



DATE: January 23, 2018

TO: Variety Release and Recommendation Committee Members

FROM: Mike Giroux, Chair

RE: 2018 Minutes and Committees

Chair: Mike Giroux, Interim Department Head PSPP

Secretary: Andy Hogg, Research Associate, PSPP

Crop Science

Entomology

Horticulture

Plant Biology

Plant Genetics

Plant Pathology

Present: Mike Giroux, Andy Hogg, Gadi Reddy, Luther Talbert, Nancy Blake, Jamie Sherman, Darrin Boss, Patrick Hensleigh, Kevin McPhee, Hikmet Budak, John Miller, Jim Berg, Doug Holen, Phil Bruckner, Heather Unverzagt, Craig Cook, Jason Cook, Ryan Holt, Pat Carr, Bill Hoch, Chengci Chen, Ron Brown, Deanna Nash, Perry Miller, Fabian Menalled, Daniel Juliano, Alan Dyer, Robert Hofman, Maryse Bourgault.

Called in: Jed Eberly, Peggy Lamb, Todd Scholz, Steve Becker
Voted by Proxy: Ken Kephart

Absent: David Weaver, Pam Linker, Bob Stougaard, Denise Conover.

Agenda for 2018 Variety Release Meeting

Following is the agenda for the 2018 Variety Release meeting to be held on Tuesday, January 23, 2018, at 1:00 pm in 108 Plant BioScience Building.

1. Approval of the Minutes of the 2017 meeting.
2. Discussion of the addition of a Pulse Crops Committee and modification of the variety release proposal document.
3. Discuss and vote on the motions submitted to the Wheat Committee.
4. Discuss and vote on the motions submitted to the Specialty Crops Committee.

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Minutes

1. Approval of the Minutes of the 2017 meeting.

Alan Dyer motioned to approve the 2017 minutes as is.

Motion seconded by Phil Bruckner.

Chair Giroux noted that the most significant event noted in the 2017 minutes was that we will no longer making variety recommendations.

Motion passed unanimously, 13-0.

2. Discussion of the addition of a Pulse Crops Committee and modification of the variety release proposal document.

Daniel Juliano presented the modified proposal release document. The most significant change to the current policy is the addition of the pulse crop committee, which is very similar to the Wheat Variety Release Committee with the exception of a representative from the Pulse Advisory Committee. The second most significant change is that we will no longer release lines that are PVP only without Title V. Title V will be required.

Chair Giroux noted that the committee's approval is not strictly required since the policy is a product of the VPR's office and the Dean of the College of Agriculture. However, the committee's approval and advice is being sought by the offices of the VPR and Dean.

Phil Bruckner and Peggy Lamb brought up the need to change the language in the forage varietal release document from 16 location-years of data to 12 location-years.

Daniel Juliano said he would make this change to the release document.

Heather Unverzagt motioned to approve the modified release document with the additional change for forage data requirements from 16 to 12 location-years.

Motion seconded by Pat Carr.

Motion passed unanimously, 13-0.

Alan Dyer brought up in further discussion that there is a lack of substantial data for pest evaluations for recent varietal releases and that a major obstacle for a new release could be its susceptibility to a pest in an environment that was not evaluated. He suggested there should be a required evaluation of pests by specialists (entomologists/pathologists) for 4 location-years.

Jamie Sherman, Phil Bruckner, and Luther Talbert brought up discussion that having the pest data be required would be a hinderance to releasing new varieties since evaluations aren't done reliably every year and/or the pest pressure is not there.

Peggy Lamb also said this is an issue for her pest ratings of sawfly as the incidence changes from year to year.

Alan Dyer said he was OK with the 4 location-years being written in as a recommendation and not a requirement for varietal release. Alan purposed that pest specialists visit two locations for two years and offered to do such evaluations.

Daniel Juliano said he would change the language in the release document to read that there is a recommendation to have 4 location-years of pest evaluation data.

Alan Dyer made the motion for a proposed change to the release document to include the recommendation that varieties suggested for release have 4 location-years of pest evaluation.

Motion seconded by Phil Bruckner.

Motion passed unanimously, 13-0.

3. Wheat Committee

Phil Bruckner - Motion to release MTF1432 forage winter wheat as a public protected variety.

Phil Bruckner presented data for the release of the forage winter wheat MTF1432 and noted that its major attributes are a significant improvement in grain yield compared to the forage winter wheat variety Willow Creek. MTF1432 is a tall awnless winter wheat that derives from a cross between an experimental forage line and Yellowstone. MTF1432 has forage dry matter yield and forage quality equal to Willow Creek. Although MTF1432 is primarily envisioned as a forage wheat, it also has improved grain quality compared to Willow Creek with loaf volume statistically similar to Yellowstone.

