MINUTES OF THE NE 1014 TECHNICAL GROUP MEETING - 2006

Date: January 14, 2006

Presiding Officers: Zenaida Ganga (UM) Chair; Chad Hutchinson (UF) Vice-Chair; Mark Clough (NCSU) Secretary

Participants:
Cornell University: Don Halseth
Walter De Jong
Xiaohong Wang

University of Florida Chad Hutchinson
Doug Gergela

University of Maine Zenaida Ganga
Greg Porter
Steve Reiling

North Carolina State University Craig Yencho
Mark Clough

Ohio State University Matt Kleinhenz

Pennsylvania State University Barb Christ

Rutgers University Mel Henninger

Agriculture and Agri-Food Canada
Prince Edward Island Walter Arsenault
New Brunswick Agnes Murphy

USDA-ARS Leslie Wanner

Venue: BARC, Beltsville, MD

1. Call to order, additions to and approval of agenda

   • Call to order: 8:15 AM – Zenaida Ganga

   • Meeting agenda was introduced; additions or revisions solicited
     i. Craig Yencho: proposed discussion on National Potato Database
     ii. Zenaida Ganga: suggested including this in item #16 when we discuss our database
     iii. Zenaida Ganga: item #17 will be skipped as Kathy Haynes could not be present due to illness
• Motion to approve agenda: Craig Yencho; Second: Don Halseth

2. **Introductions**

   • Introductions made by each individual

3. **Minutes of last meeting – Chad Hutchinson**

   • Minutes from 2005 meeting were presented Motion to accept: Craig Yencho; Second: Don Halseth

4. **Appointment of Committees – Zenaida Ganga**

   • Site Selection – Don Halseth, Craig Yencho, and Barb Christ
   • Resolutions – Walter De Jong and Greg Porter
   • Nominations – Mel Henninger and Chad Hutchinson

5. **Local Arrangements – Kathy Haynes and Leslie Wanner**

   • Leslie Wanner indicated the registration fee would be $15 for the meeting. Also a count was made for those that planned to attend dinner that evening.

6. **Administrative Advisor Report – Steve Reiling**

   • Reminded group to have minutes of the meeting prepared and submitted within a month of the meeting so the annual report could be submitted within 60 days of the meeting
   • Asked group to consider establishment of a formal liaison between both the North Central and North Western regional potato projects. This is in reference to perceived duplication of effort between the regional projects by reviewers.

7. **Cooperative State Research, Education, and Extension Services (CSREES) Report**

   • No report Given

8. **Eastern Regional USDA-CSREES Potato Special Grant project update – Greg Porter**

   • The proposal was started earlier this year and finished on time, one day before deadline.
   • Indicated overall reviewers liked the way the program was put together. Peer reviews were handed out to the group as well as panel and peer reviews from 2 years ago. High marks were given for number of states involved, organization, making use of a diverse set of environments, and a
very positive web based component. Reviewer, Dan Ronnis had very favorable remarks overall but had these two criticisms: lack of effort to discard for external defects (bruising and sunburn), and overall North American breeding efforts are too fragmented.

- With regard to the progress report reviewers from 2 years ago stated the opening paragraph should highlight what the group is doing in lay terms to provide more clarity to the non-scientific reader. On this point it was noted that Ann Marie Thro expressed frustration in lack of clarity and specifics in the current opening paragraph
- Steve Reiling: Report process is changing focusing more toward impacts and outcomes both in the short term and long term and less on numbers of scientific publications.
- Matt Kleinhenz: Reporting needs to speak to a non-agriculture entities as less people have a direct connection to farming. People are more concerned with the impact of the farm on the communities health and less on the health of the agricultural industry.
- Steve Reiling: Science is becoming more technical and less people are associated with agriculture. Congress wants simple points to report to constituents
- Leslie Wanner: We need to sell ourselves. Food is abundant and cheap and we need to remind people why this is the case
- Matt Kleinhenz: Important to focus on breeding and development but there is a lot of work outside of this that is sited in our outcomes and impacts.
- Craig Yencho: Requests CSREES representatives come to meetings to give direct input and voice concerns over program
- Greg Porter: Virginia Tech will not have a field component in 2006 due to lack of resources. UM has a genomics person moving into potatoes but there will likely not be additional funds to do this work. Each year there are less funds not more.
- Craig Yencho: Richard Veilleux deserves much credit on his willingness to fill the gap until a replacement can be found to fill Rikki Sterrett’s former position. Also noted Virginia’s importance regarding internal heat necrosis research
- Zenaida Ganga: Thank you Greg for your hard work putting the grant together

9. State Federal and Provincial Site Reports

Prince Edward Island – Walter Arsenault
- Started late, last week in May to 1st week in June. Minor Late blight in late July. Dry August, heavy rains in September and October. Harvest completed in November. Yields were average, quality was good. Reduction in acreage to 96,400 A. Buy back plan initiated to reduce acreage at $200/acre this accounted for much of the reduction.
New Brunswick – Agnes Murphy
- Planting started normal in mid-May. A second planting was required in June. August was dry and warm and no Late blight was recorded. Heavy rains in September and October delayed harvest. Yields were down, quality was good, and overall Acreage was down.

