

28th Annual Seed Conditioners Advisory Committee Meeting
December 15th, 2016 Rm 138 Crop Science Building

Members Present:

Mike Coon, Jake Stockfleth, Jessie Peters, Josh Brawley, Bill Merrigan, Ruth Martin, Dan Curry, Dennis Lundeen, Randy Black, Pat McClain, Drew Bell, Jay Noller, Rachel Hankins, Dave Stimpson

Members Absent: Warren Dole, Sean Vibbert

Guests Presents: Carrie Lewis, John Zielinski, Alex Albion, Nate Miller, Dan Weaver, Jodi Keeling, Andy Altishin, Tami Brown, Jeff McMorrان, Brandi Cox

Mike Coon called the meeting to order at 8:02.

1. Introductions were made

2. Approval of minutes: Jake moves they are approved, Bill seconded, all in favor

3. Accessing Test Reports: Dan Weaver explained the situation/concern. As contractors of proprietary varieties, they are listed as contractor on seed signups, required to order OECD tags, but don't have access to test reports unless they are specifically cc'd by the grower. Ideally there would be a blanket CC or at least an option that the grower can flag a contractor so that they are automatically cc'd. It mostly becomes an issue during the crunch time when the growers forget to cc and it may be several days/weeks until they are able to get time to add the contractor as a cc. Understands the need for confidentiality, and provisional etc because there are multiple contractors for a variety, and legitimate reasons for not cc'ing the company. Jake explained that as a cleaner, some warehouses want to see the purity before they send it to the contractor. They really want to see if there is poa etc in it. He also explained that it can work both ways (for uncertified lots) because companies don't have to cc the warehouses when they order tests.

Discussion: Most members agreed that it is a contractual issue between growers and contractors. Jake suggested an additional fee to add a cc to a tests to force warehouses to cc the contractors on the original sample (currently the fee only applies when you want a revision of the test to add it to the paper copy).

Resolution: Dennis will look into what OSCS can do within the current database, and what we can do legally. He will report back to the committee in 2017.

4. Automatic sampler review - Andrew went through the handouts (See Exhibit 1).

Discussion: There was no correlation between any certain warehouses, and no difference in the weed seeds between probe and automatic sampler.

Recommendation: Andrew visit warehouses as time allows to check that automatic samplers are working.

5. Bulk bag review: Rachel: Several warehouses called about the new procedures, and were all able to come up with a double-labeling system that met our requirements and worked for the warehouses.

Discussion: None

6. Breaking apart of multiples: Dave gave a review of the fine fescue multiple rule proposal and asked for a discussion about multiples in ryegrass.

Discussion: Jake stated that any multiples of 3 or more should be considered inert. There was discussion about multiples causing plantability issues (the 3 or more proposal would eliminate this issue). What does the industry want vs. what does the end user need.

Resolution: Jake made the motion that this committee recommends to the lab that 3 or more florets be considered inert. Mike seconded. Drew opposed. Motion passed.

7. Reports and updates:

Jay Noller: See exhibit 2

Dan Curry: Seed Services update - See exhibit 3. Dan also presented "how we report ryegrass" Exhibit 4.

Jake motions to support it.

Bill seconded.

Discussion: Pat indicated that this is a bandaid for the larger problem of the inaccuracies of the fluorescence test. Randy supports it because it's more precise.

All in favor, motion carries

Dennis: Seed Certificate update - See exhibit 5. In addition, there have been many personnel changes. Sandy Smith retired, Rachel filled his position, we will fill her position after the first of the year. Lori Weber re-retired, and Nancy Desautel also retired, and Mel Laam and Lisa Higgs were hired to replace them, and our new office manager, Brandi Cox was hired last month to replace Julie, who is retiring at the end of the year.

Dave: Seed lab update: Training new office assistant. A seed analyst is retiring, so they are working on replacing a lot of knowledge. Samples are pretty steady still for December, but money and samples are about on par with other years. Look to be coming in on budget.

