



Crop Science
Entomology
Horticulture
Plant Biology
Plant Genetics
Plant Pathology

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DATE: January 26, 2011
TO: Variety Release and Recommendation Committee Members
FROM: John Sherwood, Chair
Re: 2011 Minutes and Committees

Chair: John Sherwood, Department Head PSPP
Secretary: Irene Decker, Administrative Assistant, PSPP

Present: John Sherwood, David Weaver, Phil Bruckner, Jim Berg, Jerry Bergman, Joe Scianna, Jack Martin, John Miller, Becky Mahurin, Mike Giroux, Luther Talbert, Qasim Khan, Ron Larson, Jim Kulish, Heather Rimel, Tom Blake, Jake Heen, Susan Lanning, Dennis Cash, Hwa-Young Heo, Bob Stougaard, Melvin Goffena, Norm Weeden, Karnes Neill, Chet Hill, Alan Dyer, Tracy Dougher, Julia Dafoe, Darrin Boss, Peggy Lamb, Joy O. Garcia, Gigi Opena, Olga Walsh, Yukiko Naruoka, Bernard Schaff, Stan Bates, John McDonnell, and Irene Decker

Not in attendance: Kevin Bradley and Heather Mason; Alan Dyer filled in for Mary Burrows; Darrin Boss filled in for Gregg Carlson, Jerry Bergman filled in for Joyce Eckhoff and Perry Miller and Fabian Menalled submitted their input to David Weaver and their votes to John Sherwood.

Agenda

1. Approval of 2010 Minutes Variety Release and Recommendation Committee(s)
2. Discuss and vote on the motions put forth by the following committees in the order given: Wheat, Barley Forage, Specialty, and Horticulture and Native Plants

Wheat

Phil Bruckner and Jim Berg

That Decade hard red winter wheat be recommended for production in Montana cropping districts 3, 4, 5, and 6.

That MTS0713 solid-stem hard red winter wheat be approved for release in 2011. That MTS0713 be named 'Judee' in honor of long-term extension educator and colleague Judee Wargo. And that Judee be recommended for wheat stem sawfly-infested areas of districts 3, 4, and 5.

That MTS0721 solid-stem hard red winter wheat be approved for release in 2011. That MTS0721 be named 'Bearpaw' denoting its area of derivation and adaptation. And that Bearpaw be recommended for wheat stem sawfly-infested areas of districts 3, 4, and 5.

Luther Talbert and Susan Lanning

A motion to remove Westbred 926 from the Montana recommended hard red spring wheat variety list (effective February 2011)

A motion to release MT 0832 hard red spring wheat (effective 2011). We propose MT0832 be released with PVP Title V protection.

Dale Clark and Craig Cook

A motion that WB-Gunnison be recommended as a hard red spring wheat for dryland in districts 3, 4, 5, and 6 (updated 1/24/11).

Barley

Tom Blake

That Hockett be recommended for production as a malting barley under both dryland and irrigated conditions in all regions of Montana.

David Wichman

A motion to release MT981429 as a PVP variety to be sold to a private seed company/plant breeding company.

Miscellaneous Business

John Sherwood/Ron Larson/Bill Grey

Jeff Jacobsen has asked that the following topics be brought up and discussed at the meeting:

- Seed Lab bill SB 195; legislation to change the way Seed Lab fees are changed. (Ron Larson)
- Is the current Foundation Seed program and operation structured for success, or should some other approach be considered? (Bill Grey)
- Research Fee update and discussion – historical overview (including its stated purpose), detailed income and expenditures to date, how does the current research fee level compare to other states and private sector? (John Sherwood, Bill Grey)

David Wichman

- Should number 2 (second best) be offered up for sale or tossed.
- Merits and methods for transferring unconventional genetic line(s) to Ag market entrepreneurs.

