



Building Resilient Farming Systems in an Era of Uncertainty

By Anton Barton, Managing Director, BioAg

Australian agriculture has always faced challenges, but the pressures confronting farmers today are becoming increasingly complex.

Variable seasonal conditions, rising input costs, tighter margins and growing expectations around sustainability are forcing businesses to rethink how they manage productivity and profitability.

Across the industry, one trend is becoming clear: the most successful farming businesses are focusing on resilience rather than simply chasing yield.

Resilience starts below ground.

For decades, farming systems have largely focused on supplying nutrients to crops. While nutrition remains essential, growers are increasingly recognising the importance of supporting the biological processes that drive nutrient cycling, water infiltration, soil structure and plant health. Healthy soils are not just a growing medium; they are living ecosystems that underpin farm performance.

This shift towards biological farming practices is not about replacing conventional agriculture. It is about improving efficiency and maximising the return on every dollar invested in fertiliser, water and crop inputs.

In recent years, we have seen firsthand how biological programs help farmers perform across contrasting seasons. In favourable conditions, improved soil function supports stronger crop growth and higher yield potential. In tougher years, healthier soils often provide greater moisture retention, improved nutrient availability and enhanced crop resilience when conditions become challenging.



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Another trend we are seeing is a growing focus on nutrient efficiency. With fertiliser costs remaining a significant consideration for many businesses, farmers are looking for ways to maximise the effectiveness of every unit applied. Supporting soil microbial activity and nutrient cycling can improve the availability and utilisation of nutrients already present within the farming system, helping reduce waste and improve returns.

At BioAg, we believe the future of profitable farming lies in combining sound agronomy with biological principles. Our approach focuses on building healthy, mineral-balanced soils that support productive and resilient farming systems while improving long-term sustainability. Through our proven fertilisers, biostimulants and tailored agronomic programs, we help farmers improve soil function, optimise nutrient use and strengthen crop performance across a wide range of conditions.

The challenges facing agriculture are unlikely to disappear. However, the opportunity for farmers is significant. By investing in soil health, biological function and nutrient efficiency today, growers can build farming systems that are not only productive this season, but profitable and resilient for years to come.

At BioAg, our focus remains simple: delivering solutions that are **reliable, proven and profitable**. By combining biological science with practical agronomy, we help farmers build stronger foundations, improve input efficiency and create farming systems that perform consistently across the seasons. We want farmers to pass down their land to the next generation in a healthier state than when they received it.

How *BioAgPhos* is Helping Farmers Get Ahead of the Scope 3 Emissions Challenge

As sustainability reporting becomes a mainstream business requirement, farmers are increasingly being asked by corporate buyers, lenders, and agribusinesses to account for the greenhouse gas emissions embedded in their inputs, including fertiliser.

This falls under what is known as Scope 3 Emissions, which are the indirect emissions that occur across a company's value chain, outside of its own direct operations. For most agricultural businesses, Scope 3 represents the major share of their carbon footprint, and fertiliser manufacturing is one of the most significant contributors. Conventional phosphate fertilisers like Single Superphosphate (SSP) are energy-intensive to produce, with the chemical manufacturing process releasing substantial CO₂ at source, before a single tonne ever reaches the farm gate.

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This is where **BioAgPhos**[®] offers a clear and practical advantage, both agronomically and environmentally. Unlike synthetic fertilisers that rely on energy-intensive chemical processing, **BioAgPhos** is made from high-grade reactive phosphate rock combined with BioAg's proprietary microbial phosphate digester—a process that avoids the CO₂-releasing reactions central to SSP manufacturing. The result is a GHG footprint approximately **30% lower than Single Superphosphate on a per kilogram of phosphorus basis**. Because 100% of the phosphorus in **BioAgPhos** is bioavailable and doesn't lock up, farmers are getting more agronomic value per unit of applied P. **BioAgPhos** also adds to the accumulation of baseline P, which means less product is needed over time, reducing cumulative emissions even further. With both upfront and sustained-release phosphorus in every application, **BioAgPhos** delivers the nutrition crops need without the carbon cost of conventional alternatives.

