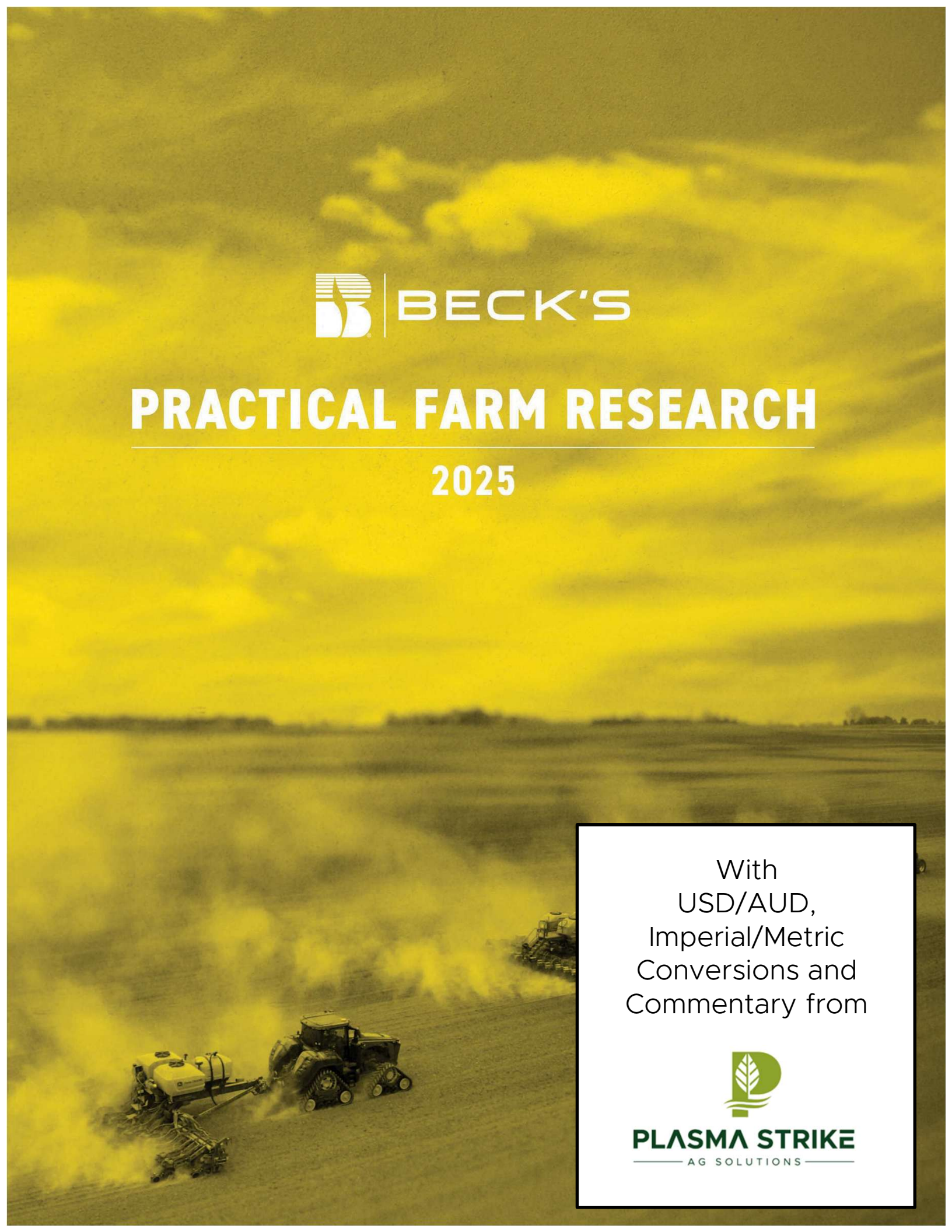
BECK'S

PRACTICAL FARM RESEARCH

2025



With
USD/AUD,
Imperial/Metric
Conversions and
Commentary from

PLASMA STRIKE
AG SOLUTIONS

Across multiple Beck's PFR sites, replacing water with Green Lightning [GL] as the spray carrier consistently lifted yield and return on investment. Yield gains ranged from modest to significant depending on disease pressure, but the economic signal was uniform: GL + fungicide outperformed water + fungicide. The strongest responses appeared when disease pressure was moderate to high or when the active chemistry benefited from improved leaf penetration.

