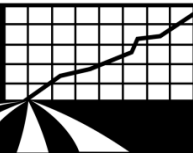


USTN



US Testing Network

2017 Annual Member Meeting

Tuesday, December 5, 2017
Chicago, IL

For more information contact USTN Coordinator:

Practical Farmers of Iowa

600 5th St, Suite 100, Ames IA 50010

Sarah Carlson 515.232.5661 or Chris Wilbeck 515.229.6988
sarah@practicalfarmers.org chris.ustn@practicalfarmers.org

AGENDA

2017

- Overview
- Improvements

2018

- Suggestions
- Discussion

2017 Overview

USTN Testing Coordination

Steering Committee

Charlie Brown, Brownseed Genetics

Dan Dorney, DKD Genetics

Jode Edwards, USDA-ARS

Mac Ehrhardt, Albert Lea Seed

Chris Eichhorn, Wyffels Hybrids

Alix Paez, Genetic Enterprises International

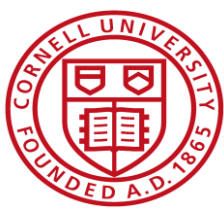
Data Analysis - USDA-ARS

Jode Edwards, USDA-ARS (Ames IA)

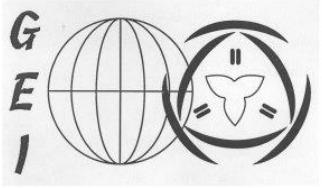
Test Coordination - Practical Farmers of IA

Sarah Carlson, PFI

Chris Wilbeck, PFI consultant



Current & Past Participants



DKD GENETICS



More than a number.



IOWA STATE UNIVERSITY PENNSTATE



Spectrum Seed Technologies

MICHAEL FIELDS AGRICULTURAL INSTITUTE



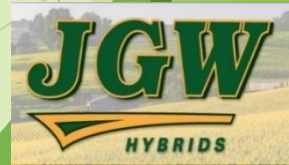
UNIVERSITY OF Nebraska Lincoln



Frank Kutka



RFR



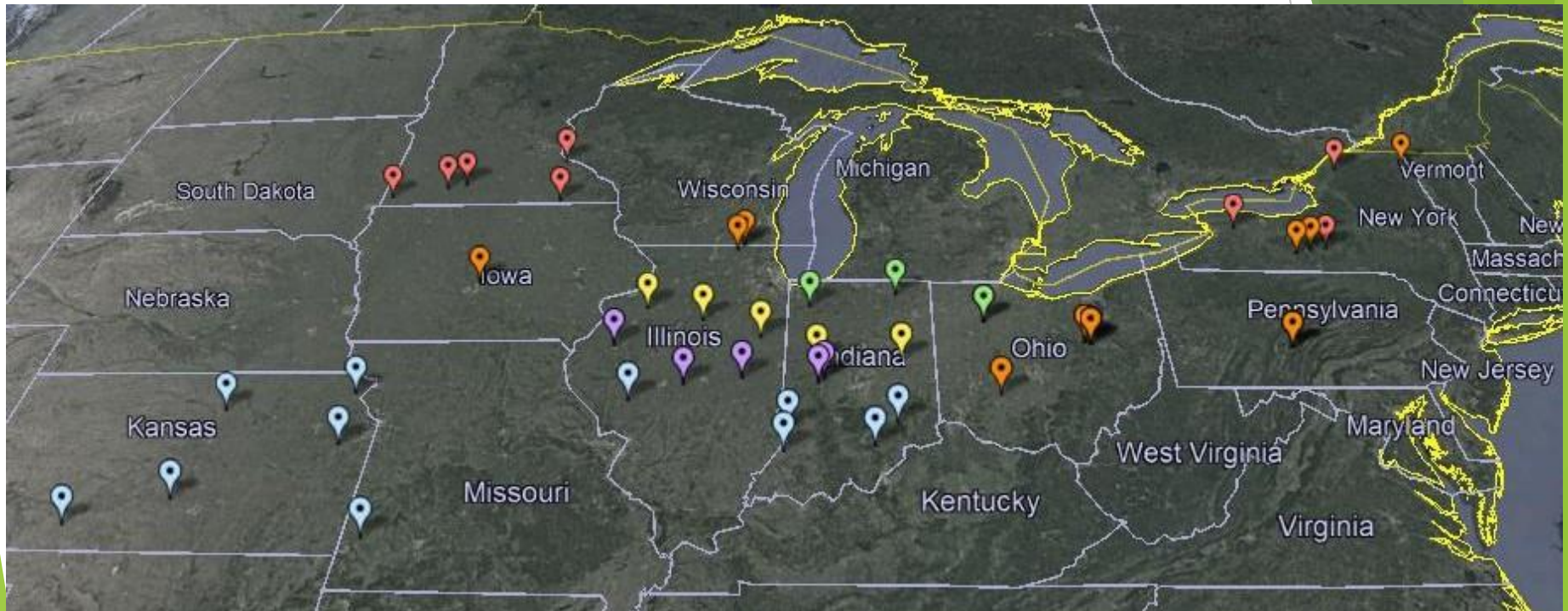
Montgomery Consulting KOOPMAN GENETICS, LLC



