

Nufarm Limited
2009 Health, Safety and Environment Report





Andrew Thurlow
Synthesis manager, Laverton

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About this report

This is the 10th annual Health, Safety and Environment Report describing Nufarm's performance and its journey on the path of continual improvement.

The report covers the 2008 calendar year. It provides performance data and examples of initiatives by employees to enhance the safety of our people and customers, and to minimise environmental effects from our operations and products.

The health and safety data is collated from 16 manufacturing sites, 19 offices and regional service centres. Not included is data from a further 8 offices in Asia and South America. We have included data from our recently acquired operation in Wyke, UK (previously A H Marks).

The health and safety data includes permanent and casual employees and contractors. Targets set by the Nufarm board have been included, including the expectation of an annual 15% improvement.

The graphical data shows areas where improvements have been made and indicates where further efforts are required.

The environmental data is provided by our manufacturing plants and summarised for this report. Most of these sites provide detailed information on their own operations. Their reports are included in loose leaf form at the back of this report. If these are missing, they can be downloaded from Nufarm's website <http://www.nufarm.com> or sent by mail if you contact Nufarm.

Nufarm's Corporate Governance Statement forms part of the Nufarm Annual Report, which can be downloaded from the website.

While gathering data for this year, a few inaccuracies in past years' data have been discovered by some sites. These have been confirmed and figures for previous years have been corrected where possible.

Overview



Badriyah
Packaging operator, Merak

About Nufarm

Nufarm Limited is a development, manufacturing and marketing company with a proven capability to manage brands and to grow business in global crop protection markets.

The company has strong synthesis capabilities and adds value through product innovation and the successful management of its branded products. One of its strengths is its strategic alliance with other manufacturers around the globe.

Nufarm prides itself on market driven differentiation and development, customer relationships, access to market and excellent service.

Based in Australia, Nufarm is listed on the Australian Stock Exchange (symbol NUF), with its head office in Laverton, Melbourne, which is also the location of our largest manufacturing plant.

The company commenced operations in a suburb of Melbourne in 1956 and has been steadily growing since. It now has manufacturing/marketing operations in some 25 countries and its products are sold in about 100 countries.

One of the benefits of the diversification into markets around the world is that the sometimes poor climatic conditions in one part of the world are off-set by better conditions elsewhere.

Nufarm is diversifying further into the seeds market. Some businesses have been acquired and a development group is in place to grow this business.

One of the world's leading crop protection companies (ranked N° 8 in sales), our products help farmers protect their crops against damage caused by weeds, pests and disease and assist them in improving farm yields.

Nufarm employs more than 3,200 people, located on every continent.

Nufarm people make a vital contribution to our reputation for quality products, innovation and first class marketing and technical support.

Our mission is to meet the interests of all stakeholders in a manner that shows that we care about:

- the growth and success of the business;
- the wellbeing of our employees;
- the environment and the communities in which we operate;
- our customers and suppliers;
- the reputation and performance of our products and services.

Nufarm is a signatory to *Responsible Care*® and actively participates in industry associations in a number of countries to enhance the reputation of the industry in which we operate. Through the various chemical industry associations and others such as Croplife, we encourage continuous improvement in our own operations and those of the industry more generally.



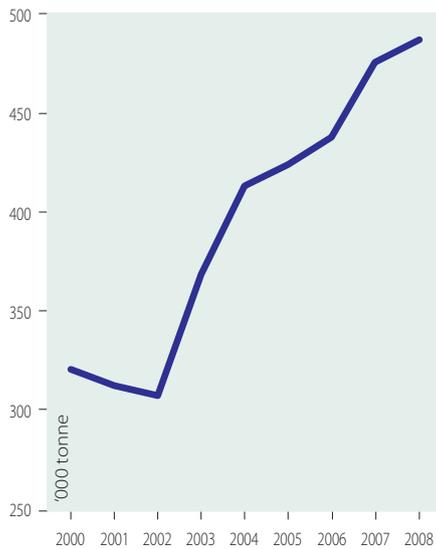
Manufacture Offices/Stores
■ Agricultural chemicals ■ Offices
■ Industrial chemicals ■ Regional offices/stores



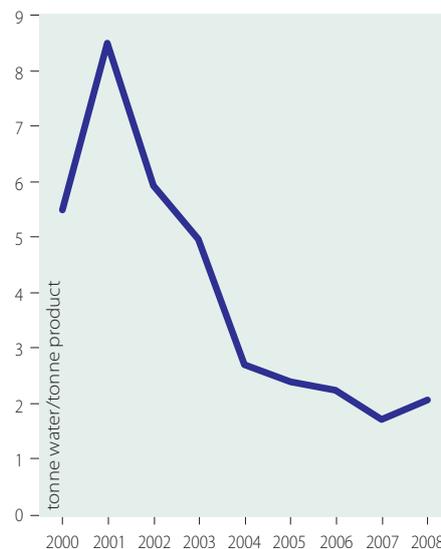
Mary Castillo
Label room operator, Chicago Heights

Performance highlights

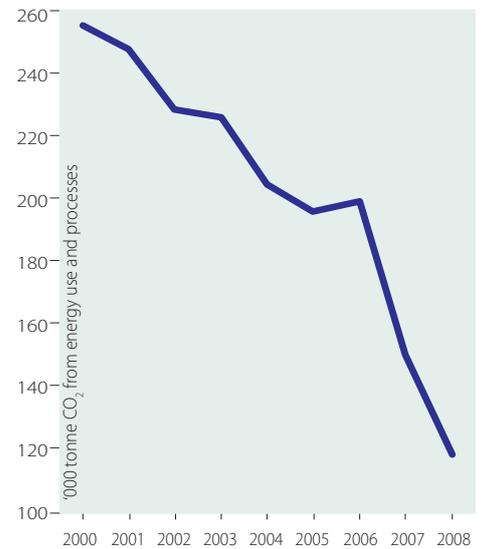
Production volume



Water efficiency



CO₂ released



Resource efficiency

Nufarm has experienced another year of significant growth. At the same time, our people have achieved further reductions in the use of scarce resources.

During 2007, we divested the two chlorine plants in Western Australia and in March, 2008, we acquired the A H Marks operation in Wyke, UK.

The UK plant's main business is chemical synthesis, which uses large amounts of water, resulting in a global increase in water use. All sites in Nufarm focus on water efficiency, and we expect the downward trend in water consumption to resume in 2009.

The success in water conservation results from many projects, mostly initiated by employees who challenge the way we use water and who suggest ways of minimising consumption. On some of our sites employees have formed water conservation teams who systematically look for opportunities for savings. We work with our water suppliers and other authorities to share smart ideas.

We have recorded another global improvement in energy use. While Wyke is a significant energy user, the reduction in electricity consumption as a result of the sale of the chlorine plants more than off-sets the increase.

Aiding sustainable farming

The environmental, social and economic importance of crop development is being increasingly recognised in the new millennium. In the face of pressures from global climate change, plant-breeding utilising both traditional and new techniques and technology continues to deliver agricultural productivity embodied in the seed.

2008 saw significant increases in the total area of biotech crops produced globally. There are now 25 countries (including 15 developing nations) sowing biotech crops and accessing the benefits of this leading technology. The total global area continues to expand with 125 million hectares of biotech crops sown in 2008. The higher productivity of biotech crops reduces the pressure for expansion in farming area through land clearing, whilst reducing the environmental footprint of agriculture by improving water use by crop plants, reducing tillage and improving soil carbon sequestration.

New Roundup Ready® varieties will continue to be taken to market by Nuseed, protected with seed treatments from Crop Care Australia and with weed control provided by Roundup Ready® herbicide supplied by Nufarm.

Australian growers will continue to have the option to select other non-biotech Nuseed canola products with Triazine tolerance or

conventional profiles where Roundup Ready® does not suit.

The Nuseed business has expanded its product range to offer sunflower, corn and sorghum varieties to both the Australian and global markets. Sorghum areas globally are forecast to increase as this hardy summer grown crop demonstrates exceptional water use efficiency making it the product of choice in drier environments. This characteristic along with recent developments in breeding and downstream processes have resulted in sorghum being favoured as an environmentally preferred feedstock for biofuels.

Development of the relationship between Nufarm and leading researchers and plant-breeders globally continues as we seek access to new technologies in both crop production and end user traits. The Monola® specialty canola business continues to gain momentum as consumers demand healthier foods. Monola® delivers a functional, healthy alternative to highly saturated and trans fats. Nuseed collaborates with the supply chain from breeding to the final oil customer.

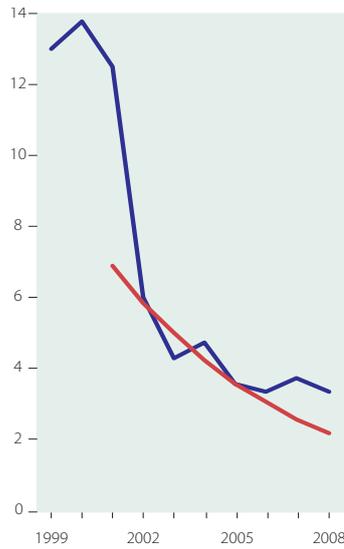
Nufarm's investment in seed and plant-breeding will continue to enhance farmers' productivity in a sustainable manner whilst delivering healthy food and energy to consumers.

A message from the chief executive

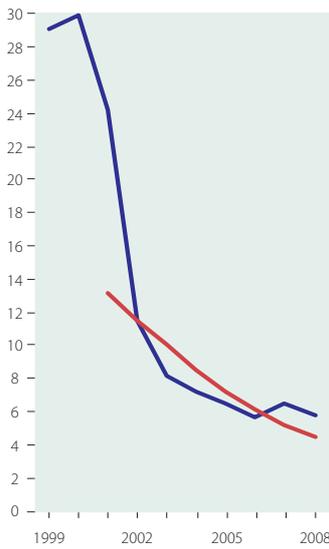
Doug Rathbone, CEO



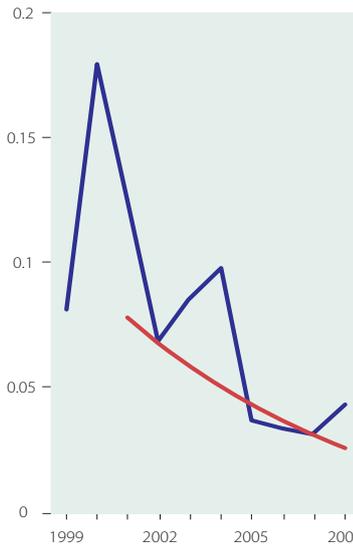
LTIFR 1999 - 2008



MTIFR 1999 - 2008



Severity 1999 - 2008



Nufarm 2009 targets

LTIFR	1.89
MTIFR	3.77
SEVERITY	0.022

LTIFR or lost time injury frequency rate is the number of lost time injuries per million hours worked that result in one or more day's absence from work.

MTIFR or medical treatment injury frequency rate is the number of lost time injuries plus those that did not result in lost time but required treatment by a qualified medical practitioner per million hours worked.

SEVERITY is the number of days lost due to injuries per thousand hours worked.

We include employees, contractors and visitors in our statistics.

A message from the chief executive

The past 12 months has been a challenging period for business, with global credit issues impacting companies in many industries. The business of agriculture has not escaped those pressures. But, as companies look to cut costs and protect earnings, it is vital that the focus is not lost on critical areas such as safety and environmental compliance.

I'm pleased to report that Nufarm has continued to pay close attention to these aspects of its business against a backdrop of challenging market conditions.

We have made important progress in our efforts to achieve continuous improvement across a range of health, safety and environmental measures. We have lowered our injury rates; achieved a reduction in total energy use; and secured production efficiencies while further minimizing our waste.

