



**BLACK
EARTH**

A WESTMET GROUP COMPANY

2025
**HARVEST
TRIAL DATA**

Black Earth develops and manufactures humic solutions from our exclusive Humalite reserve, with full control from mine to market. Our trials focus on the acres we know best, working alongside trusted growers, agronomists, and research partners to evaluate performance under real farming conditions. Every result in this booklet is generated using credible methodologies and independent data sources, with outcomes measured in practical return on investment farmers recognize and value.



STEWARDSHIP

Care for the land is at our core, with tools designed to build healthier soils, grow resilient crops and advance sustainability.



CONTINUOUS IMPROVEMENT

By advancing humic technology, we are driving growth in agriculture while unlocking new possibilities for industrial use.



PARTNERSHIP

Collaboration with farmers, advisors and industry leaders ensures solutions that create lasting impact and shared success.



TRUST

Products backed by transparency and science consistently deliver reliable results for both growers and industrial applications.



PROOF BUILT

Where Decisions are Made

Black Earth's trial program exists to bring discipline and credibility to a category where performance is often questioned. We work in core, high-accountability agricultural systems with experienced growers, agronomists, and independent partners to ensure results reflect real-world decision making, not ideal conditions. Every trial is structured to produce measurable, calculable outcomes, with yield response and return on investment as the primary benchmarks. These efforts establish a foundation we continue to expand, strengthening confidence in humalite performance season after season.

AB

MB

ND

Table of CONTENTS

Row and Specialty Crops 18

humiZEN Alpha

Intro Page.....	19
Potato Results.....	20

humaLITE GG16

Intro Page.....	21
Soybean Results.....	22
Potato Results.....	23

Forage and Hay Systems 24

humiZEN Alpha

Intro Page.....	25
Pea/Oat and Triticale Results.....	26

humaPLUS Liquid Carbon

Intro Page.....	27
Pea/Oat Results.....	28

Notebook..... 29

Oilseed Crops 5

humiZEN Magna AG

Intro Page.....	6
Canola Results.....	7
Flax Results.....	8

humiZEN Alpha

Intro Page.....	9
Canola Results.....	10

humaPLUS Liquid Carbon

Intro Page.....	11
Canola Results.....	12

Cereal and Small Grain Crops 13

humiZEN Alpha

Intro Page.....	14
Hard Red Spring Wheat Results.....	15

humaPLUS Liquid Carbon

Intro Page.....	16
Hard Red Spring Wheat Results.....	17



OILSEED CROPS

BLACK EARTH

humizEN Magna AG 

**WORKS TODAY.
STRENGTHENS
TOMORROW.**



Magna is a semi-soluble granular humalite designed for soil-applied use in systems where building soil function and nutrient holding capacity at seeding is a priority. In canola and flax, Magna is a strong fit for growers who want a foundational soil input that supports early establishment, stabilizes nutrients, and delivers measurable return through improved crop response rather than timing-dependent effects

