



32nd Annual
**NATIONAL
NO-TILLAGE
CONFERENCE**

January 9-12, 2024 • Indianapolis, Ind.

SCOTT'S COVER CROPS LLC
JAMIE SCOTT - PIERCETON, IN



Recognizing the Conservation Achievements of U.S. Soybean Farmers

2008

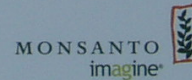
CONSERVATIONISTS OF THE YEAR

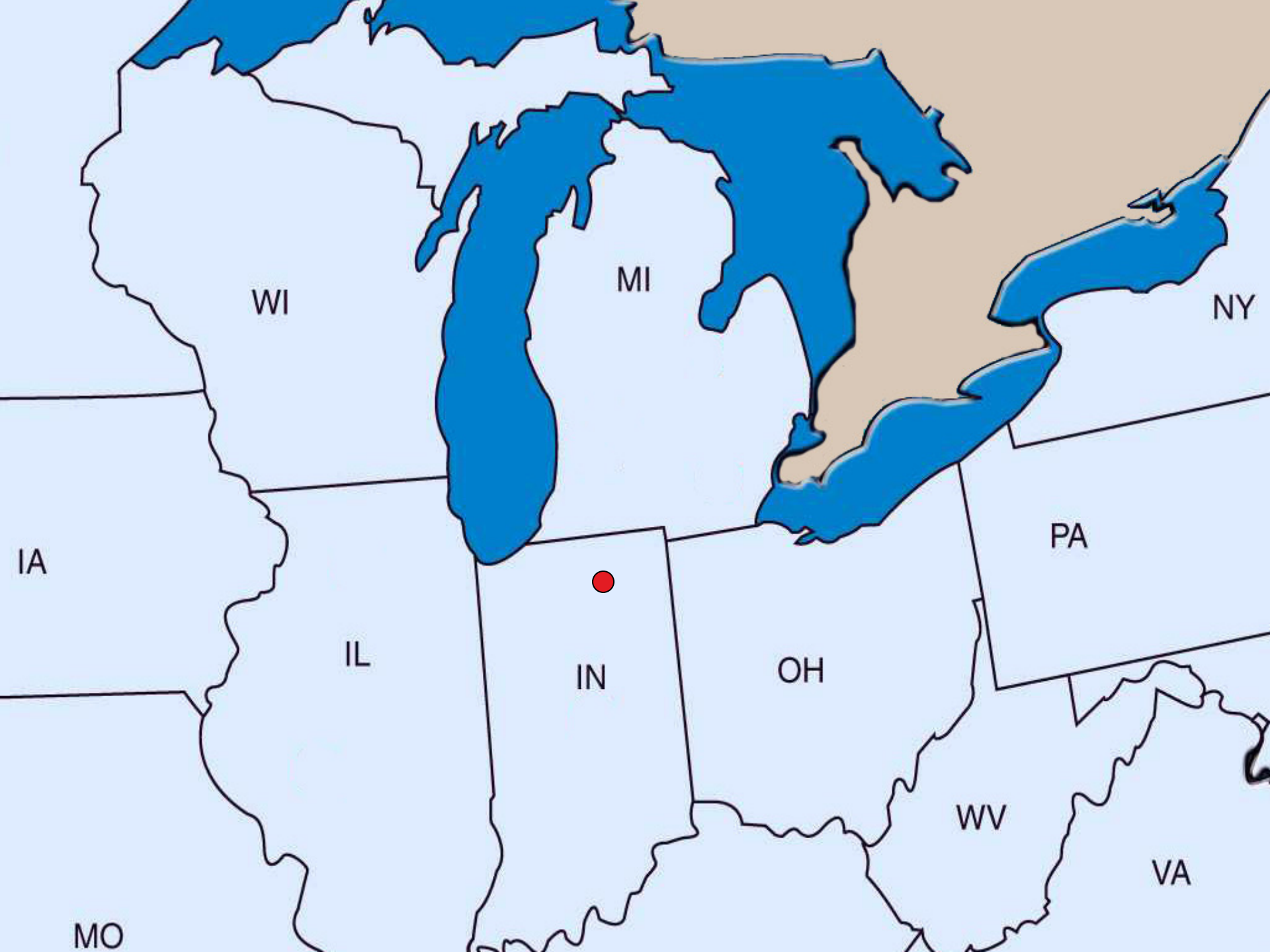
JIM, CATHY, AND JAMIE SCOTT

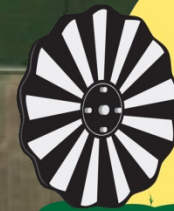
J. A. SCOTT FARMS, INC.

