



DAIRYLAND SEED



**AGRONOMY 2022: RESEARCH
& DEMONSTRATION REPORTS**

TABLE OF CONTENTS

Title	Page(s)
Introduction	3
Soybean Planting Date	4 - 5
Corn Planting Date - Wabash	6
Soybean Seed Treatment - Wabash	8
Soybean Plant Population - Winona, MN	9
Xyway® Fungicide Study	10 - 11
Soybean Rolling	12
Soybean Variety Comparison & Fungicide Study	13
Corn Fungicide Timing	14 - 15
Fungicide Use for Increased Silage Quantity & Quality	16 - 17
Strategies for Early Soybean Harvest - Third & Final Year (2020-2022)	18 - 19
Nitrogen Management	20 - 21
Utrisha™ N Observations	22
Ultra-High Yield Corn & Soybeans	24 - 25
Harvest Timing of Corn & Phantom Yield Loss - Year Two (2021-2022)	26



Aerial photo of Wabash Research Farm



Dan Ritter, Central Region
(219) 863-0583



Branden Furseth, Northern Region
(608) 513-4265



Brian Weller, Western Region
(507) 456-3034



Amanda Goffnett, Eastern Region
(989) 400-3793



Mark Gibson, Eastern Region
(260) 330-8968

INTRODUCTION

Welcome to your 2022 edition of the Product and Agronomy Research (PAR) Report. This year as in the past Dairyland Seed conducted agronomic research and demonstration plots across our marketing area. We have field trials as well as dedicated research and demonstration sites in Wabash, IN; Mt. Hope WI; and St. John, MI. In addition, we had several on farm field trials. Each year in agriculture is a challenge and agricultural research makes it even more complex. Achieving all the required, sometimes time sensitive, treatments such as planting, spraying, data collection and harvesting can be a monumental task. Thanks to great cooperators, contract researchers and staff we were able to complete another great year in answering some interesting agronomic questions. Our goal several years ago was to implement multi year studies in order to increase the validity and accuracy of our trials. You will now notice we have two- and three-year data for some of the projects. Similar results in multiple years builds a higher level of confidence in the findings.

As always, we encourage you to use the information presented here and other trusted sources to make an informed decision to manage your operation to its highest potential. Much of what we investigate is in direct response to questions and conversations with you, our valued seed friends. So, as you chat with your Dairyland Seed representatives this year, remember we are listening and just might design a test to answer your questions. Never hesitate to contact your local Dairyland Seed Dealer, District Sales Manager, Regional Sales Manager or Regional Agronomist to further discuss this report or other agronomic concerns you may have.

We would like to thank all our cooperators, contractors and staff who assisted in making this program successful.

Special acknowledgement to the following:

- Huntington University Agriculture science students for their assistance in harvesting silage plots.
- Agro-Liquid - St. Johns, MI
- Ryan Kussmaul, Dairyland Seed - Mt. Hope, WI
- Advanced Ag Resources, Bob and Chris Shultz - Wabash, IN
- Mike Unruh-Haase Sales - Winona, MN

Sincerely,

The Dairyland Seed Agronomy Team



SOYBEAN PLANTING DATE

Description:

Early planting for soybeans has been a much-discussed agronomic topic for several years. Some studies suggest a possible yield increase with earlier planting. This leads to growers asking every year if soybeans or corn should be planted first. In this demonstration we are comparing various planting dates for soybeans and different soybean varieties. This study was conducted in 2021 and 2022 at both the Wabash and St. Johns locations.

Wabash, IN

DSR-2640E™, DSR-2717E™, DSR-3177E™ and DSR-3499E™ were planted at 130,000 seeds per acre in 30-inch rows with standard management across all treatments. Target planting dates were mid-April, late-April, mid-May and early-June. Cool and wet weather this spring slightly delayed some of the planting dates.

Treatments:

1. April 23
2. May 12
3. May 19
4. June 1

St. Johns, MI

DSR-1505E™ and DSR-2717E™ were planted at 135,000 seeds per acre in 30-inch rows with standard management across all treatments. Target planting dates were mid-April, late-April, mid-May and early-June.

Treatments:

1. April 20
2. April 29
3. May 12
4. June 1



SOYBEAN PLANTING DATE (Continued)

Results:

2022 Soybean Yield by Planting Date

DATE	LOCATION	VARIETY	BU/A
4/20/2022	St. Johns	DSR-1505E™	52.5
4/20/2022	St. Johns	DSR-2717E™	60.4
4/23/2022	Wabash	DSR-2640E™	73.3
4/23/2022	Wabash	DSR-2717E™	75.5
4/23/2022	Wabash	DSR-3177E™	68.9
4/23/2022	Wabash	DSR-3499E™	85.3
Mid-April			66.1
4/29/2022	St. Johns	DSR-1505E™	55.7
4/29/2022	St. Johns	DSR-2717E™	54.2
5/12/2022	Wabash	DSR-2640E™	69.8
5/12/2022	Wabash	DSR-2717E™	69.6
5/12/2022	Wabash	DSR-3177E™	72.1
5/12/2022	Wabash	DSR-3499E™	81.5
Late April/Early May			64.1
5/12/2022	St. Johns	DSR-1505E™	56.7
5/12/2022	St. Johns	DSR-2717E™	58.2
5/19/2022	Wabash	DSR-2640E™	69.0
5/19/2022	Wabash	DSR-2717E™	70.7
5/19/2022	Wabash	DSR-3177E™	73.2
5/19/2022	Wabash	DSR-3499E™	78.3
Mid-May			65.1
6/1/2022	St. Johns	DSR-1505E™	48.6
6/1/2022	St. Johns	DSR-2717E™	52.3
6/1/2022	Wabash	DSR-2640E™	65.3
6/1/2022	Wabash	DSR-2717E™	64.1
6/1/2022	Wabash	DSR-3177E™	66.8
6/1/2022	Wabash	DSR-3499E™	77.3
Early June			59.4

2021 Soybean Yield by Planting Date

DATE	LOCATION	VARIETY	BU/A
4/5/2021	Wabash	DSR-3177E™	71.5
4/5/2021	Wabash	DSR-3587E™	72.9
4/14/2021	St. Johns	DSR-2640E™	65.1
4/14/2021	St. Johns	DSR-2040E™	64.3
Early April			68.4
4/23/2021	Wabash	DSR-3177E™	71.5
4/23/2021	Wabash	DSR-3587E™	69.6
4/30/2021	St. Johns	DSR-2640E™	69.5
4/30/2021	St. Johns	DSR-2040E™	63.8
Late April			68.6
5/15/2021	Wabash	DSR-3177E™	70.5
5/15/2021	Wabash	DSR-3587E™	72.2
5/15/2021	St. Johns	DSR-2640E™	72.0
5/15/2021	St. Johns	DSR-2040E™	64.5
Early May			69.8
5/25/2021	Wabash	DSR-3177E™	67.7
5/25/2021	Wabash	DSR-3587E™	66.5
6/1/2021	St. Johns	DSR-2640E™	68.3
6/1/2021	St. Johns	DSR-2040E™	61.6
Late May			66.0

Conclusion:

Results this year indicate the mid-April to mid-May planting dates yielded similar and were significantly higher than the June 1 planting. The 2021 data showed similar results with the lowest yields in the late May/early June planting date. Although soybean emergence can be reduced in early planting, the remaining plants are capable of branching and setting pods to make up for the lost plants. It is important to note that adequate soil conditions are necessary for determining when to plant. Planting ultra-early in conditions that are too wet or cold can result in chilling injury, reduced vigor, and seed mortality. The results from this study and other industry studies supports planting soybeans early, along as soil conditions are adequate, and waiting for more favorable conditions to begin planting corn.