APPLICATION FLEXIBILITY



PROGRAM COMPATIBILITY



SOIL SYSTEM FIT



YIELD RESPONSE RELIABILITY



ECONOMIC EFFICIENCY



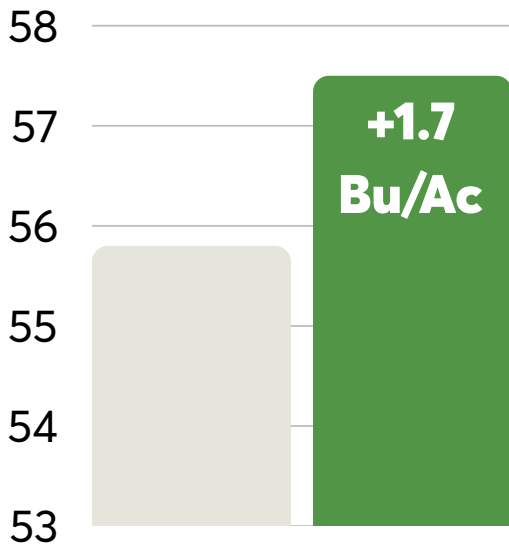


Canola Results



Avg. Yield Response (Bu/Acre)²

Canola - Rapid City, MB
Adam Gurr, AgriTruth



Control vs 15lbs/acre in-furrow



ROI (X Return)¹

Canola - Rapid City, MB
Adam Gurr, AgriTruth



Comments: In canola, Magna delivered consistent yield improvement when applied in-furrow at planting, demonstrating value as a soil-applied foundation input. Yield gains were achieved under favorable establishment conditions, translating into a positive economic return relative to product cost. The data supports Magna's role in canola as an early-season soil builder that stabilizes nutrients and supports crop response without relying on in-season timing. Data suggest that repeatable multi-year trials on the same ground will continue to drive yield improvement as Magna establishes itself as a soil conditioner beyond the first season

¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.

² Average yield response is a result of three replications where Magna outperformed the untreated control in two of three scenarios, with the third producing no change in yield. Control data is also derived from an average of the three replications.

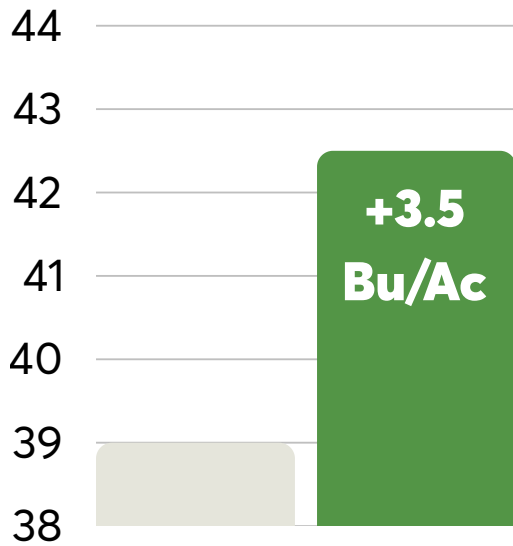


Flax Results



Avg. Yield Response (Bu/Acre)²

Flax - Minot, ND
Rubbelke Research



Control vs 10lbs/acre in-furrow



ROI (X Return)¹

Flax - Minot, ND
Rubbelke Research



Comments: In flax, Magna demonstrated the most consistent yield response among the products evaluated, particularly under dry early-season conditions. In-furrow application supported early establishment and nutrient stability, resulting in measurable yield gains and the strongest economic return within the trial set. The data positions Magna as a reliable soil-applied option in flax systems, where early-season soil function plays a critical role in driving performance and protecting return on investment

¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.

² Average yield response is a result of three replications where Magna outperformed the untreated control in two of three scenarios, with the third producing no change in yield. Control data is also derived from an average of the three replications.

BLACK EARTH

humizEN Alpha

IN-SEASON EFFICIENCY

Applied during active growth to support nutrient uptake and crop performance when oilseed crops are most responsive



MEASURABLE PROGRAM ENHANCEMENT

Fits easily with common liquid starter applications at low use rates

APPLICATION FLEXIBILITY



PROGRAM COMPATIBILITY



SOIL SYSTEM FIT



YIELD RESPONSE RELIABILITY



ECONOMIC EFFICIENCY



RELIABLE YIELD RESPONSE

Delivers consistent positive response across oilseed trials under a range of conditions

LOW-COST ENTRY

Provides strong economic return with minimal per-acre investment

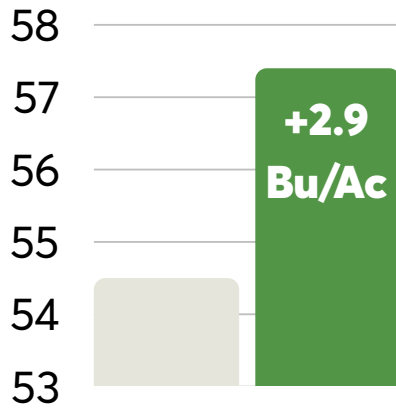


Canola Results

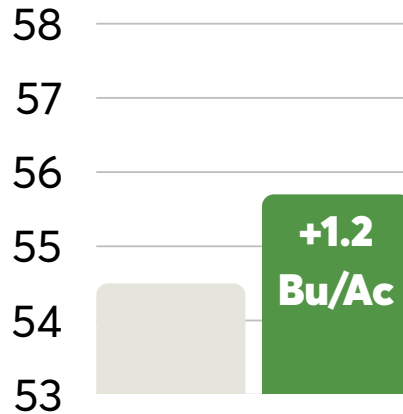
humizEN Alpha

Yield Response (Bu/Acre)