Nufarm has also signed up to the Australian Chemical Industry's 'Sustainability Leadership Program', under the banner of the PACIA Sustainability Framework, which also contains the long running industry initiative, *Responsible Care*. This will help us to more formally integrate our improvement efforts and to embed sustainability initiatives within our business. We have reported briefly on where we sit against a number of important sustainability priority areas elsewhere in this

report. When we considered our position, we found that many of the principles are already reflected in how Nufarm operates.

In the period covered by this report, Nufarm acquired the A H Marks phenoxy herbicide manufacturing business, located in Wyke, UK. The need to clear a number of regulatory requirements relating to that transaction has deferred the full integration of the business and has delayed a number of planned improvements in H S & E areas.

The addition of the Wyke plant – and its attendant energy, water and waste profiles – has led to a number of our group measurements not showing the overall improvement that would otherwise have been evident. There is substantial scope to achieve improvements at the Wyke operations and I am confident that the benefit of those improvements will show through in future reports.

I am particularly pleased to see the large number of Nufarm sites investing in additional safety training. New courses are being implemented on a regular basis and our European operations have been especially enthusiastic in this area over the past 12 months. All Nufarm employees have a responsibility to ensure that our work places are safe.

It is also satisfying to note the increased involvement of employee groups in site specific initiatives aimed at achieving improvements in areas such as water and waste minimization. This again reflects a culture within the company that must be encouraged.

Continued attention to these areas is vital for the sustained growth and success of the company.

Doug Rathbone
Managing Director and
Chief Executive

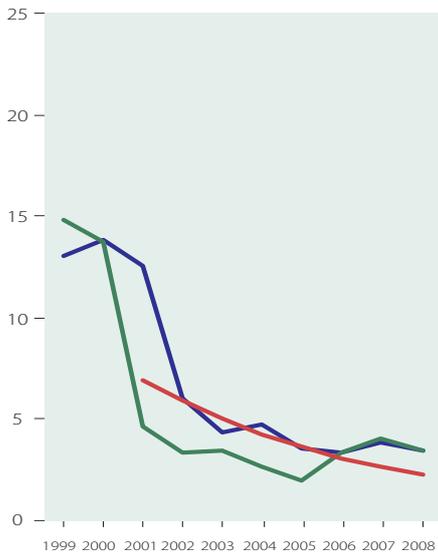
8 July 2009



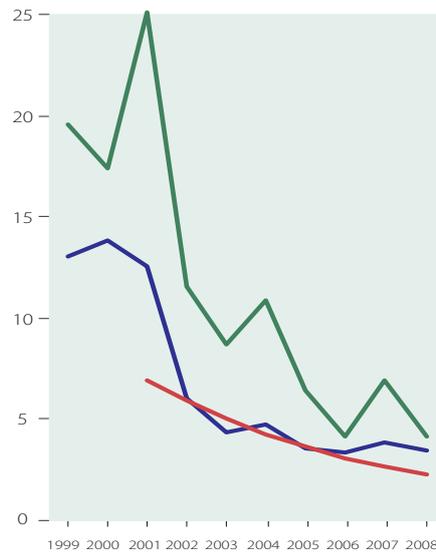
Neil Blackman
HS&E Australia manager, Laverton

Lost time injury frequency rate

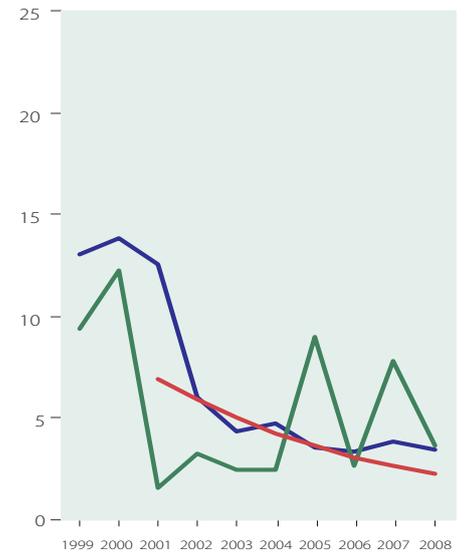
LTIFR Australia 1999 - 2008



LTIFR Europe 1999 - 2008



LTIFR NZ and Croplands 1999 - 2008



— Nufarm group — Target — Nufarm region

Lost time injuries

In 2001, Nufarm reinforced its focus on reducing injuries. While the ultimate aim is for zero injuries, the Nufarm board set ambitious (and achievable) target limits for the company and provided the further challenge to lower these annually by 15%.

The graphs above show that, while year to year performance may vary for each region, on the whole injury frequency rates are going down more or less in line with, but a little above, the board's challenge.

Of the 23 injuries resulting in loss of work time, three were due to chemicals when work was not prepared correctly; three from manual handling incidents, two involved people delivering materials on site with no Nufarm staff involvement and one each was caused by a design fault and an injury to an employee attending off site emergency training. One person strained his back when bending over. A brief outline of each injury is presented in the table.

Significantly, the remaining twelve injuries involved employees or contractors doing something in a manner they knew not to do. For this reason, we are continuing to focus on behavioural change. We believe that it is only when each and every employee takes the time to do his or her work properly that we will achieve our ultimate goal of zero harm to our people.

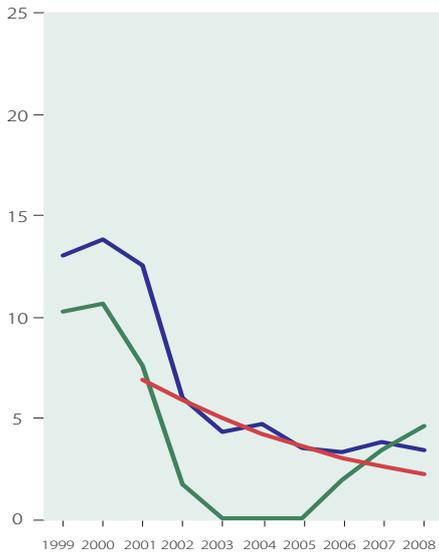
Description of injury	Days lost
Hand slipped while removing a powder blockage from a chute, finger caught between rod and chute wall	4
Stood on a hose spool to gain height, slipped and fell, did not use ladder	3
New forklift delivered to site. A forklift salesman decided to undo a chain holding the forklift, caught and amputated the end of a finger	9
A solvent vented from a reactor, fumes drifted into a laboratory, windows were left open and people continued to work; asthma resulted	6
Worker put his hand into his pocket which held a sharp knife, cutting his hand	6
Contractors were lifting a filter into place on a container. The hoist slipped, crushing three fingers on one contractor's hand. The fingers were later amputated.	126
Person lifted a 10 kg container, strained his back	5
A person unloaded a sea container holding 25 kg kegs, strained his back	5
Person removed a steel grate pit cover using inadequate tools. The grate slipped and crushed his finger	1
One of our nurses attended a person being taken to hospital with a personal illness. During transport, sudden movement caused her to break a finger	43
The person was splashed when a hose came out of a vessel during transfer of liquid from one vessel to another. He was not wearing suitable protective equipment	2
Person bent over to pick up an empty bottle from the floor and strained his back	1

Description of injury	Days lost
Person removed a glass spool piece from a pipe run, the spool piece slipped, he tried to catch it and cut his hand when the glass shattered.	14
Person tripped over a crease in an anti-fatigue mat, fell and hurt her knee	3
Person walked down a step from an office and fell, staining his back	1
Person fell down some small steps when she entered the site, spraining her ankle	24
During off-site fire training, the person was using a flying fox, received rope burns on an arm and a leg	6
Contractors were sucking a liquid into a tank truck from pipe work during a cleaning process. The air inlet to the hose was opened too quickly and a person received chemicals on his neck and face, causing some burns	8
Bent down to turn a valve, strained his back	5
Person cut his hand when a fluorescent light tube broke as he was shifting a wooden plank in the workshop store	3
Person strained his ankle when he stumbled on a step in the plant	4
Person was cutting a big bag, pulling the knife towards himself. He received a deep cut to his leg.	7
Person was cleaning up a spillage in the plant when his leg slipped into a sump. His boots filled with an acidic liquid, causing chemical burns	4

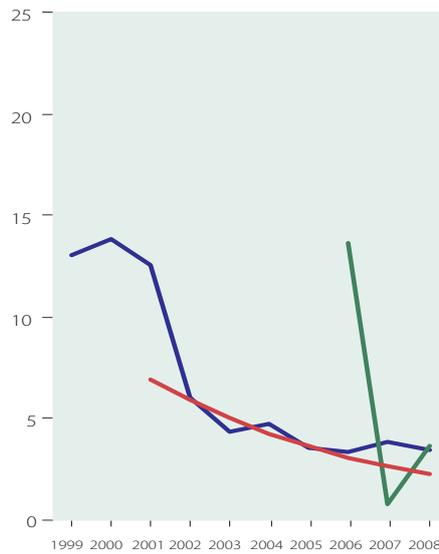


Dick Kastelein
Shift team leader, Botlek

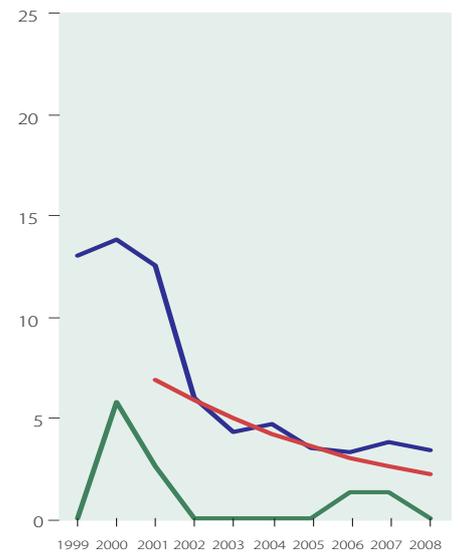
LTIFR North America 1999 - 2008



LTIFR South America 1999 - 2008



LTIFR South East Asia 1999 - 2008



Locations free of lost time injuries in 2008

Twenty-one locations worked throughout 2008 without injury sufficiently severe to require an absence of one or more days from work. They are:

Adelaide Service Centre, Australia
Belvedere, UK
Chicago Office, USA
Crop Care head office & field crew, Australia
Croplands, New Zealand
Deutschland GmbH, Germany
Dubbo Service Centre, Australia
Gennevilliers, France
Horsham Service Centre, Australia
Jakarta office & field staff, Indonesia
Kwinana Ag Chem, Australia
Kuala Lumpur, Malaysia
Merak, Indonesia
Merredin Service Centre, Australia
Moree Service Centre, Australia
Nufarm New Zealand, NZ
Nuseed Horsham & Toowoomba, Australia
Otahuhu, NZ
Toowoomba Service Centre, Australia
Wagga Wagga Service Centre, Australia
Welshpool, Australia

Locations gaining safety awards in 2008

Safety awards are presented to sites that have achieved 200,000 hours free of lost time injury. For small sites, an award is achieved if they have worked for five years without serious injury.

Recognition of good safety performance is important in encouraging sites to recognise safe working as a key performance measure. An award is a visible reminder that safe working is important and appreciated.

Some large sites that were not injury free for the whole year nonetheless gained an award for meeting the requirements of operating for a period in excess of 200,000 hours without loss of time.