CORN PLANTING DATE - WABASH

Description:

Planting date of corn is a common topic throughout the year. We know that certain hybrids have different attributes that make them better suited for different planting times. In this study we are looking to compare 4 hybrids with differing stress emergence ratings to see how planting date impacts the yield of each hybrid. This data will allow us to have a better understanding of how planting date affects hybrids with various stress emergence characteristics.

Wabash, IN

DS-4219AM™, DS-4917AM™, DS-5161Q™ and DS-5144Q™ were planted at 34,000 seeds per acre in 30-inch rows. The May 19th planting of DS-5144Q™ was unable to be harvested. Treatments were replicated 2 times.

Treatments:

Planting Dates

1. April 23
2. May 12
3. May 19
4. June 1

Results:

2022 Averages by Planting Date

DATE	YIELD	MOISTURE	TW
04/23/22	216.3	16.5	59.5
05/12/22	243.9	18.5	58.3
05/19/22	241.3	22.7	56.2
06/01/22	248.0	19.5	57.8

2022 Yield by Planting Date and Hybrid

DATE	DS-4219AM™	DS-4917AM™	DS-5161Q™	DS-5144Q™
04/23/22	215.6	208.1	216.1	225.3
05/12/22	236.9	234.6	249.5	254.4
05/19/22	244.0	244.1	235.9	—
06/01/22	242.7	254.4	241.3	253.5

2021 Averages by Planting Date

DATE	YIELD	MOISTURE	TW
04/05/21	275.1	17.5	56.2
04/25/21	273.9	17.2	56.5
05/14/21	253.8	17.9	55.9
05/24/21	240.7	19.1	55.5

Conclusion:

Cool and wet weather this spring delayed planting in several areas by about 2 weeks. Even with a little later planting date than usual, significantly lower yields were reported across all 4 hybrids for the early planting date. Yields for the May 12 through June 1 planting dates did not differ drastically. When we compare this year's results to last year's results, we see the same trend of increased test weight and lower moisture with the early planting. However, last year there were higher yields with the early planting and this year the early planting resulted in the lowest yields, regardless of hybrid stress emergence ratings. This shows the importance of paying attention to soil conditions, like temperature and moisture, instead of a calendar date to determine the optimum planting time.

Ideal conditions for planting include adequate moisture but not too much moisture and soil temperatures above 50°F with an uptrend. It is best to check the extended weather forecast before planting to make sure cool and wet conditions are not predicted. Less than ideal soil conditions can result in chilling imbibitional injury, compaction and uneven emergence which can all negatively affect yield. Overall, the best planting time is when soil conditions are optimal, and the upcoming weather forecast is favorable.



SOYBEAN SEED TREATMENT - WABASH

Description:

Early season seedling diseases and pests can wreak havoc on soybean stands. Soybean seed treatments can help preserve stand that would otherwise be lost to these early season pests. In this study we examined the efficacy of our LumiGEN® soybean seed treatment offerings as compared to an untreated check. The variety used in this study was DSR-3499E™ planted at 110,000 seeds per acre on May 21, 2022.

Treatments:

- UT-Untreated
- F-Fungicide
- FI-Fungicide/Insecticide
- FI INOC-Fungicide/Insecticide/Inoculant
- FINST-Fungicide/Insecticide/ ILeVO Nematicide

	LUMIGEN® PREMIUM FST (FUNGICIDE)	LUMIGEN® FST/IST (FUNGICIDE + INSECTICIDE)	LUMIGEN® FST/IST/INOC (FUNGICIDE + INSECTICIDE + INOCULANT)	LUMIGEN® FST/IST/NST (FUNGICIDE + INSECTICIDE + NEMATICIDE)
Lumisena fungicide	✓	✓	✓	✓
LumiTreo™ + Metalaxyl fungicide	✓	✓	✓	✓
L-2030 R biological	✓	✓	✓	✓
Imadacloprid insecticide		✓	✓	✓
ILeVO® nematicide & SDS				✓
120+ inoculant plus extender			✓	

Results:

TREATMENT	MOISTURE	TEST WEIGHT	YIELD
UT	13.5	58.3	51.03
F	13.5	58.0	56.95
FI	13.5	58.4	56.87
FI INOC	13.5	58.3	52.65
FINST	13.4	58.3	56.23

Conclusion:

The FI INOC showed the least increase in yield at 1.62 bushels/acre, as compared to the untreated check which was due to some boarder effect in the plot. The remaining treatments were an average of 5.65 bushels/acre better than the untreated check. Seed treatments continue to show the ability to preserve yield potential of soybeans by protecting the plants from early season diseases and pests. Past soybean seed treatment trials at this site have shown an increase in yield of 1 to 2 bushels over untreated checks, we will continue to test seed treatments at this site to monitor efficacy.



SOYBEAN PLANT POPULATION - WINONA, MN

Description:

Plant population or final stand plant population in soybeans has been a hot topic for the last few years. The question of what is the optimum plant population for highest yield expression, will vary from field to field as well as areas within a field, with varietal differences impacting yields by plant population too. Diseases such as Sclerotinia White Mold (SWM) favor reducing plant population and nutrient deficiencies such as Iron Deficiency Chlorosis (IDC) favor increasing population. These factors influence the decision making process on what is the correct plant population for a field or parts of a field. Other factors such as weed control, canopy type (bushy or narrow) and plant height will impact this decision as well.

The other aspect of looking at plant populations is that whether it be as an agronomist or farmer we have all had instances in which plant populations have been reduced either by some calamity such as weather (hail, wind, sandblasting, frost) or animals (deer, turkeys) and we need to make decisions as to if replanting is warranted. This data will provide a better understanding as to what level, the bottom for plant populations might be.

Winona, MN

DSR-1919E™ was planted at various plant populations starting at 155,000 seeds/acre and ratcheting down to 40,000 seeds/acre in mostly 15,000 seeds per acre increments in 30-inch rows. This plot was planted on May 13th, 2022 which was an average planting date for soybeans in this area, with the harvest date being October 10th, 2022.

Results:

VARIETY	PLANT POPULATION	YIELD	MOISTURE	ROW LENGTH	ROW WIDTH	# OF ROWS
DSR-1919E™	40K	52.23	10.1	745	30	6
	65K	63.96	10.1	746	30	6
	80K	65.44	9.9	746	30	6
	95K	68.77	10.0	747	30	6
	110K	64.8	10.0	748	30	6
	125K	69.52	10.0	749	30	6
	155K	66.85	10.0	749	30	6
	140K	67.69	10.0	750	30	6

Conclusion:

The yields for this trial were not surprising in that this field has very good soil fertility. What was surprising was how well these beans yielded with as low as the plant populations were. Typically, it has been this agronomist's belief, that plant populations below 90-95,000 plants/acre at this location would suggest replanting.

