

# RESEARCH FOR RESULTS



## 2020 University No-Till Residue Decomposition

**OVERVIEW:** This trial compared the results for residue decomposition among three treatments in no-till continuous corn and corn following soybeans utilizing various methods of residue management on their own and when combined with the other methods; Mechanical-only/Fall-applied AMS/Fall-applied Bio-Chemical/Fall-applied Bio-Chemical + AMS.

**LOCATION:** Midwest University

**HARVEST METHOD:** Standard Stalk Roller  
Mechanical Chopper

**DATES:** Fall Harvest Method Treatment - 10/7/2019  
AMS and Chemical Application - 10/14/2019  
Fall Residue Sampling - 10/14/2019  
Spring Residue Sampling - 4/14/2020

### SUMMARY OF

**TRIAL:** (see Chart on Page 2)

1. The highest decomposition percentage occurred for **SoilBiotics SB5500 + AMS** under standard harvest method. **SB5500 had 22.9% decomposition with standard stalk roller, and also placed 2<sup>nd</sup> at 19.5% with mechanical chopper.**
2. The addition of AMS resulted in a synergistic interaction with Chemical Method products. Adding AMS along with a product application resulted in greater decomposition than a product applied alone.
3. Chopping the residue resulted in a 1.8% increase in decomposition over standard harvest method (roller).

2020 University Residue Study		Residue Decomposition Percentage			
<b>Mechanical Residue Management</b>					
Standard Stalk Roller	avg. over all methods				16.0
Calmer BT Chopper	avg. over all methods				17.8
<b>AMS Residue Management</b>					
(ammonium sulphate applied at rate of 42 lbs N per acre)	No AMS avg. over all methods				16.3
	AMS avg. over all methods				17.5
	No AMS with Standard Roller				14.9
	No AMS with Chopper				17.8
	AMS plus Standard Roller				17.0
	AMS plus Chopper				17.9
<b>Chemical Residue Management</b>					
(Extract; SB5500; Hydra-Hume applied with 1 gal. UAN per acre)	Untreated avg. across all methods				18.0
	Extract avg. across all methods				15.8
	SB5500 across all methods				18.9
	Hydra-Hume avg. across all methods				14.9
<b>chemical + mechanical</b>	Untreated with Standard Roller				17.0
	Untreated with Chopper				19.1
	Extract with Standard Roller				13.4
	Extract with Chopper				18.2
	SB5500 with Standard Roller				18.8
	SB5500 with Chopper				19.0
	Hydra-Hume with Standard Roller				14.5
	Hydra-Hume with Chopper				15.1
<b>chemical + mechanical + AMS</b>	Untreated + AMS with Standard Roller				14.9
	Untreated + AMS with Chopper				18.1
	Extract + AMS with Standard Roller				13.9
	Extract + AMS with Chopper				18.7
<b>TOP PERFORMER</b>	<b>SB5500 + AMS with Standard Roller</b>				<b>22.9</b>
<b>2nd Place</b>	<b>SB5500 + AMS with Chopper</b>				<b>19.5</b>
	Hydra-Hume + AMS with Standard Roller				16.3
	Hydra-Hume + AMS with Chopper				15.3