Working on implementing digital lab cards. Looking at other automation, both to speed things up and reduce errors. In the middle of discussion within Oregon and larger industry about seed IDs. Palmer Amaranth - indistinguishable from Pigweed. So we either need to declare Oregon as Palmer Amaranth free, or work on how to distinguish them using ploidy or something else. See Exhibit 6.

Pat: makes a motion that this committee recognizes Palmer Amaranth an issue in our industry and recommends that the lab be our champion in moving forward, and for the lab to pursue revenue from other commissions/seed councils to continue researching a solution.

Jake seconded.

Discussion: none.

All in favor.

Randy Black: ODA Report - only one slow pay/no pay, hoping to resolve with a phone call discussion and no court action. New staff member Nate Miller - will be working with seed growers and dealers, random audits and to work on "educating, not legislate."

Other business:

Jake: AOSCA variety review board question. Why varieties are not added to the OSCS list automatically after they pass the Grass Variety Review Board?

Rachel: Because we require additional documentation such as a Variety Ownership declaration,

Certified Variety Application and a seed sample. It's up to the breeder/owner to supply us with this information.

Rachel presented awards for service to Jake and Jessie

8. Jake moves that Pat, Drew seconded, all in favor, motion carries.

9. Jake nominates Warren as committee representative to the board, Josh seconded, all in favor, motion carries.

11. Wednesday after seed league, location TBD. Linn County is acceptable by the committee to be considered for future meetings.

Mike adjourned the meeting at 10:52

Auto Sampler Review 2016

What do we mean by tolerance?

Tolerance: This is a table that is from AOSA. It is designed for comparing two purity test results from two different submitted samples from the same seed lot. We are comparing two different submitted samples from different methods from the same seed lot. So while this table isn't ideal, it is the only thing available for us to have an idea of how much variability is too much. Development of our own tolerance table specific to this issue would be best, and is under consideration. We should be much more concerned with samples that make/don't make certification standards.

2016

Of the 53 samples that were taken this year, 15% of the samples were out of tolerance. All of the out of tolerance samples had higher purities from the automatic sampler. Of the 53 samples, 41 had higher purities from the auto sampler. There were 5 samples that made certification from the auto sampler results that would not have passed based on the probe samples. One of those would have eventually passed as the ryegrass grow out test reduced the inert levels and acceptable levels. Of these 5, one sample was extremely out of tolerance on the probe test. We will be working with this warehouse to confirm proper functioning of that system. There was one sample that did not pass the auto sampler but would have passed on the probe sample due to high levels of other crops found.

2015

Out of 46 samples we took this year, the sampling method only affected the certification status in 2. One of those made certification from the automatic sampler and not from the probe sample. The other didn't make it on the automatic sampler but would have on the probe sample. As far as tolerance, we had 30% of samples out of tolerance. 30 of 46 samples had higher purities from the automatic sampler. All the out of tolerance samples had higher purities from the automatic sampler. For those concerned that the correction in sampling protocol is changing people's results – the out of tolerance results were split evenly between counties that have always followed the current procedure, and counties that changed to this policy. On the third line down, you will see one result that is extremely out of tolerance. We caught this lot before it was moved and were able to have it probe sampled a second time. That sample came out at 97.22%, which is still out of tolerance, but not nearly as bad. We have notified this warehouse and we are working with them to do some follow up samples on different seed lots to see if it is a homogeneity problem or if their automatic sampler needs adjustment.

