1. Introduction – Russ Karow  
   a. Project overview  
   b. Project award receipt  
   c. Officers for 2013 – Andrew Ross (OSU), Mike Pumphrey (WSU)  

2. Reports  
   a. Montana – Dale Clark for MSU  
      i. Vida – number one variety, semisolid stem for stem saw fly  
      ii. “green gene” in all – stays green longer – don’t know specific cause  
      iii. As part of Wheat CAP – has done backcrosses to West Bred and Syngenta material  
      iv. Saw fly and Hessian fly – with no-till are seeing greater levels of incidence  
   b. WSU - Aaron Carter  
      i. Commodity commissions and university are cooperating in providing the funding for and hiring of new faculty – endowments and support for state funding through the legislature  
         1. Bioinformatics center  
         2. Biosensor engineering – drought resistance measurement  
         3. Crop physiologist  
         4. Quantitative geneticist  
         5. Will refill wheat quality position  
      ii. Breeding – Campbell, Carter and Pumphrey - Stacking of gene resistance key and end use quality are primary objectives  
      iii. Crop status is good; stripe rust – seems to be lesser problem this year  
      iv. Quality – Byung-Kee Baik has taken a new position in Wooster OH  
         1. Lab has been doing work on sponge cakes and particle size effect in whole grain flours on products – truly whole grain with embryos included  
   c. WSU – Gill  
      i. Two gene Clearfield – WA8143 likely to be released  
      ii. Reworking dwarfing genes – look at new dwarfing sources in order to maintain gibberellic acid levels in plants  
      iii. Doing drought tolerance as part of international effort  
   d. Idaho – Juliet Winds, Jianli Chen  
      i. New positions  
         1. Cropping systems southern ID  
         2. Cereals agronomy at Parma and Moscow
3. Crop Physiology
4. Crop entomologist - wireworm has become a major issue
   ii. Crop – dryland poor, irrigated good
      1. Fusarium head blight 30-40% in some fields
   iii. Varieties
      1. Production down due to corn and spring barley
      2. UI Stone – dryland and irrigated – fusarium head blight resistance
      3. Two lines in process of release
      4. Part of Triticeae CAP – drought tolerance testing
   iv. Lima Grain collaboration is one-year old and working well

   e. Janice Cooper – CA
      i. Declining resources as well. Wheat commission has increased funding to
         breeding program; mini-grants to farm advisors; providing funds for half a
         wheat/barley position
      ii. Anti-wheat messages - Is working with Wheat Foods Counsel to do
         education efforts
      iii. Doing baking collaborative for whole grain flour use
      iv. Bread wheat up, durum 40% down due to market prices

   f. Scott Haley/ John Stromberger – Colorado
      i. New HWW – Antero (mountains over 14,000 ft used in naming) – acreage
         of HWW could be up to 5-6% - working with ConAgra on marketing – 15%
         yield drag on average so premium will have to be significant to off-set
      ii. Above average crop 2012 – three weeks early – 2013 extremely dry
      iii. Stripe rust changes in virulence patterns have taken out major varieties
      iv. Stem fly is an issue – solid stem and attractant work is underway
      v. Crop physiologist hire in progress as well – 9-month position with
         teaching

   g. West Bred – Dale Clark
      i. Popular varieties dominant in WA and S Idaho - trifecta blend of top
         three has done well
      ii. Releasing two soft white springs – early and Hessian fly R needed as well
         as stripe rust resistance vs older types
      iii. Jason Cook – trait integrating position – marker assisted backcross
         program
      iv. Quality lab is developing NIR techniques for sedimentation value
         determination
v. Company is now “chipping” all F2-3 populations to check for specific markers – can do 50 markers at time and only plant those with desired traits – not inexpensive so will need to determine traits on which to focus
vi. Are applying for utility patents for all materials
vii. PVP – do this at early generation as soon as looks like there is promise in a line
viii. Company is looking at 1-2% gain in yield each year once program is fully operational