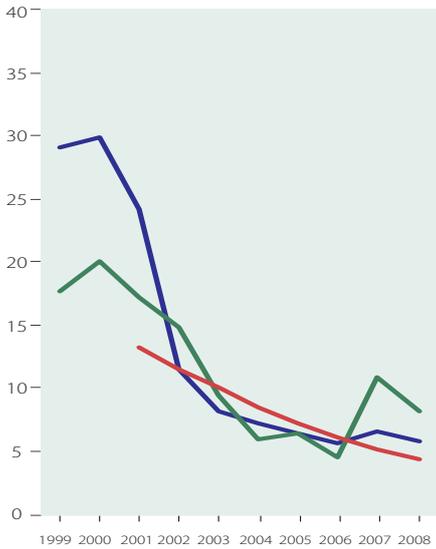
Adelaide Service Centre, Australia
Belvedere, UK
Fortaleza, Brazil
Chicago office, USA
Crop Care head office & field crew, Australia
Croplands New Zealand
Deutschland GmbH, Germany
Dubbo Service Centre, Australia
Gaillon, France
Gennevilliers, France
Horsham Service Centre, Australia
Jakarta office & field staff, Indonesia
Kwinana Ag Chem, Australia
Laverton North, Australia
Linz, Austria
Kuala Lumpur, Malaysia
Merak, Indonesia
Merredin Service Centre, Australia
Moree Service Centre, Australia
Nufarm New Zealand, NZ
Nuseed Horsham & Toowoomba, Australia
Otahuhu, NZ
Toowoomba Service Centre, Australia
Wagga Wagga Service Centre, Australia
Welshpool, Australia



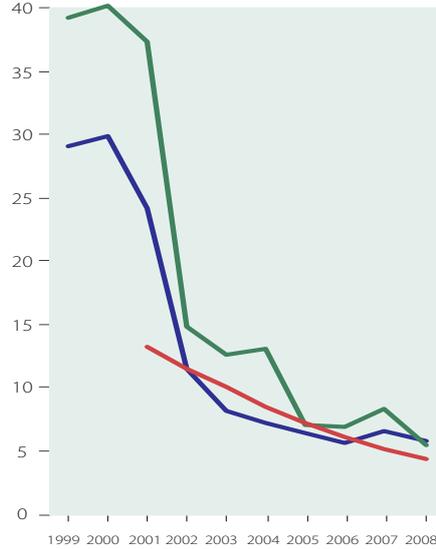
Tammy Melo
Trainee, Fortaleza, Brazil

Medical treatment injury frequency rate

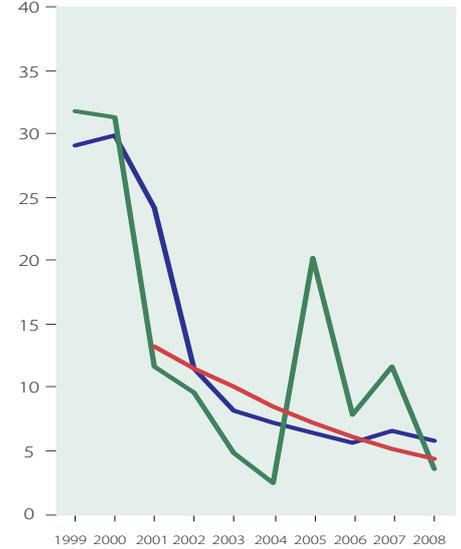
MTIFR Australia 1999 - 2008



MTIFR Europe 1999 - 2008



MTIFR NZ and Croplands 1999 - 2008



Legend: Nufarm group (blue line), Target (red line), Nufarm region (green line)

MTIFR

By definition, we record all the injuries that result in lost time also as medical treatment injuries. To these we add those injuries that required treatment by a qualified medical practitioner (excluding those that are of a diagnostic or precautionary nature only). Those that could be treated by a person trained in first aid or a qualified nurse are not counted as medical treatment injuries.

Over the last few years there has been a steady decline in the number of medical treatment injuries other than for a small reversal in 2007.

Most of the medical treatment injuries that did not result in lost time involve cuts, usually to fingers, that require sutures.

Injury analysis

Our ultimate goal is to have no injuries to any of our people, no matter where they work or what they do. Unfortunately, injuries still occur, some of them serious enough to cause people to stay away from work.

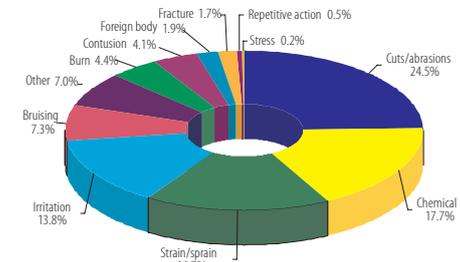
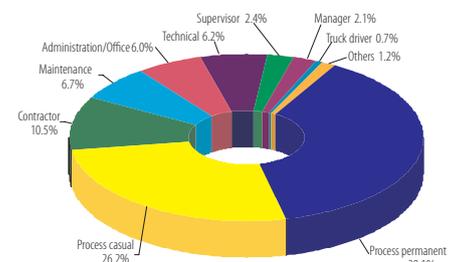
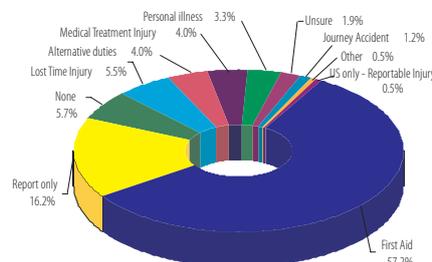
Over the last few years, about 5% of the recorded injuries have been of this type, while about 80% are minor first aid or are notified as being so minor that they require no treatment. Medical treatment injuries, which normally account for 4% of the total, are mostly cuts that require suturing. The alternative duties category generally are

strain or sprain injuries where we take the precautionary approach of selecting work which does not pose risk of aggravating the condition. In 2008, the types of injuries showed an anomaly. In previous years, the proportion of chemically related injuries has been below 10% of the total, while this year, it amounted to 17.7%. Just three of the 78 chemically related injuries have been serious enough to keep people away from work for one day or more, most of the rest are very minor, but nonetheless, worrying. We are checking whether this change is real or whether people are reporting more very minor exposures.

The remainder of the injuries follow the normal pattern, cuts, strains and sprains are predominant. There are no surprises in who gets injured. Operating a seasonal business, on many of our sites there are times of the year where we employ casual labour. We invest significantly in training and supervision of these people, but they still

have a marginally higher rate of injury than our permanent employees.

It is pleasing that our strong permit to work systems keep the injury rate down for our maintenance staff. Being engaged in non routine work, attention to risk assessments and risk reduction is considered vital to keep this group safe. We take the same care with our contractors, though they are sometimes harder to control, and consequently show a significantly higher rate of injury as a result.

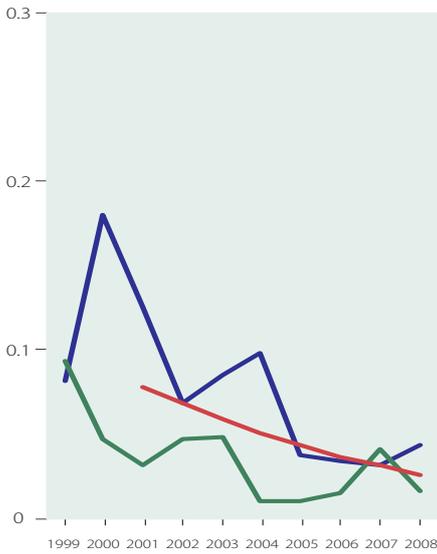




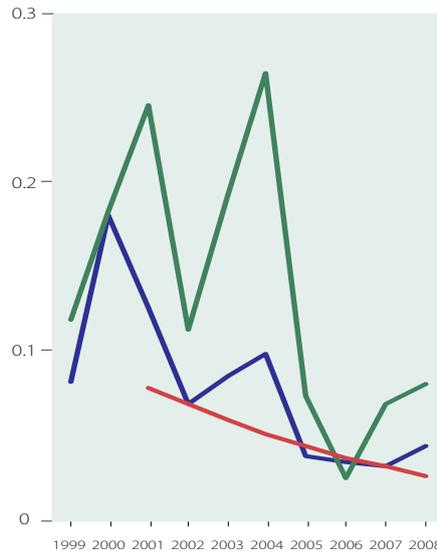
Evelyn Söllinger
Registration assistant, Linz

Severity

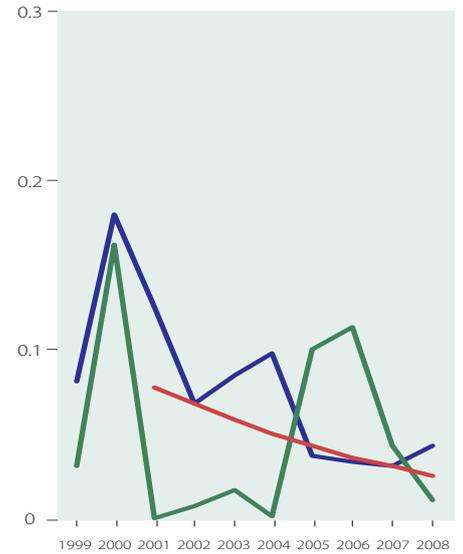
Severity Australia 1999 - 2008



Severity Europe 1999 - 2008



Severity NZ and Croplands 1999 - 2008



— Nufarm group — Target — Nufarm region

Severity

Severity is an indicator of the seriousness of the injuries that have resulted in loss of working days (severity rate = days lost per 1,000 hours worked).

The Nufarm global performance in 2008 is significantly worse than 2007; this is due entirely to one unfortunate and serious injury. This injury occurred when contractors were lifting a filter into place and their lifting device slipped, dropping a heavy lid on one person's hand. Three crushed fingers could not be saved and had to be amputated, resulting in a prolonged period away from his work. Being a contractor, we were not in a position to apply our rehabilitation processes which we believe would have facilitated his earlier return to productive work.

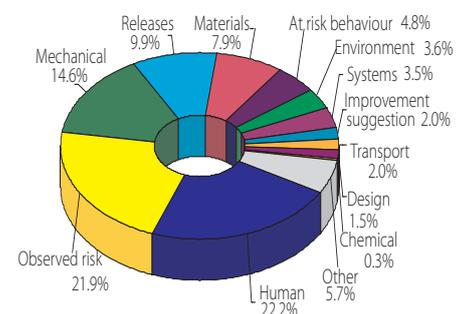
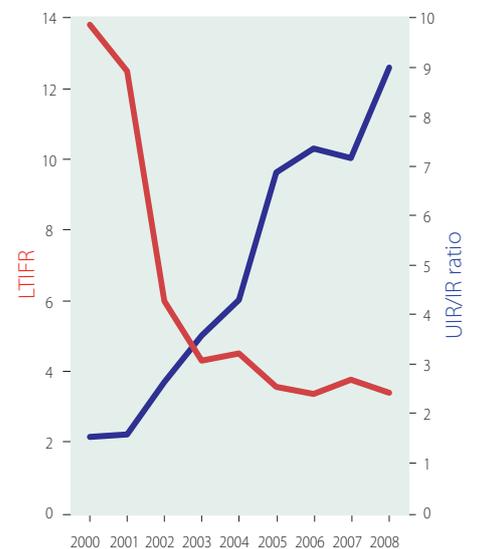
In the absence of this single injury, the severity rate would have shown an improvement compared to previous years.

Incident reporting

In last year's report we detailed our extensive unusual incident reporting system (UIR), the reasons why we place a great deal of importance in it, and the benefits that it provides. The number of incidents reported, especially compared with the number of injuries that occur, is one of our key performance indicators. One of the main benefits is that as the frequency of incident reporting increases, the incidence of injuries reduces. The graph clearly demonstrates this relationship.

Incidents caused by people not doing what they should are the most frequently reported, followed closely by reports of hazards (and risks), where things 'are not the way they should be'.

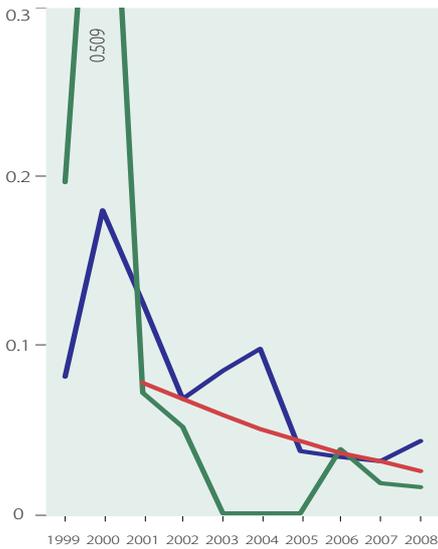
In an endeavour to reduce the number of injuries that are caused by people doing things in a way that they should not, we have been carrying out behavioural training. We encourage people to challenge those of their colleagues that are taking risks, and to report 'risky behaviour' that they have seen. The clearly stated intent of such reports is not to blame and punish a particular person, but to understand the behaviour involved, to determine the root causes for that behaviour so that we are in a position to facilitate a change in the behaviour. This involves a culture change and, like all such changes, will take much effort and take time. The benefits we expect will make the effort worthwhile.



