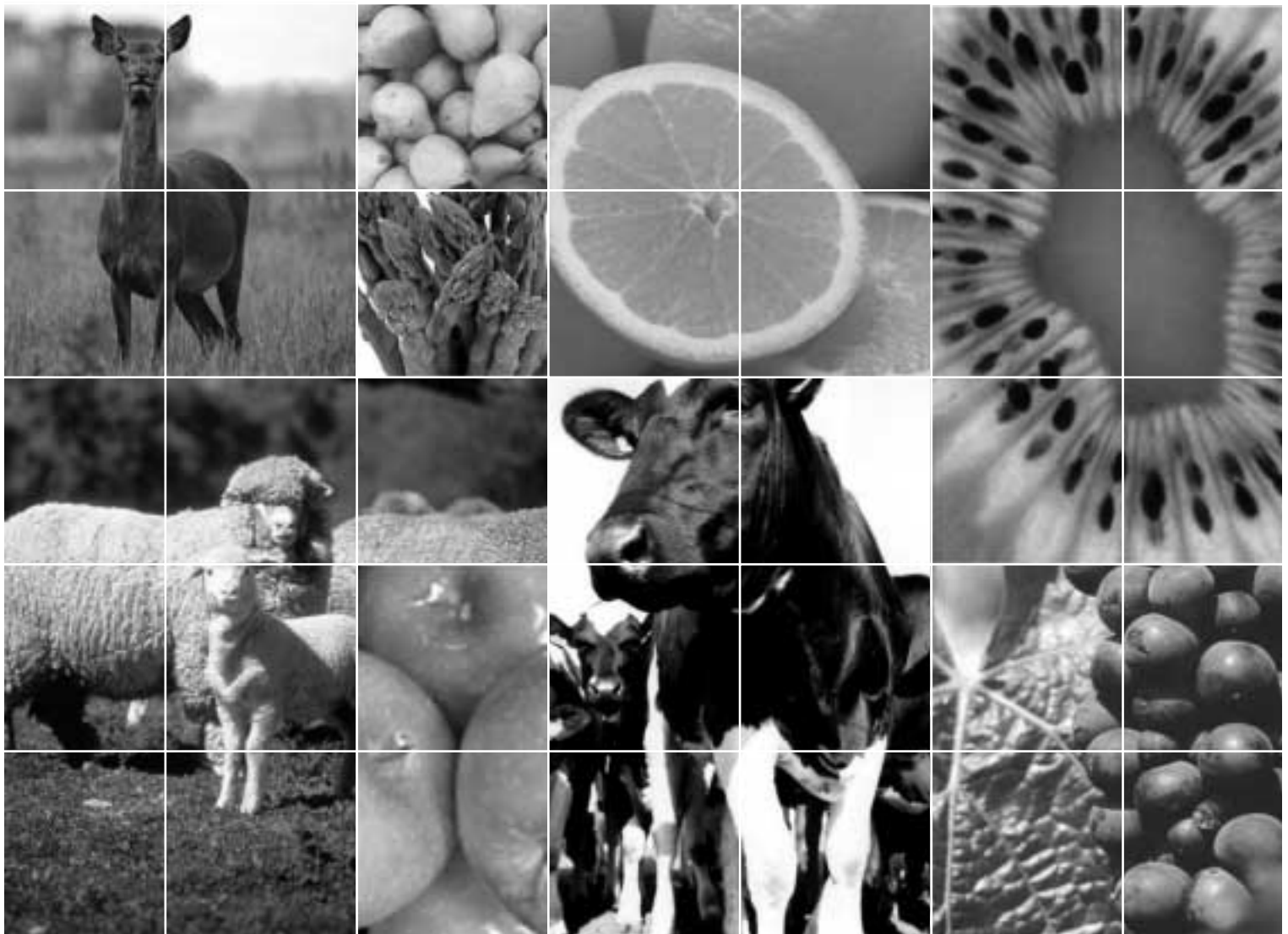


# Part Three -

A Survey of International and New Zealand  
EMS/QA Programmes





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## The SAMsn Initiative: Part Three – A Survey of International and New Zealand EMS/QA Programmes

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## 1.0 Introduction

### 1.1 Background

The Sustainable Agriculture Management Systems Network (SAMsn) has been established by a group of organisations who have a common goal in developing a framework that could form the basis of any agriculture or horticulture industry sustainable management programmes. This report is part of a programme of research that has been commissioned to investigate and assist in the development of the framework and associated resources.

This part of the report includes:

- a review of international Environmental Management and Quality Assurance programmes; and
- a review of a range of programmes used by the agriculture and horticulture sectors in New Zealand, from Sustainable Management Systems to Quality Assurance programmes.

Information contained in this report was obtained from:

- reference material held by the authors;
- a literature review and internet search; and
- contact with appropriate parties.

The format for each programme reviewed includes a background and description, followed by the possible use or implications for New Zealand horticulture and agriculture, how the programme may contribute toward the objectives of the SAMsn project, and details where further information can be obtained for the programme.

The programmes are based on a range of system models, such as HACCP, ISO, and Triple Bottom Line, or relevant regulations, depending on the objectives and requirements. Descriptions of relevant international regulations are included in text boxes in this section of the report. The system models are described in Part One: Overview of 'The SAMsn Initiative'.

### 1.2 International Environmental Management and Quality Assurance Programmes

There has been widespread development of EMS/QA programmes in Europe, USA, Japan as well as other developed nations. This report reviews a sample of the many sustainability, environmental, and quality assurance programmes found internationally. Programmes have been grouped based on the driver

for their development, as this has usually been a significant factor in the focus, structure and relative impact.

Common trends associated with the development of these programmes are identified.

### 1.3 New Zealand Environmental Management and Quality Assurance Programmes

A wide range of EMS/QA-type programmes have been developed in New Zealand for use in the agriculture and horticulture industry. These have predominately been developed by sectors to address sector-specific issues and to meet sector requirements. A total of twenty-one EMS/QA-type programmes currently in use in New Zealand have been included in this review. It is noted that there are other programmes that have been developed and are in use but have not been included. It is considered that those reviewed provide a cross section of types currently used by agriculture and horticulture in New Zealand.

The programmes cover a wide range and scope, so for the purposes of this review they have been grouped by broad programme type. The programme types include Sustainable Management Systems, Environmental Management Systems, Quality Assurance, and IPM programmes.

Programmes grouped as Sustainable Management Systems incorporate environmental, economic and social characteristics within the programme. Environmental Management Systems generally have a greater focus on environmental considerations.

IPM programmes, which have a main focus on pest management, and QA programmes, where the objectives are focused predominately on food safety and quality issues, are included because such programmes have some linkage to environmental issues in that use of agrichemicals is a key factor for consideration. Many of the sector programmes commenced as IPM or QA programmes but have been modified to incorporate additional components.

Also included in this review are four codes of practice or standards that are tools to assist implementation of EMS/QA-type programmes.

From the review a number of key components were identified and the extent to which these are reflected in programmes are collated in Part One: Overview with other parts of this report.

## 2.0 International Environmental Management and Quality Assurance Programmes

### 2.1 Trends and Issues

There has been widespread development of EMS/QA programmes in Europe, USA and Japan as well as other developed nations. The catalysts for these developments include:

- food safety concerns;
- environmental protection;
- market positioning; and
- business improvement.

As a result of these initiatives, compliance with some form of EMS/QA programme has become a precondition of supply to many major retail chains. This in turn has driven the development and adoption of programmes in other parts of the world, including New Zealand.

Some trends associated with the development of these programmes include:

**Marketing Value:** These values range from a strategy for premium market positioning to a minimum for access to value markets.

**Harmonisation:** There are increasing initiatives to harmonise programmes and standards at national, regional and international levels.

**Widening and deeper coverage:** Many programmes are evolving to incorporate coverage of a wider range of values and at a greater depth, such as environmental and social.

**Independence:** There is a move towards more robust external auditing as well as management of programmes by independent agencies against standardised management system models e.g. ISO, HACCP.

**Linkages:** Programmes are becoming referenced to externally developed and managed codes of practice and regulations.

The international sustainability, environmental or quality assurance management programmes selected and reviewed have been grouped based on the driver for their development, as this has often been a significant factor in the focus, structure and relative impact. These are summarised in Table 1.

Key driver agencies that were identified for the international programmes are:

- regulatory bodies;
- producers; and
- retailers and industry.

Regulatory bodies include bodies such as Food and Agriculture Organisation of the United Nations (FAO) and Organisation for Economic Cooperation and Development (OECD).

Producer groups have taken initiatives to establish systems and programmes which ensure their continued access to markets. Examples include the European Initiative for Sustainable Development in Agriculture (EISA) and a range of programmes that have been developed in compliance with EISA, such as Linking Environment and Farming (LEAF), in England. In Britain, the National Farmers Union have developed the Little Red Tractor standard, which is now widely recognised there.

The retailers and industry groups have also developed standards, with EUREP-GAP being the most notable. This is a common standard that facilitates harmonisation for a number of EMS and QA programmes developed by European supermarkets, such as the Tesco's Nature's Choice programme.

Table 1: Summary of selected environmental management programmes and the key drivers for their development.

Primary Driver	Overarching Initiatives	Programmes	Links
1. Regulators			
	FAO OECD standards	EMAS	Regulations /ISO 14000
2. Producers			
	EISA	LEAF	
	British Farm Standard - 'Little Red Tractor'	Farm Assurance Programmes e.g. FABBL	UKFAWC
	IFOAM	Bio-Gro	
3. Retailers and Industry			
	EUREP-GAP	Tesco Nature's Choice	QA and food safety programmes e.g. HACCP

## 2.2 Regulator Driven Programmes

### 2.2.1 FAO

#### Background

The Food and Agriculture Organisation of the United Nations (FAO) was founded in 1945 with a mandate to raise levels of nutrition and standards of living, to improve agricultural productivity, and to better the condition of rural populations.

#### Description

FAO is currently investigating the possibility of establishing and promoting Good Farming Standards as a strategy to further encourage sustainable agriculture. (The OECD has a similar linked initiative). These standards may be developed through the establishment of Codes of Practice for individual production systems with the principles and acceptable indicators established by local groups comprising producers, industry regulators and consumers.

