

Wheat Quality Council

Technical HRS Board Meeting minutes

February 19th, 2020

2019 Technical HRS Board Members:

Chair – Cathy Butti – Syngenta

Vice Chair- Andrew Green - NDSU

Secretary – Kathleen Trivette – General Mills

Member – Erica Olson – ND Wheat Commission

Member – Josh Weaver – Bay State

2020 Technical HRS Board Members:

Chair- Andrew Green- NDSU

Vice Chair-Kathleen Trivette- General Mills

Secretary- Erica Olson- ND Wheat Commission

Member- Josh Weaver-Bay State

Member- Joyana Baumann- NDSU

Approved by Richard Kendrick- Great Plains Analytical

Seconded by Brian Walker- Miller Milling

Review of Previous HRS Technical Meeting 1.21.2020

Approved by Charlie Vogel- MN Wheat Council

Seconded by Reid Christopherson- SD Wheat Commission

Overview:

Financial: Budget outlook for 2020 seems to be fine with about 18k- Each variety to be grown at each station is \$200 per sample. Budget is estimating higher than what the actual costs are likely to be

- Increase in 2020 CD: **2019: \$22604 to 2020: \$23959**
- Decrease in 2020 Checking: **2019: \$4529 to 2020: \$2911**
 - Reason for decrease due to HRS tech board paying for travel expenses to allow for our testing stations to have an opportunity to attend the meetings. Last year 3 stations participated, this year Casselton Seed Farm attended the 2020 meeting

HRS Grow out:

This year we had **8** breeder entries and **3** check samples*. These were grown at 6 locations: Havre, MT; Williston, Minot and Casselton, ND; Crookston, MN and Watertown, SD.

- 1 MSU
 - 2 NDSU
 - 1 SDSU—discarded
 - 1 Syngenta
 - 1 UMN
 - 2 Westbred
- Checks
- Glenn
 - LCS Rebel (West)
 - Linkert (East)

* The HRS Committee is evaluating LCS Rebel and Linkert as possible replacements for the long-term check variety Glenn. A decision will need to be made by the Committee, prior to 2020 planting, on whether to move ahead with replacing Glenn, based on discussion at the HRS Review session on January 20, 2020.

2019 Growing Season

Joyana Baumann reported on the 2019 growing season

- Planting: Everyone was late to get seed into the ground due to weather. Either areas had cold soils or too much moisture
 - Watertown had cooler temps with excess moisture
 - Casselton had excess moisture
 - Havre was seeded later than usual due to colder temperatures
 - Crookston did not get into the field until the third week of May however once they did, they had adequate moisture
 - Minot had decent moisture during planting
 - Williston had decent topsoil moistures however no other moisture available in soil after those 6 inches
- Growth: Similar story to planting, cooler temperatures and either too much moisture or not enough depending on the area
 - Watertown having temperatures running 5 degrees cooler than usual
 - Casselton had a wet growing season
 - Havre started off dry with no significant moisture in June, rain that did come were downpours and not helpful to the crops but caused more runoff. Slower rainfalls started in June 22nd however came with cooler than usual temperatures throughout July. This caused higher than expected yields
 - Crookston had dry weather until July

- Minot had good growing conditions, no pest issues were observed
- Williston had above average rain for both June and July—One of the best growing seasons seen in years
- Maturation
 - Most areas had decent maturation except for some scab being found on plants (not the seed) in Crookston and Williston
- Harvest: Harvest was delayed for everyone due to weather
 - Watertown had excess moisture and delayed harvest for 3 weeks, they were also about 5 degrees cooler
 - Casselton harvested on the drier side but generally the conditions were still quite wet
 - Havre had later than usual harvest due to late seeding, late rainfall and cooler temps
 - Crookston had no lodging present at harvest
 - Minot had rainy weather to delay the harvest however no pest issues
 - Williston had excellent yield however poor protein and average test weights

Linda Dykes reported on 2019 Milling data

- Miag mill received some maintenance: new screens and belts; sifter boxes were re-adjusted
- Received samples in mid-September
- All samples, excluding Havre, had high moisture and had to go into the dryer
- Samples sent out for DON (NDSU) and Vitreous (FGIS) testings
- Test weight in Watertown was low
- Falling number issues in Watertown and Crookston—
- Protein was low in Williston
- Milled beginning of October and that went well
- Mailed samples to collaborators 3rd week of November
- Sent subsamples to Mike Tilley at USDA Manhattan – protein characterization analysis
- Drill malfunction with Glenn at Havre- was discarded and used the LCS Rebel as the check for Havre set, all others had Glenn as their check

