

PROGRAM INFORMATION

EQIP: 2023 APPLICATIONS CONTINUE TO BE PRE-APPROVED AS FUNDS BECOME AVAILABLE.

CSP: 2023 APPLICATIONS CONTINUE TO BE PRE-APPROVED AS FUNDS BECOME AVAILABLE.

NSWCP: FOR IRRIGATION PRACTICES, HAVE YOUR APPLICATION COMPLETE BY AUGUST 31ST FOR FIRST CHANCE AT 2024 FUNDS. APPLICATIONS MUST BE SIGNED BY THE OWNER.

ENERGY EFFICIENCY GRANT: NEXT SIGN-UP DEADLINE IS SEPTEMBER 30TH. FOR MORE INFORMATION CONTACT JOLENE AT RURAL DEVELOPMENT AT THE KEARNEY USDA SERVICE CENTER AT 308-455-9840 OR AT JOLENE.JONES@USDA.GOV.

CALENDAR OF EVENTS

AUG 7: CNPPID BOARD OF DIRECTORS MEETING

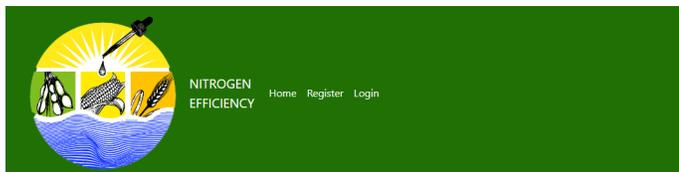
AUG 8: TBNRD ANNUAL TOUR AND BOARD MEETING

AUG 24: WCREEC FALL FIELD DAY @ NORTH PLATTE

MORE UNDER NEBRASKA EXTENSION EXTRAS ON PAGE 2.

SEPT 12-14: HUSKER HARVEST DAYS

NEW! Nitrogen Efficiency Forum



Developed and moderated locally is a new communication forum related to nitrogen and other fertilizers. Below are the words from within that explain the purpose of this forum:

This will be a place where growers, agronomists, ag consultants, extension educators, scientists, college professors or anyone interested in sharing how or learning more about how to be more efficient in the use of nitrogen fertilizer or any fertilizer product. Share what you do, what you have learned, and what worked and what did not work. Feel free to ASK QUESTIONS. This site is for education purposes to learn how to better use nitrogen so it goes into the plant and not into the ground water.

What an awesome opportunity this is to: share ideas, share successes, and share mishaps. What an awesome opportunity this is to: correct mistakes, improve upon successes, and save money. What an awesome opportunity this is to: help others and learn from others. What an awesome opportunity this is to: help our communities, protect our water, and provide our children, grandchildren, and future generations a safe and healthy environment in which they can reap the benefits that we have been so blessed to have reaped ourselves.

Here is the website link: <https://nitrogen-efficiency.com/>. Currently you can view all the written items. If you wish to respond or start a new topic, you will need to register.

CURTIS'S COLUMN



UNL TAPS Results via UNL Nitrogen Calculator

In the last two issues of this newsletter, I wrote about Realistic Yield Goals (RYG) and how I use this Calculator. This issue is going to show you a bunch of comparisons, both pivot and SDI systems, from the UNL TAPS program at the WCREEC in North Platte.

The comparison charts are on the attached pages. They are nothing more than my taking the same hybrids and comparing plant population, total nitrogen applied, total irrigation applied, total rainfall during the crop season and yield outcomes.

Various teams participating in TAPS manage corn on small plots, replicating farms. As a result, the charts are not research based. You will see gaps in which interpolation may be needed. I, the NRCS, TBNRD, UNL Extension and CNPPID do not endorse any of the hybrids on the charts. These are simply hybrids selected by the various teams where multiple teams chose the same hybrid and comparisons can be reviewed.

On the charts you will see a 252 or 250 bushel yield goal and a 262 or 260 bushel yield goal. These are RYG's used in the Calculator from which the nitrogen recommendations are based along with the appropriate N credits. All nitrogen recommendations come from the Calculator as I have described in my usage of the Calculator in the last issue. The data entry is very consistent in the charts resulting in very consistent nitrogen recommendations.

Information to know is the soil is a Cozad Silt Loam, a good soil but not quite as good as our Holdrege Silt Loam. Previous crop was soybeans on all charts. There are no irrigation nitrogen credits for water since there is very little nitrogen in the water, unlike most areas across the Tri-Basin NRD. And you may notice higher yields on the SDI versus pivot as a general observation. The SDI plots are located in a more protected area and the soil has more OM. I don't want you thinking that SDI produces more than pivots. It may and it may not.