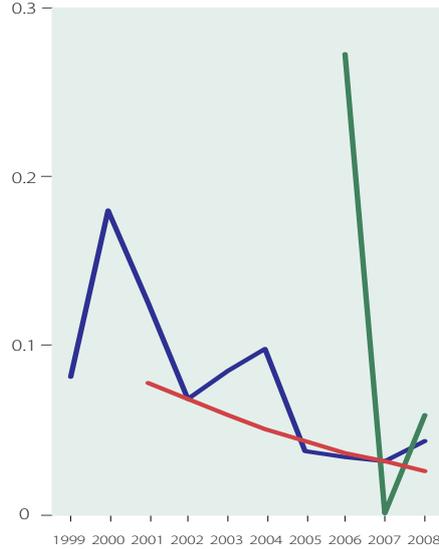


John Van Heurck
Operator, Laverton

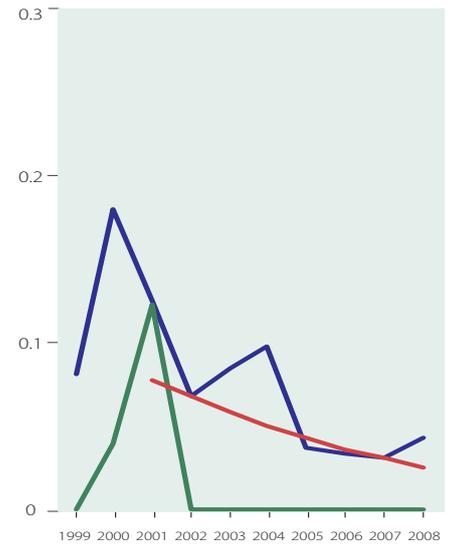
Severity North America 1999 - 2008



Severity South America 1999 - 2008



Severity South East Asia 1999 - 2008



Process safety

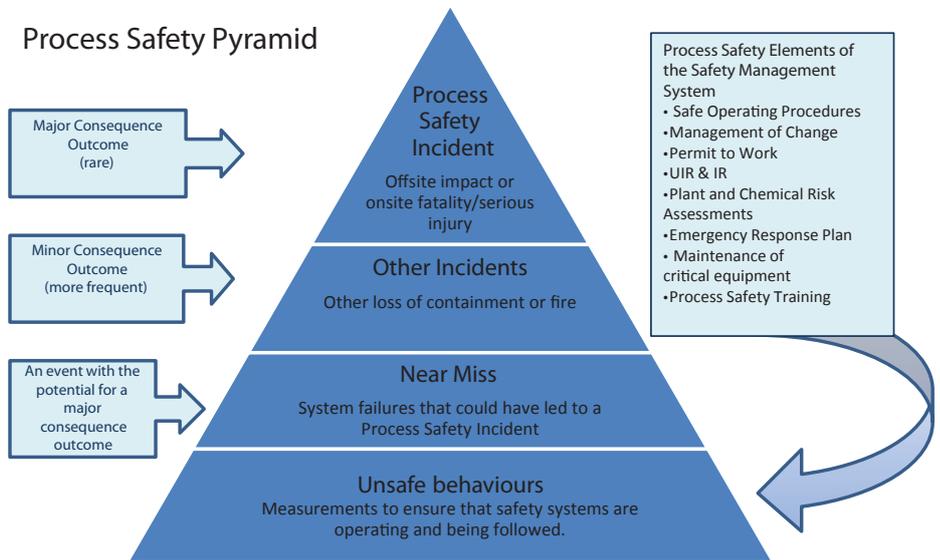
Recent major incidents in chemical plants around the world have caused the industry to re-think its approach to safety, and pay more attention to what is commonly known as "process safety".

Process Safety is different from Occupational Health and Safety, which is aimed at directly protecting the health and welfare of our employees. The focus of process safety is on preventing incidents which are relatively rare but have a major consequence, such as fires, explosions and accidental chemical or energy releases, in facilities dealing with hazardous materials. Process safety programs emphasise the design and engineering of facilities, maintenance of equipment, procedures, training, hazard identification and the integrity of risk control measures. The Process Safety Pyramid is a widely used framework that shows the relationship between unsafe behaviours, near misses and actual incidents. Monitoring performance at the bottom of the pyramid provides an indication of the potential for a minor or major incident to occur.

Nufarm has always had a strong commitment to workplace safety, and Nufarm sites already have strong systems in these areas. Examples are the Management of Change and Capex systems, UIR and IR databases, Permits to Work, Safe Operating Procedures, site Safety Training Matrices, Engineering Standards and site Emergency Response Plans. The global implementation of process safety

legislation such as Major Hazard Facilities Regulations (Australia), Seveso II (Europe), COMAH (UK) and RMP/PSH (USA), has encouraged us to go back and review how these and other key systems are functioning at our manufacturing sites, to make sure there are no holes that could contribute to a major-consequence process incident. Many sites now have an established Safety Case that has been approved by the relevant Government authority, and operate a comprehensive,

integrated Safety Management System that covers both occupational health and safety and process safety programs. The challenge for all of our sites now is to establish and maintain an effective program for monitoring process safety performance, using indicators that provide warning of failure or degradation of systems before an incident occurs (lead indicators) and identify weaknesses or gaps after an event has occurred (lag indicators).



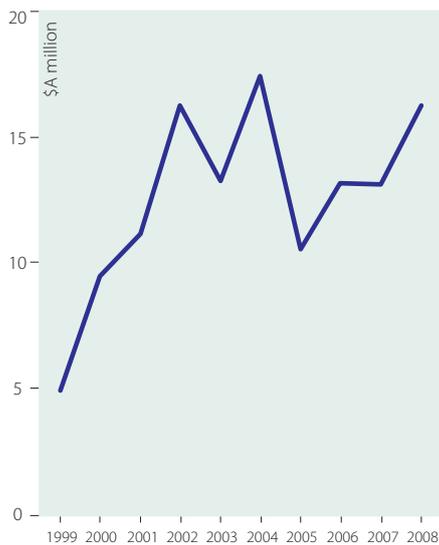
Adapted from PACIA guidelines



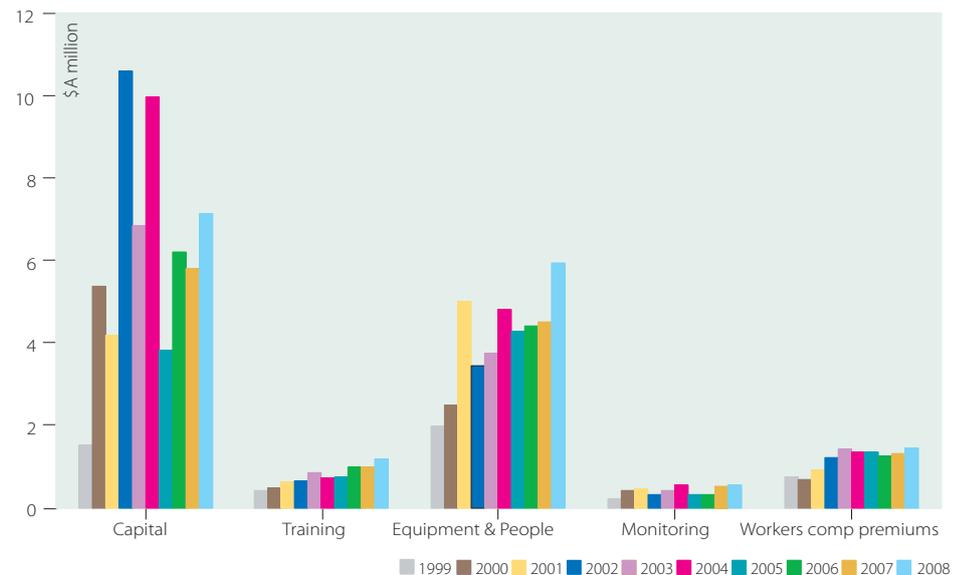
Eugene Shanahan
Technical manager, Australia

Health, safety and

Nufarm group safety expenditure



Breakdown of safety related expenditure 1999 - 2008



Health and safety expenditure

Capital spending for safety reasons continues at significant rates of about \$A7 M per year. There was no single major project, most sites carried out a variety of projects.

A few examples are:

- Nufarm Brazil further improved its fire fighting system, installed capacity for about 2000 m³ of fire fighting water
- Belvedere has installed further odour capture equipment and voltage stabilisation to reduce energy consumption
- Chicago installed a new first aid room and invested in automatic defibrillators
- Gaillon has made a large investment in upgrading its fire fighting and toxic gas detection systems
- Kwinana focused on improved vapour collection and filtration systems in its formulation area
- Linz continues to automate its plant control systems to improve safety and efficiency
- Lytton has expanded its automatic fire detection system and upgraded lighting around the plant to improve night time safety
- Otahuhu is installing a number of new processes and has made a major effort at the design and installation stages to incorporate excellent safety features.
- Welshpool upgraded its dust explosion suppression system and its filling line to remove ergonomic risks
- Wyke has focused on upgrading its toxic gas and fire detection system.

Training continues to be given priority with a steady increase in investment in this important facet of our operations. It ranges from extensive external courses training safety representatives to five minute 'tool box' talks, which some sites deliver at the beginning of each shift. In Australia, about 70% of permanent and long term contract employees on our manufacturing plants and regional service centres have attended a Nufarm five day safety course.

Our behavioural training program is continuing. Three courses, each of four days' duration, were run in Wyke, UK, presented for the first time outside Australia. Attendees were primarily from that site with a few representatives from the other five sites in Europe and the UK. The representatives from continental Europe were present to participate and to evaluate the course to judge whether a similar course, in their native languages, would be valuable for their own operations. As we said in last year's report, behavioural change, or cultural change, is difficult and requires a long time to achieve. We are seeing signs that change is occurring, at about the rate we expected, but more slowly than we would have hoped.

We will continue to report on our journey towards the ultimate goal - totally injury free workplaces.

The day to day costs of safety management are substantial, they include, for example, the provision of personal protective equipment, the time taken to supervise, devise safety programs and to carry out risk assessments amongst a host of other safety initiatives. These efforts require significant expenditure, and a substantial investment of people's time. The graph above shows that we are continuing to increase our expenditure.