Contributing factor to Greenhouse Gas (GHG) Emissions	Kg GHG as CO2 SSP	Kg GHG as CO2 BioAgPhos	Comments
PR mining & beneficiation (including transport to port)	0.039	0.059	Multiplier of 1.5 for BioAgPhos, as only 667kg of phosphate rock in one tonne of SSP.
Train transport of S in Canada	0.003	0.00	Not needed to produce BioAgPhos products.
Shipping of raw materials (PR, S, sulphuric acid) to port	0.096	0.096	
Truck transport of raw materials to plant	0.001	0.001	
Net electricity use and fuel at plant	0.003	0.00	No additional processing of RPR needed in BioAgPhos.
CO2 from CO3 in PR	0.014	0.00	No acidulation of RPR so CO3 is not decomposed.
Total Per Kg of Product	0.156	0.156	Relative to product weight, not P.
Total Per Kg of P	1.73	1.20	Only 9% P in SPP but 13% P in BioAgPhos, meaning BioAgPhos produces 30% less GHG per Kg of P

For corporate farmers seeking finance or those supplying corporate buyers, the ability to demonstrate lower emissions in their inputs is fast becoming a competitive advantage. By switching to **BioAgPhos**, farmers can point to a quantifiable, independently supportable reduction in their Scope 3 footprint, positioning their operation ahead of tightening disclosure requirements. Progressive farmers, large and small, are already successfully using **BioAgPhos**. Get your agronomic and environmental advantage back by contacting a BioAg Area Manager today.

Find your local Area Manager here

BioAg in Action: Highlights from the past month

20 Years of Results with *BioAgPhos*

For more than 20 years, Virginia Bond from Welaregang has used **BioAgPhos** as part of her farming system, helping improve soil health, increase pasture productivity, and ultimately double the carrying capacity of her cattle operation.

Virginia's experience highlights the long-term value of investing in soil fertility and building productive farming systems from the ground up.



[Watch the video](#)

Building Better Pastures at Tarcombe Herefords

Tim Hayes from Tarcombe Herefords has been using **BioAgPhos** for more than 15 years, reporting stronger clover growth, improved pasture performance and pastures that remain productive for longer throughout the season. His story demonstrates how consistent soil fertility management can support both productivity and profitability over the long term.



[Watch the video](#)



*Every time you apply lime,
apply BioAgPhos.*



– A key message from our long-term successful customers

Digest-it Delivering Results Beyond Australia

Digest-it continues to gain momentum internationally, with more than 1,000 dairy farms across Ireland and the UK now using the technology. Designed to improve slurry performance, nutrient utilisation and silage production, **Digest-it** is helping dairy producers maximise productivity while improving the efficiency of existing nutrient resources.



[Watch the video](#)

Balance & Grow Delivers Immediate Results

Matt Sheather from Corryong recently shared his positive experience using **Balance & Grow** for the first time, reporting immediate results. Designed to support vegetative growth, root development and soil microbial activity, **Balance & Grow** helps improve nutrient cycling, moisture retention and crop resilience during critical growth stages. Suitable for broadacre, pasture and horticultural systems, it provides a practical solution for growers looking to maximise performance from the outset.



[Watch the video](#)

Learning from Farmers Building Resilient Systems

Members of the BioAg team recently attended the 'Mixing It Up – Rethinking Systems for Resilient Farming' field day hosted by VicNoTill. The event provided an opportunity to hear directly from farmers about practical approaches to improving soil health, building resilience and creating more productive farming systems, including the use of **BioAgPhos**.



Staying at the Forefront of Soil Biology

BioAg agronomists Peter and Sean recently participated in hands-on soil biology workshops facilitated by **South East Local Land Services** and David Hardwick from **Soil Land Food**. Covering microbial activity, nutrient cycling, organic matter function and soil health assessment, the workshops reinforced the growing importance of biological approaches in modern farming systems.



Connecting with the Horticulture Industry

General Manager Darren Free recently attended **Hort Connections 2026** in Adelaide, Australia's premier horticulture conference. Bringing together growers, agronomists, researchers and industry leaders, the event provided valuable insights into emerging challenges, opportunities and innovations shaping the future of Australian horticulture.



Listening to Farmers and Planning for the Future



The BioAg sales and marketing team recently came together in Narrandera for their mid-year planning meeting. A highlight of the event was welcoming long-term customers and reseller partners to share their experiences and perspectives. These conversations provide valuable insight into the challenges facing farmers and help ensure BioAg continues to deliver practical, reliable, proven and profitable solutions.



Find your local Area Manager here