Next to the charts, I have added my own observations or questions I have. In providing you with this information, I hope you review it as well and really think about what the charts are showing. Hopefully it will get you thinking about how to use your own fields as demo fields.

As I mentioned in an earlier issue, I hear a lot of producers wanting information. There is a lot of past information and current information such as what I am presenting in this issue. UNL's On-Farm Research is another example of awesome information. However, as mentioned before, I believe the best information and demos come from your own fields and your own trials because every farm and situation is different. So compare you to you. Don't be afraid of failure while learning. An acre of failure today can be worth a lifetime of benefits from the wisdom gained. That wisdom might save you money and it might help clean and protect our water supply.

Before I close, I want to put my summary on all these charts. Over the course of 6 years on pivots, it appears that ideal nitrogen applications come from a 252 RYG recommendation or less 67% of the time with only 16% being higher than a 262 RYG recommendation. 4 years of SDI, 75% of the time ideal nitrogen applications were from a 252 RYG recommendation and 25% was between a 252 and 262 RYG recommendation.

New Employees - Patrol & Position Changes

Central has recently hired two new employees in the irrigation department. Avery Goldfish has been hired to operate Patrol 24, previously operated by Matt McDorman. Patrol 24 covers the area northwest to northeast of Holdrege. Matt will be taking on a new position at Central as equipment operator 1, located in the Bertrand office. Katlyn Cavanaugh has been hired to operate Patrol 34, previously operated by Jordan Browitt. Patrol 34 covers the area from Axtell to Minden north of Highway 6 & 34. Jordan will now be operating Patrol 26, previously operated by Niles Buettner. Patrol 26 covers the area northeast of Holdrege to north of Axtell. Niles will be taking on a new position at Central as equipment operator 1, located in the Holdrege office.

Central's scheduled irrigation began their 5th of 6 runs this last Monday, July 31st. The 84-day scheduled irrigation for the 2023 irrigation began on June 5th and will end the week of August 28th.

Visit www.cnppid.com or follow @CNPPID on Facebook, Instagram and Twitter for updates throughout the year.

TRI-BASIN NRD NEWS



Irrigation Season Reminders

Chemigation: Our staff is busy wrapping up chemigation inspections. New permit inspections must be conducted prior to use. But, routine inspections due this year must be completed by the end of this irrigation season. If your system is due for a routine inspection, we have tried to contact you to schedule. Please call us to schedule your inspections.

Water Samples: If you have crop reports due each year, do not forget to take water samples from your irrigation wells for those reports. These samples are for your 2024 reports.

NRD staff are also taking samples from irrigation wells for our Water Quality testing program.

Irrigation Meters: Periodically check your irrigation

flowmeters to make sure they are working correctly. If you do not think your meter is working correctly, our staff or Curtis Scheele at NRCS office can check flow rates using an ultrasonic flowmeter.

If you have a meter repaired during the irrigation season, please contact the NRD and note the meter reading before removing. Doing so will make it easier to reconcile any movement of the propeller while the meter was being repaired. If you have questions about reinstalling your flowmeter or about your meter readings, contact our office at 308-995-6688.



New LI-COR ET Sensor

LI-710 Evapotranspiration Sensor, research grade SETMI (Spatial Evaporation Modelling Instrument), is now becoming a field scale irrigation scheduling tool. During the past decades, ET (evapotranspiration) values for irrigation decisions have been calculated crop water usage estimates based on "alfalfa referenced ET."

For 2024, Bill Miller (UNL Irrigation Specialist) and LI-COR are offering ET direct water measurement software for free to pilot irrigators. Improved ET sensors will provide vertical wind and air water (ppm moisture content) molecules recording, so irrigation scheduling accuracy will likely dramatically improve.

To learn more, visit <https://www.licor.com/env>. Or call 402-467-3576 or 800-447-3576 (4647 Superior Street, Lincoln, NE 68540)

WCREEC Fall Field Day – Aug. 24 – North Platte

The 19th Annual UNL West Central Research and Extension Center Fall Field Day is scheduled for **Thursday, Aug. 24** at the WCREEC (402 West State Farm Road) at North Platte south of Interstate I-80 from 8:00 a.m. to 4:00 p.m.

New irrigation technology, ag. vendors, tours & educational demonstrations will be featured along with a cover crops panel. Special speakers will include: Jimmy Emmons (Climate Smart Cover Crops); John Schroeder (Darr Feedlot); Sarah Carlson (Practical Farmers of Iowa); Grant Keenen (Cattle Management at Walmart); and Jeff Huffam (Frito-Lay Corn producer).