Canola - Minot, ND
Rubbelke Research



Control vs. 1L/acre
Applied alone at **fungicide** timing



Control vs. 1L/acre
Applied alone at **herbicide** timing



ROI (X Return)¹

Canola - Minot, ND
Fungicide Timing



Canola - Minot, ND
Herbicide Timing



Comments: Alpha delivered positive yield response at both herbicide and fungicide timings, with the strongest performance observed at fungicide application. Later timing aligned more effectively with mid-season moisture and peak nutrient demand, resulting in higher yield gains and stronger economic return. Herbicide-timed application still provided measurable benefit, but the data supports positioning Alpha later in the season to maximize consistency and value in canola systems

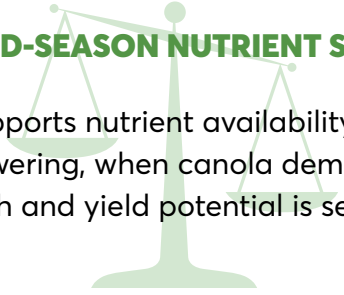
¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.

BLACK EARTH

humaPLUS Liquid Carbon

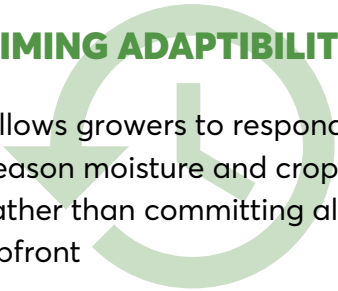
MID-SEASON NUTRIENT STABILIZATION

Supports nutrient availability during flowering, when canola demand is high and yield potential is set



TIMING ADAPTABILITY

Allows growers to respond to in-season moisture and crop conditions rather than committing all inputs upfront



APPLICATION FLEXIBILITY



PROGRAM COMPATIBILITY



SOIL SYSTEM FIT



YIELD RESPONSE RELIABILITY

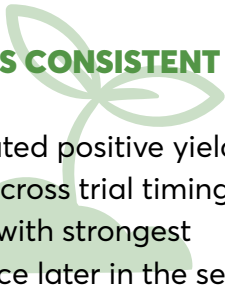


ECONOMIC EFFICIENCY



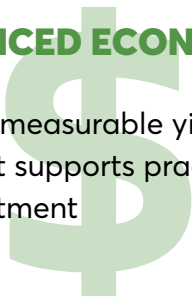
SUPPORTS CONSISTENT RESPONSE

Demonstrated positive yield response across trial timing scenarios, with strongest performance later in the season



BALANCED ECONOMIC RETURN

Delivers measurable yield gains at a cost that supports practical return on investment



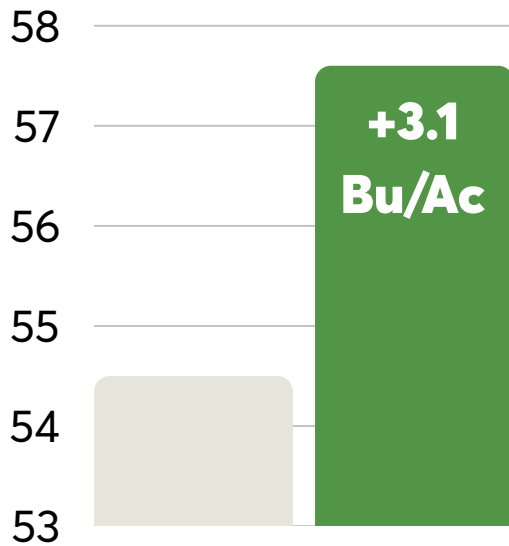


Canola Results

humaPLUS Liquid Carbon

Yield Response (Bu/Acre)

