MINUTES
CROP VARIETY TESTING PROGRAMS
SRIEG-33

Southern Regional Information Exchange Group-33
February 22 and 23, 1989
Memphis Tennessee

Director's Representative - Ken Tipton, LSU
Co-chairmen - Joe Askew, Mississippi State University - Wednesday p.m.
Bob Logan, Delta and Pine Land Co. - Thursday a.m.

List of attendees is attached.

Director's Comments - Ken Tipton related our purpose and progress as a group and indicated that SRIEG-33 had been extended for 5 more years.

Minutes of 1988 meeting were distributed and accepted. Two corrections were noted. Page 2, first paragraph, extended should be expanded. Page 5, Pioneer corn should be 3343.

Variety Testing Personnel Directory - Harvile indicated the almost constant updating needed with our directory. All were urged to forward changes to him for inclusion in the directory that will be mailed with these minutes.

Stability Index - Manjit Kang

Statistical techniques, procedures, and results were presented in the context of relating stability of variety performance over locations and years. Of particular interest was a parameter that can be included in test results to indicate the stability of a variety.

Corn Borders - Daryl Bowman

Data and statistical evidence were presented for corn grain, corn silage, and soybean grain yields where the relative efficiency of unbordered plots with twice as many reps versus bordered plots with one-half the replication. In most instances more reps with unbordered plots was an advantage when compared to bordered plots. The exception was full season soybeans where bordered plots appear to be necessary.

Mississippi MAFES Auxiliary Units

Vance Watson detailed the changes in forages, foundation seed, and variety evaluation in that these three functions were combined under one management structure. Varieties in the foundation seed program were shown and the variety evaluation effort in the Auxiliary Unit was detailed (corn, cotton, forages, grain sorghum, and wheat).

VARTEST - Kelly Day

VARTEST is a software product authored by Philip Hess, Agronomy Department, Purdue University for the management of variety field trials. It is comprehensive package of interactive computer programs for managing randomized complete block design field trials with qualitative treatments (eg., varieties). The program was demonstrated with existing data to show how completed performance bulletins could be generated that are ready for printing. The ease of manipulation of multi-year and location data was evident in the demonstrations. IBM-PC or compatible with at least 256 K memory and 2 disk drives (hard disk recommended). Distributed on two DS/DD disks with user guide for $150.00. A detailed product description was available at the meeting. Contact Day at Agronomy Department, Purdue University, West Lafayette, IN 47907 for more information or to order VARTEST.
Rape Seed - Ann Rogers

An overview of rape seed types grown and their utilization was given via slides and a video tape on harvest information. High erucic acid types and canola, low erucic acid types developed by the Canadians were described and their uses detailed. The need for variety testing was shown since rape seed and canola are potential alternate crops in almost any state. Rogers indicated that Calgene stood ready to make speakers available for seminars, programs, and classes. General production practices, problems, and usage in southeastern agriculture were discussed.

Maturity Classification of Corn Hybrids - Don Thurlow

Data were presented on determining maturity of corn hybrids. A publication of the data is available from the Agronomy & Soils department at Auburn University. Considerable interest was expressed in determining maturity. In particular the ramification of maturity classification on yield when maturity classes are mixed was noted by Raymer. Late early or early midseason varieties will always top an early maturing test and show some advantage when in fact such hybrids are being tested out of place. Consensus was that maturity classification was needed and desired and listing hybrid yields in one large table would be a step backward.

CORN MATURITY GROUP STANDARDS for 1990

Raymer organized those with corn hybrid interests to meet as an informal subcommittee to discuss and develop maturity classification standards for early, mid, and late season hybrids. Hybrids are to be entered in state tests with reference to the following standards.

Early - Funk's G-4522, RA1502

Mid - Pioneer 3320, DeKalb DK-689

Late - Pioneer 3165, DeKalb DK-789

Those conducting state yield trials were urged to publish percent moisture at harvest along with their yields as a further clarification of the relative maturity of a hybrid. These maturity group standards will be used for the 1990 crop.

Update on Variety Releases

AK - no releases of soybeans or wheat. Three corn composites with corn boer resistance will be released as germplasms. Several grain sorghum lines are being released. Among the characteristics available in the lines are purple testa lines, bird resistance with good feeding qualities, and anthracnose resistance.

SC - Perrin soybean has been released and SC520556 (test #) wheat will be released

Pioneer - Corn hybrids - Pioneer hybrid 3170 - 128 day single cross, not MDM resistant but shows good resistance or tolerance to most other diseases found in the south.

Pioneer hybrid 3176 - 128 day single cross, excellent test weight and grain quality, tall and high eared and has good resistance or tolerance to most diseases found in the south. Has some tolerance to both MDM and gray leaf spot.

