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By WINFIELD UNITED

SUMMER 2021

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INTRODUCING "SC": THE WINFIELD® UNITED STAMP OF APPROVAL FOR STRAIGHT-CUT CANOLA 8

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R7® HIGH MANAGEMENT HARD RED WINTER WHEAT: EXTENDING THE FINDINGS FROM SPRING WHEAT RESEARCH

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ARTICLES

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LAND O'LAKES® RECIPE: GIANT ICE CREAM SANDWICH

Preparation time: 40 minutes **Total time:** 7 hours 55 minutes **Serves:** 10

INGREDIENTS:

1 quart ice cream flavor of your choice, softened
1/3 cup LAND O'LAKES® Butter
2 (1-ounce) squares unsweetened baking chocolate
1 cup sugar
2 large LAND O'LAKES® Eggs
2/3 cup all-purpose flour
1/2 teaspoon baking powder
1/4 teaspoon salt
2 tablespoons chocolate-flavored sprinkles
1/4 cup hot fudge ice cream topping, room temperature

DIRECTIONS:

Line bottom and sides of 9-inch round cake pan with 24-inch piece plastic food wrap, allowing ends to hang over sides of pan.

Spread softened ice cream evenly into prepared pan. Fold ends of plastic food wrap over ice cream. Freeze 2 hours or until firm. Remove wrapped ice cream layer from pan. Keep frozen.

Heat oven to 350°F. Combine butter and chocolate in 2-quart saucepan. Cook over low heat, stirring constantly, 3-4 minutes or until melted. Remove from heat. Stir in sugar and eggs; mix well. Add flour, baking powder and salt; mix well.

Spread batter evenly into 2 greased and floured (9-inch) round cake pans. Sprinkle tops with sprinkles. Bake 12-14 minutes or until brownies just begin to pull away from sides of pan. Cool 10 minutes. Run thin knife around edges to loosen. Invert onto cooling racks. Cool completely.

NUTRITION FACTS

Calories 380
Fat 20 g
Cholesterol 80 mg
Sodium 190 mg
Carbohydrate 49 g
Protein 5 g
Dietary Fiber 1 g

Place 1 brownie layer, sprinkle-side down, onto large flat serving plate. Spread with 2 tablespoons hot fudge topping. Unwrap ice cream layer; place over brownie, pressing gently to adhere. Spread bottom of second brownie layer with remaining topping. Carefully place over ice cream, sprinkle-side up. Press down gently. Cover with plastic food wrap; freeze 5 hours or until firm.

Thaw ice cream sandwich in refrigerator 5 minutes. Cut into wedges. For easy cutting, dip knife blade in tall glass of very hot water. Dry with paper towels. Repeat with each slice.

HELP PUT YOURSELF IN A PROFITABLE POSITION WITH CROPLAN® WINTER CANOLA

Mick Miller, *CROPLAN® Winter Canola Product Manager*
Twitter: @Mick_Miller32

As the product manager for CROPLAN® winter canola, I'm always reminding producers about the many agronomic benefits that come when including the crop in their rotation. But this year, winter canola is providing farmers with another huge advantage that's making it an increasingly attractive choice: economic.

With oilseed crop futures trading at all-time highs, canola is currently trading in the range of $14 to $15/bu ($28 to $30/cwt) and futures are nearing $17/bu ($34/cwt).[1] This means producers could have a fantastic opportunity to reap the rewards next summer if they rotate into winter canola now. Whether you are looking for a quality Roundup Ready®, SURT® and/or Conventional variety with G2FLEX™ technology with high yield potential, the CROPLAN winter canola lineup has you covered. Let's take a closer look at these production systems and where they fit best.

ROUNDUP READY® WINTER CANOLA

CROPLAN winter canola with the Genuity® Roundup Ready® trait is an ideal rotational fit for wheat-fallow acres or fields that don't have any plant back restrictions. Seeding these fields to Roundup Ready® winter canola introduces a completely different cropping option and gives farmers the ability to target a wide spectrum of weeds with a glyphosate product like Cornerstone® Plus herbicide.

Cornerstone Plus is particularly strong on tough winter annual grasses like cheat and feral rye, plus any grassy weeds that have developed resistance to the Group 2 herbicides that are usually used on wheat and many other crops. Reducing this competition while winter canola is in a field allows you to plant wheat or pulse crops back into a cleaner field for the next rotation. We have one variety of CROPLAN winter canola with the Genuity® Roundup Ready®-only trait: CP320WRR.

CP320WRR

Roundup Ready

CHARACTERISTICS

	NOT RECOMMENDED				EXCELLENT
LODGING				2	
OIL CONTENT					1
DROUGHT TOLERANCE				2	
WINTER HARDINESS					1

- Excellent yield potential in highly productive environments.
- Strong fall vigor.
- Best winterhardiness in CROPLAN lineup; excelling in all regions.

ROUNDUP READY® WINTER CANOLA PLUS SURT® (SULFONYLUREA RESIDUAL TOLERANT)

Sulfonylurea products like Ally®, Glean® or Express® herbicides are often used to control weeds in wheat and other cereal crops. While effective, their long residual activity prohibits producers from enjoying the benefits of rotating into Roundup Ready® winter canola unless they plant a variety that is sulfonylurea residual tolerant (SURT®). We have two such varieties in the CROPLAN winter canola lineup: CP115WR and CP225WRR.

CP115WRR

Roundup Ready SURT

CHARACTERISTICS

	NOT RECOMMENDED				EXCELLENT
LODGING				2	
OIL CONTENT				2	
DROUGHT TOLERANCE					1
WINTER HARDINESS				2	

- Handles low-pH soil better than other products.
- Strong yield potential and excellent stress tolerance for multiple environments.
- Dependable; approved for first-time High Plains canola growers.

CP225WRR

Roundup Ready SURT

CHARACTERISTICS

	NOT RECOMMENDED				EXCELLENT
LODGING				2	
OIL CONTENT					1
DROUGHT TOLERANCE					1
WINTER HARDINESS				2	

- Excellent potential for strong yield environments.
- Strong winter-hardiness; excels in the Pacific Northwest and Montana.
- Strong fall vigor; good for less-than-ideal seedbeds.

GFLEX™ CONVENTIONAL WINTER CANOLA (GROUP 2 FLEXIBLE RESIDUAL TOLERANT)

Producers looking to tap into the non-GMO canola markets have long been handcuffed when it comes to rotating into winter canola, because depending on the crop protection history of previous wheat and pulse crops, they've been limited to planting into fields without certain plant back restrictions.

For example, if you used a product like Pursuit® or Beyond® herbicide on your recent small grains or pulse crop, canola wasn't a viable option. And wheat-fallow rotations that traditionally utilized Group 2 products like Ally® and Glean® herbicide prevented growers from working many canola varieties into their rotation for more than 4 years.