Pierceton, Indiana

Presented By





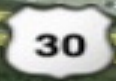


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E 200 S



FARM BACKGROUND

- No-Till
- Cover Crops
- Tile
- Crop Rotation
- Previous Owners - 2



- **Increase yield-Profit**

- **Improve water infiltration**

- **Encourage biological activity**

- **Recycle unused nutrients**

- **Increase organic matter**

CORN AND SOYBEAN

Herbicide	Active ingredient	Normal Rate/acre	Half life (days) ¹	Cash crop restrictions	Fall cover crops		Other
					OK to plant	Concern for	
Glyphosate 4L	glyphosate	0.75 to 1.25 lb	47	No restrictions preemergence	All	None	Glyphosate does not have soil activity at normal use rates
Gramoxone 2S	paraquat	2 pt	1000	No restrictions preemergence	All	None	Paraquat does not have soil activity at normal use rates
Harmony 50WDG	thifensulfuron	1/8 oz	12	Any crop can be planted 45 days after application	No restrictions for wheat, barley, and oats	None with 45 day waiting interval	Harmony Extra also contains tribenuron
Liberty 2.34L	glufosinate	22 - 36 fl. oz	7	No restrictions for canola, corn, and soybean. Small grains have a 70 day restriction.	All	Food or feed residues rather than crop injury may be a concern	Glufosinate does not have soil activity at normal use rates
Outlook 6E	dimethenamid	16 fl. oz	20	Four mo. for cereal grains and anything the following spring	Most crops should be fine	Food or feed residues rather than crop injury may be a concern	Nonfood/feed winter cover crops should be OK after corn harvest
Prowl H2O 3.8CS	pendamethalin	3 pt	44	Wheat and barley after 4 mo. Other rotational crops the following year.	Cereal grains	Small seeded legumes and annual ryegrass	We have not seen this herbicide carryover in PA. Nonfood/feed winter cover crops should be OK
Python 80WDG (Hornet and Surestart)	flumetsulam	1 oz	14-120	Cash crop restrictions from 4 mo. for alfalfa and cereals to 26 mo. for canola	Cereal grains	Small seeded legumes, mustards, and annual ryegrass	Cover crops and forage grasses are restricted for 9 mo.
Metribuzin 75DF (Sencor)	metribuzin	0.33 lb	14-60	Recrop restrictions range from 4 to 12 mo.	Cereal grains and ryegrass	Slight risk for small seeded legumes and mustards	Nonfood/feed winter cover crops allowed
Sharpen 2.85SC (Verdict and Optill)	saflufenacil	3 fl. oz	7-35	Any crop can be planted 4 mo. after application	All	None	This product has been reported more persistent in western Canada







