



Australian Packaging Covenant

Action Plan

2011 – 2015

Executive Summary

Incitec Pivot Fertilisers is the fertiliser business of Incitec Pivot Limited, a global chemicals company with nitrogen-based manufacturing at its core.

In addition to Incitec Pivot Fertilisers, the Incitec Pivot Group includes:

- Dyno Nobel, a leading supplier of industrial explosives and blasting services to the mining, quarrying, seismic and construction industries; and
- Southern Cross International, which markets products from the Group's manufacturing plants, trades in products made by other fertiliser manufacturers and procures raw materials for the Group's manufacturing operations.

This Action Plan is confined to Incitec Pivot Fertilisers, as the fertiliser products distributed by Incitec Pivot Fertilisers are considered to be the only products distributed by the Group that may be part of the consumer market.

On average, Incitec Pivot Fertilisers sells around two million tonne of solid fertiliser per annum under the Incitec Pivot brand name in Australia.

80% of this is in bulk, 15% in Flexible Intermediate Bulk Containers (FIBCs), and 5% in small packs, mostly weighing 40 kg.

A small part of the packaged fertiliser, estimated to be about 2 000 tonne per annum, is used by home gardeners. The used packaging may potentially be disposed of to landfill.

The packaging used for both FIBCs and small packs is made from Woven Polypropylene (WPP), the standard for fertiliser, seed, stockfeeds and many other materials used on farms, because of its durability and strength. No known recycler for WPP currently exists in Australia.

Most of the FIBCs are Returnable or Limited Trip. They are used a number of times before being taken out of service. Less than one tonne in twenty is in a Single Trip Bag. These are used in remote areas from which the bags can not readily be returned.

Returnable and Limited Trip FIBCs are not disposed of to landfill after being taken out of service. Some are substituted for Single Trip packs for their final use and are marked accordingly. The remainder are collected and exported to China for recycling. About 80% of the FIBCs used by Incitec Pivot Fertilisers are recovered and disposed of in this way.

Incitec Pivot Fertilisers is presently undertaking two reviews of the packaging that is used for agricultural fertilisers supplied by it.

Firstly, 40 kg packs will be replaced with 25 kg packs over the next two years (2011-12). This change to a lighter weight pack is being made for occupational health and safety reasons.

Secondly, the turnover and utilization of Returnable FIBCs remains a focus for improvement. Turnover and utilization are affected by a number of factors including the seasonal nature of the fertiliser business, the distance over which products must be supplied and empty FIBCs returned and the fact that Incitec Pivot Fertilisers' products are mostly sold through distributors and not directly to end-user customers (farmers). As a result, Incitec Pivot Fertilisers does not have control over the entire transaction process.

An investigation will be initiated to determine whether turnaround times might be improved, or lighter weight Single Trip FIBCs might be more appropriate in some markets.

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Endorsement

Incitec Pivot has a number of core Values and Behaviours, including “Care for the Community and our Environment”.



Listen to and work with the community.

Treat water as a precious resource.

Minimise environmental impacts and leave NO legacies.

Incitec Pivot Limited’s Health, Safety, Environment & Community Policy requires us to:

- Conduct our operations in compliance with all relevant environmental licences and regulations.
- Promote the efficient use of resources and energy.
- Strive to minimise our impact on the environment.
- Strive to be a valued corporate citizen in the communities in which we operate.
- Respect our neighbours, their values and cultural heritage, and be considerate to them in carrying out our operations.

Incitec Pivot Fertilisers is committed to the principles of the Australian Packaging Covenant and the sensible use of packaging.

The business promotes the sale and use of fertilisers in bulk and reusable intermediate bulk containers so that the overall use of packaging is minimised.

All packaging for solid fertilisers is presently made from WPP as it provides the necessary strength and durability necessary in agricultural markets.

There are currently no known recycling facilities for WPP in Australia.

After being taken out of service, Returnable and Limited Trip FIBCs are collected and exported overseas so that they can be recycled rather than disposed of locally to landfill.

These actions not only minimise the amount of packaging required but also the amount of used packaging sent to landfill in Australia.

Gary Brinkworth
General Manager
Incitec Pivot Fertilisers

28 March 2011

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1. Incitec Pivot Limited and its Subsidiaries

This Action Plan relates to Incitec Pivot Fertilisers, the fertiliser business of the Incitec Pivot Limited Group.

This section and section 2 provide some general information regarding the Incitec Pivot Limited Group. More detailed information regarding Incitec Pivot Fertilisers can be found at www.incitecpivot.com.au.

Incitec Pivot Limited's core business is the manufacture, marketing and distribution of industrial explosives, fertilisers and related products and services. There are three main businesses:

- **Dyno Nobel**, a leading supplier of industrial explosives and blasting services to the mining, quarrying, seismic and construction industries;
- **Southern Cross International**, which markets products from the Group's manufacturing plants, trades in products made by other fertiliser manufacturers and procures raw materials for the Group's manufacturing operations. Additionally, Southern Cross International sells products such as ammonia, urea, urea solutions, acids, caustic soda and carbon dioxide into industrial markets;
- **Incitec Pivot Fertilisers**, which sells agricultural fertilisers through distributors in the domestic Australian market.

This Action Plan focuses on the packaged products supplied by Incitec Pivot Fertilisers, as these products are regarded as those most likely to be part of the consumer market. Most of the fertiliser supplied by the company is used by farmers. A very small part of the total is used by home gardeners (0.1%).

Fertilisers sold on export markets and to other Australian fertiliser companies by the Incitec Pivot Limited Group are supplied in bulk. Some of the latter may be repackaged and sold by these companies under their own brand names.

Explosives and industrial chemicals are sold in bulk or intermediate bulk containers.