This educational event is free along with a sponsored lunch. Pre-registration by Aug. 21st is appreciated. Call: 308-696-6700 or visit: <https://go.unl.edu/2023-watercropsfielddayregistration>.

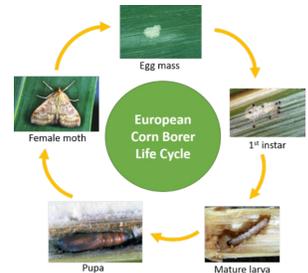
European Corn Borer Update

European corn borer (ECB) problems have been emerging in southcentral Nebraska popcorn and food grade white corn fields. Unlike standard field corn, the Bt (*Bacillus thuringiensis*) insect resistance can not be used for popcorn and white corn breeding. Therefore, European Corn Borer field management depends on biological controls, cultural controls, and targeted insecticide treatments back on field scouting.

ECB larvae damage corn in both vegetative & reproductive stages. These insects feed on corn leaf tissue in whorls and tunnel in stalks, ear shanks and ear tips during early corn growth. Since there are two generations per year, then later insect damage can also occur with reduced grain production, stalk breakage, increased stalk rots & grain molds; and higher overall harvest losses.

First generation ECB scouting usually occurs when the corn plants have their sixth leaf. Second generation ECB scouting is generally conducted in early August. Look for flattened white egg masses overlapping on corn leaves like fish scales which will turn yellow over time. Insecticide applications are recommended if the egg masses occur on over 50% of corn plant upper leaves in the fall.

The ECB life cycle begins with larva overwintering in plant residue which then pupate in late Spring. The cream/pale yellow to light brown 1" long moths emerge in May; and lay eggs on corn leaves. ECB larvae initially feed on leaves in whorls and then bore into stalks.

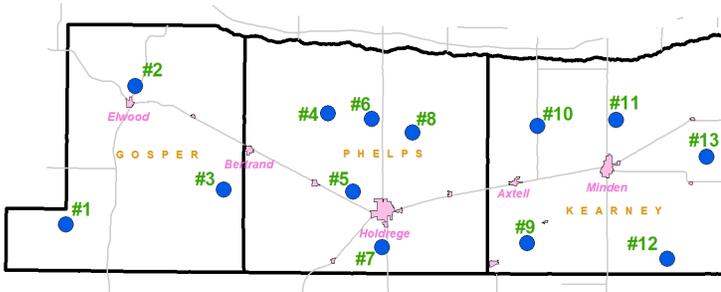


NAWMN CROP ET INFORMATION

Additional Information and other ET resources can be found at websites listed under "Crop ET Information" below.

Inches of Crop Water Use (ET) =
Evaporation x Kc

Site	July 17 – July 23		July 24 – July 30	
	Evaporation	Rain	Evaporation	Rain
1	1.40	1.38	2.50	0.06
2	1.30	0.17	2.00	0.13
3	1.30	0.25	2.00	0.48
4	NA	NA	NA	NA
5	1.30	0.20	1.90	0.10
6	1.20	0.03	1.80	0.63
7	1.20	0.26	1.90	0.03
8	1.10	0.20	1.80	0.38
9	1.20	0.41	1.80	0.24
10	1.20	0.65	1.70	0.30
11	1.20	0.19	2.00	0.24
12	1.20	0.12	2.30	0.03
13	1.30	0.17	1.80	0.50



2023 Map of NAWMN Sites across the Tri-Basin NRD

Crop Coefficients (Kc)

Corn		Soybeans	
Stage	Kc	Stage	Kc
2 leaf	0.10	Cotyledon (VC)	0.10
4 leaf	0.18	1st Node (V1)	0.20
6 leaf	0.35	2nd Node (V2)	0.40
8 leaf	0.51	3rd Node (V3)	0.60
10 leaf	0.69	Beg. Bloom (R1)	0.90
12 leaf	0.88	Full Bloom (R2)	1.00
14 leaf	1.01	Beg. Pod (R3)	1.10
16 leaf	1.10	Full Pod (R4)	1.10
Silk – Beg. Dent	1.10	Beg. Seed (R5)	1.10
¼ Milk Line	1.04	Full Seed (R6)	1.10
Full Dent (½ Milk)	0.98	Yellow Leaf (R6.5)	1.00
¾ Milk Line	0.79	Beg. Mat. (R7)	0.90
Black Layer	0.60	Full Mat. (R8)	0.20
Full Maturity	0.10	Mature	0.10

CROP STAGE INFORMATION

Corn (V14-14 Leaf to R4-Dough stage): Though not as severe as R1-Silking, stress at R2 through R4 can still have a profound effect on yield. As the kernels mature, the potential yield loss becomes less.