2016



Radish

Oats

Annual Ryegrass & Crimson Clover

Buckwheat

Ryegrass, Radish, Clover

Radish

Oats

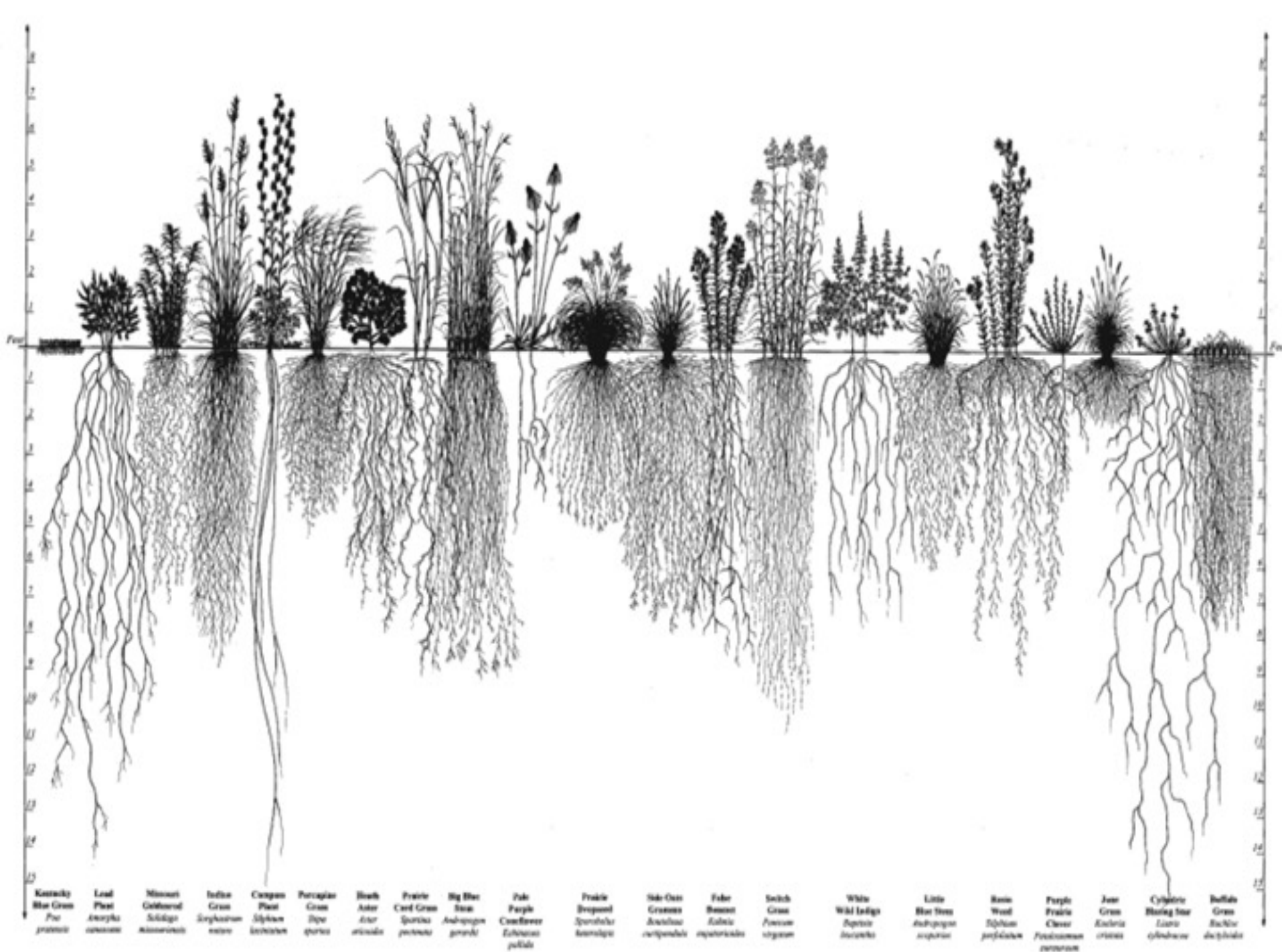
Annual Ryegrass & Crimson Clover

Radish & Oats

Annual Ryegrass & Crimson Clover

Buckwheat

Ryegrass, Radish, Clover





13 Way Mix - 2013

•Legumes

- CowPeas
- Sunn Hemp
- Cahaba Vetch
- Yellow Sweet Clover
- Crimson

•Grasses

- Sorghum Sudan
- Millet
- Oats

•Brassicas

- Rapeseed
- Turnips

•Broadleaves

- Sunflower
- Buckwheat
- Phacelia