Pioneer hybrid 3180 - 126 day single cross, intermediate to good tolerance to most southern diseases except MDM and gray leaf spot.

Pioneer hybrid 3189 - 127 day single cross, intermediate to good tolerance to most southern diseases except MDM and gray leaf spot.

These hybrids are maturity classified according to the Minnesota system (Rodgers)
Soybeans - Pioneer variety 9461 - mid group IV, no specific resistance to nematode.

Pioneer variety 9582 - late group V, resistant to Phytophthora races 1 & 2, resistant to nematodes races 3 & 4 and Southern root-knot.

Pioneer variety 9711 - early group VII, resistance to Southern root-knot nematode.

Wheat varieties

Pioneer variety 2548 - five days earlier than 2550 in southeast, awned, SRW, excellent straw. Good leaf blight and rust resistance but may be susceptible to powdery mildew but mildew is slow to spread. No Hessian fly resistance, sus. to SRW.

NC - corn, NC264, with gray leaf spot resistance that is different than NC250. Crop Science article is available describing NC264

Soybean, N82-1198, group VI, no name at this date.

MS - Rice - Maybelle; Cowpea - Miss. Pinkeye; Soybean - Lamar (VI, resis to leaf feeding insects), Cordell (V, race 5 cyst); Ryegrass - Marshall, rust resistance

DP & L - DFL 878, group VIII, moderate resistance to stem canker.

Hartz - Soybean - Hartz 6686, group 6; Wheat - Hartz 2440


Georgia 100 - midseason with resistance to powdery mildew, leaf rust and Hessian fly.

Soybean - Colquitt - group VII, resistance to southern, peanut, and javanese root-knot nematodes, stem canker & powdery mildew. Tolerant to soybean cyst nematode. Moderate tolerance to metribuzin.

Triticale - Sunland - spring type, hexaploid, poor cold tolerance, medium height, moderate lodging resistance, good test weight, moderate resistance to leaf rust, good resistance to bacterial blight.

AL - Stonewall soybean, group VII.

TN - T129 white corn inbred.

Terral Norris - Corn - Sunbelt 1805, early, tested as 7705
Soybean - Terra-Vig 626, group VI, tested as 6260; Terra-Vig 727, group VII
Wheat - Terral 101 & 102.

TX - HRW wheat germplasm - TX78V2290-36-1 and TX85C5820-5
Sorghum germplasm - A3TX430 & A3TX7000 (both USDA)
Soybean - Crockett, VIII
Peanut germplasm - TXAG-4 & TXAG-5
Vegetables - TexSprout mungbean, Texas Gold Spike carrot; Perla, Dorada, and Texas Grano 438 onion.
Cotton - TAMCOT GCNH (glandless)

DeKalb-Pfizer Genetics - Corn - DK 649, virus resis.; DK 677; DK 703W, white
Sorghum - DK 37; DK 60 with midge tolerance

Noble Foundation - Forage - Crabgrass - Red River
Hyperformer - Soybean - HSC 579, group V, resistance to common races of phytophthora and to stem canker.
Corn - HS- 88, 118 day with low ear placement, yellow, white cob, tolerance to blights, 16-18 rows of kernels.

HS-879, 118 day, heat and drought stress tolerance
HS-889, 125 day with excellent MDM tolerance.

New Northrup King - Soybeans-
Coker 6925, group V, resis. to race 3 SCN, southern RRN, powdery mildew and bacterial blight, replacement for Coker 425.
Coker 6955, group V, resistant to race 3 SCN, moderately resis. to stem canker. resis. to FRR.
Coker 6995, group V, resis. to races 3 & 4 SCN, FRR, moderately sus. to stem canker, good standability.
X8942, IV, sus. to FRR, resis to races 3 & 4 SCN.
X8843(named S42-50), IV, resis. to races 1-3, 6-10 FRR
X8943, IV, sus. to FRR, moderately sus. to stem canker.

Corn -
N8727, medium full season, N7816, medium; N8110W (tested as X710)

Sorghum -
KS714Y; KS710; KS786

Alfalfa - 84634, multtifoliate

Tobacco - K358

Cotton - Coker 130

Stoneville Pedigreed Seed Co. - Cotton - Stoneville 453, Stoneville 907, nectarless

DPL-Funk - Cotton - DPL 51; Corn - G4571 (southwest)

Tennessee Farmers Coop. - FFR 807; FFR 814, FFR 844; Wheat - FFR 525

FFR - Soybeans - FFR 398, IV; FFR 464, IV; FFR 565, V; FFR 606, VI

Variety Recommendation List - cross section on recommending procedures
AL - Thurlow -

Research and extension personnel are involved in formulating recommendatins from yield trials conducted in the major regions in Alabama. Regional recommendations are made in some instances. Normally 3 years are required for full recommendation with 2 year trial designations being available for use when warranted.

