an active participant in the fertilizer working group that is examining options for greater harmonization of fertilizer laws and regulations between the States. The working group is chaired by Steve McCutcheon of Agriculture, Fisheries and Forestry Australia.

## 6. Agreement Principles

The Eco-Efficiency Agreement is based on the following general principles:

- a. The Federation supports eco-efficiency as a strategy to minimise environmental impact, and add value to production processes.
- b. Through the activities outlined in this Agreement, the Commonwealth, the Federation and participating members will pursue means of promoting the “eco-efficiency” concept in Australia.
- c. The Federation and the Commonwealth will work co-operatively to implement this Agreement over a three-year period. However, this Agreement will not bind or restrict the parties in any way from pursuing their own policies or activities outside the Agreement.

- d. Notwithstanding clause (c) above, the Federation agrees to ensure that any policies it promotes and disseminates are not in conflict with eco-efficiency principles.
- e. Each party will be given the opportunity by the other to review media and promotional material produced in relation to the Eco-Efficiency Agreement prior to publication or release.
- f. This Agreement is not intended to create legal relations between the parties. The Commonwealth and the Federation s agree that they are not, by virtue of this Agreement, an employee, partner or agent of the other party and that neither party has the power or authority to bind or represent the other.
- g. The Federation cannot take direct responsibility for the actions of their members.
- h. The text of this Agreement is not confidential and either party may make it available to interested persons. However, financial undertakings made under this Agreement or separate contracts are confidential unless otherwise indicated.

## **7. Agreement Aims**

The broad aims of the Agreement are:

Improved environmental performance specifically in relation to:

- consumption of resources including energy, water and chemicals including fertilizers;
- air emissions (including greenhouse gases);
- discharges to water, particularly from fertilizer application by farmers;
- solid and hazardous waste; and
- noise and other amenity aspects.

Increased implementation by members of eco-efficiency tools, such as public environmental reporting, environmental management systems consistent with ISO14001, environmental auditing, product stewardship, life cycle assessment, supply chain management and design for environment.

Increased communication and promotion to member companies and, where feasible, across production and supply chains, of eco-efficiency and environmental management issues.

Increased contribution of the Federation to public policy development in the area of environmental management.

Increased involvement of the Federation in co-operative programs with other key stakeholders to ensure that nutrient issues are effectively dealt with in government and primary industry environmental initiatives.

Development of environmental standards in the form of a voluntary national environment code of practice for the Australian fertilizer industry.

Benchmarking the level of the environmental inputs and outputs, and impacts of member activities and ongoing measurement against key eco-efficiency indicators such as energy, water and chemical usage, waste and other emissions, per unit of output.

An annual sectoral environment report, made publicly available.

Development of guidelines addressing key environmental issues within the Australian fertilizer industry.

## **8. Fertilizer Industry Federation of Australia Commitments**

FIFA and its members will:

- develop an eco-efficiency imperative in corporate cultures and publicly promote the benefits of eco-efficiency within the industry and to external audiences;
- define and agree a set of industry wide eco-efficiency and stewardship performance indicators using an industry working group and pilot survey;
- develop industry benchmarks based on a full survey of current practice against the agreed performance indicators;
- develop and implement a national environmental product stewardship program a key element of which will be an accredited training course for fertilizer sales staff;
- develop an end user accredited training course based on the national environmental product stewardship program;
- develop cooperation with industry and public sector groups in the planning and implementation of programs that promote environmental product stewardship and environmental management systems in order to ensure that nutrient issues are dealt with in a coordinated and effective manner; and
- develop opportunities to work in cooperation with industry and public sector groups on projects where there is an opportunity to measure the eco-efficiency outcomes of a coordinated approach.

## **9. Commonwealth Commitment**

Environment Australia will:

- provide financial support to assist with the implementation of the Agreement Action Plan, provided contractual arrangements are agreed between the Parties;
- promote the Agreement through a Ministerial launch, the Environment Australia website, and other media;
- publicise and promote success stories of companies' implementation of eco-efficiency through media releases and the Eco-efficiency and Cleaner Production Home Page;
- assist in the development of the industry survey, including methodological assistance;
- provide advice on policy issues (including the selection of performance indicators) and development of guidelines;
- participate in Eco-efficiency Workshops for Federation members; and
- provide copies of relevant publications and materials produced by Government and copy for newsletters where possible and relevant.