CP1022WC G2FLEX™

CHARACTERISTICS

	NOT RECOMMENDED				EXCELLENT
LODGING				2	
OIL CONTENT					1
DROUGHT TOLERANCE					1
WINTER HARDINESS					1

- Consistent yield performance across environments.
- Very good standability for harvest flexibility.
- Extremely winter-hardy conventional with excellent yield potential for northern environments.

But now thanks to Group 2 Flexible (G2FLEX™) residual tolerance technology, we have a conventional canola variety that can be planted right behind wheat in soils with Group 2 herbicide residuals, including imidazolinones, sulfonylureas, sulfonamides and triazolopyrimidines. As we announced in the last issue of *Beyond Seed*® magazine, WinField United partnered with the University of Idaho to become the exclusive provider of the only canola variety with the G2FLEX™ trait: CP1022WC.

CONVENTIONAL RACEHORSE

The new CROPLAN CP1077WC winter canola is the fifth and final product in the CROPLAN® winter canola lineup. What it lacks in herbicide tolerance, it makes up for with excellent yield potential, making this racehorse variety an excellent selection for your most productive acres.

CP1077WC (NEW)

CHARACTERISTICS

	NOT RECOMMENDED				EXCELLENT
LODGING				2	
OIL CONTENT					1
DROUGHT TOLERANCE				2	
WINTER HARDINESS				2	

- Excellent yield potential in more offensive environments.
- Excellent pod shatter resistance for straight-cut opportunities.
- Excels across multiple northern regions.
- Taller product with good standability.

HELP IMPROVE FUTURE WHEAT YIELDS

As I mentioned earlier, there are a number of benefits of including winter canola in your crop rotation. Along with its value as a cash crop, planting canola helps break up the cycle of weeds, insects and disease that are present in wheat-on-wheat fields, which means farmers have the opportunity to start fresh when they return to wheat a year or two later. In addition to allowing it to utilize nutrients lower down in the soil profile, canola's large taproot helps increase water infiltration and improve the growth and soil penetration of subsequent crop roots. Plus, canola is a favorable environment for pollinators.

All of this contributes to higher yield potential in subsequent wheat crops. In fact, Kansas State University Research and Extension reports that winter wheat yields following canola have shown a 10 to 25 percent increase compared to wheat following wheat. And in some instances where wheat has been grown in monoculture for decades, wheat yields have increased more than 50 percent the first year following canola.[2]

The future of winter canola is bright, as we have some exciting new traits and technologies coming in the pipeline over the next few years. Our breeding partners continue to work hard in providing producers with better yield potential, better persistence and better profitability. If you're interested in taking advantage of all that winter canola offers, contact your local WinField® United retailer. They'll help you select the right CROPLAN varieties for your acres.

[1] Pricing data based on quotes from Viterra canola processing facility in Warden, WA as of 6/3/21.

[2] *Great Plains Canola Production Handbook*, K-State Research and Extension, June 2018.

Product descriptions and ratings are generated from Answer Plot® trials and/or from the genetics supplier and may change as additional data is gathered.

IT'S OFFICIAL: CROPLAN® LIBERTYLINK® SPRING CANOLA HAS ARRIVED

Mark Torno, *Diverse Field Crops Product Manager Wheat, Canola, Sunflower*
Twitter: @MarkTornoatWork

After several years of thorough research and development, I'm excited to share that WinField United has brought two new CROPLAN® LibertyLink® spring canola hybrids to the market, and more are on the way. Although a limited supply of these two hybrids was available to producers this spring, we'll have more available in 2022 and we anticipate having an unlimited supply ready for 2023.

Adding LibertyLink® canola hybrids to the CROPLAN spring canola portfolio puts another option in your agronomic toolbox. The unique mode of action of Liberty® herbicide works well when alternated with the Roundup Ready® system in corn/soybean rotations because it helps you manage the weed resistance that can develop when growing only glyphosate-tolerant crops.

At the same time, the Roundup Ready® and TruFlex™ spring canola with Roundup Ready® technology canola hybrids in our lineup aren't to be overlooked. They enable you to achieve strong control of tough grasses and perennial weeds like Canada thistle through the use of glyphosate products like Cornerstone® Plus herbicide.

Both systems have their advantages, and utilizing them can provide some much-needed diversity to any weed management program. It all comes down to what fits best in your operation, and you can depend on your local WinField® United retailer to help you decide which ones those are.

Here's a closer look at our new CROPLAN LibertyLink® spring canola hybrids and the characteristics they possess:

CROPLAN CP7130LL

- Mid-maturity hybrid with strong yield potential and very good lodging scores.
- Desirable shatter scores make it a good option for straight-cut systems.
- Excellent disease package with "R" rating to blackleg and clubroot.
- Clubroot resistance to pathogen types 2F, 3H, 5I, 6M and 8N.

CROPLAN CP7144LL

- Mid-maturity hybrid with excellent early season growth.
- High yield potential and very good lodging scores.
- Cutting-edge shatter technology and very good lodging scores allows for straight-cut and harvest flexibility.
- "R" for clubroot, blackleg & Fusarium wilt.
- 2nd generation "R" to clubroot races 3A, 2B, 5X and 2, 3, 5, 6, 8.

CROPLAN® LibertyLink® Spring Canola Product Rating Chart

CROPLAN By WinField United / LibertyLink	Seed Size Range	Days to Flower	Days to Maturity	Height (inches)	Height Rating	Response to Population	Blackleg		Clubroot Resistance	Oil Content	Vigor	Lodging	Straight-Cutting	Heat/Drought Stress Tolerance
							Resistance Group	Major Resistance Group						
CP7130LL*	90-120,000	48	95	43	M	N/A	Multi	Multi	R-2,3,5,6,8	2	1	2	2	2
CP7144LL*	90-120,000	48	95	43	M	N/A	Multi	Multi	R-3A,2B,5X, 2,3,5,6,8	2	1	2	1	2

Product carries shatter and lodging characteristics, allowing for success in straight-cut systems.

Scale: 1 = Excellent
5 = Not recommended

IDEAL FOR STRAIGHT-CUT

As noted, both CP7144LL and CP7130LL have desirable reduced shatter scores, with the former coming in just a tick better than the latter. CROPLAN CP9978TF TruFlex™ spring canola with Roundup Ready® technology is one of the only hybrids to score higher than this pair in the CROPLAN lineup, making these three products some of the best in the industry for standability and seed and pod retention. This means growers can experience the benefits of a straight-cut operation with valuable peace-of-mind at harvest. Turn the page to learn more about the "SC" straight-cut designation and what it means.

EXAMINING RESPONSE TO POPULATION

These new CROPLAN LibertyLink® spring canola hybrids are showcased at five Answer Plot® locations this summer, and we're running seeding trials to assess their Response to Population (RTP) characteristics. We anticipate data from this year and previous years will enable us to recommend the best seeding rates to plant them at going forward.