\$54.00/acre

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LOTS OF SEEDING TOOLS BUT ONLY TWO SEEDING METHODS

- ON TOP

- IN GROUND

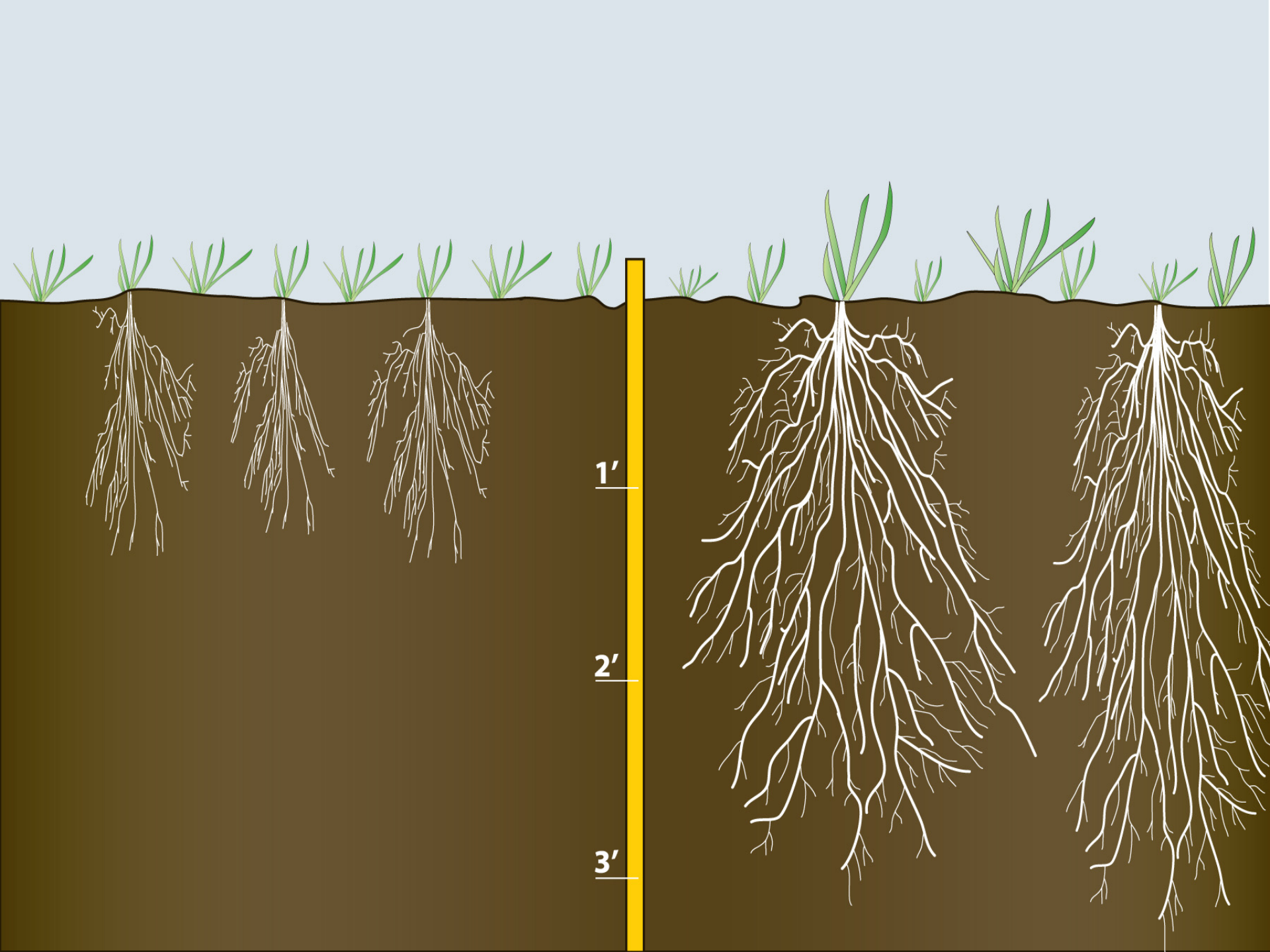


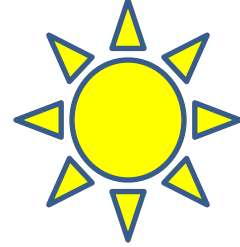


DRILLED



FLOWN





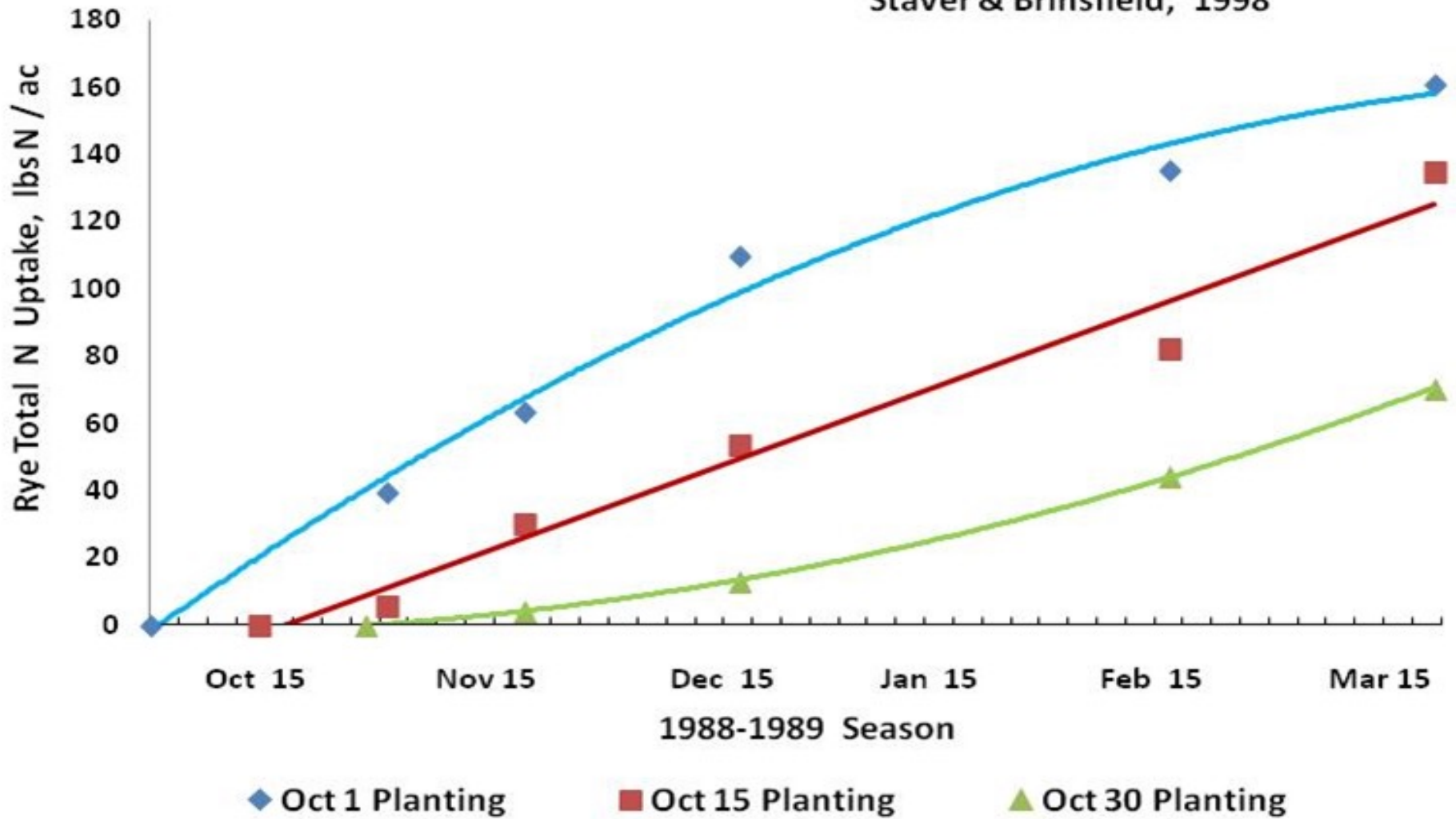
<u>Date</u>	<u>Sunrise</u>	<u>Sunset</u>	<u>Avg. High</u>	<u>Avg. Low</u>	<u>Mean</u>
-Sept. 7	6:15am	7:05pm	78	56	67
-Oct. 7	6:46am	6:14pm	66	44	55

You lose 1 ½ hours of sun light and 12 deg. in Temp.