The results, which were again very positive, would indicate that this trial needs to be replicated in different locations, with different varieties over a longer time period. Other aspects which would be interesting to see would be areas with lower fertility levels and a shorter growing season, with less overall rainfall. The shorter growing season, lower fertility and rainfall levels might suggest other outcomes over a longer period of time.

XYWAY® FUNGICIDE STUDY

Description:

Xyway® LFR (Liquid Fertilizer Ready) is a group 3 triazole fungicide that is applied in a 2x2 application at planting on corn. With the onset of tar spot in our area growers are looking for ways to help keep corn plants healthy through grain fill. Xyway LFR is used to control northern corn leaf blight and gray leaf spot up to reproductive stages in corn. Disease pressure was monitored through the growing season at both St. Johns and Wabash locations.

Wabash, IN

HiDF-4073Q™ was planted on May 22 at 34,000 seeds per acre in 30-inch rows. Xyway LFR was applied in 2x2.

St. Johns, MI

DS-3601AM™ and DS-4510Q™ were planted on May 17 at 32,000 seeds per acre in 30-inch rows. Xyway was applied using the Conceal (3x2x2) system.

Treatments:

1. Xyway LFR (15.2 oz/A) soil applied at planting
2. Xyway LFR (15.2 oz/A) at planting + Aproach® Prima (6.8 oz/A) at VT
3. Xyway LFR (15.2 oz/A) at planting + Aproach Prima (6.8 oz/A) at brown silk
4. Untreated

Results:

Wabash and St. Johns results combined

TREATMENT	AVERAGE OF YIELD	ESTIMATE OF YIELD (LSD (0.10)=13.2)	YIELD DIFFERENCE
Untreated	210.334089	216.61	BC
VT only Aproach Prima	224.593025	230.86	A
Xyway 2x2	222.538852	228.81	AB
Xyway 2x2 + VT Aproach Prima	221.299971	227.57	AB
Xyway 2x2 + brown silk Aproach Prima (St. Johns only)	183.35	213.48	C

Wabash results

TREATMENT	YIELD	EST YIELD (LSD (0.10)=6.08)	YIELD DIFF	AVG MOISTURE	EST MOISTURE (LSD (0.10)=0.20)	MOISTURE DIFF	AVG TW	EST TW (LSD (0.10)=0.41)	TW DIFF
Untreated	225.26	232.30	C	17.60	18.13	A	58.27	57.94	A
VT only Aproach Prima	241.46	248.50	A	18.23	18.76	B	57.70	57.38	BC
Xyway LFR 2x2	233.53	240.50	B	17.70	18.23	A	58.40	58.08	A
Xyway LFR 2x2 + VT Aproach Prima	242.13	249.17	A	18.13	18.66	B	57.67	57.34	BC

XYWAY® FUNGICIDE STUDY (Continued)

Conclusion:

In the hopes of comparing the efficacy of Xyway LFR on gray leaf spot suppression as well as tar spot we selected to HiDF-4073Q™ at Wabash which has a GLS score of 5, which is more susceptible to GLS infection than some other products. As often happens in research, we did not see GLS lay into either plot in recordable levels. There was very little disease in this trial block overall, the only noteworthy disease to impact this trial was tar spot which showed up at R4 across all treatments but did not progress to detrimental levels. Upon statistical analysis of this trial, we see that the application of Xyway LFR at planting + VT application of Approach Prima and a VT application of Approach Prima showed no statistical difference. The 0.67 bushel increase in yield of the Xyway LFR application and VT Approach Prima treatment vs the VT application of Approach Prima alone was likely not economically viable this year, in this location. It is important to note the increase in yield with the application of fungicides in this trial where all application's resulted in an increase in yield, even in years of low disease expression, the plant health benefits of fungicides can increase yield. The combined data shows an increase in yield with an application foliar fungicide at VT. The VT growth stage is the most common application timing recommendation for foliar fungicides, because this allows for optimum plant health during reproductive stages. As with any pesticide use, blanket applications and overuse can lead to resistance in the pests controlled, fungicides and the fungus that they control are no different. Proper integrated pest management and the use of multiple modes of actions are recommended for long term fungicide use.



SOYBEAN ROLLING

Description:

Intentional damage to the terminal growing point of soybeans is believed to increase branching and produce more nodes from which pods may develop. These practices are often brought up at meetings anecdotally and some claim to have seen increases in yield. We will look at rolling soybeans at the V2-V3 growth stage and determine if this practice increases yield.

Wabash, IN

DSR-3177E™ and DSR-3587E™ were planted on April 27th at 130,000 seeds per acre in 30-inch rows.

Treatments:

1. Untreated
2. Roll soybeans at V2-V3 growth stage

Mt. Hope, WI

DSR-2188E™ and DSR-2562E™ were planted on May 11th at 120,000 seeds per acre in 30-inch rows.

Treatments:

1. Untreated
2. Roll soybeans at V2-V3 growth stage

Results:

Soybean Rolling Results for Mt. Hope and Wabash

VARIETY	ROLL YIELD	NO ROLL YIELD	ADVANTAGE
DSR-2188E™	74.3	79.7	-5.4
DSR-2562E™	77.7	71.1	6.6
DSR-3177E™	70.3	67.0	3.3
DSR-3587E™	73.2	72.7	0.5
Average	73.9	72.6	1.3

Conclusion:

Soybeans that were rolled had the application during the heat of the day while the plant was limber, to avoid breaking the plants off at the soil line. The results indicate a slight 1 bushel per acre average advantage to rolling. However, individual results by variety show a large range in the advantage to rolling. The lack of consistency indicates that other yield determining factors, such as weather, could have a larger play than the rolling treatment. A similar study was conducted last year at the Wabash location that looked at the effect of a mowing treatment and a rolling treatment on DSR-3177E™ and DSR-3587E™. That study found no yield gain or loss with the treatments, except with DSR-3587E™ that were mowed and were also border rows. Soybean plants have an exceptional ability to compensate for loss or damage to the main growing point by growing through the axillary buds. Still, the amount of yield at the end of the season is heavily influenced by nutrient availability and growing conditions.

SOYBEAN VARIETY COMPARISON & FUNGICIDE STUDY

Description:

This trial is to show variety performance comparisons for group 1.4 – 2.9 soybeans, with and without foliar applied fungicide. Fungal disease may be suppressed or controlled through varietal selection and the use of fungicides. The fungicide used not only controls white mold but is labeled for other foliar diseases in soybeans.