Explosives are used in the mining and construction industries. The industrial chemicals are used for various purposes including chemical manufacture, an emission reduction agent for diesel engines, food processing and water treatment. None of these products are used in the consumer market.

2. The Nature of the Business, its Size and Turnover

Incitec Pivot Limited is a global chemicals company with nitrogen-based manufacturing at its core.

The synthesis of ammonia is fundamental to the business. Ammonia is used in the manufacture of nitrogen fertilisers and explosives, being used to produce urea, ammonium nitrate, ammonium phosphates and ammonium sulfate.

In addition to its nitrogen manufacturing capacity, Incitec Pivot Limited has a phosphate rock deposit and high analysis phosphorus fertiliser manufacturing facility in northwest Queensland, and manufactures superphosphate in Victoria.

Within Australia, Incitec Pivot Limited is the:

- number one supplier of fertilisers in eastern Australia;
- number two supplier of explosives products and services.

The company also markets industrial chemicals.

Incitec Pivot Limited handles around three million tonne of fertiliser per annum. Local manufacture is supplemented with imports.

Each year, about two million tonne of fertiliser is manufactured at Phosphate Hill in north-west Queensland, Brisbane, Geelong and Portland, including ammonia that is used in the production of other products.

Not all of this is sold through Incitec Pivot Fertilisers and its distribution network in Australia. Some is sold to other Australian fertiliser suppliers, some is exported.

3. Incitec Pivot Fertilisers

Incitec Pivot Fertilisers typically sells about two million tonne of fertiliser per annum to farmers through its distribution network under the Incitec Pivot brand name. This is mostly through distributors, with a smaller amount of direct sales through the company's own distribution outlets. Demand varies, and is dependent on a number of factors such as seasonal conditions, fertiliser and commodity prices, and competition.

In excess of 90% of Incitec Pivot Fertilisers' sales are as solids. The remainder is comprised of anhydrous ammonia (a liquefied pressurized gas) and liquids (aqueous fertiliser solutions).

4. Brand Names

Incitec Pivot Fertilisers sells agricultural fertilisers under the "Incitec Pivot" brand name, with the exception of that sold through Grow Force, a Ruralco business. Grow Force is supplied with product in its own packaging under a long-standing commercial agreement. Product sold through Grow Force is included in Incitec Pivot Fertilisers sales data presented in this Action Plan and will be referred to in the Annual Reports submitted to the APC.

Under the Incitec Pivot brand name, Incitec Pivot Fertilisers has a number of distinguishing product names, examples of which are:

- Big N® Anhydrous Ammonia
- Cal-Am® Calcium Ammonium Nitrate
- Gran-am® Granulated Ammonium Sulfate
- Cal-Gran® Blends containing Cal-Am and Gran-am
- Granulock® Compound ammonium phosphate fertilisers enriched with sulfur or zinc
- SuPerfect® Granulated Single Superphosphate
- "CK" (Crop King®) "N-Rich", "Croplift®" and "Complete" Blends
- Liquifert® Soluble Solids
- EASY Liquids® Fertiliser solutions including EASY N® (Urea Ammonium Nitrate Solution)

5. Incitec Pivot's Place in the Supply Chain

Incitec Pivot Limited's role in Australia's fertiliser supply chain is vertically integrated. It ranges from the manufacture and importation of bulk fertilisers to their warehousing, packaging, and distribution from strategically located Distribution Centres. From here, rural merchants take delivery of the products, provide country storage, and make the final sale to Australia's farmers.

Incitec Pivot Limited is involved in the:

- Manufacture of ammonia, urea and granulated ammonium sulfate in Brisbane.
- Manufacture of sulfuric acid at Mt Isa from sulfur dioxide.
- Extraction of phosphate rock at Phosphate Hill in north-west Queensland, its acidulation with sulfuric acid from Mt Isa and elsewhere, and its manufacture into high analysis ammonium phosphate fertilisers (MAP and DAP).
- Sourcing and importation of raw materials used in the manufacture of fertilisers, including phosphate rock and sulfuric acid.
- Manufacture of superphosphate at Geelong and Portland by reacting imported phosphate rock with sulfuric acid.
- The sale and export of bulk fertilisers, primarily MAP and DAP produced at Phosphate Hill, but also Gran-am and superphosphate, to other Australian fertiliser suppliers and overseas to the Asia Pacific, Indian sub-continent and Latin America.
- Export of containerised packaged fertilisers to near Pacific nations, such as Papua New Guinea.