The FAO has been involved in similar initiatives in relation to organic production that resulted in the development of Codex Guidelines for Organic Production. These organic guidelines provide a baseline that is internationally recognised as a minimum level for organic standards, and allows for some harmonisation between standards. Other similar initiatives undertaken by the FAO include the development of Guidelines for Distribution and Use of Pesticides, and a Draft Code of Practice for

Conservation Farming. There have also been discussions on the establishment of a Codex for Food Safety that could link with this initiative.

The FAO has used the common Codex developed by the European Initiative for Sustainable Agriculture (EISA) as a reference document, and this document could evolve into an internationally recognised Codex standard for Integrated Farming. FAO also has a role in:

- education of the world community on the essential role of Integrated Agriculture in the search for sustainable and adequate productivity; and
- assistance within Member Countries in the application of the Standards to Codes of Practice for individual production systems.

The FAO is also considering the issues in relation to the establishment of schemes for product certification.

#### Possible Use or Implications

The FAO has an important role in harmonising approaches and standards in agriculture. The FAO Guidelines/Standard often describe a minimum international standard and should be reviewed in the development of any similar national or industry programme to ensure that these are at least equivalent to those in the FAO documents.

#### Further Information

Website: [www.fao.org/prods/event.asp](http://www.fao.org/prods/event.asp)

## 2.2.2 Eco-Management and Auditing System (EMAS)

### Background

The European Union has a voluntary environmental management and auditing scheme. Participation requires the organisation to adopt an environmental policy that includes compliance with strict European and national legislation, including environmental laws.

Within the organisation, an initial environmental review is undertaken. In the light of this review and the company's environmental policy, an environmental programme and environmental management system is established for the organisation. The EMAS regulation has adopted ISO 14001 as the basis for environmental management systems, but has extended it to meet its specific objectives.

### Possible Use or Implications

Environmental audits, covering all activities of the organisation, must be conducted within an audit cycle of no longer than three years and, based on the audit findings, environmental objectives set and the environmental programme revised to achieve the set objectives. On completion of the initial environmental review and subsequent audits, or audit cycles, a public environmental statement is produced.

New Zealand producers and companies cannot join this scheme, as only organisations with production bases in Europe are eligible. Achieving ISO 14001 accreditation is the only way for New Zealand producers to gain access to markets that require EMAS certification.

### Further Information

Website:

[www.europa.eu.int/comm/environment/emas](http://www.europa.eu.int/comm/environment/emas)

## 2.3 Producer Driven Programmes

### 2.3.1 European Initiative for Sustainable Development in Agriculture (EISA)

#### Background

The European Initiative for Sustainable Development In Agriculture (EISA) is the representative body of Integrated Farming projects operating throughout Europe. Members are:

- FARRE, France, Forum de l'Agriculture Raisonnée Respectueuse de l'Environnement
- FILL, Luxembourg, Fordergemeinschaft Integrierte Landbewirtschaftung Luxemburg
- FNL, Germany, Fördermeinschaft Nachhaltige Landwirtschaft e.V
- L- agricoltura che vogliamo, Italy
- LEAF, United Kingdom (UK), Linking Environment And Farming
- Odling i Balans, Sweden.

EISA members are strongly committed to sustainable agriculture, which is economically viable, environmentally responsible and socially acceptable. They work in partnership with all stakeholders to achieve this goal through the promotion and further development of Integrated Farming.

In March 2001 the EISA member associations jointly established a common Codex outlining the fundamentals of Integrated Farming that is currently being used as a reference document by the United Nations FAO. This document could evolve into an internationally recognised Codex standard for Integrated Farming.

#### Possible Use or Implications

The EISA Codex has become the international reference for Integrated Farming. New Zealand producers may need to show equivalence with this standard in the future if they are to make Integrated Farming label claims or possibly for market access.

#### Further Information

EISA, c/o FNL e.V., Konstantinstrasse,  
90, D – 53179 Bonn, Germany  
Tel: +49 (0) 228 97 99 30  
Fax: +49 (0) 228 97 99 340  
email: info@fnl.de

### 2.3.2 LEAF

#### Background

LEAF (Linking Environment And Farming) is a member of the EISA and a national charity, established in the UK in 1991. It seeks to develop and promote Integrated Farm Management (IFM), help farmers improve their environment and business performance, and create a better public understanding of farming through a nationwide network of demonstration farms. It was one of the original developers of the integrated farm management concept and has been active in promoting this in the UK. It has developed a programme that has been adopted by a large number of UK farmers.

LEAF's Mission is 'Committed to a viable agriculture'.

Its objective is 'Working with farmers for farmers and consumers to:

- encourage farmers throughout the UK to adopt Integrated Farm Management; and
- promote the benefits of IFM to consumers and raise awareness of the way many farmers are responding to current concerns'.

The suggested benefits are that it looks at the whole farm, combining the best of modern technology with the basic principles of good farming practice. It includes practices that avoid waste, enhance energy efficiency and minimise pollution. For the producer it helps ensure the ability to continue business, and for consumers a continued supply of quality produce - achieved with responsibility and sensitivity to the environment.

#### Further Information

Website: [www.leafuk.org/LEAF](http://www.leafuk.org/LEAF)

### 2.3.3 Little Red Tractor

#### Background

The British Farm Standard – more commonly known as the Little Red Tractor programme - was established by the UK National Farmers Union in 1999 to provide an assurance that any food with the Little Red Tractor stamp was produced to independently inspected standards as set out by farm assurance schemes that define good agricultural practice. The programme was catalysed following various food scares, to provide consumers with confidence on how food was produced. The programme now incorporates meat, milk, cereals, vegetables and fruit with 78,000 participating farmers, who supply up to 90 percent of UK output of these products. Many UK retailers have adopted the

programme and consumer recognition of the distinctive label is increasing.

Assurance programmes have been developed which typically cover the entire food chain and address food safety, environmental, and animal welfare issues. Sector specific assurance programmes incorporate detailed standards and inspection systems and include reference to Government Regulations (refer to Box 1), Codes of Good Agriculture Practice or advisory bodies eg Farm Advisory Welfare Council (FAWC). Farmers adopt these programmes and are then subject to independent audit.

The establishment of systems to track product throughout the food chain is a key feature of these programmes.

Assurance programmes recognised by the Little Red Tractor programme include:

- Beef and Sheep
  - Farm Assured British Beef and Lamb (FABBL)
  - Farm Assured Welsh Lamb (FAWL)
  - Northern Ireland Farm Quality Assurance Scheme (NIFOAS)
- Fruit, vegetables and salad – Assured Produce
- Dairy – National Dairy Farm Assurance Scheme
- Arable crops – Assured Combinable Crops
- Poultry – Assured Chicken Production.

#### Possible Use or Implications

The wide spread adoption of these programmes by UK farmers has been catalysed by strong retailer demands as well as government encouragement. New Zealand products entering into these markets are coming under increasing pressure to demonstrate a similar standard of assurance.

#### Further Information

Website: [www.littleredtractor.org.uk](http://www.littleredtractor.org.uk)

#### Box 1: Regulations and Codes of Good Agricultural Practices

##### Regulations and Codes of Good Agricultural Practices

UK assurance programmes are referenced to various codes of practice or regulations developed by Government, typically in consultation with stakeholders. These often have legally enforced obligations. They include:

##### UK Code of Good Agricultural Practices

For the Protection of Air (PB0618)

For the Protection of Soil (PB0617)

For the Protection of Water (PB0587)

##### Other Regulations and Guides

Farm Fires - Advice on Farm Animal Welfare (PB0621)

The Food Safety Act 1990 and You - A Guide for Farmers and Growers

MHS Clean Livestock Policy (PB3250/PB3411)

Clean Beef Cattle for Slaughter - A Guide for Farmers (PB4103)

Clean Sheep for Slaughter - A Guide for Farmers (PB4102).

### 2.3.4 Farm Assured British Beef and Lamb (FABBL)

#### Background

The FABBL scheme was set up in 1992 to provide a nationwide farm assurance scheme, to give retailers and consumers confidence in British livestock production standards. More than 18,000 farmers belong to FABBL, which is owned by trade organisations representing farmers, auctioneers and abattoirs.

#### Description

FABBL is an Assured British Meat (ABM) scheme operating to the European Standard EN 45011 for product certification activities.

The FABBL scheme standard covers six sections:

- identification and traceability;
- farm animal management;
- environment & hygiene management;
- feed composition, storage and usage;
- housing and handling facilities; and
- medicines and veterinary treatments.

These provide details on expected management. The standards are also referenced to external Codes of Practice and the Farm Animal Welfare Council (FAWC). (Refer to Box 2.)

#### Further Information

Website: [www.fabbl.co.uk](http://www.fabbl.co.uk)

#### Box 2: UK Animal Welfare Council

##### UK Farm Animal Welfare Council

#### Background

The Farm Animal Welfare Council (FAWC) is an independent advisory body established by the UK Government in 1979. Its terms of reference are "to keep under review the welfare of farm animals on agricultural land, at market, in transit and at the place of slaughter, and to advise the Minister of Agriculture, Fisheries and Food, the First Minister of the Office of the Scottish Executive and the First Secretary of the National Assembly for Wales of any legislative or other changes that may be necessary".

#### Description

It has developed the 'five freedoms' for animal welfare that has been used extensively in quality assurance programmes:

- Freedom from hunger and thirst
- Freedom from discomfort
- Freedom from pain, injury or disease
- Freedom to express normal behaviour
- Freedom from fear and distress.

The FAWC is currently undertaking a review of farm assurance schemes applying to animals on-farm, at market, in transit and at place of slaughter to establish their value in protecting animal welfare. As well it will be taking into consideration food safety issues and environmental impacts as they relate to animal welfare. Feedback indicates that issues of audit, traceability and labelling are important aspects, as are consumer confidence and public perception.

#### Possible Use or Implications

The output of the review will be of value to meat companies to help anticipate changes in FAWC guidelines. These seem to often be automatically adopted by most farm assurance schemes.

#### Further Information

Website: [www.fawc.org.uk](http://www.fawc.org.uk)

## 2.3.5 Organics Certification

### Background

Organic certification has developed to provide organic product consumers with the guarantee that the products they buy are genuine and produced in accordance with organic principles. With the increased international trade in organic products and price premiums, organic certification systems have become increasingly stringent to protect the interests of consumers and remove the potential for fraudulent claims.