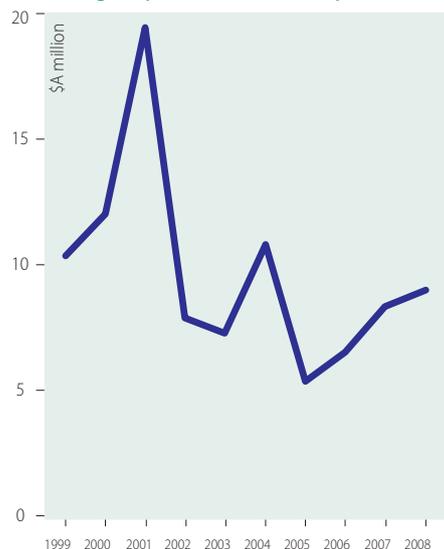
We have recently introduced a global risk assessment database, available to all of our employees on our global system. This is intended to be a repository for each site's risk assessments. One benefit will be that any site can learn from risk assessments carried out by other sites, sharing insights and solutions to perceived hazards and risks.

environment expenditure

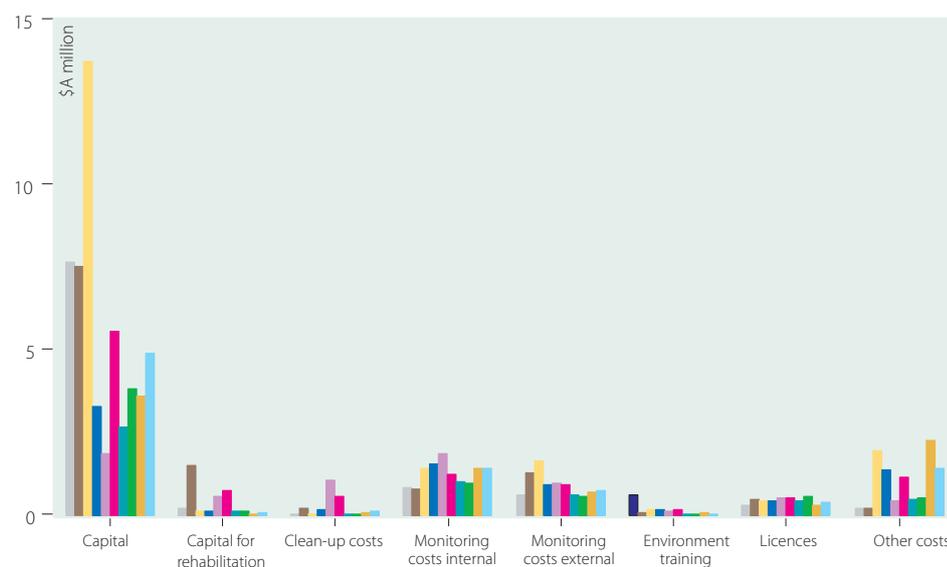


Irena Penny
Production chemist, Lytton

Nufarm group environment expenditure



Breakdown of environment related expenditure 1999 - 2008



Environment expenditure

Over the last six years the amount of capital invested on environmental matters has remained relatively steady. It was higher in the earlier years when Nufarm was growing rapidly internationally by acquisition. In many cases the operations we purchased required significant capital to reach the environmental standards demanded by Nufarm.

More recently we have entered a period of rationalisation of manufacture, including some divestment of non core business or surplus manufacturing capacity. This has reduced the need for major capital investment.

Nufarm acquired A H Marks in Wyke, UK in March 2008. Following the acquisition, the UK Competition Commission placed restrictions on the integration of the site into Nufarm - this has hindered some of the actions that we have wanted to do on safety and environmental issues. Once these restrictions are lifted, it is expected that capital investment in safety and environmental areas in Wyke will be significant.

Clean-up costs, while not high, are reducing. These costs are generally for site remediation before divestment of a site or for the removal of historic waste. Mostly, clean-up is required for sites we have recently acquired rather than sites we have owned and operated for many years.

Our focus is now more centered on improving efficiencies, smarter use of energy, more efficient use of water, reduction in waste generation - all those activities needed for a sustainable and profitable business.

Monitoring of our operations is a significant cost to the business, but it is necessary to provide us with the surety that our operations are under control and that we meet our environmental obligations.

Amongst the category of 'other costs' are several projects designed to minimise our waste generation or to reduce waste discharge. For example, more effective waste destruction is being trialled in our Otahuhu plant in New Zealand and in Lytton, Australia. In Laverton, we have installed improved equipment to recover values from our effluent stream and instigated another project to look at yet further recoveries from the same stream.

Examples of some of the many other projects include:

Working with suppliers to find a suitable washing process to recover bulk bags for further use, or in one case, to clean and shred those bags to recover the plastic values for recycling.

We have some staff dedicated to look at packaging innovations to minimise waste generation at our customers' sites once the package has been emptied.

Another site that discharges its salty waste to a deep well is working on innovative methods to remove all organics from the stream, which may provide an opportunity for a different destination for the stream.

A careful review of scheduling and measuring decay curves during washing of formulation vessels is expected to lead to one site being able to return all of its wash solutions to future production.

All of our sites that formulate agricultural products have programs to eliminate generation of waste wash water by finding ways of returning the washings to production while ensuring that no cross contamination between different products occurs.

These and many other sustainability activities are usually managed by teams of employees specifically formed for each project. A bonus from this approach is that our people gain valuable skills in innovative thinking, thinking outside the square and minimising the formation of organisational silos that cause inefficiencies.



Kirsty Johnson
Engineering coordinator, Lytton

Sustainability

Sustainability

'Sustainability' is the buzz word that is now being used by everyone around the world. So, how do we see it in Nufarm and what are we doing about it?

Sustainability has many definitions. One such was developed by the Bruntland Commission in 1987, which defined it as:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

In Australia, the Plastics and Chemical Industry Association (PACIA), in conjunction with the EPA, has developed a program entitled 'Sustainability Leadership Framework'. This provides the platform for the delivery of leading programs, tools and policies for companies to provide leadership in integrating sustainability into their core business strategy. The principal aim is to maximise the economic, social and environmental values of the business.

Having signed up to the 'Sustainability Leadership Framework', we are at the beginning of the journey to apply the tools to characterise where we currently stand, and to determine what opportunities there are for us as we move forward.

Doug Rathbone, Nufarm's CEO is committed to this Framework and expects that sustainability principles be incorporated into Nufarm's core business strategy. Nufarm's board of directors has voiced its desire that staff will optimise sustainable business practices to ensure ongoing profitability.

The Framework has identified eleven priority areas for evaluation and action in our industry. These were developed during extensive consultation with the companies that make up PACIA membership. Each of these priority areas, as it applies to Nufarm, is discussed below. While we have yet to apply the framework tools in detail, we can report on what we have done in the past and where we think we are at present. We will communicate progress in more detail on these priority areas in future reports, especially about opportunities found and actions that we take.

The formal Framework will be introduced into the Australian business first and will flow across our global operations as we progress.

Priority Area - Financial

Aim - to be a competitive and profitable business.

It seems obvious that to be sustainable as a business, it needs to be profitable. Nufarm is profitable, and initiatives such as the application of the Framework aim to enhance this. Some details are on page 1 of this report.

Priority Area - Water

Aim - to be water efficient and to continually look for opportunities for further reductions.

Being an industry based in the world's driest continent, with our customer base the farmers of this country who are often in drought, we have long been conscious of the need to preserve this precious resource. We have been working on water efficiency and regularly reported on progress in our annual HS&E report, not just in Australia, but globally. Our progress and some successes are described on pages 17 and 20 of this report. Globally, we are now using about one third of the amount of water per volume of production compared to the situation in 2001. While we are pleased with the result, we recognise that there must be further opportunities. As an example, the article on page 17 describes a project where we teamed up with our water supply company and the local EPA to change a part of our operations resulting in significant water savings.

Priority Area - Energy and Greenhouse

Aim - to be an energy efficient business that is reducing greenhouse gas emissions.

As a significant business expense, energy has always attracted a degree of management attention. In more recent years, energy, and the resultant release of greenhouse gases, has been in the community's spotlight. Each of our sites measures and reports its energy consumption, and we report this annually in this global report and in the individual site reports (refer pages 16 and 17). We publicise ideas for energy efficiency improvements between sites. Many of our sites report energy consumption to various Government regulators and some, especially the more energy intensive plants, prepare mandatory energy efficiency plans, based on detailed site energy audits.

We incorporate energy considerations in design of new installations, in retrofitting our plants and our equipment purchases.

Priority Area - Wastes and Emissions

Aim - to be an industry aiming for zero wastes and emissions.

We consider wastes to be an opportunity for improvement. In the distant past, wastes were considered somewhat inevitable and usually received little attention. That view of waste changed in Nufarm many years ago when we started to measure the types of wastes and waste quantities our sites were generating. The old saying 'what gets measured gets managed' is true. On some of our sites we have very good waste management, on others we are still in the midst of understanding all the sources and causes for waste generation and finding smart ways of minimising it. When that is not possible, such as for packaging waste from raw materials use, we work on methods to recycle or recover values from the waste. All of our sites that carry out formulations are working on methods to return wash waters to production.

While we have made considerable gains over the years, we know that there is a long way to travel before we can truly say that we generate the absolute minimum of waste. This is especially true for those of our sites where we carry syntheses. Synthesis processes are never 100% perfect, but continual development or discovering more efficient synthetic routes can result in waste reduction. Most of our processes have a long history of efficiency improvement, often coupled with an increase in production capacity. We report on wastes, see pages 18 and 19.

The quantity of emissions to air, apart from energy related CO₂, is relatively small. However, we are very sensitive to the fact that even small emissions so often are an amenity problem for our neighbours. We encourage our neighbours to report odours as soon as they are noticed so that we can take preventative action. All odour complaints are recorded in our OIR database, all are investigated and where possible, preventative action is initiated. We recognise that a clear target for our operations is zero odour complaints. We are improving, but we know that we need to do more. We report on the number of odour complaints we receive on page 14.



Cliff Branch
Operator, Chicago Heights

Priority Area - Materials, Processes and Products

Aim - to be an industry taking a life cycle view of materials, processes and products.

Almost all of our products are agricultural chemicals. As such, the environmental fate is known, it is requisite information for registration of a product. Unlike the middle of the 20th century, actives with extremely long half lives are no longer being used, the products that are now in the market are biologically degraded in the field. The life cycle of our products therefore terminates in the field, some time after application, when biodegradation has converted them to benign materials.

To supply a product, it needs to be packaged. We recognised many years ago that contaminated packaging such as drums are a concern to the community, especially if they are disposed of in landfill. We have been working with our customers and the authorities to minimise the environmental effects. Our first approach was to encourage customers to receive the products in returnable (refillable) containers. In cases where the products are required in containers that cannot be refilled, we have worked with our industry associations and authorities to install programs to collect cleaned containers and to recover the values, steel or plastic. The Australian scheme, called drumMuster, is being replicated in other countries and is destined to become a feature in others.

Another community concern has been the accumulation of unwanted chemicals, often because their use is no longer required when a farmer changes the crops he grows. We worked with the industry association and the authorities to install a program to take back those products. Initiatives of this type have been highlighted in previous annual HS&E reports.

Priority Area - Health and Safety

Aim - to be a business where people are safe and free of injury and disease.

Twenty years ago we started to measure, benchmark and work to eliminate injuries, with the ultimate goal of zero harm to our people, our neighbours and customers. Detailed reporting and benchmarking have been features of all of our annual HS&E reports. In Australia and parts of Europe, Nufarm contributes to the development of

better safety management and legislation, by active involvement in industry associations and participation in the development of new legislation and regulatory initiatives. Internally, we focus on training and involvement of our people in improving our plants and work practices. Active safety committees, a robust incident reporting system and ways of sharing experiences globally are some of the keys to improvement that we use (see pages 4-10). We do not publicly report on employee health (largely because there is nothing adverse to report), we carry out detailed annual medical examinations of all employees. The benefits we see are twofold; the results indicate that there are no occupational diseases amongst our staff, but the medicals do regularly identify personal illness at the pre-clinical stage, allowing for early treatment or control of those conditions. Diabetes, heart conditions and life style related diseases are examples of the types of problems which are better controlled with early diagnosis and timely medical intervention.

Priority Area - Security

Aim - to operate and deliver secure sites and product chains.

We provide the level of site security we believe to be adequate for the risks posed by each of our operations. On large sites this may involve security guards, CCTV surveillance etc. On smaller sites, such as warehouses, we install intruder and fire detection systems. The degree of security is constantly reviewed and changed as potential threat levels are identified by authorities. Transport of our products is done, as much as possible, by properly accredited commercial carriers.

We train our people involved in purchasing and sales to recognise approaches from potential customers that may be searching for chemicals to use for illegal purposes such as drug manufacture or terrorism. We directly, or through our industry associations, work cooperatively with the Police and other Government authorities on security matters. Security of chemicals is an area where we need to continue to be vigilant and to adapt to changing circumstances in the community.

