



National Packaging Covenant

Annual Report

July 2009 – June 2010

Executive Summary

Incitec Pivot Limited is a global chemicals company with nitrogen-based manufacturing at its core. Within Australia, the Company is the:

- Number One supplier of fertilisers in eastern Australia;
- Number Two supplier of explosives products and services.

This Report is confined to agricultural fertilisers sold to farmers in Australia through Incitec Pivot Fertilisers distribution centres and its agent and dealer network. It excludes Incitec Pivot business that service overseas, explosive and industrial markets that trade in the following products:

- Fertilisers supplied in bulk to other Australian distributors;
- Fertiliser exports;
- Industrial chemicals;
- Explosives.

In 2009-10, Incitec Pivot Fertilisers sold 1.6 million tonnes of fertiliser to Australian farmers, either through its Dealer Network, or direct to farmers through Agents or company-operated facilities.

Solid fertilisers accounted for more than 90% of the total.

75 - 80% of the solid fertiliser is supplied in bulk and 15 – 20 % is in Flexible Intermediate Bulk Containers (FIBCs). The remaining 5% is in small packs (20, 25, 40 and 50 kg), of which 40 kg packs make up close to 90% of the total.

Over 95% of the fertiliser sold in FIBCs is in Returnable and Limited Trip Bags. These are kept for about three years before being taken out of service. About 2% of the fertiliser supplied in FIBCs is in Single Trip Bags.

The packaging used for solid fertilisers (FIBCs and small packs) is made from woven polypropylene (WPP).

WPP is used because of its durability and strength, but is not accepted domestically within Australia in recycling programs.

Rather than dispose of Returnable and Limited Trip FIBCs that have reached the end of their working life to land-fill, Incitec Pivot fertilisers collects these and exports them to China for recycling. Incitec Pivot fertilisers also accepts back Single Trip FIBCs that it has supplied to customers as part of this recycling scheme.

Small (20 - 50 kg) packs are not usually accepted back. It is impractical to offer a collection and disposal service for these packs. They are mostly disposed of on farm.

Incitec Pivot Fertilisers is recycling one-third or more of the total weight of woven polypropylene packaging that it used.

The vast majority of the raw materials and products sourced by Incitec Pivot are in bulk so the company does not generate large quantities of post consumer packaging waste.

Some speciality and trace element fertilisers are packaged. These may be on-sold as is, or used internally as blend ingredients in the manufacture of other fertilisers. The used FIBCs are added to those sent 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. While recycling programs are in place at many of the company's sites, specific data on post consumer packaging wastes and recycling rates are not available.

A small part of the fertiliser sold in small (20 – 50 kg) packs, about 2 000 t/annum, finds its way into consumer markets, and for this reason Incitec Pivot reports annually on its domestic fertiliser sales to the National Packaging Covenant. This represents about 0.1% of the total amount of fertiliser sold annually under the Incitec Pivot brand name, and has a value of less than the \$5M.

In summary, the fertiliser market is mature and stable. As far as fertiliser packaging is concerned:

- 75 - 80% of solid fertilisers are supplied in bulk, 15-20% in FIBCs and about 5% in small packs.
- Returnable and Limited Trip Bulk Bags make up more than 95% of the fertiliser despatched in FIBCs. Less than one tonne in fifty is in a Single Trip bag.
- More than one third of the woven polypropylene packaging that is used is recycled by collecting spent FIBCs and exporting them to China.

Endorsement

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

The company 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 Woven Polypropylene (WPP) as it provides the necessary strength and durability necessary in agricultural markets.

There are no recycling facilities for WPP in Australia.

After being taken out of service, Returnable and Limited Trip Flexible Intermediate Bulk Containers are collected and exported overseas so that they can be recycled rather than disposed of locally to land-fill.

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



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Table of Contents

1. Incitec Pivot Limited – Company Background	5
2. Environment & Community	6
3. Financial Results	6
4. Domestic Fertiliser Sales	6
5. Consumer Sales	7
6. Fertiliser Packaging	7
7. Packaging Materials	7
8. Solid Fertilisers	7
9. FIBCs	8
10. Disposal of Used Packaging to Land-Fill	8
11. Recycling	9
12. Achievements	10
KPI 1 Weight of Consumer Packaging/Ratio of Product to Packaging by Weight	10
KPI 3 Improvements in Design, Manufacture, Marketing and Distribution	14
KPI 4 Changes in Supply Chain that affect Manufacturing	15
KPI 6 Non-Recyclable Packaging	16
KPI 16 Post-Consumer Recycling Facilities	17
KPI 21 Packaging to Land-Fill or Recycled	18
KPI 22 Formal Adoption of EcoPP	18
KPI 26 Buy Recycled Policy	19
KPI 27 Baseline Data	20
KPI 28 Annual Reporting Against Plan	20
KPI 29 Demonstrate Improvement	20

1. Incitec Pivot Limited – Company Background

Incitec Pivot Limited is a global chemicals company with nitrogen-based manufacturing at its core. The head office is in Melbourne.

