DIG DEEP

Industry Insights from Incitec Pivot Fertilisers | Winter 2025 | Edition 05

$9M Mackay boost

Investments drive productivity

Potatoes show eNpower benefits

... and more

Incitec Pivot Fertilisers

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Industry Insights from Incitec Pivot Fertilisers
Winter 2025
Edition 05


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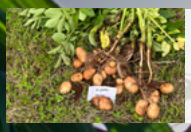
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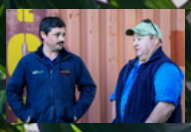
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Contact us

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Want more in depth agronomic insights to help increase your productivity? Scan the QR code to visit our Smart Fertilisers website where you can sign up to receive monthly agronomic insights direct to your inbox.

Cover Image: IPF Tropical Systems Agronomist Rob Dwyer and Mackay region canegower Steve Russell with IPF's new pink eNpower bags on-farm.

IPF volatilisation trial in Gippsland, Victoria.

PRESIDENT'S NOTE

Welcome to the fifth edition of *Dig Deep*

Scott Bowman

I'm pleased to introduce this edition of *Dig Deep*.

This edition's cover image is from a recent customer and farmer event the team held at our Mackay Primary Distribution Centre (PDC) to showcase the major environmental, safety and infrastructure investments at the site (full story on page 5).

These upgrades are part of Incitec Pivot Fertilisers' (IPF) continued commitment to improve productivity for our customers and build on our long and proud history in Australian agriculture dating back more than 100 years.

In May, we announced a historic milestone, with Ridley Corporation signing a sales agreement for our market leading fertiliser distribution business. This is an exciting moment for our business and an excellent outcome for our valued customers, the communities where we operate, and our people.

Ridley is a leading, diversified Australian agricultural services company, and a strong fit for our distribution business. We have a complementary distribution footprint, with shared customers and core competencies across commodity risk management and logistics.

It is the strength of our business and how we're delivering on our strategy that sets us up for a strong future. Ridley sees a significant opportunity to build the existing market position of our distribution business by bringing investment and leveraging the skills and capabilities of our people.

As we work towards a sale completion in the third quarter of 2025, we are focussed on delivering for our customers, providing the nutrients farmers need to capture productivity gains in their crops, and maintaining the highest standards of environmental and safety management as we go about our business.

We have a number of important projects that are progressing well including:

- The relocation of the Gibson Island PDC to a new site at nearby Fisherman Island remains on track for the second half of 2025. The new modernised site will be more efficient and a step change in how we service customers, including state-of-the-art blending, bagging and smart liquids coating, all driving greater productivity for farmers along with best-in-class bulk distribution.
- Manufacturing of Single Super Phosphate (SSP) at Geelong is expected to conclude in the final quarter of 2025 as we transition to a SSP import model. IPF has a long heritage at both Geelong and Gibson Island, and I thank our customers for their support and our teams for their dedication at these sites.
- IPF has a proud history of leading and delivering cutting-edge research and development (R&D).

IPF's Ian Laube, Scott Bowman and Nathan Bryant in the new shed at the Port Lincoln PDC.

On pages 10 and 11, there is a deep dive into our latest in field R&D, which has demonstrated enhanced efficiency fertilisers (EEFs) – specifically Green Urea NV® and eNpower® – can mitigate nitrogen losses and help reduce fertiliser related emissions on-farm. I want to particularly call out the economic return where Green Urea showed up to $65 net benefit per hectare. You can read more in our Green Urea trial report found on our website.

This R&D reflects our ongoing commitment to helping growers optimise N use and improve productivity through smarter fertiliser management.

To match our ongoing research into cutting-edge technology, we're also making substantial capital investments in our sites. This edition takes a closer look (pages 5-7) at how these investments in our regional sites are benefiting our customers and farmers and ensuring we can continue to support productivity now and well into the future.

As we look ahead to the rest of the year, there is a real sense of excitement amongst our people and our customers about our future with Ridley.

Ridley will be a strong custodian of the Incitec Pivot brand, and we look forward building on our heritage together.

Regards,
Scott Bowman
President, Incitec Pivot Fertilisers

GLOBAL TRADING OVERVIEW

Q3 2025 in review

In recent months, global prices for Ammonium Phosphate (AP) have continued to increase while nitrogen (N) prices also remain strong and have been volatile.

Global Ammonium Phosphate (AP) prices have continued to increase in recent months, reaching levels last seen in late 2022 during the early phase of the Ukraine-Russia conflict.

The persistent rally in AP prices is supported by continued robust demand in key markets and ongoing supply-side constraints and risk. A temporary and limited increase in Chinese AP and urea exports has not meaningfully changed the global supply and demand dynamic and other events have heightened the supply risk for APs and urea.

Nitrogen markets have also remained firm in response to continued demand in key markets such as India, Brazil and the USA, and the recent conflict in the Middle East gave rise to potential urea supply disruptions, resulting in a sharp rally.

While global macro risk has diminished, the overarching fundamentals indicate continued strength for APs and urea, as geopolitical and economic pressures continue to shape the broader trading environment.

Ammonium Phosphate (AP)

- The price momentum continues despite China's limited increase in short-term export availability, and prices remain firm in all key markets.
- Despite elevated global macro risk and some affordability challenges, global demand remains very strong.

Nitrogen (N)

- Urea prices have been volatile but remain firm and have risen sharply in response to the recent conflict in the Middle East.
- Limited availability of Chinese exports has provided some relief, however ongoing low Indian inventory and strong tender demand for that market continues to support elevated prices.
- Elevated risk in the global macro environment continues to drive volatility in global urea and energy markets.

Looking ahead

▶ **Continued AP price support:** AP prices are expected to remain firm over the next few months, supported by strong demand in key markets.

▶ **Nitrogen will be volatile,** but generally supported at higher levels: Continued demand from India, Oceania and the Americas will support urea prices, and the global macro environment will continue to place upward pressure on prices.

▶ **Macroeconomic and political risks:** Global uncertainties, including Middle East conflicts, the US political transition, the Ukraine war and Chinese economic recovery and energy costs, are expected to continue to influence the market.

▶ **Exchange rate volatility:** The Australian dollar (AUD) is likely to remain volatile as global markets grapple with growth and inflation concerns, and interest rate policies remain uncertain.