J. Sherwood – Is there a motion to approve minutes from 2010 Variety Release meeting?

J. Bergman – Made a motion to approve the minutes from the 2010 meeting

David Weaver – Seconded the motion

Vote: 15 for and 0 against

Wheat

2011 Variety Release Committees

Wheat Variety Release Committee		
Voting Members, 16	Affiliation	Appointing Administrator
<i>Chair , John Sherwood</i>	<i>PSPP Head</i>	<i>Director MAES</i>
1. Phil Bruckner-spring Luther Talbert-winter	Breeder	PSPP Head
2. Mike Giroux	Quality - Cereal or Forage	PSPP Head
3. Alan Dyer for Mary Burrows	Plant Pathologist	PSPP Head
4. Bill Grey	Manager	MT Foundation Seed Program
5. Ron Larson	Manager	MT Seed Growers Association
6. Fabian Menalled	Weed Scientist	LRES Head
7. Perry Miller	Cropping systems	LRES Head
8. David Weaver	Entomologist	LRES Head
9. Darrin Boss for Gregg Carlson		NARC Superintendent
10. Dave Wichman		CARC Superintendent
11. John Miller		WTARC Superintendent
12. Heather Mason		NWARC Superintendent
13. Jerry Bergman for Joyce Eckhoff		EARC Superintendent
14. Ken Kephart		SARC Superintendent
15. Keven Bradley	Chair	MAES Advisory Board
16. Melvin Goffena		Montana Wheat and Barley Comm.
Ex-officio Becky Mahurin	Dir. Technology Transfer	V.P. for Research, Creativity and Technology Transfer

Phil Bruckner - *Moved that Decade hard red winter wheat be recommended for production in Montana cropping districts 3, 4, 5, and 6.*

D. Wichman – Seconded the motion

P. Bruckner – Decade was approved for release last year at this meeting. Foundation Seed has distributed Decade seed in Montana and North Dakota. Decade is high yielding and winter hardy with good stem rust resistance. Decade has good bread-making quality.

Vote: 15 for and 0 against

Phil Bruckner - *That MTS0713 solid-stem hard red winter wheat be approved for release in 2011 and recommended for production in wheat stem sawfly-infested areas of districts 3, 4, and 5.*

R. Larson – Seconded the motion

J. Sherwood – We don't need to consider the name at this point, we only need to consider whether it be released and in what districts.

P. Bruckner – MTS0713 is intended as a potential replacement for Genou. It is more solid than Genou, but not as solid as Rampart which is the standard for solidness; and it has about a 4 bu per acre yield advantage over Genou. It is a semi-dwarf line, on average 3 inches shorter than Genou and Rampart. As far as sawfly cutting, it is most similar to Genou. Quality wise, the milling and baking quality data looks good.

D. Weaver – In Table 1, what is the difference between % lodging and % sawfly cutting?

J. Berg – The lodging mean is independent of sawfly cutting and is data primarily collected under high yield conditions like Kalispell.

J. Sherwood - Any other comments?

B. Grey – Last year at Kalispell, they had significant stripe rust infestation and MTS0713 was resistant.

P. Bruckner - 713 has good stripe rust resistance, but is susceptible to stem rust.

Vote – 15 for and 0 against

P. Bruckner - We plan to call this variety 'Judee'. We have checked with everyone concerned including Judee Wargo's family and they have approved the name also.

Phil Bruckner - That MT20721 solid stem hard red winter wheat be approved for release in 2011 and recommended for production in wheat stem sawfly-infested areas of districts 3, 4, and 5.

B. Grey – Seconded the motion

P. Bruckner – The name 'Bearpaw' has been proposed and cleared by all those concerned. We believe it is appropriate because of the area we are targeting for this cultivar, north-central Montana.

721 is a more natural replacement for Rampart. Although it does not have quite as much yield potential as 713, it is a definite improvement as far as yield over Rampart. It is very solid like Rampart and will stand up to sawfly cutting. Based on 42 locations of yield data, 721 yielded seven bushels per acre more than Rampart and 3.8 bu/acre more than Genou on statewide basis. It is resistant to stem rust, but not stripe rust. The most dramatic response to wheat stem sawfly occurred at Loma, an off-station nursery, in 2010. At Loma, which was severely infested by sawfly, average cutting by sawfly was 95% in 15 hollow-stem lines, 63% in 4 semi-solid lines (including Judee and Genou), and 8% in five solid-stem lines (including Rampart and MTS0721). We need to diversify the solid-stem

cultivars in the state and for that reason I would recommend release of multiple lines this year. The quality is not as good as we would like; but is similar to other lines that are grown in Montana like Neeley and Rocky, which have been acceptable.

B. Mahurin – Will this variety be PVPed?

P. Bruckner – We recommend that it should be.

J. Sherwood – Basically all varieties that we put out there are PVPed.

J. Bergman – What variety would you recommend?

P. Bruckner – I would recommend 721 in areas where they have the worst cutting problems like Loma had last year. If there is a more moderate level of sawfly cutting, then I would recommend Judee.

