

NCCC167 Publications Summary

Iowa State University

- Scott, M.P., J.W. Edwards, C.P. Bell, J.R. Schussler, and J.S. Smith. (2006) Grain composition and amino acid content in maize cultivars representing 80 years of commercial maize varieties. *Maydica* 51:417-423.
- Salhuana, W and Pollak, L. (2006) Latin American maize project (LAMP) and germplasm enhancement of maize (GEM) project: Generating useful breeding germplasm *Maydica* 51: 339-355.
- Duvick, S.A., Pollak, L.M., Edwards, J.W., and P.J. White (2006) Altering the fatty acid composition of corn belt corn through tripsacum introgression. *Maydica* 51: 409-416.
- Whitehead, F.C., Caton, H.G., Hallauer, A.R., Vasal, S. and Cordova, H., (2006) Incorporation of elite subtropical and tropical maize germplasm into elite temperate germplasm. *Maydica* 51: 43-56.
- Ross, A.J., Hallauer, A.R. and Lee, M. (2006) Genetic analysis of traits correlated with maize ear length. *Maydica* 51: 301-313.
- Rasmussen, C.C. and Hallauer, A.R. (2006) Evaluation of heterotic patterns of Iowa stiff stalk synthetic and non-stiff stalk synthetic maize populations *Maydica* 51: 177-186.

Minnesota

- Arbelbide*, M., J. Yu, and R. Bernardo*. 2006. Power of mixed-model QTL mapping from phenotypic, marker, and pedigree data in self-pollinated crops. *Theor. Appl. Genet.* 112: 876-884.
- Arbelbide*, M., and R. Bernardo*. 2006. Mixed-model QTL mapping for kernel hardness and dough strength in bread wheat. *Theor. Appl. Genet.* 112: 885-890.
- Bernardo*, R., L. Moreau, and A. Charcosset. 2006. Number and fitness of selected individuals in marker-assisted and phenotypic recurrent selection. *Crop Sci.* 46: 1972-1980.
- Pumphrey*, M.O., R. Bernardo, and J.A. Anderson*. 2006. Validating the Fhb1 QTL for Fusarium head blight resistance in near-isogenic wheat lines developed from breeding populations. *Crop Sci.* 47: 200-206.
- Bernardo*, R., and J. Yu. 2007. Prospects for genome-wide selection for quantitative traits in maize. *Crop Sci.* (in press).
- Tabanao*, D.A., J. Yu, and R. Bernardo*. 2007. Multilocus epistasis, linkage, and genetic variance in breeding populations with few parents. *Theor. Appl. Genet.* (in review, tentatively accepted).

North Dakota

- Carena, M.J. 2007. *Travels in the Genetically Modified Zone.* By Mark L. Winston. Cambridge: Harvard University Press, 2005. 288 pp., ISBN 0-674-01529-0. Book review. *Ag. Hist.* 81:147-148.
- Sonnino, A., M.J. Carena, E. Guimaraes 2006. Status of research and development of molecular markers in developing countries. *FAO, Rome, IT. Book Chapter.*

- Carena, M.J. and Z.W. Wicks III. 2006. Maize population hybrids: an exploitation of U.S. temperate public genetic diversity in reserve. *Maydica* 51:1-8.
- Barata, C. and M.J. Carena. 2006. Classification of ND maize inbred lines into heterotic groups based on molecular and testcross data. *Euphytica* 151:339-349.
- Guimaraes, E.P., E. Kueneman, and M.J. Carena. 2006. Assessment of national plant breeding and biotechnology capacity in Africa and recommendations for future capacity building. *Hort. Sci.* 41:50-52.
- Melani, M.D., and M.J. Carena. 2005. Alternative heterotic patterns for the northern Corn Belt. *Crop Sci.* 45:2186-2194.

The Ohio State University

- Jović, J., T. Cvrković, M. Mitrović, S. Krnjajić, M.G. Redinbaugh, R.C. Pratt, R.E. Gingery, S.A. Hogenhout and I. Toševski. 2007. Roles of Stolbur phytoplasma and *Reptalus panzeri* (Cixiidae, Auchenorrhyncha) in the epidemiology of maize redness in Serbia. *Eur. Jour. Plant Pathology*: 118:85–89.
- Gowda, M., H. Li, J. Alessi, F. Chen, R. Pratt, and G.L. Wang. 2006. Robust analysis of 5'-transcript ends (5'-RATE): A novel technique for transcriptome analysis and genome annotation. *Nucleic Acids Research* 34:e126.
- Gordon, S.B., R.C. Pratt and P.E. Lipps. 2006. Components of resistance to *Cercospora zeae-maydis* derived from maize inbred VO613Y. *Phytopathology* 96:593-598.
- Pratt, R.C. and M.A. Casey. 2006. Registration of maize germplasm line Oh605. *Crop Science* 46:1004-5.
- Pratt, R.C. and S.G. Gordon. 2006. Breeding for resistance to maize foliar pathogens. *Plant Breeding Reviews* 27:119-173.
- Pratt, R. C. 2006. Tropical Crops and Crop Production Systems. In: Hartmann's Plant Science, M. McMahon, A. Kofranek, and V. Rubatzky (eds.), Prentice Hall, N.J.

