

4-YEAR TRIAL WITH BW FUSION BIOLOGICALS PROVES POSITIVE IMPACT ON (P) & (K) AVAILABILITY



COST SAVINGS OF

\$134/AC

Based on conventional industry (P) & (K) removal rates and application recommendations.

In this four-year grower case study, an increase of (P) by 10 ppm was achieved with only 29% of conventional university removal rate recommendations applied. An increase of 44 ppm of (K) was achieved on 77% of recommended removal rates.

These conventional removal rates suggest we should have seen no change in nutrient levels. Contrary, consistent use of BW Fusion biologicals unleashed the availability of (P) & (K), bringing significant cost savings while protecting crop productivity.

FIELD HISTORY

- Northwest Iowa
- Corn-Soybean Rotation, Non-Irrigated
- Corn 214 BPA 10-yr APH
Soybean 63 BPA 10-yr APH
- Average CEC 19
Average pH 6.5

APPROACH

- Biology applied for 5 years
- BW-Biocast** applied in the spring
- BW-Meltdown** applied in the fall
- Fall soil sampling by a third-party provider (*Tucker Consulting, Storm Lake, IA*)

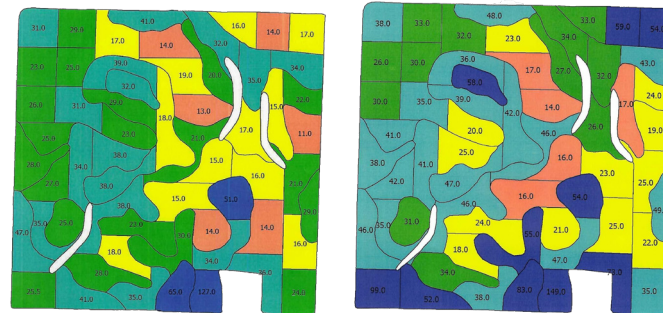
YIELD RESULTS

2023 Soybean: **63 BPA**
2022 Corn: **200 BPA**
2021 Soybean: **73 BPA**
2020 Corn: **212 BPA**

FIELD 4: NUTRIENT LEVEL IMPACTS

PHOSPHORUS

2019 2023

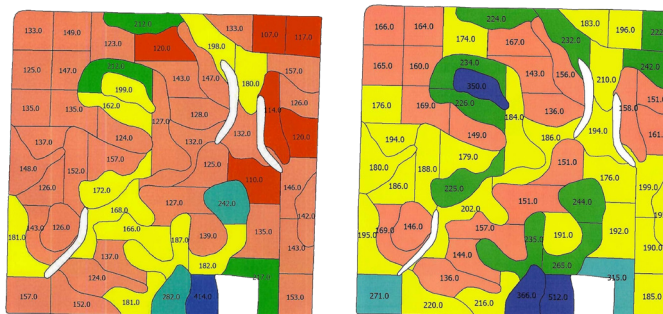


↑ 10 ppm
applied 29% of removal rate

Conventional Industry Nutrient Removal Rate **241 units**
Actual (P) Applied **71 units**
Actual Nutrient Average Levels
2019 28.2 PPM **2023 38.5 PPM**

POTASSIUM

2019 2023



↑ 44 ppm
applied 77% of removal rate

Conventional Industry Nutrient Removal Rate **265 units**
Actual (P) Applied **204 units**
Actual Nutrient Average Levels
2019 155.5 PPM **2023 199.7 PPM**



4-YEAR TRIAL WITH BW FUSION BIOLOGICALS PROVES POSITIVE IMPACT ON (P) & (K) AVAILABILITY



COST SAVINGS OF

**\$52/AC on
(P) Application**

while driving levels **up 15 ppm**
with use of biologicals.

In this four-year, grower case study with use of biologicals, an increase of (P) by 15 ppm was achieved with only 67% of conventional university removal rate recommendations applied. An increase of 74 ppm of (K) was achieved on 18% build rate above recommended removal rates.

Consistent use of BW Fusion biologicals unleashed the availability of (P) & (K), bringing significant cost savings while protecting crop productivity.

FIELD HISTORY

- Northwest Iowa
- Corn-Soybean Rotation, Non-Irrigated
- Corn 219 BPA 10-yr APH
Soybean 62 BPA 10-yr APH
- Average CEC 30
Average pH 7.2

APPROACH

- Biology applied for 5 years
- BW-Biocast** applied in the spring
- BW-Meltdown** applied in the fall
- Fall soil sampling by a third-party provider (*Tucker Consulting, Storm Lake, IA*)