▶ **Government policies & trade intervention:** Government interventions in key markets will continue to impact the market. Notable examples include export controls in China, the Nutrient Based Subsidy in India, Countervailing Duties (CVDs) in the US and US tariffs.

▶ **Crop prices:** Key crop prices are fluctuating, impacting growers' terms-of-trade, however they are broadly supportive of current fertiliser values.

▶ **In response to all the above factors,** price risk is likely to remain dynamic and deliver continued volatility, however key indicators suggest a period of continued market firmness.

CAPITAL WORKS

Boost for northern growers

Incitec Pivot Fertilisers (IPF) has delivered major environmental, safety and infrastructure upgrades at its Mackay Primary Distribution Centre (PDC), investing more than $9 million to support growers across one of Australia's largest sugarcane regions.

Timed ahead of the 2025 cane planting season, the upgrades enhance service reliability and ensure greater consistency, and access to smart fertilisers such as eNpower®.

IPF President, Scott Bowman, said the multi-million-dollar investment highlights IPF's commitment to innovation, sustainability, and farm productivity in the region.

"Over the past three years, we've invested more than $9 million in this site, to further strengthen our long-term support for the growers that help power northern agriculture," Scott said.

"It includes a $5.5 million upgrade to the potash shed – extending the life of the facility, significantly improving product protection, and safely removing over 4,000m² of asbestos."

Nearly $2 million has been dedicated to environmental improvements that include a widened alleyway, a centralised wheel wash system, and a floor scrubber installation.

"The environmental upgrades reduce nutrient runoff, make the site cleaner, safer, and more efficient, while helping us meet the highest regulatory and sustainability standards," Scott said.

"Operational efficiency has also been enhanced through upgrades to infrastructure and equipment, including refreshed electricals, a modernised milling tower, and a new forklift, to boost service reliability during the peak season.

"A new dehumidifying air conditioning system has been installed to improve blending accuracy, reduce power consumption, and prevent cross-contamination between products.

IPF officially unveiled its eye-catching new pink eNpower® bags at the Mackay event.

"These enhancements are part of our broader commitment to enhancing operational safety, environmental responsibility, and supply chain reliability for the future of northern farming."

Think pink to minimise nitrogen loss

To mark the Mackay PDC upgrades and the start of the 2025 sugarcane season, IPF officially unveiled its new pink eNpower® bags at the Mackay event.

"The distinctive packaging helps growers and retailers easily identify this enhanced efficiency fertiliser (EEF), designed for more sustainable nitrogen use," Scott said.

"eNpower is one of those rare products that can do it all – it improves nitrogen use efficiency, meaning there is more available to the crop to potentially boost yields, whilst at the same time reduces environmental losses. All of this to drive a better return on fertiliser investment is a proven way to boost productivity.

"The pink bags are a clear signal of innovation in our industry.

"This is an exciting time for northern agriculture, and we're proud to continue our investment in the Mackay region to help growers achieve strong, sustainable results."

CAPITAL WORKS

Investments driving productivity on site

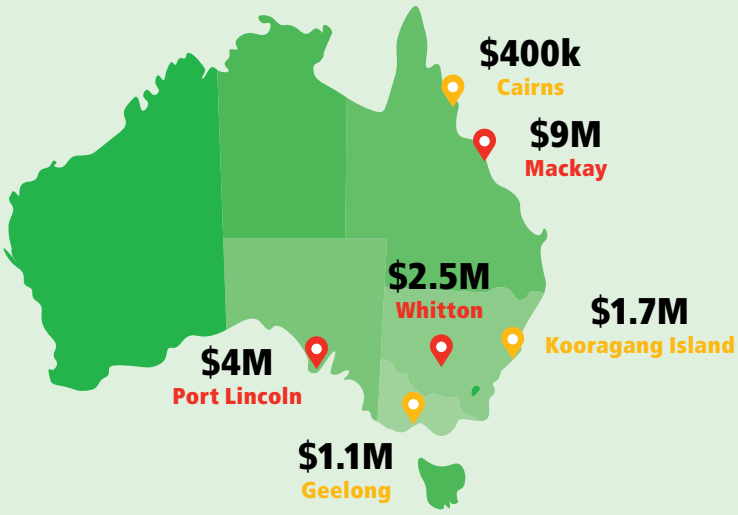
Some of the IPF team inside the new storage shed at Port Lincoln PDC at its official opening in May.

Incitec Pivot Fertilisers (IPF) continues to invest in the infrastructure, technology, and tools that support long-term productivity in Australian agriculture.

From Devonport to Geelong, Cairns to Port Lincoln, work is underway to deliver a network that is even safer, more efficient, more environmentally responsible, and ultimately, better for growers.

These upgrades reflect a commitment not only to operational excellence, but to the safety of staff, the success of customers, and the sustainability of the regions in which IPF operates.

Targeted upgrades driving efficiency



Continuous improvement

Over the past three years, significant investments have been made across key IPF sites to enhance productivity, environmental performance, and the customer experience, with further developments already in the pipeline.

Upgrades include equipment renewals, coating enhancements, and site infrastructure improvements, increasing throughput and streamlining service delivery.

IPF General Manager Distribution, Glenn Johnson, said it's great to see the impact that continued site development is having across the supply chain.

"It's not just about new kit – it's about giving our teams the tools and environment to do their jobs well, and to do them safely," Glenn said.

"Whether that be new front-end loaders improving the day-to-day operation of our sites or increased storage ensuring reliable, year-round access to key inputs – it's benefiting operators, customers and our growers."

Major site upgrades are currently underway across the IPF network, aimed at improving operational efficiency, product quality, and safety outcomes.

These investments are part of a broader strategy to ensure each facility is equipped to meet seasonal demand and deliver a consistently high standard of service to customers and growers.

On Kooragang Island, a $1.7 million project to upgrade bulk outload overbelt systems and install a new precoat machine is on track for completion by mid-August.

The investment will improve customer loading rates by ensuring all products are always available on two bulk bridges, while also boosting site productivity through more efficient precoating of bagged products.

IPF General Manager – Northern Region, Justin Turvey, said the Kooragang Island investment would support faster customer loading and better site efficiency.

"Having both bulk bridges available and being able to precoat more efficiently will lift turnaround times and reduce pressure during peak periods," Justin said.

"It also means fewer truck movements on site which helps from both a safety and environmental perspective."

