



Project Objective: This research is to investigate whether the use of BW Fusion Meltdown biological product can help reduce difficulties experienced with excessive corn residue in the subsequent soybean crop, impact soil nutrient availability, and crop yields.

- Project Insights:**
1. There was not a significant yield difference at any sites in 2025.
 2. Only 1 site showed a significant reduction in residue.
 3. Soil and tissue tests did not show a consistent difference when compared to the untreated control.
 4. In the environments tested, this product did not have a positive ROI.

2025 BW Fusion Results

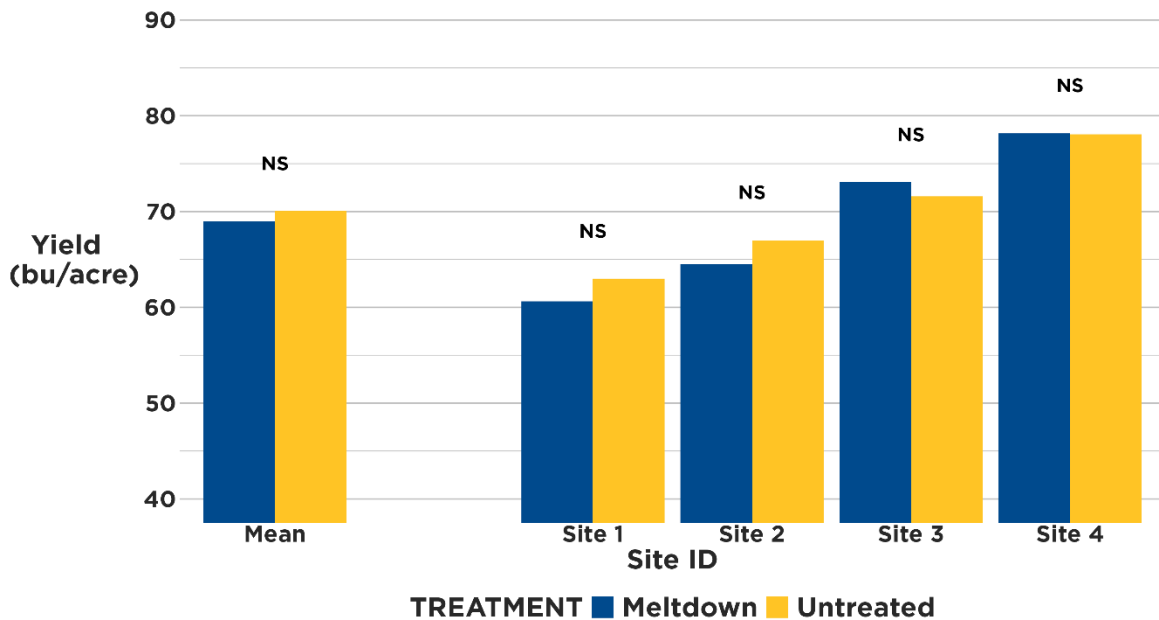


Figure 1. 2025 Yield results comparing BW Fusion Meltdown and Untreated. NS Indicates no significant difference.

2025 Project Discussion

Although it's not always top of mind following corn harvest, residue management is an important consideration and can have an impact on the following year's cash crop. Especially in no-till systems where residue isn't worked back into the soil, a thick mat of residue can cause issues during planting the following spring. Equipment solutions exist but another option coming onto the market is biological products marketed to speed up the breakdown process. Meltdown, a product from BW Fusion, is a biological soil and residue management product used to help decompose residue faster while also making nutrients available to next year's crop. By increasing decomposition rates, this product markets a way



to minimize field preparation time by reducing the need for tillage while improving seedbed conditions and better seed-to-soil contact. This product is typically applied in the fall directly after harvest or can be applied in the spring prior to planting at a rate of 32 oz/acre.

In 2025, there were 5 locations (Figure 2) around the state where Meltdown was applied in strips in Fall 2024 following corn harvest. Yield data was collected in Fall 2025 at 4 of the sites (Figure 1), with an overall average response of -1.0 bushel/acre with the Meltdown product. Individually, Site 3 showed the best response at +1.4 bushel/acre when comparing the Meltdown product to the Untreated control strips. Due to complications which impacted yield data, Site 5 was not included in the overall yield analysis but will be included for all in-season scouting and sample collection.