NEW CROPLAN PACKAGING

Now that we have three different herbicide-tolerant traits in the CROPLAN spring canola lineup, we've changed the packaging to make them easy to identify and help you prevent any mix-ups when loading the seeder. We've added new tags and color-coded our canola bags, which hold 50 lbs of seed.

- LibertyLink® canola: Blue
- TruFlex™ spring canola with Roundup Ready® technology: Black
- Roundup Ready® canola: Purple

We're proud of our current CROPLAN spring canola portfolio offerings, but we're also focused on the future. A number of promising experimental spring canola hybrids from the LibertyLink® spring canola and TruFlex™ spring canola with Roundup Ready® technology lines are being observed at our Answer Plot locations this summer. If they perform as well as we hope, you can expect to see them added to our lineup in the coming years.

If you're interested in getting your hands on some CROPLAN LibertyLink® spring canola for your acres next spring, contact your local WinField United retailer soon.

INTRODUCING "SC": THE WINFIELD® UNITED STAMP OF APPROVAL FOR STRAIGHT-CUT CANOLA

Ryan Moeller, *WinField United Technical Seed Agronomist*

Straight-cut canola has become the harvest method of choice for most producers in recent years, so it's no surprise that demand has increased for products that exhibit reduced shatter characteristics. WinField® United is helping meet that demand with three of its CROPLAN® spring canola hybrids, and we're using our new "SC" logo shown here to identify them as products that are exceptionally well suited for straight-cut operations.

We've worked closely with breeders to develop hybrids that protect yield potential through better pod hold, reduced pod shatter and improved standability. Listed below, these three products perform among the best reduced-shatter hybrids in the industry:

- CROPLAN CP9978TF TruFlex™ spring canola with Roundup Ready® technology
- CROPLAN CP7144LL LibertyLink® spring canola
- CROPLAN CP7130LL LibertyLink® spring canola

Pod drop and shatter has always been a challenge for canola producers, reducing yields by 40 percent or more in severe cases. Growers have helped prevent this damage by swathing their crop, but straight-cutting is more efficient because it requires only one pass through the field and less equipment, saving farmers a good deal of time and harvest costs. Plus, it gives pods more time to fill, resulting in improved oil and yield potential.

SHATTER IS ONLY ONE COMPONENT

By utilizing a genetic mechanism that limits pod shatter, the industry standard in reduced shatter technology has released a number of canola hybrids in recent years that perform well. But as the old adage goes, there's more than one way to skin a cat. WinField United and partnering breeders have developed germplasm that contain multiple agronomic characteristics that improve your ability to get the plants, their pods and seeds into the combine at harvest, including:

- Strong seams that help keep pods from opening, reducing seed loss.
- Strong pod hold that helps prevent pods from falling off the plant.
- Sturdy plants that provide improved standability and reduced lodging.

Each of these characteristics helps "SC" straight-cut designated

CP9978TF

TruFlex CANOLA

CHARACTERISTICS

	NOT RECOMMENDED				EXCELLENT
LODGING					1
OIL CONTENT				2	
DROUGHT TOLERANCE				2	
STRAIGHT CUTTING					1

- Excellent for straight cutting with one of the industry's leading shatter and pod drop scores.
- TruFlex™ hybrid for optimal crop safety at high rates and a wide application window.
- Excellent yield potential; LepR3, RlmS provide enhanced blackleg resistance.

CP7144LL

LIBERTY LINK

CHARACTERISTICS

	NOT RECOMMENDED				EXCELLENT
LODGING				2	
OIL CONTENT				2	
DROUGHT TOLERANCEE				2	
STRAIGHT CUTTING					1

- Liberty® herbicide tolerance provides an excellent alternative herbicide system.
- Excellent shatter tolerance and lodging scores for straight cut systems.
- High yield potential across environments; industry leading clubroot resistance.

CP7130LL

LIBERTY LINK

CHARACTERISTICS

	NOT RECOMMENDED				EXCELLENT
LODGING				2	
OIL CONTENT				2	
DROUGHT TOLERANCE				2	
STRAIGHT CUTTING				2	

- Liberty® herbicide tolerance provides an excellent alternative herbicide system.
- Top yield potential LL EXP product with very good shatter in 2020 Answer Plot® trial testing.
- Very good standability along with good shatter for straight-cut systems; blackleg and clubroot resistance.

Shatter scroes from 2020 Velva, ND Answer Plot location. CP7144LL* relative rating of this hybrid; not planted at this location.

CROPLAN spring canola hybrids better withstand the usual culprits of seed and pod loss – inclement conditions like hail and high winds. If a product doesn't have the "SC" designation, it doesn't mean it can't be straight-cut; it just means there's more potential for seed and pod loss depending on the conditions the crop is subjected to.

DATA RANKS "SC" CROPLAN HYBRIDS AMONG THE BEST IN REDUCED SHATTER

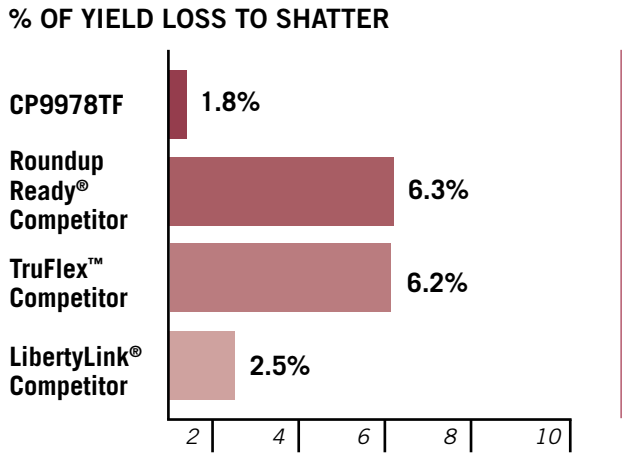
CROPLAN CP9978TF, CP7144LL and CP7130LL "SC" hybrids have consistently exhibited strong scores for enhanced seed and pod retention and reduced lodging in breeding studies, Answer Plot® trials and university research, making them excellent selections for your straight-cut harvest operation. Some of this supporting data is illustrated in the accompanying charts, including results from the 2020 Velva, ND Answer Plot location* shown above, which was harvested after a strong storm of 60 mph winds. In this study, CP9978TF had the best reduced shatter score of all hybrids planted in the trial, including two competing hybrids that have industry standard shatter reduction technology.

If you're looking to plant some of the top-performing reduced shatter canola in the industry next spring, look no further than the "SC" line of CROPLAN spring canola. We expect to have an ample supply of CP9978TF TruFlex™ spring canola with Roundup Ready® technology, but CROPLAN LibertyLink® spring canola availability will be limited, so I encourage you to place your order early.

* CP9978TF and CP7130LL had strong reduced shatter scores at the 2020 Velva, ND Answer Plot location. CP7144LL wasn't planted in this trial, but breeding trial data scores it one step up from CP7130LL.