At Geelong, a $1.1 million Green Urea and eNpower coating upgrade at the Oyster Cove facility is due for completion in mid-July.

IPF General Manager – Sales South, Tom Guthrie, said the upgrades will allow customers to pick up coated products directly from Oyster Cove, rather than from the blender at North Shore – improving turnaround times, enhancing overall product quality, and freeing up the blends to be more responsive to customer needs.

"We're backing Geelong because we know how critical it is for customers in this region, and we want to ensure we're delivering the best service and product we can," Tom said.

In Cairns, a $400,000 upgrade to Blends Plant 1 is expanding coating capabilities to include Lockdown, eNpower, and Zinc Glaze.

The improvements are set to boost enhanced efficiency fertiliser (EEF) coating operations, supporting more reliable customer order fulfilment.

"Zinc Glaze will be a new product offering in the region, designed to improve nutrient distribution even at trace application rates," Glenn said.

"These improvements broaden what we can offer and make it for customers to get what they need, when they need it."

A $2.5-million upgrade of IPF's Whitton EASY Liquids facility was officially opened in February.

"It's not just about infrastructure – it's also about the people behind it,"

At Brisbane's Gibson Island facility, a $800,000 investment completed last financial year delivered a new precoat machine now producing Green Urea and eNpower-coated urea.

The upgrade has made these key nitrogen products available to the out of Brisbane market.

Across all locations, these projects reflect a commitment to supporting the people who run the sites as much as the customers they serve.

"It's not just about infrastructure – it's also about the people behind it," Glenn said.

"These upgrades help our teams do their best work, and that flows through to better outcomes for growers."

Looking ahead: Fisherman Island

Preparations are also underway for the relocation of a new, state-of-the-art facility on Fisherman Island in the Port of Brisbane.

Located approximately 15 kilometres from the existing site, the new PDC will offer:

- Blending capacity of up to 300 tonnes per hour
- Capability for bulk and bagged product delivery
- Liquid and EEF coating facilities to meet market demand.

This facility represents a major step forward in supply chain capability, enhancing reliability and flexibility for IPF customers.

Celebrating people and progress

From infrastructure upgrades in Mackay and coating improvements in Cairns, to long-term planning at Whitton and the 100-year milestone ahead in Port Lincoln, each project is part of a focussed effort to lift productivity and deliver lasting value to key growing regions.

"There's a real pride in what our teams do – not just in getting the job done, but in knowing it matters," Glenn said.

"They show up for their communities, for our growers, and for each other. The sites we work on aren't just facilities – they're part of the regions we're proud to support.

"The work doesn't stop here, with more projects to come, IPF's commitment to investing in its network is as strong as ever."

RESEARCH & DEVELOPMENT

Hub powering next generation of smart fertilisers

University of Melbourne's Professor Deli Chen, with IPF's Dr Robert Impraim and Natalia Gomez; and University of Melbourne student and IPF interrn, Bo-Lung You, inspecting chambers covering cauliflowers, that measure greenhouse gases CO_2 (carbon dioxide), N_2O (nitrous oxide), CH_4 (methane), and NH_3 (ammonia).

In the ARC Research Hub for Smart Fertilisers at the University of Melbourne, backed by a substantial $3.8 million investment from Incitec Pivot Fertilisers (IPF), leading scientists from the University of Melbourne, as well as La Trobe University and Elders Rural Services are working to pioneer a new generation of fertilisers.

Rethinking nitrogen fertilisers

The ARC Research Hub is focussed on developing enhanced efficiency fertilisers (EEFs) which make better use of nitrogen fertilisers, releasing nutrients precisely when crops need them most, reducing environmental impacts and potentially improving growers' profitability.

Professor Bill Malcolm School of Agriculture, Food and Ecosystem Sciences (SAFES) said the ARC Research Hub for Smart Fertilisers Hub is helping shift the conversation around fertiliser use in agriculture.

"Traditionally, fertiliser decisions focussed primarily on the costs and benefits of increased crop and pasture yields, now we're also considering the environmental and health implications associated with nitrogen use," Bill said.

A part of the Hub effort is to develop an EEF Advisor tool, a calculator that uses crop yield and emissions data gathered from field trials to inform both producers of fertiliser as well as users.

The EEF Advisor integrates agricultural production economics principles and environmental effects of nitrogen use to determine nitrogen application rates that are optimal for producers and the wider society.

Productivity through profitability

Early economic modelling conducted by the Hub shows promising potential for EEFs.

"In scenarios where cotton growers had to bear half the environmental costs associated with emissions of nitrous oxide, conventional urea provided a net margin of $1766 per hectare," Bill said.

"By comparison, a hypothetical EEF scenario in which a more costly EEF product reduced the nitrous oxide emissions by 30% while maintaining yields showed a slightly lower net margin of $1698 per hectare. Another hypothetical EEF that also cost more than conventional nitrogen fertiliser and reduced emissions by 30% but improved cotton yields by 5%, delivered the highest net margin at $1806 per hectare."

These initial outcomes suggest that under the right conditions EEFs could have significant potential to maintain or improve financial returns for growers while addressing critical environmental challenges.

Looking ahead

The ARC Research Hub for Smart Fertilisers, now in its fourth year of operation having commenced in 2021, is beginning to bring some of this innovation directly to farmers to drive productivity.

Looking forward, the ARC Research Hub for Smart Fertilisers aims to refine the EEF Advisor further, making it a practical source of added information for farmer decisions about using nitrogen fertilisers which will help reduce the adverse environmental effects of using nitrogen on their crops and pastures.

