

CORN COMPETITION RESOURCES

Videos, Web Pages, Books, and Peer-Reviewed Articles to Supplement
the *Corn Competition Teacher's Guide*



Videos:

<http://plantsinmotion.bio.indiana.edu/plantmotion/earlygrowth/germination/corn/corngerm.html>

Corn Germination (<0:20). Time-lapse movies of germination in corn seeds. Part of the Plants-In-Motion website, by Roger P. Hangarter.

<http://www.youtube.com/watch?v=Wc6ifBieaSO> **The Evolution of Corn** (4:37). Tour of Pioneer Hi-Bred diversity plots, including volunteer grasses, teosinte, and corn varieties from the 18th and 19th centuries along with corresponding agricultural practices; by NBCNews.

<http://www.youtube.com/watch?v=iFCdAgeMGOA> **Time-Lapse Fast Growing Corn, Roots and Leaves Growing** (0:36). Time-lapse underground and above-ground video of corn seed germination and seedling growth, by mindlapse.

Web Pages for Corn Seed and Educational Kits:

http://www.territorialseed.com/category/all_corn_seed/a **All Corn**. Territorial Seed Company sells nearly thirty varieties of sweet and popping corn by mail, phone, or internet order; based in Oregon. Organic varieties are available.

<http://www.carolina.com/plant-genetics/carolina-biokits-albino-corn/177050.pr?catId=&mCat=&sCat=&ssCat=&question=albino+corn> **Carolina Biokits™: Albino Corn**. Educational kit available for purchase from Carolina Biosciences to demonstrate Mendelian genetics in corn plants.

<http://www.carolina.com/teacher-resources/Interactive/corny-genetics/tr10693.tr?question=corny%20genetics> **Corny Genetics**. Description of why corn is an excellent model system for studying genetics and middle school/high school level kits available for purchase from Carolina Biosciences.

<http://www.gurneys.com/corn-seed/c/92/> **Corn Seed**. Gurney's Seed & Nursery Co. sells twenty-one varieties of sweet, ornamental, popping, and dent corn by mail, phone, fax, or internet; based in Illinois.

<http://www.fedcoseeds.com/seeds/search.php?listname=Corn> **Search results for corn**. Fedco Co-Op Garden Supplies sells over thirty varieties of sweet, flint, and popping corn by mail, phone, or internet; based in Maine. Organic varieties are available.

<http://www.burpee.com/vegetables/corn/> **Sweet Corn Seed.** Burpee sells nearly two dozen varieties by mail, phone, or internet; based in Pennsylvania. Heirloom and organic varieties are available.

<http://www.carolina.com/teacher-resources/Interactive/corn-ears-for-genetics/tr10691.tr> **Teaching Mendelian Genetics with Corn Ears.** Tips on how to use corn ears year after year to study the genetics of endosperm and kernel color at the high school or college level, with ears available for purchase from Carolina Biosciences.

Web Pages for Corn Growth and Agriculture:

http://www.agweb.com/corn_planting_map.aspx **Corn Planting Map.** Shows current, state-by-state progress of corn plantings based on USDA estimates, provided by AgWeb.

http://www.caes.uga.edu/publications/pubDetail.cfm?pk_id=7638 **Growing Home Garden Sweet Corn.** University of Georgia Cooperative Extension document C-905 provides information on growing sweet corn on a small scale, with tips for the Southeastern climate; by Robert R. Westerfield.

<http://www.coopext.colostate.edu/4DMG/VegFruit/corn.htm> **Growing Sweet Corn in the Backyard Garden.** Colorado State University Cooperative Extension resource outlining how to grow sweet corn on a small scale and what to expect for harvest and taste; by Robert Cox.

<http://www.ncga.com/home> **National Corn Growers' Association.** Website for the major organization supporting US corn growers, with technical, economic, and policy information and related news.

http://home.earthlink.net/~dayvdanls/monocot_seed.htm **Seed Development in Corn – A Monocot.** Diagram showing corn seed morphology; part of a larger site for AP Biology lecture notes on flowering plant reproduction developed by a retired biology teacher.

<http://www2.kenyon.edu/projects/farmschool/food/corntyp.htm> **Types of Corn.** Short descriptions of the main varieties of corn, with review questions; by The Family Farm Project.

<http://www.agry.purdue.edu/ext/corn/news/timeless/GerminationEvents.html> **Visual Indicators of Germination in Corn.** Photo and description of germination in maize seeds, including favorable and unfavorable environmental conditions; by R.L. (Bob) Nielsen, Purdue University.

Web Pages for Corn Genetics and Evolution:

<http://pg-secrets-www.pgml.uga.edu/story-corn> **Corn – The Dynamic Genome.** Introductory information on corn genomics with videos, short lessons, and links to the maize genome website; by National Science Foundation.

<http://learn.genetics.utah.edu/content/variation/corn/> **The Evolution of Corn.** Comparative genetics between corn and teosinte, highlighting a key misconception and incorporating both text and connections to a lecture by Dr. David Kingsley; provided by the Learn.Genetics™ Genetic Science Learning Center at the University of Utah.

http://evolution.berkeley.edu/evolibrary/news/070201_corn **The Other Green (R)evolution.** Lesson on artificial selection as an evolutionary force, with a major focus on the domestication of corn. Includes outside references, discussion questions, and related lessons; by Understanding Evolution, University of California at Berkeley.

http://www.nsf.gov/news/news_summ.jsp?cntn_id=104207 **Scientists Trace Corn Ancestry from Ancient Grass to Modern Crop.** Press release about federally-funded research using genetic methods to understand the domestication of teosinte, by the National Science Foundation.

http://www.nytimes.com/2010/05/25/science/25creature.html?_r=0 **Tracking the Ancestry of Corn Back 9,000 Years.** *New York Times* article on the history of genetic and evolutionary research linking teosinte to modern maize, by Sean B. Carroll.

<http://www.weedtowonder.org/> **Weed to Wonder.** A large website providing college-level information on the interactions between corn and humans throughout history and modern corn genetics, by DNA Learning Center, Cold Spring Harbor Laboratory.

Web Pages for Cultural Connections:

<http://www.themaize.com/> **The MAiZE: World's Largest Corn Maze Family.** A large database where corn maize growers can share information and collectively plan events. Includes a map of corn maze locations in the US, Canada, UK, and Poland and teaching resources for class field trips.

<http://cornpalace.com/index.php> **Mitchell Corn Palace.** Website for a regional multi-use center in Mitchell, SD having regularly changed exterior designs made out of corn and other grains.

<http://www.campsilos.org/mod3/students/index.shtml> **The Story of Corn.** Classroom activities, fact lists, and history of corn and human uses of it are provided for students. A set of teachers' pages is also available; by Silos & Smokestacks National Heritage Area.

Books & Articles:

Bubel, N. 1981. *Grow the Best Corn.* *Country Wisdom Bulletins* A-68. North Adams, MA: Storey Publishing, LLC. 32 pp.

Fussell, B. 2004. *The Story of Corn.* Albuquerque, NM: University of New Mexico Press. 367 pp.

Hageman, R.H., Flesher, D., Wabol, J.J., and D.H. Storck. 1961. An improved nutrient culture technique for growing corn under greenhouse conditions. *Agronomy Journal* 53(3): 175-180.