J. Sherwood to David Weaver – Remind me how solid stem imparts resistance to wheat stem sawfly.

David Weaver – Resistance to wheat stem fly results since the solid stem kills eggs and larvae in the stem.

J. Sherwood to David Weaver – Will sawfly infestations decrease if solid stem varieties are grown in an area?

David Weaver – If it was a large contiguous area over a number of years, yes; it probably would have an impact.

Vote: 15 for and 0 against

Luther Talbert and Susan Lanning - *A motion to remove Westbred 926 from the Montana recommended hard red spring wheat variety list (effective February 2011)*

D. Wichman – Seconded the motion

L. Talbert – There are better varieties available.

J. Sherwood – So they are not going to be selling 926 anymore?

L. Talbert – It is probably not sold now.

Vote – 15 for and 0 against

Luther Talbert - *A motion to release MT0832 hard red spring wheat (effective 2011). We propose MT0832 be released with PVP Title V protection.*

D. Wichman – Seconded the motion

L. Talbert - Working on two main traits in the spring wheat program: Solid stems and leaves staying green longer. Vida was the first variety released with that trait. MT0249, sister of Vida, also had this characteristic and basically performed as well or better than Vida. We made a lot of crosses, including MT0249 by Choteau, selecting for a longer green period. MT0832 has solid stems and is a little taller than Choteau and easier to thresh. 832 was tested alongside other varieties and the last three years, yield performance was very good; only Vida was better. It had good stem solidness and was one inch taller than Choteau. 832 has done very well in off station nurseries even with saw fly pressure. It was tested with several other varieties and it did have stronger gluten than other lines. We chose this one because of the overall quality.

J. Sherwood - Comments?

M. Giroux – How do you measure threshing quality?

L. Talbert - Rub it in your hands and see if your hands are bleeding.

S. Lanning – We do look in the bags.

LT – It is easy to tell if it is easy to get the grain out.

M. Giroux – Is that a maturity issue related to the stay green trait?

L. Talbert – No, it is not related to maturity or stay green. I am not sure why Choteau is hard to thresh out, but it is.

D. Wichman – It is important not to go too far the other way or they shatter.

Vote: 15 for and 0 against

L. Talbert – In terms of names we chose 'Duclair' because that was the name of a small town in Montana west of Turner that existed from 1916 – 1918.

B. Grey – West of Turner is a sawfly area so that is appropriate.

Luther Talbert presented the following motion for Dale and Craig.

Dale Clark and Craig Cook - A motion that WB-Gunnison be recommended as a hard red wheat for dryland in districts 3, 4, 5, and 6 (updated 1/24/11).

R. Larson – Seconded the motion

L. Talbert – Westbred has led the way in developing varieties with resistance caused by the fact that females tend to stay away as far as laying eggs.

D. Weaver – The mechanism is called “relative antixenosis” and refers to situations where female sawflies can make a choice to lay an egg in a variety that they like more or to not lay an egg if they like it less. There are very few lines that are consistently unlikely to receive eggs when there are choices that can be made. We’ve identified this pattern in a small set of spring wheat varieties, almost all developed by Westbred, and Gunnison appears to be the newest member of this type. So, I suggested alternate language when I saw the initial motion using the term ‘tolerance’, which refers to an entirely different type of host plant resistance and is technically incorrect.

J. Sherwood – Westbred was very happy to change the wording and did change the wording.

L. Talbert – We have data from spring wheat trials grown across the state. Gunnison is very similar to Corbin agronomically, but has done a little better than Corbin as far as not attracting wheat stem sawfly.

Vote: 15 for and 0 against

J. Sherwood – David Weaver asked for a motion that makes this clear so please read the motion David.

D. Weaver – I move that in cases where hollow stem varieties show what is called “relative antixenosis” or resistance by non-preference where the lack of cutting is due to decreased oviposition that it be recommended that the following language be adopted for consistency: “This variety is not solid-stemmed, but has high yields under sawfly pressure due to relative non –preference in small plot nursery trials”.