Quebec – Andre´ Gagnon
- Temperatures were similar to other Canadian locations. Planting started on time towards the end of May. July was dry. Yields were average or slightly better. Heavy rainfall in October. Price for red potatoes was $19 (Canadian). Between 35,000 and 40,000 acres planted down roughly 5% from last year.

Florida – Doug Gergela
- Last year growers received a respectable price. This year acreage down as development occurs on and near former fields. Contract prices up this year, chips $9 – $10 /cwt. Fertilizer and seed prices are also up. Acreage 25,000 to 30,000. Marion White retired on December 31st, a special was placed to Marion where he informed to group he was in the woods hunting and enjoying retirement.

Maine – Greg Porter
- Cold, wet start caused late planting. Crop grew quick, had steady rainfall throughout the season. Over the weekend of Oct 12th received 7 in of rain. Crop was good, yields were slightly off last year. Chip color was good, demand and price were good, fresh market is moving. Acreage was 55,000. Trials went well, 50% acreage of Russet Burbank for fries. McCain foods looking for other varieties but Russet Burbank is adequate because of storage potential

New Jersey – Mel Henninger
1. Season started out wet. June through July was wet. One field of Russet Norkota with Late blight found but never spread. Dried out in late July for harvest. In mid to late August IHN was normal. Trials went well, yields were average. Overall acreage was 2,500 to 3,000.

New York – Don Halseth
- Wet planting, half normal rainfall all summer. September was good for digging followed by a wet October. 24,000 acres planted. Prices were $10 to 12 for table stock (open market), chipper taking most spuds with few exceptions because of high table market price. Yields were average, quality was good, and chip colors were good.

North Carolina – Craig Yencho
- Roughly 14,000 acres planted this past year. Decreased acreage primarily affecting the chipping industry. At the start of planting we were delayed 1 week. Overall the season was cool with patchy rain. Yields were average. Crop still about 70% chip and 30% table. Contract prices are up for this year and we
expect acreage to pick back up to around 17,000. Two to three week prior to harvest last season high ozone levels in plots contributed to early decline. Rainfall for our season was behind 30 year averages. This year we expect to see acreage of Harley Blackwell increase because Atlantic is difficult to find.

Ohio – Matt Kleinhenz

- About 4000 acres planted. Acreage is roughly 60% devoted to the chip market. Less than average rainfall. Rains occurred early and late in the season but not at the bulking phase. Yields were better than average, quality was fair, and chip color was good. Early temperatures were cooler than average, and late season they were above average.

Pennsylvania – Barb Christ

- Overall a dry season. Planting was on schedule. About half normal rainfall all season. No Late blight. In SE Pennsylvania yields were down, dry all season until late October rain. Other parts of state yields were okay. Temps were average. Acreage around 14,000. Keystone Dehy. plant, opened by Keith Masser, is up and running. Has allowed producers a market to sell some off grade potatoes.

Virginia – Not Given

10. Comments from Industry Representatives

- No representatives present

11. Pathology Tests Reports

- Barb Christ: Good Late blight year in trials. Susceptible and resistant lines were easily discernable. Powdery Scab trials were good had high levels on Russet Burbank.

- Xiaohong Wang: Cornell continues to evaluate for Golden nematode resistance. Currently evaluate potatoes from New York, Michigan, and the USDA-ARS. This year 400 clones were screened for RO1 resistance and 300 were identified with some resistance. Two-hundred clones were screened for RO2 resistance about 20 had some resistance. Currently trying to develop molecular marker to identify RO1 and RO2 resistance. A detection system is needed for RO2. PCR primers already exist for screening for RO1.

- Leslie Wanner: Presented a through and informative talk on the variation in scab causing organisms in the NE and US. Asked for southern states to contribute scab samples as we find them in the field to expand her collection.