St. Johns, MI

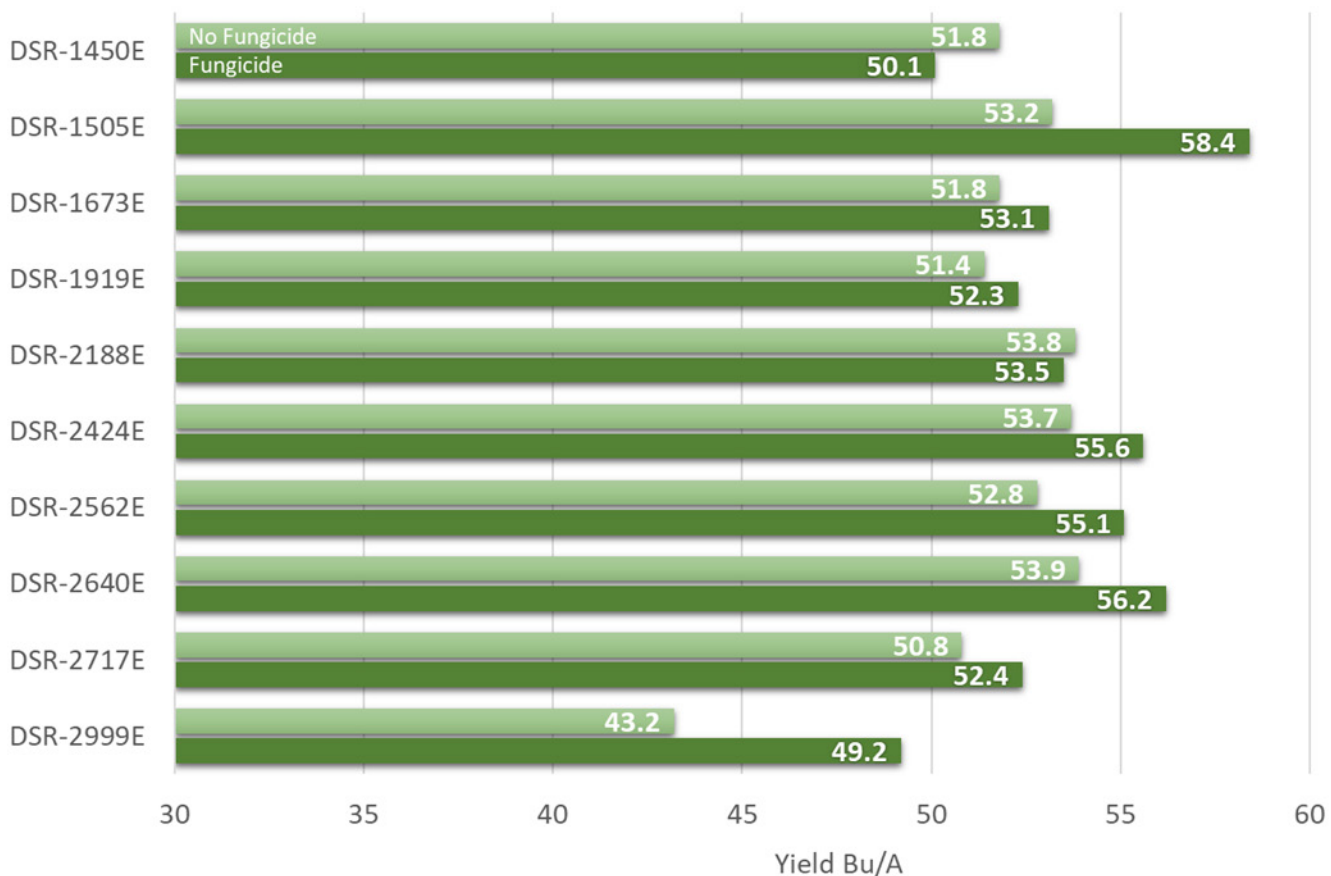
DSR-1450E™, DSR-1505E™, DSR-1673E™, DSR-1919E™, DSR-2188E™, DSR-2424E™, DSR-2562E™, DSR-2640E™, DSR-2717E™ and DSR-2999E™ were planted at 135,000 plants per acre in 30-inch rows on May 12, 2022.

Treatments:

1. No fungicide application
2. Aproach (9 oz/A) applied at R3 beginning pod

Results:

Effect of Aproach Fungicide on Yield of Soybean Varieties



Conclusion:

The weather this year during the growing season was drier than usual and resulted in a low disease pressure year. In this plot, there was no instance of white mold or other yield limiting diseases. Some Septoria brown spot was noted but that is not usually associated with significant yield loss. The soybean varieties treated with Aproach fungicide appeared slightly healthier than the untreated varieties and resulted in a 2 bushel per acre average advantage. In a year with higher disease pressure, the benefit to using fungicide is expected to be significantly higher. In any year it is best to monitor disease risk and select the best timing for fungicide application.

CORN FUNGICIDE TIMING

Description:

With the onset of polycyclic diseases such as tar spot, fungicide application timing has become a topic of discussion. Structured fungicide applications have become common practice in management strategies. Common timings for foliar fungicides are V5, VT (tassel), and R3 (brown silk). This trial looks at these single applications as well as these applications in combination with one another.

Wabash, IN

DS-4510Q™, DS-4878AM™, DS-5095AM™ and DS-5279Q™ were planted on May 22 at 34,000 seeds per acre in 30-inch rows.

St. Johns, MI

DS-3601AM™ and DS-4510Q™ were planted on May 17 at 32,000 seeds per acre in 30-inch rows.

Treatments:

1. Untreated
2. Aproach® (6 oz/A) at V5
3. Aproach® (6 oz/A) at V5 + Aproach® Prima (6.8 oz/A) at VT
4. Aproach® Prima (6.8 oz/A) at VT
5. Aproach® Prima (6.8 oz/A) at VT + Aproach® Prima (6.8 oz/A) at Brown Silk
6. Aproach® Prima (6.8 oz/A) at Brown Silk
7. Aproach® (6 oz/A) at V5 + Aproach® Prima (6.8 oz/A) at VT + Aproach® Prima (6.8 oz/A) at Brown Silk (St. Johns only)

Results:

Wabash and St. Johns combined

TREATMENT	AVERAGE OF YIELD	ESTIMATE OF YIELD (LSD (0.10)=4.49)	YIELD DIFFERENCE
Brown Silk	249.78133	186.32	A
Untreated	243.67464	179.5	B
V5	249.82067	185.64	A
V5 & VT	246.94275	182.76	AB
V5 & VT & Brown Silk (St. Johns only)	185.05	173.11	C
VT	251.25711	187.08	A
VT & Brown Silk	242.59318	178.41	B

Wabash

TREATMENT	AVG OF YIELD	EST OF YIELD (LSD (0.10)=3.90)	YIELD DIFF	AVG OF MOISTURE	EST MOISTURE (LSD (0.10)=1.05)	MOISTURE DIFF	AVG TW	EST OF TW (LSD (0.10)=0.25)	TEST WEIGHT DIFF
Untreated	252.96	253.86	B	23.75	22.16	B	55.3	54.66	C
V5	258.18	259.08	A	23.77	22.18	B	55.5	54.87	BC
V5 & VT	257.34	258.25	A	23.7	22.11	B	55.5	54.84	BC
VT	259.91	260.82	A	23.49	21.9	AB	55.7	55.01	AB
VT & Brown Silk	251.15	252.05	B	23.38	21.79	AB	55.8	55.17	A
Brown Silk	256.61	258.19	A	23.34	20.9	A	55.6	55	AB

CORN FUNGICIDE TIMING (Continued)

Wabash Variety Results:

VARIETY	TREATMENT	AVERAGE YIELD OF 3 REPS
DS-4510Q™	Untreated	257.6
	V5	257.5
	V5 & VT	259.6
	VT	258.8
	VT & Brown Silk	253.4
	Brown Silk	265.3
DS-4878AM™	Untreated	253.2
	V5	264.2
	V5 & VT	256.9
	VT	267.3
	VT & Brown Silk	253.5
	Brown Silk	256.5
DS-5095AM™	Untreated	259.2
	V5	257.7
	V5 & VT	260.4
	VT	255.7
	VT & Brown Silk	252.2
	Brown Silk	255.8
DS-5279Q™	Untreated	241.8
	V5	253.0
	V5 & VT	252.5
	VT	257.9
	VT & Brown Silk	245.1
	Brown Silk	248.9



Conclusion:

Treatments at the Wabash location in 2022 were the same as at St. Johns, minus the “full meal deal” application of a V5+VT+Brown silk fungicide application. In anticipation of a tar spot infection like 2021 we hoped to learn more about fungicide timing and the suppression of tar spot as well as other foliar diseases. However, both locations saw very little disease pressure through the year. Moderate temperatures and precipitation around R4, R5 were conducive conditions for a light infection of tar spot across all treatments, but the infection did not progress. This is likely due to higher temperatures up to black layer. There were no visible differences in any of the treatments through the growing season, the entire study range remained healthy all season. When we analyze the yield results from this study, we see that the V5, V5+VT, VT, and brown silk applications were all statistically the same regarding yield, and raw data showing a 1.74 bushel increase in yield over the V5 application. In low disease environments, a single application makes the most economic sense, with best timing landing at the VT growth stage. This application timing is the most recommended by fungicide manufactures. Table 2 shows the average yields of the 3 replications for each hybrid and treatment. We see the best yield for 3 out of the 4 hybrids occurring with a VT application. As with any pesticide use, blanket applications and overuse can lead to the development of resistance. Proper integrated pest management and the use of multiple modes of actions are recommended for long term fungicide use to negate potential resistance.

FUNGICIDE USE FOR INCREASED SILAGE QUANTITY & QUALITY

Description:

Concern over corn foliar diseases has increased in recent growing seasons. This is especially true when we account for concerns over tar spot. In this second-year research project we will focus on corn silage production. We will be evaluating silage yield and silage quality. To achieve this, we looked at three categories of silage hybrids. Those hybrids are as follows: one HiDF - HiDF-5000Q™, one brown mid rib - DB-5211AMXT™ and one dual purpose - DS-5279Q™. They will all be treated with Approach® Prima fungicide at the label recommended timing of VT - R2. The hybrids were planted at 33,600 seeds per acre and managed at standard agronomic levels. Each year we used four replications. Data assimilated were hand harvested silage weights, machine harvest grain yield as well as visual leaf ratings. In addition, all samples were submitted for silage quality analysis.

Results:

2021 Silage Corn Fungicide Trial

PRODUCT	TONS/A	STARCH	NDFD	TONS/A	STARCH	NDFD
NO FUNGICIDE			FUNGICIDE			
BMR-3508RA™	25.1	37.7	58.5	24.8	39.0	60.4
HiDF-4999Q™	25.2	38.4	55.8	28.4	40.1	57.7
DS-5279Q™	31.1	38.4	56.2	30.1	39.0	56.5
Average	27.1	38.2	56.8	27.8	39.4	58.2

PRODUCT	GLS %	NCLB%	TAR SPOT%	GLS %	NCLB%	TAR SPOT%
NO FUNGICIDE			FUNGICIDE			
BMR-3508RA™	7.5	1.5	0.0	17.5	5.0	0.25
HiDF-4999Q™	5.0	0.0	0.5	1.0	0.0	0.25
DS-5279Q™	6.5	0.0	0.0	2.0	0.5	0.25

Wabash 2022

PRODUCT	TONS/A	STARCH	NDFD	TONS/A	STARCH	NDFD
NO FUNGICIDE			FUNGICIDE			
HiDF-5000Q™	29.54	34.27	54.43	30.45	31.57	53.67
DS-5279Q™	29.54	37.30	58.07	31.85	36.94	56.80
DB-5211AMXT™	27.91	31.70	58.28	26.18	31.29	61.42
Average	28.99	34.42	56.93	29.49	33.27	57.30

2021 and 2022 Averages

	TONS/A	STARCH	NDFD	TONS/A	STARCH	NDFD
NO FUNGICIDE			FUNGICIDE			
2022 Avg	28.99	34.42	56.93	29.49	33.27	57.30
2021 Avg	27.12	38.17	56.82	27.77	39.36	58.23
Two years	28.06	36.29	56.87	28.63	36.31	57.76

FUNGICIDE USE FOR INCREASED SILAGE QUANTITY & QUALITY (Continued)

Conclusion:

Limited disease levels in both 2021 and 2022 may have reduced the impact of fungicide applications. In 2021, disease ratings were taken and are reported above. In 2022, disease ratings were taken but little to no disease was present at the late August rating date. Both years we looked for gray leaf spot, northern corn leaf blight and tar spot. In both years we have noticed that tar spot infestations increased significantly in the month of September. This, as we have come to observe, has been rather typical of this disease. In 2021, we observed increased tonnage of about 1,400 lbs (.7 ton) and in 2022, it was slightly less at 1,000 lbs (.5 ton). Starch data for the two years was mixed, with 2021 showing a slight advantage to fungicide and starch content and 2022 showing a bit of a decrease with fungicide applications. The NDFD30 numbers showed an increase for both years. However, again for 2022, the difference was not as great as in 2021. Two-year averages show a .57 ton advantage for fungicide applications and .89 increase in NDFD30. Starch numbers for the two years was negligible. Summarizing, even under little to no disease pressure we are recording an advantage to applying fungicide for corn silage production. It looks as if both years, the increased tonnage will cover the cost of fungicide application. The gain (or profit) would be in “feed hygiene” and increased NDFD30 and quality.



STRATEGIES FOR EARLY SOYBEAN HARVEST - THIRD & FINAL YEAR (2020 - 2022)

Description:

There are several reasons growers have questions related to harvesting soybeans early. Cover crop establishment is one of the reasons and the initial purpose for conducting this project. Other reasons include tile projects, manure management, early soybean contracts or simply an early start on harvest. We will investigate two methods of achieving early soybean harvest. The first is using ultra early soybean varieties and second using desiccation of soybean in the late R7 and early R8 stage of development using herbicides. We will then evaluate yield performance and economic returns for this system.