Foliar trials comparing water versus GL as the spray carrier showed the same pattern of improved performance. When GL was used with a standard nutritional foliar mix at V4, yield and gross margin increased substantially, with an uplift of roughly A$213/ha. A similar trend appeared when GL was paired with a premium fungicide package at R3. These results demonstrate that GL improves the efficiency of both nutritional and fungicidal foliar products, increasing the economic return from applications farmers are already making.

In soybeans, GL applied at Pre-emerge, Dual Dribble, V4, and R3 produced yield gains across all timings. R3 delivered the most reliable lift at roughly 141 kg/ha and improved gross margin by about A$78/ha. The consistency across timings indicates that GL supports crop metabolism at both vegetative and reproductive stages, and stacked programs in higher-value soybean systems show potential for additive benefits.

Corn nitrogen studies comparing UAN, GL, blends, and timing strategies showed that combined programs produced the strongest agronomic and financial outcomes. A 50/50 GL/UAN approach at both timings generated the highest Milk/ha, Beef/ha, and Net Return, pairing competitive yield with substantially lower nitrogen cost.

The nitrogen-replacement and nitrogen-timing trials did not show a benefit from GL because the trial setups themselves limited the outcome. In several cases the GL treatments were run at nitrogen levels that were too low to realistically compete with the full UAN programs they were compared against. In others, the timing design forced GL to act as a straight N-replacement in situations where UAN has a known structural advantage. These trials are still useful because they show the limits of GL: it performs well as a supplement or blend, but it is not a like-for-like replacement for high-rate UAN in every timing scenario.

Taken together, the Beck's data show that GL is a consistent performance enhancer when used as a spray carrier with fungicides, foliar nutrition, or herbicide additives. In corn, blended GL/UAN nitrogen programs deliver the strongest balance of yield and cost control. In soybeans, both reproductive-stage application and premium foliar combinations generate reliable returns and position GL as an effective lever for improving crop performance across multiple management systems.

PLASMA STRIKE
AG SOLUTIONS

Comments from Plasma Strike.

Water quality has a major impact on how well many chemicals perform. This is well documented and peer-reviewed. Couple this with the lower pH profile of Plasma Activated Water, which shifts your typical tank mix from alkaline to acidic and PAW as a carrier becomes a no-brainer.

If we look at the simple economics of the below data with Green Lightning:

- 5,000 Ha corn operation
- $130,000 Purchase Price of Thunder 365
- ~139,000 Liters of annual production

- 18L/Ha Carrier
- 90,000 L of Green Lightning used at Fungicide (~49,000L remaining)
- $63.33/ha advantage ($316,650 gross)

$186,650 net gain in one season and ~50,000L remaining.

2025 Results – Converted to AUD and Metric

R1 Treatment	Carrier 18L/Ha	Percent Moisture	Ton/Ha	Kg/Ha Difference	ROI ($/Ha)	Delta
Control: No Fungicide	--	16.1	16.02			
414ml (14oz) Atticus Aquila XL	Water	17.3	16.42	395.40	$80.91	
	Green Lightning	17.3	16.66	640.18	$144.24	+ $63.33

FUNGICIDE STUDY

WATER VS. GREEN LIGHTNING® - DRONE

Similar to what we recorded with our ground application study, we observed a benefit from using Green Lightning® as a carrier for our drone-applied fungicides. However, the benefit was more pronounced in the drone system vs. ground, which might be attributed to the drone's ability to penetrate the canopy due to greater disturbance from the prop wash.

2025 RESULTS

R1 TREATMENTS	CARRIER (2 GAL./A.)	PERCENT MOISTURE	BU./A.	BU./A. DIFFERENCE	RETURN ON INVESTMENT
Control: No Fungicide	--	16.1	255.3	--	--
14 oz. Atticus Aquila XL™	Water	17.3	261.6	+6.3	+$21.83
	Green Lightning®	**17.3**	**265.5**	**+10.2**	**+$38.98**

Corn $4.42/Bu. Atticus Aquila XL™ $55.00/gal. Green Lightning® $0.04/gal. These results are based on the disclosed study parameters and participating sites.