Canola - Minot, ND
Rubbelke Research



Control vs. 1L/acre
Applied alone at **fungicide** timing



ROI (X Return)¹

Canola - Minot, ND
Rubbelke Research



Comments: In canola, the trial data shows Liquid Carbon performed strongest when applied at fungicide timing, delivering the largest yield increase and the highest return on investment among all treatments evaluated. Fungicide-timed Liquid Carbon aligned with mid-season moisture and flowering, allowing the crop to better capitalize on nutrient availability during a yield-defining stage. While early timing was less responsive under dry conditions, the results clearly position Liquid Carbon as a later-season efficiency tool in canola

¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.



CEREAL AND SMALL GRAIN CROPS

BLACK EARTH

humizEN Alpha

EASY TO APPLY

Designed for low use rates and straightforward tank mixing with common crop protection and fertility programs



IMPROVED NUTRIENT EFFICIENCY

Supports availability and movement of nutrients already present in the soil and applied fertilizers, helping crops access what is there when demand is highest

FLEXIBLE TIMING

Effective when applied in-crop, allowing growers to respond to seasonal conditions rather than committing everything upfront

LOW-COST ENTRY

Delivers measurable yield response with minimal per-acre investment, supporting strong economic returns in cereal systems

APPLICATION FLEXIBILITY



PROGRAM COMPATIBILITY



SOIL SYSTEM FIT



YIELD RESPONSE RELIABILITY



ECONOMIC EFFICIENCY



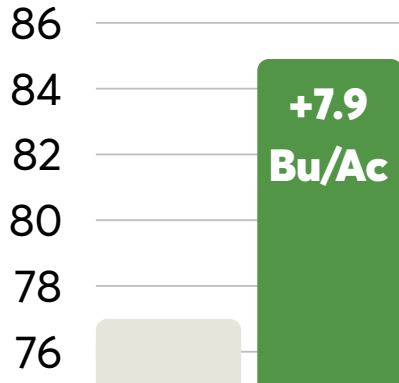


Hard Red Spring Wheat Results

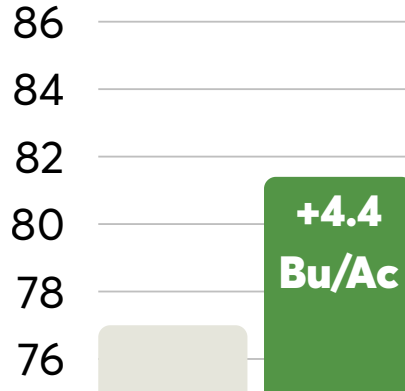
humizEN Alpha

Yield Response (Bu/Acre)

Hard Red Spring Wheat - Minot, ND Rubbelke Research



Control vs. 1L/acre
Applied alone at **fungicide** timing



Control vs. 1L/acre
Applied alone at **herbicide** timing



ROI (X Return)¹

HRSW - Minot, ND Fungicide Timing



HRSW - Minot, ND Herbicide Timing



Comments: Alpha delivered positive yield response at both herbicide and fungicide timings, with the strongest performance occurring at fungicide application. Later timing aligned more effectively with moisture availability, resulting in higher yield gains and stronger economic return. While herbicide-timed applications showed measurable benefit, the data indicates Alpha is most effective when positioned in-season during periods of active crop demand.

¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.

BLACK EARTH

humaPLUS Liquid Carbon



SOIL THAT WORKS HARDER



Liquid Carbon delivers highly available humic acid in a liquid form that begins working immediately in the soil. It improves nutrient retention and efficiency while supporting soil structure and carbon function through the growing season. Liquid Carbon is used where growers want reliable in-season response paired with long-term soil improvement, all without adding complexity to their program.

