

**Minutes of NCR-167
Urbana, IL
June 17, 2002**

Administrative advisor:

Dr. Gary H. Heichel
University of Illinois
Dep. of Crop Science
AW-101
1102 S. Goodwin Ave.
Urbana, IL 61801

Chair:

Dr. Marcelo Carena
North Dakota State University
Dep. of Plant Sciences
PO Box 5051
Fargo, ND 58105

Secretary:

Dr. Kendall R. Lamkey
USDA-ARS
Department of Agronomy
Iowa State University
Ames, IA 50011

Members in Attendance: Rex Bernardo – Minnesota, Martin Bohn – Illinois, Marcelo J. Carena – North Dakota University, James G. Coors – Wisconsin, Larry L. Darrah – USDA-ARS, Arnel R. Hallauer – Iowa State University, Gary Heichel – Administrative Advisor, Kendall R. Lamkey – USDA-ARS, Elizabeth Lee – Ontario, Richard Pratt – Ohio, Ann Marie Thro – CSREES representative

Members Absent: John E. Ayers, Pennsylvania, Javier Betran, Texas, James L. Dodd – Industry Representative, James B. Holland – USDA-ARS, Zeno W. Wick, III – South Dakota, W. K. Russell – Nebraska

Guests: John Dudley – Illinois, James Hawk – Delaware, M. Paul Scott – USDA-ARS (Guest), William Tracy – Wisconsin, David Willmot – USDA-ARS, Kenneth Ziegler – Iowa State University

The annual meeting of the NCR-167 was held at the Holiday Inn Hotel and Conference Center, Urbana, IL on June 17, 2002. The meeting site and date were determined at the 2001 annual business meeting. It was agreed at that meeting to meet in conjunction with the Long-term selection conference that was to be held in Urbana the following June. Marcelo Carena, Chair of NCR-167 planned and coordinated the 2002 annual meeting of NCR-167. John W. Dudley, took care of the local arrangements for NCR-167.

Dr. Carena called the meeting to order at 5:30PM, which was followed by each person attending introducing themselves.

The agenda was reviewed:

- Attendance of members, introduction of Ann Marie Thro
- Review of Agenda
- Approval of the February 5, 2001, meeting minutes
- NCR-167 Administrative Advisor Report – G. Heichel
- Treasurer's Report – K. Lamkey
- Committee Reports
 - Meeting Place Subcommittee Report – J. Coors
 - Nominating Subcommittee Report – L. Darrah
 - Germplasm Release Subcommittee Report – J. Coors
 - 100-300 Maturity Group Subcommittee Report – E. Lee
 - 400-600 Maturity Group Subcommittee Report – J. Coors (subst. for Z. Wicks)
 - 700-800 Maturity Group Subcommittee Report – R. Pratt
 - Steering Committee of Symposium – J. Dudley
- Unfinished Business
- New Business
- Interdependency/Nursery Visits – K. Lamkey
- Future Funding for Public Corn Breeding – M. Carena

- CSA News and Private-Public Initiatives – M. Carena
- Adjournment

Dr. Lee moved we approve the agenda and Dr. Coors seconded the motion. The motion was approved unanimously.

Dr. Coors moved the minutes from the 2001 meeting be approved. Dr. Lee seconded the motion. The motion was approved unanimously.

There was discussion concerning the issue of reports from each station. NCR167 has not had a history of writing such reports, but they are expected by the administrative advisors. Dr. Coors moved that we send a written report covering the past year to Dr. Lamkey (secretary). Dr. Darrah seconded the motion. The motion was approved unanimously.

Dr. Ann Marie Thro, our CSREES representative, was introduced and she gave a report. She introduced CSREES (Cooperative State Research, Education, and Extension Service) as the “other” research agency. One of the functions of CSREES is to serve as a federal-state liaison. Dr. Thro is the NPL (National Program Leader) for plant breeding and genetics. In that role, she serves as the CSREES liaison for multi-state projects, manages hatch project by providing support, coordination, and reducing redundancy. She discussed funding for public plant breeding and what is happening with the NRI, IFAFS, etc. More information on funding managed by CSREES can be found at: <http://www.reeusda.gov/1700/funding/ourfund.htm>. She also indicated that another plant breeding human resource study has been funded.

Dr. Gary Heichel, NCR-167 administrative advisor, made a few comments. He pointed out that we are an international as well as a regional committee, that multi-state committees get funding only for travel, emphasized the importance of demonstrating linkages and synergisms among the members of NCR-167, thanked Ann-Marie Thro for coming. He pointed out that we are a model committee and have been continued for the 5-year period from Oct1, 2001 to Sept. 30, 2006. We will have a mid-year review in 2003 before we actually meet in Madison, WI. The mid-year report will include accomplishments since Oct. 1, 2001 and the report should be driven by the objectives of the committee. Our regional trials are evidence of collaborative activities. We need to try and keep attendance of official members in the 60 to 70% range.