12. Breeding Reports
• Maine - Zenaida Ganga: Wet weather stretched out planting season but overall trials went well. Have scab, verticillium wilt, and rhizoctonia plots. Received some early generation materials from Idaho (Rich Novy). AF1808-18 and AF1758-7 have been increased by the state farm and are ready for larger scale trials. AF2211-9 did very well in trials, good in Quebec, has high gravity and high yield. AF1455-20 out on a small scale in OH and did well in 2005. Intend to enter 5 more varieties into NE1014 trials.

• New Brunswick - Agnes Murphy: Highlighted Agriculture and Agri-Food Canada’s selection and release method. This year expected to release 3 french fry and 4 or 5 table market varieties. Dr. Xiu-Qing Li is working to differentiate between cultivars and selections. Also work is being done on pigmented flesh selections transferring some material from diploid to tetraploid levels. Looking forward to returning to NE1014 evaluation program. Greetings from Richard Tarn and David De Koeyer.

  Craig Yencho: Very interested in seeing AR clones in the NE1014 program. Also if material transfer agreements had to be filled out that should be no problem.

  Walter De Jong: What is the bidding process for clones? Would it be possible for American entities to enter the bidding process for new releases?

  Craig Yencho: We would also like to see our varieties grown in CA as much as they would like to see theirs grown in the US.

  Greg Porter: Allowing CA clones into the US allows all producers to have data of performance at more locations. If MTA’s need to be signed each participating institution must fill out their own. Only a modest number of clones could submitted into the program because of cost.

  Agnes Murphy: How does NE1014 prefer to receive seed?

  Greg: As long as documentation is available the type of seed doesn’t matter.

• New York - Walter De Jong: Indicated scab after GN was the next most important pathogen facing New York’s production. Cornell has 2 scab plots that are replicated and multi-year.

  Leslie Wanner: Is there any economic impact data on scab?

  Walter De Jong: How would we conduct an economic impact study?
  Craig Yencho: In NC we have had success with grower surveys from sweetpotato growers by going through the commodity association.
Walter Dejong: About 50% of breeding lines are rejected because of scab. Also this season the irrigation ponds were drained for repair in April adding to dry conditions mid season. Many clones were ejected from program this year because of IHN. Season also encouraged selection for early bulking due to moisture issues.

NY136 was proposed to be dropped but was saved by North Carolina and Florida. NY129 is liked by a grower in PA and a grower in FL is planning to raise it on a larger scale in 2006. Y18-16 is now NY138, and Y28-9 is now NY139. The later is a breeders choice for 2006.

• North Carolina – Craig Yencho: planted roughly 10,000 single hills this year. We are still taking materials from Kathy Haynes program as singles. In about the 3rd year of our own breeding efforts and anticipate in the next few years having breeders seed entered into the NE1014 program. Per McCord former masters student has started his PhD and is working on an IHN mapping project, his goal is to tag genes associated with IHN. This is the final year of the early generation project initiated with the USDA-ARS and hope to have the results soon after the end of the season.

• USDA-ARS - Kathy Haynes: Not Given

13. Seed Orders, Shopping List, New Entries – Greg Porter

Payment of bills in a timely manner has been an issue for some locations. Each cooperator needs to make sure their bill is paid.

Shopping list

- NY138: will not be distributed due to high virus levels
- B1763-4, B2274-2, B2291-7, B2319-1, B2319-3, NY130, NY133, NY134, and AF2209-9 all dropped from program.
- A9014-2 (Gemstar Russet): ME: french fry quality similar to Russet Burbank, 11% external defects, yields well, has PVY symptom expression problems, 20% misshapes, 42.5% hollow heart; NY: good yields, 25 to 50% hollow heart; PEI: 2.6% total defects, high specific gravity. Scheduled to be done testing after 2006
- AF2199-6: NJ: has growth cracks, low yield; NY: marketable yield was 92% of Russet Burbank, 20% misshapes, 10% growth cracks; PEI: good fry quality, 86% marketable yield Russet Burbank; ME: 83% Russet Burbank (5 year average), slow emergence this year, some misshapes, fries well, good specific gravity, shatter bruise susceptible
AF2211-2: ME: external defect problems, deep eyes, low yield, high levels of scab; NJ: Many growth cracks, very scab susceptible; NC: had it in 2004, yield equal to Atlantic, low gravity, fair appearance, 10% IHN at a severity rating of 6, deep stem end; NY: 78% Atlantic, okay dry matter, 5% growth cracks, 5% misshapes, 5% hollow heart, high amounts of scab. Dropped