Treatments for 2020:

1. DSR-0847E™
2. DSR-1673E™
3. DSR-2259E™
4. DSR-3058E™ and desiccant at R7
5. DSR-3365E™ and desiccant at R7
6. DSR-3058E™ and desiccant at R8
7. DSR-3365E™ and desiccant at R8
8. DSR-3587E™
9. DSR-3058E™

Treatments for 2021:

1. DSR-1673E™
2. DSR-2040E™
3. DSR-2640E™
4. DSR-3177E™ and desiccant at R7
5. DSR-3587E™ and desiccant at R7
6. DSR-3177E™ and desiccant at R8
7. DSR-3587E™ and desiccant at R8
8. DSR-3587E™
9. DSR-3177E™

Treatments for 2022:

1. DSR-1505E™
2. DSR-2188E™
3. DSR-2717E™
4. DSR-3177E™ desiccated at R7
5. DSR-3499E™ desiccated at R7
6. DSR-3177E™ desiccated at R8
7. DSR-3499E™ desiccated at R8
8. DSR-3177E™
9. DSR-3499E™

Results:

Wabash, IN - 2020

VARIETY	AVG YIELD	SPRAY DATE	HARVEST DATE
DSR-0847E™	38.9	N/A	5-Sep
DSR-1673E™	54.2	N/A	15-Sep
DSR-2259E™	57.7	N/A	17-Sep
DSR-3058E™ at R7	53.5	13-Sep	22-Sep
DSR-3058E™ at R8	60.2	15-Sep	6-Oct
DSR-3587E™ at R7	57.9	17-Sep	6-Oct
DSR-3587E™ at R8	59.8	20-Sep	6-Oct
DSR-3058E™	49.3	N/A	22-Sep
DSR-3587E™	46.9	N/A	29-Sep
Average	53.2		

Mt. Hope, WI - 2020

VARIETY	YIELD BU/A	HARVEST DATE
DSR-2030E™	78.0	15-Sep
DSR-2112E™	76.6	15-Sep
DSR-2424E™	77.0	15-Sep
DSR-1673E™	80.7	15-Sep
DSR-1318E™	75.1	15-Sep
DSR-0847E™	63.8	15-Sep

STRATEGIES FOR EARLY SOYBEAN HARVEST - THIRD & FINAL YEAR (2020 - 2022) (Continued)

Wabash, IN - 2021

VARIETY	AVG YIELD	SPRAY DATE	THEORETICAL HARVEST DATE
DSR-1673E™	63.58		6-Sep
DSR-2040E™	64.28		10-Sep
DSR-2640E™	67.11		16-Sep
DSR-3177E™ at R7	73.00	9-Sep	16-Sep
DSR-3587E™ at R7	69.31	14-Sep	21-Sep
DSR-3177E™ at R8	71.69	13-Sep	20-Sep
DSR-3587E™ at R8	70.60	18-Sep	23-Sep
DSR-3177E™	70.84		21-Sep
DSR-3587E™	71.72		25-Sep
Average	69.14		Actual Harvest 28-Sep

Wabash, IN - 2022

TREATMENT	AVG YIELD	HARVEST DATE
DSR-1505E™	64.96	5-Oct
DSR-2188E™	73.14	5-Oct
DSR-2717E™	72.83	5-Oct
DSR-3177E™ at R7	72.22	5-Oct
DSR-3177E™ at R8	71.84	10-Oct
DSR-3499E™ at R7	79.21	5-Oct
DSR-3499E™ at R8	78.99	10-Oct
DSR-3177E™	71.04	10-Oct
DSR-3499E™	77.34	10-Oct
Average	73.51	

Two-year analysis 2021 and 2020

TREATMENT	AVG YIELD	ESTIMATE YIELD (LSD(0.10)-2.3)	YIELD DIFF
Early maturity (1.6, 2.0, 2.6)	57.7	56.3	C
Standard maturity (3.1, 3.5) desiccated at R7	60.8	60.6	B
Standard desiccated at R8	64.8	63.5	A
Check standard maturity	60.5	60.5	B

Conclusion:

Three years of field research has clearly indicated an unexpected conclusion. At the inception of the project Dairyland Seed agronomists were investigating the best options to accommodate early harvest of soybeans. Our data shows there exists a couple suitable options. Not only did we find viable options but may have found some yield increases. Desiccation for early harvest had intriguing results yet again in 2022. Although we did not run statistics for all three years combined, 2020 and 2021 combined analysis showed a statistically sound yield increase for desiccating soybeans at the R8 growth stage. Simple trend line yields for all three years 2020, 2021 and 2022 show an advantage of late R stage desiccation. In 2022 we gained 1.35 bu looking at R7 and R8 desiccation combined. All three years data indicate penalties for certain early soybean harvest strategies and other strategies having a yield advantage.

We continued using an early to ultra-early soybean for the geography. As expected, we lose a little yield by shortening our maturity too much. The best option seems to be using a maturity soybean which is about a half maturity group earlier than recommended for the area. These beans gained us 5 to 10 days in harvest time. There was a yield loss at about 3-5 bu. in previous years and nearly 10 bu. in 2022. The fuller season varieties desiccated early gave us a similar harvest date and a slight yield boost. That yield increase depending on the year could cover the costs of desiccant and application and get you harvesting 5 to 10 days earlier. In some years that's the difference between 9% harvest moisture and 13%. We are all aware of issues with beans too dry or the advantage of 5 to 10 more harvest time. In summary use either .5 maturity earlier than your earliest bean or use your typical bean and defoliate them at R7 to R8.

NITROGEN MANAGEMENT

Description:

The use of biological products in crop production is becoming common place on many operations. The products that we looked at in this study work with the corn plant and provide nitrogen from the atmosphere. Utrisha™ N is a foliar product applied at V5 and colonizes the corn plant through the stomata, the bacteria in Utrisha N then fixes nitrogen from the atmosphere and makes it available to the corn plant while living off methanol given off by the plant. PROVEN® 40 by Pivot Bio is applied in furrow at planting and colonizes the roots of corn and works to supply the corn plant Nitrogen from the atmosphere while living off root exudates. We tested these products with 3 different total nitrogen rates. Yield expectations at Wabash, IN are 250 bushels per acre and 215 bushels per acre at St. Johns, MI.

Methods:

- Hybrid - DS-4878AM™ (Wabash)
DS-3900AM™ (St. Johns)
- Utrisha N - 5oz/acre applied at V5 with only water as carrier
- PROVEN 40 - 12.8oz/acre applied in furrow with only water as carrier
- All treatments were planted with same amount of N at planting, and nitrogen rates were reduced at side dress.

Treatments:

Wabash

1. N rate total 175#
2. N rate total 155#
3. N rate total 135#
4. 175 # total N + PROVEN 40
5. 155# total N + PROVEN 40
6. 135# total N + PROVEN 40
7. 175# total N + Utrisha N
8. 155# total N + Utrisha N
9. 135# total N + Utrisha N
10. 175# total N + PROVEN 40 + Utrisha N
11. 155# total N + PROVEN 40 + Utrisha N
12. 135# total N + PROVEN 40 + Utrisha N

St. Johns

1. N rate total 210#
2. N rate total 190#
3. N rate total 170#
4. 210# total N + PROVEN 40
5. 190# total N + PROVEN 40
6. 170# total N + PROVEN 40
7. 210# total N + Utrisha N
8. 190# total N + Utrisha N
9. 170# total N + Utrisha N
10. 210# total N + PROVEN 40 + Utrisha N
11. 190# total N + PROVEN 40 + Utrisha N
12. 170# total N + PROVEN 40 + Utrisha N



NITROGEN MANAGEMENT (Continued)

Results:

Wabash only

ROW LABELS	ESTIMATE OF YIELD	YIELD DIFF (LSD(0.10)=5.1)	ESTIMATE OF MOISTURE	MOISTURE DIFF (LSD(0.10)=0.49)	ESTIMATE OF TEST WEIGHT	TW DIFF (LSD(0.10)=0.39)
Both	248	NS	18.63	NS	56.71	B
None	244.5	NS	18.49	NS	56.63	B
PROVEN 40	247.4	NS	18.63	NS	56.67	B
Utrisha N	248.5	NS	18.51	NS	57.34	A