Rye Total N Uptake for Three Planting Dates

Staver & Brinsfield, 1998







Flown @ 25 lbs/acre
September 14 2011



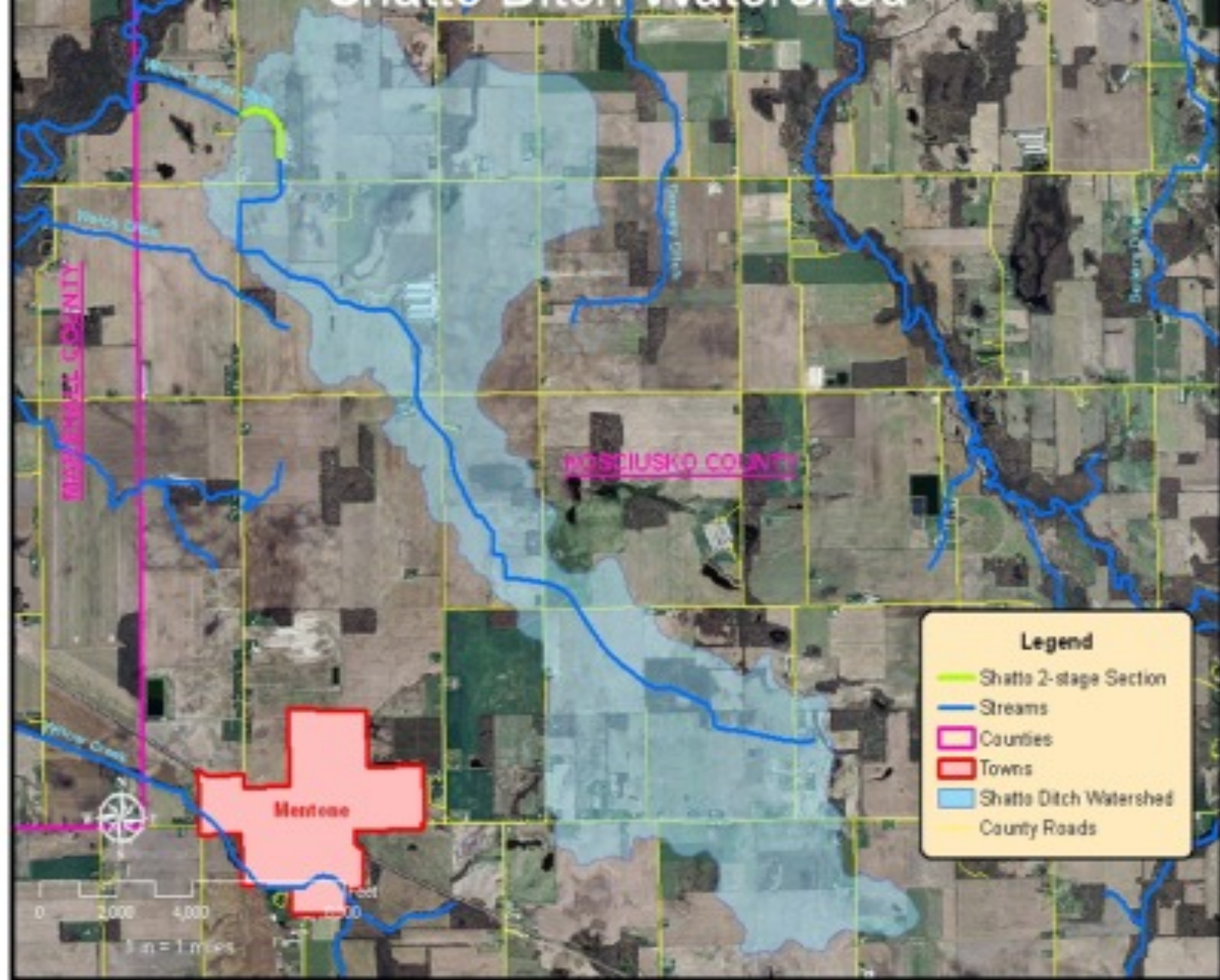




APRIL 1 2015



Shatto Ditch Watershed



Legend

- Shatto 2-stage Section
- Streams
- Counties
- Towns
- Shatto Ditch Watershed
- County Roads

0 2000 4000
1 in = 1 mile







BOUNTY
ANNUAL RYEGRASS

CLAY'S
TREE SERVICE
574-594-2643

BOUNTY
ANNUAL RYEGRASS

• High germination
• Excellent rooting ability
• Superior persistence
• Winter hard





COVER CROP BURN DOWN



1. Glyphosate was never intended to be used in cold weather as it requires an actively growing/transpiring plant for the chemistry to work.
2. Glyphosate requires a minimum of 3 hours after spraying on an actively growing/transpiring plant before a dark period (night). Most plants stop growing 1-2 hours before sunset. Glyphosate that has not reached the growing point by dark; 25-30% will become bound within the plant and will not be available the next day. If the following day the plant does not actively grow/transpire due to cold, wet, cloudy conditions, then the next dark period will bind an additional 80% of the glyphosate. Therefore there will not be any glyphosate left to provide control of the plant. (I found that means no spraying after 2pm for best control in cold conditions in March/early April)
3. It is critical that the mixing order of glyphosate be followed to ensure the maximum amount of glyphosate is available for control. Glyphosate should never be mixed in untreated water as 40%+ can be "neutralized" at mixing depending on water quality.
4. Glyphosate is most active at a pH of 3.5 but plants will react by not absorbing spray below 4.5. (Trials at Dixon Springs with Ron Hines, we found that the optimum pH for spray solution is 5-5.2)

What I know about ryegrass is :