## **10. Financial Commitment**

The parties to this Agreement undertake to provide the financial and other resources required for its implementation. The financial and in-kind undertakings for the implementation of the Agreement will be subject to agreement on and signing of a separate legal contract.

This will involve full acquittal of Environment Australia funds following expenditure in the first year of the Agreement.

Environment Australia will provide \$190,000 (inclusive of GST) during the first year of the Agreement towards;

- the employment and operation of an Environment Manager by the Fertilizer Industry Federation of Australia to exclusively manage the implementation of this Agreement;
- costs of developing and implementing the Fertilizer Industry eco-efficiency survey and production of an environmental report;
- costs of developing and producing eco-efficiency training programs and materials;
- costs of developing a national environmental product stewardship program; and
- costs of developing and producing point of sale information materials for distribution to farmers.

Environment Australia's funding contribution will also provide \$10,000 (inclusive of GST) for the Department's administration and promotional costs during the life of this Agreement. The Environment Australia funding to the Federation is available for salaries and salary related on costs, travel and other related employment expenses of the Environment Manager.

FIFA will fund the Environment Manager for the second year of the agreement and all the time, materials and associated cost to conduct the survey and reporting activities in year 3 of the agreement. The position will allocate 100% of time and costs on activities related to implementing this Agreement in the first year, and at least 60% in the second year.

The Fertilizer Industry Federation of Australia will provide financial and in-kind contributions directly related to this agreement. The in-kind contributions will be in members time developing, implementing and reporting on eco-efficiency measures undertaken, in developing training and information material and in direct payment for staff training. The contribution to the agreements is conservatively estimated at:

- \$300,000 per annum for national product stewardship training.
- \$200,000 per annum on development and implementation of eco-efficiency measures by members.
- \$10,000 consultant to develop environmental survey and report.
- \$ 95,000 in year two for employment and related costs of the Environment Manager.

## **Appendix 1. Action Plan for Year 1**

### **Promotion of Eco-Efficiency concepts and tools to Federation Members, agricultural industry groups, and farmers.**

#### Desired Outcomes:

- Federation members and other stakeholders become aware of eco-efficiency and its potential benefits to the fertilizer industry.
- Federation members and other stakeholders are provided with sufficient information on eco-efficiency tools to enable their use in achieving the aims of the agreement.
- Federation members and other stakeholders are given the opportunity to contribute to the development of detailed initiatives under this agreement.
- Federation members and other stakeholders are fully aware of the activities being undertaken under this agreement and the expectations of them.
- Federation members become champions of eco-efficiency, integrating promotion of the concepts into marketing activities and building the concepts into organisational culture.
- Develop a brand image that establishes the relationship between FIFA, environmental product stewardship and eco-efficiency.

#### Activities:

The eco-efficiency working group formed from members, users and Government stakeholders will develop a strategy for communication and promotion of the agreement. The strategy will include at least the following initiatives.

Eco-efficiency workshops will be held to inform Federation members and other stakeholders of the initiatives under this agreement and make them aware of the eco-efficiency tools available and the expectations of them.

Fertilizer Industry Federation of Australia will provide information on eco-efficiency and environmental issues to members of the industry through a range of media:

- Articles will be written in all issues of the Federation's existing newsletter which is distributed approximately bi-monthly.
- A web page will be established, as part of the existing FIFA web site, dedicated to environmental issues in the fertilizer industry. This will include information on the activities outlined in this Agreement as well as ongoing developments on environmental issues within the industry.
- The Federation will develop and distribute to all members a set of industry fact sheets on eco-efficiency in the industry, including fact sheets on eco-efficiency tools (see list of eco-efficiency tools at Attachment A). The fact sheets may include case studies from members.
- Conferences and meetings: Eco-efficiency will be included as a topic for speakers and/or discussions at conferences and other meetings organised by the Federation.
- Maximum use will be made of any opportunities to publicise initiatives in the wider media. Particular attention will be paid to using stories where manufacturers, distributors and farmers have implemented eco-efficiency measures and realised benefits to both productivity and the environment.
- All communications will seek to build on the value of the FIFA product stewardship training as a standard in which fertilizer users can have confidence.

A list of issues and the likely tools and actions that will be considered by FIFA members under this agreement are listed in appendix 3. The actual tools implemented will be decided during and subsequent to the workshops and refined during the survey and reporting process.