Participants

	2012	2013	2014	2015	2016	2017
Seed Suppliers	12	17	16	18	13	10
↓ Can be both ↑						
Location Managers	15	20	20	19	17	15
TOTAL	19	28	28	30	24	21

2017 Locations: 48 test sites in 11 states



EC1-95 EC3-105 EC4-110 EC4-112 EC5-115
Organic (EO1-95 EO3-105 EO4-110)

Note: some locations provide sites for organic & conventional tests

Entries

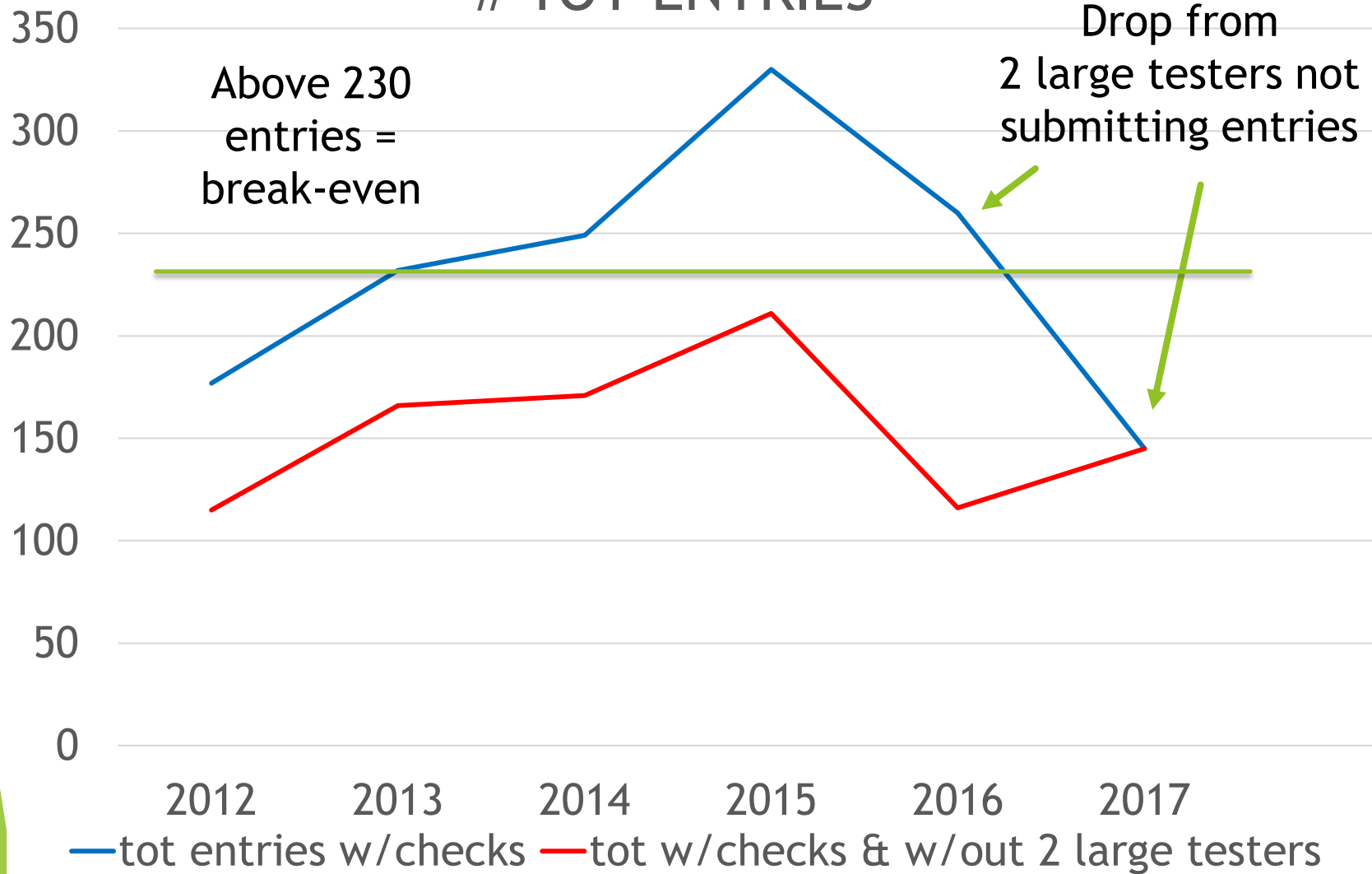
	2012	2013	2014	2015	2016	2017
Test Entries	164	215	235	304	245	127
Check Entries	13	17	14	26	15	18
TOTAL Entries	177	232	249	330	260	145