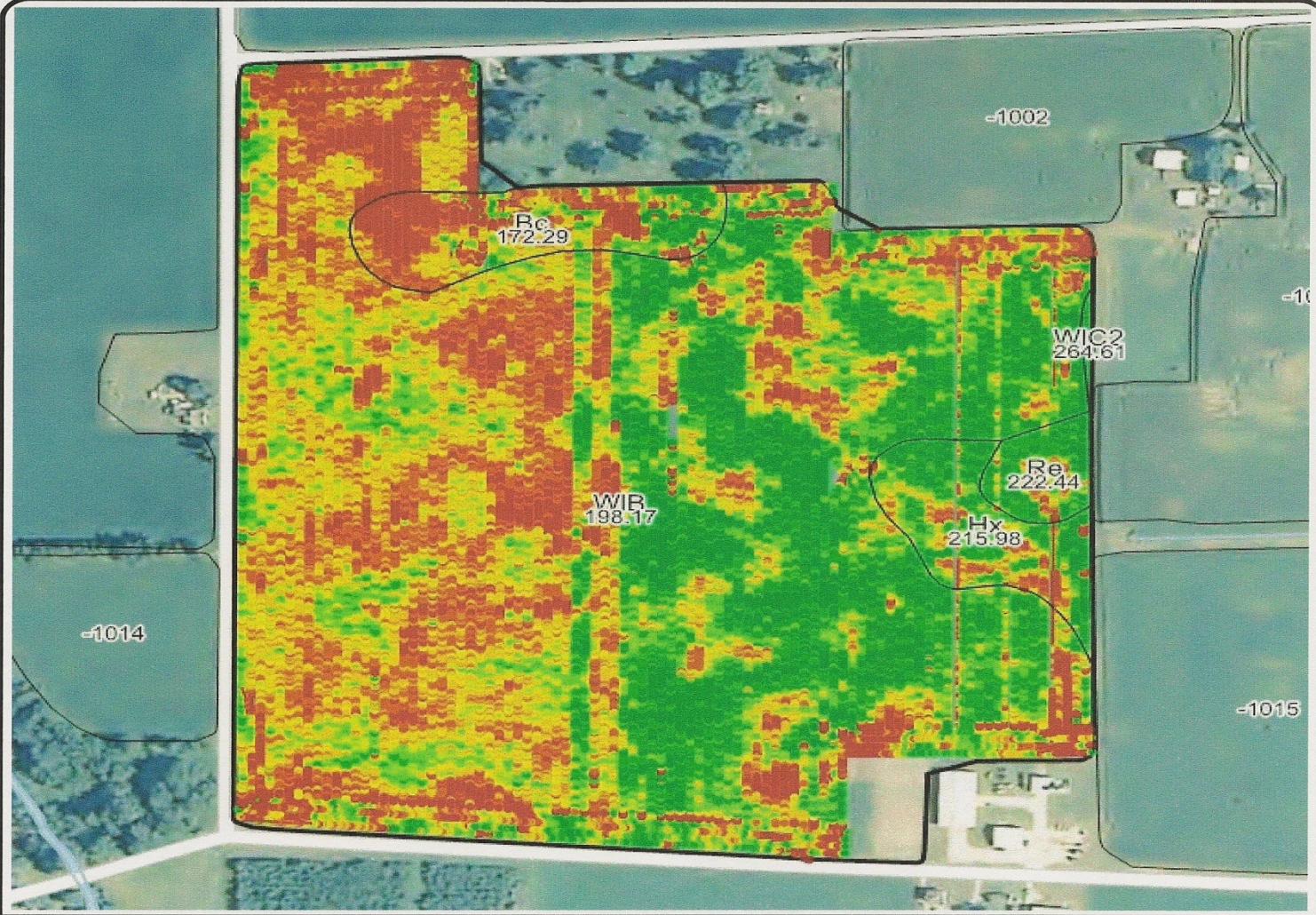
1. Ryegrass does not actively grow below 40 degrees F
2. If temperatures drop below 35 degrees F , ryegrass will go dormant for 2-3 days and will not uptake glyphosate— therefore don't spray in this time period, wait till the ryegrass starts growing
3. Soil temperatures at 4" less than 40-45 degrees F means ryegrass is not actively growing
4. Ryegrass will tolerate saturated soils, but does not actively grow/transpire in those conditions so glyphosate uptake is limited
5. Dr. Andy Hulting, OSU just finished an extensive glyphosate control study on all the annual ryegrass varieties sold from Oregon and did not find any lack of control with glyphosate if proper spray procedures were used
6. I did a study on time of spraying glyphosate from 10am to 6 pm and found a significant reduction in control as the time got later with no control after 6pm when the weather was cold the end of March-early April
7. There are significant control reduction issues when some other herbicides are mixed with the glyphosate
8. Uninformed commercial applicators do not know the importance of glyphosate mixing order and normally get poor control because of mixing in untreated water







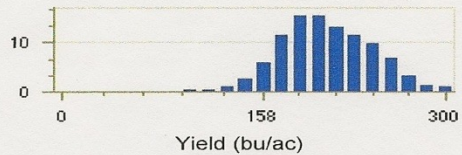




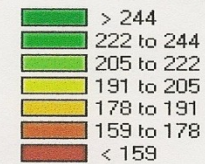
Harvest Summary

Total Yield (dry): 14,323.55 bu
Harvested Area: 72.32 acre
Avg. Moisture: 20.04 %
Average Yield: 198.06 bu/acre

Yield Distribution (%)



Yield (bu/acre)



17-Feb-2011
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 Map(s) may not represent all fields or products planted