### Performance Measures

- Level of member and stakeholder participation in eco-efficiency workshops
- Number of workshops or seminars held
- Adoption of eco-efficiency tools amongst members and through co-operative agreements with other stakeholders, and resulting economic savings and environmental performance improvements to be measured through surveys in years 2 and 3.
- Number of promotional/communications activities completed.
- Adoption of an eco-efficiency component in corporate culture and marketing activities, to be measured through the industry survey.

## **Australian Fertilizer Industry Environmental Product Stewardship**

### Desired Outcomes

- Eco-efficiency measures are implemented by **end users** that significantly reduce the environmental risks associated with fertilizer use.
- Eco-efficiency measures are implemented by the fertilizer distribution chain that significantly reduce the environmental risk associated with the storage, transport and application of fertilizers.
- Product stewardship advice and programs are implemented consistently across the industry, including the integration of the AFSA codes of practice and training programs.
- Eco-efficiency measures are built into the provision of advice and decision support systems that are currently used by the fertilizer industry.

### Activities

- An accredited environmental product stewardship training program will be developed under the guidance of a steering committee composed of FIFA members and other key stakeholders such as Environment Australia, farmer organisations, CRC for Greenhouse Accounting, WWF or ACF.
- Manufacturing and distribution sales personnel will complete training at one of two levels, depending on level of advice provided to users, to ensure that customers are given advice that minimises the risk of adverse environmental impacts from fertilizer use.

### Performance Measures

- The industry survey and public reporting will detail numbers of accredited staff.
- The industry survey and public reporting will detail accredited operators and equipment under the AFSA code of practice.
- The total number of soil tests conducted nationally, and the number interpreted by advisers with the advanced environmental product stewardship training will be included in the industry survey and reporting.
- The course material and delivery will be subject to continual review and update based on participants feedback and the views of the steering committee.

## **FIFA Co-ordination of nutrient management**

### Desired outcomes

- Eco-efficiency outcomes relating to nutrient management are given a high profile amongst the public and private sector in planning and implementing environmental management programs.
- Eco-efficiency outcomes relating to nutrient management are incorporated into Agricultural Industry, Regional and Catchment planning in a consistent manner.
- Eco-efficiency advice to agricultural producers on nutrient management is delivered by a range of organisations in a consistent and co-ordinated manner.
- Specific initiatives across a range of industries and scales will be identified that offer opportunities to measure and analyse the effectiveness of a coordinated approach to nutrient management.

### Activities

- An Environment Manager will be appointed by the Federation to further develop linkages and relationships with environmental planners in the public and private sector, particularly in those industries where nutrient related environmental issues are a high priority or concern.
- The Environment Manager will identify specific initiatives across a range of industries and scales that offer opportunities to measure and analyse the effectiveness of a coordinated approach to nutrient management.
- The Environmental Manager will develop and enhance the use of “Cracking the Nutrient Code” as the basis for a co-ordinated approach to nutrient management.

Co-operative activities have begun with Queensland Canegrowers, Queensland Fruit and Vegetable Growers, and the dairy industry through DRDC. The level of commitment and input to these initiatives is critically dependent on this project proceeding.

### Performance measures

- Extent of communication and influence amongst target groups measured by adoption of nutrient management principles in line with “Cracking the Nutrient Code”.
- Empirical measurement of the effectiveness of a co-ordinated approach in achieving reductions in environmental impact in selected co-operative projects.

## **Australian Fertilizer Industry State of the Environment Report**

### Desired outcomes

- Useful eco-efficiency indicators are identified for the Federation's members.
- Member companies monitor and report on eco-efficiency annually.
- The Federation obtains reliable time series data from members about their eco-efficiency and environmental management.
- Members demonstrate improvement in eco-efficiency during the life of the agreement
- FIFA and cooperative partners demonstrate improvements in eco-efficiency at the user level with particular emphasis on nutrient management.
- FIFA actively promotes the report in the public domain as part of championing eco-efficiency and building the profile of FIFA and its members as responsible participants in the environmental debate and in public policy development.

## Activities:

The Federation will produce a sectoral State of the Environment Report (Public Environment Report[PER]). With useful benchmark and performance measures in manufacturing, distribution and use of products. This will be based on Environment Australia's "A Framework for Public Environmental Reporting: An Australian Approach", March 2000).