There is no one international organic standard that regulates production and trade, however there are a number of important sets of organic standards around the world that need to be met in particular markets if a product is to be successfully exported into those markets.

### International Standards

#### International Federation of Organic Agricultural Movements (IFOAM)

The IFOAM base standard is generally recognised as the baseline for organic agriculture. IFOAM is regarded as the world 'organic organisation'. IFOAM currently has over 600 member organisations in over 100 countries. Its activities include setting, and regularly revising, the international 'IFOAM Basic Standards of Organic Agriculture and Food Processing', which are translated into 19 languages.

The International Organic Accreditation Services, Inc., (IOAS) runs the IFOAM Accreditation Programme to ensure equivalency of certification programmes worldwide.

Some large purchasers of organic product e.g. Sainsbury's in the UK, more preferentially take organic product from suppliers with IFOAM accredited certification due to the perceived high integrity of the IFOAM accreditation process and standard.

#### Codex Alimentarius

The Codex Alimentarius Commission implements the joint FAO/WHO food standards programme. The 'Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods', are the Codex contribution to organic standards. These guidelines are an attempt at official international harmonisation of the requirements for organic products in terms of production and marketing standards, inspection arrangements and labelling requirements. They do not, however, prevent the implementation of tighter standards in member countries.

### National and Regional Certification Programmes

#### USA

The United States Department of Agriculture (USDA) has recently developed a National Organic Programme. Now that the programme is in place, individual certifying agencies, or government authorities such as the New Zealand Food Safety Authority (NZFSA), have to seek USDA accreditation for organic products to be exported to the USA. The NZFSA has achieved this accreditation for New Zealand producers.

#### European Union (EU)

The EU organic standard is set out in Council Regulation 2092/91. Third countries (i.e. not part of the EU) that wish to export organic agricultural products to the EU must have a national certification system that ensures the equivalence of their production to the standard required under the regulation. The regulation requires all imports of organic products from third countries to be accompanied by assurances from the government's competent authority that the product has been produced to the rules of production specified in the regulation or rules deemed to be equivalent to the regulation.

Individual countries within the EU are able to set higher standards as befits their local requirements. Until July 2002 New Zealand exports to the EU were made under a derogation to the regulation. After 2005 the EU will no longer permit derogation. New Zealand applied for, and was granted, placement on the third country list in July 2002. The New Zealand Official Organic Assurance Programme that provides the basis for this equivalence position has simplified access for organic products exported to the EU, as it has replaced the need for New Zealand exporters to obtain import licenses from individual states within the EU.

#### Japan

The Japanese Ministry of Agriculture, Forestry and Fisheries implemented a Codex Alimentarius-based organic standard and a system of mandatory inspection, certification and labelling that applies to domestic and imported products. This requires all produce and processed foods (crops only) labelled as organic in Japan to carry the Japan Agricultural Standard (JAS) mark. The NZFSA is currently developing an official assurance programme with Japan.

## New Zealand

At present there are two standards that New Zealand producers can certify to that are harmonised to international standards and recognised as Third Party Agencies under the NZFSA 'Official Organic Assurance Programme'. These are Bio-Gro New Zealand (Bio-Gro) and the AgriQuality New Zealand Organic Standard. Another smaller agency, Demeter also has a standard and undertakes certification, however it is not currently recognised by NZFSA.

### Possible Use or Implications

There is a rapidly growing international market for certified organic products. Consumers typically pay a premium for these products which provide producers with an incentive for production.

### Further Information

IFOAM: [www.ifoam.org](http://www.ifoam.org)

NZFSA: [www.nzfsa.govt.nz/organics/about/overview](http://www.nzfsa.govt.nz/organics/about/overview)

## 2.4 Retailer and Industry Driven Programmes

### 2.4.1 Euro-Retailers Produce Working Group – Good Agricultural Practice (EUREP-GAP)

#### Background

EUREP-GAP was established in 1997 when an agro-chemical company wished to encourage integrated crop management to protect products from chemical resistance build-up. Currently twenty-two of the largest European based retailers have agreed to work through EUREP-GAP to establish a common standard for safe and sustainable agriculture.

#### Description

The programme is a business-to-business tool with no intention of having a consumer EUREP-GAP brand because the participating retailers do not want the label to overshadow their own marketing strategies. It is an initiative to facilitate mutual recognition of integrated production standards. It aims to be a benchmarking system for the sustainable management systems of its members, rather than a stand-alone EMS/QA programme. It aims to encourage the development of individual and/or national schemes for food safety and quality assurance that also address environmental, worker safety and welfare issues. The goal is to have a reference system at hand that can serve as a global benchmark for the pre-farm gate production of food. The main focus to date for EUREP-GAP has been on horticultural products, however a Technical Standards Committee has been formed to develop livestock standards. At a meeting in early 2001 the participants finished the first draft of a generic livestock document. It proposed that sub-protocols or modules for different species of animals would be developed by sub-groups to reflect specific needs.

#### Possible Use or Implications

EUREP-GAP is a powerful initiative that will require compliance by New Zealand producers to gain access into typically high-value European supermarkets. Potentially it could assist in the standardising or harmonising of programmes in New Zealand.

The highest priority for EUREP-GAP is the successful implementation of the global certification scheme for fruits and vegetables. This is in operation and in New Zealand ENZA, Pipfruit Growers of NZ Inc and Zespri™ are supplier members, showing that they have established systems to satisfy the EUREP-GAP

requirements. The key driver for this initiative is that without compliance with the EUREP-GAP programme by 2004, access to key European markets will be lost. The integrated management programmes that have been established for some time, such as Integrated Fruit Production (IFP) and the KiwiGreen programmes, have simplified compliance with the EUREP-GAP programme. A similar initiative for flowers is also under way.

#### Further Information

Website: [www.eurep.org](http://www.eurep.org)

### 2.4.2 Tesco - Nature's Choice

#### Background

Tesco is an example of one of the companies involved in the EUREP-GAP programme. As with the other UK supermarket chains it introduced an assurance programme for fruit and vegetables in the mid 1990s. The Tesco programme is called 'Nature's Choice'.

#### Description

All UK growers of fresh fruit, vegetables, flowers and other ornamental plants have to meet strict rules protecting wildlife and the land - i.e. the farm's biodiversity - in order to do business with Tesco. These rules are being introduced to suppliers around the world, including New Zealand.

The Code of Practice, called Nature's Choice, promotes the use of beneficial insects rather than chemicals to control pests, encourages water and energy efficiency and ensures recycling. Growers are asked to draw up a farm conservation plan, which guides them in protecting important wildlife and landscapes. Tesco monitors the effects of Nature's Choice on farmland birds such as the song thrush, lapwing and grey partridge. British suppliers are compliant with the NFU Little Red Tractor programme conditions.

Tesco has also developed a code of practice for livestock. This principally covers animal welfare and food safety issues, however if it evolves like the Nature's Choice programme, it is anticipated, it will be extended to cover a broader range of environmental factors.

#### Possible Use or Implications

TESCO is a large and rapidly growing UK-based supermarket chain that is expanding into other countries. New Zealand fruit and produce suppliers to Tesco have had to satisfy the conditions of the Nature's Choice programme. One feature of this programme is the calculation of the energy used in the production of

the product. The distance of New Zealand from this market does create greater pressure on being able to establish moderate energy (or food mile) costs.

#### Further Information

Website: [www.tesco.com](http://www.tesco.com)

## 3.0 New Zealand Programmes - Sustainable Management Systems to Quality Assurance

### 3.1 Programmes reviewed

Twenty-two EMS/QA-type programmes which have been developed in New Zealand, as well as four codes of practice or standards that are tools to assist implementation of programmes, were reviewed. The programmes cover a wide range and scope and have been grouped, for the purposes of this report, by programme type. Table 2 lists the programmes and groupings. (Refer to Part One: Overview for programme descriptors.) It should be noted that while the programmes have been categorised there are not definitive demarcations in all cases.

Of the twenty-two programmes, the majority are sector specific. They have been designed and developed by an industry sector group to address issues specifically relating to that sector. The programmes which are generic include Greentick™, NOSLAM, Eco-Profit and Enviro-Mark®. In addition, the FarmPride programme is organisation specific, having been developed specifically to meet the requirements of Landcorp Farming Ltd across all the sectors in which the company operates. The Fresh Produce Approved Supplier Programme has been designed to apply across all fresh produce and incorporates both vegetables and fruit, although some fruit sectors also have sector specific programmes.

#### Sustainable Management Systems

Five programmes, which cover a broad range of considerations, are described as Sustainable Management Systems. These are Sustainable Winegrowing NZ, Project Green™, GreenTick™, Livestock Improvement's SmartPlan™ and the Organic Standards. Components of these programmes encompass sustainability factors, including such things as energy use, greenhouse gas budgets and a wide range of environmental issues such as biodiversity.

#### Environmental Management Systems

While there are seven programmes described as EMS-type programmes, in that they incorporate environmental issues not necessarily specific to food safety or quality, there is a significant variation in type and scope within this group. The Living Wine Group and NOSLAM are ISO 14001 programmes, with Enviro-Mark™ having the potential to be ISO accredited if desired. Market Focused has two levels, with the

second level based on a farm plan that looks at the total property in a holistic manner. Eco-Profit is a self-evaluating programme which incorporates a range of on-farm issues.

#### Quality Assurance

There are seven sector programmes which are Quality Assurance (QA) programmes where the objectives are focused predominately on food safety and quality issues. These programmes generally have limited environmental considerations, mainly where the issues are also related to food safety and quality. KiwiGreen, in its current format, is essentially a QA programme but the addition of EUREP-GAP requirements extends the scope of issues for consideration and so in the revised format is a more inclusive EMS-type programme.

#### Integrated Pest Management

Three sectors have Integrated Pest Management (IPM) programmes which have a main focus on pest management. Such programmes have some linkage to environmental issues in that use of agrichemicals is a key factor for consideration. Many of the sector programmes commenced as IPM type programmes but have been modified to incorporate additional components.

#### Codes of Practice and Standards

Four Standards and Codes of Practice are included as they are tools that are available to be used in the implementation of EMS/QA-type programmes. For instance NZS8409 The Code of Practice for the Management of Agrichemicals is incorporated into a number of programmes reviewed.