CROPLAN® SEED DELIVERS EXCELLENT SHATTER SCORE

CROPLAN® seed TruFlex™ canola (CP9978TF) showed a better shatter score than competitive checks in a recent study from Roseau, MN.[1]

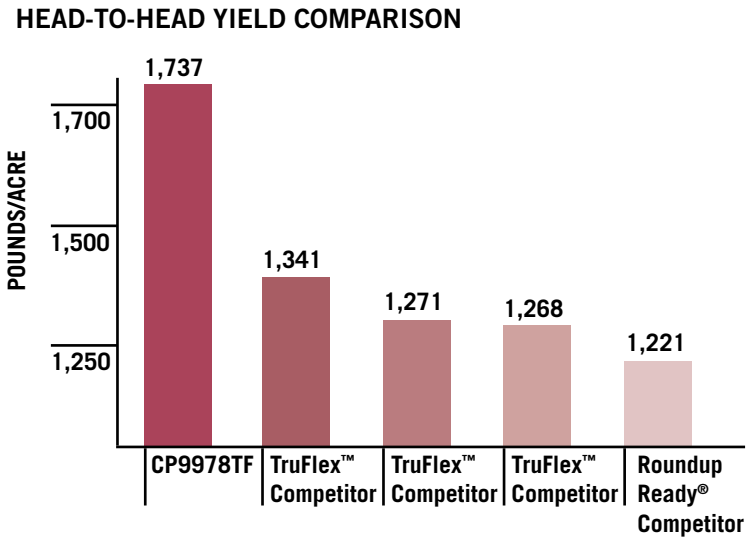


Source: 2019 Canola Shattering Variety Trial. Northern Resources, Roseau, MN.

[1] Results not statistically significant and may vary.

CROPLAN® TRUFLEX™ CANOLA TOPS YIELD TRIAL

CROPLAN® seed TruFlex™ canola (CP9978TF) out-yielded the other 18 TruFlex™ and Roundup Ready® competitive checks included in a 2019 study performed by the NDSU Hettinger Research Extension Center.



Source: 2019 Roundup Ready® Canola Yield Trial. NDSU Hettinger Research Extension Center.

Because factors outside of WinField United's control, such as weather, product application and any other factors, results to be obtained, including but not limited to yields, financial performance or profits, cannot be predicted or guaranteed by WinField United.

PROPER GRAIN PREPARATION AND STORAGE IS ESSENTIAL FOR REALIZING SUNFLOWER PROFIT

As is the case with every crop, you put in a lot of hard work and effort to optimize your sunflower yield potential throughout the growing season. But all of that can be for naught if your grain is stored improperly.

Harvest season will be here before we know it, so do yourself a solid and review your storage plans before the combines hit the fields. There are a number of steps you should take to prepare your grain and prevent insects and spoilage from impacting grain quality. The following sunflower drying and storage tips come from the extension services at North Dakota State University and Kansas State University.[1]

DRYING SUNFLOWERS

The large size of sunflower seed allows for a crop to be easily dried, and relatively small quantities of moisture are removed during the process due to their low test weight. As a result, producers who are used to drying corn or small grains have a tendency to over-dry sunflowers. For example, drying corn from 25 percent to 15 percent moisture removes about 6.6 lbs of moisture per bushel. Drying sunflowers, however, removes only about 3.0 pounds of moisture per bushel when going from 20 percent to 10 percent moisture. Therefore, you'll want to increase the flow rate through the dryer or decrease the drying air temperature to compensate.

Crops are best stored when cool, dry and clean. Mold growth is based on temperatures and crop moisture content. The maximum recommended moisture contents of clean, sound sunflower grains for storage with aeration is:

- Confectionary Sunflower: 11 percent for short term (less than 6 months) and 10 percent for long term.
- Oil Sunflower: 10 percent for short term and 7 to 8 percent for long term.

Sunflowers can be dried at temperatures between 160 to 220 degrees Fahrenheit (F) without having an adverse effect on oil yield or fatty acid composition. That said, drying non-oil varieties at high temperatures can cause the nutmeats to be steamed, wrinkled or even scorched.

Operate continuous-flow dryers and recirculating-batch dryers at plenum temperatures of 160 degrees F. Batch and bin dryers should be operated at 110 to 140 degrees F, respectively.

PREVENTING DRYER FIRES

Drying sunflowers presents a greater risk of fire than other crops because the seed has fine hairs or fibers that can be rubbed off during handling. The hairs float in the air around the dryers and can ignite when drawn through the drying fan and open burner. This presents a fire hazard unless the ignited particles burn themselves out before contacting the sunflowers.

An effective way to help prevent dryer fires is to ensure that the fan draws in clean air that is free of these hairs or fibers. This can be performed by using a portable dryer and turning the fan into the wind. Another option is to build an intake duct over the air inlet, which can help decrease the number of hairs and fibers drawn into a stationary dryer. Long snorkel tubes can be attached to the drying fan.

Guidelines for drying sunflowers are:

- Use good housekeeping practices. Clean around the dryer and in the plenum chamber daily.
- Don't over-dry.
- Make sure all sections of recirculating batch and continuous-flow dryers have continuous flow. Uneven flow will cause over-dried spots and increase fire hazards.
- Don't leave drying equipment unattended.

CLEANING SUNFLOWERS

Crops that contain substantial plant material are more susceptible to mold and insect damage, so cleaning your crop before storing can help reduce this hazard. Fines can accumulate under the down spouts and hinder aeration, making it difficult to maintain uniform air through the seeds. Stalks and trash have a higher moisture content, leading sunflowers to heat even though the seeds are below 9 percent.

Be sure to remove large pieces of head and stalk, as this is the highest moisture fraction of the seed. Early harvested seed contains 1 to 2 percent of the small flower (floret) that is fastened to each seed in the head. The florets disappear after a hard frost or later as the head dries out. The fraction of dockage containing florets is high in moisture and tends to heat in storage.

Seed cleaning is tough to accomplish during the busy harvest season, so plan on performing this work once fall fieldwork stops if you have a center unloading system and access to a seed cleaner. Trash is heaviest in the center of your bin, so that's the best place to start.

STORING THE CROP

Grain is a good insulator, so since you'll likely fill the storage when temperatures are much warmer than winter temps, the crop in the center of the bin will hold its temperature from harvest even after outside temperatures have dropped well below freezing.

Using airflow to control temperature is critical, as crops should be held near average outdoor temperatures during the fall. Doing so creates an unfavorable environment for fungi and insects and helps prevent moisture migration. Aeration helps maintain a uniform temperature throughout the seeds. Fans should be operated in the fall when the average outside air temperature is about 10 to 15 degrees F cooler than the stored sunflowers, and turned off once the temperature of the stored seeds are uniform and near the outside temperature. Repeat this cycle whenever the average outside temperature is 10 to 15 degrees F lower than the seed temperature, or until the grain temperature reaches 25 degrees F.