Incitec Pivot Limited was established in 1919 as the Phosphate Co-operative Company of Australia and in 2003, merged with Incitec Fertilisers. Southern Cross Fertilisers was acquired in 2006. Incitec Pivot expanded into explosives and North America with the acquisition of Dyno Nobel in June 2008.

Incitec Pivot has extensive operations throughout the United States, Canada, Mexico and Australia, including over 20 manufacturing plants, scores of distribution centres and well-established channels to market. The Company employs approximately 4,500 staff worldwide. The Company is the:

- Number One supplier of fertilisers in eastern Australia;
- Number One supplier of explosives products and services in North America - the largest industrial explosives market in the world; and
- Number Two supplier of explosives products and services in Australia - the third largest industrial explosives market in the world.

Incitec Pivot Fertilisers supplies more than 50 per cent of Australia's agricultural fertiliser needs, marketing into all States and Territories except for Western Australia.

Fertiliser manufacturing facilities are located at Phosphate Hill in northwest Queensland, Brisbane, Geelong and Portland. Manufactured fertilisers include ammonia, urea, diammonium phosphate (DAP), monoammonium phosphate (MAP), superphosphate, granulated ammonium sulfate (Gran-am), other granulated fertilisers (Granulock products) and fertiliser solutions (EASY Liquids).

To meet demand, local production is combined with imports through Adelaide, Portland, Geelong, Port Kembla, Newcastle, Brisbane, Mackay, Townsville and Cairns.

Fertilisers are sold through an extensive Agent and Dealer network that includes Elders, Graincorp, Landmark, Ruralco, Cooperatives such as Murray Goulburn, and various independents.

In addition to its direct sales across eastern and southern Australia, Incitec Pivot supplies fertilisers in bulk to other Australian fertiliser distributors, and exports fertiliser overseas to the Asia Pacific, the Indian sub-continent and Latin America through its trading arm, Southern Cross International.

Explosive grades of ammonium nitrate and initiating systems are sold in North America and the Asia Pacific region under the name Dyno Nobel. Dyno Nobel's customers are in the mining, quarry, construction, pipeline and geophysical exploration industries.

This Report is confined to agricultural fertilisers sold direct to farmers in Australia through the company's own distribution centres and its agent and dealer network. It excludes:

- Fertilisers supplied in bulk to other Australian distributors;
- Fertiliser exports;
- Industrial chemicals;
- Explosives.

In round figures, Incitec Pivot typically produces and imports around three million tonne of fertiliser per annum within Australia. Between one and a half to two million tonne of this is sold through the company's fertiliser distribution network under the Incitec Pivot brand name.

One Dealer, Grow Force (a Ruralco business), is also supplied with products in packages bearing its own brand name. Sales through Grow Force and the packaging that is used are included in this report.

Incitec Pivot fertilisers are marketed in a range of packaging to suit customer needs, including bulk, intermediate bulk containers and small packs (ranging in size from 20 to 50 kg). The latter are used where fertilisers have to be manually handled.

Incitec Pivot Fertilisers does not intentionally market into consumer markets. The company does not produce a range of fertilisers specifically for sale through supermarkets and grocery chains, hardware stores and nurseries for use in the home garden. The focus is on agriculture. The company's resellers are appointed to service rural markets, not domestic situations.

A small part of the fertiliser sold in small packs does find its way into consumer markets through reseller and distribution outlets in rural towns and on the outskirts of large metropolitan centres. As the packaging is made from WPP, it is not recycled through municipal waste collection services.

Incitec Pivot does supply fertilisers in bulk or FIBCs to companies that service the consumer market. These companies repackage these fertilisers and sell them under their own brand names.

The industrial chemicals and explosives marketed by Incitec Pivot and Dyno Nobel are not used in consumer markets and are excluded from this report. These products are supplied in bulk or Intermediate Bulk Containers, and have specific uses in the industrial, mining and construction sectors. The sale and use of explosives is closely regulated.

2. Environment & Community

Incitec Pivot's Health, Safety, Environment and Community (HSEC) Policy states that the company will:

- 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.

3. Financial Results

Incitec Pivot's financial year is from 1 October to September 30.

At the time of preparation and submission of this report, financial results for the 2009-10 financial year were not available. Incitec Pivot's Net Profit after Tax in 2008-09 was \$348 m.

The sales and packaging data presented in this Report is not based on the company's financial year. It is based on the National Packaging Covenant reporting year from July to June, or on calendar years.

4. Domestic Fertiliser Sales

Incitec Pivot Fertilisers sells between 1.5 and 2 million tonnes of fertiliser per annum through its own distribution network. Demand in the last two years has been depressed, attributable to a reaction to higher fertiliser prices that prevailed through much of this period, adverse seasonal conditions and competition.

Incitec Pivot Fertilisers sells fertiliser indirectly through Dealers, or directly through Agents and company owned and operated distribution centres to end-users (farmers) who have accounts with the company.

Most of this fertiliser is sold as solids, though some is supplied as fluids (liquefied gases and solutions). The breakdown of fertiliser sales by major product group is shown in Table 1.