When looking at products like these, overall yield is important but not the only factor to consider. Crop residue weights were collected in Fall 2024 following the Meltdown application and collected again at Planting, R1 growth stage, and prior to leaf drop in 2025. A breakdown of how much residue remained from first to last sampling event is shown as percentage remaining in Figure 3. Only site 3 showed a significant reduction in the amount of residue remaining between the Meltdown treated strips and untreated control, averaging 20% more removal with the product. All other sites showed varying levels of breakdown/removal that did not appear to be influenced by the addition of the Meltdown product.

2025 Trial Locations

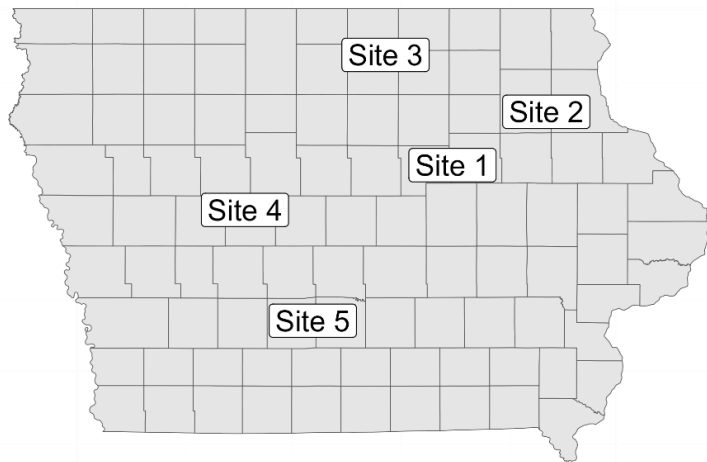


Figure 2. Site locations in 2025

Residue Remaining from Fall 2024 to Summer 2025

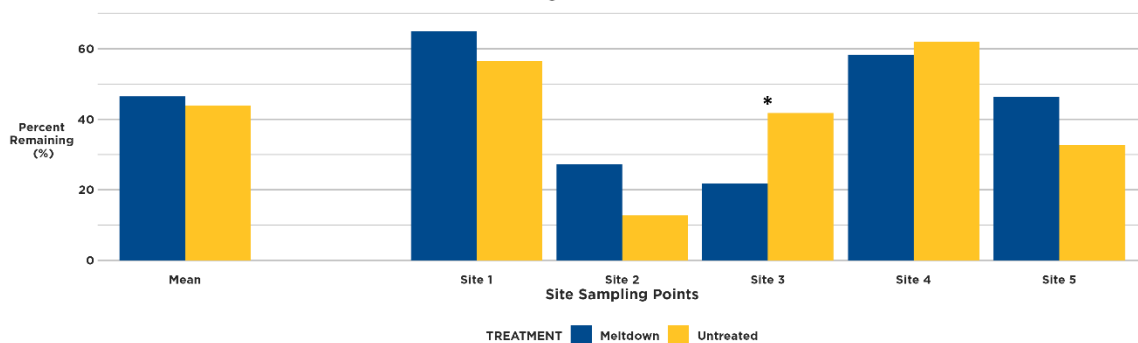


Figure 3. Percent residue remaining comparing BW Fusion Meltdown and Untreated at each site. An * denotes a significant difference between treatments.



Soil & Tissue Sampling

With an increase in the amount of residue breakdown occurring, additional nutrients should be returned to the soil and available for the growing cash crop. Soil samples from 0-6 inch depths were collected at planting, mid-season (R1) and late-season (R6-R7). Results from mid-season sampling are shown in Figure 4. During the mid-season sample collection, tissue samples were also collected (Figure 5) at the same points throughout the field. Similar to residue breakdown, results from soil sampling varied across sites. At Site 3 where the Meltdown product treatment showed a significant amount of residue removed, organic matter concentration was also significantly increased (Figure 4a). Across all sites, a small increase in organic matter was observed. Overall phosphorus levels (Figure 4b) were reduced with the Meltdown product, with Site 5 testing very high concentrations. Results for potassium showed that most sites had concentrations below the optimum range (Figure 4c). Sites 2 and 5 showed a significant increase in potassium with the Meltdown product.