Avg. daily water use from July 24 – July 30 was 0.27"-0.39".

Soybeans (R2-Full Bloom to R5-Beginning Seed stage): Demand for water and nutrients is large throughout the rapid seed filling period. Environmental stress from now til shortly after R6 (Full Seed) needs to be avoided.

Avg. daily water use from July 24 – July 30 was 0.27"-0.39".

July 24-July 30 (12 of 13 NAWMN sites reporting): Average weekly rainfall was 0.26 (range 0.03 to 0.63). Average weekly ET for corn was 2.13 and for soybeans was 2.17.

CROP ET INFORMATION

NAWMN: <https://nawmn.unl.edu/ETdata/DataMap>

TBNRD: <https://www.tribasinrd.org/tbawmn>

UNL CropWatch: <https://cropwatch.unl.edu/gdd-etdata> NEW

Texting (Daily): Sasha @ TBNRD: 308-995-6688

Email (Weekly): Curtis @ NRCS: 308-995-6121, Ext. 3

CORN STAGE		DESCRIPTION
R2	Blister	The kernels are white on the outside and resemble a blister. The cob should be at or near full size by R2. The silks are beginning to dry out and darken in color.
R3	Milk	The kernels display a yellow color on the outside. Inner fluid is milky white. Silks are brown and dry or becoming dry.
R4	Dough	Most kernels contain semi-solid, pasty material.

SOYBEAN STAGE		DESCRIPTION
R3	Beg Pod	At least one pod of 3/16" length is present at any one of the four upper most main stem nodes that have a fully developed leaf. It's not uncommon to see larger pods at lower nodes.
R4	Full Pod	At least one pod of 3/4" length is present at one of the four uppermost main stem nodes that have fully developed leaves.
R5	Beg Seed	At least one pod containing small seeds is present at one of the four uppermost main stem nodes that have fully developed leaves. You can hold a pod up to the bright sky to see the small developing seeds in the pod cavities.

LAKE AND RIVER LEVELS

CNPPID Reservoir Elevation and Capacity as well as Platte River Flow data listed below and other locations can be found on CNPPID's website at <http://cnppid.com/wp-content/uploads/2016/06/lakeRiverData.html>.

	August 3, 2023, 8:00 AM	1 Year Ago
EI. & Cap. – Lake McConaughy	3234.0 ft - 55.0%	3227.4 ft - NA%
Inflows to Lake McConaughy	615 cfs	148 cfs
Flows on the North Platte at North Platte	NA cfs	911 cfs
Flows on the South Platte at North Platte	300 cfs	68 cfs
Flows on the Platte at Overton	280 cfs	120 cfs

Water is the lifeblood of our bodies, our economy, our nation and our well-being.
- Stephen Johnson

WEBSITES OF INTEREST

NRCS Nebraska www.ne.nrcs.usda.gov
 Farm Service Agency www.fsa.usda.gov
 TBNRD Home Page www.tribasinrnr.org/
 Central Irrigation District www.cnppid.com/cropwatch.unl.edu
 UNL Cropwatch cropwatch.unl.edu
 UNL Extension extensionpubs.unl.edu/
 K-State SDI Website www.ksre.ksu.edu/sdi
 No-till On The Plains www.notill.org
 Soil Health: www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/
 NE State Irrig Assoc www.nebraskastateirrigationassociation.org/

RAINFALL

Rainfall amounts listed below and other locations come from NeRAIN which can be found at website <https://nednr.nebraska.gov/NeRain/Maps/maps>.

Location:	July 20 – Aug 2	May 1 – Aug 2
Elwood 1.81 mi. NW:	2.30	12.32
Loomis 0.2 mi. SW:	0.81	12.63
Holdrege 1.7 mi. W:	0.91	10.73
Minden 7.2 mi. W:	1.08	9.32
Minden 5.8 mi. E:	1.12	9.33

Average Rain for May-July in Holdrege = 11.32 Inches

*** If you wish to receive this newsletter via e-mail, or have any questions, comments or ideas, feel free to contact Curtis Scheele at the NRCS office in Holdrege or you can email him at curtis.scheele@usda.gov. ***