The report will also provide activity and performance measures for all the eco-efficiency activities undertaken by FIFA members and other stakeholders and will involve:

- consulting with members and other stakeholders;
- developing performance indicators;
- developing reporting forms and regimes;
- developing a format for the report; and
- establishing a process for members to sign off on the report.

The Federation will prepare and publish an initial public environmental report detailing the current industry performance, targets for subsequent years, and targets for end user pilot projects.

A major industry forum held after the Year 1 survey will discuss preparation of the first annual Public Environmental Report (PER). Members will also be encouraged to consider preparing PERs at the individual company level.

The Federation will prepare and publish annual environmental reports that report industry and end user eco-efficiency programs, activities and achievements against objectives.

The report will utilise the data obtained from the Environmental Benchmarking and Monitoring program. It will also be undertaken in consultation with the wider industry, the community, and relevant government agencies and non-government organizations.

The report will also include measures of the co-ordination activities described above, including the results of specific initiatives that can measure the effectiveness of a coordinated approach to nutrient management.

## Performance Measures

- First PER is developed from Year 1 and published in Year 2.
- PERs are produced annually thereafter for at least a further 2 years.

The end user pilot programs would have a clear aim to demonstrate eco-efficiency benefits, particularly in relation to nutrients, and to provide a model for wider implementation of eco-efficiency tools in the farming community. Through co-operation with other projects these pilots would attempt to measure the effectiveness of eco-efficiency tools in reducing environmental impacts.

FIFA has had preliminary discussions with the Chairman of the Natural Resource Management Board (Wet Tropics) Incorporated, the Cane Growers association and the Queensland Fruit and Vegetable Growers with a view to building a co-operative framework in the Great Barrier Reef Catchment in order to implement some of the proposed cooperative initiatives detailed above. FIFA has attended the key stakeholder meetings to develop the Great Barrier Reef Water Quality Action Plan, which should help to enable cooperative projects.

FIFA has also had some discussions with the dairy research section of NRE Victoria and with consultants acting for Unilever on an environmental management system initiative in the Goulburn Valley, with a view to developing a co-operative framework in the Murray Darling Basin.

## **Ongoing Planning and Review of the Agreement**

### Desired Outcomes:

- A detailed action plan for year one with measurable outcomes and timeline is prepared and agreed by all parties. (An initial draft is attached as appendix 2.)
- A formal process of monitoring and review, including development of subsequent years action plans is agreed and implemented.

### Activities:

The Fertilizer Industry Federation of Australia will provide a finalised work plan (in consultation with Environment Australia) within the first two months of the agreement, detailing a timeframe for all the activities outlined in this Agreement.

The work plan will be reviewed and updated on at least an annual basis and will include any new activities identified during the course of the implementation of the Agreement.

An Action Plan for Years 2 and 3, based on the outcomes of and experience gained in Year 1, will be submitted for Environment Australia's agreement towards the end of Year 1 activities. The Action Plan will include activities for the next two years, costings, deadlines and reports to EA.

The Years 2 and 3 Action Plan will include:

- continuing general promotion of eco-efficiency and the tools;
- an annual survey of members and annual Public Environmental Reports for the sector against the agreed indicators;
- assistance to members to improve monitoring of their performance and to improve actual performance against the indicators; and
- progress reports to Environment Australia at the end of Years 2 and 3.

### Performance Measures

Proposed Action Plan is endorsed by the Fertilizer Industry Federation of Australia Board and Environment Australia as realistic, relevant and achievable and capable of meeting the aims of the agreement.