D. Weaver - It is important to have consistent language in order for things to be clear in the future.

B. Stougaard – Seconded the motion

Vote – 15 for and 0 against

Barley

Barley and Oats Variety Release Committee		
Voting Members, 16	Affiliation	Appointing Administrator
<i>Chair, John Sherwood</i>	<i>PSPP Head</i>	<i>Director MAES</i>
1. Tom Blake/Phil Bruckner	Breeder	PSPP Head
2. Mike Giroux	Quality - Cereal or Forage	PSPP Head
3. Alan Dyer for Mary Burrows	Plant Pathologist	PSPP Head
4. Bill Grey	Manager	MT Foundation Seed Program

5. Ron Larson	Manager	MT Seed Growers Association
6. Fabian Menalled	Weed Scientist	LRES Head
7. Perry Miller	Cropping systems	LRES Head
8. David Weaver	Entomologist	LRES Head
9. Darin Boss for Gregg Carlson		NARC Superintendent
10. Dave Wichman		CARC Superintendent
11. John Miller		WTARC Superintendent
12. Bob Stougaard		NWARC Superintendent
13. Jerry Bergman for Joyce Eckhoff		EARC Superintendent
14. Ken Kephart		SARC Superintendent
15. Kurt Kammerzell	Chair	MAES Advisory Board
16. Melvin Goffena 16. Mike Davis	Barley Feed Barley Malt	Montana Wheat and Barley Comm. American Malting Barley Association
Ex-officio Becky Mahurin	Dir. Technology Transfer	V.P. for Research, Creativity and Technology Transfer

Tom Blake - That Hockett be recommended for production as a malting barley under both dryland and irrigated conditions in all regions of Montana.

A. Dyer – Seconded the motion

J. Sherwood - This was released last year; there is additional data if anyone wants it.

Vote: 15 for and 0 against

Forage

Forage Crop Variety Release Committee		
<i>Voting Members, 16</i>	<i>Affiliation</i>	<i>Appointing Administrator</i>
<i>Chair, John Sherwood</i>	<i>PSPP Head</i>	<i>Director MAES</i>
1. Norm Weeden	Breeder	PSPP Head
2. Dennis Cash	Quality - Cereal or Forage	PSPP Head
3. Alan Dyer for Mary Burrows	Plant Pathologist	PSPP Head
4. Bill Grey	Manager	MT Foundation Seed Program
5. Ron Larson	Manager	MT Seed Growers Association
6. Fabian Menalled	Weed Scientist	LRES Head
7. Perry Miller	Cropping systems	LRES Head
8. David Weaver	Entomologist	LRES Head
9. Darin Boss for Gregg Carlson		NARC Superintendent

10. Dave Wichman		CARC Superintendent
11. John Miller		WTARC Superintendent
12. Heather Mason		NWARC Superintendent
13. Joyce Eckhoff		EARC Superintendent
14. Ken Kephart		SARC Superintendent
15. Kurt Kammerzell	Chair	MAES Advisory Board
16. Joe Scianna for Roger Hybner		Bridger Plant Materials Ctr. Manager
Ex-officio Becky Mahurin	Dir. Technology Transfer	V.P. for Research, Creativity and Technology Transfer

David Wichman - *A motion to release MT981427 as a PVP variety to be sold to a private company/plant breeding company.*

D. Cash – Seconded the motion

The private seed industry requested this. Lavina is higher yielding at lower levels, but this variety is generally higher yielding under irrigated conditions. Lavina had higher grain yield than Haybet; this variety has slightly better yield than Lavina.

T. Blake - Is there any chance that Circle S would end up undercutting Foundation Seed sales?

D. Wichman – I don't see this as a loss to Montana. Lavina is not PVPed and whether this variety is going to be PVPed would be up to who bought it.

J. Sherwood - Forages have a lower threshold for data collection and there is not sufficient data for protecting the variety which is the practical reason for not PVPing it. The procedure is that if a variety is recommended for release and considered for license, it would go to the Dean and then if accepted, the license committee would meet and they would want to know if there was an industry partner that had expressed interest. At that point, the Technology Transfer Office sends out for bids and the variety would be licensed to the highest bidder.

D. Wichman - We have a very small quantity of seed. Data is from thirteen locations over approximately four years.

J. Sherwood – If the licensee wanted to do the additional work and PVP it, could they? This would be part of the licensing process.