USDA - Natural Resources Conservation Service

1609 Burlington Street
PO Box 798
Holdrege, NE 68949-0798
308-995-6121, Ext. 3

309 Smith Street
PO Box 41
Elwood, NE 68937-0041
308-785-3307, Ext. 3



1005 South Brown Street
Minden, NE 68959-2601

308-832-1895, Ext. 3

Central Nebraska Public Power & Irrigation District

415 Lincoln Street
PO Box 740
Holdrege, NE 68949
308-995-8601



Tri-Basin Natural Resources District

1723 Burlington Street
Holdrege, NE 68949
308-955-6688



Nebraska Extension

1308 2nd Street
Holdrege, NE 68949



PO Box 146
Elwood, NE 68937

308-785-2390

424 North Colorado
PO Box 31
Minden, NE 68959
308-832-0645

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TAPS Pivot Comparisons

2017 Pivot

252 RYG = 187 lb N rec.

262 RYG = 196 N lb rec.

Hybrid: Dyna-Grow D53VC55RIB				
OM = 1.9%	Population	Nitrogen UNL=187/196	Irrigation Rain = 21.4"	Yield YG = 252/262
Team 9	34,000	181	7.2	261
Team 10	34,000	171	7.0	261
Team 1	34,000	151	3.6	250
Team 3	28,000	231	2.5	238

Team 10: 171 lbs. of N looks ideal. This is 16 lbs. of N below the 252 Realistic Yield Goal (RYG) recommendation of 187 lbs. of N.

Could Team 1 get to the 261 bu. yield or be close enough with 161 lbs. of N?

Hybrid: Pioneer 1197 AM				
OM = 1.9%	Population	Nitrogen UNL=187/196	Irrigation Rain = 21.4"	Yield YG = 252/262
Team 13	32,000	171	9.0	257
Team 15	34,000	206	11.0	247

Could 171 lbs. of N be ideal for this hybrid?

There is not a 161 nor a 181 lbs. of N comparison with this hybrid to see how it would have yielded.

Hybrid: Pioneer 801 AM				
OM = 1.9%	Population	Nitrogen UNL=187/196	Irrigation Rain = 21.4"	Yield YG = 252/262
Team 11	31,000	231	9.0	244
Team 2	30,000	156	5.4	232

Without closer comparisons, 171 lbs. of N might be ideal with this hybrid as well. That's 15 lbs. more than the 156 lbs. of N applied with a 232 bu. yield (12 bu. less than the top yield of 244). Still, the 252 RYG recommendation of 187 lbs. of N is 31 lbs. more than the 156 lbs. applied.

2018 Pivot

252 RYG = 176 lb N rec.

262 RYG = 185 N lb rec.

Hybrid: Dekalb 60-69				
OM = 2.4%	Population	Nitrogen UNL=176/185	Irrigation Rain = 14.9"	Yield YG = 252/262
Team 1	33,000	216	11.7	275
Team 18	34,000	181	9.7	264
Team 13	34,000	146	6.2	258
Team 17	33,500	136	1.1	222

Would 196 lbs. of N be ideal here? 181 lbs. appears to be not enough but 216 lbs. is likely too high.

Team 18: maybe the 262 RYG recommendation of 185 lbs. of N would be enough with another inch of water and maybe backing off the population a tad bit for extra sun/space.

Hybrid: Golden Harvest G10S30-3220				
OM = 2.4%	Population	Nitrogen UNL=176/185	Irrigation Rain = 14.9"	Yield YG = 252/262
Team 14	30,000	196	4.6	261
Team 6	32,500	171	5.1	234

Is 196 lbs. of N good here or would 185 lbs. have worked? Obviously these two needed more irrigation.

Hybrid: Pioneer 0801 AM				
OM = 2.4%	Population	Nitrogen UNL=176/185	Irrigation Rain = 14.9"	Yield YG = 252/262
Team 9	30,000	231	6.6	270
Team 5	28,000	186	9.0	247

As a summary for 2018, is 196 lbs of N ideal? If Team 5 would have bumped up to 32,000, where would that leave their yield?

TAPS Pivot Comparisons

2019 Pivot

252 RYG = 184 lb N rec.

262 RYG = 194 N lb rec.

The sweet spot appears to be 171 lbs. of N with 4.5 inches irrigation. 171 lbs. of N is 13 lbs. below the 252 RYG recommendation of 184 lbs. of N.

Team 16 is only 2 bu. short of top yield for this hybrid.

Team 14 applying 181 lbs. of N was well short on yield with 1.5 inches less water than the 4.5 which appears ideal.

Comparing Teams 9 & 23: Where would Team 23 be yield wise if they applied 4.8 inches of water? Or asked differently, where would Team 9 be yield wise if they applied 186 lbs. of N?

Team 10 looks pretty good with 176 lbs. of N applied. What would it look like backing off to the 33,000 like Team 19? Comparable or not???