APPLICATION FLEXIBILITY



PROGRAM COMPATIBILITY



SOIL SYSTEM FIT



YIELD RESPONSE RELIABILITY



ECONOMIC EFFICIENCY



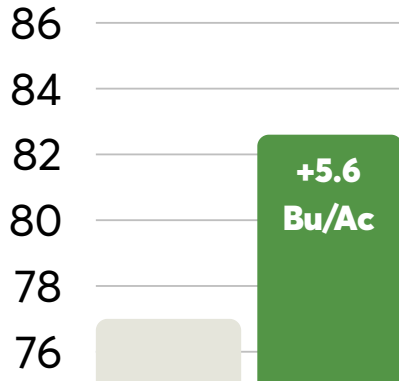


Hard Red Spring Wheat Results

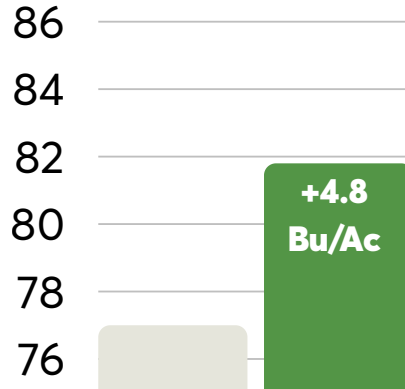
humaPLUS Liquid Carbon

Yield Response (Bu/Acre)

Hard Red Spring Wheat - Minot, ND Rubbelke Research



Control vs. 1L/acre
Applied alone at **fungicide** timing



Control vs. 1L/acre
Applied alone at **herbicide** timing



ROI (X Return)¹

HRSW - Minot, ND Fungicide Timing



HRSW - Minot, ND Herbicide Timing



Comments: Liquid Carbon produced positive yield response at both herbicide and fungicide timings, with the strongest performance observed at fungicide application. Later timing aligned more closely with active nutrient demand and improved moisture availability, resulting in higher yield gains and stronger economic return. Herbicide-timed application still delivered measurable benefit, but the data supports positioning Liquid Carbon later in the season to maximize consistency and value.

¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.



ROW AND SPECIALTY CROPS

BLACK EARTH

humizEN Alpha

IN-SEASON EFFICIENCY

Applied during active growth to support nutrient uptake and crop performance when it matters most

LOW-RATE, LOW-DISRUPTION

Delivered at a low use rate and fits easily into standard liquid programs without added operational burden

SUPPORTS MARKETABLE YIELD

Helps drive yield response tied to improved tuber development rather than excess vegetative growth

STRONG ECONOMIC FIT

Provides measurable return at a low cost per acre, supporting profitability in high-input potato systems



APPLICATION FLEXIBILITY



PROGRAM COMPATIBILITY



SOIL SYSTEM FIT



YIELD RESPONSE RELIABILITY



ECONOMIC EFFICIENCY





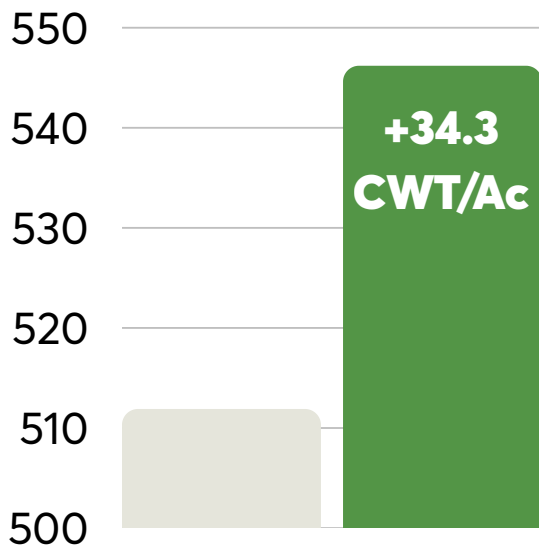
Potato Results

humiZEN Alpha

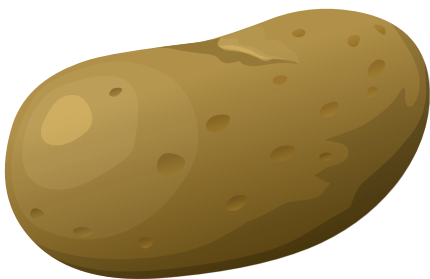
Yield Response (CWT/Acre)