2016 Automatic Sampler Check Results

Species	lot size	Original Test			Probe Sample			Difference	Average	Tolerance?	Tolerance allowed
		purity	Other Crops	Inert Matter	purity	Other Crops	Inert Matter				
PR	50000	97.27	0	2.73	97.66	0	2.34	-0.39	97.465	y	
AR	55000	99.74	0	0.26	99.49	0	0.51	0.25	99.615	y	
TF	36100	98.38	0	1.62	98.54	0	1.46	-0.16	98.46	y	
TF	4900	99.38	0	0.62	99.28	0	0.72	0.1	99.33	y	
AR	55000	99.81	0	0.19	99.77	0	0.23	0.04	99.79	y	
TF	15200	99.51	0.16	0.33	99.54	0.05	0.41	-0.03	99.525	y	
AR	55000	99.73	0	0.27	99.41	0	0.59	0.32	99.57	y	
AR	55000	99.83	0	0.17	99.44	0	0.56	0.39	99.635	y	
TF	17000	99.54	0	0.46	99.05	0	0.95	0.49	99.295	y	
PR	30500	98.6	0	1.4	98.95	0	1.05	-0.35	98.775	y	
TF	54000	99.76	0	0.24	99.67	0	0.33	0.09	99.715	y	
TF	55200	99.99	0	0.01	99.97	0	0.03	0.02	99.98	y	
OG	33250	97.4	0.05	2.55	96.3	0.02	3.68	1.1	96.85	y	
TF	55100	97.95	0	2.05	97.48	0	2.52	0.47	97.715	y	
AR	55000	99.5	0	0.48	98.87	0	1.13	0.63	99.185	y	
AR	55000	99.48	0	0.52	99.71	0	0.27	-0.23	99.595	y	
PR	39400	99.44	0	0.56	99.5	0	0.5	-0.06	99.47	y	
PR	5750	97.98	0	2	96.79	0	3.21	1.19	97.385	n	1.16
TF	52500	99.61	0	0.39	99.48	0	0.52	0.13	99.545	y	
TF	48600	99.36	0	0.64	99.73	0	0.27	-0.37	99.545	y	
TF	54000	99.68	0	0.32	99.91	0	0.09	-0.23	99.795	y	
PR	28360	98.85	0	1.15	99.16	0	0.84	-0.31	99.005	y	
PR	54000	97.81	0	1.19	97.55	0	2.45	0.26	97.68	y	
TF	34600	99.95	0	0.05	99.94	0	0.06	0.01	99.945	y	
RC	14600	99.01	0	0.99	98.4	0	1.59	0.61	98.705	y	
KB	20650	92.85	0	7.15	92.05	0	7.95	0.8	92.45	y	
PR	50164	99.38	0	0.46	99.22	0	0.62	0.16	99.3	y	
TF	54000	99.4	0	0.6	99.04	0	0.96	0.36	99.22	y	
TF	43300	99.92	0.02	0.01	99.88	0	0.12	0.04	99.9	y	
AR	22000	99.9	0	0.1	99.83	0	0.17	0.07	99.865	y	
TF	54250	99.88	0	0.12	98.76	0	1.24	1.12	99.32	n	** (0.61)
TF	51900	99.63	0	0.37	99.66	0	0.34	-0.03	99.645	y	
PR	56000	99.86	0	0.14	99.33	0	0.67	0.53	99.595	n	0.47
WH	155000	99.92	0	0.08	99.87	0.04	0.09	0.05	99.895	y	
PR	54000	99.2	0	0.8	99.06	0	0.94	0.14	99.13	y	
PR	48800	98.56	0	1.44	98.44	0	1.56	0.12	98.5	y	
PR	11650	97.57	0.38	1.81	92.51	0	7.4	5.06	95.04	n	***** (1.51)
TF	56000	99.88	0.02	0.1	99.78	0.06	0.16	0.1	99.83	y	
TF	39300	98.12	0	1.88	96.11	0	3.89	2.01	97.115	n	** (1.21)
PR	56000	98.85	0	1.15	97.84	0	2.16	1.01	98.345	n	0.93
PR	48000	99.49	0	0.51	96.66	0	3.34	2.83	98.075	n	** (1.00)
TF	56000	97.52	2.24	0.24	98.13	1.35	0.52	-0.61	97.825	y	
PR	53050	99.37	0	0.63	98.39	0	1.61	0.98	98.88	n	0.78
AR	34500	99.89	0	0.11	99.71	0	0.29	0.18	99.8	y	
IR	5750	99.19	0	0.79	99.02	0	0.92	0.17	99.105	y	
AR	41100	99.65	0	0.35	99.53	0	0.47	0.12	99.59	y	
TF	48700	99.78	0	0.22	99.81	0	0.19	-0.03	99.795	y	
TF	31020	99.9	0	0.1	99.83	0.12	0.05	0.07	99.865	y	
TF	55000	99.88	0	0.12	99.79	0	0.21	0.09	99.835	y	
TF	55000	99.83	0.06	0.11	99.82	0	0.18	0.01	99.825	y	
TF	9650	99.36	0.03	0.61	99.1	0	0.9	0.26	99.23	y	
AR	52500	99.97	0	0.03	99.93	0	0.07	0.04	99.95	y	
TF	44000	99.66	0.01	0.33	99.56	0	0.43	0.1	99.61	y	