Hybrid: Pioneer 1197 AM				
OM = 1.9%	Population	Nitrogen UNL=184/194	Irrigation Rain = 21.2"	Yield YG=252/262
Team 7	34,000	171	7.3	227
Team 16	34,000	216	4.5	225
Team 6	34,000	216	3.3	208
Team 14	34,000	181	3.0	198

Hybrid: Pioneer 1366 AML				
OM = 1.9%	Population	Nitrogen UNL=184/194	Irrigation Rain = 21.2"	Yield YG=252/262
Team 21	30,000	276	9.9	241
Team 9	31,000	166	4.8	217
Team 23	32,000	186	0.3	197

Hybrid: Channel 213-19VT2				
OM = 1.9%	Population	Nitrogen UNL=184/194	Irrigation Rain = 21.2"	Yield YG=252/262
Team 10	35,000	176	2.0	238
Team 19	33,000	196	2.1	219

2020 Pivot

252 RYG = 178 lb N rec.

262 RYG = 186 N lb rec.

Wish there were more comparisons.

226 lbs. of N is too high and 126 lbs. of N is too low. 126 lbs. did pretty good considering 10 inches or more short on water. That's a lot of bushels. I would lean on the 178 or the 186 lb. UNL recommendation based off other years as where things generally fall out.

Where would 178 and 186 lbs. of N rec. yield in comparison to the 191 lbs. of N applied if all had proper irrigation?

We need more comparisons.

Team 27 has good irrigation and too much N applied.

Where would Team 5 yield at 33,000 for more sun/space and equal irrigation to Team 27?

Need more comparisons with 186 and 196 lbs of N.

Hybrid: Fontanelle 11D637				
OM = 2.3%	Population	Nitrogen UNL=178/186	Irrigation Rain = 9.0"	Yield YG=252/262
Team 1	32,000	226	12.5	295
Team 20	33,000	126	5.3	203

Hybrid: Fontanelle 13G519				
OM = 2.3%	Population	Nitrogen UNL=178/186	Irrigation Rain = 9.0"	Yield YG=252/262
Team 23	32,000	191	5.6	200
Team 18	32,000	246	3.3	171
Team 7	31,000	206	4.1	155

Hybrid: Channel 213-19 VT2PRIB				
OM = 2.3%	Population	Nitrogen UNL=178/186	Irrigation Rain = 9.0"	Yield YG=252/262
Team 27	33,000	246	13.6	293
Team 19	34,000	226	8.0	235
Team 5	35,000	176	4.9	186

TAPS Pivot Comparisons

2020 Pivot cont'd

Hybrid: Big Cob B13-N22GENVT2P				
OM = 2.3%	Population	Nitrogen UNL = 178/186	Irrigation Rain = 9.0"	Yield YG = 252/262
Team 15	32,000	186	6.0	218
Team 24	33,000	176	4.9	181

Where would Team 15 yield with 7.5 more inches irrigation? Comparing with the Channel 213 hybrid on the previous page for Team 27? If could get 75 more bushels then the 186 lbs. of N looks good at 262 RYG.

Hybrid: Pioneer 1366 AML				
OM = 2.3%	Population	Nitrogen UNL = 178/186	Irrigation Rain = 9.0"	Yield YG = 252/262
Team 22	29,000	246	12.6	276
Team 9	32,000	192	10.8	263
Team 11	34,000	81	7.8	233
Team 16	32,000	186	6.6	217

Team 16's 186 lbs. of N, irrigation and yield compare almost identically with the Big Cob hybrid above on Team 15 at 186 lbs. of N. Add 7 more inches of water on this hybrid, will it compare to the 276 bu. yield? Population will play a factor one way or another.

2021 Pivot

252 RYG = 187 lb N rec.

262 RYG = 196 N lb rec.

Hybrid: Pioneer 1089 AM				
OM = 2.0%	Population	Nitrogen UNL = 187/196	Irrigation Rain = 14.5"	Yield YG = 252/262
Team 1	31,000	213	10.7	227
Team 16	33,000	198	8.3	223
Team 20	33,000	213	5.9	208
Team 4	24,000	143	7.0	193

Team 16: 198 lbs. of N applied looks pretty good. That's basically the 262 RYG recommendation. Curious how the 252 RYG recommendation of 187 lbs. of N would compare?