Table 2: Summary of programmes and groupings

Programme	Programme Type					
	SMS	EMS	Quality Assurance	IPM IFP	Standards	Codes of Practice
GreenTick	X					
Organic Standards	X					
Project Green™	X					
SmartPlan™	X					
Sustainable Winegrowing	X					
Market Focused		X				
NOSLaM		X				
The Living Wine Group		X				
Merino Benchmarking Group		X				
Eco-Profit – Towards Sustainable Agriculture		X				
Enviro-Mark™		X				
Green Globe		X				
Kiwi Green		X (EUREP-GAP)	X			
NZ Fresh Produce Approver Supplier Programme			X			
DeerQA			X			
AFFCO Select			X			
FarmPride			X			
FernMark Quality Programme			X			
Olive Care™			X			
Pipfruit – Integrated Fruit Production				X		
AVO Green				X		
SummerGreen				X		
Agrichemical Code of Practice					X	
Fertiliser Code of Practice						X
FertMark						X
Spreadmark						X

### 3.2 Components of programmes

While there are a range of programmes currently in use there are some synergies between these through a set of key components that appear as common themes throughout. Table 3 identifies these key components and the extent to which they are included within the framework of the programmes assessed. The components identified, and the key determinants include:

- Registered – Was it required that a participant be registered with the organisation administering the programme?
- Checklists – Does the programme use a series of checklists completed by the participants as a fundamental component of the programme?
- Audited – Is the programme externally audited?
- Certified – Does the result of an audit lead to certification or accreditation of some kind?
- Voluntary – Is compliance with the programme voluntary or required by an agency or organisation?
- Tiered – Does the programme give scope to be introduced in a number of stages with increasing compliance across a greater range of issues?
- External references – Does the programme include reference to other regulations, standards and other resource documents or is it self-contained?
- Market drivers – Did market drivers influence the development of the programme?

The majority of programmes require some form of registration and hence ability to monitor participants. Such a registration framework is essential where auditing and certification is part of the programme. Most programmes include an external audit function so that compliance can be verified. Usually such compliance is recognised with a formal certification and use of a brand or logo, such as Fresh Produce Approved Supplier. The consequence is that there are a range of brands or logos currently in use.

Most programmes are voluntary, although increasingly the requirement for compliance with some programmes is coming from sources beyond the sector, such as from supermarkets or wineries. Zespri™ require compliance with KiwiGreen for the marketing of fruit and Landcorp Farming require all their farms to comply with FarmPride.

A number of programmes are including a tiered approach, which enables an ongoing progressive approach to adoption. This approach allows for

compliance to be undertaken in stages rather than having to address all issues at the outset, and also enables a participant to determine the level they wish to achieve.

External documents are used in a number of programmes with GROWSAFE® certification and compliance with NZS8409 The Code of Practice for the Management of Agrichemicals often a requirement. Reference is made to other documents such as the Code of Practice for Fertiliser Use and farm environmental plans.

Table 3: Components of the programmes

Programme	Programme components							
	Registered	Checklists	Audited	Certified	Voluntary	Tiered	External document	Market drivers
GreenTick™	Y	Y	Y	Y	Y	Y	Y	Y
Organic Standards	Y	Y	Y	Y	Y	N	Y	Y
Project Green™	Y	N	Y	Y	Y	N		Y
SmartPlan™	Y				Y	N		Y
Sustainable Winegrowing	Y	Y	Y	Y	Y	N	Y	Y
Market Focused	N	N	N	N	Y	Y		Y
NOSLaM	Y	Y	Y	Y	Y	N	Y	Y
The Living Wine Group	Y	Y	Y	Y	Y	N		Y
Merino Benchmarking	Y	Y	Y	N	Y	N	N	N
Eco-Profit	N	Y	N	N	Y	N	Y	N
Enviro-Mark™	Y	Y	Y	Y		Y		
Green Globe	Y		Y	Y	Y	Y		Y
KiwiGreen (EUREP-GAP)	Y	Y	Y	Y	N	Y	Y	Y
NZ Fresh Produce Approved Supplier	Y	Y	Y	Y	Y	N	Y	Y
DeerQA	Y	Y	Y	Y	Y	N	Y	Y
AFFCO Select	Y	Y	Y	Y	N	N	Y	Y
FarmPride	Y	Y	Y	N	N	N		Y
FernMark	Y	Y	Y	Y	Y	N		Y
Olive Care™	Y	Y	Y	Y	Y	N	Y	Y
Pipfruit – IFP	Y	Y	Y	Y	Y	N	Y	Y
AVO Green	Y	Y	Y	Y	Y	N	Y	Y
KiwiGreen	Y	Y	Y	Y	N	N	Y	Y
SummerGreen	Y	Y	Y	Y	Y	N	Y	Y

## 3.3 Sustainable Management Systems

### 3.3.1 Sustainable Winegrowing New Zealand

#### Background

The Sustainable Winegrowing New Zealand (SWNZ) programme, which was previously called New Zealand Integrated Winegrape Production when it first began development in 1995, has released the 4<sup>th</sup> Edition of its technical manual. The renaming of the programme in 2002 was to improve the general understanding of the programme by both growers and consumers alike.

The programme has been modelled on a Swiss Integrated Fruit Production system. Since the initial development, a range of trials and research have been undertaken, culminating in the latest edition of the programme. Three hundred and eight growers, reflecting 60 percent of the production area, adopted the programme in the 2001/2002 season, although the programme is still voluntary within the industry.

#### Description

SWNZ is an holistic approach which seeks to encompass all appropriate environmentally and economically sustainable winegrape production methods suitable to New Zealand conditions into a single set of consistent and transparent standards, giving priority to methods that are the safest possible for the environment and human health. It includes management of soils and fertilisers, pest and diseases, use of agrichemicals, cover crops, irrigation management, sward management, and integrated plant protection and recognises the importance of achieving a balance between environmental and economic factors in production.

A number of key principles underpin SWNZ so that it is accepted both nationally and internationally:

- Practices must:
  - be standardised;
  - have defined limits; and
  - be open to audit and scrutiny.
- Processes are open to continuous improvement, based on research developments.

The programme is based around a seasonal activity chart and a 'scorecard'. The data on the scorecard reflects the individual vineyard, with the data being the basis of the audit, which takes place once in every three years. The scorecard is based on the SWNZ standards and common principles across all vineyards. The

programme has a manual that includes detailed chapters on technical issues, which are updated as new research becomes available.

#### Possible Use or Implications

The extension of the Sustainable Winegrowing programme demonstrates that existing programmes can be amended with additional modules being added to an existing programme. The composition of the new programme has extended the scope of the programme to include a wider range of sustainability issues.

Refer 'The SAMsn Initiative: Part Four – Case Studies' for further details of the programme.

#### Further Information

New Zealand Winegrowers

Website: [www.nzwine.com](http://www.nzwine.com)

### 3.3.2 Project Green™

#### Background

The Project Green™ concept initially evolved through the input of a number of parties with an interest in establishing a significant supply base to satisfy international, most significantly the UK, market demand for organic meat. The initial focus on developing an organic standard broadened to the establishment of an integrated/sustainable production standard for pastoral production. Support to develop and pilot the concept was obtained from Richmond Ltd, MAF's Sustainable Farming Fund and the New Zealand Business Council for Sustainable Development.

In the early stages the project was called 'Green Tick' but this name had been trademarked by the Green Tick Technologies, so the name of the project was changed to Project Green™. At one stage development of a New Zealand Standard was considered but did not get widespread industry support, so has not been pursued.

#### Description

The Project Green™ programme was developed by the project team, in consultation with interested farmers and other stakeholders. Critical values underpinning the programme include the need:

- to reflect New Zealand pastoral production;
- to be based on the objective measurement and active management of a farm system to produce positive environment, economic and social outcomes; and
- for the standard to be accessible, feasible and viable for a greater number of New Zealand farmers than existing standards.

Project Green™ has a vision: “To achieve a standard of food safety, animal welfare and sustainable resource management that is defensible in all countries of the world.”

This vision is achieved through the development of three core management plans which are specific to the farm property.

- Land and Environment Plan. This plan is a structured approach to land use planning based on a standardised resource analysis. The plan covers soil health, water quality, shelter and shade, pasture, biodiversity, biosecurity and greenhouse gases. The plan is developed in consultation with an approved land management professional and is unique to each property, to reflect the local issues and challenges.
- Animal Management Plan. This plan includes both animal welfare and animal health. It is developed in consultation with an approved veterinarian and requires a current level of ‘Base Farm Assurance’ as a prerequisite.
- Social Responsibility Plan. This plan, developed by the farm manager, seeks to maintain protection of those involved on the farm and in the community. It includes staff, community and heritage issues, as well as a commitment to sustainable development.

The organisation of the Project Green™ programme into these sub-areas reflects the desire to incorporate farm management with economic, environmental and social impacts and has a basis in Triple Bottom Line Reporting.

Minimum standards apply for entry and on-going compliance. The objective is to encourage progressive behaviour, with an audit process that assesses progress against the agreed action plan for the farm. The degree of progress is determined by the agreed requirements of the specific property.

#### Possible Use or Implications

The current programme development has led to discussion about the relationship between EMS/SMS type systems and NZ Standards. It is also a comprehensive system for pastoral agriculture incorporating environmental, economic and social considerations based on the requirements of the particular farm property.

#### Further Information

Website: [www.projectgreen.co.nz](http://www.projectgreen.co.nz)

### 3.3.3 GreenTick™

#### Background

The GreenTick™ programme has been developed by GreenTick Technologies, an independent company who have established the programme on a commercial basis. It was launched in 2002.

#### Description

GreenTick™ is an approval system that assures customers that a product or service is truly “clean and green”. There are two approval processes – one for organisations with ISO 14001 accreditation and one for those without. There are also two levels of approvals – GreenTick Approved and GreenTick Premium. Approval to use the GreenTick™ logo is gained after an audit based on set criteria. The approval is valid for two years and spot audits can be undertaken at any time. Approval is based on twenty standards – eight safety and twelve sustainability standards - which seek to protect product quality, health and safety, the environment and credibility.

GreenTick™ is independent, measurable, repeatable, and verifiable.

#### Possible Use or Implications

The GreenTick™ programme is tiered to allow for adoption in stages, thus enabling a progressive movement toward certification of sustainable management.