AF2211-9: NJ: high IHN, a lot of hollow heart, high gravity; NC: high IHN, mid-maturing, hollow heart noted, high gravity, 72% Atlantic; NY: high IHN; ME: mid to early maturing, 72% Atlantic, high gravity, excellent chip color. Kept for colder locations

AF2209-8: NJ: high IHN in 2002, good yield, low gravity; FL: 30% IHN over 2 years, good yield, low gravity (1.059); ME: 1.059 gravity, 5% hollow heart, yield okay, appearance good, susceptible to shatter bruise; NC: 1.053 gravity, 65% IHN at a severity rating of 6.3 over 2 years; NY: 72% Atlantic, 1.069 gravity, 13% hollow heart, 20% vascular discoloration. Drop

AF2291-10: This should not be a russet type potato some in 2004 received mixed up lots; NJ: 86% Atlantic, gravity similar to Atlantic, IHN problems, high numbers of missshapes; ME: yields equal to Atlantic, good gravity, chips good, susceptible to bruise; NC: 86% Atlantic, 1.076 gravity, good chip score, fair appearance, high levels of IHN, some hollow heart, FL: similar to NC data, 80% Atlantic, 1.082 gravity, some hollow heart; OH: good gravity, poor appearance, poor chip color. Breeders Choice for 2006

AF2314-1: NJ: high numbers of heat sprouts, lots of secondary growth, poor appearance, and low yield; ME: low yield, many pear shapes, okay appearance; FL: 50% standard; 1.067 gravity, 100% less than 2 1/2” inches, deep eyes; NY: Fair appearance, yield less than Atlantic

AF2322-2: NJ: many heat sprouts and secondary growth, no IHN, some scab; ME: low gravity, fresh market type, round to oblong shape, scab susceptible.

AF2376-5: NJ: 67% Atlantic, 4 out of 10 with IHN, yellow flesh; NC: 93% Atlantic (2 year average), variable gravity, slightly later than mid-season, all other ratings variable; ME late maturing, good appearance, smooth skin, low yields.

AF2393-7: NJ: netted red, low yield; ME: on wet site netted, good size and shape, skin set not good
AF2916-1: ME: bright smooth skin, fresh market, good yield 3 of 5 years, some hollow heart; NJ: very small.

B1806-8: NJ: some hollow heart, good appearance, gravity 5 points better than superior, scab susceptible, breeders choice for 2005, slight yellow flesh; ME: scab susceptible, 6 out of 9 tests had high scab levels, very black spot and bruise susceptible, darkens after cooking, 9% hollow heart regionally over all years; PEI: 78% standard; NC: seen in 11 tests, 106% Atlantic, good size, light yellow, chips, slight net, good appearance, some scab; FL: 10 site years, 97% Atlantic, 1.074 gravity, good size, 6% IHN at one location. Completed testing in 2006.

B1816-5: NJ: good yield, too netted; NY: too ugly; ME: round to oblong, slight net, yellow flesh; Breeders Choice for 2006.

B1870-3: ME: fresh market, round to oblong, scab, growth cracks, early to mid-season; FL: large tubers; NY: good cooking scores, no after cooking darkening, low gravity, few internal defects; NJ: low gravity.

B1952-2: NJ: susceptible to scab, smooth shape, some hollow heart; ME: good skin; OH: good yield, nice appearance; FL: high gravity.

NDTX731-1R: ME: high yield, good in ME, bright red, slight net, passed boil and bake tests, low external defects, ME grower likes, regionally 106% Chieftain; NY good in muck soils, 251% Chieftain in 2005, 194% in 2004. Completed testing in 2006.

NY129: NJ: high yield, low gravity, eats well, bakes and boils, netted skin; NY: uniform tubers; NC: shallow eyes, netting; ME: high yield, low external defects; PA: nets in southeast PA, Erie County grower markets it local and can’t get enough; OH: likes it also. Completed testing in 2006.

NY137: NJ: high yield, low gravity; OH: low yield, good appearance, low gravity; FL: high yield, low gravity.


NY73-49: NY: some trichome mediated insect resistance, susceptible to GN, fresh market type, mid-season; NC: mid-season, good gravity, good yield; NJ: some IHN, good yield.

Additions for next year:
Beacon Chipper: unsure of parentage or where it came from. Released by Michigan State University and Maine. Maine growers asked to enter it into program.

Dakota Diamond: from NDSU originally ND5822C-7. NJ: high levels of IHN; NY: high levels of IHN; NC: some CPB resistance.