Table 1:
Incitec Pivot Sales of Fertiliser from July 2009 to June 2010 through Dealers, Agents and Direct to Farmers.

Product Group	Tonnes
Anhydrous Ammonia	56 964
Solutions	51 425
Solid Fertilisers	1 520 044
TOTAL	1 628 433

The majority of this fertiliser was sold under the Incitec Pivot brand name.

There is a long-standing agreement with one of the company's Dealers, Grow Force (a Ruralco business), to supply fertiliser to them in their own packaging. Incitec Pivot sources this packaging on Grow Force's behalf.

Both the product and packaging supplied to Grow Force are covered in this Report. These sales are not treated differently to sales to other customers.

5. Consumer Sales

Typically, 1.5 – 2 million tonne of solid fertilisers is sold by Incitec Pivot Fertilisers each year through Dealers, Agents and direct to farmers.

Of this, it is estimated that about 0.1% or around 2 000 t is used by home gardeners. This product is purchased in 20 – 50 kg packs from rural outlets in country towns and market garden areas adjacent to metropolitan centres.

6. Fertiliser Packaging

Solid fertilisers are mostly supplied in Bulk (75 – 80%) or Flexible Intermediate Bulk Containers (FIBCs) (15 – 20%).

About 5% is sold in 50, 40 25 and 20 kg packs.

Anhydrous ammonia is supplied in bulk only, as a liquefied gas.

Liquid fertiliser solutions are supplied in Bulk or Intermediate Bulk Containers (IBCs). The latter are of a rigid construction and have a long life.

This report focuses on the packaging used for solid fertilisers.

7. Packaging Materials

FIBCs and small packs are made from woven polypropylene (WPP), chosen because of its robustness and the protection it provides to the product.

Most small packs have a sewn polyethylene liner.

8. Solid Fertilisers

75-80% of the solid fertiliser sold under the Incitec Pivot (and Grow Force) brand names in Australia is in bulk. Grain and cotton growers, and graziers on large pastoral holdings, are among those who use bulk.

15-20% is supplied in FIBCs, usually of one tonne capacity. Practically all of this in Returnable and Limited Trip bags. Single Trip FIBCs made up less than 5% of the combined total.

FIBCs are popular in the sugarcane, horticulture and dairy industries. 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.

Around 5% is supplied in small packs (50, 40, 25 and 20 kg). Small packs are used on small holdings and for specialty fertilisers, e.g. soluble solids and trace elements, which are required in smaller quantities.

Sales of solid fertilisers in 2009-10 by pack size are detailed in Table 2.

Table 2: Incitec Pivot Sales of Solid Fertilisers by Pack Size from July 2009 to June 2010

Packaging	Tonnes	%
Bulk	1 185 712	78
Returnable/Limited Trip FIBCs	257 710 *	17
Single Trip FIBCs	4 320	0
Small packs – 20 to 50kg	72 301	5
TOTAL	1 520 044	100

* 3 124 t of this was in FIBCs that were owned and supplied by Dealers (other than Grow Force). The vast majority was in Incitec Pivot packs.

9. FIBCs

Flexible Intermediate Bulk Containers (FIBCs), commonly referred to as Bulk Bags, are popular in those agricultural markets where true bulk systems are not practical and some form of packaging is necessary. They offer convenience, eliminate manual handling and provide cost savings over small packs.

Returnable, Limited Trip and Single Trip FIBCs are available.

Returnable and Limited Trip FIBCs are used a number of times, but do have a finite life.

- 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).

A \$30 deposit is charged on all Returnable and Limited Trip FIBCs, which is refunded on their return.

Single trip FIBCs (and small packs) are used once and then disposed of.

The promotion of bulk handling systems and the use of Returnable and Limited Trip FIBCs reduces the overall use of packaging.

Returnable and Limited trip FIBCs are fitted with a number of loops or attachment points that require farmers to invest in lifting plates to attach the bag to their jibs.

Single Trip FIBCs have a Single Loop that can be attached directly to the jib.

Realizing that the need for a lifting plate was hampering the adoption of Multi-Trip bags in some districts Incitec Pivot developed a Returnable FIBC, known as the Versalift Bag, which can be lifted by either a four point or a single point lifting system. This provides farmers with more flexibility.

The introduction of the Versalift Bag and the continued promotion of intermediate bulk handling systems has seen the percentage of packaged solid fertiliser sales in Returnable and Limited Trip FIBCs increase by 20% since 2002.

The percentage of packaged solid fertiliser sold in Single Trip FIBCs has fallen from 10% in 2002 to less than 1% in 2009.

Apart from the industrial and explosives markets, neither of which are the subject of this Report, little use is now being made of Single Trip FIBCs. Their use is largely restricted to remote markets, such as the supply of fertilisers ex Townsville into the Northern Territory, where bag return is not easily accomplished.

The percentage of packaged solid fertiliser sold in 20 - 50 kg packs has fallen from 33% in 2002 to less than 25 % in recent years.

Table 3.

