2018 Annual Member Meeting
Tuesday, December 4, 2018
Chicago, IL

For more information contact USTN Coordinator:
Practical Farmers of Iowa

Coordinator Chris Wilbeck 515.229.6988
chris.ustn@practicalfarmers.org

Advisor Sarah Carlson 515.232.5661
sarah@practicalfarmers.org
Agenda

Overview
Data
Improvements
Challenges & Suggestions
Wrap-Up
2018 Overview
The US Testing Network (USTN) is run as a not-for-profit, participant-based network started in 2009 and coordinated by Practical Farmers of IA.

USTN’s purpose is to coordinate a rigorous testing program to evaluate public and private germplasm.

The primary focus of USTN is to evaluate germplasm under development for the organic and non-transgenic grain (corn) industry.

USTN’s participants provide seed to be tested, locations for testing and/or financial support.
Before USTN

Organic & Non-GMO corn breeders & retailers:

- Had few economical testing options
- Ran isolated testing programs
- Were geographically limited
- Relied on small data sets
- Lacked an efficient network to communicate data

Making it hard to assess a hybrid’s performance across a range of environmental conditions.
With USTN

- ECONOMICAL, ONE-STOP testing service across a WIDE RANGE of LOCATIONS
- INCREASED EXPOSURE for independent programs of varying sizes
- COLLABORATIVE NETWORK of breeders, seed companies and end-users focused on the non-GMO and organic marketplace.

GOAL: Improved QUALITY and QUANTITY of non-GMO & organic hybrids available to farmers
USTN Testing Coordination

Test Coordination - Practical Farmers of IA
Chris Wilbeck, PFI consultant - coordinator
Sarah Carlson, PFI advisor

Data Analysis - USDA-ARS
Jode Edwards, USDA-ARS (Ames IA)

Current 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
Participants

Public Breeders

Private/Independent Breeders

Seed Retailers

Seed Treatment Developers

Researchers
<table>
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<tr>
<th>Can be both</th>
<th>2012</th>
<th>2013</th>
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<th>2015</th>
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<td>20</td>
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<tr>
<td>TOTAL</td>
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<td>28</td>
<td>30</td>
<td>24</td>
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<td>22</td>
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</table>
2018 Locations: 53 test sites in 10 states

Note: some locations provide sites for organic & conventional tests
### Entries

<table>
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<th></th>
<th>2012</th>
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<th>2016</th>
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<td>249</td>
<td>330</td>
<td>260</td>
<td>145</td>
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230 break-even
Should not rely on any one tester

119 from 2 testers
144 from 1 tester
105 from 1 tester

# TOT ENTRIES

230=break-even

2012 2013 2014 2015 2016 2017 2018

- tot entries
- tot w/out large testers
<table>
<thead>
<tr>
<th>TEST</th>
<th>TYPE</th>
<th>CRM</th>
<th>2015 # Entries</th>
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<tr>
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<td>CONV</td>
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<td>11</td>
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<td>CONV</td>
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<td>CONV</td>
<td>115 or 115E</td>
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<td>10</td>
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<tr>
<td>EC5</td>
<td>CONV</td>
<td>115FW-i</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>10</td>
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<tr>
<td>EC5</td>
<td>CONV</td>
<td>115FW</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>EO1</td>
<td>ORG</td>
<td>95</td>
<td>37</td>
<td>23</td>
<td>18</td>
<td>18</td>
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<td>EO3</td>
<td>ORG</td>
<td>105</td>
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<tr>
<td>Total</td>
<td></td>
<td></td>
<td>330</td>
<td>260</td>
<td>145</td>
<td>226</td>
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</tbody>
</table>
### Budget

**Goal is to BREAK-EVEN**

<table>
<thead>
<tr>
<th></th>
<th>ACTUAL 2017</th>
<th>ACTUAL 2018</th>
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<tbody>
<tr>
<td>SS Income</td>
<td>$33,904</td>
<td>$56,664</td>
</tr>
<tr>
<td>less no harvests</td>
<td>-$715</td>
<td>-$824</td>
</tr>
<tr>
<td>less free to fill tests</td>
<td>-$960</td>
<td>-$10,080</td>
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<tr>
<td>TOTAL INCOME</td>
<td>$32,229</td>
<td>$45,760</td>
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<tr>
<td>LM Payments</td>
<td>$22,056</td>
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<tr>
<td>LM donation</td>
<td>-$578</td>
<td>-$816</td>
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<tr>
<td>LM credit (apply next year)</td>
<td>-$99</td>
<td>-$1,292</td>
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<tr>
<td>LM credit (apply this year)</td>
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<tr>
<td>Coordinator</td>
<td>$8,925</td>
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<td>PFI Book-Keeping</td>
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<tr>
<td>Annual Meeting</td>
<td>$3,856</td>
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<tr>
<td>OREI reim ASTA</td>
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<td>TOTAL EXPENSE</td>
<td>$36,160</td>
<td>$49,205</td>
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<td>NET</td>
<td>-$3,931</td>
<td>-$3,445</td>
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</table>

**FREE to fill tests:**

- **2017:**
  - 4 = 2conv + 2org

- **2018:**
  - 37 = 5conv + 32org

**$3000 is for meeting room**
2018 Data
presented by
Jode Edwards USDA-ARS
Improvements
2018 Improvements

3 Reports per Test

1. **USTN:** internal *(ALWAYS PROVIDED)*
   all entries - not for public distribution