41 had higher auto sampler results
 8 of the out of tolerance samples had higher automatic samples
 15.09% out of tolerance samples

CSS Update
December 15, 2016

The following are highlights of activities over the past few months in Crop and Soil Science (CSS) and the College of Agricultural Sciences (CAS) as they affect clientele groups affiliated with CSS.

Crop and Soil Science – We are all about Soils to Seeds

Passed Accreditation of Degree Programs

Our undergraduate major passed university review this month, adding to the passage of our two graduate degree programs in Soil Science and Crop Science. We continue to add new courses to our on-campus and Ecampus curriculum, with new courses in agronomy being the focus.

New CSS Faculty

- a. Dr. Ray Qin (Chin) was hired as the Assistant Professor, Extension Agronomy/Soils at HAREC. He started 16 September.
- b. Dr. Maziar Kandelous has been hired as Assistant Professor, Extension Water Quality Soil Scientist, a statewide position to assist agricultural producers in sustaining or enhancing crop productivity while maintaining or increasing surface and groundwater quality associated with surface and soil processes.
- c. We are in the process of hiring the Assistant Professor, Extension Soil Fertility Specialist. An announcement is expected around the new year.

CSS Faculty Searches

- a. Assistant Professor, Marion County Extension Field Crops -- we are restarting the search process this month as Professor of Practice (non-tenure track).
- b. Assistant Professor of Practice, Irrigation and Water Management – This faculty position is stationed at Klamath Basin Research and Extension Center (KBREC).
- c. CSS is looking forward to gaining College approvals of our requests for Weed Science research and teaching position and an Extension Entomologist position, by this winter. We need stakeholder input in assembling Search Committees, which in addition to the search for filling the position are charged with the final description of these positions before accepting applications.

We greatly appreciate the stakeholder time, effort and input on these hires.

College of Agricultural Sciences

Earlier this year, the OSU Board of Trustees sought a continued service level increase for these programs – simply the amount of funding that would be needed to provide the same level of service next biennium as what was provided during the current biennium: \$128 million, a \$9.4 million increase. Cost increases for the OSU Statewides are primarily driven by state mandates and state policies that require state retirement and health insurance benefits and salary increases. Other cost increases are due to regulatory compliance, technology, communication and transportation costs. In order to maintain the same level of service for the Statewides the legislature will need to find \$9.4 million in general fund resources. We look to our stakeholders to help find practicable solutions for addressing the funding challenges facing the Statewides in the 2017-19 biennium.

ARS

ARS-FSCRU continues to look for ways to work with and support grass seed growers in Oregon. The unit, the College and CSS are co-funding (in that order of support dollars) a temporary Extension Field Crops Entomologist, half time for the next 12 months. We are placing an open recruitment presently.

Exhibit 3

Seed Services Update

December 14, 2016

Seed Laboratory

- Seed Lab folks had a very busy fall with an average amount of samples and a quick 4-5-day turnaround for purities during the busiest part of the fall
- Dave Stimpson hired in July to replace Adriel Garay
- AOSA rule proposal that would change the way the reports are for ryegrass
- The lab is hiring a group on campus to program iPads for data entry

Seed Certification

- Certified acres stayed up over 240,000 acres for the fourth straight year
- Sandy Smith retired and Rachel Hankins took his place. We hope to hire a replacement for Rachel's position this spring.
- Julie Hendrix is retiring as office manager and Brandi Cox has been learning the ropes and will take over as office manager in January