A cooling cycle typically takes 5 to seven days of continuous operation; aerating for exactly a week should do the job and makes it easier to remember when to turn off the fan.

Follow the same procedure when warming seed in the spring, except in reverse. Aerate when the average outside temperature is about 10 to 15 degrees F higher than the seed temperature. Continue aerating in stages until the grain temperature is between 50 to 60 degrees F.

Cover the fans and unloading tubes when not aerating to keep natural air movement from over-cooling or drying the seeds near the ducts or floor. A canvas cover or plastic bag held in place with an inexpensive elastic cord works well. Temperature changes can occur, so make it a practice to remove the cover and operate the fan for about a day several times over the course of the winter, when outside temperatures are about the same as the grain temperature. This will help keep grain temperatures even.

With proper management, sunflowers can be dried and stored safely, provided you operate your aeration fans and keep the seeds at ideal temperatures. Some producers choose to not run the fans due to high energy costs. However, it's critical to utilize the aeration system whenever necessary. Don't let energy cost be a factor, because you'll get hit a lot harder if your grain spoils.

Looking for more sunflower storage tips, or have questions that are specific to your operation? Contact the grain drying and storage experts at your local university extension office.

[1] *Drying and Storing Sunflowers* KSU Extension Service, Joseph P. Harner (based on numerous article released by Dr. Kenneth Hellevang, NDSU Extension Service Engineer), www.sunflowernsa.com/uploads/3/drying_storing_sunflower_ksu.pdf.

R7® HIGH MANAGEMENT HARD RED WINTER WHEAT:

EXTENDING THE FINDINGS FROM SPRING WHEAT RESEARCH

Ryan Moeller, *WinField United Technical Seed Agronomist*

At WinField® United, we go to great lengths to develop high-yielding wheat products that are tailored for your acres and the challenges that come with them. We feel our CROPLAN® hard red winter wheat portfolio is already one of the best in the industry, but based on what we've learned from our R7® high management research in spring wheat, we believe opportunities exist to better manage these varieties and improve yield potential and grain protein levels in the process.

For that reason, we're excited to announce that we have expanded our R7 research to hard red winter wheat. We seeded varieties at four Answer Plot® locations in the northern plains in 2020 to help improve the management recommendations we provide with each product. Before we get into the parameters of this research, here's a brief history on how our R7 high management research started, and how it's grown over the years.

APPLYING CORN EXPERIENCE TO WHEAT

The innovative WinField United research and development (R&D) team began exploring the high management concept more than a decade ago when it started planting CROPLAN brand corn at different populations. Upon discovering that some hybrids performed better than others under increased populations, the focus expanded to nitrogen (N) management. Similar results were observed; some hybrids flourished when N rates were increased, but others saw minimal results. Then the same models were applied to fungicide applications. Some corn hybrids experienced a yield increase when fungicides were applied, some didn't. All of this data enabled us to provide farmers with optimal positioning and management recommendations for each product.

This breakthrough finally started carrying over to CROPLAN spring wheat in the early 2010s. Since wheat and corn are both grass plants, our agronomy and R&D experts had the infrastructure in place and knew the right protocols to use when setting up small test plots in the Northern Plains. We focused on areas like Response to Population (RTP), Response to Nitrogen (RTN), seed treatments and Response to Fungicides (RTF), and the data revealed that varieties respond differently when these inputs are altered.

As a result, we introduced the WinField United Wheat Characterization Charts on the R7 Tool in 2017, which helps WinField United retailers and agronomists recommend the right CROPLAN spring wheat varieties for each field and prescribe specific management practices to maximize yield potential and retain favorable grain protein levels.

SIMILAR RESULTS EXPECTED FOR WINTER WHEAT

Although we've performed similar research on CROPLAN winter wheat in the past, we wanted to create a testing program that will give us extremely predictive data and a full "response to" data set. Therefore, we doubled down in the 2020-2021 production season. We are testing 16 varieties at four Answer Plot locations across the Dakotas, with the hope of providing us significant predictive data to help drive management decisions.

As in the past, these research efforts were designed to help us understand what the plant will do when populations, N applications and fungicides are applied at different rates, regardless of environmental interaction. Varietal performance will obviously change based on what kind of environment they're placed in, but the "response-to" scores act independently whether you're planting in the Dakotas, Nebraska, Kansas, Oklahoma or Texas.

RESPONSE TO POPULATION PROTOCOLS

Last fall, we seeded hard red winter wheat varieties at two different seeding rates in our test plots:

- High population trials: 1.4 million seeds/A.
- Low population trials: 700,000 seeds/A.

Universities tend not to research population rates, so when we look at winter wheat populations, we do so under the impression that a lot of growers are likely seeding all varieties at the same populations. The problem is that some varieties won't increase in yield when populations are increased. Whether they tiller less or develop fewer spikelets per head, we expect to identify these varieties so you can reduce seeding rates and improve profitability.

At the same time, if we can determine which winter wheat products do not sacrifice head size, number of kernels per plant, or yield contributing tillers when populations are increased, then we can help you optimize yield potential by recommending you plant them at higher seeding rates.

We're also looking to analyze the effect population has on protein content. As we've discovered in spring wheat, increasing populations doesn't always increase total protein/A. In fact, it often decreases. This is obviously important depending on what your production goals are, and my gut tells me we'll see similar differences among hard red winter wheat varieties once all the yield data has been processed.

RESPONSE TO NITROGEN PROTOCOLS

Nitrogen plays an important role in determining protein levels, and we know we also see yield responses based on the amount applied. To help us better understand the differences, we supplied each variety of hard red winter wheat with two different rates:

- High rate: 140 lbs/A including an in-season application.
- Low rate: 70 lbs/A applied upfront.

The data we receive from this study should help us determine the effects N has on each variety of CROPLAN hard red winter wheat. We anticipate the high N rate will give us a yield bump on some products, while others will see an increase in protein. Others may not experience an economic return at all. These are usually the scrappier, more rugged plants – the ones that perform best in your toughest acres. The high RTN products, on the other hand, are the ones that typically have more success on your moderate to high-performing acres.

RESPONSE TO FUNGICIDE PROTOCOLS

When we first started looking at how wheat varieties respond to fungicides, we focused on whether or not a fungicide applied at flag leaf generated a yield response. While most farmers already include a fungicide in their tank mix when applying herbicides, the theory was that this additional fungicide application could help optimize yield potential by protecting the top leaf below the head, which drives photosynthesis.

Of course, the challenge of applying a fungicide at flag leaf is that it requires a separate, timely pass that usually falls at an inconvenient time, when producers are occupied with other responsibilities around the farm. So this year we instead decided to look at the effects two different fungicides have on hard red winter wheat when included in the herbicide tank mix that's applied around V4-V5:

- Premium treatment: WinField United Protegam® YLD fungicide at 2 oz/A + MasterLock® adjuvant at 6.4 oz/A.
- Standard treatment: WinField United Topaz® fungicide at 4 oz/A + MasterLock adjuvant at 6.4 oz/A

The objective of this research is to determine if any winter wheat varieties experience enough of a response from a fungicide with multiple modes of action to justify including it in a herbicide tank mix instead of a single-mode product. Since the Strobilurin component of Protegam YLD has been known to help reduce oxidative stresses and ethylene production in plants – while also increasing internal plant efficiencies – we want to identify

whether applying it at tillering helps optimize the yield potential of specific varieties.