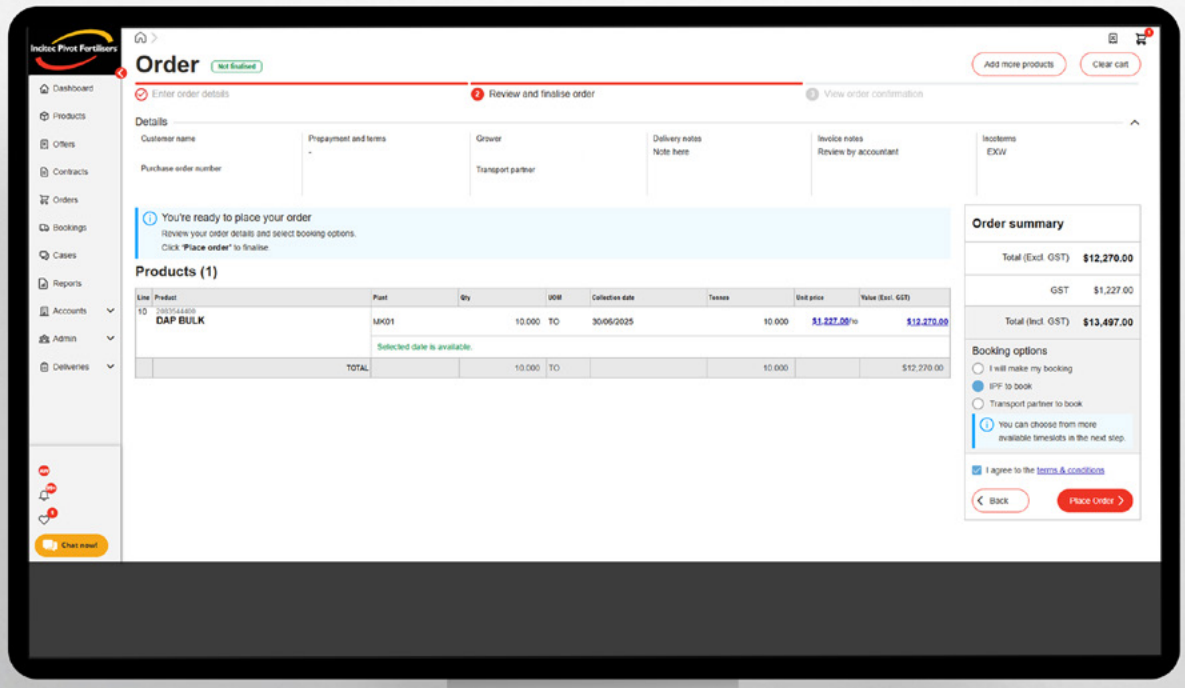
IPF Vice President of Agronomy and Innovation, Charlie Walker, said these initial scenarios suggest that, with the right conditions, EEFs could help farmers achieve stronger financial outcomes while addressing environmental challenges. This is supported by recent cotton trials that showed yield increases where an EEF was used in comparison to conventional nitrogen fertiliser.

"Our goal is simple, we're developing tools and fertilisers and information that help growers enhance efficiency, reduce environmental impacts, and boost their bottom line," Charlie said.

"While there's still research to undertake, we're optimistic about the significant benefits that innovative more efficient fertilisers will bring to Australian agriculture.

"IPF remains committed to investing in research and development that supports nutrient efficiency, profitability, and sustainability, securing a smarter and more productive future for agriculture."

To find out more, visit smartfertiliserhub.org.au



CUSTOMER SERVICE

The myIncitecPivot digital platform provides a faster, more efficient system that simplifies pricing, ordering, and freight booking in one place.

myIncitecPivot set to transform how customers transact

Incitec Pivot Fertilisers (IPF) is set to transform the customer transaction experience with the launch of my IncitecPivot, a new digital platform designed to streamline how customers engage and transact across all market channels.

Set to replace existing platform, Fertshed, myIncitecPivot will offer a faster, more efficient system that simplifies pricing, ordering, and freight booking in one place.

IPF Business Readiness Lead, Peter Sullivan, said the platform will automate key parts of the transaction process, simplifying the way customers do business with IPF.

"With myIncitecPivot, customers will be able to log in, view a live market-based price, and complete their order, including freight, in just a few minutes," Peter said."It will significantly improve speed, accuracy, and ease of use, especially for small-volume purchases which make up around 80% of transactions.

"This change represents a major step forward in digitising the fertiliser supply chain, helping to meet the growing demand for real-time service and self-management."

Built for every customer

myIncitecPivot is being built to support all of IPF's customer channels with a consistent experience across the board.

"The development of this platform supports a key goal of IPF's strategic plan to streamline how customers transact with IPF," Peter said.

"It's about improving how we do business with all our customers.

"This approach will enable us to deliver a better, efficient, more transparent service."

Operational benefits

The benefits extend beyond the customer interface. By removing repetitive, manual steps from pricing and order entry, myIncitecPivot will also create internal efficiencies.

"The current process is resource-heavy," Peter said.

"Digitising the process will enable teams to focus on customer service, supply chain coordination and other activities that add value to our customers.

"This will free up capacity across the business, allowing teams to concentrate on where they can make the biggest impact to support customer success.

"It's an investment in making our business more efficient and our relationships stronger."

The platform also promises benefits for IPF's supply chain and customer service functions, with streamlined ordering set to improve responsiveness and planning across the board.

The first release of myIncitecPivot is planned for the second half of 2025, with further updates to come. This marks the beginning of an ongoing journey to deliver a more seamless, responsive, and customer driven experience.

RESEARCH & DEVELOPMENT

EEF trials reveal major emissions cuts and nitrogen savings for growers

Growers could reduce fertiliser losses and emissions significantly by using enhanced efficiency fertilisers (EEFs), according to new field trial results from Incitec Pivot Fertilisers (IPF).

IPF's research was conducted in wheat in 2024 at 'Glenelg', near Grenfell in Central West NSW. (Inset: Dr Robert Impraim)

Field trial results from IPF confirm EEFs, specifically Green Urea NV® and eNpower®, significantly reduce emissions of nitrous oxide (N_2O) and ammonia (NH_3), the two major nitrogen (N) loss pathways from urea-based fertilisers.

IPF's research was conducted in wheat in 2024 at 'Glenelg' near Grenfell in Central West NSW – the same site where long-term N by phosphorus trials have been undertaken since 2007.

IPF Research and Development Agronomist, Dr Robert Impraim, said the aim of this latest trial was to evaluate the emission reduction potential of IPF's patented inhibitor technologies under real farming conditions.

"The trials demonstrated that using eNpower and Green Urea NV significantly reduced N_2O emissions by 64–73% compared to untreated urea, depending on the rate of N applied," Robert said.

"The study also evaluated Green Urea NV's performance in reducing NH_3 volatilisation, an indirect greenhouse gas (GHG) loss pathway. Results showed NH_3 losses were reduced by 48–83% over a 16-day period, varying by N application rate.