#### Further Information

Green Tick Technologies

Website: [www.greentick.co.nz](http://www.greentick.co.nz)

### 3.3.4 SmartPlan™

#### Background

SmartPlan™ has been developed for the New Zealand dairy industry by Livestock Improvement’s FarmWise Consultancy Service. It was launched at the end of 2002 as a sustainable farm management service. The programme has been developed to help dairy farmers deal proactively with social, work and environmental issues, as well as financial aspects of the farm business. The programme is based on a personalised plan developed between a FarmWise consultant and the farmer, with guidance on regional and industry sustainability requirements.

The definition of ‘sustainable’ used by SmartPlan™ is: “An improvement in the productive performance of the dairy farm system without depleting the natural resource

base upon which future performance depends; and being economically (profitability) socially (communities) and environmentally sustainable. Environment encompasses land, water, air, communities and animals.”

#### Description

The programme establishes mechanisms for the farmer to evaluate on-farm activities in terms of environmental, financial, social and work sustainability, and developing individually tailored solutions to address issues identified. The programme is delivered via the on-farm consultancy service FarmWise. A consultant visits the farm, interviews the farmer and develops a specific targeted plan to address the sustainability issues that affect the business. There are three aspects to the plan – a data profile, a farm walk and an Action Plan.

A data profile is established in consultation with the farmer, containing details of current practices, including water quality, irrigation, nutrients, biodiversity, labour, contingency planning, effluent disposal, soil, waste, chemicals, animal welfare, social, carbon balance, air, milk quality, archaeological sites and aesthetics.

This is followed by a farm walk to document practices being used on-farm, assess the effectiveness in terms of sustainability objectives, and the potential for change and improvement. This is then collated into a comprehensive Action Plan prepared by the consultant.

#### Possible Use or Implications

The programme includes a higher degree of external involvement than other programmes.

#### Further Information

Livestock Improvement FarmWise consultants

Website: [www.lic.co.nz](http://www.lic.co.nz)

### 3.3.5 Organic Standards

There are a number of organic standards which are aligned to the international organic standards under the NZ Food Safety Authority, 'Official Organic Assurance Programme'. These include:

- Bio-Gro;
- The AgriQuality Standard, operated by Certenz; and
- Demeter Standard, certified by the NZ Bio-dynamic Farming and Gardening Association.

A NZ Organic Standard is being developed by Standards NZ.

Refer to Part Three 2.3 above, for details of the International Organic Standards to which NZ is aligned.

#### Possible Use or Implications

There is a rapidly growing international market for certified organic products. Consumers typically pay a premium for these products, which provide producers with an incentive for production. The NZ Standard is based on the International Standards.

#### Further Information

BIO-GRO New Zealand,

Website: [www.bio-gro.co.nz](http://www.bio-gro.co.nz)

AgriQuality New Zealand Ltd,

Website: [www.agriquality.co.nz](http://www.agriquality.co.nz)

Demeter New Zealand,

Website: [www.biodynamic.org.nz](http://www.biodynamic.org.nz)

New Zealand National Standard

Website: <http://www.standards.co.nz>

## 3.4 Environmental Management Systems

### 3.4.1 Market Focused

#### Background

Market Focused is an environmental management system for dairy farmers, which includes environment and animal welfare. The development of Market Focused was initiated by the EQUAL group of farmers who held a series of 'think tanks' on developing such a system for the dairy industry. The programme was developed over a three-year period by a stakeholder group, including Otago Regional Council and all the dairy companies, led by New Zealand Dairy Research Institute. The EQUAL group trialled and peer reviewed the programme during its development. It was launched in September 2001, and was followed by a series of workshops throughout the country outlining the programme to dairy farmers.

#### Description

Market Focused is a template-based self-assessment tool for environmental quality management. At this stage it is voluntary, and there is no audit process. There are two modules in Market Focused, although to date the second module has not been actively promoted.

Module One is based on the dairy industry policies and guidelines as the starting point for effective environmental and animal welfare management on-farm. Environmental management matters include effluent, water, fertiliser, waste, soil, and pesticide/agricultural management. Animal welfare includes animal husbandry, animal feeding practices, disease and injury control and animal environment. There is a template sheet for each issue with the farmer completing objectives for the farm, best management practices to be used, monitoring required and actions needed. The reverse side has some suggested objectives and Best Management Practices (BMP's). The templates are self-assessments as to how the industry policies may be met on farm.

Module Two includes a critical and comprehensive identification and analysis of individual farm environmental issues and risks. It is based on use of the Farmcheck computer programme, provided on CD. This incorporates a Land Management Unit (LMU) approach where the farm is divided up into units based on 'like areas' and where management issues would be similar. The result of working through the programme culminates in generation of a report pertaining

specifically to the farm property and activity sheets for action and recording.

#### Possible Use or Implications

The tools provided in the Farmcheck programme identify a range of environmental issues and assess and establish risk levels and responses.

Refer 'The SAMsn Initiative: Part Four – Case Studies' for further details of the programme.

#### Further Information

Fonterra: [www.fonterra.com](http://www.fonterra.com)

Dexcel: [www.dexcel.co.nz](http://www.dexcel.co.nz)

### 3.4.2 North Otago Sustainable Land Management Programme (NOSLaM)

#### Background

The NOSLaM project was developed in the early 1990's by a group of North Otago farmers who sought to develop a market advantage for products that complied with an EMS programme. The programme was funded and supported by Otago Regional Council, MfE's Sustainable Management Fund (SMF), AGMARDT and the local community.

#### Description

The NOSLaM Enviro-Ag environmental certification for farmers is based on a workshop process that leads a farm business to develop an integrated management plan that is initially accredited by NOSLaM (or another group in another area), and subsequently can lead to ISO 14000 certification. The programme was based on ISO 14001 because it:

- certifies that the organisation has a system in place to manage environmental risks and impacts;
- is internationally recognised;
- has no minimum standards except that all legal requirements must be met (e.g. RMA and OSH requirements); and
- continuous improvement must be built in.

Costs of certifying an individual farm to ISO 14001 are generally prohibitive i.e. between \$5,000-7000 for initial audit and then \$2000-4000 annually (1998 prices). The process is also highly bureaucratic.

Enviro-Ag is designed to develop a group accreditation scheme for ISO 14000. This has the advantage of reducing costs and limiting the bureaucracy as well as providing a support network for individuals.

The commitment required to achieve and maintain ISO 14000 certification is significant and the group has not been able to sustain and build the interest. In particular, the lack of market recognition (i.e. increased prices) meant there was little incentive for the effort required. The workshop manual is large and extremely comprehensive, and may be seen as rather daunting at the outset.

#### Possible Use or Implications

NOSLaM is a model of a group working together, across sectors, to establish a locally-based programme, reflecting local conditions and providing the opportunity to market local produce using a group certification. However the marketing opportunities need to be realised so that they become an incentive for the effort required.

The programme and material has been prepared for NZ situations and could be useful for other groups, with much of it being publicly available.

#### Further Information

Otago Regional Council

Note: The NOSLaM web site ([www.noslam.org.nz](http://www.noslam.org.nz)) is not currently active.

### 3.4.3 The Living Wine Group

#### Background

The Living Wine Group is a network of four wineries in Hawkes Bay and Wairarapa who worked collectively on attaining a quality standard. They have all achieved ISO 14001 accreditation and others have now also joined the group and obtained accreditation. The participants were audited by JAS-ANZ (Joint Accreditation Systems of Australia and New Zealand).

#### Description

The objectives of the Group are to:

1. Achieve a sustainable balance between business and environment.
  - a) Gain control over environmental or resource management issues by:
    - i. internalising the cost of environmental management through adequate planning and effective implementation of environmental improvements;
    - ii. reducing the effects of 'non-commercial' organisations e.g. Councils, NGO's, on business sustainability, by increasing

participants' environmental understanding and environmental improvement outcomes.

- b) Protect the value of the organisation's assets, e.g. productive capability.
  - c) Demonstrate corporate citizenship.
2. Contribute to the preservation of the local and global environment.
  3. Encourage other organisations and individuals to follow suit.

Actions derived from the objectives cover human resources, quality grapes and wine, natural resources, sustainability, and economic stability. Methods and measures of results are established for each objective.

Barriers identified by the Group include time and cost requirements, but costs were considered to be outweighed by the benefits. The complexity of the issues and demands of other aspects of the business were also constraints, as well as concerns about interference from external 'non-commercial' organisations.

The Group saw great benefit from the collective approach and consider that peer review is a key driver to the ongoing maintenance of the network. There were gains through lack of duplication of time and costs, such as consultancy, certification and auditing. The benefits include improvement in business structure and resulting cost efficiencies, and a greater awareness of inputs and savings in those areas such as energy, chemicals, water and waste management.

The network clearly sees a market advantage from being ISO 14001 accredited.

Richard Riddiford, of Palliser Estates, regards the "process as continuous improvement and our peers within the group are our watchdogs as opposed to the auditors. Our manual will never be finished and we must remember that success is a journey, not a destination." (The Living Wine Group – A Group approach to ISO14001, The Clean & Green Seminar – The Wine Industry, Adelaide June 1999).

#### Possible Use or Implications

The Living Wine Group has quantified the process of adopting an ISO 14000 programme as a group in a New Zealand horticultural setting. It may be a suitable model for other groups to adopt if synergies exist, similar to The Living Wine Group.

#### Further Information

The Living Wine Group

Website: [www.livingwine.org.nz](http://www.livingwine.org.nz)

### 3.4.4 Merino Benchmarking and Monitoring Group

#### Background

The Merino Benchmarking and Monitoring Group was established by a group of progressive Merino sheep farmers who wished to develop a stronger approach to the monitoring and management of their properties, with the ability to increase profit being the strongest driver.

#### Description

Farmer involvement in previous environmentally focused farm projects had often been poor, and involvement in on-going activity was nearly non-existent. This project set out to develop and evaluate a methodology for farmers to combine environmental monitoring and planning, which often benefits others, with farm production monitoring and planning, which benefits farmers directly. The project recognised that farmers have little incentive to record environmental data long term unless there are clear benefits, which the markets were not demanding at that point in time.

Each property developed a formal monitoring and decision-making process that was linked with a group-benchmarking scheme incorporating production, financial and environmental data.