Russet Burbank - Portage la Prairie, MB

Darin Gibson - Gaia Consulting



Control vs. 4L/acre in-furrow at planting w/ Liquid Starter



ROI (X Return)¹

Russet Burbank - Portage la Prairie, MB

Darin Gibson - Gaia Consulting

35X

Comments: At a 4 L per acre application, Alpha delivered the strongest yield response and economic return in the potato trials. Yield gains were driven by an increase in larger, more marketable tuber classes, aligning performance with grower revenue rather than total tonnage alone. The results confirm Alpha's role as a high-efficiency, in-season input in potato systems, where low application cost and timing flexibility translate into clear, measurable value

¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.

humalITE GG16

EARLY SEASON SOIL SUPPORT

Placed at seeding to improve nutrient availability and root-zone conditions during establishment



IMPROVED NUTRIENT HOLDING CAPACITY

Enhances cation exchange and nutrient retention near the root, improving fertilizer efficiency

APPLICATION FLEXIBILITY



PROGRAM COMPATIBILITY



SOIL STRUCTURE CONTRIBUTION

Supports aggregation and moisture management in the seed zone, aiding early crop vigor

SOIL SYSTEM FIT



STRAIGHTFORWARD APPLICATION

Applied once at planting with standard equipment, with no additional passes required

YIELD RESPONSE RELIABILITY



ECONOMIC EFFICIENCY



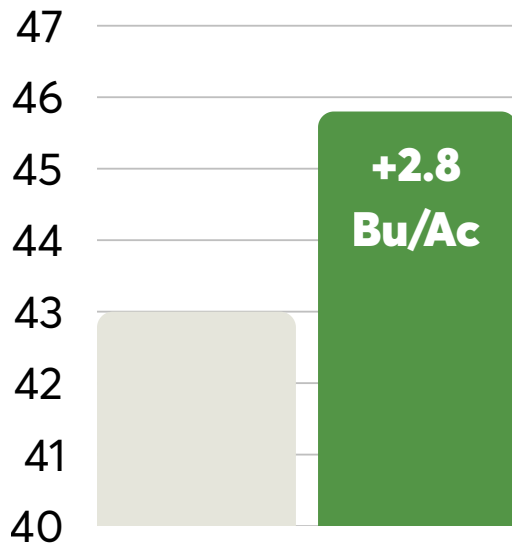


Soybean Results

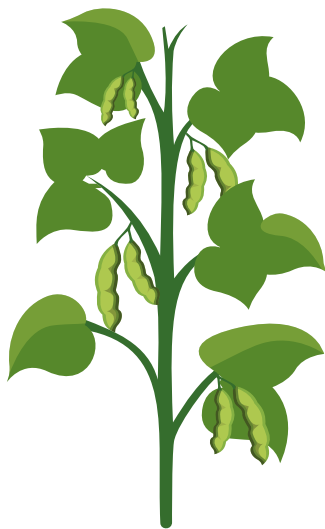
humaLiTE GG16

Yield Response (Bu/Acre)

Soybean - Minot, ND
Rubbelke Research

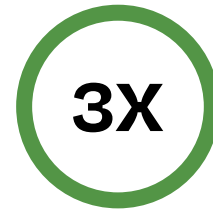


Control vs. 40lbs/acre in-furrow



ROI (X Return)¹

Soybean - Minot, ND
Rubbelke Research



Comments: GG16 delivered consistent yield response when applied in-furrow at planting, with the strongest economic performance observed at the moderate application rate. Yield gains were achieved despite dry early-season conditions, indicating GG16's ability to support nutrient retention and root-zone efficiency during establishment. The data shows GG16 is best positioned as a soil-applied foundation input in soybean systems, where balanced rate selection is critical to maximizing return on investment.

¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.