PIONEER
 A DUPONT BUSINESS





JAMIE SCOTT

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PYLE®

PLVHR75

2017/08/09 15:05:09



POWER

V1/V2

MENU

REMOTE

MODE

SYS



2015
LOTS OF RAIN

























Cover Crop Chart

GROWTH CYCLE

A = Annual
B = Biennial
P = Perennial

RELATIVE WATER USE

☉ = Low
💧 = Medium
💧 = High

PLANT ARCHITECTURE

∩ = Upright
* = Upright-Spreading
≡ = Prostrate

-----Cool Season-----

-----Warm Season-----

---Grass---										---Grass---	
A <u>Barley</u>		-----Broadleaf-----								A <u>Pearl millet</u>	
A <u>Oat</u>	A <u>Phacelia</u>									A <u>Amaranth</u>	A <u>Foxtail millet</u>
A/P <u>Ryegrass</u>	A <u>Flax</u>	-----Legumes-----								A <u>Buckwheat</u>	A <u>Proso millet</u>
A <u>Wheat</u>	A <u>Spinach</u>	B <u>Turnip</u>	A <u>Field pea</u>	A <u>Berseem clover</u>	A/P <u>Medic</u>	A <u>Chickpea</u>	A <u>Sunflower</u>	A <u>Sudan grass</u>			
A <u>Cereal rye</u>	A <u>Kale</u>	A <u>Radish</u>	A <u>Lentil</u>	B/P <u>Red clover</u>	P <u>Birdsfoot trefoil</u>	A <u>Cowpea</u>	A <u>Safflower</u>	A <u>Teff</u>			
A <u>Triticale</u>	A/B <u>Canola</u>	B <u>Beet</u>	A <u>Lupin</u>	P <u>White clover</u>	P <u>Sainfoin</u>	A <u>Soybean</u>	A <u>Squash</u>	A <u>Grain sorghum</u>			
A <u>Annual fescue</u>	A/P <u>Mustard</u>	A/B <u>Carrot</u>	A/B <u>Vetch</u>	A/B <u>Sweetclover</u>	P <u>Alfalfa</u>	A <u>Mung bean</u>	P <u>Chicory</u>	A <u>Corn</u>			



Cover Crop Chart

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RELATIVE WATER USE

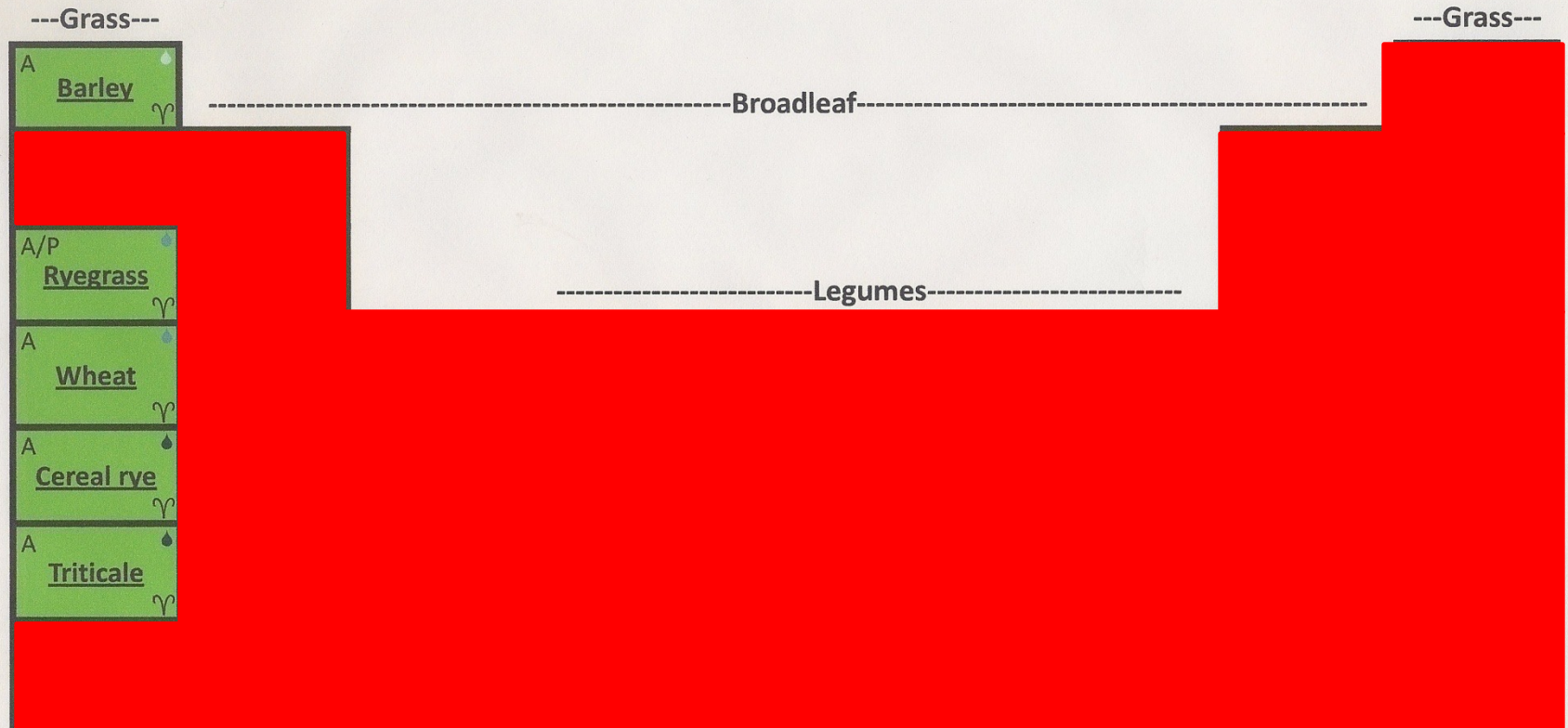
- ☾ = Low
- 💧 = Medium
- 💧 = High

PLANT ARCHITECTURE

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- ≡ = Prostrate

-----Cool Season-----

-----Warm Season-----









**COVER
CROP
SEEDS**

The image shows a man standing in a field of cover crops. In the foreground, there is a sign with a logo and text. The logo features a green circle with a white crosshair and a plant with roots. The text on the sign reads "COVER CROP SEEDS". The man is wearing a light blue long-sleeved shirt and blue jeans. The field is filled with green plants and yellow flowers.





