Percentage (%) of Incitec Pivot Bagged Fertiliser Sales by Pack Size, Calender 2003 to 2009

Pack Size	2002	2003	2004	2005	2006	2007	2008	2009
Bulk Bags – Returnable/Limited Trip	57	58	62	63	72	71	74	77
Bulk Bags - Single Trip	10	9	9	9	3	2	2	0
Small packs (20,25, 40 & 50 kg)	33	33	29	28	25	27	24	22

10. Disposal of Used Packaging to Land-Fill

Very little of the fertiliser packaging used by Incitec Pivot Fertilisers is disposed of to land-fill. The company's 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.

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.

A small proportion of the company's total fertiliser sales, approximately 2 000 tonne per annum, is used in the consumer market rather than the agricultural market, i.e. by home gardeners. The packaging from this product may be disposed of to land-fill through urban waste collection services. About five tonne of packaging is involved.

Incitec Pivot Fertilisers maintains ownership of Returnable and Limited Trip FIBCs during their working lives. They remain the property of Incitec Pivot Fertilisers and are returned to the company after use. Incitec Pivot Fertilisers does not dispose of spent FIBCs to land-fill when they are taken out of service. They are being recycled (as explained in Section 11).

Single Trip FIBCs become the property of the user at the time of sale. Incitec Pivot Fertilisers, however, does accept their return for disposal, along with Returnable and Limited Trip FIBCs that have been taken out of service.

In Tasmania, Incitec Pivot Fertilisers has a commercial arrangement with Gunns Limited to take back used 25 kg packs. These packs are recycled in the same way that spent FIBCs are.

11. Recycling

There are presently no recycling schemes for WPP in Australia. WPP is not accepted as a recyclable waste through kerbside recycling schemes, and other outlets are presently not available.

Rather than dispose of spent Returnable FIBCs to land-fill, Incitec Pivot Fertilisers has investigated opportunities to dispose of these off-shore. They are presently being sent to China where they are used in the production of new bags.

Incitec Pivot Fertilisers also accepts back one trip FIBCs from farmers as part of this recycling program.

Grow Force FIBCs are part of this recycling scheme.

Small (20 - 50 kg) packs are not accepted. It is not practical to collect and recycle these packs from farm. These packs are also of mixed construction, most having a WPP outer and sewn polyethylene liner.

An exception to this rule is Gunns Limited in Tasmania, who use 25 kg packs in their forestry plantations. Arrangements have been made for these packs to be returned and recycled along with spent FIBCs.

Over recent years, Incitec Pivot Fertilisers has recycled one third or more of the packaging that it uses.

In 2009-10, it is estimated that Incitec Pivot Fertilisers used 497 t of WPP packaging on solid agricultural fertilisers. This excludes packaging for liquid fertilisers and industrial chemicals.

64 126 Limited Trip and Returnable FIBCs were taken out of service for export to China for recycling in 2009-10. This includes both Incitec Pivot and Grow Force FIBCs.

At an average weight of 4 kg, the weight of the recycled bags amounts to 257 t.

This represents a recycling rate of 50 %.

The cost of the recycling program is \$1 per bag, a cost that Incitec Pivot Fertilisers has chosen to bear rather than see spent bags disposed of to land-fill.

12. Achievements

Incitec Pivot Fertilisers, as a Brand Owner, is required to address Key Performance Indicators (KPIs) 1, 3, 4, 6, 16, 21, 22, 26, 27, 28 and 29.

KPI 1.

Total Weight of Consumer Packaging

Ratio of Product to Packaging by Weight

Actions	Performance Target	Responsibility	Timeline
Measure: Weight of solid fertilisers supplied in: <ul style="list-style-type: none"> • Bulk • FIBCs • Small Packs (20 - 50 kg) Weight of Packaging used for: <ul style="list-style-type: none"> • FIBCs • Small Packs Determine following ratios: <ul style="list-style-type: none"> • Weight of all solid fertilisers:Weight of all packaging • Weight of fertiliser supplied in FIBCs:Weight of FIBCs • Weight of fertiliser supplied in small packs:Weight of packaging 	Data from 2006/07, the first year of reporting to the NPC, will be used as a benchmark. i) Ratio of all solid fertiliser to weight of all packaging is largely determined by customer buying patterns and preferences (for bulk, etc.). ii) Ratio of fertiliser supplied in FIBCs to weight of FIBC packaging will be the most important factor to monitor, as it illustrates how well Returnable FIBCs are being utilized. iii) Ratio of fertiliser supplied in small packs to weight of packaging is fixed.	Supply Contract Manager; Demand Planning Manager; Market Managers; Operations Managers; Distribution Managers.	Report annually for the NPC's reporting year (July – June).

i) Product Weight

Sales of solid fertiliser (tonnes) under the Incitec Pivot and Grow Force Brand Names in 2008-09 are shown in Table 4.

The data included sales of Incitec Pivot product in Dealer-owned Returnable FIBCs. These packs were purchased by the Dealers independently of Incitec Pivot Fertilisers, and used locally ex some supply centres.

Table 4.

Incitec Pivot solid fertiliser sales by pack size in 2009-10.