Priority Area - Community and stakeholders

Aim - that people important to our industry and operations are engaged, participating and supportive.

This is an area where we are less involved than most of the bigger companies in the industry. Most of our sites are small or distant from neighbours, so only a few of our operations directly engage with their local community through formal liaison committees. On the other hand, we encourage our people to get involved in community activities, from schools to charities and sporting activities, especially with youth, invitations to visit our operations, liaison with emergency services and so on. We encourage people to ask for information or make comment via our web sites. We provide contact numbers in case of emergency; in some countries these are handled by industry emergency specialists, while we provide those services directly from Nufarm for Australia, New Zealand and some of the Pacific Islands.

Priority Area - Workforce

Aim - to have a healthy, skilled and engaged workforce, available to meet the needs of our business.

Apart from providing detailed annual medical examinations for all staff, some of the individual sites offer health programs, health promotions etc.

For those people that require it, we offer employee assistance programs to help employees overcome adversities. Involving, as we do, employees at all levels in consultation, and empowering employees to make decisions, all contribute to people feeling job satisfaction, and with it, improved health.

Periodically, we carry out employee surveys to check that we are achieving what we set out to do. These indicate that we are engaging our people in positive ways, but there are always areas where they tell us we can improve. We take such feedback seriously and try to meet the needs of our people.

Another area that we believe contributes to employee satisfaction is our approach to rehabilitation, where we make a major effort to get ill or injured employees back to satisfying work, irrespective of whether work contributed to the condition or not.

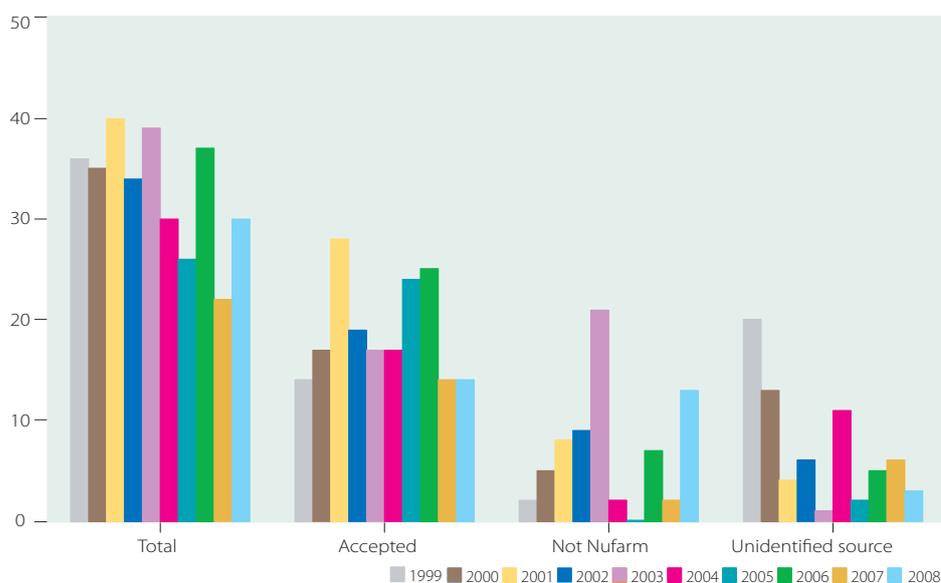
(Continued page 14)



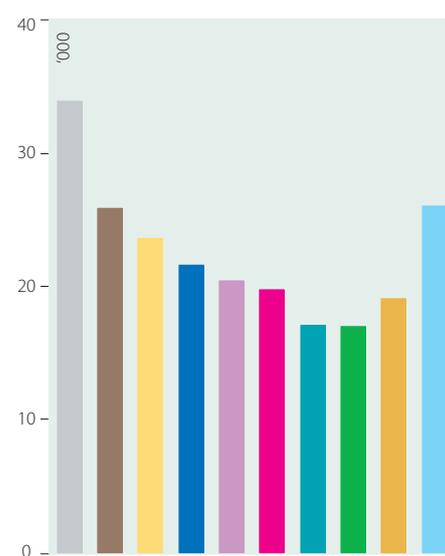
Steve Hoffner
Production planner, Chicago Heights

Environmental complaints

Environmental complaints 1999 - 2008



Number of environmental tests



Sustainability

(continued from page 13)

Priority Area - Innovation

Aim - to innovate to create sustainable products, processes and services.

We have had a long time program to improve delivery systems for our materials. This can encompass new formulations to raise efficacy, improve application of the products in the field, reduce unwanted effects such as spray drift and so on. We continue to pioneer packaging for greater safety and better handling and convenience for our customers.

Recently Nufarm has ventured into the seeds market, by alliances with some of the worlds foremost seed producers and by carrying out seed development in Australia specifically to enhance traits that are needed for our local conditions, and to enhance yields and quality for the crops of our customers. We are conscious of the desperate need for farmers to grow more food to meet the needs of a growing world population at a time when the amount of farming land available is not increasing. (See the article on page 2)

In our own manufacturing operations we are continually working on improvements in quality, manufacturing efficiency, waste reduction and conservation of resources.

Much of this report details our achievements over the years and our aims for the future.

Priority Area - Accountability

Aim - to operate a business that is open, accountable and communicating progress

This report is the major public communication of our progress towards sustainability.

We regularly report to regulatory authorities, where our approach is to communicate fully, honestly and work cooperatively with those authorities on improvements to our performance.

We are involved with the industry associations that are appropriate for our business, a few examples are: PACIA and Croplife in Australia, CIA (Chemical Industries Association) in the UK and Croplife in Canada. We have held 'open days' on many of our sites in the past, though lately there has been a reluctance amongst chemical industry to issue open invitations to the public because of security concerns. However, we continue to welcome interest groups, schoolchildren and other groups.

Finally

While we feel that we have started down the track of sustainability years ago, we see the opportunity of a more holistic approach that the Sustainability Leadership Framework provides. It will be a continuing journey, hopefully benefits will accrue along the way.

Environmental complaints

Some of our manufacturing processes involve the use of materials that are intensely odourous. Plants that were originally built well away from neighbours are now being encroached by habitation. In addition, people have an ever greater expectation that they should not be affected by releases from industrial operations.

We continue to work on containing or capturing odours, to avoid annoying the community. It is pleasing that the number of complaints we receive is decreasing, despite closer neighbours and higher expectations. Some of the work we do is innovative, as exemplified by the initiative by Nufarm Brazil described in last year's report.

In 2008, we recorded a total of 30 complaints about odour. Of these, we accepted 14 as real, 13 as proven to be not from Nufarm and three as being doubtful, when we could not locate any source.

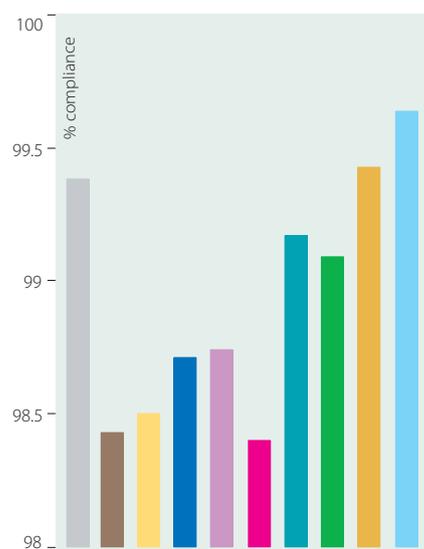
One release of odour, which we recorded as a single event, attracted 34 phone calls to our Botlek site. Gaillon accounted for 16 complaints, eight of which we traced to a problem on site, Wyke received seven, of which 2 were accepted.

and compliance, air emissions



Rebecca Paton
Helpdesk and Systems Administrator, Laverton

Environmental tests compliance



Compliance

The number of tests carried out (see graph above left) had stabilised over the years, though there have been significant increases during the last two years.

Gaillon has increased its measurements of its effluent from about 1,500 in 2006 to 6,100 in 2007 and 9,260 tests in 2008, mainly to check the performance of its effluent treatment efficiency. Belvedere is also increasing surveillance of its effluent and Lytton has increased its scrubber testing. Wyke has added its testing regime involving about 1,300 tests last year, and is likely to increase the amount of testing in the future.

The pleasing result is that 99.64% of tests were within the set limits, an improvement on last year's 99.44%.

Most of the non-compliant tests only marginally exceed the set limits.

Emissions to air

Some emissions, CO, SOX and particulates are calculated from energy use, based on published emission factors. So are NOX emissions from all but one plant. Wyke carries out nitration reactions and does some recovery of NOX. They also have continuous NOX measurements on their stacks. The very significant increase in NOX releases reported above are a result of that operation.

Emissions to air 2001 - 2008

Kg	2001	2002	2003	2004	2005	2006	2007	2008
CO	4,809	4,333	4,635	2,793	2,533	2,533	2,813	3,645
Freon	130	345	150	151	273	1	178	70
Herbicides	390	289	333	296	397	417	686	600
Inorganics	554	69	126	74	53	74	66	124
NOX	16,094	5,392	14,021	11,162	9,521	8,929	9,029	181,285**
Particulates	4,423	1,449	1,211	3,311	1,420	1,268	1,559	2,307
Phenolics	43	66	23	48	7	7	-	620
SOX	33,862	1,028	1,414	1,416	2,991	1,175	1,169	1,284
VOC	346,510*	369,513*	355,209*	307,357*	50,625	59,248	76,209	86,012
Total (excl SEAC)	172,814	119,473	103,122	104,109	67,819	73,652	91,709	275,949

*SEAC, in northern France, was sold at the end of 2004. It was a major emitter of VOCs.

**Wyke, purchased in 2008. Nitration process adds significant NOX.

While there was a major decrease in energy use, this was principally due to the sale of two chlorine plants, the reduction being mainly electricity, though the acquisition of the Wyke plant has, in part, offset this reduction.

The reported release of VOC (volatile organic compounds) had risen sharply in 2007, and further increased in 2008. This is entirely due to one site, Gaillon, who have reported a further increase in their release. The other sites reported only minor variations in their releases.

Gaillon is a site that uses large quantities of solvents, and they account for the bulk of the reported VOC emissions for the entire Nufarm group. It should be noted that Wyke was not able to provide VOC figures for the past year, but will do so for the current year. We will report their emissions in next year's report.

As mentioned in last year's report, the accuracy of Gaillon's estimates is highly doubtful. They derive their estimates using two different processes.

The first uses direct emission measurements of the many discreet emission points on the site. Staff measure the concentration of VOCs in the discharged air from each point on a number of occasions each year. These concentrations are then multiplied by the air flow in the discharge and scaled over the year. Gaillon manufactures using batch processes.

Depending on when the discharge is analysed (always during production), the discharged air can contain varying amounts of solvent. Multiplying the total air volume discharged over the measurement period, and assuming that the flow and VOC concentrations are continuous over the whole year, will overestimate the total air flow and discharge. Both the measurement of air flow and concentration of solvent in the air introduce variables that can result in gross variations in the calculated result from one year to the next.

The second estimation technique uses a mass balance estimations of VOC release to attempt to quantify fugitive losses, but this is much less reliable than the above approach. The annual loss reported in the table above equates to well below 1% of total solvent used on site. Mass balances are accurate to +/- 5% when all the sources of error in weight and volume measurements are taken into account. So, the figures, while required by the authorities and required to be analysed by mass balance, are in our view, meaningless.