University of Illinois

- Bohn, M., J. Novais, R. Fonseca, R. Tuberosa, and T.E. Grift. 2006. Genetic evaluation of root complexity in maize. *Acta Agronomica Hungarica* 54:291-303.
- Bortiri, E, G. Chuck, E. Vollbrecht, T. Rocheford, R. Martienssen, and S. Hake. 2006. *ramosa2* Encodes a LATERAL ORGAN BOUNDARY Domain Protein That Determines the Fate of Stem Cells in Branch Meristems of Maize. *Plant Cell* 18: 574-585.
- Clark, D.J., J.W. Dudley, T.R. Rocheford, and J.R. LeDeaux. 2006. Genetic analysis of corn kernel composition in the random mated 10 generation of the cross of generations 70 of IHO x ILO. *Crop Sci.* 46:807-818.
- Dudley, J.W. 2006. From Means to QTL: Why selection for oil and protein is still effective after 100 generations. *Proceedings 61st Corn & Sorghum Research Conference*. Chicago, IL
- Dudley, J.W., Darryl Clark, T.R. Rocheford, and John R. LeDeaux. 2007. Genetic analysis of corn kernel chemical composition in the random mated 7 generation of the cross of generations 70 of IHP x ILP. *Crop Sci.* 47:45-57.

- Heckenberger, M., J. Muminović, J.R. van der Voort, J. Peleman, M. Bohn, and A.E. Melchinger. 2006. Identification of essentially derived varieties obtained from biparental crosses of homozygous lines. III. AFLP data from maize inbreds and comparison with SSR data. *Molecular Breeding* 17:111-125.
- Reif, J.C., M.L. Warburton, X.C. Xia, D.A. Hoisington, J. Crossa, S. Taba, J. Muminovic, M. Bohn, M. Frisch, and A.E. Melchinger. 2006. Grouping of accessions of Mexican races of maize revisited with SSR markers. *Theor. Appl. Genet.* 113: 177-185.
- Upadyayula, N., H.S. Da Silva, M. Bohn, and T.R. Rocheford. 2006. Genetic and QTL analysis of maize tassel and ear inflorescence architecture. *Theor. Appl. Genet.* 112:592-606.
- Upadyayula, N., J. Wassom, M. Bohn, and T.R. Rocheford. 2006. Quantitative trait loci analysis of phenotypic traits and principal components of maize tassel inflorescence architecture. *Theor. Appl. Genet.* 112: DOI 10.1007/s00122-006-0359-2.
- Willmot, D.B., J.W. Dudley, T. R. Rocheford, and A. Bari. 2006. Effect of random mating on Marker-QTL Associations for grain quality traits in the cross of Illinois High Oil X Illinois Low Oil. *Maydica* 51:187-199.

University of Missouri

- Hibbard, BE., D.B. Willmot, S.A. Flint-Garcia, and L.L. Darrah. 2007. Registration of the Maize Germplasm CRW3(S1)C6 with Resistance to Western Corn Rootworm. *Journal of Plant Registrations*. Accepted, In press.
- Ivezic, M., J.J. Tollefson, E. Raspudic, I. Brkic, M. Brmez, and B.E. Hibbard. 2006. Evaluation of corn hybrids for tolerance to corn rootworm (*Diabrotica virgifera virgifera* LeConte) larval feeding. *Cereal Research Communications* 34:1101-1107.
- Meyer, J.D.F., Snook, M.E., Houchins, K.E., Rector, B.G., Widstrom, N.W. and McMullen, M.D. Quantitative trait loci for maysin synthesis in maize (*Zea mays* L.) lines selected for high silk maysin content. *Theor. Appl. Genet.*, in press.
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- Prischmann, D.A., K.E. Dashiell, D.J. Schneider, and B.E. Hibbard. 200X. Field screening maize germplasm for resistance and tolerance to western corn rootworms (Coleoptera: Chrysomelidae). *J. Appl. Entomol.* Accepted, In Press.
- Vroh Bi, I., McMullen, M.D., Sanchez-Villeda, H., Schroeder, S., Gardiner, J., Polacco, M., Soderlund, C., Wing, R., Fang, Z., and Coe, E.H. Jr. Single nucleotide polymorphisms and insertion-deletions for genetic markers and anchoring the maize fingerprint contig physical map. *Crop Sci.* 46:12-21. 2006.
- Yim, Y.-S., Moak, P., Sanchez-Villeda, H., Musket, T., Close, P., Klein, P.E., Mullet, J.E., McMullen, M.D., Fang, Z., Schaeffer, M.L., Gardiner, J.M., Coe, E.H. Jr., and Davis, G.L. 2007. A BAC pooling strategy combined with PCR-based screenings in a large, highly repetitive genome enables integration of the maize genetic and physical maps. *BMC Genomics* 8:47 (published online Feb 9).

University of Wisconsin

Krakowsky, M.D. M. Lee, and J.G. Coors. 2006. Quantitative trait loci for cell wall components in recombinant inbred lines of maize (*Zea mays* L.) II: Stalk tissue. *Theor. Appl. Gen.* 112: 717-726.

Coors, J.G. 2006. Who are Plant Breeders, What Do They Do, and Why? In K.R. Lamkey and M. Lee (eds) *Plant Breeding: The Arnel R. Hallauer International Symposium*. Blackwell Publishing, Ames, IA.