- Importation of finished fertilisers to complement local production of Urea, MAP and DAP, and of products that are not manufactured or produced in Australia such as Potash, through wharf facilities in Port Adelaide, Geelong, Port Kembla, Newcastle, Brisbane, Mackay, Townsville and Cairns.
- Blending, bagging and despatch of bulk and packaged fertilisers through Primary Distribution Centres in the ports of Adelaide, Portland, Geelong, Port Kembla, Newcastle, Brisbane, Mackay, Townsville and Cairns. These fertilisers are sold under the Incitec Pivot brand name.
- Distribution of solid fertilisers through Regional Distribution Centres in country centres, including Circular Heads, Devonport, Howth, Longford, Scottsdale in Tasmania; Port Lincoln and Port Pirie in South Australia; Shepparton in Victoria; Griffith and Moree in New South Wales, and Bundaberg in Queensland.
- Distribution of Big N through storage facilities at Colonsay, Melrose, Pittsworth, Allora, St George, Dalby, Jimbour, Chinchilla, Emerald, and Dirranbandi in Queensland; and Moree, Griffith, Mungindi, Boggabilla, North Star, Narba, Garah, Bellata, Colly Farms, Koramba, The Gardens, Walgett, Coonamble, Emerald Hill, Tamworth, Merah North, Spring Ridge, Buttabone, Cowra, Cudal and Wallendbeen in New South Wales.
- Incitec Pivot Fertilisers also leases company-owned solids depots at various localities in country areas to distributors.
- Similarly, Big N facilities at Warren Main, Wilona, Narromine, Bourke, Junee, Hay, Hillston, and Forbes are operated by distributors.
- Incitec Pivot Fertilisers only markets agricultural fertilisers. These are sold under the Incitec Pivot brand name (with the exception of that supplied to Grow Force in their packaging).
- Distributors operate in provincial cities and towns. They include Elders, Graincorp, Landmark, Ruralco (Grow Force), cooperatives such as Murray Goulburn, and various independents.
- Incitec Pivot Fertilisers does not market home garden fertilisers into the consumer market through nurseries, home garden centres, hardware stores and supermarkets. The business does supply other businesses with fertilisers in bulk or Intermediate Bulk Containers that they repackage and sell under their own brand names.
- “Incitec Pivot” branded fertiliser products are primarily used on farms in rural Australia. A small part of the total, estimated at around 0.1% or 2 000 t/annum, is purchased from rural outlets and used by home gardeners.
- The value of the fertiliser sold into consumer markets is currently less than \$5 M per annum.

6. Packaging Format

Incitec Pivot Fertilisers supplies solid, liquid and gaseous fertilisers.

Solid fertilisers are supplied in bulk, intermediate bulk containers and small packs.

Annual comparisons in fertiliser use are best made on a calendar year basis. The Christmas New Year break is a quiet period for fertiliser use in Australia, with no major activity.

Seasonal conditions and delays due to wet weather can significantly affect use patterns at other times of the year, making annual comparisons less meaningful.

For example, autumn pasture topdressing, which is normally complete by June 30 (the end of the Australian Packaging Covenant reporting year); can be deferred to spring in some years if wet weather disrupts spreading operations.

The Fertilizer Industry Federation of Australia (FIFA) has chosen to report on a calendar year basis when preparing its annual EcoEfficiency Report. Much of the data in this Action Plan is also presented on a calendar year basis

Incitec Pivot Limited was formed as the result of a merger between Pivot Limited and Incitec Fertilizers Limited in 2003.

Sales data by calendar years is available for the seven calendar years from 2003 to 2010. This data has been used for benchmarking purposes and is the basis for this Action Plan.

Over this period, Incitec Pivot Fertilisers has sold around two million tonne of fertiliser per annum, of which about 95% is solids, though this percentage has fallen a little in recent years as liquids gain in popularity.

Table 1: Fertiliser Sales kt (2003 – 2010)

Product	Minimum	Maximum	Average	%
Solids	1 298	2 797	2 090	96
Liquid & Gaseous	58	109	83	4
TOTAL	1 407	2 855	2 173	100

Sales of gaseous (anhydrous ammonia) and liquid fertilisers have been around 100 000 t per annum over the past three years (2008-10).

Solid Fertilisers

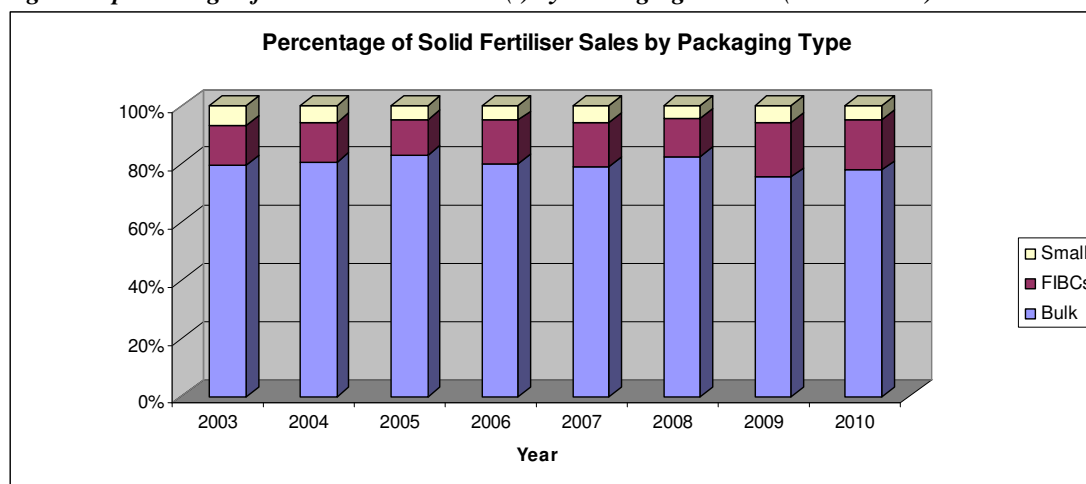
Solid fertiliser sales are comprised of:

- Bulk 80%
- FIBCs 15% (Flexible Intermediate Bulk Containers)
- Small Packs 5% (20 – 50 kg)

This break-up is subject to seasonal variation, but has been relatively constant over recent years.

The fertiliser market is relatively mature when it comes to choice in how products are packaged and supplied. Variations from year to year generally reflect market conditions rather than changes in buying patterns. The weather and seasonal prospects, along with other factors such as fertiliser and commodity prices, all affect the demand for fertiliser.