Pack Size	Tonnes
Bulk	
FIBCs	
Returnable	257 710*
Single Trip	4 320
Total	262 030
Small Packs	
50 kg	0
40 kg	63 345
25 kg	8 929
22.7 kg (50 lb)	27
20kg	0
Total	72 301
TOTAL	334 331

* Includes 3 124 t in FIBCs that were purchased and supplied by Dealers (other than Grow Force).

ii) Weight of Packaging

FIBC Pack Weights

Pack weights for Returnable and Limited Trip One Tonne FIBCs range from 2.6 to 5 kg, with the average weight being a little less than 4 kg.

Weight of Returnable FIBC Packaging

The most commonly used Returnable FIBCs have an effective working life of three years before being taken out of service. The FIBCs are inspected before reuse, and if damaged and beyond repair, are disposed of earlier.

As these bags have a life of three years, the actual weight of these packages in use in 2009/10 has been determined by adding all purchases over the three year period from 1 July 2007 to 30 June 2010, and dividing the sum by three.

Table 5. Estimated weight of Returnable FIBC Packaging used by Incitec Pivot in 2009-10.

Type of Returnable FIBC	Number ordered from 1/7/07 to 30/6/08	Number ordered from 1/7/08 to 30/6/09	Number ordered from 1/7/09 to 30/6/10	Annual Average	Bag Weight (kg)	Annual Total (t)
Half Tonne	3 810	1 510	3 606	2 975	3.0	8.9
One Tonne*	32 670 (26 980)	43 580	47 600	39 387	3.5	137.9
One Tonne Versalift	26 120	21 700	13 634	20 485	5.0	102.4
TOTAL						249.2

* The volume of one tonne returnable FIBCs purchased in 2008/09 increased over previous years as it included 17 070 replacement bags for stock that was deemed as faulty and would not last the 3 year life span. It is assumed that the bags taken out of service were drawn evenly from the previous three years – 2005/06 to 2007/08. Hence the total number of bags for 2007/08 have been reduced by 5 690 bags per annum. The revised figure is shown in brackets.

Weight of Limited Trip FIBC Packaging

One Tonne:

Limited Trip Bags of one tonne capacity are used in Tasmania. These bags are used up to ten times before being taken out of service. Their typical working life is three years. These bags are being phased out of service and replaced with Returnable FIBCs. None have been purchased since 2008/09.

Table 6. Estimated weight of Limited Trip FIBC Packaging used by Incitec Pivo Fertilisers in Tasmania in 2009-10.

Type of Limited Trip FIBC	Number ordered from 1/7/07 to 30/6/08	Number ordered from 1/7/08 to 30/6/09	Number ordered from 1/7/09 to 30/6/10	Annual Average	Bag Weight (kg)	Annual Total (t)
One Tonne	3 800	0	0	1 267	2.6	3.3

1.2 Tonne:

These bags, weighing 2.8 kg, are used throughout the market place. They may be used up to five times. It is assumed these bags have a life of one year. 4 945 of these packs were purchased in 2009/10, weighing 5.9 t.

TOTAL:

The total weight of Limited Trip FIBCs is 9.2 t.

Weight of Returnable plus Limited Trip FIBCs

The total weight of Returnable plus Limited Trip FIBCs attributed to the 2009/10 year is estimated to be 258.4 t.

Weight of Single Trip FIBCs

4 320 t of fertiliser was sold in 2009/10 in Single Trip FIBCs, which have a typical weight of 2.7 kg.

The combined weight of this packaging is 11.7 t.

This excludes single trip bags used for industrial products, which are not part of this study.

Total Weight of all FIBC Packaging (Returnable, Limited trip and Single Trip FIBCs)

Returnable	249.2 t
Limited Trip	9.2 t
Single Trip	11.7 t
TOTAL	270.1 t

Weight of Small Packs (25 – 50 kg)

The weight of packaging used for products sold in small packs is shown in the following table.

Table 7.

Estimated Weight of Packaging used for Fertilisers despatched in Small Packs in 2009-10.

Pack Size	Tonnes of Fertiliser	Number of Packs per Tonne	Total Number of Packs	Typical Pack Weight (g)	Combined Weight (t)
40 kg	63 345	25	1 583 625	125	198.0
25 kg*	8 956	40	358 240	80	28.7
TOTAL					226.7

* Includes 22.7 kg (imported product packed in 50 lb bags) and 20 kg packs.

GRAND TOTAL

(FIBCs and Small Packs)

Table 8.

Total Weight of Packaging used by Incitec Pivot Fertilisers in 2009-10

Pack Type	Weight (tonnes)
Returnable and Limited Trip FIBCs	258.4
Single Trip FIBCs	11.7
Small Packs (25 – 50 kg)	226.7
TOTAL	496.8

iii) Product to Packaging Ratios

Product to Packaging ratios for solid fertilisers are shown in Table 9.