For the process to be cost-effective, an internet-based group database was developed to link with individual on-farm recording, using an existing commercially available New Zealand farm database software programme, 'Endeavour' on home PC's to record the data. Data for benchmarking and analysis is uploaded via the Internet to the group database.

To make benchmarking comparisons between businesses meaningful, the group contained only farms with significant areas of native tussock country, a majority of merino sheep, and with similarities such as product and/or land type, although they had a wide geographic spread from Marlborough to Otago.

Group analyses provided are:

- stocking rate;
- livestock performance;
- wool; and
- financial performance.

The group has four workshops each year that include a farm visit and a workshop session to discuss the particular property and the analysis of the group data.

Between workshops farmers record their monitoring data according to the group protocols.

The benefits to the farmers include:

- 'real' data on which to make development decisions;
- the ability to compare with others in the same sector; and
- significant dollar benefits for those who have made changes.

The project has also developed a draft 'environmental report card' to show how the data could be used for quality assurance purposes. This could readily be adapted or another style of report developed.

The development project is now complete but an important measure of its success is that the group has agreed to self-fund its continuance.

#### Possible Use or Implications

The concepts and results of this project could be readily applicable to many land based businesses and provide a good insight into strategies to facilitate the adoption of SMS.

#### Further Information

Merino Benchmarking and Monitoring Group  
C/- PO Box 74 Omarama.

### 3.4.5 Eco-Profit – Towards Sustainable Agriculture

#### Background

The development of Eco-Profit was sponsored by MAF Policy in 1996 with the objective of helping Southland farmers move towards sustainable farming - financial, social and environmental. It was developed in consultation with farmers and used the LEAF programme for direction.

The programme was introduced to Southland farmers through a series of meetings in the late 1990's.

#### Description

The programme is a self-assessment tool for individual businesses, although it could be used in a workshop setting. It asks questions about farm practices, and gives a selection of responses, each with different scores. Each question also asks the user to select the desired score, as well as present situation. For each section, the user is asked to list areas for improvement, and the final pages encourage turning ideas into actions.

Eco-Profit covers financial matters, OSH, shelter and energy, as well as land and stock management issues in an easy-to-follow booklet. However, it is not intended

for ongoing monitoring. The responses are subjective, not measured, and notes and guidelines are often specific to Southland.

#### Possible Use or Implications

The checklists provide a useful self-evaluation tool for on-farm use. It also demonstrates a regional, rather than a sector, approach to on-farm issues.

#### Further Information

MAF Policy, Dunedin

### 3.4.6 Enviro-Mark® NZ

#### Background

Enviro-Mark® is a generic international programme developed in Ireland. Enviro-Mark®NZ, is the New Zealand version of the programme, which is managed by Landcare Research. It is an Internet-based, five-step certification programme focused on health, safety and environmental management issues in organisations, regardless of size or nature.

#### Description

The programme has a self-assessment and planning process, using an Enviro-Mark® Planner, to enable users to evaluate their environmental management and health and safety performance against the Enviro-Mark® NZ standards. Achievement of the standard is verified by external audit.

The programme has five levels of attainment, each with respective requirements and levels.

**Bronze:** Compliance with the most commonly applicable environmental and health and safety legislation.

**Silver:** Commitment to production of an appropriate environmental policy, built upon a determination of environmental impacts.

**Gold:** Effective monitoring of targets and objectives to achieve continuous improvement.

**Platinum:** Competence and control of the organisation's activities with operational documentation.

**Diamond:** Pre-certification to ISO 14001 through correction and improvement driven by a proven internal audit programme.

#### Possible Use or Implications

The tiered or staged approach to environmental improvement is of value so that issues are addressed in an ongoing and manageable framework. There is also the opportunity to work toward ISO accreditation if so desired.

#### Further Information

Website: [www.enviro-mark.com](http://www.enviro-mark.com) go to International page and select New Zealand.

Email: [ENMARK@LandcareResearch.co.nz](mailto:ENMARK@LandcareResearch.co.nz)

### 3.4.7 Green Globe 21

#### Background

Green Globe 21 is an EMS operating in New Zealand for the travel and tourism industry. It currently has about three hundred member companies, mostly at the affiliate membership stage.

#### Description

The Green Globe 21 standard provides a framework to benchmark environmental and social performance, to achieve certification and to continuously improve. Green Globe 21 has three stages of membership: affiliate, benchmarked and certified. Affiliate membership can be considered an introductory stage. A company progresses by measuring environmental performance through benchmarking and making annual improvements. The performance of the operation is assessed in ten key areas and when certified can use the Green Globe logo.

#### Possible Use or Implications

The tiered structure allows for participants to address issues in an on-going way. It is also relevant to agriculture and horticulture tourism ventures.

#### Further Information

Website: [www.greenglobe21.com](http://www.greenglobe21.com)

## 3.5 Quality Assurance Programmes

### 3.5.1 NZ Fresh Produce Approved Supplier Programme

#### Background

The NZ Fresh Produce Approved Supplier Programme was initially developed in the mid 1990's by the Fresh Vegetable Sector within Vegfed. It has been extended to now include all fresh produce, with fruitgrowers becoming part of the programme in 2000. It was a proactive initiative by industry to ensure that safety standards were met in the production of fresh produce.

The programme is HACCP-based, incorporates the principles of ISO, and applies to the whole supply chain of fresh produce including transport and packaging.

The aim of the programme is food safety, developed in response to consumer awareness, both domestically and internationally. It seeks to ensure that there is only one auditor through the gate so the grower does not have to comply with a multiple range of programmes and requirements. An underpinning principle is that the programme can be applied regardless of the size or complexity of an operation – from small through to extensive operations. It is focused on an approach to business that allows suppliers to develop and respond to requirements in a way that suits and reflects individual businesses. The focus is on a 'business to business' basis, rather than a 'business to consumer' basis. While the consumer is the benefactor, the programme was not intended to have a high public profile or to override promotion and branding being undertaken at business levels.

The programme was developed over four years by MAF Quality Management (now AgriQuality), with financial support from AGMARDT and the Fresh Vegetable Sector of Vegfed. The programme has been updated twice, in January 2001 and May 2002, incorporating industry feedback, customer requests and regulatory requirements. In particular, industry sought changes to records management and the addition of checklists and cross-referencing to reduce compliance fatigue.

#### Description

The objective of the programme is to become an Approved Supplier so the Approved Supplier trademark can be attached to produce. All supermarkets in NZ now require Approved Supplier status from suppliers.

The focus is on the areas of production where hazards to food safety may occur, such as in agrichemical

application, fertiliser application, packaging and handling.

There are a number of steps to become an Approved Supplier, including:

- attendance at a training workshop where the programme and how to implement it are outlined; and
- working at the property level using the supplied checklists to ensure all requirements are met.

Once these are completed an assessor visits the property and carries out an assessment of the operation to ensure that processes meet the required standards. If reached, Approved Supplier status is obtained.

To maintain the Approved Supplier status there are a range of ongoing audit requirements that need to be met, with an external assessment one year in three.

#### Possible Use or Implications

The training system, checklists and auditing structure ensure the ongoing adoption of the programme.

Refer 'The SAMsn Initiative: Part Four – Case Studies' for further details on the programme.

#### Further Information

NZ Vegetable and Potato Growers Federation

Website: [www.vegfed.co.nz](http://www.vegfed.co.nz)

### 3.5.2 DeerQA

#### Background

The New Zealand Deer Industry quality assurance programmes (DeerQA) were established from 1991 following widespread industry debate on the future direction of the industry. Quality assurance was identified as being a critical factor for future market access into premium value markets. At the time of its development, venison processing plants did not have quality assurance programmes, other than MAF's regulated requirements. The development of the programme was supported with seed funding from the New Zealand Game Industry Board (now Deer Industry New Zealand), as it was perceived as being an industry-good initiative. The initial focus of the programmes was on food safety and animal welfare.

#### Description

The DeerQA programmes consist of four components, reflecting the industry's intent to have quality assurance programmes covering the industry's value chains from "pasture to plate" for venison and "pasture to patient" for velvet. The overall programme is described as DeerQA.

The programme follows the core principles of quality assurance - reliability, independence, customer driven and committed to continuous improvement.

The four components are:

- Transport Programme;
- On-farm programme;
- Venison processing, inc Cervena® Marketing Programme; and
- Livestock Agents QA Programme.

The DeerQA Transport programme, begun in 1992, was the first component of the quality assurance programme developed because it was identified that there were relatively few operators to target, as well as significant meat quality issues resulting from the poor handling of deer prior to and during transport.

The On-farm Programme was developed in 1993. The drivers for the development of this programme included:

- an expectation that market demands would require such a programme;
- observations of the wide range in quality of deer submitted for slaughter (e.g. level of defects) and animal venison quality resulting from variations in on-farm management; and
- the Cervena® Programme demanding a greater consistency in venison quality and the expansion of this programme to provide assurance in relation to a number of aspects of the deer production environment. This requirement came later in the piece and after the Cervena® strategy was put in place. QA underpinned the Cervena® Programme.

The On-farm Programme was strongly supported by deer farmers with 2,700 registered by 1999 and 1,200 – 1,300 fully accredited (out of a total of 4,300 farmers). This programme has subsequently been adopted by a number of venison processing and marketing companies and incorporated into their own quality assurance programmes and standards. An advantage of this has been the mutual recognition by processing companies of each other's quality assurance programmes when these are based on the industry's generic DeerQA programme. This minimises the need for farmers to gain accreditation to a number of different quality assurance programmes in order to supply competing processors.

The Venison Processing Programme was developed even though all venison processors had to comply with MAF requirements. The industry has a set of industry agreed quality standards which are voluntary (with

almost all companies adopting them), externally audited and which comply with ISO 9002 standards. Aspects of the venison processing standards were developed by the deer industry and are managed through a technical committee made up of industry representatives. The industry standards have been moving from an ISO basis to one based on HACCP principles and now encompass individual company Risk Management Plans.

The Cervena® Programme is a trademarked assurance programme that provides purchasers of qualifying product, assurances that the product has been naturally produced and has been covered by a quality assurance programme throughout the value chain.

A recent component of the industry quality assurance programme covers livestock agents. One of the main components of this programme requires stock agents to attend a two-day course and become accredited to the Stock Agents DeerQA programme.