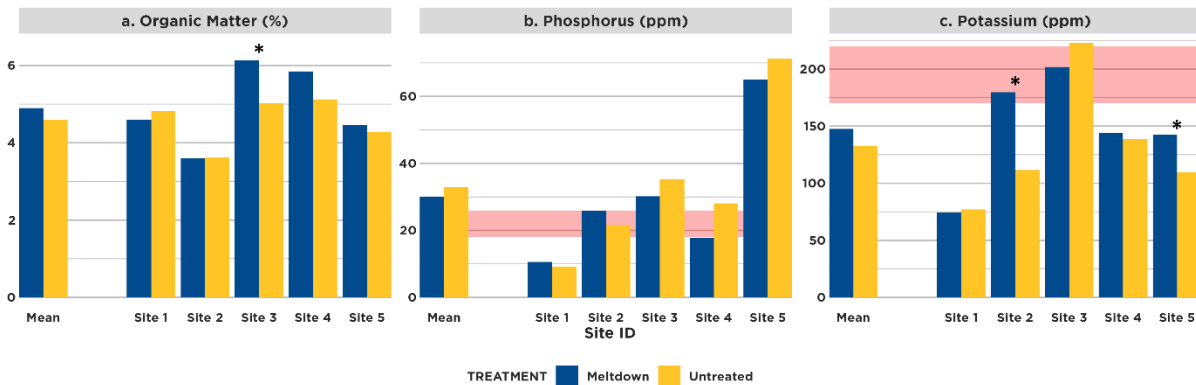


Figure 4. Soil sample results for 2025 comparing BW Fusion Meltdown and Untreated. An * denotes a significant difference between treatments. Red bars indicate optimum fertility levels.

Looking at tissue samples, average phosphorus, potassium and sulfur concentrations showed small increases with Meltdown across all sites. Increases in potassium were seen at 4 of the 5 sites but only Site 3 showed a significant response. At the sites where soils had a significant increase in potassium (Sites 2 and 5), tissue samples were only slightly improved compared to the untreated control. Concentration of phosphorus and sulfur were unaffected or increased at all but one site. Even with these increases, yield was not significantly impacted.

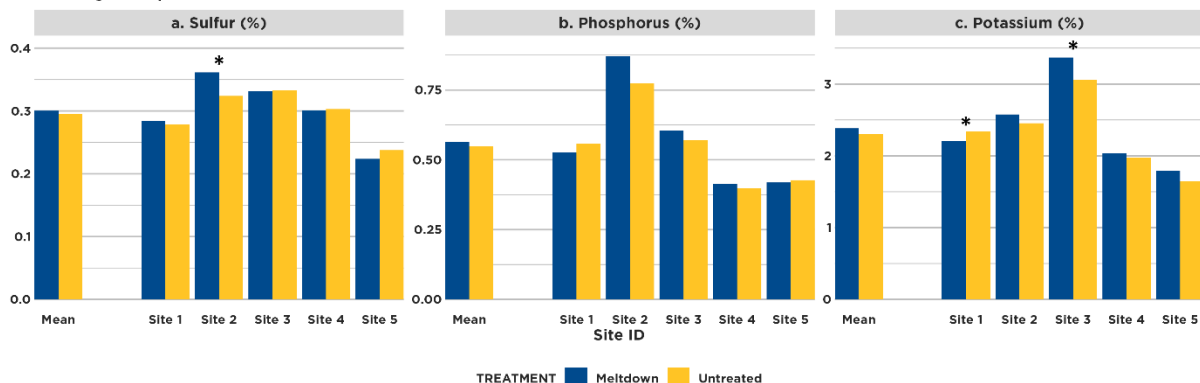


Figure 5. Tissue sample results for 2025 comparing BW Fusion Meltdown and Untreated. An * denotes a significant difference between treatments.



Return on Investment

Given that no significant yield increase was seen with the Meltdown product, ROI for this product would be negative regardless of the price based on yield alone. Changes in residue breakdown, like what was observed at Site 3, could result in some farmers having the ability to reduce or cut tillage passes which would increase return value and may result in a positive ROI for the product.

Across all sites, nutrient concentrations were not consistently different between BW fusion and untreated controls. While significant differences in organic matter and potassium from soil sampling and increases in potassium and sulfur concentrations in tissue testing were observed, this was only on a few individual sites. Even with these increases, yield was not significantly impacted.

Trials have been established for 2026 to continue evaluating this product and its impact on soil nutrient availability and yield.