Hybrid: Pioneer 1197 AM				
OM = 2.0%	Population	Nitrogen UNL = 187/196	Irrigation Rain = 14.5"	Yield YG = 252/262
Team 6	34,500	183	5.0	174
Team 14	32,000	233	2.0	152

Would the 252 RYG recommendation of 187 lbs. of N be an ideal spot with 5 more inches of water. Simply comparing to the 1089 hybrids above of Teams 1 & 16. Curious how the population would play that out by tweaking both of them?

Hybrid: Pioneer 1082 AM				
OM = 2.0%	Population	Nitrogen UNL = 187/196	Irrigation Rain = 14.5"	Yield YG = 252/262
Team 13	31,000	263	13.5	274
Team 2	35,000	208	6.2	262
Team 15	32,500	198	6.4	248
Team 8	32,000	183	3.0	190
Team 28	30,500	253	1.5	158

Team 15: Is 198 lbs. of N ideal with 3 more inches of water? That's a 262 RYG recommendation.

TAPS Pivot Comparisons

2021 Pivot cont'd

Hybrid: Pioneer 1366 AML				
OM = 2.0%	Population	Nitrogen UNL= 187/196	Irrigation Rain = 14.5"	Yield YG= 252/262
Team 23	34,000	283	10.3	260
Team 32	34,000	158	9.8	247
Team 22	34,000	158	12.3	244
Team 10	34,000	158	9.8	237
Team 12	32,000	243	9.6	233
Team 25	34,000	158	9.3	229
Team 24	34,000	158	8.4	224
Team 31	34,000	128	9.8	224
Team 3	34,000	175	0.0	152

Teams 32 and 10 average a yield of 242 bu. Basically same water as the top yielder in Team 23. Can we get another 18 bushels by adding 20 or 30 more lbs. of N to Teams 32 & 10? 178 lbs. of N is 9 lbs. below the 252 RYG recommendation of 187 lbs.

Check out Team 31 at 128 lbs. of N. What would 50 more lbs. of N do to that? That would still be an application of 9 lbs. of N less than the 252 RYG recommendation of 187 lbs.

Hybrid: Fontanelle 11D637				
OM = 2.0%	Population	Nitrogen UNL= 187/196	Irrigation Rain = 14.5"	Yield YG= 252/262
Team 29	32,000	143	7.8	248
Team 18	33,500	188	4.8	202

Adding 5 more inches of water to Team 18 with a 252 RYG recommendation of 188 lbs., could we be competing with top yield for this hybrid?

2022 Pivot

252 RYG = 194 lb N rec.

262 RYG = 203 N lb rec.

Hybrid: Big Cob B6562-VT2P				
OM = 1.9%	Population	Nitrogen UNL= 194/203	Irrigation Rain = 9.0"	Yield YG= 250/260
Team 13	29,000	174	9.3	216
Team 32	32,000	149	1.2	112

Team 13: Up population to 33,000, add 20 more lbs. of N to 194 (250 RYG rec.) and apply 5 more inches of water, does this look like it could be ideal?

Hybrid: Dekalb DKC59-82RIB				
OM = 1.9%	Population	Nitrogen UNL= 194/203	Irrigation Rain = 9.0"	Yield YG= 250/260
Team 18	33,000	219	8.6	201
Team 14	34,000	194	7.6	180

What would 7 more inches of water get Team 14? Would there be a need to go higher or lower on the nitrogen application?

Hybrid: Pioneer 1366 AML				
OM = 1.9%	Population	Nitrogen UNL= 194/203	Irrigation Rain = 9.0"	Yield YG= 250/260
Team 15	31,000	234	15.0	249
Team 4	32,000	224	14.5	243
Team 11	34,000	229	14.9	235
Team 27	32,000	184	10.4	231
Team 5	34,000	229	11.9	219
Team 3	34,000	229	6.5	177
Team 29	34,000	229	6.5	174
Team 23	27,500	204	7.3	170
Team 20	34,000	186	0.0	103

Team 27: Would 4 more inches of water make 184 lbs. of N the ideal application?

A comparison with 194 lbs. of N would be nice to see. Regardless, it looks like the 250 RYG recommendation of 194 lbs. of N or a bit lower might have been the ideal application in 2022.

TAPS Subsurface Drip Comparisons

2019 SDI

252 RYG = 145 lb N rec.

262 RYG = 154 N lb rec.

Hybrid: Pioneer 1366 AML				
OM = 2.6%	Population	Nitrogen <small>UNL=145/154</small>	Irrigation <small>Rain = 21.2"</small>	Yield <small>YG = 252/262</small>
Team 5	33,000	176	2.3	261
Team 6	32,000	156	0.7	255
Team 16	33,000	181	2.0	252
Team 1	34,000	126	0.6	248

How would Team 6 yield if they applied another 1.5 inches of water. It appears that 156 lbs. of N was ideal (262 RYG rec.). Although Team 1 at 126 lbs. isn't terribly far behind in yield. So maybe 145 lbs. of N (252 RYG rec.) or lower may have been the best option.