Dr. Lamkey gave the treasurer’s report. The balance at the end of 1999 was \$776.43. At the 2001 meetings we received \$1920.00 in registration and spent \$2989.84 at the hotel and on miscellaneous supplies, leaving a balance of -\$293.41. In addition, we have \$1485.25 from the 2000 regional meetings which has not been spent.

Dr. Coors made the meeting place sub-committee report. The 2003 NCR-167 meeting will be held on February 17 and 18, 2003 in Madison, WI. Dr. Coors expressed some concerns about attendance because of the location and the time of year.

The nominating committee report was made by Dr. Darrah. Dr. Wicks term on the executive committee will be extended to 2003 and he will be the 2003 chair. Dr. Carena will become the past chair. Dr. Willmot stays on the committee and will be the chair in 2004 when we host the interregional meeting. Dr. Russell will be added for a term of 2002 to 2005. There were no changes to the sub-committees.

The germplasm committee report was given by Dr. Coors. The full report can be found on the NCR-167 web site (<http://www.agron.iastate.edu/ncr167>). Five new inbreds were released since the last report (one from Canada, two from North Dakota, and two from New York).

Dr. Lee presented the report on the Uniform 100-300 maturity trials for 2001. The full report can be found on the NCR-167 web site (<http://www.agron.iastate.edu/ncr167>). Trials were conducted at five locations (Elora, Ontario; Ottawa, Ontario; Cortland, NY; Watertown, SD; Fargo, ND) in 2001 from modified single-cross seed produced in 2000. Two related-line testers were used: LH176 x LH177 and LH300 x LH301. The full report is attached as Appendix B.

Dr. Coors presented the report on the Uniform 400-600 maturity trials for 2001. The list of testcrosses made 2001 for testing in 2002 was handed out. The full report can be found on the NCR-167 web site (<http://www.agron.iastate.edu/ncr167>). Testcrosses of 12 lines onto 2 testers is being made in 2002 for testing in 2003.

Dr. Pratt presented the report on the Uniform 700-800 maturity trials for 2001. Dr. Hallauer was contacted regarding testcross production for the 2003 test. They agreed that Dr. Pratt would contact NCR-167 members electronically regarding submissions and Dr. Hallauer would make the seed. There is a need to discuss future testcross seed production. Committee members were contacted regarding preparation and distribution of 2001 test results. Dr. Betran agreed to handle the data and distribute it to the committee. Participants sent data electronically to Dr. Betran. The participation of Dr. Russell on the committee is uncertain and a new member may need to be added. Dr. Hallauer distributed seed for 2002 test to all cooperators. The full report can be found on the NCR-167 web site (<http://www.agron.iastate.edu/ncr167>). .

Dr. Dudley reported for the Steering Committee for the Long-term selection conference. He reported that everything was going well and that the conference would soon be in the hands of the editorial committee.

Dr. Lamkey led a discussion on the possibility of having routine nursery visits, where NCR-167 members would visit each other nurseries. Several scenarios were discussed, including better advertisement of station field days with the NCR-167 group and the possibility of moving the NCR-167 meeting to September. It was left to Dr. Lamkey to pursue coordinating some type of nursery visit plan.

Dr. Carena led a brief discussion on the future of funding for public plant breeding.

Dr. Carena led a discussion on private-public initiatives for funding in public plant breeding. It was moved and seconded that Dr. Hallauer investigate possible sources of funding to support graduate student education and training in plant breeding. The motion was approved unanimously.

Dr. Dudley moved and Dr. Pratt seconded a motion to hold the 2004 interregional corn breeding meetings in St. Louis. The motion was approved unanimously.

Dr. Carena adjourned the meeting at 7:05PM.

Approved:

Kendall R. Lamkey
NCR-167 Secretary 2002

Date

Gary F. Heichel
NCR-167 Administrative Advisor 2002

Date

**Abbreviated State
Reports of NCR-167 Committee**

John E. Ayers Pennsylvania State University Dep. of Plant Pathology 308 Buckhout Laboratory University Park, PA 16802	PH: 814-865-7776 FAX: 814-863-7217 jea@psu.edu
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No report.

Rex Bernardo University of Minnesota Dep. of Agronomy & Plant Genetics 411 Borlaug Hall 1991 Upper Buford Circle St. Paul, MN 55108-6026	PH: 612-625-6282 FAX: 612-625-1268 berna022@umn.edu
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My mission at the University of Minnesota is (i) to conduct research that is meaningful to corn breeders and (ii) to educate future plant breeders. My research focuses on exploiting new technologies in applied corn breeding, increasing the efficiency of breeding methods for corn, and enhancing germplasm adapted to the northern U.S. corn belt.