EAR LEAF PICTURES: FIELD 3

CONTROL: NO FUNGICIDE

FUNGICIDE + WATER CARRIER

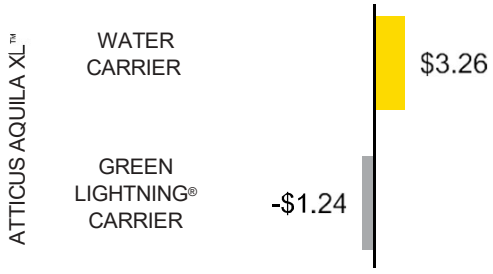
FUNGICIDE + GREEN LIGHTNING® CARRIER

PARTICIPATING SITES

IN KY C.IL S.IL OH IA NE MN KS WI DELTA **FARM**

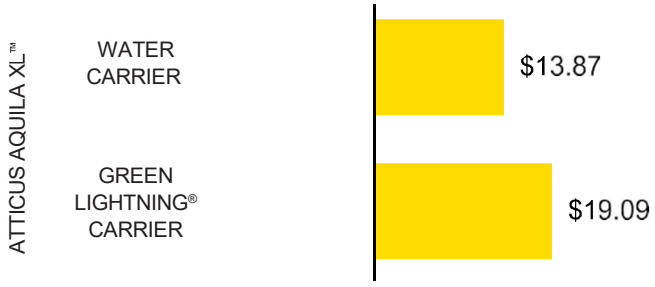
FIELD 1: LEWISTOWN, IL

Disease Pressure: Light (Southern Rust)



FIELD 2: LEWISTOWN, IL

Disease Pressure: Moderate (Southern Rust), Light (NCLB), Light (Tar Spot)



PLASMA STRIKE AG SOLUTIONS

"Interesting observation; the greater disease pressure the better the ROI becomes"

FIELD 3: LEWISTOWN, IL

Disease Pressure: Heavy (Southern Rust), Moderate (NCLB), Light (Tar Spot)

PLASMA STRIKE
AG SOLUTIONS

Comments from Plasma Strike.

Green Lightning used as the carrier for Veltyma delivered a stronger agronomic result than water.

- When Veltyma was applied with water, yield increased by 238 kg/ha over the untreated control.
- When the same Veltyma rate was applied with Green Lightning, the yield gain rose to 358 kg/ha.

The only difference between the two treatments was the carrier, making it clear that Green Lightning improved the performance of the fungicide application under the conditions of this trial.

Using Green Lightning as the carrier resulted in the highest yield (13.61 t/ha) and the largest gain over the control (+357.8 kg/ha).

While still slightly negative in ROI, it delivered a significantly improved financial position relative to the water treatment.

2025 Results – Converted to AUD and Metric

R1 Treatment	Carrier	Carrier Rate (L/ha)	Percent Moisture	Yield (t/ha)	Yield Difference (kg/ha vs Control)	ROI (AUD/ha)
Control: No Fungicide			22.5	13.25		
207 ml (7 oz) Veltyma	Water	187.08	22.5	13.49	238.52	-29.76
207 ml (7 oz) Veltyma	Green Lightning	187.08	22.4	13.61	357.78	-1.59

FUNGICIDE STUDY

WATER VS. GREEN LIGHTNING® - GROUND

In this study, we used Green Lightning® nitrogen solution as the fungicide spray carrier Green Lightning has a lower pH profile and appears to improve the performance of the fungicide application. Disease pressure was moderate and appeared later in the growing season.

2025 RESULTS

R1 TREATMENTS	CARRIER (20 GAL./A.)	PERCENT MOISTURE	BU./A.	BU./A. DIFFERENCE	RETURN ON INVESTMENT
Control: No Fungicide	--	**22.5**	**211.1**	--	--
7 oz. Veltyma®	Water	22.5	214.9	+3.8	-$8.03
	Green Lightning®	22.4	216.8	+5.7	-$0.43

Corn $4.42/Bu. Veltyma® $454.00/gal. Green Lightning® $0.04/gal. These results are based on the disclosed study parameters and participating sites.

PARTICIPATING SITES

IN KY C.IL S.IL OH IA NE MN KS WI DELTA FARM