"While untreated urea lost between 20–25% of applied N as NH_3, Green Urea NV consistently mitigated these losses. Although its effectiveness declined over time, it remained substantially more effective than untreated urea throughout the trial period.

"This work forms part of a broader research initiative evaluating the effectiveness of IPF's patented inhibitor technologies, smart fertilisers, more broadly known as EEFs, in reducing fertiliser-related emissions on-farm.

"It reflects our ongoing commitment to helping growers optimise N use and improve productivity through smarter fertiliser management."

Looking ahead, IPF is conducting more trials this year measuring emissions from N application in winter crops at multiple locations including Bacchus Marsh, Victoria.

How the trial was conducted

N_2O trial

N_2O emissions were measured over 120 days at three N application rates: 0, 60, and 120 kg N/ha. eNpower-coated urea was banded at sowing, and Green Urea NV was surface-applied as a topdress. Total N rate applied: 0, 30, 60, 90 and 120 kg N/ha. Each of these plots (except the 0 kg N/ha) received 20 kg P/ha to reflect common agronomic practice.

N_2O measurement

N_2O was measured using static PVC chambers consisting of a fixed base and a removable top.

At each sampling event, gas from the chamber headspace was collected into pre-evacuated vials at half-hour intervals over one hour and analysed via gas chromatography. Emissions were calculated using chamber dimensions, sampling intervals, and N_2O concentrations.

NH_3 trial

NH_3 emissions were measured over a 16-day period following surface application (topdress) of urea and Green Urea NV at five N rates: 0, 15, 30, 45, and 60 kg N/ha. To maintain consistent total N inputs, similar rates of urea or eNpower-coated urea were also applied at sowing. This brought the total N rates across the trial to 0, 30, 60, 90, and 120 kg N/ha.

FIGURE 1: N_2O emissions dropped significantly with EEFs compared to urea. (Source: Robert Impraim, 2024)

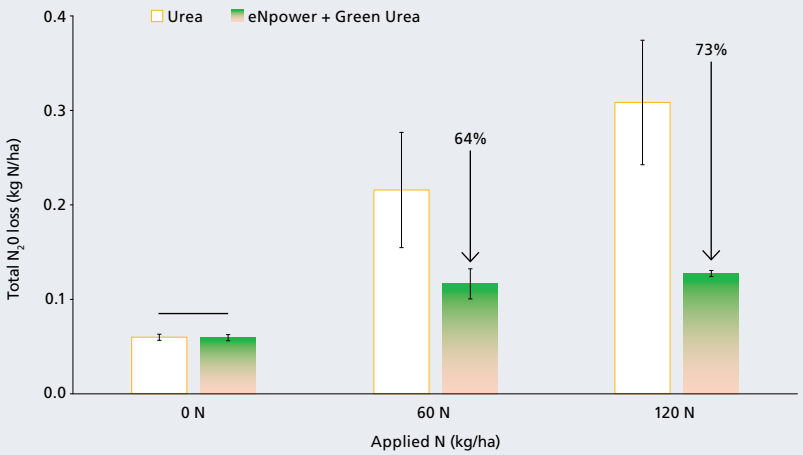
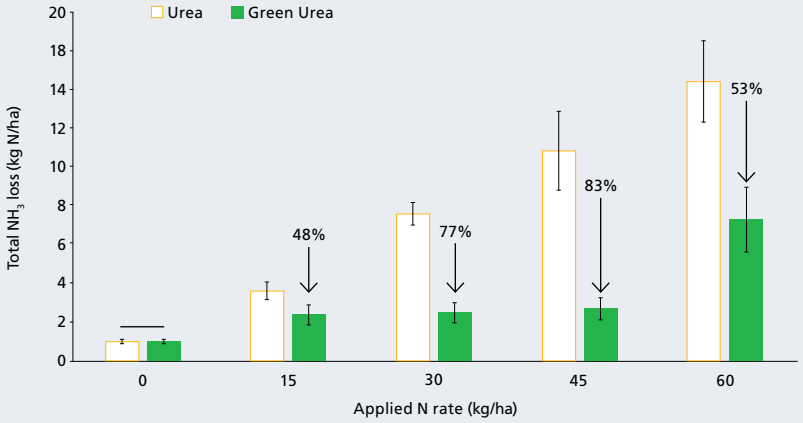


FIGURE 2: Green Urea NV reduced ammonia (NH_3) loss by nearly half compared to untreated urea over 16 days. (Source: Robert Impraim, 2024)



NH_3 measurement

NH_3 was captured using acid-treated foam placed in a 150 x 300 mm (diameter x height) PVC pipe inserted into the soil to about 5 cm deep to trap emitted NH3 from the soil. The foams were replaced every four days, with the trapped NH_3 (as NH_4^+) extracted and analysed via flow injection analysis. The total volatilised NH_3 was calculated based on sampling area, duration, extract concentration and volume.

Reduction in N_2O loss

At an application rate of 60 kg N/ha, split evenly between eNpower-treated urea at sowing and Green Urea NV at topdressing, N_2O emissions were reduced by 63.7% compared to using untreated urea alone. This reduction accounts for background emissions observed in control plots with no N applied. At the higher rate of 120 kg N/ha, the combined use of eNpower and Green Urea NV achieved an even greater reduction of 72.5% in N_2O emissions. Across all treatments, the N_2O emission factor (the proportion of applied N emitted as N_2O-N) ranged between 0.2% and 0.3%.

Reduction in NH_3 loss

Out of the 15–60 kg N/ha applied as urea, between 4 and 16 kg N/ha was lost through NH_3 volatilisation. Green Urea NV significantly reduced these losses, cutting NH_3 emissions by 48–83% over the 16-day monitoring period. Although its effectiveness declined slightly towards the end of the sampling period, Green Urea NV consistently minimised NH_3 loss relative to untreated urea.

With untreated urea, 89–95% of total NH_3 emissions occurred within the first eight days after application. In contrast, with the Green Urea NV, except at the 30 kg N/ha rate (where 70% of emissions occurred within eight days), only 23–47% of total NH_3 loss occurred in the same period. This demonstrates Green Urea NV's ability not only to slow urea hydrolysis and reduce overall NH_3 loss but also to extend N availability, supporting more efficient nutrient uptake by crops.