Javier Betran Texas A&M University Dep. of Soil & Crop Sciences College Station, TX 77843-2474	PH: 979-845-3469 FAX: 979-862-1931 Javier-betran@tamu.edu
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Our research activities focus on aflatoxin resistance, high lysine corn, introgression of germplasm, food corn, and abiotic stresses (drought and heat). During the 2001 season we have continued the evaluation, characterization and selection of corn germplasm with different origins and genetic backgrounds to develop inbred lines with superior grain quality, aflatoxin resistance, adaptation to Texas, and tolerance to abiotic stresses

Martin Bohn University of Illinois Dep. of Crop Science S-110 Turner Hall 1102 S. Goodwin Ave. Urbana, IL 61801	PH: (217) 244-2536 FAX: 217-333-9817 mbohn@uiuc.edu
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There were 4 presentations from U. of I. Faculty at the long-term selection symposium co-sponsored by NCR-167. One location of the 700-800 hybrid trial was grown by the University of Illinois. The symposium on long-term selection was hosted by the University of Illinois and the organizing committee was chaired by a U. of I. Faculty member. Approximately 165 participants were present for a 2.5 day symposium which considered effects of long-term selection in plants, animals, model organisms, and theory. Participants were from several countries and included experts in evolution, animal breeding, and population genetics as well as corn breeders.

Marcelo J. Carena North Dakota State University Dep. of Plant Sciences PO Box 5051 Fargo, ND 58105	PH: 701-231-8138 FAX: 701-231-8474 marcelo_carena@ndsu.nodak.edu
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The objectives of the North Dakota corn-breeding project are to 1) identify corn heterotic patterns for early maturity 2) maximize genetic improvement of corn germplasm adapted to North Dakota 3) develop improved corn inbred lines for the northern Corn Belt 4) educate plant breeders. In addition, the project leads the coordination of the hybrid corn performance testing trials to help farmers identify the best hybrids in their area.

James G. Coors University of Wisconsin Department of Agronomy 1575 Linden Drive Madison, WI 53706	PH: 608-262-7959 FAX: 608-262-5217 jgcoors@facstaff.wisc.edu
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The corn breeding/genetics program at the University of Wisconsin involves research with both grain and silage germplasm. The more basic research focuses on selection methodology and genetic variation for grain yield and related agronomic traits. The more applied breeding work focuses on germplasm and technology development for improving yield and nutritional quality of silage corn.

Larry L. Darrah USDA-ARS University of Missouri 110A Curtis Hall Columbia, MO 65211	PH: 573-882-2349 FAX: 573-884-7850 darrahl@missouri.edu
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David B. Willmot, USDA-ARS Plant Genetics Research Unit, joined the corn breeding effort at Missouri in March 2001. His effort is equally divided between the corn breeding and corn molecular genetics (M. D. McMullen, USDA-ARS, Lead Scientist) projects. Sherry A. Flint-Garcia (co-advised by Darrah and McMullen) completed her Ph.D. in December 2001 and moved to a post-doc with Ed Buckler, USDA-ARS, at NCSU in Raleigh. Sheri A. Martin completed her M.Sc. in Entomology in May 2002 and was co-advised by B. E. Hibbard, USDA-ARS Entomologist, and Darrah.

James L. Dodd Professional Seed Research, Inc. 7 South 437 Dugan Road Sugar Grove, IL 60554	PH: 630-466-1060 FAX: 630-466-1068 psr@psrcorn.com
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No Report

James B. Holland USDA-ARS North Carolina State University Dep of Crop Science Box 7620 Raleigh, NC 27695-7620	PH: 919-515-4087 FAX: 919-515-7959 James_Holland@ncsu.edu
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No Report

Kendall R. Lamkey USDA-ARS Iowa State University Department of Agronomy Ames, IA 50011-1010	PH: 515-294-7826 FAX: 515-294-9359 krlamkey@iastate.edu
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The USDA-ARS program is developing S₂ progenies from BS13(S)C10 for evaluation 2003, which will be the 18th cycle of selection in this long-term program. Reciprocal full-sib progenies from BSSS(R)C15 and BSCB1(R)C15 are on test in 2002. BS31(R)C2 and BS32(R)C2 are being formed in 2002 and should be available for release in 2003. BS31 is derived from FS8A(T)C4 and BS32 is derived from FS8B(T)C4.

Elizabeth Lee University of Guelph Dep. of Crop Science Guelph, ON N1G 2W1 Canada	PH: 519-824-4120 ext. 3360 FAX: 519-763-8933 lizlee@uoguelph.ca
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Established in the 1970s primarily to broaden the genetic base of short-season corn, the corn breeding program at Guelph is now contributing commercially useful and genetically unique dent corn inbred lines. Additionally, the program is engaged in breeding methodology research that has the potential to contribute to commercial corn breeding practices

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Additional phenotypic data was obtained from gray leaf spot nurseries in Ohio and R.S.A. during 2001-2002. The genetic mapping of gray leaf spot resistance QTLs in a South African maize inbred line VO613Y was concluded and results are being prepared for publication. Regional testing of selected GEM breeding lines from the population FS8(A):S09 was conducted through cooperation with USDA/ARS and private sector breeders. Performance of the breeding line 43-2 was essentially equal to that of the mean of the commercial checks. Visual selection for disease resistance and agronomic traits was continued in two synthetic populations. Studies on epidemiology of gray leaf spot in Uganda, and a survey of disease and insect pests of corn throughout diverse agroecological regions of Uganda, were completed and the results were published.

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No Report