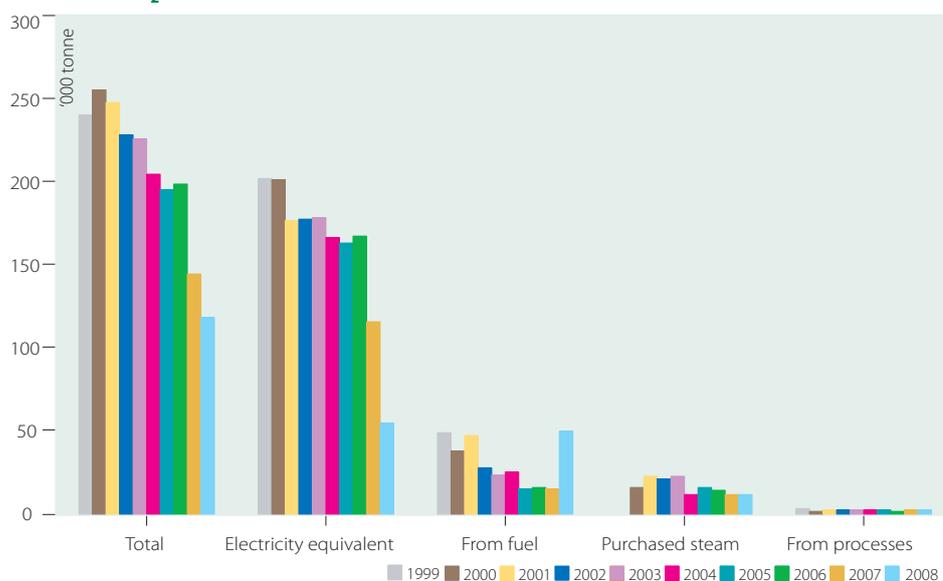
The increase in reported herbicides emissions is from Botlek where occasional measurements of discharge air from the filters indicate an increase. This is still under investigation.



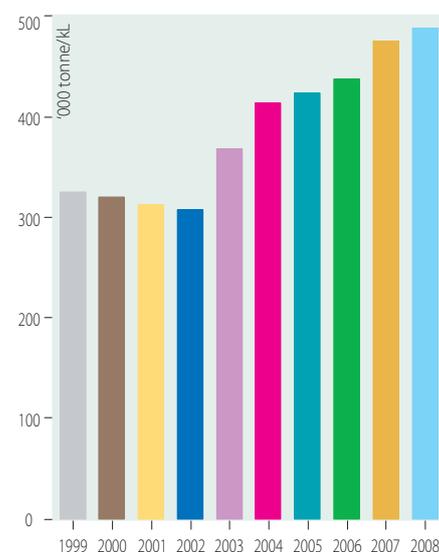
Sophie Moran
Engineer, Laverton

Energy use

Estimated CO₂ released from energy use and processes 1999 - 2008



Production volume 1999 - 2008



Energy use

Compared with most chemical companies, Nufarm is a relatively modest user of energy.

The year recorded another significant reduction in overall energy use. In part this was due to our continuing sustainability efforts, but the major reduction is due to the sale of the two chlorine plants in Western Australia at the end of July 2007. The reduction was moderated by the acquisition of the Wyke plant, which is a significant energy consumer.

Over the last few years there has been a significant change in our product mix; the volume of low energy intensity formulations has increased more rapidly than that of the more energy intensive syntheses, although the Wyke plant now reverses this change to some extent. The very steep decline in energy use (CO₂ emissions) per tonne of product shown in the graph on the next page illustrates the effect of product mix changes.

There have been overall savings in energy as a result of continuing work by many of our sites on energy efficiency. More detailed information is provided in the attached site reports.

Of our major energy users, the Laverton site has increased both synthesised products and formulations with an increase in energy

use just below that of the corresponding increase in energy intensive synthesis. The chlorine plant in Laverton is very efficient and the main user of electricity on site. While we continue to work on improving the energy efficiency of this plant, there have been no major gains because it is operating close to world best practice. Gaillon has decreased its consumption over the last few years, partly due to efficiency gains, though mostly due to a change in product mix. A small increase this year is due to a change in product mix, with a higher proportion of synthesis. Linz's efforts have resulted in lower overall energy use while increasing both synthesis and formulations. In Linz's case, the milder winters recently have helped to reduce the demand for steam to heat buildings in winter. The increase in Botlek's energy consumption is caused by an increase in production.

The major new addition in the graph is Wyke. This site's activity is almost entirely chemical synthesis, which is energy intensive.

The calculations of CO₂ from fuel use are straightforward, based on the carbon in the fuels such as natural gas, LPG, diesel and oil. Electricity is a little more complex. In some countries, much of the energy used is from nuclear power plants which do not cause CO₂ release. In others, it is a mix of nuclear and alternative (non-carbon) sources such as solar, wind and hydro. For the rest, the power

comes from thermal stations, including cogeneration. Where possible, we take into account the actual sources of energy for each site and make allowances for those sources that do not result in CO₂ emissions. For thermal sources, where we cannot get emissions data for the local sources, we use a factor based on brown coal use in Victoria, Australia. This is likely to overestimate the release of CO₂. Wyke mainly uses gas to fire its cogeneration plant. They also use a small amount of oil from time to time.

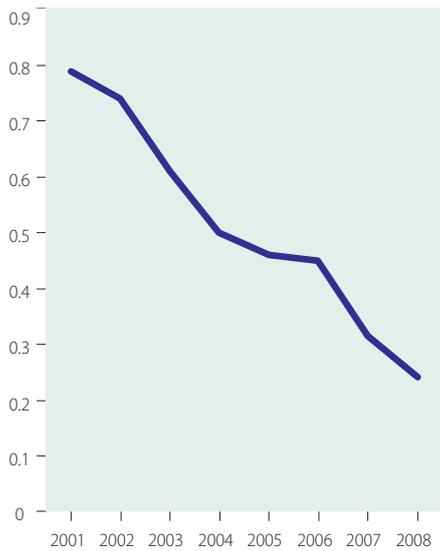
This report does not make comparisons of energy efficiency between sites. No two Nufarm sites are directly comparable.

Complicating energy efficiency calculations are climatic conditions. Some of our plants require a lot of energy to heat their buildings as in Canada, Chicago and Linz and the rest of Europe, where winters can be severe. This demand is almost independent of production rates and constitutes a base energy load. Contrasting these, we have operations in tropical and sub-tropical locations, where heating of buildings is not an issue. Benchmarking of energy efficiency between sites is very difficult given these differences, so we tend to focus on energy efficiency gains for each location. Continuing improvement on each site is the yardstick by which we measure success.

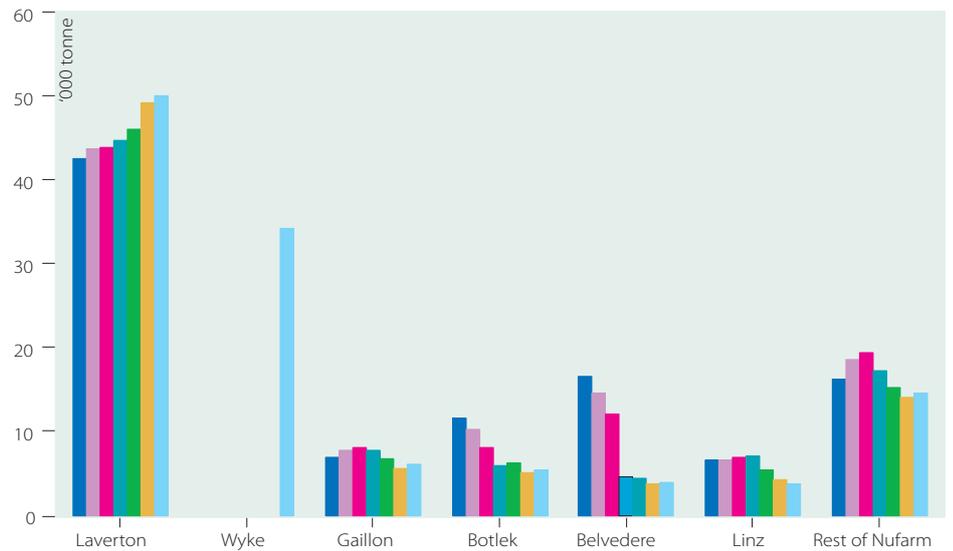


Angelique Clark
Project engineer, Lytton

Tonne CO₂ per tonne production



Major CO₂ emitters 2002 - 2008



Working together - with authorities

The Victorian EPA and the water supply company, City West Water, formed a powerful partnership with Nufarm working on improving resource efficiency at the Laverton site. The following article was published by City West Water (and is reproduced here with their permission).

“Nufarm’s largest agricultural chemical manufacturing operation, and their global head office, is located at Laverton North. At the site, water is a central component of the chemical manufacturing process and is used in heating (with gas used to heat the water) and cooling processes. Water is also used as an ingredient within the final chemical products themselves.

A key part of the chemical manufacturing process involves heating and liquefying solid raw materials. Previously, this operation involved the use of hot water baths in which drums were placed. The use of baths meant significant amounts of water and energy were lost through evaporation. The baths also posed possible safety risks such as scalding, which had the potential to occur when handling the drums in the baths.

A project was identified and implemented to improve the hot water bath operation by replacing them with enclosed hot box units. The hot box units, piped into the site’s central steam system, do not produce any steaming

water vapour or hot water, removing any risk of scalding. If a drum ruptures, the contents are collected in a drip tray and recovered.

The hot boxes are vastly more efficient and use only 21 kilograms of steam per hour to operate, compared with 127 kilograms of steam per hour used by the hot water baths, an efficiency increase of 84 per cent. Savings are also seen in reduced discharge to trade waste and in reduced chemical costs to treat water before the steam generation process.

City West Water initially contributed \$15,000 to the project to reflect the water savings and Sustainability Victoria contributed another \$10,000 to reflect the energy savings.

The project was originally trialed with the installation of two hot box units. This trial was successful and another two units were installed within 12 months. City West Water contributed a further \$13,625 to support the installation and expansion of this project.

Nufarm has continued to develop their Resource Management Action Plan (resourceMAP), with inputs from the Water Warriors, an internal team aiming to reduce water consumption, not only on site at Nufarm, but to bring about a cultural change of innovation and improvement. The Water Warriors have been particularly successful and as a result, their staff has made significant improvements to their water usage at home.



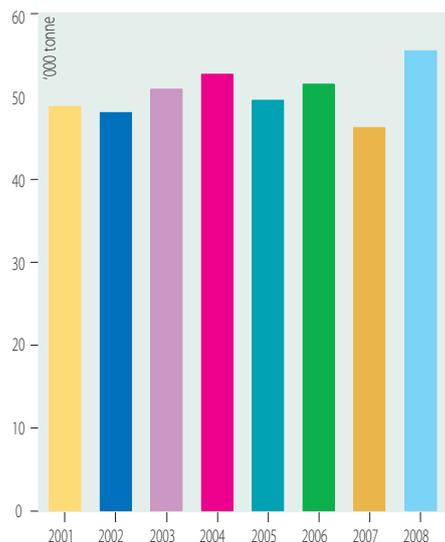
City West Water and Nufarm continue to work together and look forward to further efficiency improvements to improve the sustainability of both businesses.”



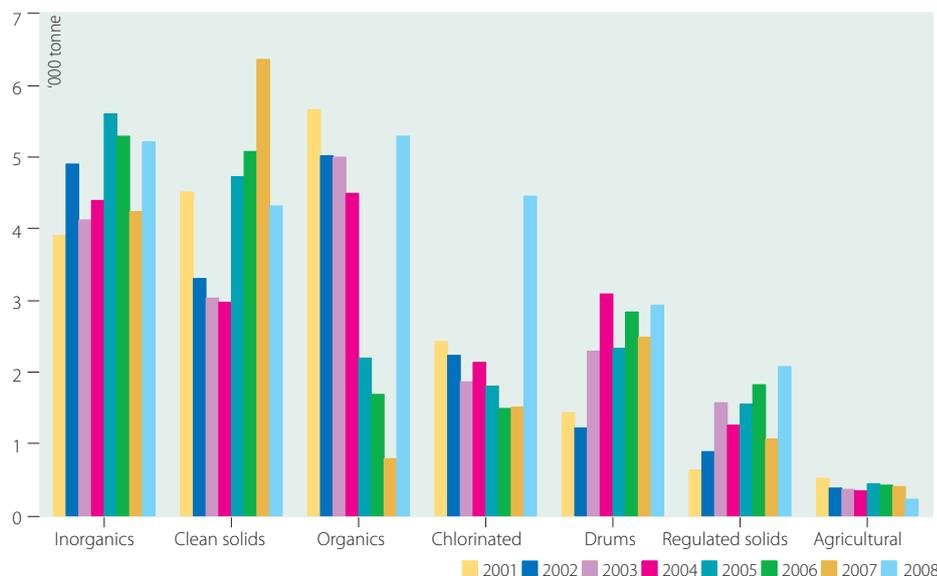
Geoff Schnaars
Storeman, Welshpool

Waste management

Total Waste 2001 - 2008



Total waste excluding salt 2001 - 2008



Wastes

We have been reporting a general decrease in waste generation since about 2004, but this has reversed during 2008. Whether salt (see opposite page) or other waste, the operation at Wyke has contributed significantly. The effect is apparent in all of the graphs.