SC - Graham

Commodity groups at departmental level begin process. Normally 3 years of yield data is necessary for recommendation. Trial recommendation on 2 years data is used at times. Recommendations from commodity groups are discussed with seedsmen for their input and insights into such issues as seed supply. A university committee then makes a final recommendation based on the commodity group inputs and meeting with seedsmen. Combination of
yield, pest resistance, and other traits are used for recommendation.

IA - Harville

Numerous committees deal with the various crops. Harville relayed information on soybean recommendations. Recommendations are made by areas. Arithmetic mean of 3 years with top 3 varieties used for the mean. Any variety within 90% of mean is recommended. Trial recommendation after 2 years with 95% of the top 3 varieties and their mean. A one year grace period on less than 90% for recommended variety before removal.

TN - Graves

Recommended list is made in consultation with companies, breeders, and extension personnel. Data is reviewed on 3 year basis with some 2 year data being considered. Commodity groups consider data and final recommendation is made.

General Comments to Recommendation

LSD - use of LSD at 5% would include too many varieties. A more likely value would be 2%.

Other considerations such as the disease package go into developing a list. Yield alone is rarely the sole reason for recommendation.

The companies would like to be informed as soon as possible when a list is developed. There are often extenuating circumstances that can be resolved about particular varieties.

Are there specific guidelines that are used, written down and followed?

Tipton - sentiment toward no recommended lists seems to be developing. If recommended lists are developed then the university should have a structure and speak with one voice on said list.

DIRECTION for SRIEG-33 - Raymer

Cordonnier (GA) & Buchanan (AL) started concurrent organizational efforts for a SRIEG group that resulted in a meeting at the American Society of Agronomy in Washington in 1983. Tipton as AES representative moved the group to numbered status and secured a chairman in Darrell Bowman (NC) for a 1984 meeting in Atlanta. Initial goals for SRIEG-33 were:

Information exchange on variety releases, equipment, techniques, computer software Develope common checks, designate disease tests, and develop cooperative testing and research
Standardize plot techniques, application forms, seed requirements, deadlines, and entry fees Improve data reporting and distribution, reduce variability and establish guidelines for discarding test, establish personnel directory, and assist in promotion of variety testing personnel.

1984 MEETING - ATLANTA

-Standardized application forms and deadlines.
-Developed directory of personnel.
-Formed commodity subcommittees.
-Adopted cochairmen approach.

1987 MEETING - MEMPHIS

-Updated directory.
-Discussed states variety recommen-
dation procedures.
-Structure of states’ testing programs.
-FVPA, CVs, and discarding tests.
-New variety releases.
1985 MEETING - MEMPHIS
- Updated and expanded directory.
- Revised application form and deadlines.
- Recommendations on use of statistics in data reporting.
- Established soybean checks.
- Announced new variety releases.

1988 MEETING - MEMPHIS
- Changes in testing programs.
- Revised soybean checks and established wheat checks.
- Reviewed variety release procedures.
- Stat packages, computer software, discarding data, & analysis of missing data.

1986 MEETING - ATLANTA
- Updated directory of personnel.
- Identified Corn and soybean pest screens.
- Reviewed variety testing equipment and innovative techniques.
- Announced new variety releases.

1989 MEETING - MEMPHIS
- Stability indices to measure variety performance.
- Border vs. unbordered plots.
- Corn maturity.
- Variety testing software.
- Corn maturity group standards for 1990 hybrid corn tests.
- Variety releases.
- Procedures for recommended lists.

BUSINESS SESSION - Askew and Logan

CO-CHAIRS FOR 1991
Harville, Williams, Rayner, and Rodgers met as a committee and brought forth the names Terry Walker and Joe Schafer for co-chairmen for the 1991 meeting.

CO-CHAIRS FOR 1990
John Sij and Craig Moots are the co-chairmen for the 1990 meeting.

1990 MEETING WILL BE HELD IN MEMPHIS, TN IN THE SECOND WEEK OF FEBRUARY FOLLOWING THE CORN IMPROVEMENT CONFERENCE.

Possible program topics include:

Data exchange between testing programs and companies via floppy disks
Protein and oil reporting for soybeans
Biotechnology
Legal ramifications of recommending
University evaluation and rewarding of variety testing personnel

Please forward any possible topics to Sij or Moots

Submitted by Secretary for SRIEG-33, Doyce Graham, Jr. Doyce Graham, Jr.
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