Blazer Russet

Summit Russet

Dakota Jewel: some silver scurf resistance

Discussion of completed lines:


NY125: PA: grower trial – ugly/no way, sticky stolons; NJ: good yield, poor tuber conformation; NY: will not evaluate any longer, size profile is small; ME: bruise resistance good, good appearance; NC: good appearance scores, good yield, no IHN, sticky stolons

NY126: ME: gets large and has many off shapes, good yield, moderate gravity, okay appearance, black spot and bruise resistant; NC: chips, yellow flesh, good appearance; FL: flat; NJ: some hollow heart; NY: skin not smooth enough.

NY127: ME: fresh market, high yield, poor appearance; FL: high yield; NY: high yield, lot of scab, variable size, resistant to GN RO2; NC: poor appearance.

NY128: FL: low yield, good gravity, netted round potato, cream flesh, good appearance; NC: late maturity, 90% Atlantic, no IHN, very Atlantic like, good chip, okay gravity; ME: later than Atlantic, good yield, chips from December are good, shatter bruise susceptible, regionally 6% internal defects; NY: scab susceptible, black spot and bruise susceptible; NJ: almost no IHN.

Eastern Trial Summary – Greg Porter

Suggests publishing it as a miscellaneous ME experiment station publication. The 2003 data has been submitted and 2004 data will go out soon. It would also be good to put on the website as a PDF document.
Reviewed summary with the group pointing out regional standout with better appearance scores (Marcy, NY126, NDTX731-1R, NY129). Also emphasized Table 7, summarizes defects, this information can help to eliminate material based on defects. A good example is IHN older lines had more IHN than more recent entrees. Were as hollow heart is still expressed with a fairly high incidence.

15. **Update on AMMI analysis of NE1014 data – Don Halseth**

AMMI is a valuable tool to compare genetic by environmental interaction. An overview of this year’s analysis was presented to the group.

16. **Update on the NE1014 website/database development – Don Halseth/ Craig Yencho/ Mark Clough**

Don Halseth: Still planning the development of the NE1014 website. Items to include on the website: mission and project description in layman’s terms; variety release info from all materials that have gone through the program; information on each project involved in the program; link to the database.

Regarding the database; it has been practice to submit data prior to the January meeting each season this causes problems with those who gather late season and storage data such as cold chipping data. Should there be a time lag for data submission? Can those with storage and cold chipping data submit data later?

Mark Clough: proposed development of an online submittal interface

Craig Yencho: Congratulated Mark Clough on Database development and work. At this point an online interface is not worth the effort. Reviewer said we need to budget for maintenance. John Keeling and Ann Marie have been in touch about the establishment of a national potato database. Potatonet is giving us good praise for the database. John is looking to our group for leadership, do we want to find additional support? What type of database do you want – grower/variety friendly or genomics?

Greg Porter: Not sure Mark should take on being archivist for the US.

Craig Yencho: Suggested regions take care of themselves but meet periodically

Greg Porter: We need a good website to allow sharing of the information

Mat Kleinhenz: Do you track the number of visitors and who visits?

Mark Clough: No, and there is also another problem with large databases, clone list size, there comes a point when you can’t find what you are looking for when there are too many entrees.
Matt Kleinhenz: it would be good to get information from the individuals that are using the site, maybe through some sort of registration

17. Annual Report Forms - Skipped

18. Old Business

No old business

19. New Business

No new business

20. Committee reports

Site Selection: Don Halseth: the committee has selected Philadelphia Jan 12th, 2007 as the location and date for our next meeting. Mel Henninger will line up accommodations. Don Halseth motioned to accept. Craig Yencho second.

Nominations: Mel Henninger and Chad Hutchison motioned that Leslie Wanner be the incoming secretary. Craig Yencho second.

Resolutions:

Where as the annual NE 1014 technical committee meeting has been a productive and enjoyable gathering of friends, let us resolve to:

1. Commend Kathy Haynes, Leslie Wanner, and Dianne Fleck for detailed local arrangements, especially the potato chips at lunch

2. Commend Greg Porter for his effort in again assembling and managing the USDA-CSREES proposal.

3. Commend Steve Reiling for exemplary leadership and diplomacy as our administrative advisor

4. Commend the NE 1014 2005-2006 officers, Zenaida Ganga (Chair), Chad Hutchinson (Vice-Chair), and Mark Clough (Secretary) for their service

5. Commend Rikki Sterrett, recently changed positions, and Marion White, recently retired, for their dedicated service and friendship to NE 1014 over many years.

Chad Hutchinson motioned to accept. Greg Porter second.
21. **Adjournment**

Craig Yencho moved for adjournment. Chad Hutchinson seconded the motion at 4:03 P.M. January 14th, 2006.