Total waste has increased. There has been a very significant increase in organic (non-chlorinated) waste. These biodegradable wastes are mostly discharged to sewerage treatment plants, where the bacteria rich process rapidly destroys them, leaving an effluent that is suitable for discharge. Chlorinated organic compounds have also increased, originating mostly from distillation processes used to purify some intermediates in agricultural products being manufactured at Wyke. These wastes are incinerated for energy recovery.

In the graph on the opposite page showing the destination of our wastes, there has been a major reduction in waste sent to 'industrial treatment' plants. This category dealt mostly with the salt discharged from the two chlorine plants in WA sold in mid 2007. The salt discharged from those plants was treated in settling ponds to remove small quantities of heavy metals and then discharged directly to sea. The increase in discharge to sewage plants is salt and non-chlorinated wastes from Wyke.

Regulated solids are principally packaging sufficiently contaminated to require disposal rather than recycling. On some plants we are working on washing these containers to make the material suitable for recycling, the focus at present being on bulk bags.

We recycle materials where we can, and it is pleasing that this category continues to be significant, with about the same weight recycled in both 2007 and 2008.

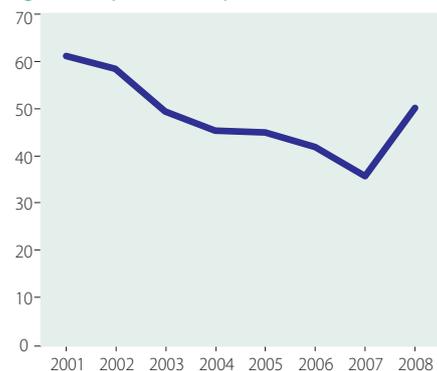
Summary graphs such as the ones in this report provide a useful overview of our activities over the last few years, however, they hide the successes gained by individual plants. Many of those plants show continuing decreases in waste generated per volume of production. Attached to this main report are detailed reports on each of our production sites, these give a better representation of the achievements made by our production sites.

The involvement of the UK Competition Commission in the acquisition of the Wyke plant has precluded us from starting some efficiency projects in production. As soon as this has been resolved, we will have an opportunity to focus on ways of waste minimisation.

Total waste excluding salt 2001 - 2008



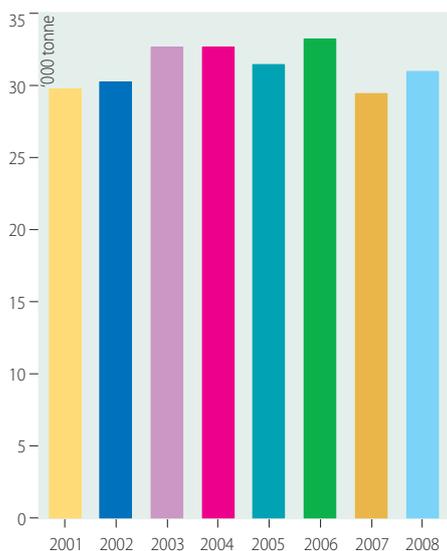
kg waste per tonne production (excl salt)



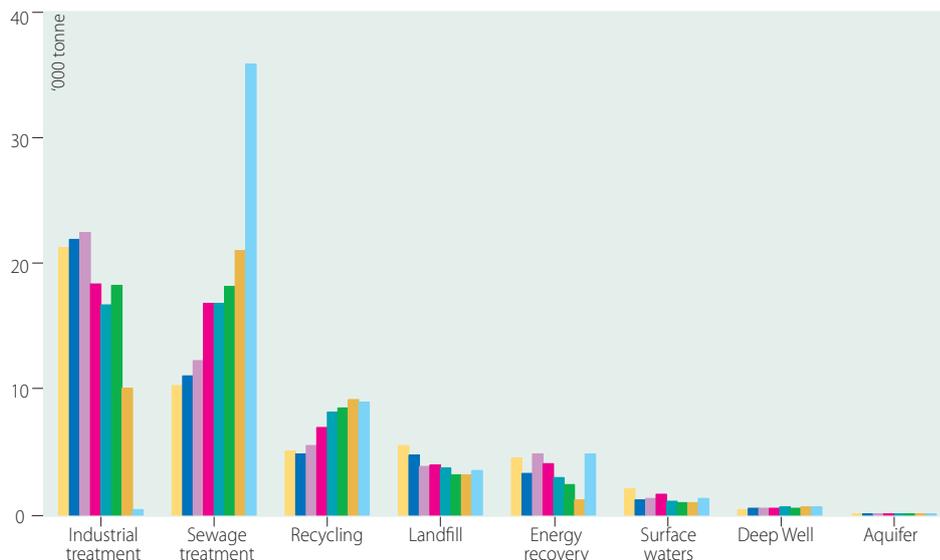


Mike Iovinelli
PLC programmer, Chicago Heights

Salt discharge 2001 - 2008



Waste destinations 2001 - 2008



Salt

Much of our synthesis is based on chlorine chemistry, and an inevitable outcome is that we generate effluents containing salt. About 34% of the salt discharge reported above was from our two chlor alkali plants in Western Australia before their sale at the end of July 2007. Their salt is discharged to the sea after treatment (under licence).

The remaining salt is from our synthesis plants, including a significant contribution from our Wyke plant (10,200 tonne in 2008), included in this report for the first time. The salty effluent from all these plants is contaminated with organic materials and cannot be discharged directly to the environment. The effluent is mostly treated in sewage plants to biologically remove the organics (BOD) before release of the salt into natural water bodies.

There has been an increase in salt from Linz and Laverton as both plants have increased their production of 2,4-D. We have also changed the method of determining the amount of salt discharged from our Laverton plant. In the past, the amounts were calculated by an occasional analysis of our effluent and calculating the salt discharge from the total annual effluent discharge volume. We have decided that this is not sufficiently accurate and have now calculated the salt discharge by mass balance.

Working Together – Drum Reconditioning

This story is just one example of initiatives taken by sites to turn waste into valuable goods.

Many raw materials used at Nufarm, Laverton North, are received in 200L drums; in excess of 25,000 drums are used every year. For many years all 200L drums used on site have been rinsed before sending them to a recycle facility. This has always been under a contractual agreement with the service supplier and has directed thousands of drums per year away from landfill.

With the old service contract reaching expiry, a new contract with a new provider, Quality Drum Services (QDS), was signed in early 2008. Under the new contract, the drums were to be used as a feedstock at the facility of the service provider for their drum reconditioning operation, and depending on the quality of the drum, Nufarm would be paid for those that could be recovered. This meant that instead of sending the drums as a waste for scrap or steel recovery, they would become a resource for another operation and raise revenue for both partners as containers are refurbished and re-used.

Initially, the number of drums that could be reconditioned was only 15%, due to the handling processes on site as well as the rinsing system we used. When the drums were being placed in hot water baths to melt

raw materials, they were being corroded externally and their re-use was compromised. The increased use of hot boxes in place of hot baths overcame this problem; however the number of drums that could be reconditioned did not significantly increase. Quality Drum Services found that the rinsing process that we were using was not efficient and their process water tanks were being routinely contaminated by raw materials such as technical trifluralin and pendimethalin. They had to clean their wash tanks more regularly, increasing their water usage and generating waste.

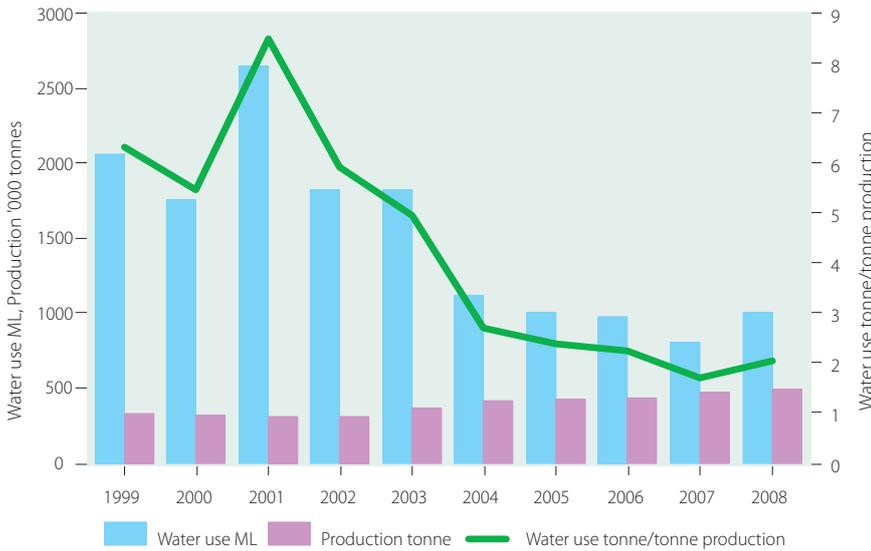
As a result, Quality Drum Services made some suggestions and recommendations for us to incorporate within our drum rinsing process. This included QDS staff training Nufarm staff what to look for in the type of drums and the quality of drums that were being rinsed. Furthermore, modifications to the rinsing process and changes to the drum collection routines were made. This saw an immediate increase of 15% in the number of drums that were being reconditioned as opposed to being scrapped. There remains some further work to be done, however this teamwork has already begun to show wins for both parties, and of course, the environment.



Craig Harrison
Permit Writer, Laverton

Water

Water use and efficiency



Water use

The need for efficient use of water is increasing around the world, especially in Australia where reduced rainfall is becoming the norm. We continue to make major efforts in all our plants to minimise the use of water.

The graph above summarises our global successes; the detailed site activities and efficiencies are recorded in the individual site reports attached at the back of this report.

For the first time in eight years, our annual global consumption of water has increased and our water use efficiency has decreased. This is due to the inclusion of Wyke in the group. Wyke's main business is synthesis. Unlike formulation activities, synthesis requires significant amounts of water, whether directly in the process or for heating and cooling, washing etc. Wyke and Laverton each account for about one third of Nufarm's global water consumption.



Most of our formulation plants use little water above that required to make up the formulations. In the past, some of these plants have used excessive amounts of wash water to clean formulation vessels when changing from one product to another. Now the volume of wash water is minimised to that required to clean a vessel and, where possible, the wash water is captured and used for a subsequent batch of the same product.

Many of our sites have installed tanks to capture rain water from roofs. While the amount captured may not be large compared to the total water used, every such tank is a constant and visible reminder to each of our employees that water is precious and must not be wasted.

On some sites, such as our Regional Service Centres in Australia, water use is small, but



rain water capture allows them to grow gardens without using drinking water.

On one production site, Laverton, some of the captured water is used on gardens, ensuring that no drinking water is used for that purpose, the rest is piped into the process water supply of the plant. Lytton, in Queensland, is capturing all their rain water and is currently using it for irrigation of gardens. The site is now evaluating whether the water quality is suitable for use in the plant.

Some examples of rain water collection are shown in the photos on this page. The water from the larger tank in the photo at the far left is piped to the plant as process water, while the rest are collecting water for use on gardens.



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