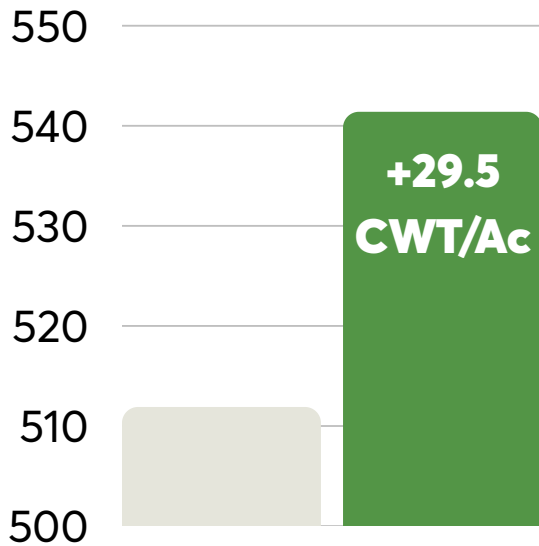
Potato Results

humaLiTE GG16

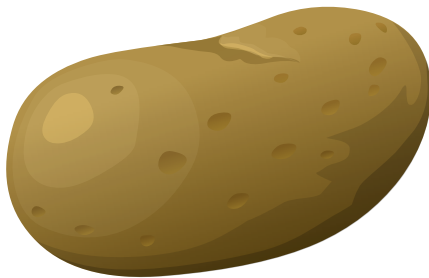
Yield Response (CWT/Acre)

Russet Burbank - Portage la Prairie, MB

Darin Gibson - Gaia Consulting



Control vs. 100lbs/acre in-furrow



ROI (X Return)¹

Russet Burbank - Portage la Prairie, MB

Darin Gibson - Gaia Consulting

7.5X

Comments: At 100 lbs per acre, GG16 delivered a clear yield improvement in potatoes compared to the grower standard. The yield response was driven by increased production in larger, more marketable tuber classes, translating into a positive economic return at this rate. The data indicates GG16 is most effective in potato systems when applied at moderate in-furrow rates, where soil support and nutrient retention can be improved without eroding ROI

¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.



FORAGE AND HAY SYSTEMS

BLACK EARTH

humizEN Alpha

EASY TO APPLY

Designed for low use rates and straightforward tank mixing with common crop protection and fertility programs



IMPROVED NUTRIENT EFFICIENCY

Supports availability and movement of nutrients already present in the soil and applied fertilizers, helping crops access what is there when demand is highest

FLEXIBLE TIMING

Effective when applied in-crop, allowing growers to respond to seasonal conditions rather than committing everything upfront

LOW-COST ENTRY

Delivers measurable yield response with minimal per-acre investment, supporting strong economic returns in cereal systems

APPLICATION FLEXIBILITY



PROGRAM COMPATIBILITY



SOIL SYSTEM FIT



YIELD RESPONSE RELIABILITY



ECONOMIC EFFICIENCY



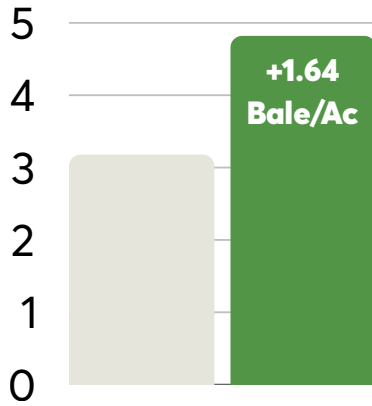


Oat and Triticale Bale Results

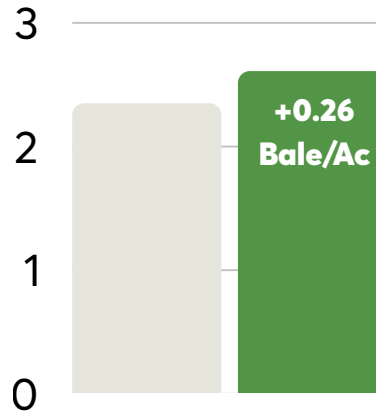
humizEN Alpha

Yield Response (Bale/Acre)