Why reducing N_2O and NH_3 emissions matter

N_2O has 273 times the global warming potential of carbon dioxide, and is one of the three key GHGs, along with carbon dioxide and methane (CSIRO & Bureau of Meteorology, 2024), contributing to human-driven climate change. N_2O can remain in the atmosphere for more than 100 years and it is also an ozone-depleting substance (Ravishankara et al., 2009).

While Australian grain production accounts for less than 2% of Australia's total emissions, reducing GHG emissions through improved fertiliser use efficiency is important.

It will achieve positive environmental outcomes, contribute to Australia's emissions reduction target of 43% and net zero emissions by 2050, and potentially help protect market access. In the three years to 2023–24, Australia exported around 78% of its wheat.

NH_3 emitted to the atmosphere reduces air quality and negatively impacts human health. When deposited, NH_3 can lead to soil acidification and decline in water quality (Chaopu Ti et al., 2019).

From an economic perspective, NH_3 volatilisation leads to significant loss of N from the cropping system and lost grain yield potential.

The trial has demonstrated the importance of IPF's eNpower and Green Urea NV in mitigating the emissions of N_2O and NH_3 in cropping systems.

With emissions reduction under increasing focus, these trials show growers can take practical steps now to improve efficiency and environmental outcomes through smarter N use.

ON FARM RESULTS

Potatoes show eNpower benefits

ENpower plant: One of the eNpower treated potato plants at Peter's farm, approximately 85 days after planting.

In Australia's biggest potato producing state, Tasmania, grower Peter Lette has a critical role helping to ensure the industry's future.

At his Scottsdale farm in Tasmania's northeast, Peter grows 900 tonnes of Ranger Russet seed potatoes and 420 tonnes of Russet Burbank processing potatoes each year, supplying Simplot Australia.

While Peter's processing potatoes are destined for consumer plates including as delicious French fries, it's the seed potatoes he grows that other growers rely on to plant their crops and drive the industry.

A desire to boost yield and achieve more consistent, uniform tuber size under plants in his seed potato crops saw Peter conduct his own on-farm trials, incorporating Incitec Pivot Fertilisers' (IPF) enhanced efficiency fertiliser (EEF), eNpower, into his nutrition program for the first time.

eNpower is an ammonium stabiliser, that when applied to nitrogen (N) fertiliser, offers the potential to improve N use efficiencies, and ensure N applied at or prior to planting remains largely available to the crop as demand increases – typically around tuber initiation and rapid vegetative growth stages.

"Seed potatoes are the foundation for everything else. We have been on the hunt for a number of years to find ways to both improve yield and get more consistent tuber size under the plants," Peter said.

"With seed potatoes, it's not just about tonnes per hectare but also quality and size. If you can get consistently sized tubers, it makes it easier to decide when to spray off the crop, and ensure the tubers are under the 75mm diameter specification when they're harvested.

"Our seed crop is sprayed off under 100 days, but historically, you've always got king tubers that will go over the specification and then small tubers that haven't had the chance to grow out.

"Further, Ranger Russet seed potatoes produce 8 to 10 tonnes per hectare less on average than Russet Burbank seed potatoes, so increasing yield is important. We've tried different products over the years to address those issues."

On-farm trials

Peter decided to conduct his own trials incorporating eNpower into his nutrition program after hearing of its benefits from fellow grower, Luke Sattler, and an analysis by Simplot's Barry Wylie on the correlation between seed potato grower yields and their nutrition programs.

Peter conducted four different trials using the same seed, with eNpower applied through the planter to be banded under the tubers.

Soil types on Peter's farm range from red soil, through to grey loam with clay banks, and sandy gravel.

Peter said the end results clearly demonstrated eNpower's benefits.

"What really showed up with the trials was two things – the plants with eNpower not only had the most consistent tuber size and a noticeable reduction in big king tubers, but also had an increased yield," Peter said.

"The trial results ranged from 54.67 tonnes per hectare to 57.03t/ha, with eNpower treated crop 1.3t/ha better than the next best performing trial.

"In one of the eNpower treated crops planted on grey soil, yields were as high as 60t/ha.

Scottsdale potato grower, Peter Lette.

"The plants established really well and continued to grow consistently.

"In one paddock where we got 100mm of rain in November and had to drain water off them, the potatoes still had reasonably consistent tubers under them.

"It was enlightening and eNpower is the only product I've used that I'd use again.

"Obviously, it's only the first year that we've tried it but with what I've seen so far, I'm impressed with the consistency of the size. Going forward, we will do more trials this year."

Peter's family has been growing potatoes for more than 50 years, and he has run his own farm for more than 30 years.

He believes more innovation is needed in the seed potato sector to keep driving productivity.

"We don't want to reinvent the wheel and lose quality or vigour, but we're trying to find ways of increasing yield, and the best way to do that is obviously to produce more tubers," Peter said.

"As an industry, we don't trial enough. If there's an easier or smarter way to do something, you need to test it and try to do it better."

For more information about using eNpower in potatoes, contact IPF Sales Manager – Northeast Tasmania, Lester Rainbow, 0418 571 384, or email: lester.rainbow@incitecpivot.com.au

EASY LIQUIDS

On the road with EASY Liquids
Showcasing innovation in action

From Dalby to Gunnedah, growers, advisors and equipment specialists came together for IPF's 2025 Liquids Cotton Planting Roadshow – a regional showcase designed to support practical adoption of liquid fertiliser systems in cotton.

Moree EASY Liquids Sales Representative, Matt Urquhart, talking liquids application with a local grower.

Focussed on liquid fertiliser application ahead of cotton planting season, this three-stop Roadshow offered attendees the chance to engage with technology in the field, speak directly with application experts, and hear from others who are navigating the same path.

Led by EASY Liquids Product Manager, Ben Anderson, and Sales Representative – Moree, Matt Urquhart, the focus was on delivering practical information, useful tools, and local insights to support growers where adoption is underway.

"The events highlighted the operational efficiencies that can be achieved through a switch to liquids, particularly when supported by the right infrastructure and advice," Ben said.

Technology in action

Each location featured live demonstrations, including:

- INCYT's Discovery Centre – showcasing remote telemetry and tank monitoring systems
- Application rigs from Liquid Systems (SA) – giving attendees a first-hand look at in-furrow delivery tools and equipment setup.

"It wasn't about pushing product – it was about giving growers access to the right people, the right equipment, and the kind of real-world experience that helps them make confident decisions," Ben said.