Table 9.
Product to Packaging Ratios by Weight

Ratio	Tonnes of Product*	Tonnes of Packaging	Ratio
Total weight of all solid fertilisers, including bulk, to total weight of packaging.	1 520 044	496.8	3 060
Weight of fertiliser supplied in packages (FIBCs and small packs) to total weight of packaging.	334 331* (331 207)	496.8	673* (667)
Weight of fertiliser supplied in FIBCs to weight of FIBC packaging.	262 030* (258 888)	270.1	970* (958)
Weight of fertiliser supplied in 20 - 50 kg packs to weight of packaging.	72 301	226.7	319

* Includes 3 124 t in FIBCs that were purchased and supplied by Dealers (other than Grow Force). Figures in brackets denote corrected data.

iv) Comparison with Previous Years.

2009-10 was the fourth year for which this data was collated.

A comparison with previous years is shown in the following table.

Table 10.
Comparison of Ratios with Previous Years

Ratio	Ratio			
	2006/07	2007/08	2008/09	2009/10
Total weight of all solid fertilisers, including bulk, to total weight of packaging.	2 931	2 740	2 704	3 060
Weight of fertiliser supplied in packages (FIBCs and small packs) to total weight of packaging.	665* (653)	561* (557)	581* (575)	673* (667)
Weight of fertiliser supplied in FIBCs to weight of FIBC packaging.	1060* (1034)	748* (739)	774* (765)	970* (958)
Weight of fertiliser supplied in 20 - 50 kg packs to weight of packaging.	320	319	319	319

* Includes FIBCs that were purchased and supplied by Dealers (other than Grow Force). Figures in brackets denote corrected data.

The Product to Packaging Ratios fluctuate with the overall demand for fertiliser, being lower in those years in which demand is depressed.

The Product to Packaging Ratio for small packs of 20 – 50 kg capacity will remain fixed while ever the current packages and weights remain in vogue.

KPI 3.

Improvements in Design, Manufacture, Marketing and Distribution

Actions	Performance Target	Responsibility	Timeline
Measure percent of solid fertilisers supplied in: <ul style="list-style-type: none"> • Bulk • FIBCs • Small Packs (20 - 50 kg) and <ul style="list-style-type: none"> • Percent of FIBCs in Returnable Bags. 	<ul style="list-style-type: none"> • Bulk plus FIBCs > 95% • Small Packs < 5% • % FIBCs in returnable bags > 95% • % FIBCs in single trip non-returnable bags <5% 	Market Managers; Demand Planning Manager.	Report annually for the NPC's reporting year (July – June).

i) Percent Bulk and Intermediate Bulk Vs Small Packs

75 – 80% of solid fertiliser is despatched in bulk, 15 – 20% is in Flexible Intermediate Bulk Containers (FIBCs), and about 5% is in small packs (20 – 50 kg).

Seasonal conditions and commodity prices affect demand for fertiliser and are responsible for much of the variation in demand, and the proportion of fertiliser despatched in Bulk, FIBCs and small packs. Variations from year to year often reflect market conditions rather than changes in buying patterns.

The fertilisers used in the broadacre grain market and on extensive legume based pastures (mostly superphosphate) are generally supplied in bulk.

FIBCs are the norm in the sugarcane, horticulture and dairy pastures markets.

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

Table 11.

Sales (000 t) of Incitec Pivot Branded Solid Fertilisers (Calendar 2006 to 2009) and % by Pack Size.

Packaging	2006		2007		2008		2009	
	kt	%	kt	%	kt	%	kt	%
Bulk	1 679	80	1 465	79	1 458	83	978	75
FIBCs	313	15	280	15	236	13	247	19
20 to 50kg	106	5	106	6	74	4	73	6
TOTAL	2 099	100	1 851	100	1 767	100	1 306	100

ii) Percent Returnable Vs Single Trip FIBCs

The promotion of Returnable FIBCs, and the introduction of a Single Loop Returnable FIBC, i.e. the Versalift Bag, has seen the proportion of FIBCs supplied in returnable bags increase over the past five years.

The use of single trip non-returnable FIBCs, as a percent of the total despatched in FIBCs, has fallen from 15% of the total in 2002 to 2% in 2008-09.

Table 12.

Sales of Incitec Pivot Fertiliser in FIBCs – % Returnable Versus % Single Trip Bags. Calendar 2002 to 2008.

Pack Size	2002	2003	2004	2005	2006	2007	2008	2009
Bulk Bags - Returnable	85	87	87	88	95	97	98	98
Bulk Bags - Single Trip	15	13	13	12	5	3	2	2

KPI 4.
Changes in Supply Chain that affect Packaging

Actions	Performance Target	Responsibility	Timeline
A move from 40 and 50 kg packs to 20 and 25 kg packs by or in 2010 is being considered at the major distribution centres at Brisbane and Geelong. The feasibility of using polyethylene packaging instead of WPP for these smaller pack sizes will be considered at the same time.	Potential replacement of WPP with Polyethylene packaging may result in a reduction in the overall weight of packaging used for small packs.	Operations Managers; Market Managers; Supply Contract Manager.	Report progress in 2009/2010 Annual Report.

In 2009-10, 40 kg packs accounted for 88% of the fertiliser Incitec Pivot sold in small packs (20-50 kg). 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, specifications set and contracts entered into for their supply and existing contracts and packs run out.