## Appendix 2. Action Plan and Timelines

<b>FIFA Eco-efficiency draft activity timetable and indicative funding</b>				
		Contribution		
Activity	Key Dates	EA	FIFA	Notes
Communications strategy developed by working group	Mar 2003	Time	Time	FIFA Executive Manager to develop draft and circulate for modification / approval.
Product Stewardship Management Committee formed with technical sub committee.	Mar 2003	Time	Time	Will include FIFA, Agricultural Industry, Government and Environmental group representation.
Environment Manager appointed.	Mar 2003	\$90,000 Year 1	\$95,000 Year 2	Salary, on costs, facilities and equipment, travel and accommodation.
Eco efficiency workshops	/Mar/Apr 2003	\$12,000	Time Travel Accom	Brisbane, Melbourne & Perth. (2 at each location, one manufacturing based the other distribution and sales based)
Public launch of Eco Efficiency Agreement.	May 2003	\$5,000	Time Travel Accom	In Brisbane, factory, farm and creek, including spreader calibration
Pilot survey	Apr 2003		\$10,000	Consultant fee
Eco-efficiency measures planned and implemented	Feb 2003 - Feb 2004		\$200,000	Time and materials estimated at a minimum of \$200,000
Eco Efficiency promotional and demonstration events	Twice yearly		Time Travel Accom	EA officer to visit different demonstration sites to promote the progress of Eco Efficiency
Point of sale material developed.	Jul 2003	\$5,000		Development of key messages, design and pre production.
Product Stewardship course A pilot.	Jul 2003	\$34,000		Development of course materials, registration and production set up. (Payments will be from Jan to July)
Product Stewardship course B pilot.	Aug 2003	\$34,000		Development of course materials, registration and production set up. (Payments will be from Jan to August)
Product Stewardship course delivery	July 2003- July 2004		\$300,000	Course fees paid by participant organisations.
Full survey of members and co-operative activity	Aug 2003		Time	
Review of year one and detailed plan agreed for year two	Nov 2003	Time	Time	Plan prepared by Working Group
First Fertilizer Industry Environmental Report Published	Dec 2003	\$10,000	Time	Production and printing costs
		\$190,000	\$605,000	

### Appendix 3. Likely tools and actions.

As a result of a workshop involving Environment Australia, FIFA members and representatives of Queensland Cane Growers and Queensland Fruit and Vegetable Growers, a list of environmental issues for the fertilizer industry was developed.

The range of eco-efficiency tools that would be applicable to the management of these issues were discussed and the results are listed in the following table.

This table is a guide to the likely activities that members of FIFA will undertake as part of this agreement. The actual tools implemented will be decided during and subsequent to the workshops and refined during the survey and reporting process.

Issues and likely activity	
Sector/issue	Key Activity
Primary Manufacturers and Importers	
<ul style="list-style-type: none"> <li>• Heavy metal impurities:</li> </ul>	Adoption of a code of practice for purchasing including quality assurance processes.
<ul style="list-style-type: none"> <li>• Fluorine in products</li> <li>• Odour (organic compounds)</li> <li>• Use of local materials</li> <li>• Recycling</li> <li>• Positive and negative implications of;               <ul style="list-style-type: none"> <li>○ Organic wastes</li> <li>○ Industrial wastes</li> <li>○ Domestic wastes</li> </ul> </li> <li>• Storm water quality</li> <li>• Dust</li> <li>• Groundwater impact</li> <li>• Water conservation (process efficiency)</li> <li>• Ship discharge spillage</li> <li>• Direct CO<sub>2</sub> emissions from acidulation and fuel use.</li> <li>• Indirect greenhouse contributions from energy use</li> <li>• Stack emissions;               <ul style="list-style-type: none"> <li>○ Sulphur compounds</li> <li>○ Fluorine</li> </ul> </li> <li>• Site contamination               <ul style="list-style-type: none"> <li>○ Nutrients</li> <li>○ Heavy Metals</li> </ul> </li> <li>• Solid waste               <ul style="list-style-type: none"> <li>○ Packaging</li> <li>○ Other wastes</li> </ul> </li> </ul>	Survey and reporting, use of EMS to manage and improve eco-efficiency outcomes.  Use of external audit.  Compliance reporting.  Other tools: <ul style="list-style-type: none"> <li>• Communication and involvement at all levels of organisations</li> <li>• Process and procedure analysis and re-engineering.</li> </ul>
Distribution & Storage	
<ul style="list-style-type: none"> <li>• Spillage               <ul style="list-style-type: none"> <li>○ Transport</li> <li>○ Handling</li> </ul> </li> <li>• Truck clean out</li> <li>• Transport mode analysis (truck vs rail vs ship)</li> <li>• Storm water</li> <li>• Power use</li> <li>• Packaging</li> <li>• Site contamination</li> </ul>	Survey and reporting, use of EMS (where appropriate) to manage and improve eco-efficiency outcomes.  Product stewardship accredited training course.  Codes of practice.  Transport eco-efficiency analysis.