"These are the conversations that make a difference at planting time.

"And growers appreciated having both equipment providers and fertiliser specialists in one place, making it easier to understand how the pieces come together in practice."

Local insights, shared learning

The Roadshow visited three key locations – Dalby, Moree and Gunnedah – with around 15-20 growers and advisors attending at both Dalby and Moree.

Across all locations, conversations focussed on what growers had learned through the early stages of their liquids journey – from trial and error, to what they'd do differently if starting again.

Several attendees highlighted the efficiency gains they've already seen, achieving better yields with less product.

"Growers are already seeing the upside – better application accuracy, lower product volumes, and in some cases, stronger crop response," Matt said.

"It's still early days for many, but the direction is clear. With the right setup, liquids can deliver both efficiency and agronomic upside."

The EASY Liquids BBQ trailer kept the conversations flowing, with all attendees entered into the draw to win a shuttle of FLOWPHOS 13Z.

Building capability, site by site

Several junior and early-career agronomists also attended.

Ben said that for many, it was their first time seeing liquid products and application equipment up close.

"The Roadshow gave them a valuable opportunity to connect with suppliers, build product knowledge, and take real-world insight back to their customers," Ben said.

"We know switching to liquids is a significant step – and it's not a one-size-fits-all process.

"Starting small, focusing on one area, and building from there is usually the most successful approach for everyone involved."

Looking ahead

With more growers showing interest and adoption steadily increasing, Matt said IPF will continue to support the transition to liquids through field-based engagement, targeted insights, and practical tools that support long-term success.

"This isn't about pushing change for the sake of it," he said.

"It's about working with growers, one step at a time, to build capability that fits their system – and backs up in the paddock."

For more information on EASY Liquids products and how they can be incorporated into farm operations, contact Matt Urquhart on 0429 789 298.

AWARDS

Green Urea NV takes out Net Zero Transition Award

Incitec Pivot Fertilisers (IPF) is celebrating national recognition for its leadership in developing practical solutions that support the transition to lower emission farming systems, winning the Net Zero Transition Award at the 2025 Chemistry Australia Industry Awards.

IPF Director of R&D, Roya Khalil (centre) collecting the Award with some of the R&D team at the 2025 Chemistry Australia Industry Awards.

The award recognises IPF's work with enhanced efficiency fertiliser (EEF), Green Urea NV, which significantly reduces ammonia volatilisation losses across a diverse range of soils and cropping systems.

Driving innovation and sustainability

A dedicated three-year research project, conducted by IPF's Research & Development (R&D) team across 19 trial sites from South Australia to North Queensland, demonstrated that topdressing with Green Urea NV reduced ammonia volatilisation losses in winter crops and pastures by up to 89% and delivered a net positive return of $39.64 per hectare compared to conventional fertiliser.

The project included the design and development of emission measurement chambers, led by IPF R&D Agronomist Robert Impraim, and involved lab-scale testing, glasshouse validation and the extensive on-farm field trials.

Innovation from lab to farm

IPF President Scott Bowman said the award reflects the real-world benefits of innovation for Australian agriculture.

"This recognition underscores the value that sustainable fertiliser solutions bring to our growers, enabling them to reduce emissions and improve profitability," Scott said.

"The trials are one of the many R&D projects IPF is running to help drive efficiency, sustainability, and innovation in the fertiliser industry, and enhance farmer productivity.

"Our R&D team, along with our growers and resellers who partnered with us in the field, have been instrumental in validating this technology in real world farming scenarios.

"Their collaborative efforts are key to our industry's ability to achieve meaningful progress on climate action."

How Green Urea NV works

Green Urea NV contains a urease inhibitor that slows the conversion of urea to ammonium, a process that, under certain conditions, can result in the loss as ammonia gas (NH_3).

By delaying this process Green Urea NV helps retain nitrogen in soil for longer, enhancing its availability to crops and pastures.

"Green Urea NV exemplifies how targeted research can deliver both environmental benefits and practical economic outcomes for Australian farmers," Scott said.

Looking forward

IPF remains committed to sustainability and productivity, consistently demonstrating what is possible through science, collaboration and innovation.

"We are proud to contribute to climate action and decarbonisation, and to align our work with the UN Sustainable Development Goals. This achievement would not have been possible without the dedication of our incredible team, and the support of our partnering farmers who embraced these innovations with us," Scott said.

"Thank you again to Chemistry Australia for this recognition."

Key findings

A detailed economic analysis reinforced the practical value of Green Urea NV, showing consistent economic returns alongside notable environmental benefits, including:

- Investing in Green Urea NV resulted in a net positive return of $39.64/ha compared to conventional fertiliser.
- Green Urea NV reduced ammonia volatilisation/nitrogen (N) loss by an average of 77% in June, 82% in July and 76% in August across all sites.
- The economic implications of N loss were assessed, highlighting the direct costs and impact on potential yields. The analysis showed a significant net positive return when using Green Urea NV.
- Green Urea NV reduced ammonia volatilisation by up to 89% across trial sites.

FAREWELL

Jim hangs up his IPF hat

Respected IPF Senior Technical Agronomist, Jim Laycock, has hung up his hat after a 30-year career with Incitec Pivot Fertilisers, that has seen him spearhead groundbreaking research and development benefiting broadacre farmers.

IPF Senior Technical Agronomist, Jim Laycock.

Originally from Queensland, Jim started his agronomy career initially with Pivot as a productivity specialist based at Cowra NSW, before Pivot merged with Incitec in 2003.

Valuable P and N insights

Jim has been involved in many R&D projects that have led to on-farm changes in soil health management, including the long-term phosphorous (P) and nitrogen (N) cropping trial at 'Glenelg' near Grenfell NSW, which has been continually assessed since 2007.

"Through the project we found that, particularly in these more reliable areas, the critical value of soil Colwell P needs to be higher than what previous research suggested," Jim said.

"If you've got your Colwell P at 45mg/kg and above, you've got so much more ability to flex the system.

"In a good year, you will get a good response to that higher Colwell P number. After a less favourable year, there is potential to cut back on your P application rates in the next year.

"Care should be taken when reducing P inputs as this long-term trial shows yield improvements with the inclusion of starter P, even in high Colwell P soils.