B. Mahurin – It is typical to have them pay for PVP. Has this been made public at all? Does this still qualify for PVP?

D. Wichman – No

J. Bergman – When is it available?

J. Sherwood – After it is released to Foundation Seed, it goes to public when there is a larger amount of seed.

P. Bruckner – Are there any cases where we sell technology instead of licensing technology?

B. Mahurin – There is one case that involves someone in this room where they are considering a one time license fee, but that is very unusual. If this one comes to fruition, it will be first time in my 20 years this has happened.

B. Grey – How is this line distinguished from Hayes or Lavina, in terms of the morphological characters?

J. Bergman – Would you release it before you have seed for Foundation Seed?

J. Sherwood – When would you have sufficient seed to turn it over to the licensee?

J. McDonnell – If all there is only a pound, we are OK with that.

J. Sherwood – All we are voting on today is whether or not to release

Vote: 14 for and 0 against

Miscellaneous Business

Dean Jeff Jacobsen asked that we discuss the following three items:

- *Seed Lab Bill SB 195; legislation to change the way Seed Lab fees are charged. (Ron Larson).*

Ron described legislation that is being forwarded to address the issues of increasing Seed Lab fees without going through the Department of Agriculture, as is now the case. Instead, fees would be established with a Seed Advisory Committee, made up of various industry and university representatives.

- *Is the current Foundation Seed program and operation structured for success, or should some other approach be considered? (Bill Grey)*

Bill Grey described the function of Foundation Seed and how they are governed by the Foundation Seed Committee. Foundation Seed has doubled in bushels sold in the last six years compared to the previous six. This can be, in large part, attributed to the practice established six years ago to PVP wheat and barley varieties developed at MSU. Unfortunately, there are no new people on the stations except for temporary labor, which has strained the system.

Different states have different systems; South Dakota is a model that we could look at. North Dakota and Washington are more unique so South Dakota is a better model for us. There is a great amount of respect for Montana and the varieties we produce. 80% of all planted acres in Montana are planted with MSU varieties. CIA in South Dakota receives release of varieties and they market them to growers.

This is somewhat separate from the university but there are ties through memorandum of agreements for salary, land, equipment. South Dakota has a royalty collection stream just like we do.

The Seed Advisory Committee meets tomorrow morning to talk about keeping enough seed for Foundation Seed to deal with. The committee consists of Jim Kulish, Joe Scianna, Phil Bruckner, Ron Larson, John McDonnell and John Sherwood.

- *Research Fee update and discussion – historical overview (including its stated purpose), detailed income and expenditures to date, how does the current research fee level compare to other states and private sector? (John Sherwood, Bill Grey)*

John described the history of establishing the Variety Release Policy in 2004 that led to the establishment of Research Fees. Following is part of the Variety Release Policy that tells how fees should be used.

“A Research Fee will be collected on all Registered Class and Certified Class seed sold of Protected Public Release varieties of wheat or barley (only option F.2.b.). The MAES Director will establish a MSU designated fund for protection of PVP Title V varieties. This will be distributed as follows: 1) pay for costs associated with PVP Title V and fees (administrative and MAES), 2) 50% of net to inventor and, 3) 50% of net to fund high priority programs for variety improvement, cereal quality and focused outreach.”

The use of fees between then and now was described, including how the administrative costs have been spent (administration of program, paying for PVP of new varieties, membership in Farmers yield Initiative). We are developing a system to send out a request for people to apply to us for use of those funds. The primary criteria are that it was used in variety development and improvement.

A discussion on whether varieties other than the “best” should be made available to the public was initiated by Dave Wichman.

David Wichman

- *Should number 2 (second best) be offered up for sale or tossed.*
- *Merit and methods for transferring unconventional genetic line(s) to Ag market entrepreneurs.*

J. Sherwood – This is an open discussion and we will not vote. A consensus of feelings will be recorded and we will make those known to the Dean and whoever else needs to know.

D. Wichman – The Agricultural Experiment Stations can keep #1 and #2 should be offered up for sale to some other seed company if they want it. Sometimes our #2 is better than anything else out there. If our ultimate goal is to serve the producers out there, why not give them the best thing we have to sell? Why do we want to

compete with Foundation Seed Program. We should not worry about Foundation Seed Program before we worry about growers. We should not leave something good on shelf and let growers grow something inferior.

B. Mahurin - Why don't we try to license the best variety instead of the second best?

J. Sherwood - This decision was made several years ago; our best varieties would be released as protected public varieties.