Figure 1: percentage of Solid Fertiliser Sales (t) by Packaging Format (2003 – 2010)



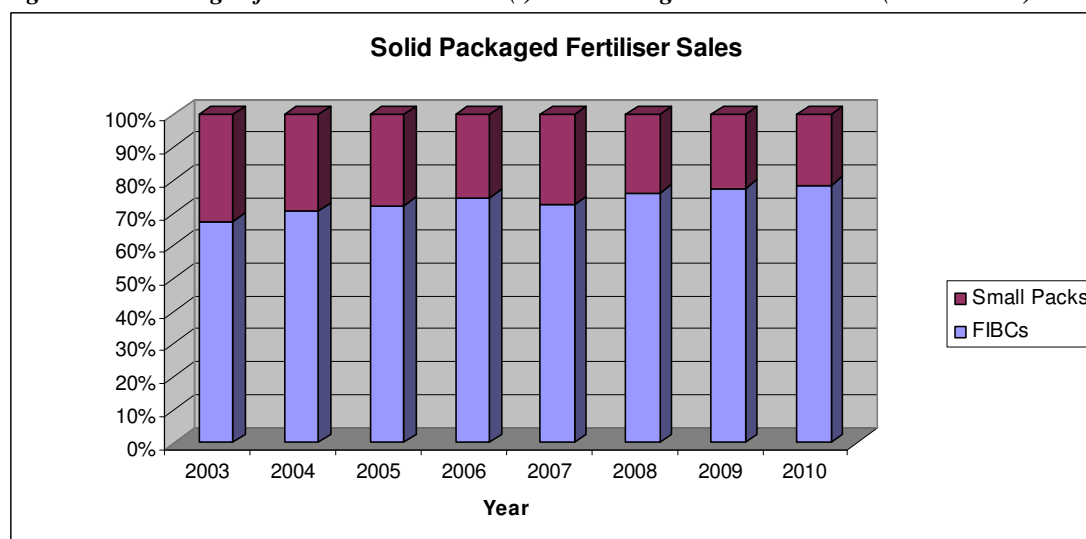
Grain and cotton growers, and graziers on large pastoral holdings, are among those who use bulk.

FIBCs are the norm in the sugarcane, horticulture and dairy pastures markets. These holdings are smaller in size (area fertilised) than grain and extensive grazing properties, and generally use a wider range of fertilisers. Consequently, they are not able to take delivery of full truck loads of bulk fertiliser.

Small packs are used on small holdings, and for specialty fertilisers that are used in small quantities, e.g. trace elements.

FIBCs are being adopted in preference to small packs. As a percentage of the total amount of fertiliser sold in FIBCs and small packs, the amount of fertiliser sold in small packs has fallen from a third (33%) in 2003 to a under a quarter (20 – 25%) from 2008 to 2010.

Figure 2: Percentage of Solid Fertiliser Sales (t) in Bulk Bags and Small Packs (2003 – 2010)

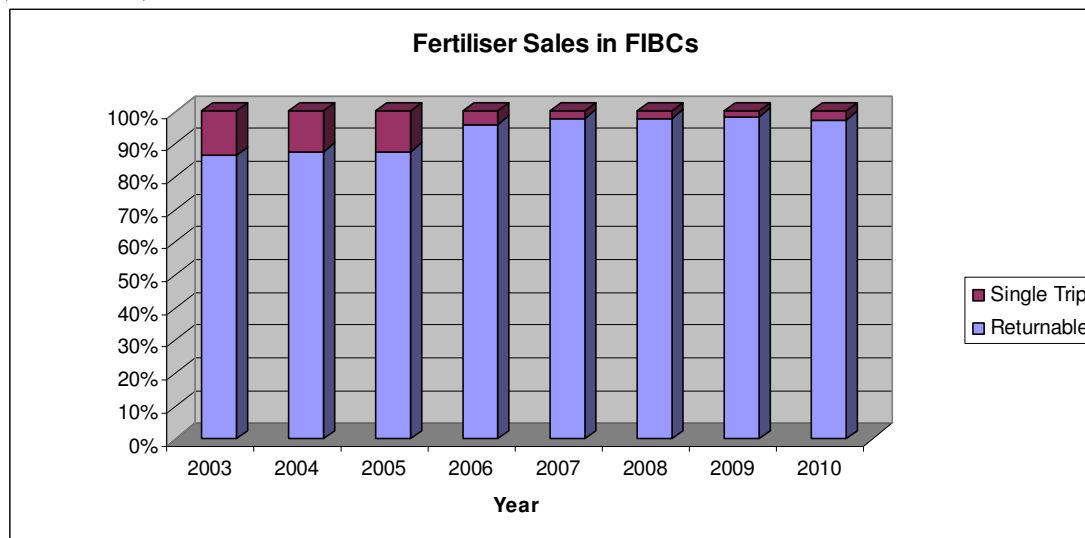


Returnable and Limited Trip packs account for the majority of the fertiliser sold in FIBCs.

Little use is now being made of Single Trip FIBCs, with less than one tonne in twenty of the FIBCs, being despatched in this way.

Single Trip FIBCs are largely restricted to remote markets, such as the supply of fertilisers ex Townsville or Adelaide into the Northern Territory, where bag return is not easily accomplished.

Figure 3: Breakdown of FIBC Sales (% of Tonnes Despatched) between Returnable and Single Trip Packs (2003 – 2010).



Small Packs

In the 2009/10 National Packaging Covenant reporting year, 88% of fertiliser sold in small packs was in a 40 kg bag.

12% was in 25 kg packs, including a small amount of imported product in 50 lb bags.

7. Packaging Design

FIBCs and small packs are made from WPP.

WPP is used because of its robustness and the protection it provides to the product. As well as being the norm in the fertiliser industry, it is also used for other products used in the agricultural sector, such as seed and stockfeeds.

The vast majority of FIBCs and small packs are manufactured overseas and imported, with some being printed locally. These packs are new and do not have a recycled component in order to meet strength, durability and safety requirements.

FIBCs

FIBCs are mostly of one tonne capacity, though 0.5 and 1.2 t bags are also used.