The On-farm Technical Committee has developed an extension of DeerQA through the development of a strongly linked, but separate document, the Deer Farming Landcare Manual, which describes best management practices and basic environmental management system principles. It seeks to increase the emphasis on minimising negative environmental impacts from deer farming. The On-farm Programme has a new, clearly identifiable environment section with specific criteria required or recommended, and specific links to the Landcare Manual where farmers can refer to for best practice methods. Both documents will be subject to continuous improvement and regular reprint.

#### Possible Use or Implications

The DeerQA programme was one of the first developed, has progressively expanded and developed, and is a good model of an evolving EMS/QA that maintains a high level of voluntary support. The development and management approach, with the commitment of input from all key stakeholders, is a useful model. It is also an example of a programme being adopted by competing processors, thereby reducing the need for multiple accreditations.

Refer 'The SAMsn Initiative: Part Four – Case Studies' for further details on the programme.

#### Further Information

Deer Industry New Zealand

Website: [www.nzgib.org.nz](http://www.nzgib.org.nz)

### 3.5.3 Affco Select

#### Background

The meat company Affco established a programme in 1998 to ensure consistency and quality standards of all stock being processed in Affco plants. The programme was reviewed in 1999 and additional requirements were added. The programme is used in conjunction with the Livestock Presentation Policy to provide customers with an assurance as to quality, food safety and traceability.

#### Description

The AFFCO Farm Select – Lamb and Beef Accreditation Programme establishes standards which are audited on farm to ensure that on farm practices and procedures satisfy the customer requirements for food safety and quality standards. The programme requires compliance with the relevant standards, legislation and guidelines, including the NZ Animal Welfare Advisory Committee (AWAC) Code of Recommendations and Minimum Standards for Animal Welfare, the Animal Welfare Act (1999) and Meat (Residues) Regulations. It is based on the 'five freedoms':

- Freedom from hunger and thirst;
- Freedom from discomfort;
- Freedom from pain, injury or disease;
- Freedom to express normal behaviour;
- Freedom from fear and distress.

Ovines and bovines must be managed for origin and traceability, stockmanship, the 'five freedoms', feed and water and drafting, presentation and transportation. There are set criteria for each requirement of the programme and accreditation is gained when an external audit confirms compliance with the programme.

#### Possible Use or Implications

This programme is similar to others developed by New Zealand meat companies and is equivalent to the UK sheep and beef assurance programmes, a major market for New Zealand meat exports.

#### Further Information

Website: [www.affco.co.nz](http://www.affco.co.nz)

### 3.5.4 FarmPride

#### Background

FarmPride is a QA programme developed by Landcorp Farming Ltd for use on all Landcorp properties to ensure quality assurance across all the organisation's

farming properties and to maintain the future success of the business. Development of the programme began in the mid-90's. By 2000 FarmPride had been developed and implemented across all Landcorp's farm properties with two formal on-farm audits having been completed.

#### Description

FarmPride is based on Landcorp's charter and includes all staff in the structure and implementation of the policy. It has a philosophy of continuous improvement and review. It is seen as a way to address the 98 Acts and Regulations which can affect the operation of the Landcorp farms. It has a focus on:

- ensuring product quality and safety;
- reaching beyond customer satisfaction;
- longevity in the global market place;
- a commitment to environmental sustainability; and
- safety for people and animals on farm.

The areas covered by FarmPride include:

- product quality;
- customer satisfaction;
- environmental responsibility;
- animal welfare; and
- animal health.

A fundamental element is the relationship with processors and maintaining relationships for the positive benefits to both businesses.

FarmPride is independently audited bi-annually and an Action Plan is developed for matters to be addressed. FarmPride has been described as 'a culture' (Primary Industry Magazine Vol 5 N4 Dec 2002 pg 16). Central to adoption of the programme was education about the programme and the culture that it encompassed – that is, the approach to the business. There were messages about tidiness and how it was reflected and linked to the operation, such as farm safety and animal welfare.

#### Possible Use or Implications

This is an example of a QA programme focused on a particular organisational operation rather than a sector, with the programme encompassing the range of farming operations within Landcorp Farming Ltd. The focus on the 'culture' of the business and engaging with, and training of, all staff is critical to its success.

#### Further Information

National Manager – Projects, Landcorp Farming Ltd, Wellington.

### 3.5.5 FernMark Quality Programme

#### Background

The FernMark Quality Programme for woolgrowers was developed by WoolPro and launched in 1996. A similar programme, Woolcare, introduced by Wrightson, is now incorporated into FernMark. The philosophy was a producer-driven QA programme that sought to address the fragmented supply chain, which limited the ability to put pressure on the market.

Reform within the industry has meant that the impetus behind FernMark has reached a plateau at the present. Responsibility for the programme has transferred to Meat and Wool Innovation.

Uptake was greatest within the merino sector with 80 percent of merino growers accredited, compared to 40 percent of mid-micron and 13 percent of crossbred growers.

#### Description

FernMark covers shearers, farmers and scourers – that is, the supply chain within the industry.

The Grower's Manual outlines the process to become a FernMark Quality Accredited Wool Grower. A key part of this is the Farm Quality Plan which includes consideration of the following:

- facilities;
- preventing contamination;
- animal welfare;
- dip residues;
- sheep preparation;
- standards and records;
- staff requirements; and
- woolshed procedures – pressing identification and transport.

There are requirements for each aspect and recommended ways to achieve these, with the focus on producing a quality product.

The Grower's Manual includes checklists and record sheets. Following completion of the Farm Quality Plan an assessment is undertaken both pre-shearing and at shearing. Following a successful assessment an agreement is signed to formalise the accreditation. Assessment is carried out by a Farm Quality Plan (FQP) broker or MWI officer.

Random audits are undertaken to ensure on-going compliance with the programme and a full reassessment is undertaken every two years.

#### Possible Use or Implications

This is an example of a fibre-based programme where there is no emphasis on food safety. However the focus on quality reflects the impacts of operations on both the environment and product quality.

#### Further Information

Meat and Wool Innovation offices.

### 3.5.6 Olive Care™

#### Background

The Olive Care™ programme was developed by the Queensland Dept of Primary Industry (DPI) in conjunction with a panel of processors and producers. It is being used in New Zealand by the NZ Olive Association (NZOA) under licence as the grass roots component of their Quality Assurance System.

#### Description

The NZOA Quality Assurance System has four components:

- Olive Care™ for growers – Approved Supplier Programme to processors;
- Programme for HACCP Accreditation for Processors;
- Chemical Testing of olive oil; and
- Sensory (Organoleptic) Tasting of olive oil by an Accredited Panel.

The latter two components are subject to accreditation by the International Olive Oil Council and are required to identify oils that qualify for Extra Virgin status. A quality seal may be placed on bottled oil that has qualified through all four stages.

The focus of Olive Care™ is ensuring a safe quality food source for processing.

Olive Care™ for growers incorporates HACCP principles. A one-day course provides a framework for a grower to develop and maintain an approved supplier programme for their own grove. The course workbook includes practical ways to identify and control hazards using good horticultural practice and a checklist process for internal review within the grove. It also provides examples of documentation needed for product traceability, including chemical storage, grove application, and harvest and transportation records.

Growers are certified after a successful audit undertaken by a HACCP trained processor, who audits growers annually prior to harvest. The processor is required to attend a three day HACCP course and be

able to develop a HACCP Plan for the processing operation (this plan is externally audited and certified).

While Olive Care™ is voluntary, it is expected that processors will increasingly restrict olive acceptance to only growers who are accredited under the programme.

#### Possible Use or Implications

This is a good example of how a programme developed overseas i.e. Australia, can be used in New Zealand under license.

#### Further Information

New Zealand Olive Association

Website: [www.nzoa.co.nz](http://www.nzoa.co.nz)

## 3.6 Integrated Pest Management Programmes

### 3.6.1 Pipfruit Integrated Fruit Production

#### Background

Pipfruit Growers New Zealand (PGNZI) manages the Integrated Fruit Production (IFP) programme that was part of the former ENZAWAY programme. The changes within the pipfruit industry over the last few years have resulted in changes to the way that a number of programmes are managed. The IFP programme is industry-good, so is now the responsibility of PGNZI. ENZA is requiring growers to be EUREP-GAP accredited to be able to sell product in Europe. The IFP programme contributes to a grower reaching EUREP-GAP standards. The focus of the IFP programme is on food safety, but EUREP-GAP also encompasses environmental and social responsibilities.

#### Description

The Pipfruit IFP programme focuses on minimising agrichemical use within the orchard, with spray diaries being required for export fruit. Previously growers were audited but new audit requirements are currently being established. Auditing is carried out by external agencies approved by PGNZI. Registration is orchard, not grower, based, with some growers having a number of orchards.

#### Possible Use or Implications

The relationship between New Zealand industry programmes and the requirements for EUREP-GAP need to be worked through so that a grower only needs to comply with one regime and have one auditor through the gate. Some pipfruit growers are also NZ Fresh Produce Approved Supplier accredited as well as needing to meet EUREP-GAP requirements.

#### Further Information

Pipfruit NZ Inc

Website: [www.nzpipfruit.co.nz](http://www.nzpipfruit.co.nz)

### 3.6.2 AvoGreen Programme

#### Background

AvoGreen seeks to ensure responsible and auditable avocado production systems that assures safe fruit for customers. The programme has been developed over a period of five years and tested with growers during its development. The programme and registered trademark are owned by the Avocado Growers Association (AGA),

while the Avocado Industry Council (AIC) manages the implementation of the programme.

#### Description

AvoGreen is a pest monitoring programme based on IPM principles. It includes a monitoring system and manual, an industry database of results, supporting research, website, and field management to support implementation of the programme.

The programme is based on having accredited operators, pest monitors and auditors undertake all aspects of the programme. An orchard owner can become an accredited operator so that they can monitor their own orchard.

To comply with AvoGreen a crop needs to meet a set of requirements:

- only agrichemicals approved by AIC shall be applied to the crop, which are recorded in a spray diary and submitted for audit;
- all person spraying agrichemicals on avocado crops are to be GROWSAFE® certified;
- all fruit shall be packed by an AIC registered operator; and
- pest monitoring shall be carried out by an AIC accredited pest monitor.