Once again, we anticipate that we'll see mixed results; some wheat products might not respond favorably, but others may provide a positive return on the extra investment.

PUTTING IT ALL TOGETHER

As we're reminded time and time again, we rarely get a blanket "yes" or "no" when assessing whether crop management practices provide a positive ROI. Since you have a limited amount of dollars to spend on crop inputs, we've designed our R7 high management research to identify which CROPLAN seed varieties best respond to specific positioning and management practices.

Now that these hard red winter wheat trials have been harvested, we're looking forward to sorting through all the yield data and sharing the results so you can decide where to put that investment in your future winter wheat crop. Stay tuned!

TWO NEW HERBICIDE-TOLERANT HARD RED WINTER WHEAT VARIETIES JOIN THE CROPLAN® SEED LINEUP

It's a pleasure to announce that farmers can now introduce a new production system to their CROPLAN® hard red winter wheat acres that can help improve control of annual and winter grass weeds. The CoAXium® Wheat Production System combines a patented herbicide-tolerant trait, elite varieties, industry stewardship and a quality branded herbicide in Aggressor® herbicide.

We have two new CoAXium® hard red winter wheat varieties in our portfolio that are available for seeding this fall – CROPLAN CP7017AX and CP7050AX. These varieties contain the patented, non-GMO AXigen® trait, which is tolerant to an in-crop application of Aggressor® herbicide.

Right is untreated check with feral (cereal) rye. Left is treated with Aggressor® herbicide at 10 oz/A. Trial conducted by Oregon State University. www.coaxiumwps.com/portfolio/feral-rye-control

Aggressor® herbicide provides growers with more crop rotation freedom due to limited plant back restrictions on key crops like other systems. It offers broad-spectrum grassy weed control on tough-to-control winter annuals including brome, feral/cereal rye, jointed goatgrass and Group 2-resistant biotypes (ALS inhibitors). Other benefits of Aggressor® herbicide include:

- Can be combined with many broadleaf weed partners for complete grass and broadleaf control in a single application.
- Offers growers a new Group 1 herbicide mode-of-action and excellent crop safety when used on varieties that are developed with the AXigen® trait.
- Can be tank-mixed and applied with foliar fertilizers.
- Application rates of 8-12 oz/A depending on environment, weed species and size at time of application.
- For best results, it can be applied in the fall and spring at rates that match grassy weed size and pressure.
- Has a wide window of crop growth application from 5-leaf wheat to jointing (node detectable on main stem).

If you're interested in planting your fields to CROPLAN CoAXium® winter wheat this fall or next season, contact your local WinField® United retailer. They can help you select the right variety for your acres and provide assistance on how to best manage it.

CLOSING OUT THE SEASON:
MANAGING NITRATES IN "SORGHUMS FOR FEED"

CROPLAN By WINFIELD UNITED

Nitrates can become a concern in nearly any environment when sorghum products are involved. This year posed many obstacles in raising a great crop for feed.

Some areas did not receive enough rain to grow the first intended crop, including corn for grain. Acres that were able to be rotated into a forage sorghum or sorghum x sudan had most likely been fertilized up front for a profitable corn yield, with about 2x the nitrogen (N) than a sorghum crop required. Luxury consumption of N by the plants can happen, resulting in higher nitrate levels.

In other areas, a dry environment was anticipated so no fertilizer was applied for fear of crop failure and sorghum was planted. Adequate moisture allowed for the crop to germinate and grow. Data shows that no fertilizer can also result in higher-than-desired nitrate levels in sorghums.[1]

Even when sorghum was part of the plan and a proper amount of N and sulfur (S) were applied (1-1.2 pounds of N for every day of growth with a balance of S at a 5:1 ratio), drought may have persisted for weeks before a rain event took place, resulting in a high concentration of N being taken up by the plant all at once when the plant resumed growth.

All of these scenarios, a combination of, or many others have the potential to lead to higher nitrate concentrations in the plant material. Studies have shown the highest concentration of nitrates accumulate in the lower 1/3 of the stalk.[1]

So now what? How do we manage harvest to be able to utilize this crop to its greatest potential? Take a nitrate test of whole plant material and find the levels currently present in the feed source.

- **Grazing** is still an option for warm season annuals with potential nitrate issues, but keep in mind that the lower portion of the stalk has the highest concentration. Always have another source of fresh feed available for your animals. Perhaps a couple bales of grass to revert to if they start getting a 'belly ache' while grazing. Do not try to graze the crop completely out...the lower portion of the stalk is "HOT". Leave 8 to 10 inches of stem in the field for cover and erosion control. This also provides potential for good regrowth.
- **Dry hay** is another popular use for warm season annuals. Raise the cutting height to reduce the amount of high nitrate material harvested. As the plant is cut and dried to prepare for storage, the nitrate levels do not significantly drop. Most of the nitrate will be stored and preserved in the dry hay crop. Test the hay prior to feeding so you can dilute with other feedstuffs to mitigate the impact of any high-nitrate material.
- **Baleage** can be a very effective way to manage the nitrate levels in the plants harvested. Plants that can be harvested wet and go through proper fermentation can reduce the nitrate levels by as much as 30 to 40 percent in the stored feed. Test prior to feedout to monitor how much other product needs to be blended to feed safely.
- **Silage** is potentially the most effective way to reduce the impact of nitrates in a feed source. Silage is usually done at a much more consistent moisture rate in the higher ranges of 65 to 70 percent whole plant moisture. Proper fermentation will be able to reduce nitrates by 30 to 40 percent. Test prior to feeding to understand the dilution factor at mixing.

Consult with veterinarians and livestock nutritionists to ensure a safe feeding process to protect livestock and maintain feed intakes and gain.

[1] Dryland study conducted at Ag Valley Co-op, Norton, Kan. Data analyzed at High Plains Laboratory, Hereford, Texas.

A FALL BURNDOWN BEATS ANY WEED CONTROL MEASURE YOU CAN TAKE IN SPRING

Kyle Okke, *WinField United Agronomist*

As farmers in the Northern Plains know all too well, relying on fall tillage to break up weed pressure going into the winter comes with some risk…especially if you end up not working the fields. Such was the case last fall, when dry conditions led a lot of producers to leave their fields as bare stubble to conserve moisture. As a result, many fields experienced heightened weed pressure this spring.