Exhibit 4

Changing the Way We Report Ryegrass

A RULE PROPOSAL BY NORTH WEST SEED TESTING
LABS

Here is the Problem

From grow-out tests and genetic tests, we know that the fluorescing seedlings are not always Annual ryegrass

Most of the time it is either perennial ryegrass or a hybrid

Yet the Seed Labs are required to call this contaminant as annual ryegrass (*Lolium multiflorum*)

Lab Analysts are uncomfortable about not reporting the correct information



Here is a Partial Solution

Current Reporting by Seed Labs

PURITY ANALYSIS (5.288 GRAMS ANALYZED)			Germ-ination %	Dorm %
PURE SEED COMPONENT(S):				
Perennial ryegrass*	96.83 %		97	
Lolium perenne				
COMMENTS				
OTHER CROP SEED	2.73 %	7 Day Pre-chill.		
INERT MATTER	0.44 %			
WEED SEED	0.00 %			
OTHER CROP SEED:				
Annual ryegrass (Lolium multiflorum)	2.73%			



Proposed Reporting by Seed Labs

PURITY ANALYSIS (5.288 GRAMS ANALYZED)			Germ-ination %	Dorm %
PURE SEED COMPONENT(S):				
Perennial ryegrass*	96.83 %		97	
Lolium perenne				
COMMENTS				
OTHER CROP SEED	2.73 %	7 Day Pre-chill.		
INERT MATTER	0.44 %			
WEED SEED	0.00 %			
OTHER CROP SEED:				
Undetermined ryegrass (Lolium spp.)	2.73%			



2

So What Should Be Done?

Leave the reporting as it is, which causes the lab to be incorrect

Adapt something that is more accurate, for example "other ryegrass"

NW labs are proposing that we change to report the contaminate as "other ryegrass"

What Happens With More Precise Testing?

Grow-outs and PCR tests are more precise than the fluorescence test

When performed, these test do a better job indicating if it is perennial, annual or a hybrid

So, if a more precise test is used, we would will not use “other ryegrass” but actually list them as what they truly are, perennial or annual

What Happens When Reporting a Mixture?

When the fluorescence test is used to distinguish between annual and perennial ryegrass assume:

- Fluorescing seedlings in a mixture are annual
- Non-fluorescing seedlings are perennial

Leave “other ryegrass” out of the report for all mixtures and report as annual or perennial ryegrass

Grow-out or DNA test can also be used to determine annual and perennial types in a mixture

Summary

Seed Labs have to report fluorescing seedlings over the VFL level as annual ryegrass, when much of the time they are not annual

A solution would be to report these seedlings as “other ryegrass” rather than “annual ryegrass”

When reporting results from a grow-out, PCR test or a mixture, the reporting would not change.



Oregon Seed Certification Service

Oregon State University, 31 Crop Science Bldg., Corvallis, Oregon 97331

T 541-737-4513 | F 541-737-2624

<http://seedcert.oregonstate.edu>

2016 Snapshot of the Oregon Seed Certification Service

- Staffing
 - 3 Administrative staff
 - 2 Information Technology staff
 - 1 Systems Manager
 - 1 Software Engineer
 - 8 Seed Certification Specialists
 - 10 Part-time/seasonal Seed Certification Inspectors
 - 4 Fulltime and 4 part-time Seed Certification Samplers
 - 1 Manager & Seed Certification Specialist

- Types of Crops Certified by acreage
 - Grasses 82.93%
 - Tall fescue 47%, Perennial ryegrass 29%, Kentucky Bluegrass 6%
 - Cereals 10.43%
 - Wheat & Club Wheat 88%, Barley 5%, Oat 4%
 - Legumes 3.45%
 - Alfalfa 38%, Red Clover 27%, Crimson Clover 13%
 - Other Crops 3.19%
 - Potato 36%, Corn 30%, Sunflower 18%

- Programs Administered
 - Oregon Certified Seed
 - Part of the Association of Official Seed Certifying Agencies (AOSCA)
 - OECD Certified Seed
 - Administered in Oregon for USDA-SRTD

- Stats for 2016
 - 246,669 acres and 5,650 fields
 - 28 Oregon counties with certified crops
 - 84 different crop types certified, and 1,238 different varieties.
 - Growers: 721
 - Warehouses: 363
 - Contractors: 418

- Celebrating 100 years!
 - On December 14th from 4-6:30pm at the OSU Crop Science Bldg, OSCS will be celebrating the 100th year of offering certification services in Oregon. There will be a short presentation, displays emphasizing the various aspects of seed certification in Oregon. and food-- please join us to celebrate!