Brian Otteson Casselton Seed Farm Report

- Overview of the NDSU Agronomy Seed Farm
 - Began in 1950
 - Self-supportive through seed sales, though a state agency they receive no state tax dollars
 - Part of ND Agricultural Experiment station
 - 1400 acres with 1100 acres being Foundation Seed production leaving 300 acres for research
 - Produced 24 varieties of seeds
 - Oats, HRW, HRS, and Barley
 - High quality seed purity with 99.9% pure seed
- Pedigree Seed Generations
 - Breeders

- Foundation
- Registered
- Certified
- Providing high quality
 - Support main station scientists
 - Support research and outreach efforts
 - Field days for farmers and tours for agriculture meetings and commission groups
 - Collaborate with WQC
 - Grow spring wheat lines for evaluation
 - Host beginning of each HRS tour to train participants on how to perform stem counting in the field
- 2019 Production year overview
 - Wet for their area- 25.4" of rain
 - Planting and spraying windows were narrow due to rain and cooler weather
 - Some crops are still left in the field
 - At harvest wheat moistures were 13-13.5%, collected and tested for moisture, test weight, and yield then delivered to Linda

Erica Olson ND Wheat Commission 2019 Overview

- Difficult growing and harvest season as planting was delayed due to weather, colder temps and drier in the north and wetter conditions in the south . This also impacted emergence. Harvest was impacted by perpetual rains.
- Some areas got 10-15" of rain in one month during harvest season—western part of the state gets that in the entire year let alone in one month
- July was humid and rain made an increase in disease pressure
- The wet harvest led to an increase in feed wheat
- Quality discounts due to elevated DON and low FN values
- Elevators did a great job of segregating wheat by quality
- 2019 production compared to 5-year average
 - ND is up
 - MT is stable
 - SD decline
 - MN slight decline
- Estimated 1 million acres not harvested
- ND was 89% harvested
- Good portion of the crop had decent protein
- High grade factors however weaker dough strength even with higher proteins
- Not a disastrous crop but not typical
- Vitreous kernel was down 30 points so much of the HRS fell to a NS-Northern Spring
- Planting acres trending lower but no significant
- Production is stable
- Harvest acres dip due to weather
- Farinograph absorptions are down to environment and shift in varieties planted

- Loaf volume higher than normal

Brian Walker Milling and Performance 2019

- Wettest harvest since 1985
- First 50% came off good- good quality, wet but still good- grading at 1 and 2
- 2nd 25% came off with 2-3 grades with high moistures and low FN around 250
- 10-15% came off with grade 4's and feed grade due to extremely low FN around 150 or less
- Market discounted 270 FN numbers
- High moisture was being blended due to higher moisture
- Decent proteins at 14.5%
- Temper times were being adjusted by millers due to wheat moistures—especially with HRW and HRS blends
- Not many quality issues as thought, a few bread bake inconsistencies however minimal
- Same story with some inconsistencies with absorptions and mix times
- More scab than usual
- Not much Vom.
- Issues primarily on noodle color and texture
 - Bread was good
- Durum-vitreous is down-blends being made and mill optimizations to get better yields
- Lots of wheat still from last year making initial concern of low quality less of an issue with blending abilities

Josh Weaver with Bay State Milling comments on 2019 Harvest

- Concerning quality, as Brian walker mentions, with blending the wheat they have been able to manage and control a lot of the quality concerns making it not as bad as they thought it would be
- Some inconsistencies in trains however not the influx they thought would occur in regards of low FN in areas however being blended with last year's crop

Dr. Simsek- International Perspective on 2019 HRS Crop

- Overseas thoughts about HRS
 - Used in many products due to high gluten and high protein
- Asian Market is big for the HRS market
 - Maintain market in Philippines and Japan
 - Acquire new markets in Indonesia and Malaysia
- Highlighted some new products in Japan and their growing desire to produce cleaner labels example of bread that has a three-day shelf life (only sell three slices of bread per package)
- Challenges for HRS markets
 - Not many varieties in ND hitting the target water absorption
 - U.S. vs Canadian wheat- very competitive in protein and functionality
 - Water ABS with Canadian wheat is higher
 - Indonesia and Malaysia like higher ABS and buy CWRS (Canadian wheat)