Left unchecked, kochia, dandelion and waterhemp were prevalent in parts of the Dakotas and Montana, as were winter annuals like marestail, narrowleaf hawksbeard and cheatgrass species like downy brome and Japanese brome. Most of these are difficult to eliminate with herbicides once they reach 4 inches in height. That's why I always encourage making a burndown application in the fall when these weeds are easiest to control – especially if you practice minimum/no-till and have a history of winter annuals popping up in your fields.

Why do some producers shy away from making a fall burndown application? If I had to bet, most will say that they don't want the added cost. This application comes at a time when farmers have finally recouped input costs from their spring crop and they're looking at purchasing seed for next year. My guess is that a lot of sales agronomists fear that they're asking a lot by recommending a fall burndown at the same time that seed is being purchased. I understand this hesitation, but unfortunately the weeds don't care.

FALL BURNDOWN PROVIDES EFFICACY AT A LOW COST

The good news is that a fall burndown application doesn't need to be complicated or expensive to be effective. In fact, even a late fall burndown made shortly before freezing is likely to provide far better results than a spring herbicide tank mix at a fraction of the cost. (More on that later.)

Provided you're planting a herbicide-resistant crop next spring, all you need to include in your burndown application this fall is glyphosate, a growth regulator like 2,4-D or dicamba to target glyphosate-resistant weeds, and the appropriate adjuvant package. I usually recommend a tank mix containing the following WinField® United products to my customers:

- WinField United Cornerstone® 5 Plus herbicide (glyphosate).
- WinField United Shredder® E-99 herbicide (2,4-D).
- WinField United Class Act® NG® adjuvant, which contains a quality nonionic surfactant.
- WinField United InterLock® adjuvant to lock in spray coverage and lock out drift.

For an average cost in the neighborhood of $5 to $6 per acre[1], this application can wipe out most weed concerns leading up to winter and help prevent them from returning early next spring. Just be sure to consult your local WinField United retailer for assistance in determining the best product rates for your fields.

IS RESIDUAL CHEMISTRY NEEDED?

If you're planting a herbicide-tolerant crop next season, it isn't necessary to include a residual herbicide in your fall burndown application unless you're dealing with a complex weed issue. In most cases, you can just come back next spring and clean up newly sprouted weeds with the appropriate postemergent herbicide application.

But if you're planting a conventional crop, wheat on no-till or minimum-till acres, or pulse crops like peas, lentils, chickpeas or dry edible beans, it's best to include a fall residual product in your burndown tank mix. An effective flumioxazin option like Valor® herbicide applied in the fall will continue to suppress marestail, narrowleaf hawksbeard and downy brome in the spring.

THE DOWNSIDES OF RELYING ON A SPRING APPLICATION

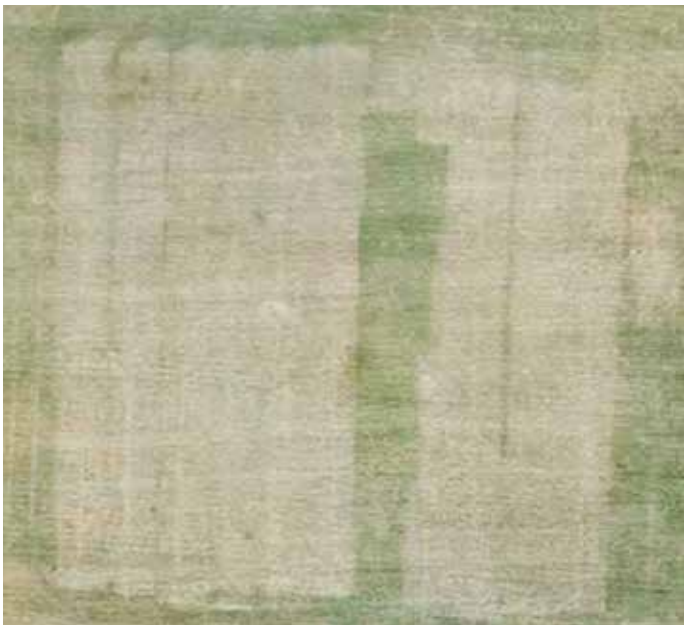
Wheat producers who practice minimum/no-till and skip a burndown application this fall will be forced deal with broadleaf weeds and downy brome next spring, which starts growing early in the season. Pyroxsulam products like OpenSky® and GoldSky® herbicides are the best options for controlling downy brome on wheat and other cereal crops. Everest® 3.0 herbicide also offers residual control, but it isn't used as often as the others due to its longer rotational restrictions.

Whichever of these products you choose, relying on it for your spring herbicide application will cost about $25 per acre[1]. For that amount you'd hope to get excellent control, but these tank mixes are not a silver bullet by any means. Since weeds that started growing in fall are larger and harder to manage come spring, farmers are often disappointed by the modest results they attain.

Choosing between spending $5 to $6 per acre this fall to achieve effective control, or $25 per acre next spring to get mediocre results is a no-brainer. Depending on the size of your operation, you can save thousands of dollars with a fall burndown application, all while receiving better results.

TIMING IS IMPORTANT, BUT NOT AN END-ALL

The best time to make your fall burndown application is when weeds germinate after harvest, which is generally mid-September in the Northern Plains. But as I implied earlier, you can still achieve adequate control as long as you apply a fall burndown before the first heavy freeze, or even post freeze if growing temperatures return for an extended amount of time before winter ultimately arrives.



This aerial image, which was taken at spring green-up, shows the results of a number of burndown trials I made on a producer's field last fall. At the time of application, a carpet of marestail in the cotyledon stage had overtaken the field. The untreated marestail is seen in the green borders, while the brown strips show the efficacy of all the different burndown herbicide tank mixes that were applied.

I got a first-hand look at what a late application can do last fall, when a friend and I made a burndown application on some volunteer wheat a local grower had in his field. As it turned out, it snowed the next day and didn't end up melting off until spring. We thought that application was going to be a lost cause, so imagine how surprised we were when we saw excellent results in the spring. In addition to eliminating the volunteer wheat, there were perfect strips of black soil where we sprayed, but carpets of cheatgrass had started growing in the unsprayed border areas.

If you're tired of large weeds and winter grasses outlasting your spring herbicide treatment and reducing your yield potential, give some serious thought to making a burndown application this fall. Your local WinField United retailer will help custom-tailor the right tank mix for your operation.

[1] Per acre herbicide application costs are supplied only as an estimate, and will vary depending upon current pricing and rates used.

NORTH EXAMPLE CROP BUDGET SHEET*

Many factors go into determining which crops to rotate to and how to manage them, so these decisions shouldn't be based on gut reactions alone. At WinField® United, we're focused on giving you the right tools to help you decide what's best for your acres. For that reason, we like to provide example crop budget sheets in *Beyond Seed®* magazine.

Crop values and input costs are constantly changing and often vary by region. Therefore, the figures in these budget sheets are always ballpark estimates. But the analysis of income, estimated expenses, fixed costs and return on investment (ROI) is an accurate guideline when it comes to helping you think through the pros and cons of each crop and its management options.