2. **Public:** public *(NEW LAST YEAR)*
   entries tester agrees can be on report
   use all-entry summary test statistics

3. **Top 3 per Test:** public *(NEW THIS YEAR)*
   entries tester agrees can be on report
   use all-entry summary test statistics

**BENEFITS:**

- same cost per entry
- customizable, formatted public data for websites
- raw data still distributed for internal use
# Entries per Tester

<table>
<thead>
<tr>
<th>TESTER</th>
<th>USTN</th>
<th>Top 3</th>
<th>Public</th>
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<tr>
<td>AL</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Becks</td>
<td>5</td>
<td>5</td>
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</tr>
<tr>
<td>Cornell</td>
<td>8</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>CRD</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DKD</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEI</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>GHO</td>
<td>5</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Mand</td>
<td>23</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>MAS</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>MC</td>
<td>105</td>
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</tr>
<tr>
<td>Mont</td>
<td>30</td>
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<td></td>
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<tr>
<td>SEN</td>
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<td>USDA</td>
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<td>FILLED</td>
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<tr>
<td>TOTAL</td>
<td>226</td>
<td>184</td>
<td>32</td>
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</table>

Most entries ok for Top 3 Report = 81% of total entries

Not many agree to have entries on Public Report = 14% of total entries
Entries per Test

<table>
<thead>
<tr>
<th>TEST</th>
<th>USTN</th>
<th>Top 3</th>
<th>Public</th>
<th>Top 3+ Public</th>
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<tbody>
<tr>
<td>EC1-95E</td>
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<td>EC1-95W</td>
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<td>9</td>
</tr>
<tr>
<td>EC3-105E</td>
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<td>9</td>
<td>2</td>
<td>4</td>
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<tr>
<td>EC3-105EW</td>
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<td>18</td>
<td>5</td>
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<td>EC4-110E</td>
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<tr>
<td>EC4-112E</td>
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<td>25</td>
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<td>EC5-115E</td>
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<tr>
<td>EO1-95</td>
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<td>EO3-105</td>
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<tr>
<td>TOTAL</td>
<td>226</td>
<td>184</td>
<td>32</td>
<td>52</td>
</tr>
</tbody>
</table>

Top 3 entries added to Public Report = 23% of total entries
2018 Improvements

Added 3rd Rep to EO4-110 Organic Test

Encouraged more nitrogen applications in organic (see Organic Location Comments)

Improved data analysis
Challenges & Solutions
Challenges & Solutions

Challenge:
Number of organic entries dropping from current members
Difficult to fill tests
• “known” organic breeders/retailers already contacted
• gave free organic entries to fill tests

Solution:
Need more organic testers
• other OREI groups? European seed breeders/retailers?
Are there other uses for USTN organic testing network?
• Add test option: 1 location per test
  ex: EO1-95 Penn Yan, EO3-105 Wooster, EO4-110 Ames
  3 reps per entry: 500 kernels vs 1200-2000 kernels needed previously
• Other?
Challenges & Solutions

Challenge:
Difficult to get “checks”
- swapped free organic entries for checks (Becks/GHO)
- LM provided some checks (CRD, Cornell)
- SS submitted own checks (DKD, MC)

Solution:
MBS provides conventional checks
- SS buys seed from MBS & signs agreement
- pedigree & hybrid on USTN report/hybrid on Public reports
- USTN gives SS 1 free entry per check
Get organic checks from (need option?)
- need to show pedigree & hybrid on USTN report, hybrid on public reports
Challenges & Solutions

Challenge:
Organic certification letters not always with seed
• SS reminded in instructions, but still forgets
• LM asks for it prior to an inspection (short notice)

Solution:
Send 2\textsuperscript{nd} reminder to SS
Remind LM to check seed shipment for letter
Challenges & Solutions

Challenge:
Farmers unaware of USTN and results
• current PFI website focus for breeders/retailers
• Public data only available since 2017 (limited)

Solution:
Push-out the info to farmers
Encourage farmers to go to SS websites to buy seed
• highlight Top 3 Reports
• PFI social media tweets
• Tester social media tweets
Challenges & Solutions

Challenge:
Rising cost of meeting at Hyatt
• meeting room costs $3000
  • room + min food/beverage $2000
  • affiliate charge to get a meeting room $500
  • badge charge $100
  • AV cost $400

Solution:
Consider a nearby restaurant w/meeting room
• in 2012, met at Bella Bacinos for $800 (food included)
Challenges & Solutions

Challenge:
Invoicing too complex with minimal benefits
• deducting payments made or received when location not harvested
• other testing services don’t do this?

Solution:
Streamline invoicing
• pay LM full payment, even if location not harvested
• SS pays full payment, even if location not harvested
• still deduct payments, if location not planted
Challenges & Solutions

Challenge:
Would like to send data reports earlier
• some locations received early
• many locations harvested later
• analysis not done until all locations are in for test
• report production is time consuming

Solution:
Email raw data weekly starting mid-Nov
Minimize report formatting with pre-production
Challenges & Solutions

Others?
Wrap-Up
JOIN!

To become a member and participate in 2019 USTN Testing

Contact:

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