<b>Issues and likely activity</b>	
<b>Sector/issue</b>	<b>Key Activity</b>
<ul style="list-style-type: none"> <li>○ Nutrients</li> <li>○ Heavy Metals</li> <li>● Provision of advice</li> </ul>	
End User	
<ul style="list-style-type: none"> <li>● Storage <ul style="list-style-type: none"> <li>○ Spillage</li> <li>○ Water Management</li> <li>○ Location (paddock dumps)</li> </ul> </li> <li>● Application <ul style="list-style-type: none"> <li>○ Decisions and advice</li> <li>○ Off target</li> <li>○ Eutrophication <ul style="list-style-type: none"> <li>▪ Run off</li> <li>▪ Erosion</li> <li>▪ Off target</li> </ul> </li> <li>○ Greenhouse <ul style="list-style-type: none"> <li>▪ Direct from N fertilizer</li> <li>▪ Indirect from efficiency of application</li> </ul> </li> <li>○ Groundwater nitrate</li> <li>○ Accumulation <ul style="list-style-type: none"> <li>▪ Heavy metals</li> <li>▪ Fluorine</li> </ul> </li> <li>○ Depletion</li> <li>○ Acidification</li> </ul> </li> <li>● Packaging</li> </ul>	<p>Co-ordination with other stakeholders is a key activity and role for the Environment Manager.</p> <p><b>Direct Actions (FIFA Members)</b></p> <ul style="list-style-type: none"> <li>● Packaging management</li> <li>● Advice, education awareness</li> <li>● Product Stewardship</li> <li>● Increase use of objective testing</li> <li>● Include biological health indicators in soil testing.</li> <li>● Improve advice developed from objective testing to incorporate environmental factors</li> <li>● Nutrient management codes of practice</li> <li>● Research and development</li> <li>● Implementation of codes of practice for distribution, handling and application (enhancing work of AFSA)</li> <li>● Include organic and recycled products in decision support and advice systems</li> </ul> <p><b>Indirect Actions (Partnerships and coordination)</b></p> <ul style="list-style-type: none"> <li>● Development of codes of practice.</li> <li>● Self assessment</li> <li>● EMS (may provide links to regional planning)</li> <li>● Waste management</li> <li>● Research and development</li> <li>● Application technologies and procedures (similar to Accuspread® type programs)</li> </ul>
<p>Communication</p> <ul style="list-style-type: none"> <li>● Demonstrate commitment</li> <li>● Involve and inform stakeholders</li> <li>● Promote eco-efficiency and industry leadership</li> <li>● Promotion of product stewardship as an effective standard</li> <li>● Promote FIFA as a credible and responsible industry group</li> <li>● Explain our contributions to areas of public interest and concern eg. <ul style="list-style-type: none"> <li>○ Biodiversity</li> <li>○ Soil biological health</li> <li>○ Marine ecosystems</li> <li>○ River health</li> </ul> </li> </ul>	<p>Public environmental reporting.</p> <p>Co-ordination activities of the Environment Manager.</p> <p>Media releases and events.</p> <p>Corporate culture initiatives.</p> <p>Company and product promotion.</p> <p>Presentation at conferences/forums.</p>

## Attachment A

### Tools for Eco-efficiency

*Environmental auditing.* Highly desirable as a first step in assessment of company's eco-efficiency. Involves measurement and evaluation of all inputs to and outputs from a production process. Enables a company to focus on its environmental impacts and identify measures to improve resource efficiency and environmental performance.

*Environment Management Systems.* Logical next step. Enables a company to manage environmental impacts and to integrate environmental management into a company's daily operations, long term planning and quality management systems. Greater certainty of organisational/management commitment.

*Environmental Reporting.* Voluntary public disclosure about an organisation's (or industry sector's) environmental performance and achievements as well as its contribution to sustainability. The main benefit of undertaking environmental reporting is that it greatly improves relations with the community and key stakeholders. It also provides greater control of environmental disclosure. Further, the process of developing a report uncovers opportunities for improvement in environmental performance, along with efficiencies in operations and monetary savings. Benchmarking and monitoring against eco-efficiency indicators provides a good foundation from which companies can initiate environmental reporting.

*Environmental Accounting.* An approach to company accounting whereby all environmental costs are incorporated into a company's financial reports. Benefits include better estimates of the true cost to a company of creating a product or providing a service (i.e. beyond the narrow definition of costs incurred in compliance with, or breach of, environmental laws or regulations).

*Life Cycle Assessment.* Tool for assessing the environmental impacts of a product, process or activity throughout its life cycle from the extraction of raw materials through to processing, transport, use and disposal. Business can use it in the design of their products and production lines.