Hybrid: Pioneer 801 AM				
OM = 2.6%	Population	Nitrogen <small>UNL=145/154</small>	Irrigation <small>Rain = 21.2"</small>	Yield <small>YG = 252/262</small>
Team 9	28,000	151	4.8	260
Team 10	30,000	136	3.3	259

This comparison is telling me that the 136 lbs. of N applied was the best route for this hybrid (20 lbs. below the 252 RYG rec.)

Hybrid: Big Cob 18-H64				
OM = 2.6%	Population	Nitrogen <small>UNL=145/154</small>	Irrigation <small>Rain = 21.2"</small>	Yield <small>YG = 252/262</small>
Team 15	33,500	146	4.0	278

No comparison here. Just a little extra verification that the 252 RYG rec. of 145 lbs. did a great job. Could we have gone to that 136 lbs. of N as shown in the above two charts?

2020 SDI

252 RYG = 160 lb N rec.

262 RYG = 168 N lb rec.

Hybrid: Pioneer 1366 AML				
OM = 2.8%	Population	Nitrogen <small>UNL=160/168</small>	Irrigation <small>Rain = 9.0"</small>	Yield <small>YG = 252/262</small>
Team 6	33,500	151	11.8	248
Team 1	32,000	156	8.2	238

Appears that the 252 RYG rec. of 160 lbs. of N or less has good results. I would like to see how a higher rate of nitrogen would perform.

Hybrid: Pioneer 1197 AMT				
OM = 2.8%	Population	Nitrogen <small>UNL=160/168</small>	Irrigation <small>Rain = 9.0"</small>	Yield <small>YG = 252/262</small>
Team 13	34,000	81	7.8	242
Team 11	34,000	6	0.0	144

Check out this 81 lbs. of N applied with a 242 yield. Would 80 more lbs. of N and proper irrigation get this hybrid to top yield? See the 1366 chart directly above this chart.

TAPS Subsurface Drip Comparisons

2021 SDI

252 RYG = 165 lb N rec.

262 RYG = 173 N lb rec.

Hybrid: Pioneer 1366 AML				
OM = 2.7%	Population	Nitrogen <small>UNL = 165/173</small>	Irrigation <small>Rain = 14.5"</small>	Yield <small>YG = 252/262</small>
Team 8	33,000	208	9.1	289
Team 14	31,000	273	16.9	284
Team 10	33,000	153	7.0	275
Team 7	30,000	223	7.2	274
Team 1	34,000	158	6.0	241

Team 10: Adding 10 – 20 more lbs. of N and 2 more inches of water is probably ideal? That is applying the 252 RYG rec. or the 262 RYG rec. Which is better? Don't know for certain but a good place to be.

Team 1 is in that same ballpark with 3 more inches of water.

Team 13 is a top yielder applying that 252 – 262 RYG rec of 165 – 173 lbs. of N.

But look at Team 4 with 20 lbs. of N less than the 252 RYG recommendation of 165 lbs. and 2 inches less water.

Hybrid: Channel 216-36VT2				
OM = 2.7%	Population	Nitrogen <small>UNL = 165/173</small>	Irrigation <small>Rain = 14.5"</small>	Yield <small>YG = 252/262</small>
Team 13	34,500	168	8.5	286
Team 4	33,000	143	6.6	280

2022 SDI

252 RYG = 166 lb N rec.

262 RYG = 174 N lb rec.

Hybrid: Pioneer 1366 AML				
OM = 2.6%	Population	Nitrogen <small>UNL = 166/174</small>	Irrigation <small>Rain = 9.0"</small>	Yield <small>YG = 250/260</small>
Team 15	33,300	284	13.4	283
Team 13	32,000	184	9.9	261

Team 13: Another 1000 population and 4 more inches of water, where do they yield? Can they have applied less lbs. of N with the same result if applying what was just mentioned?

Hybrid: Pioneer 1185 AM				
OM = 2.6%	Population	Nitrogen <small>UNL = 166/174</small>	Irrigation <small>Rain = 9.0"</small>	Yield <small>YG = 250/260</small>
Team 5	34,000	244	17.2	289
Team 4	31,000	144	11.5	257

Team 4: Add 2000 to population, 20 lbs. of N, and 2 inches of water, where would they yield? That would be applying at the 250 RYG recommendation of 166 lbs. of N.