ROW LABELS	ESTIMATE OF YIELD	YIELD DIFF (LSD(0.10)=4.5)	ESTIMATE OF MOISTURE	MOISTURE DIFF (LSD(0.10)=0.42)	ESTIMATE OF TEST WEIGHT	TW DIFF (LSD(0.10)=0.35)
135	248	NS	18.63	NS	56.71	AB
155	248.7	NS	18.6	NS	56.88	A
175	251.5	NS	19.02	NS	56.45	B

Wabash and St. Johns

ROW LABELS	ESTIMATE OF YIELD	YIELD DIFF (LSD(0.10)=4.2)	ESTIMATE OF MOISTURE	MOISTURE DIFF (LSD(0.10)=0.35)	ESTIMATE OF TEST WEIGHT	TW DIFF (LSD(0.10)=0.26)
Both	251.9	NS	18.94	NS	56.6	B
None	248.9	NS	18.88	NS	56.54	B
PROVEN 40	248.6	NS	18.85	NS	56.58	B
Utrisha N	251.4	NS	18.88	NS	57	A

ROW LABELS	ESTIMATE OF YIELD	YIELD DIFF (LSD(0.10)=3.6)	ESTIMATE OF MOISTURE	MOISTURE DIFF (LSD(0.10)=0.30)	ESTIMATE OF TEST WEIGHT	TW DIFF (LSD(0.10)=0.23)
High	251.9	NS	18.94	NS	56.6	NS
Low	249	NS	18.67	NS	56.74	NS
Med	249.9	NS	18.65	NS	56.82	NS

Conclusion:

As often happens when conducting these types of trials, the results were not what we expected to see. The anticipated result was a significant increase in yield with the addition of more nitrogen as well as both biological products. When we apply statistical analysis to our findings, we see no significant difference in yield across any of the treatments or nitrogen rates, and the knee jerk reaction is to think that we did not learn much from this study but that is not the case. We can see that because there was no significant decrease in yield when nitrogen rates were decreased with the application of either Utrisha N or PROVEN 40, that these products did help protect our yield in reduced nitrogen application scenarios. It is important to remember that the addition of a singular product or practice is unlikely to significantly add yield unless there is a known need for that product or practice determined through testing such as soil or tissue tests. These products claim to provide nitrogen for plants when nitrogen would otherwise be unavailable and in this study, this year, in these 2 locations we saw that these products did insure yield even in reduced nitrogen scenarios.

UTRISHA™ N OBSERVATIONS

Description:

The use of biological products that aid in nutrient management is becoming common place across the Dairyland Seed footprint. Our nitrogen management study looked at a couple of these products and we also have folks looking at these products on their own operations. Utrisha™ N by Corteva Agriscience™ was used by several folks and they were gracious enough to share their findings with us, and this study summarizes what folks saw from the product in the wild.



Utrisha N is a living organism, *Methylobacterium symbioticum*, that supplies supplemental nitrogen to a wide variety of plants such as corn, soybeans, alfalfa, wheat, and others. Utrisha N is applied through a foliar application and is compatible with many herbicides and fertilizers. This organism is an endophytic bacteria which means that it can live in the plant and has no negative impact on the plant, and colonizes the plant by entering through stomata. Entry through stomata means that optimum application timing is early in the day while stomata are still open from respiration. When Utrisha N lives in symbiosis with the crop plant and lives off a byproduct of cell division, methanol, and in return supplies the crop plant with ammonium (NH4+) fixed from atmospheric nitrogen (N2).

Results:

Soybeans - Illinois

- DSR-3177E™, 115,000 population, sample area 1.688 acres for both treated and untreated
- Utrisha N 71.9 bpa
- Untreated 71.8 bpa

Corn - Illinois

- DS-4510Q™ planted at 36,000 seeds per acre in 20-inch rows
- Nitrogen application-175 units of N anhydrous ammonia preplant, 50 units side dress 32-0-0.
- Utrisha N applied same day as side dress and applied with only water as carrier. Sample area 1.112 acres for each treatment. Moisture for each grain sample 19.8.
- Utrisha N 236.8 bpa
- Untreated 234.7 bpa

Soybeans - Mt. Hope, WI

TREATMENT	VARIETY	HARVEST POPULATION	YIELD ADJ TO 13% MOISTURE
Untreated	DSR-2188E™	77,000	75.53
Utrisha N	DSR-2188E™	68,500	74.75
Utrisha N	DSR-2188E™	77,000	74.47
Untreated	DSR-2188E™	73,000	68.54

Corn - Wabash

TREATMENT	YIELD	MOISTURE
170 Units N	186.8835	17.3
210 units N + Utrisha N 2x	189.3433	17.2
210 units N + Utrisha N 1x	194.5270	16.8
40 units N + Utrisha N 2x	170.2332	17.1
40 Units N	165.9201	16.8
210 Units N	200.6636	17.3

Conclusion:

This year, in these trials, soybeans did not show a large response to the application of Utrisha N, and corn responses varied. We included this portion to show what results folks are seeing in the wild or under extreme reduced nitrogen scenarios. It is clear to see that in all of these trials nitrogen was not a limiting factor to yield. Even in the reduced nitrogen rates at Wabash, with only 40 total units of nitrogen applied with compared to 40 total units of nitrogen plus 2 applications of Utrisha N, we see a 4.31 bpa increase with the double application of Utrisha N. The application of nutrient management biological products allows for greater access to and luxury consumption of nutrients and in this case that nutrient is nitrogen which can increase yield if nitrogen is a major limiting factor to yield. It is important to remember that many factors impact yield, and in these trials, in these locations, this year nitrogen was likely not a limiting factor to yield.



ULTRA-HIGH YIELD CORN & SOYBEANS

Description:

The quest for extreme top yields continues in corn and soybeans. This research focuses standard production practices versus intensive management for top yields. Although profitability is of concern the main goal is to maximize yield in this scenario. In both crops, standard treatments were used versus adding various levels of inputs including irrigation, fungicides, insecticides, micronutrients, humics, plants sugars, Utrisha N and biologicals.