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 pack 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 should be achieved during 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 required strength and durability for fertilisers, which must be able to withstand a degree of rough handling on farm.

Torn packaging may result in:

- Loss of product. This not only represents a financial loss, the spilt product may contaminate land and waterways, depending on where and how it is lost.
- The contents of the bag may be exposed to the elements, and suffer moisture ingress. This can cause the fertiliser to cake and sett 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.

On one hand, it will make the packs easier to handle.

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

KPI 6.

Non-Recyclable Packaging

Actions	Performance Target	Responsibility	Timeline
The WPP packaging used by Incitec Pivot is non-recyclable in Australia, but that used in the form of FIBCs is recovered. Returnable FIBCs that have been taken out of service and single trip FIBCs that are returned by farmers are exported to China for recycling. The weight of FIBC packaging sent to China will be documented, and expressed as a percentage of the total weight of WPP packaging used each year.	The percentage of the total amount of WPP packaging that is recycled will be benchmarked against 2006/07.	Market Managers, Supply Contract Manager; Distribution Managers.	Report annually for the NPC's reporting year (July – June).

WPP packaging is not recyclable in Australia. Incitec Pivot Fertilisers, however, is recycling one third or more of the WPP packaging that it uses by exporting spent FIBCs to China.

The total weight of WPP packaging purchased for solid fertilisers for the domestic fertiliser market in 2009/10 was 497 tonne. Packaging used for liquid fertilisers and industrial chemicals is not included in this figure. The weight of spent FIBC packaging exported to China for recycling was 257 t. This represents a recycling rate of approximately 50 %.

Comparative figures over the past four years are shown in Table 13.

Table 13.

Percent of WPP packaging used each year that is recycled.

Year	2006-07	2007-08	2008-09	2009-10
Percent	38	31	59	52

Incitec Pivot Fertilisers does not accept back used packaging from fertilisers sold in 20 - 50 kg packs.

KPI 16.
Post-Consumer Recycling Facilities

Actions	Performance Target	Responsibility	Timeline
<p>Incitec Pivot does not distinguish between waste derived from used packaging and that derived from other sources. All like waste is treated the same. Used packaging makes up a very small part of the total. Current collection facilities for recyclable paper and various other recyclable materials used on site will be reviewed at major manufacturing sites, distribution centres and offices. Opportunities for enhancement will be investigated.</p>	<p>Sites to be reviewed include Head Office (Melbourne), Brisbane, Geelong, Portland, Newcastle, Adelaide, Townsville, Cairns and Mackay.</p>	<p>Operations Managers; Distribution Managers; Site Managers; Environment & Community Manager.</p>	<p>Annual updates on progress.</p>

Most of the raw materials and finished products sourced by Incitec Pivot are handled 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. FIBCs that are used for the latter purpose are disposed of along with other spent FIBCs, i.e. exported to China for recycling. Waste is not generated at Incitec Pivot Fertilisers' distribution sites as a result of this activity.

The main packaging waste that is generated that has to be disposed of off-site is cardboard from pre-packaged goods that are used on-site. The overall amount of cardboard is not great, and it is not treated differently to or separated from other paper wastes, e.g. from office use. Specific data is not available on the amount of cardboard waste that is generated.

Waste collection and recycling programs are in place at many of the company's sites and offices.

Incitec Pivot's two largest manufacturing sites are Brisbane and Phosphate Hill in northwest Queensland.

Collection procedures for recyclable waste are in place at Brisbane, but not at Phosphate Hill, given its remote location and distance from recycling facilities.

KPI 21.
Packaging to Land-Fill or Recycled

Actions	Performance Target	Responsibility	Timeline
The quantity of wastes generated at major manufacturing sites that have implemented recycling procedures will be recorded, along with the quantities that are recycled, sent to land-fill or disposed of in other ways. Note. Recycling is not possible at the Southern Cross Operations site at Phosphate Hill in northwest Queensland, due to its remoteness.	All major sites, with the exception of Southern Cross Operations, to record data from July 2008. As noted under KPI 16, separate data is not available on packaging waste, so specific targets for the disposal of used packaging cannot be set.	Operations Managers; Distribution Managers; Site Managers; Environment & Community Manager.	Annual updates on progress.

Waste collection and recycling programs 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.

Apart from used woven polypropylene FIBCs, Cardboard is the main packaging waste that is generated.

Used packaging materials are not separated from other wastes as they make up a small part of the total. They are collected along with other like wastes, e.g. paper in the case of cardboard.

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 South Bank (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.

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

KPI 22.
Formal Adoption of ECoPP

Actions	Performance Target	Responsibility	Timeline
Promote awareness of EcoPP (Environmental Code of Practice for Packaging) throughout company. Adoption of Guidelines.	Incitec Pivot has accepted and is committed to the Environmental Code of Practice for Packaging.	Environment & Community Manager; Product Stewardship Manager.	NA

Incitec Pivot is committed to the Environmental Code of Practice for Packaging. The key strategies in the EcoPP are addressed as follows:

Source Reduction

The quantity of packaging used is minimised by promoting bulk and intermediate bulk handling systems.

