The GEM Cooperator Meeting was called to order at 8:35 AM by Walter Trevisan, since the GEM TSG Chair, Tom Hoegemeyer, was not present due to the Midwest snowstorm. There were 60 attendees at the Meeting.

Minutes were read by Jerry Rice, with a motion to approve by Jim Parks, and seconded by Natalia de Leon.

The election of new TSG members was the next topic of business. Appreciation was extended to the 2 outgoing members, Wenwei Xu, from the public sector, and Jerry Rice from the private sector. Both individuals served 2 consecutive terms (6 years) and contributed extensively to the GEM Project. Tony Maves from BASF, and Jim Parks from DowAgroSciences were suggested by the election committee as new private sector members, and Martin Bohn as a public sector member. No nominations were made from the floor, and the Cooperators voted unanimously for approval of the new TSG members.

**GEM Annual Reports:** Brief highlights of the GEM Annual Reports were presented by Mike Blanco for Ames, and Matt Krakowsky for Raleigh. A 20 page report was provided to the attendees that covered activities and staff at both locations, and research summaries of 8 Public SCA reports.

**Research Results, and Recommendations:** The GEM IT Specialist, Mack Shen, provided an overview of the year, and updated information on GEM Cooperators, and their contribution for in kind support. He also gave an interesting update on the GEM website, and user hits from around the world. The year 2009 was about 2 weeks later than average for harvest and therefore trial data was received late. Cooperators were recognized for sending the data in early when possible to do so. Mack also discussed two new features he implemented for data analysis. This included a variance statistic (which indicates degree of consistency across locations), and percentage of the check mean. A CD prepared by Mack was distributed which had all the data from public and private GEM Cooperators. Mike Blanco showed performance data for 8 new GEM releases from the Ames location, and gave an update of the disease evaluations. Cooperators were acknowledged from the private sector and included Bill Dolezal (Pioneer), and Jim Dodd (PSF Research). From the public sector USDA-ARS scientists were recognized for disease and insect support from GA, MO, MS, and NC; and University cooperators from IL, NY, and TX. In 2009, three GEM releases were recommended for grey leaf spot (GLS), 10 for Northern Leaf Blight (NLB), 17 for Southern Leaf Blight (SLB), 3 for Diplodia ear rot, and 1 for Fusarium ear rot. Matt Krakowsky presented an overview of data from Raleigh, and recommended 11 new GEM lines for release.
Presentations (3): Double Haploid Application to Allelic Diversity Germplasm Mike Blanco and Andrew Smelser jointly presented the GEM work going on in Ames. Some of this research was also part of Andrew’s thesis research. Approximately 70 GEM BC1 populations representing 50 races were studied for induction and doubling. Each population was backcrossed to PHZ51 (an Ex-PVP non-stiff stalk) and to PHB47 (a Ex-PVP SS). It was concluded that variability exists among the races for induction and doubling and the range for induction was 3-14% and doubling ranged from 0-2 4%. Although not statistically analyzed, no major differences were found for induction or doubling based on the PVP line used as the recurrent parent.

Thomas Lubberstedt presented Need for a Public Double Haploid Facility? His presentation covered the genetics of DH’s and the advantages for plant breeding such as rapid conversions, and mapping QTL’s. He also discussed preliminary plans for a Doubled Haploid Facility at Iowa State University and requested feedback for interest to have a DH facility in Ames which will be accessible to public and private sectors.

Tom Hoegemeyer and Candy Gardner jointly presented Education for Plant Breeders. Since Tom could not be present due to the snowstorm he successfully contributed via teleconference. Tom challenged the group to think about the decreased funding of plant breeders from all the state programs being down about 50% from 1985. Some of the questions posed were “Can we educate breeders effectively without operating public breeding programs?” Do we need to rethink how and where plant breeders are educated? Since the background of students today in agriculture is different now (less farm background, and more urban) he suggested a need to recruit students from biology who would have “hands on” interest to be plant breeders. Candy reported results of a survey she did about how GEM germplasm contributes to education of students, and leveraging research for collaboration. To date, 13 PhD’s and 8 MS degrees were completed that involved GEM germplasm. At least 7 of the PhD grads are involved in plant breeding at the commercial sector and two are faculty in the public sector. Programs in progress now include 4 PhD’s and 3 MS projects. It was also mentioned that GEM germplasm enabled the Iowa State Grain Quality Lab to extend the range of NIRS calibration for starch, oil, protein, and amino acids.

The GEM Meeting was adjourned at 12:10 PM.