300 entry goal

TEST	TYPE	CRM	2015 # Entries	2016# Entries	2017# Entries
EC0	CONV	75	36	-	Not offered
EC1	CONV	90/95W	30	15	15
EC1	CONV	95E	Not offered	Not offered	10
EC2	CONV	100	20	-	Not offered
EC3E	CONV	105	19	10	12
EC3W	CONV	105	21	-	-
EC4E	CONV	110	20	17	16
EC4W	CONV	110	15	-	-
EC4E	CONV	112	20	83	14
EC4W	CONV	112	15	75	-
EC4FW	CONV	112	35	-	-
EC5	CONV	115	13	10	15
EC5	CONV	115FW-i	Not offered	Not offered	10
EC5	CONV	115FW	Not offered	Not offered	10
EO1	ORG	95	37	23	18
EO3	ORG	105	30	16	15
EO4	ORG	110	19	11	10
Total			330	260	145

Should not rely on any one tester

TOT ENTRIES



Budget

Goal is to BREAK-EVEN

	ACTUAL 2016		ESTIMATE 2017	
Test Income		\$71,094		\$32,944
From SS	\$71,094		\$32,944	
From Grant	\$0		\$0	
Sponsor Donation	\$0		\$0	
TOTAL INCOME		\$71,094		\$32,944
To LM		\$43,433		\$22,260
LM donation		-\$578		\$0
To PFI Admn (CW & SH)		\$14,275		\$15,000
Annual Meeting		\$3,121		\$3,000
Field Days, other		\$0		\$0
TOTAL EXPENSE		\$60,251		\$40,260
NET		\$10,843		-\$7,316

First time negative since 2013

2017 Improvements

2017 Improvements

1. Offered public data

- submit entry as “public” or “USTN-only”
- USTN report shows all entries
- Public report shows only those entries submitted as “public”
 - used all-entry summary test statistics
- same cost per entry
- formatted public data for member & PFI website
- raw data still distributed for internal use
- **NO checks were offered for public data**

Entries per Test

TEST	Public	USTN
EC1-95E	5	10
EC1-95W	9	15
EC3-105E	6	12
EC4-110E	2	16
EC4-112E	1	14
EC5-115E	2	15
EC5-115FW		10
EC5-115FW-i		10
EO1-95	13	18
EO3-105	10	15
EO4-110	3	10
Total	51	145