In 2016 The Oregon Seed Certification program is recognizing its 100th year of providing Certification Services to the state. The beginnings of this is from a man closely associated with OSU and the College of Agricultural Sciences in particular, George Hyslop. It all began in 1916 when he saw a need for certification of potatoes that were true to variety and relatively free of disease, so they could be more effectively marketed. There are very few records from these early years, but it was almost a one man show during this time. In 1918, there were obvious problems with “mixed wheat”. Regional varieties were commonly grown and shared amongst growers, but would often get contaminated and/or blended together as there was no set method to determine varietal purity. A small excerpt written by Hyslop on March 18th, 1919 illustrates how new certification was to the state:

“The rules and regulations under which I did seed certification last summer were simply formulated in my head and have never been put on paper before. A farmer who wanted his seed certified made arrangements with the County Agent of his county and when one of us were in that county we inspected the field. If it passed the field inspection we asked for a threshed sample and made the final inspection. After that we issued the certificate, a copy of which I enclose...in addition to this grain that is threshed too close so that the seed coat is seriously injured or that is rather light in test weight is rejected. I think the sample should have a test weight of fifty-six pounds if it should have not enough wheat of other classes to grade below No. 1, for instance not an uncommon mixture is White Club in Marquis. Two percent of this mixture is sufficient to throw it into No. 2, therefore a sample which has more than one and on-half percent of spring White Club wheat or other spring wheats of classes other than the hard Red Spring would be rejected because it is too dangerously close to the line. A mixture of Forty Fold in Marquis is not so serious in that Marquis is practically always spring planted and the Forty Fold does not head out when spring planted. It being present usually only as a volunteer.”

“On Classes of wheat other than the hard Red Spring and the Hard Winter I usually do not certify stuff carrying more than three per cent of mixture, of course, in these other classes five percent is allowed. With Forty Fold I have had to be more lenient in that it is pretty hard to get that variety at the present even reasonably free from mixture.”

With further development of Crop Standards over the years, the current standards call for a maximum of .05% of other varieties total, and .02% allowance for other small grains. Quite a difference from the original 1.5% when certification started.

Palmer Amaranth (*Amaranthus palmeri*)

What is it, and will it affect me?

In little over 20 yrs., Palmer amaranth (*Amaranthus palmeri*) has risen from relative obscurity to its current status as one of the most widespread, troublesome, and economically damaging agronomic weeds in the southeastern U.S. (Weed Technology 2013). It is a difficult-to-control weed, with a rapid growth rate, an ability to tolerate adverse conditions, and is **herbicide resistant**. One plant can produce 250,000 seeds.

“...I believe it will be the No. 1 weed in the Midwest in 5 years or so,” says University of Tennessee weed scientist Larry Steckel.

Current legal status: Amaranthus palmeri

- Noxious in Ohio
- Prohibited in Minnesota

How could the legal status affect me?

Identifying *Amaranthus* to the species level is difficult and sometimes impossible. If *Amaranthus* sp. is added to the Noxious Weed list, it may have drastic effects on your ability to ship seeds.

Possible scenarios: You want to ship seed and your report states a Pigweed - *Amaranthus* sp. was found.

- You cannot ship to Minnesota or Ohio.
- You cannot ship to Australia. AU will not accept any lot with a contaminant that is not identified with both genus and species.

Seed ID

If it was easy, anybody could do it!



Redroot pigweed
Amaranthus retroflexus



Palmer amaranth
Amaranthus palmeri



Tumble pigweed
Amaranthus albus

Factors that make it difficult for a correct seed identification:

- Maturity
- Malformation
- Damage
- Proper magnification
- Reference specimen availability and quality

Can you tell those apart?