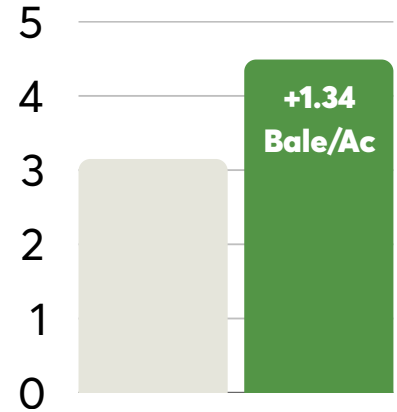
Oat Bale - Hanna, AB
Grower Trial



Triticale Bale - Hanna, AB
Grower Trial



Pea/Oat Bale - Hanna, AB
Grower Trial



Control vs. 1L/acre in-crop spray

ROI (X Return)¹

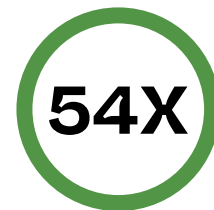
Oat Bale - Hanna, AB
Grower Trial



Triticale Bale - Hanna, AB
Grower Trial



Pea/Oat Bale - Hanna, AB
Grower Trial



Comments: Across bale systems, Alpha consistently delivered positive yield response and strong economic return when applied alone. In each trial, Alpha outperformed higher-cost combination treatments on ROI, reinforcing that simplicity and low use rates matter in forage systems. Results also show Alpha performs reliably under variable moisture conditions, supporting its role as a practical in-crop tool rather than a pre-season input.

¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.

BLACK EARTH

humaPLUS Liquid Carbon

STRAIGHTFORWARD CARBON PERFORMANCE



Liquid Carbon is used in forage and hay systems as a standalone application to support nutrient efficiency and plant response during periods of active growth. Its strength lies in delivering readily available humic acid to the soil and root zone, helping crops make better use of existing fertility and moisture. Liquid Carbon is best positioned where producers want a simple, single-input approach to drive incremental yield and improve forage performance without adding complexity to the system.

APPLICATION FLEXIBILITY



PROGRAM COMPATIBILITY



SOIL SYSTEM FIT



YIELD RESPONSE RELIABILITY



ECONOMIC EFFICIENCY



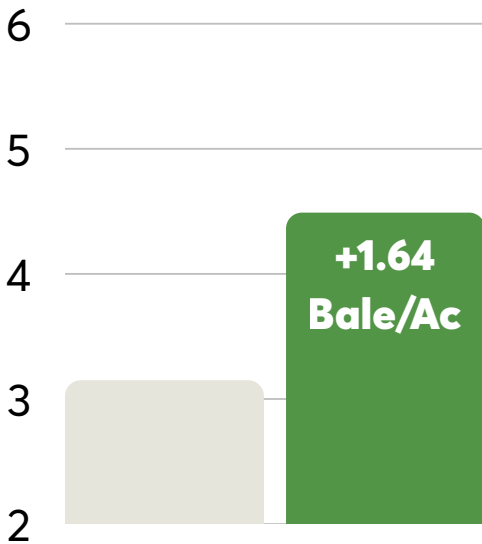


Pea/Oat Bale Results

humaPLUS Liquid Carbon

Yield Response (Bale/Acre)

Pea/Oat Bale - Hanna, AB
Grower Trial



Control vs. 1L/acre pre-burn spray

ROI (X Return)¹

Pea/Oat Bale - Hanna, AB
Grower Trial

71X

Comments: In the pea and oat bale pre-burn application, Liquid Carbon delivered a clear improvement in bale yield compared to the untreated control. Applied ahead of termination, it supported early nutrient availability and crop vigor, translating into measurable yield response under dry early-season conditions. The data shows Liquid Carbon performs well when positioned as a pre-burn efficiency tool, offering strong return without added application complexity.



¹ Return on investment (ROI) expressed as an X multiple for each treatment compared with the untreated Control. Calculations assume a relevant commodity price at the time of data collection and the listed product application rates. ROI is calculated as the extra revenue generated per acre divided by the product cost per acre.

GET IN TOUCH

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