

WASHINGTON**USDA-ARS, WESTERN WHEAT QUALITY LABORATORY**

E-202 Food Science & Human Nutrition Facility East, P.O. Box 646394, Washington State University, Pullman, WA 99164-6394, USA.

<http://www.wsu.edu/~wwql/php/index.php>

Craig F. Morris, B. Beecher, A.D. Bettge, D.A. Engle, G.E. King, M. Baldrige, P.K. Boyer, E.P. Fuerst, B. Paszczynska, G.L. Jacobson, W.J. Kelley, M.J. Lenssen, J. Luna, E. Wegner, S. Vogl, S. Sykes, and D. Ramseyer.

The mission of the lab is two-fold: conduct milling, baking, and end-use quality evaluations on wheat breeding lines, and conduct research on wheat grain quality and utilization. Our web site: <http://www.wsu.edu/~wwql/php/index.php> provides great access to our research, including a database of wheat varieties relating kernel hardness and puroindoline alleles. Our research publications are available on our web site.

Publications.

- Bhave M and Morris CF. 2008. Molecular genetics of puroindolines and related genes: allelic diversity in wheat and other grasses. *Plant Mol Biol* 66:205-219.
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- Bhave M and Morris CF. 2008. Basic instincts and fatal attractions. In: *Proc 58th Royal Aus Cereal Chem Conf* (Panozzo JF and Black CK, Eds). 31 August-4 September, 2008, Surfers Paradise, Queensland, Australia, pp. 10-13.
- Brevis JC, Khan IA, Chicaiza O, Morris CF, Jackson L, and Dubcovsky J. 2008. Agronomic and quality evaluation of common wheat near-isogenic lines carrying the leaf rust resistance gene *Lr47*. *Crop Sci* 48:1441-1451.
- Eujayl I and Morris CF. 2009. Identification of differentially expressed UniGenes in developing wheat seed using digital differential display. *J Cereal Sci* (In press).
- Gaylord TG, Barrows FT, Rawles SD, Liu K, Bregitzer P, Hang A, Obert DE, and Morris CF. 2009. Apparent digestibility of nutrients and energy in extruded diets from cultivars of barley and wheat selected for nutritional quality in rainbow trout *Oncorhynchus mykiss*. *Aquaculture Nutrition* (In press).
- He XY, He ZH, Morris CF, and Xia XC. 2009. Cloning and phylogenetic analysis of polyphenol oxidase genes in common wheat and related species. *Genet Res Crop Evol* (In press).
- Li S, Morris CF, and Bettge AD. 2009. Genotype and environment variation for arabinoxylans in hard winter and spring wheats of the U.S. Pacific Northwest. *Cereal Chem* (In press).
- Morris CF, Pitts MJ, Bettge AD, Pecka K, and McCluskey PJ. 2008. The compressive strength of wheat endosperm: Analysis of endosperm 'bricks'. *Cereal Chem* 85:351-358.
- Morris CF, Bettge AD, Pitts MJ, King GE, Pecka K, and McCluskey PJ. 2008. The compressive strength of wheat endosperm: Comparison of endosperm 'bricks' to the single kernel characterization system. *Cereal Chem* 85:359-365.
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- Morris CF and King GE. 2008. Registration of hard kernel puroindoline allele near-isogenic line hexaploid wheat genetic stocks. *J Plant Registr* 2:67-68.
- Morris CF, Burns JW, Gill KS, Engle DA, and King GE. 2008. End-use quality of U. S. soft white winter and spring wheat. In: *Proc 58th Royal Aus Cereal Chem Conf* (Panozzo JF and Black CK, Eds). 31 August-4 September, 2008, Surfers Paradise, Queensland, Australia, pp. 95-99.
- Tanaka H, Morris CF, Haruna M, and Tsujimoto H. 2008. Prevalence of puroindoline alleles in wheat varieties from eastern Asia including the discovery of a new SNP in puroindoline b. *Plant Genet Res* 6:142-152.
- Xia L, Geng H, Chen X, He Z, Lillemo M, and Morris CF. 2008. Silencing of puroindoline a alters the kernel texture in transgenic bread wheat. *J Cereal Sci* 47:331-338.