About 1/3
of entries

Need more
public entries
for more
meaningful
Public Reports

Entries per Tester

Tester	Public	USTN
AL	37	44
BRH		11
Cornell	3	3
DKD		26
GEI		4
GRP		5
Lords		18
MAS	7	7
Mont	3	26
USDA	1	1
Total	51	145

Need participation from more Testers for more meaningful Public Reports

2017 Improvements

2. Revised Test Zones

- Added EC1-95E
 - 3 locations (NY)
 - 10 entries = some interest
- Split EC5-115FW
 - 3 locations irrigated (KS)
 - 3 locations non-irrigated (KS/MO)
 - 10 entries in each = some interest

2017 Improvements

3. Implementation

- simplified location and entry RSVP
- customized reminders (some really like reminders, some don't need them)
- reiterated need for organic certification letters to go w/shipped seed
- added instructions to label outside of seed shipment box with "USTN"
- paid LMs early (except those who submitted entries and payment is netted)

2018 Suggestions

2018 Suggestions

1. Still need to expand Organic

Help recruit more organic sites

Current locations:

Cornell University - NY

Mandaamin Institute - WI

Michael Fields Institute - WI

Ohio State University - OH

Penn State University - PA

University of Vermont - Extension - VT

USDA-ARS - IA

No longer offering locations:

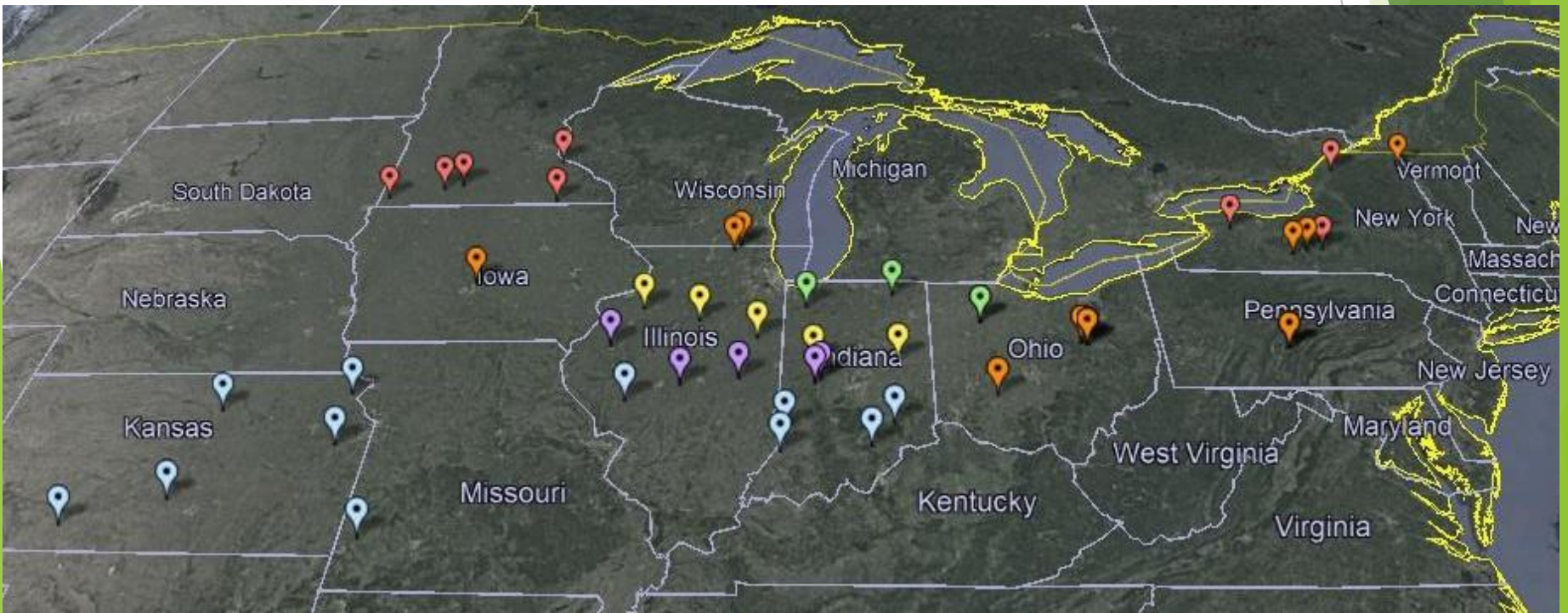
University of Nebraska-Lincoln - NE

Who's missing?