AUG 15



SEP 1



port Genuity® Roundup Ready® Alfalfa seed including hay or hay products, to China pending approval. In addition, due to the unique cropping system, **do not plant Genuity® Roundup Ready® Alfalfa in Alameda County, California**, pending import approvals. Monsanto grants express permission for such

Company is a member of Excellence in Stewardship® (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Policy Guidance, and in compliance with Monsanto's commercialization of Biotechnology-Derived Plant and Animal Commodities. Commercialized products approved for import into key export markets are subject to existing regulatory systems. Any crop or material from this product can only be exported to, or leased or sold in countries where all necessary approvals have been granted. It is a violation of international law to move material containing genetic material across boundaries into nations where import is prohibited. Growers should talk to their grain handler or purchaser to confirm their buying position for this Excellence Through Stewardship® is a registered trademark of Biotechnology Industry Organization.

Products may not yet be registered in all states. Check with your local Monsanto representative for the registration requirements in your state.

IMPORTANT IRM INFORMATION: Genuity® RIB corn blend products do not require the planting of a refuge except in the Cotton-Growing Area. European corn borer is a significant pest. **See the IRM/Label for additional information. Always read the IRM requirements.**

For more information regarding the intellectual property protection for the seed products discussed in this publication, please see www.dandekalb.com.

Results may vary, and performance may vary from location to location and from year to year. This result is an indicator of results you may obtain as local soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

READ AND FOLLOW PESTICIDE LABEL INSTRUCTIONS. Roundup Ready® crops contain genes for tolerance to glyphosate, the active ingredient in many brand agricultural herbicides. Roundup Ready® agricultural herbicides will kill crops that are tolerant to glyphosate. Tank mixtures: The labeling for each product must be in the possession of the user at the time of application. Follow the instructions, including application rates, and restrictions of each product used in the tank mix. Monsanto has not tested all tank mix products for compatibility or performance other than those listed by brand name. Always predetermine the ratio of tank mixtures by mixing small proportional amounts. Acceleron and Design®, Asgrow and Asgrow®, Bollgard®, Bollgard II®, DEKALB®, DEKALB®, DroughtGard®, Genuity Design®, LibertyLink®, LibertyLink®, Respect the Refuge and Cotton On Demand®, Roundup Ready 2 Technology, Roundup Ready 2 Yield®, Roundup Ready®, VT Double PRO® and VT Triple PRO® are trademarks of Monsanto Technology LLC. Deltapine® is a trademark of Monsanto Company. Channel® and LibertyLink® are trademarks of Monsanto Company. Channel® and LibertyLink® are trademarks of Monsanto Company. Channel® and LibertyLink® are trademarks of Monsanto Company. Channel® and LibertyLink® are trademarks of Monsanto Company.

Before opening a bag of seed, be sure to read, understand and accept the stewardship requirements, including applicable refuge requirements, for insect resistance management, for herbicide resistance, and for seed saving. The stewardship requirements are part of the Stewardship Agreement that you sign, by opening and using a bag of seed, you are reaffirming your obligation to comply with the most recent stewardship requirements.



Pro aerial seeding tips

Cover crops need sunlight, seed-to-soil contact and moisture.



This cereal rye-spring barley cover crop mix in Wisconsin was seeded at the same time, but the corn on the left was harvested in late September, allowing the cover crop more time to establish a stand. The corn on the right side of this field was harvested the third week of October, robbing the cover crop of three to four weeks of sunlight.

By Susan Winsor

These cover crop aerial seeding tips come from Damon Reabe, a third-generation aerial applicator and president of Reabe Spraying Service, Waupun, Wis.

- **Avoid aerial seeding too early.** You risk having your cover crop competing with the cash crop and lacking access to sufficient sunlight beneath the canopy. Access to sunlight is the key to successful cover crop stand establishment.
- **Seed cover crops when soybean leaves are yellow, but before they drop.** Too much green soybean canopy will shade cover crop seedlings, and fallen leaves will block seed-to-soil contact. If the soybean field does not mature evenly (a common problem),

you are set up for a poor cover crop stand.

- **Time cover crop seeding on corn properly.** Do not fly cover crop seed on corn until the corn plant has senesced (dried out) up to the ear, or the new crop will lack critical sunlight access.
- **Spring barley and cereal rye are ideal cover crops for northern climates.** Spring barley is popular with beginners because it is quick to germinate and easy to manage. Of all the grasses, it is the fastest-growing and the largest nitrogen scavenger. Even when barley survives to the reproductive stage, the spring straw is not woody or difficult for tillage implements to manage. Spring

THINK DIFFERENT: AGRONOMICS | DATA | SOIL | PROFITS™

CORN+SOYBEAN

AUGUST 2014

DIGEST®

Seed better covers.

This Indiana farmer rigged his spray boom to experiment with early cover crop seeding. Our cover story talks pros, cons and costs of all seeding methods.



SCOTT FARMS INC
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PIERCEIDA IA 48582-9703





























COVER CROP BURN DOWN





4:00 pm

9:30 am

Time of Spraying Critical















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