Seed products used are:

- Soybeans: DSR-3177E™, DSR-3256E™, DSR-3499E™ and DSR-2717E™
- Corn: DS-5144Q™, DS-5250AM™, DS-5279Q™ and DS-5383AM™

Soybean high yield plan included:

- Plant tissue samples throughout the year – no deficiencies
- 105,000 seeding rate in 30" rows
- Approach Prima fungicide
- Insecticide at R3
- Pop-up at planting which included humic acid, fulvic acid, plant growth regulators and sugars
- 2x2 placement of potassium thiosulfate
- R1 application of a micronutrient pack and additional fulvic acid and sugars

Standard soybean plan included:

- Seed treatment fungicide, insecticide and ILeV0
- Approach Prima fungicide
- Insecticide at R3

Corn high yield plan included:

Plan 1:

Nitrogen total 210 units as follows:

- 40 units through planter
- 120 units at sidedress at V5
- 50 units Y drop at V10

All three N applications also included humic acid, boron, sugars, ammonium thiosulfate

Plan 2:

Nitrogen 270 units as follows:

- 40 units through planter
- 100 units at sidedress
- 65 units Y drop at V10
- 65 units Y drop at VT

All four N applications also included humic acid, boron, sugars, ammonium thiosulfate

Standard corn plan included:

Nitrogen total 200 units as follows:

- 40 units through planter
- 160 units at sidedress V5

ULTRA-HIGH YIELD CORN & SOYBEANS (Continued)

Results:

2022 Wabash PAR Location Soybeans

VARIETY	PLAN	YIELD
DSR-2717E™	Standard	74.5
DSR-2717E™	Plan 1	75.7
DSR-3499E™	Standard	81.2
DSR-3499E™	Plan 1	80.65
DSR-3256E™	Standard	71.9
DSR-3256E™	Plan 1	72.69
DSR-3177E™	Standard	69.6
DSR-3177E™	Plan 1	70.5
Average	Standard	74.3
Average	Plan 1	74.9

2022 Wabash PAR Location Corn

HYBRID	PLAN	YIELD NON-IRRIGATED	YIELD IRRIGATED
DS-5095AM™	Standard	265.0	271.0
DS-5095AM™	Plan 1	266.0	273.0
DS-5095AM™	Plan 2	266.0	288.8
DS-5250AM™	Standard	262.0	275.8
DS-5250AM™	Plan 1	235.0	261.5
DS-5250AM™	Plan 2	253.0	287.3
DS-5279Q™	Standard	267.0	266.0
DS-5279Q™	Plan 1	268.0	264.0
DS-5279Q™	Plan 2	280.0	297.0
DS-5383AM™	Standard	250.2	251.1
DS-5383AM™	Plan 1	250.5	246.5
DS-5383AM™	Plan 2	257.8	280.8
		260.0	271.9

2022 Wabash PAR Corn Summary

	YIELD
Standard	263.51
Plan 1	258.06
Plan 2	276.34
Irrigated	271.90
Non-Irrigated	260.04
Overall	266.00

Discussion:

The corn plots were not replicated in an exact sense. Rather, as an aggregate combining all hybrids and we had multiple looks at the results of each management plan. With one year of limited data, the information was carefully evaluated and compared with similar research. The one data standout was the effect of irrigation which was to be expected. This difference was over 11 bushel per acre advantage for irrigation. We did see a positive response of over 13 bushels using the Plan 2 management option. What seems to be a bit perplexing was Plan 1 performance. That treatment had 10 more units of N than the standard and had N applied at similar timings with more split timing of the applications. Natural variance in the experiment could be the cause as well. Even taking this into account there still seems to exist a strong response to our Plan 2 management scheme. The question as always is the economics of this plan.

The soybean plots were not split by irrigation and had two replications of treatments by variety. Each plan was replicated in sense 8 times. So, 4 varieties by two replications. There seemed to be little response from the increased management which resulted in an advantage of about .6 bushel. Most every soybean variety did respond positively to the increased management. The one exception was DSR-3499E™. This variety is a very high yielding genetic line to begin with so perhaps that is why there was a limited response. As with the corn results, the question is will this compensate the grower for the added management costs?

HARVEST TIMING OF CORN & PHANTOM YIELD LOSS - YEAR TWO (2021-2022)

Description:

Dairyland Seed agronomists wanted to verify whether yield is lost by allowing corn to dry in the field as opposed to harvesting corn at a higher moisture. As reported in previous years, studies have shown that optimum harvest moisture is 25%. Based on this information there is continued interest in harvest moisture and timing, and how that impacts yield. Harvesting at a higher moisture has shown to reduce mechanical damage and loss. In addition to that mechanical loss there exists some unexplained yield loss. The grain yield lost between an earlier harvest and allowing the corn to field dry is often referred to as phantom yield loss. The hybrids used range from 105 day to 112 day in maturity (DS-4510Q™, DS-4878Q™, DS-4917AM™, DS-5095AM™, DS-5161Q™, DS-5250AM™ and DS-5279Q™). In 2022 this trial was planted on April 23 at a population of 33,600 seeds per acre.

Results:

2021: Treatment 1=Early October, Treatment 2=Mid October, Treatment 3= Mid-Late October

TRT	AVG OF ADJUSTED YIELD	ESTIMATE OF YIELD (LSD(0.10)=3.9)	YIELD DIFF	AVG OF MST	ESTIMATE OF MOISTURE (LSD(0.10)=1.0)	MST DIFF	AVG TEST WEIGHT	ESTIMATE OF TEST WEIGHT (LSD(0.10)=0.16)	TEST WEIGHT DIFF
1	276.96	259.5	A	24.86	22.72	B	54.23	54.67	C
2	275.40	258.4	A	19.72	17.58	A	55.52	55.96	A
3	268.16	250.6	B	20.34	18.20	A	54.73	55.17	B

2021 and 2022 - Multi-year Results: Treatment 1=Late September, Treatment 2=Early October, Treatment 3=Mid October

TRT	AVG OF ADJUSTED YIELD	ESTIMATE OF YIELD (LSD(0.10)=7.05)	YIELD DIFF	AVG OF MST	ESTIMATE OF MST (LSD(0.10)=1.66)	MST DIFF	AVG TEST WEIGHT	ESTIMATE OF TEST WEIGHT (LSD(0.10)=1.23)	TEST WEIGHT DIFF
1	234.4	223.0	A	21.85	18.22	B	56.01	56.51	B
2	233.5	222.1	A	16.96	15.47	A	57.83	58.16	A
3	225.0	213.6	B	16.72	16.17	A	58.18	57.16	AB

Discussion:

This two-year comparison across hybrids indicates a clear yield advantage for harvesting in late September to early October. Each year we found a statistical difference in harvest timing. Of interest is the marked difference both years from early October to mid-October. It is also noted that moistures both years dropped considerably from September harvest date to early October harvest dates. The yield however did not change as much. As we moved to mid-October, yield loss was more prevalent and moisture loss had not changed to the same degree. Data would support the advantage early harvest. For those wanting to wait and field dry even more, our research may suggest the ideal time to be early October time frame. At that timing we peaked out on moisture loss and yield loss is limited. Multi-year data would say we were seeing a 10 bushel advantage for early harvest.





DAIRYLAND SEED

HEADQUARTERS

MAILING ADDRESS
P.O. Box 958
West Bend, WI 53095-0958

SHIPPING ADDRESS
3570 County Highway H
Kewaskum, WI 53040

PHONE (262) 626-3080
FAX (262) 626-2281
TOLL-FREE (800) 236-0163

EASTERN CUSTOMER SERVICE CENTER

15 Ringel Ave
Wabash, IN 46992-5101

PHONE (260) 563-3163
FAX (260) 225-0461
TOLL-FREE (888) 563-3163


WESTERN CUSTOMER SERVICE CENTER


8992 Kussmaul Rd
Mount Hope, WI 53816-9760


PHONE (608) 988-4266
FAX (608) 988-1019
TOLL-FREE (800) 988-4266

DAIRYLANDSEED.COM

dairylandseed@dairylandseed.com

 /DairylandSeed

 @DairylandSeed

 /DairylandSeed