2018 Suggestions

2. Continue to offer new zones

- Any interest in NE?
- No interest in IA because ISU has testing?
- Other zones?



2018 Suggestions

3. Setup Tests Earlier

- Ask for specific locations vs review those submitted?
- Setup tests by 1/15 vs 2/1?
- Entries still due 3/1, so more time to submit?

2018 Suggestions

4. Provide Top Yield Data Reports

- Publish top 3 entries (yields) per Test
 - Testers agree at sign-up
- Post on PFI Website for Farmer use
- In addition to Public & USTN Reports

5. Explore Prediction Models

- Use 2017 data or earlier?
- Use weather data?
- Zip code or zone prediction?
- Other ideas?

2018 Suggestions

6. Other ideas?

Wrap-Up

How to Participate

(details in back of handout)

JOIN!

To become a member and
participate in 2018 USTN Testing

Contact:

Chris Wilbeck (USTN) 515.229.6988
chris.ustn@practicalfarmers.org

How to Participate

1. Sign Testing Agreement (Jan/Feb)

USTN Germplasm, Testing and Data Agreement

Note: You must sign an agreement every year you participate.

Seed Supplier = Submits seed to test

Has proper license to test seed & share data within USTN

Submits letter w/seed going to organic tests certifying/confirming that seed is untreated and not GMO

Location Manager = Manages test plots

Will not breed, self, sib or manipulate corn

Will not distribute seed to 3rd party

Coordinator = Administers testing & data distribution (PFI)

All =

Will not share test data outside of USTN, except in reports distributed for “external” or “public” use

2. Pay for participation

Seed Supplier pays = per test entry (to PFI)

UNIQUE: *YOU decide how many entries you submit.*

AND, you get data for everyone's entries across ALL TESTS.

PFI directs payment to:

Location Manager (plot management fee)= per test plot

PFI (administration fee) = per test plot

UNIQUE: *You can be BOTH a Seed Supplier AND Location Manager to offset costs, if desired.*

UNIQUE: *PFI handles the coordination of the tests, including invoicing to both SS & LMs.*

3. Support USTN

Sponsor donates = lump sum based on company revenue

Pays for recruiting, marketing costs, program enhancements

4. Receive Instructions (March)

USTN File:

USTN # assigned per entry per test

Instructions for participation:

when/where ship seed (directly to locations)

how to label seed packets

how to code pedigrees

how to handle late seed

data needed, file formats

when files are due, etc.

Payment estimates:

Seed Supplier costs, Location Manager payments

USTN File - To Complete (fictional ex)

USTN#	Test	Breeder	Hybrid	Pedigree	Seed TRT	RM	Stature	Native Traits	GMO Traits	Publish
64	EC1	AL								
65	EC1	AL								
66	EC1	AL								
67	EC1	AL								
75	EC2	AL								
76	EC2	AL								
77	EC2	AL								
78	EC2	AL								
89	EC3	AL								
90	EC3	AL								
91	EC3	AL								
92	EC3	AL								
102	EC4E	AL								
103	EC4E	AL								
104	EC4E	AL								
105	EC4E	AL								
116	EC5	AL								
117	EC5	AL								
118	EC5	AL								
119	EC5	AL								
*your organization's testing number is										10

Each Seed Supplier is given:

1. USTN # for each test entry

2. Unique code: for organization name

AL = Albert Lea for pedigree coding

10 = Albert Lea

5. Supply Data (June and After Harvest)

Seed Supplier:

Seed File: due June
hybrid & coded pedigree assigned to each USTN
includes seed treatment, traits, RM, etc

Location Manager:

Randomization File: due June

Data File: due immediately after harvest

Seed File (fictional ex)

organization's testing code = 33 coded public pedigree= 09

USTN#	Test	Breeder	Hybrid	Pedigree	Seed TRT	RM	Stature	Native Traits	GMO Traits	Publish
105	EC1	CAW	C536-07	09188x09102	Maxium	86	Tall		GT	public
106	EC1	CAW	C23-07	33121x09141	Maxium	92	Short		GTCBLL	USTN
107	EC1	CAW	C4300-07	33122x33123	Maxium	92	Average	white	NONE	public

Commercial x Commercial

Commercial x Proprietary

Proprietary x Proprietary

UNIQUE:

coded pedigrees to allow for comparisons

Randomization File (fictional ex)

TEST	LOCATION	USTN #	FILLER	REPLICATE	PLOT#	RANGE	PASS	DATEPLANTED	PLOTLENGTH	ROWSPACING	#SEED	#ROWS
EC4W	Rippey	120	NO	1	1	1	1	5/15/2013	17.5	30	45	4
EC4W	Rippey	121	NO	1	2	1	3	5/15/2013	17.5	30	45	4
EC4W	Rippey	122	YES	1	3	1	5	5/15/2013	17.5	30	45	4
EC4W	Rippey	123	NO	1	4	1	7	5/15/2013	17.5	30	45	4
EC4W	Rippey	130	NO	1	5	1	9	5/15/2013	17.5	30	45	4
EC4W	Rippey	131	NO	1	6	1	11	5/15/2013	17.5	30	45	4
EC4W	Rippey	132	NO	1	7	1	13	5/15/2013	17.5	30	45	4
EC4W	Rippey	133	NO	1	8	1	15	5/15/2013	17.5	30	45	4
EC4W	Rippey	147	NO	1	9	1	17	5/15/2013	17.5	30	45	4
EC4W	Rippey	120	NO	2	18	2	17	5/15/2013	17.5	30	45	4
EC4W	Rippey	121	NO	2	17	2	15	5/15/2013	17.5	30	45	4
EC4W	Rippey	122	NO	2	16	2	13	5/15/2013	17.5	30	45	4
EC4W	Rippey	123	NO	2	15	2	11	5/15/2013	17.5	30	45	4
EC4W	Rippey	130	NO	2	14	2	9	5/15/2013	17.5	30	45	4
EC4W	Rippey	131	NO	2	13	2	7	5/15/2013	17.5	30	45	4
EC4W	Rippey	132	NO	2	12	2	5	5/15/2013	17.5	30	45	4
EC4W	Rippey	133	NO	2	11	2	3	5/15/2013	17.5	30	45	4
EC4W	Rippey	147	NO	2	10	2	1	5/15/2013	17.5	30	45	4



If test seed not planted due to late seed, etc = YES

Data File

Required:

- Test (EC1, EC2, etc)
- Location (city)
- Replicate (1 or 2)
- Plot#
- Range
- Pass
- #Rows Harvested
- Plot Length Harvested
- Date Harvested
- Weight (lbs/plot)
- Moisture (%)
- Stand Count (# plants/plot)
- Root Lodge (# plants/plot)
- Stalk Lodge (# plants/plot)

Optional:

- Test Weight (lbs/bu)
- Green Snap (# plants/plot)
- Plant Height (inches)
- Ear Height (inches)
- Mid Pollen Date
- Mid Silk Date
- Population
- Comments
- Discard

6. Receive USTN Data Summary (Dec)

*Example file
available upon request*

2018 Timeline

JAN = Submit Locations for Tests (LM) due 1/15/18

FEB = Locations Selected & Call for Entries 2/1/18

MAR= Submit Entries & Check Offers (SS) due 3/1/18

APR= Ship Seed to Locations (SS)

JUN = Seed Entry Files (SS) due 6/15/18
Field Randomization Files (LM) due 6/15/18

After

Harvest= Data Files (LM): due immediately after harvest

NOV= Raw Data & Test Summaries distributed as available

DEC= USTN Data Summary Recaps (@ ASTA mid Dec)
Final Invoices Emailed after ASTA meeting
Payment due to Location Managers

JAN= Payment due to PFI