Pest monitoring frameworks and orchard mapping are critical components of the programme to ensure that pest monitoring is carried out in a consistent fashion.

Auditing is carried out by either AgriQuality or Zespri's audit team, who operate under the same requirements. A grower or operator can choose which organisation will carry out an audit.

#### Possible Use or Implications

AvoGreen sets in place a system whereby product control is managed by a registered operator, who may or may not be the owner. It draws attention to the input of external accredited operators as part of the process to ensure best management practices.

#### Further Information

Avocado Industry Council

Website: [www.nzavocado.co.nz](http://www.nzavocado.co.nz)

### 3.6.3 KiwiGreen Programme

#### Background

The KiwiGreen programme was initially established in 1991 to satisfy Italian demands for residue-free kiwifruit. Based on the results of this initial project and the expectation of continued market demands for residue-free fruit, the New Zealand Kiwifruit Marketing Board decided that all its export fruit would be grown under the KiwiGreen programme. The programme has been revised over time as a result of experience and research. However an initiative in the late 1990's to extend the scope of the programme to a full EMS was not supported by the industry.

In 2001 Zespri™, under its Customer Gateway Programme, introduced initiatives to satisfy market demands. These include the introduction of improved product track and trace systems, as well as systems to satisfy the requirements of the EUREP-GAP programme. It is anticipated that compliance with the EUREP-GAP programme will be simplified because of the existing KiwiGreen programme and other components of the Zespri™ supply management system.

#### Description

The KiwiGreen programme uses an IPM approach to pest and disease control, with the aim of having nil or minimal residues on fruit at harvest, and to meet the quarantine requirements of importing countries. The programme provides a KiwiGreen manual to growers and has a coordinated monitoring and audit process.

The manual contains:

- information on kiwifruit pests and their management;
- the standardised KiwiGreen pest monitoring process;
- botrytis information and recommended management strategies;
- an appendix with resources to assist with the monitoring associated with the programme; and
- guidelines on the use of the programme with the various types of kiwifruit.

Principal features of the programme include:

- sprays are to be used only in response to a demonstrable need;
- all persons spraying agrichemicals within an export kiwifruit orchard have to have certification under the GROWSAFE® programme;

- spraying decisions are influenced by the orchard history, weather conditions and levels of pest present; and
- growers are required to complete and submit a spray diary at harvest.

All export growers are required to comply with the conditions of the programme. A key component of the programme is the seasonal monitoring of pest/predator levels which is carried out by the grower or pest scouts. The spray diary details the timing, type and volume of chemical used on the crop. A crop cannot be packed until a completed spray diary has been submitted.

#### Possible Use or Implications

The KiwiGreen programme was one of the first IPM programmes established and has acted as a model for other industries. The recent extension of the Kiwifruit industry quality assurance programme to satisfy EUREP-GAP requirements could be a useful model for other organisations seeking EUREP-GAP compliance.

Refer The SAMsn Initiative: Part Four – Case Studies for further details on the programme.

#### Further Information

Zespri™ International

Website: [www.zespri.com](http://www.zespri.com)

### 3.6.4 SummerGreen

#### Background

SummerGreen is an IPM programme developed by SummerFruit NZ for use in summer fruit orchards – covering peaches, nectarines, plums, apricots and cherries. The programme was developed in consultation with the growers and is now managed by a Programme Manager, with a facilitator who oversees the programme in each growing area.

#### Description

The programme is based on pest monitoring and identification and seeks to apply the principles of IPM by limiting applications of agrichemicals. There are clear industry guidelines that growers must adhere to, in order to meet industry export standards. Spray diaries are required to be kept and must be supplied to packhouses and audited. Residue testing is also undertaken. All growers using agrichemicals are required to be GROWSAFE® certified.

An integral part of the programme is the ongoing information transfer to growers, with each region establishing priorities for training and information and research identification.

The programme is likely to be extended to cover additional issues such as the use of fertilisers, leaching to groundwater, and soil quality, through the development of guideline tools for growers.

Many SummerFruit growers are Approved Suppliers under the Fresh Produce Approved Supplier Programme. The requirements of both programmes are complementary.

#### Possible Use or Implications

The process for establishing and implementing SummerGreen has been led by the industry and has a strong regional focus, reflecting the needs of the industry in the respective areas.

#### Further Information

SummerFruit NZ

Website: [summerfruitnz.co.nz](http://summerfruitnz.co.nz)

## 3.7 Standards

### 3.7.1 NZS8409:1999 The Code of Practice for the Management of Agrichemicals

#### Background

The Code of Practice for the Management of Agrichemicals is administered by the New Zealand Agrichemical Education Trust, which has as its Mission Statement: "To facilitate the approved and safe use of agrichemicals in New Zealand consistent with effective sustainable land management and environmental protection".

As an accredited agency of Standards New Zealand the Trust has published NZS8409:1999 The Code of Practice for the Management of Agrichemicals. This Standard incorporates legislative changes and has a comprehensive coverage of animal remedies and spray drift management issues.

The Standard is currently undergoing a review to enable it to be an Approved Code of Practice under the Hazardous Substances and New Organisms Act (HSNO), and so be a means of complying with the regulations under HSNO, administered by the Environmental Risk Management Authority (ERMA). The HSNO Act sets out certain controls under its regulations for the management of hazardous substances. There are agrichemicals that will require the user to be an Approved Handler and the person conferring that approved status, to be a Test Certifier.

#### Description

The Standard is the core training document for the GROWSAFE® Certificates which aim to improve users' understanding of the:

- role of agrichemicals in the management of pests and diseases;
- properties and mode of action of commonly used agrichemicals;
- principles of agrichemical application;
- potential impact of agrichemicals; and
- obligations of agrichemical users.

The focus is on best management practices for all aspects of agrichemical use.

The training courses include Introductory, Applied, Registered Chemical Applicators and Pilots Agrichemical Rating.

The Standard has been incorporated into many EMS/QA-type programmes as a means to ensure safe application, storage and use of agrichemicals.

#### Possible Use or Implications

Many industries, regional and district councils currently require compliance with the Standard and GROWSAFE® certification as a means of ensuring that best management practices are used in agrichemical application, use and storage. NZS8409:1999 The Code of Practice for the Management of Agrichemicals and GROWSAFE® are tools that could be used within the framework of a sustainable management programme.

#### Further Information

New Zealand Agrichemical Education Trust

Website: [www.GROWSAFE.co.nz](http://www.GROWSAFE.co.nz)

## 3.8 Codes of Practice

### 3.8.1 Code of Practice for Fertiliser Use

#### Background

The Code of Practice for Fertiliser Use was first published in 1998, and updated in 2003, by the New Zealand Fertiliser Manufacturers' Research Association, which developed the programme in conjunction with industry. It is founded on the Framework for Evaluating Sustainable Land Management (FESLM) principles of sustainable land management as a means of providing guidance as to the effects of activities. It is a non-prescriptive approach that provides for the safe, effective and responsible use of fertiliser.

#### Description

The Code includes information on best management practice for fertiliser application; good practice indicators; fertiliser use considerations such as record keeping and nutrient requirements, handling, transport and storage of fertilisers; as well as application. It also includes a section on the Resource Management Act and responsibilities in terms of fertiliser use.

It has a number of Fact Sheets and User Guides for specific operations including:

- horticulture;
- plantation Forestry;
- pastoral; and
- arable Farming

The Fact Sheets cover basic issues related to fertiliser application, detailing the effects and how to address the issue.

The User Guides provide a practical framework to audit factors which are critical to an operation and the potential for impacts on the environment.

#### Possible Use or Implications

Many industries and regional and district councils currently refer to the Code of Practice for Fertiliser Use as a tool that is appropriate as a means of achieving best management practices in fertiliser application. As such it is a tool that could be used within the framework of a sustainable management system.

#### Further Information

New Zealand Fertiliser Manufacturers Research Association

Website: [www.fertresearch.org.nz](http://www.fertresearch.org.nz)

### 3.8.2 FertMark

#### Background

Fertmark is a fertiliser quality assurance scheme, developed by the fertiliser industry in the early 1990's, in response to a vacuum in government regulation regarding the quality of fertiliser product being sold. The green Fertmark tick is a registered trademark which can be attached to products certified under the scheme. There are currently eleven companies who belong to Fertmark and have products registered. The scheme is administered by the New Zealand Fertiliser Quality Council which has a governing board representing a cross section of industry participants.

#### Description

The scheme is voluntary but has a requirement that members abide by a code of conduct, which requires manufacturers to be able to substantiate claims about registered products. All products are audited to ensure quality standards are maintained and that they comply with registered products or mixes. The production, distribution, staff training systems, laboratory methods and safety records of the company are also assessed. Regular product samples are taken and analysed to ensure ongoing consistency.

The New Zealand Fertiliser Quality Council appoints an auditor who undertakes the audit function on behalf of the Council.

#### Possible Use or Implications

The use of Fertmark registered products provides a guarantee of the composition and quality of the product. Within the framework of a SMS, the nature of fertiliser being applied and its potential impacts should be able to provide certainty. Fertmark may be a useful tool in this regard.

#### Further Information

Website: [www.fertmark.co.nz](http://www.fertmark.co.nz)

### 3.8.3 Spreadmark

#### Background

Spreadmark was developed by the New Zealand Groundspread Fertiliser Association, which has administered the scheme for the last ten years. Recently the New Zealand Fertiliser Quality Council has undertaken the management of the programme, in conjunction with Fertmark. The intent of the programme is to provide farmers with assurances that fertiliser is applied using best management practices and that it will be applied evenly and at a correct rate.

An Aerial Spreadmark is currently under development, as an initiative from the New Zealand Agricultural Aviation Association.

#### Description

Spreadmark is a voluntary ground spreader operator certification programme. To become a Spreadmark registered company the spreader company must have a documented management system and spreading equipment that meets set standards. The operators are required to attend a one-day training course and be externally audited to ensure compliance with the scheme, including calibration of equipment.

#### Possible Use or Implications

The use of a Spreadmark registered operator provides an assurance that fertiliser is being applied using best management practices. Within the framework of a SMS, the nature of fertiliser application and its potential impacts should be able to provide certainty. Spreadmark may be a useful tool in this regard.

#### Further Information

NZ Fertiliser Quality Council