Most FIBCs are Returnable. They are designed so that the contents can be removed by opening and closing a spout on the bottom of the pack, without damaging or cutting it. They are made to allow repeated use.

Returnable FIBCs have a finite life. They are withdrawn from use after three years, or earlier if considered unsafe for further use.

Small Packs

The most commonly used small pack at the present time is 40 kg, though it is intended that these be phased out and replaced with a 25 kg pack.

Most small packs have a sewn polyethylene liner, to protect the contents from moisture ingress.

8. Disposal to Landfill

Very little of the fertiliser packaging used by Incitec Pivot Fertilisers is disposed of to landfill. The business' products are mostly used in rural areas, where kerb-side collection services and access to municipal waste collection, recycling and disposal services are not available.

Incitec Pivot Fertilisers maintains ownership of Returnable and Limited Trip FIBCs during their working lives, the bags being returned to the business after each use. A refundable deposit is charged to encourage their return.

Incitec Pivot Fertilisers does not dispose of spent FIBCs to landfill when they are taken out of service. They are used a final time as a Single Trip Bag, or are recycled, as explained in Section 9.

Used small packs (20 – 50 kg) are generally disposed of on farm, though some of these packs are used for other purposes, e.g. sandbags.

It is estimated that approximately 2 000 tonne per annum of the fertiliser supplied in small packs, a small proportion of the total, is used in the consumer market by home gardeners, rather than in the agricultural market. The packaging from this product could find its way to landfill through urban waste collection services. Nationally, about five tonne of packaging may be disposed of in this way (assuming that all packaging associated with the estimated 2 000 tonne per annum was disposed of to landfill).

Most small packs are of a composite design, having a WPP outer and a sewn polyethylene liner. The used packages can not be placed in household recycling bins.

9. Recycling Programs

There are presently no recycling schemes for WPP in Australia. WPP is not accepted as a recyclable waste through kerb-side recycling schemes, and other outlets are presently not available, but new opportunities are constantly being sought and investigated by the company's Sustainability team.

Returnable and Limited Trip FIBCs

A refundable deposit is charged on Returnable and Limited trip FIBCs to encourage their return. At the end of their working life, Incitec Pivot Fertilisers exports the spent packs to China where they are used in the production of new bags, rather than being disposed of to landfill.

Grow Force FIBCs are part of this recycling scheme.

Single Trip FIBCs

Incitec Pivot Fertilisers accepts the return of Single Trip FIBC's for disposal along with Returnable and Limited Trip FIBCs that have been taken out of service. The onus is on the customer to return the pack.

Small Packs

The return of small (20 - 50 kg) packs is not currently accepted.

It is not currently practical to collect and recycle these packs from farm, although new opportunities are constantly being sought and investigated by the Sustainability team. These packs are also of mixed construction, most having a WPP outer and sewn polyethylene liner.

10. FIBC Acquisition, Sales and Disposal Data

The number of Returnable and Limited Trip FIBCs purchased each year (July to June) to service the fertiliser market since Incitec Pivot Limited first became a signatory to the National Packaging Covenant is shown in Table 2.

Table 2: Number of Returnable and Limited Trip FIBCs purchased each year (July to June)

Type	Weight (kg)	2006/07	2007/08	2008/09	2009/10
Returnable					
Half Tonne	3.0	3 500	3 810	1 510	3 606
One Tonne	3.5	38 490	32 670	43 580	47 600
One Tonne Versalift	5.0	30 240	26 120	21 700	13 634
Limited Trip					
Half Tonne	2.2	2 050	0	0	0
One Tonne	2.6	3 100	3 800	0	0
1.2 Tonne	2.8	3 625	5 750	3 250	4 945
TOTAL (Tonne Equivalent)		82 580	71 395	69 935	68 971

Annual sales of fertiliser in Returnable (plus Limited Trip) and Single Trip FIBCs in company owned FIBCs over recent years are detailed in Table 3.

Table 3: Fertiliser Sales in FIBCs*

Year**	Returnable/Limited Trip	Single
2006/07	303 120	10 289
2007/08	270 547	5 935
2008/09	216 505	4 547
2009/10	254 586	4 320
Average	261 190	6 273

*This data excludes sales made in FIBCs owned by distributors that have been filled by Incitec Pivot Fertilisers on their behalf.

**APC Reporting Year (July – June)

The number of FIBCs that have been taken out of service each year and exported to China is detailed in Table 4.

Table 4: Number of Spent FIBCs exported to China each year (July to June)

Year	Number of FIBCs
2006/07	62 933
2007/08	50 531
2008/09	73 657
2009/10	64 126
Average	62 812

11. Recycling Rates

Over the four year period since Incitec Pivot Limited first became a signatory to the National Packaging Covenant and has submitted Annual Reports, an annual average (tonne equivalent) of:

- 73 220 Returnable and Limited Trip FIBCs have been purchased each year (Table 2);
- 6 273 t of fertiliser has been despatched in Single Trip FIBCs* (Table 3);
- In total, 79 493 packages have been purchased/used*.
- 62 812 FIBCs have been taken out of service, or returned by farmers, and exported to China for recycling (Table 4).

This represents a recovery and recycling rate of close to 80%.

Not all Returnable and Limited trip FIBCs are recovered, despite a refundable deposit of \$30 being placed on each FIBC. Some are lost, misplaced, damaged or not returned for other reasons.

Incitec Pivot Fertilisers does not provide a financial incentive, by way of a refundable deposit or otherwise, to encourage the return of Single Trip FIBCs.

* Note. Returnable FIBCs that have reached the end of their working life are sometimes substituted for Single Trip FIBCs.