Potential for Reuse

Returnable and Limited Trip FIBCs make up more than 95% of the total tonnage of fertiliser despatched in bulk bags.

About 2% of the tonnage of fertiliser supplied in FIBCs is in Single Trip Bags.

Small packs (20 – 50 kg) can not be reused.

Recovery and Recycling

FIBCs are recovered at the end of their working lives and are exported to China for recycling.

Ability to Incorporate Recycled Content

The Woven Polypropylene (WPP) packaging (FIBCs and small packs) used by Incitec Pivot Fertilisers is new and does not have a recycled content. This provides extra strength and durability in agricultural markets.

Minimising Impacts of Packaging

WPP is used to minimise the risk of tears and spills. Losses of containment result in a monetary loss. They also have the potential to cause environmental harm, e.g. through contamination of waterways.

Propensity to Become Litter

Returnable FIBCs are exported to China for recycling after being taken out of service.

If this was not done, these bags would be disposed of to land-fill.

Single trip non-returnable FIBCs are also accepted back for recycling.

There is no recycling scheme for WPP small packs (20 - 50 kg). Special arrangements, however, have been made with Gunns Limited for the return of 25 kg packs used in forestry plantations in Tasmania.

Small packs used in agriculture are disposed of on farm, though some are used for other purposes, e.g. sand-bags.

It is estimated that about 2% of the fertiliser supplied by Incitec Pivot Fertilisers in small packs (0.1% of the total, including bulk and FIBCs) is used by home gardeners. This packaging may potentially be disposed of to land-fill in household refuse.

Consumer Information

Apart from promoting the benefits of using Bulk and Returnable FIBCs, no environmental claims are made about the packaging used by Incitec Pivot.

KPI 26.

Buy Recycled Policy

Actions	Performance Target	Responsibility	Timeline
WPP packaging is mostly imported. WPP packaging with a recycled content is not purchased so that the safety, strength, durability and life expectancy of the packaging used in Australia is not compromised.	NA	NA	NA

The vast majority of the WPP packs (FIBCs and small packs) used by Incitec Pivot Fertilisers 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 expectations for packs holding up to 1.25 t.

KPI 27.
Baseline Data

Actions	Performance Target	Responsibility	Timeline
Data presented in Tables 2, 3 and 4 in this Action Plan is to be updated annually.	Information to be reported annually under KPI 1, KPI 3 and KPI 6.	Product Stewardship Manager.	NA

Historical data by calendar year dating back to 2002 is presented in Tables 3 and 12.

Data for the current year (2009-10) is shown in tables 1 - 2 and 4 – 9.

Comparative data from different years after becoming a signatory to the NPC is shown in tables 10, 11 and 13.

KPI 28.
Annual Reporting Against Plan

Actions	Performance Target	Responsibility	Timeline
Collate and analyse data. Prepare Reports.	- Annual Report to the National Packaging Covenant; - A précis for the Incitec Pivot Annual Report and/or HSEC (Health, Safety, Environment and Community) Annual Report.	Product Stewardship Manager; Group HSEC Systems Administrator.	NPC Report to be submitted by 31 October each year, IPL Reports shortly afterwards.

Incitec Pivot became a signatory to the National Packaging Covenant in May 2007, and has reported each year since, this being the fourth annual report.

The NPC Annual report is also listed on the company's website.

KPI 29.
Demonstrate Improvement

Actions	Performance Target	Responsibility	Timeline
Monitor and report annual changes in <ul style="list-style-type: none"> • Adoption of Bulk and FIBCs; • Ratio of the weight of fertiliser supplied in FIBCs to the weight of the FIBC packaging used; • The amount of packaging that is being recycled. 	Information to be reported annually under KPI 1, KPI 3 and KPI 6.	Product Stewardship Manager.	NA

Much has been done to minimise packaging and waste, and Incitec Pivot's position is now one of consolidation.

Incitec Pivot Fertilisers markets its products in a range of smaller pack sizes to meet varying customer needs, but encourages the use of Bulk and Returnable FIBCs. Bulk accounts for 75 – 80% of total solid fertiliser sales and intermediate bulk handling systems (FIBCs) account for about 15 - 20%. Around 5% is sold in small packs (20–50 kg).

Since 2002 the percentage of solid packaged fertilisers that was sold in small packs (20-50 kg) has fallen from approximately one-third (33%) to 20-25% of the total while that supplied in FIBCs has increased from approximately two-thirds (67%) to around three-quarters (75%).

The percentage of the fertiliser supplied in FIBCs in Single Trip (non-returnable) bags was 15% in 2002. That figure is now 2%, i.e. one tonne in fifty. This is attributable to the promotion of returnable bulk bags in general, and the development and introduction of the Single Loop Returnable Versalift Bag.

Incitec Pivot Fertilisers collects and exports spent FIBCs off-shore, resulting in excess of one third of the WPP packaging that it purchased each year being recycled. WPP is not recycled in Australia.