Heather Unverzagt wanted to know how many acres are in the ground for foundation seed currently. Doug Holen said there are 5 acres in Bozeman and 5 acres at NARC.

Darrin Boss wanted to know MFT1432s sawfly resistance. Phil Bruckner said it has the same susceptibility as Yellowstone.

Phil Bruckner motioned to release MTF1432 forage winter wheat as a public protected variety.

Motion seconded by Alan Dyer.

Motion passed unanimously, 14-0 (extra vote by Ken Kephart via proxy).

Phil Bruckner - Motion to release MTF1435 forage winter wheat as a licensed variety outside of Montana.

Phil Bruckner presented data for the release of the forage winter wheat MTF1435 which is a tall awnless winter wheat that was derived from crosses between Yellowstone (and derivatives) and the forage line 98X168-1. It is similar in appearance and performance to MTF1432. Line MTF1435 major attributes are a significant improvement in grain yield compared to the forage winter wheat variety Willow Creek but less than MTF1432. MTF1435 has statistically similar forage dry matter yield and forage quality as Willow Creek. MTF1435 also has protein and loaf volumes equal to Yellowstone.

Phil Bruckner asked what Ryan Holt's opinion was. Ryan noted the line was tall and wanted to know if Phil thought this line could be used more as a grain crop. Phil didn't think so because thought it was too tall. Before licensing a variety like this, Ryan would like to have the ability to test in their own research sites outside of Montana. Ryan supports the idea that MTF1432 and MTF1435 not both be released in Montana because they would compete, MTF1435 as a private release and MTF1432 as a public release.

Daniel Juliano wanted to know if it could cause a potential problem if it is not licensed in Montana. Discussions between Phil and Daniel focused on whether the licensing agreement should say specifically that it is not available to grow in Montana or whether we should retain the possibility to grow it in Montana but focus on it being marketed outside the state.

Due to lack of a clear consensus on what should be done, Phil decided to withdraw the motion to release MTF1435 forage winter wheat outside of Montana as a licensed variety.

Phil Bruckner - Motion to release MT1465 hard red winter wheat as a public, protected variety.

Phil Bruckner presented data for MT1465 hard red winter wheat that is intended for grain production. It derives from an F2 composite of 5 different crosses with Yellowstone as one of the parents in each of the crosses. Over 32 location-years MT1435 had statistically similar yield to top varieties Keldin and SY-Wolf. Compared to Yellowstone over 18 location-years MT1465 was significantly shorter, headed earlier, had higher protein, and a higher test weight. MT1465 has similar milling and baking qualities as Yellowstone.

Phil Bruckner noted that Yellowstone seems to have weakening stripe rust resistance and that MT1465 has a higher stripe rust resistance than Yellowstone. It was evaluated over three years in the field for stripe rust in Montana and in Washington by Dr. Xianming Chen. Dr. Chen noted that MT1465 stands out as it has a different stripe rust reaction than the

other cultivars in the regional nursery by displaying both strong seedling and adult stage stripe rust resistance. Because MT1465 was grown in the regional nursery, it was screened with genetic markers and discovered that it carries gene *tsn1* for tan spot resistance. Phil sees MT1465 as a good replacement for Yellowstone because it has increased stripe rust resistance, is shorter, has good end use quality, and a high yield potential.

Alan Dyer commented that he agrees that stripe rust resistance in Yellowstone is declining and having this release helps meet that need.

Phil Bruckner motioned that MT1465 hard red winter wheat be released as a public, protected variety.

Motion seconded by Alan Dyer

Motion passed unanimously, 14-0 (extra vote from Ken Kephart via email).

4. SPECIALTY CROPS Committee

Perry Miller - Motion to release 14-24 SB Faba bean as a private, specialty crop.

Perry Miller presented that 14-24 SB could be used as a new legume cover crop that could be used in a blend. It was selected from a world collection with origins in Afghanistan and has a stiff plant structure compared to other legumes. It also has a dark seed coat which should prevent the need for seed treatments. Currently, no faba bean is grown for seed in Montana. Perry noted that he has no data for 14-24 SB because of inherent difficulties or lack of cover crop evaluations. Perry also noted that he has spoken with commercial partners that have shown interest in working with this crop.

Jamie Sherman asked if there would be private testing first. Perry responded no because testing is not common in cover crops.