"It's not rocket science but it's simple and the science has been demonstrated. The project has also demonstrated that if you haven't got adequate P in the system and you get a good year, N responses are less, so you're missing out on those good years if you're running a low P system.

"You only get one shot with P, so you've got to make sure you get it right. That might mean changing your P rates at planting, paddock by paddock, and there is lot more of that going on now in zonal variable rate.

"We have done a lot of trial work including liquid fertiliser trials, row spacing trials, and foliar P trials over the years.

"The more recent research focus has been on enhanced efficiency fertilisers (EEFs) to reduce ammonia emissions and nitrous oxide emissions in farming systems.

"While urease inhibitors and nitrification inhibitors have been around for a while, it's probably only just in the last five years that people are starting to realise they may be the future when it comes to N management and reducing greenhouse gas emissions."

Jim said IPF's development of the soil health test has also been valuable to growers.

"The test provides simple numbers to look at every four to five years to see where you are in terms of organic carbon, labile carbon, carbon to N ratio — those basic soil analyses results show you where you're going in terms of your soil health," Jim said.

Ag's big game-changers

Throughout his career, Jim has witnessed significant changes to farming systems and technology which has shifted the dial on productivity.

"Stubble retention, and the move to reduced or no tillage, has changed a lot of the soil conditions and changed some of the nutrient strategies that are required as well," Jim said.

"Precision agriculture has also really changed the landscape in terms of how accurate you can be running your planting equipment year-on-year.

"Obviously, machinery has increased in size and capacity as well, and that has influenced the logistics of supply, particularly when it comes to getting fertiliser on the paddock.

"The ability of the end user to apply large amounts of product in a short amount of time certainly puts stress on the logistics side of the business."

Looking ahead, Jim believes maintaining social licence to farm will continue to be an issue for the industry, while carbon farming and addressing GHG emissions will also become more important.

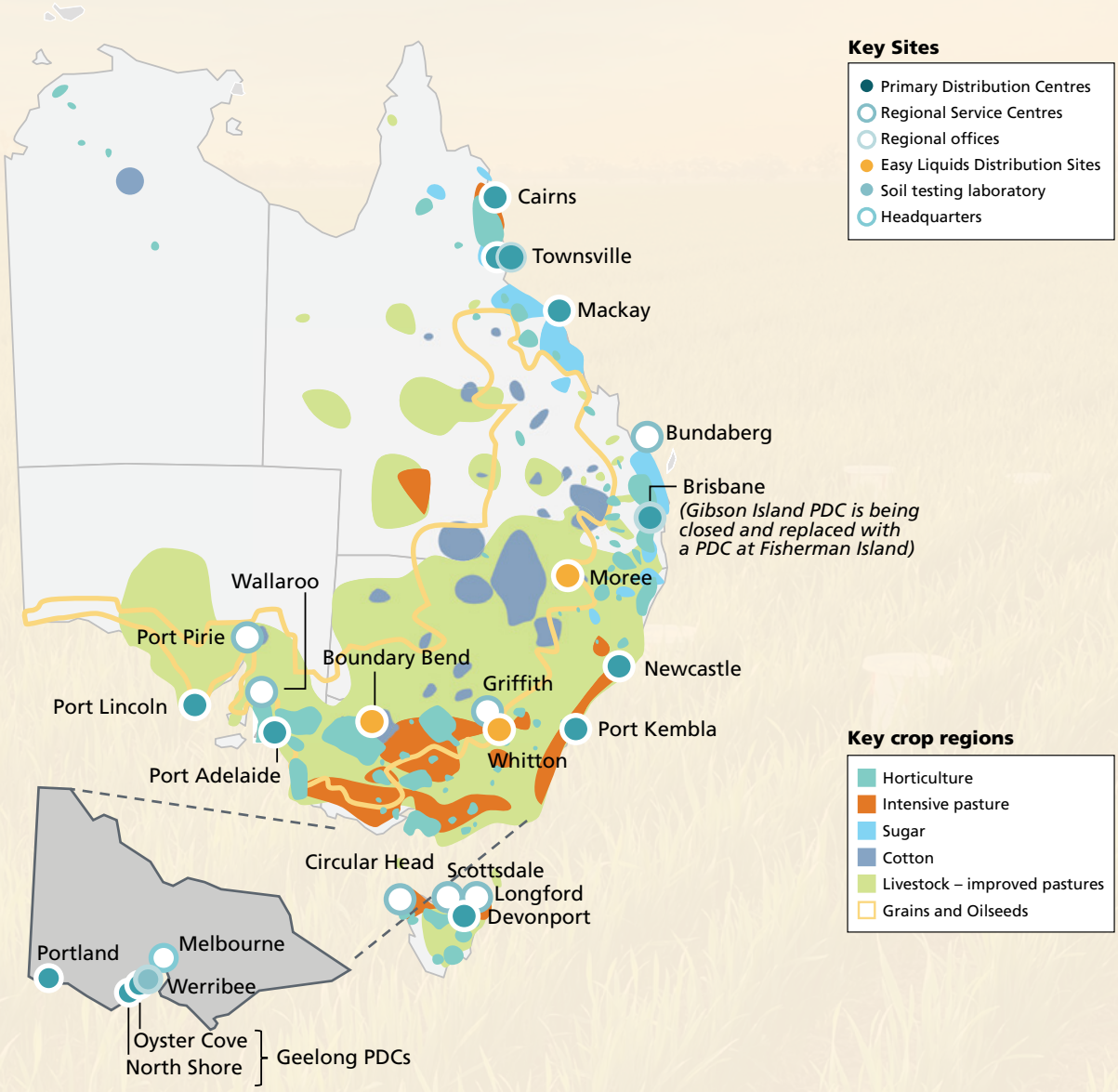
For Jim, the highlight of his career has always been working with farmers and his colleagues.

"Broadacre farmers are very innovative and forward thinking, they're terrific land managers, and you're learning from them just as much as I think they potentially get little snippets from me," Jim said.

"They know that if you don't have your soil, you don't have anything."

After living in Cowra for 32 years, Jim has moved to Port Macquarie to spend more time with family and grandchildren in his retirement.

Comprehensive coverage to drive farm productivity



13
Primary Distribution Centres (PDC)

7
Regional Services Centres

2Mt+
volumes distributed annually

Incitec Pivot Fertilisers