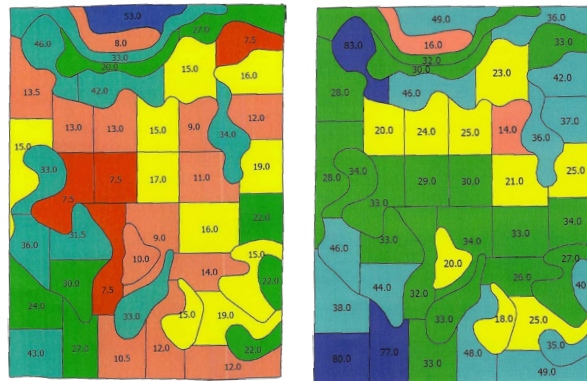
YIELD RESULTS

2023 Soybean: **61 BPA**
2022 Corn: **202 BPA**
2021 Soybean: **69 BPA**
2020 Corn: **210 BPA**

FIELD 5: NUTRIENT LEVEL IMPACTS

PHOSPHORUS

2019 **2023**



↑ 15 ppm
applied 67% of removal rate

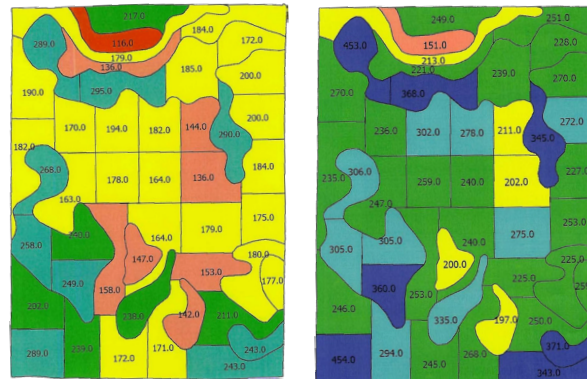
Conventional Industry Nutrient Removal Rate **238 units**

Actual (P) Applied **161 units**

Actual Nutrient Average Levels
2019 **2023**
20.4 PPM **35.7 PPM**

POTASSIUM

2019 **2023**



↑ 74 ppm
applied 118% of removal rate

Conventional Industry Nutrient Removal Rate **259 units**

Actual (P) Applied **306 units**

Actual Nutrient Average Levels
2019 **2023**
197.1 PPM **271.1 PPM**



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CONCLUSION

In this four-year, grower case study with use of biologicals, an increase of (P) by 7 ppm was achieved with only 7% of conventional university removal rate recommendations applied. An increase of 24 ppm of (K) was achieved on only 31% of recommended removal rates.

Consistent use of BW Fusion biologicals unleashed the availability of (P) & (K), bringing significant cost savings while protecting crop productivity.

COST SAVINGS OF
\$139/AC
WHILE STILL DRIVING UP P & K NUTRIENT LEVELS

FIELD HISTORY

- Northwest Iowa
- Corn-Soybean Rotation, Non-Irrigated
- Corn 202 BPA 10-yr APH
Soybean 60 BPA 10-yr APH
- Average CEC 23
Average pH 6.4

APPROACH

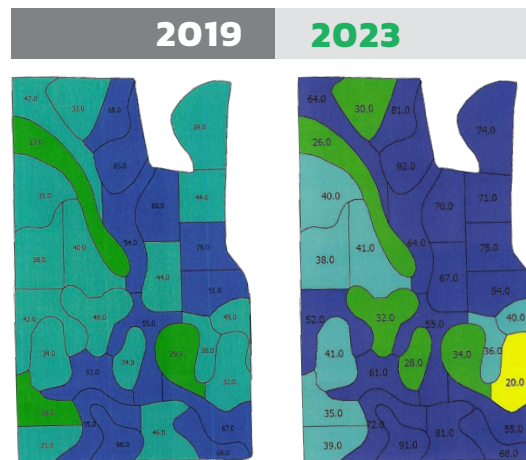
- Biology applied for 6 years
- BW-Biocast** applied in the spring
- BW-Meltdown** applied in the fall
- Fall soil sampling by a third-party provider (*Tucker Consulting, Storm Lake, IA*)

YIELD RESULTS

2023 Corn: **207 BPA**
2022 Soybean: **62 BPA**
2021 Corn: **226 BPA**
2020 Soybean: **53 BPA**

FIELD 6: NUTRIENT LEVEL IMPACTS

PHOSPHORUS



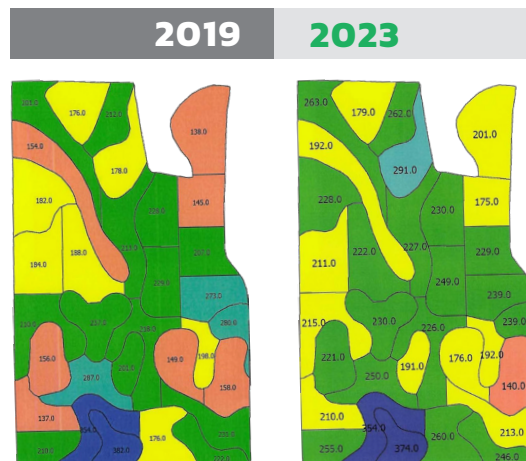
↑ 7 ppm
applied 7% of removal rate

Conventional Industry Nutrient Removal Rate **234 units**

Actual (P) Applied **18 units**

Actual Nutrient Average Levels
2019 46.9 PPM **2023 53.9 PPM**

POTASSIUM



↑ 24 ppm
applied 31% removal rate

Conventional Industry Nutrient Removal Rate **245 units**

Actual (P) Applied **77 units**

Actual Nutrient Average Levels
2019 204.6 PPM **2023 228.9 PPM**