12. FIBC Utilization Rates and Turnaround Times

Returnable FIBCs are taken out of service after three years or should an inspection reveal the FIBC is damaged and no longer suitable for use.

Limited Trip FIBCs are disposed of after they have been used either five or ten times (depending on the type of bag). The 1.2 Tonne Limited Trip FIBC, which is the only one of these bags that continues to be used, may be used up to five times.

Typically, Incitec Pivot Fertilisers has up to 200 000 Returnable and Limited Trip FIBCs at its disposal.

Sales of fertiliser in Returnable and Limited Trip FIBCs in recent years have ranged from 217 – 303 kt (Table 3).

This indicates that Returnable and Limited Trip FIBCs are being used on average up to 1.5 times per annum, and no more than five times during their life.

The poor utilization is attributed to:

- The seasonal nature of the fertiliser business in many markets.
- The distance over which fertiliser has to be supplied. Utilization tends to be better in the Queensland sugarcane market which is supplied from Mackay, Townsville and Cairns and where there is a shorter distance to market, than ex more southerly distribution points such as Brisbane, Newcastle and Geelong.
- The indirect route to market with most fertiliser being resold through distributors. Often Incitec Pivot Fertilisers has no control over the final transaction with the end user.

13. Post Consumer Packaging

Most of the raw materials, and finished products sourced for supply by Incitec Pivot Fertilisers to farmers, are purchased in bulk, e.g. phosphate rock, sulfuric acid, urea, calcium ammonium nitrate, high analysis phosphorus fertilisers, potash and compound fertilisers. No packaging is involved.

Some trace element and speciality fertilisers are sourced in FIBCs and small packs. These may be on-sold, or used internally, e.g. in fertiliser blends.

Any spent FIBC packaging that is generated in the process is disposed of along with other spent FIBCs, i.e. it is exported to China for recycling.

There is a small amount of other post consumer packaging waste, e.g. drums, cardboard. This is disposed of along with other wastes generated at the company's major sites, and makes up a small part of the total packaging waste.

14. Other Wastes

Waste collection and recycling programs for general waste (other than WPP packaging) are in place at many of the company's sites and offices (excluding Phosphate Hill), with the weights being recorded at the larger sites. At smaller sites, recyclable waste is often collected by local charities.

Packaging materials for office supplies and other items are not separated from other wastes, as they make up a small part of the total. Cardboard is the main packaging waste that is generated, and it is collected along with other like wastes, e.g. paper.

The Gibson Island site in Brisbane is the site of one of the company's largest manufacturing facilities, and offices. This site generates 5t/month, or 60 t per annum of paper and cardboard.

In 2009/10, 76 t of paper and cardboard was collected across other sites, including the company's head office in Southbank (Melbourne), the Werribee Laboratory, Geelong, Port Adelaide, Newcastle, Pinkenba (Brisbane) and Townsville.

Plastics and glass are not separated. They are disposed of in mixed (comingled) bins.

Recycling is not practical at Phosphate Hill due to its remote location in northwest Queensland.

15. Future Directions

In 2009-10, 40 kg packs accounted for 88% of the fertiliser Incitec Pivot Fertilisers sold in small packs (20-50 kg). Most of the remainder was in 25 kg packs. No product was supplied in 50 kg packs.

The Fertilizer Industry Federation of Australia (FIFA) has agreed to move towards a maximum package size of 25 kg, on occupational health and safety grounds.

Within Incitec Pivot Fertilisers, a project team has been formed to plan for and implement this change.

Capital investment (modifications and improvements) will be required to bagging lines and palletizers, new packs will need to be evaluated and sourced.

Many sites use an open mouth sown pack, and it is anticipated that most of these sites will be converted to 25 kg during 2011.

Valve filled packs are used at the Gibson Island Site in Brisbane, where more time is required to evaluate new packs and modify equipment.

The full implementation of a 25 kg pack size across the company is anticipated to occur during calendar year 2012.

Woven Polypropylene (WPP) packaging will continue to be used, though a lighter weave than that presently used for larger pack sizes might be used.

Polyethylene packaging does not provide the strength and durability required for fertilisers, for which packs must be able to withstand a degree of rough handling on farm.

Torn packaging may result in:

- loss of product;
- the contents of the bag being exposed to the elements, and suffering moisture ingress. This can cause the fertiliser to cake and set hard, which makes it difficult if not impossible to apply. Most fertilisers are hygroscopic and absorb atmospheric moisture.

It is not certain what impact the move to smaller pack sizes may have on the overall demand for fertiliser in small packs, i.e. whether it will encourage or be a deterrent to their use.

It will, on one hand, make the packs easier to handle.

On the other, more packs will need to be handled, and the cost per tonne will increase.

16. Alignment with Australian Packaging Covenant Sustainable Packaging Principles and Guidelines

16.1 Applicability of the Covenant to Incitec Pivot Limited

Agricultural fertilisers are mostly sold through rural distributors. As the end users are largely businesses, the packaging that is used is not covered by the Australian Packaging Covenant (APC). Incitec Pivot branded agricultural fertilisers are generally not sold for domestic or consumer use (by home gardeners).

Fertilisers are supplied in bulk, Flexible Intermediate Bulk Containers (FIBCs), usually of one tonne capacity, and in small packs (25 and 40 kg).

A small part of the total amount of fertiliser that is sold, estimated at about 2 000 t per annum or 0.1%, all of which is in small packs, finds its way into the consumer market through rural outlets on the outskirts of metropolitan areas. About five tonne of packaging per annum is involved.

Rather than report to the Australian Packaging Covenant specifically on this, on what is a very small amount of packaging, and also as a proportion of the overall amount of packaging used by Incitec Pivot Fertilisers, this report focuses on the use the business makes of packaging on all solid agricultural fertilisers. That sold into home gardens is not treated differently to and can not be separated from that sold into agriculture.