h. John Moffitt – AgroPro Wheat (Syngenta)
i. SY Steelhead – HRS – held up to stripe rust, good end use quality
ii. Increased investment in wheat in PNW operations – was historically an “other” crop in Syngenta and is now a global crop category – there are increased expectations for performance
iii. Hybrid effort once again – PNW, Plains and SE – will hire hybrid breeder – marker technology to maximize heterosis – CMS system
iv. Also hiring trialing managers to optimize data roll out – each location will have trial manager and will also have national level person
v. Also hiring product evaluators – will have been rough cut on yield and agronomy and then pass off for release – will try to optimize agronomy
vi. Syngenta also looking at 1-2% gain in yield

i. Wheat Marketing Center – Gary Hu
   i. Six quality workshops for growers
   ii. Numerous self-funded programs for specific product development
   iii. General public educational workshops – more than 40
   iv. Four visiting scientists – China (2X), S Korea, Nigeria (government mandate to include cassava flour in all wheat products)
v. Are patenting processes – most cases owned by sponsoring company, some co-owned

j. Western Wheat Quality Lab
   i. Personnel – Brian Beecher left for Kansas City
   ii. Budgets – all vacancies held open until budgets are finalized
   iii. Puroindoline work continues, color methods for arabinoxylans
   iv. Flavor work – mouse preference studies
   v. Have soft durum patent claim that has been allowed

k. Limagrain – Jeron Chatelain
   i. Made through first year in collaboration with UI
   ii. New UI positions are coming through Limagrain agreement
   iii. Have increased on-the-ground footprint
I. OSU – Ross/Rowe
   i. Four new varieties – Kaseberg, Ladd, Roselyn, Bobtail
   ii. Unique findings in improved quality from crosses where this would not be expected
   iii. TK Kongraksawech replacing Caryn Ong as quality lab manager
   iv. Ave yield 65 bu/a vs long-term average – acreage down due to grass recovery and corn; overall acres down
   v. Are starting process to replace Dan Ball, weed scientist, at CBARC
   vi. OWC and OSU engaged in discussions about sustainable funding models given likely continued decline in state and federal funding
   vii. Quality
      1. falling numbers – genetic influences on protein, starch
      2. working with genetics faculty on issues related to flour aging, falling numbers, etc.
      3. rapid turnaround in breeding materials is needed – six week window – have been successful at early generation selection for quality

3. General hard white discussion
   a. Discounts for HRS but none for HWS – pay nearly similar for HRS – treating as single class at this time – winter and springs comingled – contracted and so bought regardless of protein content. Industry will need to decide as the market grows whether separation is needed
      i. Klassic still big, people have learned how to grow
      ii. Juan Li Chen – 50% HW effort – south Idaho has significant production – mostly export but domestic use increasing

4. AACC Meeting
   a. Sponge cake testing improvements – Byung-Kee Baik
      i. Sponge cake is a major use of PNW soft white wheat exported to Asia – high value end product
      ii. Simpler testing techniques with less potential for human error are needed but also procedures with high correlation to old procedure
      iii. Frozen eggs can be used as well to homogenize process
      iv. Non-baking method – simple flour-water mix with flow distance – may have possibilities
   b. The Evolution of Grain Quality form the Importer’s Perspective – Koji Murakami, Manger Quality Control, Nisshin Flour Mills
      i. Nisshin is the largest Japanese wheat miller
      ii. US > 50% of Nisshin market, SWW about 25% of this total
iii. Uniformity is key, Canadian CWRS is major competitor to HRW less so HRS
iv. Changing specifications are problematic, consistency is the key
v. Food Safety – consumer concern – allergens, GMO, contaminants, chemical residues
   1. Contaminants – buckwheat, soybean, treated seed
   2. Some concern about heavy metals specifically Cd
c. Factors Affecting Falling Number Results – Andrew Ross, OSU
   i. Hypothesis – low protein per se may cause low FN
   ii. Due to flour proteins per se though there seems a grain protein correlation
   iii. May need to fertilize to reduce falling number risk if low protein
   i. Saw temperature x moisture interaction
   ii. Could perhaps add moisture to dry grain to test for sensitivity to low FN
   iii. Could perhaps differentially harvest during grain fill to estimate Fn potential
e. Branscan – UK company – Aytun Erdentug
   i. determining bran and aleurone content of flours and quality
   ii. underlying question “Does ash have some relation to grain quality?”
   iii. There are companies producing high grade aleurone
   iv. Perhaps use bran as a replacement measurement for ash
f. HRS targets in PNW - new standards were adapted