B. Mahurin - We don't have to exclusively license.

J. Sherwood - The paragraph read earlier has been the rationale behind all of our decisions. The new variety must be at least as good as or better than the current recommended varieties.

P. Bruckner - A lot of us have significant grower support through check off funding and a lot of those growers would at least favor public release.

D. Wichman - This has been successful, they have become most popular in the state. Private companies still have their niche; let them have #2 instead of # 3 or #4.

B. Mahurin - Should we provide non exclusive licenses to "Jones and Company"? Is there an advantage to doing that?

K. Kephart - A variety loses its notoriety. This is a fairly common practice; Purdue does this all the time.

B. Mahurin - I can see advantages to both ways. We need to support the breeding programs and research fees to that. Is it good to get seed varieties to farmers at better prices because of competition?

J. Sherwood - Lavina does better in some situations than 1427, but 1427 may be better on irrigated and higher production environments. This would be a great way to move 1427, how long has it been sitting idle; why not do something with it?

B. Mahurin - Can we release a variety that is not as good as another?

J. Sherwood - We are always willing to consider ways in which they may differ. Today Phil offered two varieties that are not that different so we look at solid stems individually because it has a unique trait. Is there always a variety that is better under certain situations? Dave, give me a situation where it is better than Lavina? If not better in any way, we should not even be looking at it.

B. Mahurin - Are we looking at changing the policy?

J. Sherwood - Crops that are not PVPed and protected are not competing with royalty fees. There is a difference between PVP varieties we protect and common releases.

M. Goffena – As things unfold, there are going to be some very interesting topics come up and as small companies, we need to protect university systems and growers, but not totally stop progress. With the hay barley situation, we need to keep an eye on breeding/gmo issues.

D. Wichman – Is this generally an acceptable policy?

J. Sherwood – I see differences between protected public release and the situation we just went through with hay barley.

N. Weeden – Two varieties are very similar, but they are used in different habitats. That is what breeding is all about.

J. Sherwood – We would consider them separate. A few years back, Phil brought forth two varieties and they were both recommended for approval and they went to the PVP Committee and Yellowstone was approved and the other was not because they were not sufficiently different.

D. Cash – Instead of calling it second best, we should call them cohort varieties.

B. Mahurin – I am a capitalist. If we have two things to sell, sell them; everyone has their brand preference so producers would end up preferring different varieties.

A. Dyer – Montana brand is very valuable.

P. Bruckner – We haven't really considered two identical ones this year. The ones we are comparing are the top two, but they are not identical.

D. Wichman – Sometimes there is a unique character in species, but not readily marketable quality such as Bob Quinn and his Kamut. This has been a boon for him in his niche market. Should there be a mechanism where we could offer this unique crop line for sale? Say a purple aleurone hulless barley; is there a way we could sell a lb to an entrepreneur?

D. Cash - Can we release it as a germplasm?

J. Sherwood – None of this would go through this committee from the way Dave Wichman is describing it.

P. Bruckner – We have never put germplasm releases before this Committee. There is no formal mechanism for that.

L. Talbert – Dean would have to sign off on it.

P. Bruckner – They need to have germplasm name for variety they are planning to release.

B. Grey – The naming can be parallel with native plant materials and leave it as germplasm with a name associated with the release.

J. Scianna – The term “germplasm” is confusing because in some instances it refers to a line with no testing at all, and in other cases it describes selections released through the prevarietal mechanism (i.e., Copperhead Germplasm slender wheatgrass) that have been tested and selected. There is a possibility of releasing it that way, as a prevarietal germplasm.

K. Kephart - How do you make a buck off this? Anyone can send in seed to a national collection for others to use.

D. Weaver – I think I have my answers.

J. Sherwood – Is there a motion to adjourn?

B. Grey - Motion to adjourn

Bob Stougaard – Seconded the motion

Vote – 15 for and 0 against

Approvals from Dean Jeff Jacobsen

1. Approval of the minutes from the Variety Release meeting in 2011 - John Sherwood, Chair.
[APPROVED BY JJ.](#)
2. Approval/minutes from the Wheat and Barley Variety Protection Committee (Mar 21, 2011) on Judee, Bearpaw, and Duclair wheats - Jeff Jacobsen Chair, John Sherwood, Secretary.
[APPROVED BY JJ.](#)
3. Approval of License Release Committee for MT981427, Hay barley - John Sherwood, Chair.
[APPROVED BY JJ.](#)