The packaging used for liquid fertilisers, industrial chemicals and explosives is excluded from the Action Plan.

Liquid fertilisers are supplied in bulk or rigid IBCs that are reusable and have a long life span.

16.2 Fit for Purpose/Meeting Market and Consumer Expectations

The packaging used by Incitec Pivot Fertilisers is chosen with farmers in rural areas in mind.

FIBCs and small packs are made from WPP because of its strength and durability and the protection it provides to the contents of the package. WPP is the standard packaging used for agricultural inputs such as fertiliser, seed and stockfeeds.

Most fertilisers are hygroscopic. They absorb moisture readily which can cause them to cake or set, which makes them difficult to apply through modern precision application equipment.

Incitec Pivot Fertilisers uses CHEP pallets which have a long life and are used repeatedly.

The pallets are not shrink-wrapped unless specifically requested by the customer. This is the exception rather than the norm. Shrink-wrapping is not available ex all distribution centres.

16.3 Resource Efficiency and Recovery

- Minimising Materials/Source Reduction
- Using Renewable/Recyclable Materials
- Reuse
- Recovery/Litter reduction

The WPP packaging used by Incitec Pivot Fertilisers is imported and is new. It does not have a recycled content, so that the strength of the packages is not compromised.

WPP cannot currently be recycled within Australia.

However, even if it were, farms are located in rural areas, and few farmers have access to municipal kerb-side collection and recycling schemes.

The packaging on fertilisers used by home gardeners may potentially be disposed of to landfill.

Incitec Pivot Fertilisers has minimised the weight of packaging used as FIBCs by maximising the use of Returnable and Limited Trip bags. Less than one tonne in twenty of FIBCs is despatched in a Single Trip bag.

Spent FIBCs are not disposed of to landfill. They are collected and exported to China for recycling.

About 80% of the FIBC packaging used by Incitec Pivot Fertilisers is recovered and exported in this way.

16.4 Review

An internal committee has been formed to review requirements for small packs, and to oversee the introduction and replacement of 40 kg with 25 kg packs. It is comprised of representatives from:

- Sourcing and Procurement;
- Operations and Distribution;
- Marketing and Product Management; and
- Product Stewardship.

A similar committee will be convened to review the use of FIBCs.

16.5 KPIs and Action Plan

Actions to be taken against the Australian Packaging Covenant Goals and Key Performance Indicators are listed in Appendix 1.

17. Goals

Incitec Pivot Fertilisers' goal is to provide products in packages that are safe, protect the product and meet farmers' needs.

While the ultimate choice of packaging is that of our farmer customers, Incitec Pivot Fertilisers strives to minimize the use of packaging by making products available in bulk and intermediate bulk containers.

Incitec Pivot Fertilisers strives to minimize the number of packages by using Returnable FIBCs where practical.

Incitec Pivot Fertilisers also strives to recycle used packaging. Rather than dispose of redundant FIBCs to landfill, Incitec Pivot Fertilisers exports spent FIBCs to China so that they can be recycled when they are taken out of service. Around 80% of the FIBC packaging that is used is being recovered and recycled in this way.

18. Reporting

In its Annual Reports to the Australian Packaging Covenant, Incitec Pivot Fertilisers will report on its sales of solid agricultural fertilisers under the Incitec Pivot and Grow Force brand names and the use of packaging for these products.

Baseline data is presented in this Action Plan.

Specifically, the Annual Reports will cover:

- The breakdown between bulk, FIBCs and small packs, and comparisons with past years.
- The breakdown of FIBCs between Returnable and Single Trip bags, and the outcome of internal investigations and reviews on their use.
- The number of FIBCs purchased each year.
- The number of spent FIBCs recovered and exported to China for recycling.
- Progress with the transition from 40 kg to 25 kg small packs on occupational health and safety grounds.

In addition, the Annual Report will cover progress on the Actions listed in Appendix 1 against the Australian Packaging Covenant Goals and Key Performance Indicators.

Appendix 1: KPIs and Action Plan

Covenant Performance Goal	Covenant KPI	IPL action	Baseline	Responsibility	Target or performance goal/measure	Due date
1. Design Optimise packaging to achieve resource efficiency and reduce environmental impact without compromising product quality and safety.	KPI 1 Proportion of signatories in the supply chain implementing the SPG for design or procurement of packaging	Incitec Pivot Fertilisers does not design its own packaging, which is manufactured overseas.				
		80% of solid fertilisers are supplied in bulk, 15% in Flexible Intermediate Bulk Containers (FIBCs) and 5% in small packs (40 and 25 kg).				
		Both the FIBCs and small packs are made from Woven Polypropylene (WPP). This is the standard for fertilisers, and other products sold into agriculture, e.g. seed and stockfeeds.				
		Packaging materials other than WPP have been investigated, trialled or used and abandoned, e.g. polyethylene, paper, as they do not provide the necessary strength, durability or protection of the contents that are necessary for farm use.				
		WPP is used as it is "Fit for Purpose". There was an adverse customer reaction to polyethylene and paper packaging when used in the past. These packs were more difficult to handle, tears and spillages were more common, paper packaging in particular did not provide the necessary protection from the elements, and the contents of the package deteriorate if subjected to moisture ingress.				
		Resource Efficiency is achieved by maximising the use of Returnable FIBCs, which may be reused several times, as opposed to Single Trip FIBCs. This is covered under KPI 3.				
		1/1 Write the APC Sustainable Packaging Guidelines into the Incitec Pivot General Standard for Product Stewardship.	Internal General Standard 11, Guideline 1.	Product Stewardship Manager	Revised Guideline for Product Packaging to be available to company staff on the Intranet.	12/2011
		1/2 Replace 40 kg packs with 25 kg packs.	25 kg packs presently make up 12% of the combined tonnage in small packs (2010 NPC Annual Report).	National Distribution Manager PDC Manager (Gibson Island)	Review packaging requirements and bagging equipment by Dec. 2011. Use of 25 kg pack size to be increased, and 40 kg packs to be phased out at all distribution points by the end of calendar year 2012.	12/2012
		This is a new industry standard and is being introduced on occupational health and safety grounds.				