We encourage you to work with your local agronomist to use their electronic versions of these budget sheets to help you customize the figures for your fields. It's a great collaborative tool and it puts you and your agronomist on the same page – both literally *and* figuratively.

INCOME	CROPLAN® Spring Wheat	Public Spring Wheat	Winter Wheat	Soybean Enlist	Soybean Xtend	CROPLAN TruFlex Canola	CROPLAN LL Canola	Invigor LL Canola	Sunflower Express Sun	Corn
Average Yield	33	28	34	25	25	11.00	11.00	11.00	15.00	70
Price*	$8.15	$8.15	$5.60	$13.00	$13.00	$34.74	$33.00	$33.00	$30.78	$4.85
Income/Acre	**$268.95**	**$228.20**	**$190.40**	**$325.00**	**$325.00**	**$382.14**	**$363.00**	**$363.00**	**$461.70**	**$339.50**
				Plus Rotational Value						
ESTIMATED EXPENSES*										
VARIABLE COSTS										
Seed										
Seed	$25.04	$23.09	$21.02	$55.20	$55.20	$40.41	$46.25	$50.89	$34.09	$94.29
Seed Treat/Inoculant	$9.40	$6.15	$0.00	$9.50	$9.50	in bag	in bag	in bag	in bag	in bag
Crop Protection Products										
Tech Fee	—	—	—	in bag	in bag	in bag	in bag	in bag	in bag	in bag
Chemicals	$44.36	$31.51	$31.51	$74.25	$70.94	$10.85	$10.18	$15.48	$30.75	$24.06
Fertilizers										
Fertilizer	$26.61	$21.07	$27.72	$6.20	$6.20	$27.37	$27.37	$27.37	$21.99	$48.80
Field Operations										
Fuel & Lubrication	$10.50	$10.50	$10.50	$10.50	$10.50	$10.50	$10.50	$10.50	$11.50	$13.50
Repairs	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$19.00
Drying	—	—	—	—	—	—	—	—	$7.00	$12.00
Misc. Variable Costs										
Crop Insurance	$11.00	$11.00	$11.00	$12.00	$12.00	$12.00	$12.00	$12.00	$11.00	$22.00
Operating Interest	$4.91	$4.25	$4.36	$6.50	$6.38	$4.17	$4.35	$4.70	$4.70	$8.18
FIXED COSTS										
Machinery	$40.00	$40.00	$40.00	$41.00	$41.00	$39.00	$39.00	$39.00	$44.00	$54.00
Land Investment	$60.00	$60.00	$60.00	$60.00	$60.00	$60.00	$60.00	$60.00	$60.00	$60.00
Total Costs/Acre*	$249.82	$225.56	$224.12	$293.15	$289.72	$222.29	$227.65	$237.94	$243.04	$355.83
Net ROI/Acre	**$19.13**	**$2.64**	**-$33.72**	**$31.85**	**$35.28**	**$159.85**	**$135.35**	**$125.06**	**$218.66**	**-$16.33**
Break-even Yield	31	28	40	23	22	6.40	6.90	7.21	7.90	73
Break-even Price	$7.57	$8.06	$6.59	$11.73	$11.59	$20.21	$20.70	$21.63	$16.20	$5.08

*** Pricing data based on the average of elevators in the North Central North Dakota region as of 7/15/21.**

*** Expenses are estimates only and based on the average costs for the expenses listed in the North Central North Dakota region.**

Contact your local seed agronomy advisor for your own customized version. Because of factors outside of Winfield United's control, results to be obtained, including but not limited to yields, financial performance, profits, losses or otherwise, cannot be predicted or guaranteed by Winfield Solutions.

Data provided is an example only. Actual results may vary. Winfield Solutions, LLC shall have no liability in connection with the performance of your operation.

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CUSTOMER TESTIMONIAL

BRYCE WEBER
LINTON, ND

How many acres do you seed to CROPLAN® sunflowers, and what other crops do you grow on your farm?

My brothers and I farm west of Linton, ND and dedicate at least 500 acres to sunflowers every season – sometimes more depending on the rotation. We have a lot of light, sandy soils, so we position CROPLAN CP432E on those tougher acres. Being more of a racehorse variety, we plant CROPLAN CP455E on the best-performing fields. Usually we produce for the birdseed market, but we've also been able to take advantage of the NuSun® oil market on occasion.

We also grow corn, including CROPLAN CP2845SS/RIB. In addition to farming, I serve as a sales agronomist with Maverick Ag, so I like to run new product trials on my farm whenever we can. This year we're running a test plot of experimental CROPLAN soybeans with XtendFlex® technology. I'm fortunate to have that opportunity, because it allows me to base my recommendations to customers on first-hand experience.

When did you start using CROPLAN sunflower seed and how has it performed for you?

We planted a competing brand of sunflowers back in 2009 and a significant portion of the crop tipped over. So, we decided to switch to CROPLAN sunflowers the following year and have never looked back. In my experience, the standability of their sunflower products is the best you can get. All these years later, we've yet to have any CROPLAN sunflowers blow over on our farm.

What populations do you plant at, and how much N do you apply?

We typically plant 20,000 seeds/A and apply a total of 100 lbs of nitrogen (N) per acre. I used to spread urea and apply a liquid starter fertilizer, but I got a different planter this year so this season we were able to side band UAN 28% safely beside the seed row, which is much more efficient.

Yields were down a bit last year due to the overly dry conditions we experienced throughout North Dakota, but we yielded 2200 to 2500 lbs/A in each of the five years prior to that. I've observed similar yield results on fields throughout my territory in my role as a sales agronomist. CROPLAN sunflowers consistently perform really well.

Do you have any advice for farmers who have been hesitant to grow sunflowers?

I encourage farmers to give them a try and start off at comfortable pace. There are easier crops to grow, but as most sunflower growers will tell you, the added profit potential makes it well worth your effort. Another big plus is that sunflowers perform well in varying conditions. Thanks to the deep taproot, they can reach nutrients and moisture further down in the soil profile, helping them hold up well under droughty weather. The sunflower products from CROPLAN seed fit our geography really well. And thanks to the weed control benefits offered by the DuPont™ ExpressSun® trait and Clearfield® Production System, producers have the ability to harvest a clean crop come fall.

Bryce Weber's story is provided as an individual's experience with *WinField United* products and may not be a representation of actual results than can be guaranteed. Because of factors outside of WinField United's control such as weather, soil, planting and product application; individual results to be obtained, including but not limited to: financial performance, profits, losses and yields cannot be predicted or guaranteed by Winfield United.

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MasterLock®
By WinField United

Get every dollar out of EVERY DROP.

If you spray fungicide, make every drop count with MasterLock® adjuvant. As part of your tank mix, MasterLock improves spray coverage, penetration and placement so your fungicide goes where you need it. Does what it should. And delivers the return you want. Contact your local WinField United retailer so we can help you get the most out of every drop.