Jamie Sherman asked what risks this crop could pose to Montana growers. Perry said that he couldn't think of any obvious potential problems.

Darrin Boss stated that there is a looming shortage of legumes to use in cover crop mixes. RMA is restricting the use of pea and lentil, and there are also problems with vetches (contamination of lentil) and so there is a need for another legume.

Pat Hensleigh added that regarding testing it would essentially be determined by growers that try it. If the crop fails to produce sufficient biomass it would likely disappear quickly as an option.

Mike Giroux asked if we would be out the PVP costs if we released this line.

Daniel Juliano responded no, and that a licensee would pay the PVP.

Heather Unverzagt asked who would be responsible for maintaining foundation seed of this line. Perry responded that he thinks he could maintain a pure seed stock and could cooperate with Doug Holen.

Alan Dyer asked about the disease profile of faba bean. Does it have the same diseases as pea and lentil? Perry responded he did not know. Chengci Chen noted that tan spot is a common disease problem in faba bean. Perry commented that he thought it would not be an issue in pea rotations and might even be beneficial.

Perry Miller noted that chocolate spot (*Botrytis fabae*) and not tan spot is a common disease of faba bean.

Heather Unverzagt commented that without any data available it would be a problem to fill out a PVP application and get a variety release. Without data and descriptions, it couldn't be evaluated as foundation seed by the Montana Seed Growers Association.

Perry Miller noted that it would likely be grown in a mix which presents problems for evaluating the line on its own merit.

Daniel Juliano commented that 14-24 SB could be licensed as germplasm and not a variety.

Todd Scholz commented that he thought there would be complications on collecting a PVP/licensing fees because all the details aren't all worked (how to seed, blend, harvest etc.)

Daniel Juliano noted that the PVP costs would be paid for by a licensee and that even though it would be identified as germplasm, MSU could still collect royalties.

Because of issues brought up during discussion, Perry Miller withdrew the motion to release 14-24 SB faba bean as a private, specialty crop.

Kevin McPhee - Motion to release PS0877MT457 green pea as a public, protected variety.

Kevin McPhee presented data on PS0877MT457 that has been in development for 12 years in cooperation with Chengci Chen. It is derived from USDA-Pullman germplasm and Kevin noted that the USDA has given him approval to move forward with a varietal release. Its pedigree is Stirling/PS0010946 and 18 location-years data shows it has a higher yield compared to Aragorn and Arcadia. It has similar yields to Majorette and Hampton which is a newer release. Under irrigation PS0877MT457 yielded more or equal to Majorette and Hampton. This line has similar height and lodging resistance to Aragorn and Arcadia. PS0877MT457 has a larger 1000 seed weight than Arcadia, Aragorn, Majorette, and

Hampton but is within the acceptable range. PS0877MT457 flowering time and protein are similar to the other lines mentioned. PS0877MT457 is susceptible to powdery mildew but resistant to *F. oxysporum* f.sp. *pisi*. It is similar to other released cultivars with a susceptible reaction to Sclerotinia, Ascochyta, and bacterial blight. It is susceptible to pea enation mosaic virus. Breeder seed was established at Post farm in 2017. Currently the seed is being increased in California and then more breeder seed will be produced in Montana in 2018.

Mike Giroux asked what is the potential acreage for green pea in Montana? Kevin didn't have a specific number but mentioned that overall 30% of peas are green with 70% being yellow.

Kevin McPhee thinks PS0877MT457 is designed to grow specifically in Montana and might not perform well in other environments.

Kevin McPhee motioned to have PS0877MT457 green pea be released as a public, protected variety.

Motion seconded by Doug Holen

Motion passed unanimously, 13-0.

Phil Bruckner motioned to adjourn.

Motion seconded by Alan Dyer.

Meeting was adjourned.

February 2018 Addendum to January 2018 Variety Release meeting minutes:

At the Variety Release meeting on January 23, 2018, the motion below by Phil Bruckner was discussed and then withdrawn. On February 12, 2018, Phil Bruckner requested that the wheat committee vote on the motion below.

Bruckner/Berg - Motion to release MTF1435 forage winter wheat outside of Montana as a licensed variety.

Motion passed, 14 for, 2 did not vote

June 2018 Addendum to January 2018 Variety Release meeting minutes:

On June 18, 2018, Phil Bruckner requested that the wheat committee vote on the motion below. Materials regarding the motion were sent to the committee and the committee voted to release in an email only vote.

Bruckner/Berg – Motion to release MTW1491 as a license release.

Motion passed, 12 for release, 4 did not vote.