Covenant Performance Goal	Covenant KPI	IPL action	Baseline	Responsibility	Target or performance goal/measure	Due date
2. Recycling The efficient collection and recycling of packaging.	KPI 2 National recycling rate	Noted that this is a covenant goal. Incitec Pivot Fertilisers will continue to focus on its recycling initiatives set out below.	N/A	N/A	N/A	N/A
	KPI 3 Proportion of signatories with on-site recovery systems for recycling used packaging.	3/1 Continue to collect Returnable FIBCs at the end of their working lives and export them to China for recycling. Note. The business also accepts the return of Single Trip FIBCs, though most of these are destined for remote markets and are not returned.	80% of FIBC packaging used is currently recovered and recycled.	National Distribution Manager	Monitor and report annually on the number on FIBCs that are recovered and the recycling rate.	07/2011 07/2012 07/2013 07/2014 07/2015
		3/2 Investigate Australian options for recycling of FIBCs.	Not presently utilised. Spent FIBCs are being sent to China.	Waste Working Group.	Report annually on findings/progress. Recycle all FIBCs within Australia rather than export overseas.	07/2011 07/2012 07/2013 07/2014 07/2015
		3/3 Explore opportunities, either at a corporate or industry level (Fertilizer Industry Federation of Australia) for collection of spent small packs from farm for recycling.	Nil. Recycling programs not available at present. Most small packs are of a composite design (WPP outer, with a sewn polythene liner).	Waste Working Group.	Report annually on findings/progress. Implement recycling scheme if viable options identified.	07/2011 07/2012 07/2013 07/2014 07/2015

Covenant Performance Goal	Covenant KPI	IPL action	Baseline	Responsibility	Target or performance goal/measure	Due date
Continued (Recycling)	KPI 4 Proportion of signatories with a policy to buy products made from recycled packaging	4/1 Adopt a policy to buy packaging with a recycled content where such packaging meets quality and safety requirements and customer expectations.	No current policy. Returnable FIBCs with a recycled component do not have the same strength and life expectancy as those manufactured from new materials. This compromises safety and shortens working life.	Marketing Manager Category Sourcing Manager	Policy approved and implemented, and reflected in Product Packaging Guideline. (See Action 1/1).	12/2011
		4/2 Investigate options for use of Single Trip FIBCs and small packs with a recycled component. Note. All packaging is presently sourced from overseas.	Nil packaging is used with a recycled content.	Waste Working Group Category Sourcing Manager	Report annually on findings/progress. Source Single Trip FIBCs and/or small packs with a recycled component if suitable suppliers identified.	07/2011 07/2012 07/2013 07/2014 07/2015
	KPI 5 Additional tonnes of material reprocessed in primary and secondary markets as a result of covenant-funded projects	Noted that this is an APC goal. It is not presently envisaged that this is relevant to Incitec Pivot Fertilisers.	N/A	N/A	N/A	N/A

Covenant Performance Goal	Covenant KPI	IPL action	Baseline	Responsibility	Target or performance goal/measure	Due date
3. Product Stewardship A demonstrated commitment to product stewardship by the supply chain and other signatories.	KPI 6 Proportion of signatories that have formal processes for working with others to improve design and recycling of packaging.	6/1 Advise packaging suppliers of the requirements detailed in the APC Sustainable Packaging Guidelines Note. All packaging is presently sourced from overseas.	Nil	Category Sourcing Manager	Written communication with bag suppliers.	12/2011
		6/2 Review new packaging options against the APC Sustainable Packaging Guidelines as they become available.	Existing packaging meets internal needs and requirements, but contains no recycled component.	Category Sourcing Manager	Review any new recycled packaging against internal needs and requirements Report annually on any changes in packaging.	07/2011 07/2012 07/2013 07/2014 07/2015
	KPI 7 Proportion of signatories demonstrating other product stewardship outcomes.	7/1 Review of FIBC packaging requirements, and utilization and turnaround times for Returnable FIBCs.	Returnable and Limited Trip FIBCs are being used on average up to 1.5 times per annum, and no more than five times during their life.	National Distribution Manager Marketing Manager	Recommendations on adequacy of current system, and what improvements, if any, can be made, to improve utilisation and thereby reduce the inventory of FIBCs that needs to be carried in order to meet demand.	12/2012

Covenant Performance Goal	Covenant KPI	IPL action	Baseline	Responsibility	Target or performance goal/measure	Due date
<p>Continued</p> <p>(Product Stewardship)</p>	<p>KPI 8</p> <p>Reduction in the number of packaging items in litter</p>	<p>Investigate and report on the feasibility of fostering, or partnering with others in a farm recycling scheme for WPP packaging used for small packs (20 – 50 kg) of fertiliser, and if feasible, seed and stockfeeds.</p> <p>See Action 3/3</p>	<p>Spent small packs (25 and 40 kg) have the propensity to become litter as there is no collection process in place.</p> <p>Incitec Pivot Fertilisers takes spent FIBCs out of service and exports them to China for recycling.</p>	<p>Waste Working Group</p>	<p>See Action 3/3</p>	<p>See Action 3/3</p>