- 10-year average decline in ABS
 - Due to variety or environment?
- 10-year stability is declining
 - Japan is #1 customer for stability and want us to increase
 - Malaysia and Indonesia want higher water abs
- Australian wheat is a strong competitor for Philippine markets
- Opportunities for HRS markets
 - Japan has strong interest in whole wheat and high fiber diets
 - Malaysia and Brazil both have high demand for frozen dough production increase
 - Malaysia and Indonesia have an increase in whole wheat, clean label, and frozen dough production

Steve Wirsching with US Wheat Associates thoughts on subject

- Breeding targets are working with goals for each class
- Issues experienced in 2015-2016 crop-lower stability issues have been overcome
- Better stability times in new varieties
- 2019 crop- due to rain- did see a lower stability- wants to complete the link to follow through on providing growers with better varieties that provide higher abs/stability-think of a preferred variety list- limit varieties on our own instead of the customers
 - System in PNW for white wheat has worked—should we put into place for HRS

Jim Peterson with ND Wheat Commission

- Explains more what a preferred variety would be-list that helps producer with end use quality- Private companies pull out of public testing to compare varieties- tends to make communication a little harder
- HRS varieties are broad- working through hurdles-challenges with mixograph and farinograph absorptions and stabilities and how to compare these results to each other
- Mixograph to disappear soon
- HRS increasing in overseas market due to quality
- HRS Class Quality Targets were last updated in 2014- would be a good idea to discuss again
 - Work on parameters for:
 - ABS (64%)
 - Stability (15-17minutes)
 - Extensograph Resistance (600 BU)
 - Loaf Volume (1055cc)
 - Selecting varieties on yield, pro and straw strength
 - Biggest issue for 2019 crop are the low FN's due to preharvest sprouting
 - Certain pockets had low temp in grain fill- this led to low falling numbers due to Late Maturity Amylase (LMA)
 - Growers looking for pre-sprouting resistance
 - LMA effecting scores-some varieties have LMA issues
 - Temperatures to cause LMA would be low 40's-42 temp for regions that had cold August temps-these effected the grain fill

2020 State outlooks

- **South Dakota-Reid Christopherson:**
 - Problems with planting wheat HRS in spring of 2019...acres turned into not HRS
 - 2019 planted acres of 605,000 acres-record low
 - Challenges in low germination rate-crops going to row crops, expecting as low as 500,000 acres of HRS
- **North Dakota-Neal Fisher:**
 - Challenging year with delayed harvest and very wet soils...a lot of corn still in fields Covered in snow in eastern part of state-
 - Weather in western portion of the state has been warmer with less snow
 - Economics of wheat are challenging and may lead to more corn and soybean acreages
- **Washington State- Mike Miller:**
 - Large increase in HRS wheat acreage-record amount of HRS and Soft white spring wheat acreage due to poor markets for pulse crops
- **Montana- Cassidy Marn:**
 - Pending trade agreement for pulse crops may change ideas by planting season, but HRS acres likely to increase due to lower HRW acreage
 - HRS only option in many areas with 2.9 million acres expected
 - ½ million acres for durum in 2019 could go up to 800,000 in 2020
- **Minnesota- Charlie Volgel:**
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 - 2020-unharvested corn and rutted up fields with lots of snow fall may mean a decrease in wheat acres
 - Farmers not going to try to get wheat in past May 5th-not fighting the fight and will just plant other crops if needed
 - Corn and soybeans markets strong and wheat acres are going down

Mixograph Conversation

- Update on Mixograph and concern of not being able to get parts, new equipment etc. TMCO says that they have parts and pieces if we need them however not giving support.
- Will sell equipment until they run out- waiting to hear if there is a demand in the industry for them to think about starting up National Manufacturing again or not
- Looked at taking inventory through USDA however with being the government, they can buy them but then they can't sell
- Message to let TMCO know that there is a demand for this machine and it's support
- Smaller group that is using mixograph however still need to voice concern for any hope of getting support and continuing this testing process- stock up on consumable
- Limiting parts to buyers- thoughts on negotiating engineering documents to resurrect and manufacture parts and pieces with a different company

Motion to adjourn the meeting Kelly McMonagle- NDSU

Seconded motion Erica Olson- ND Wheat Commission