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COLOR PLATES

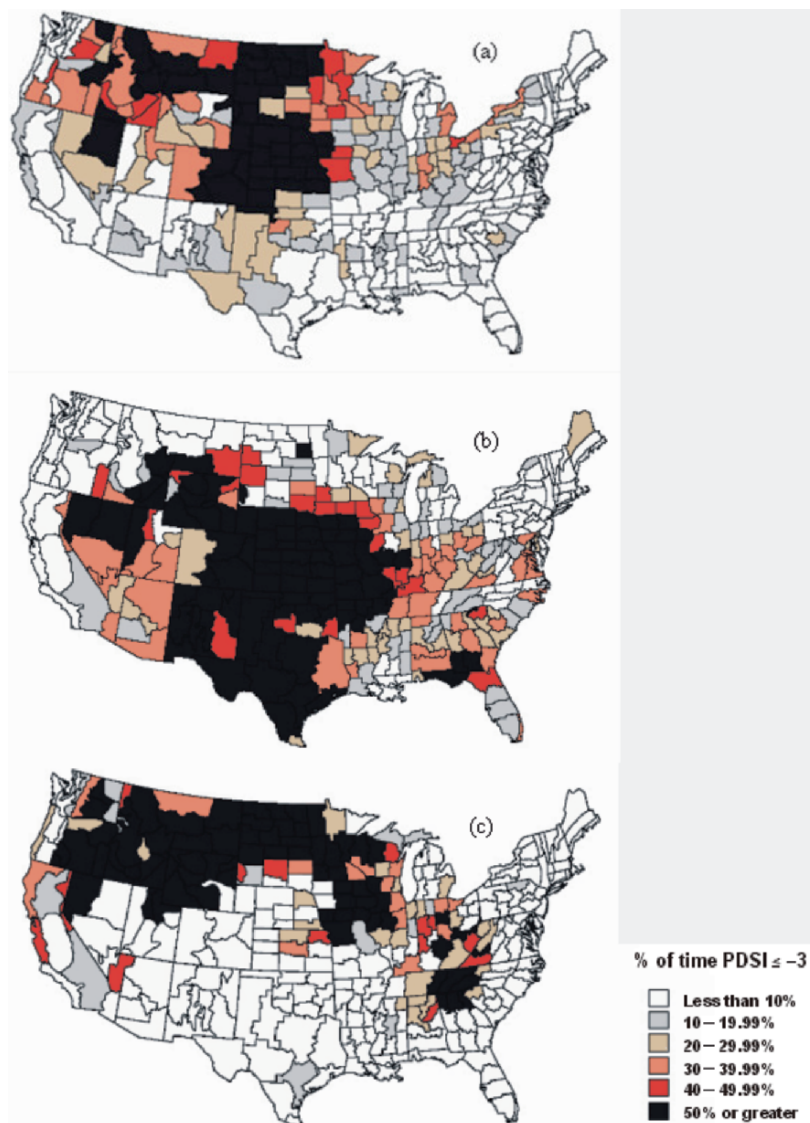


Figure 2-5. Palmer Drought Severity Indices (percent of time in severe and extreme drought) for three droughts in the USA (a) 1934–1939; (b) 1954–1956; and (c) 1988 (Maps prepared from various sources by the National Drought Mitigation Center, University of Nebraska, Lincoln.)

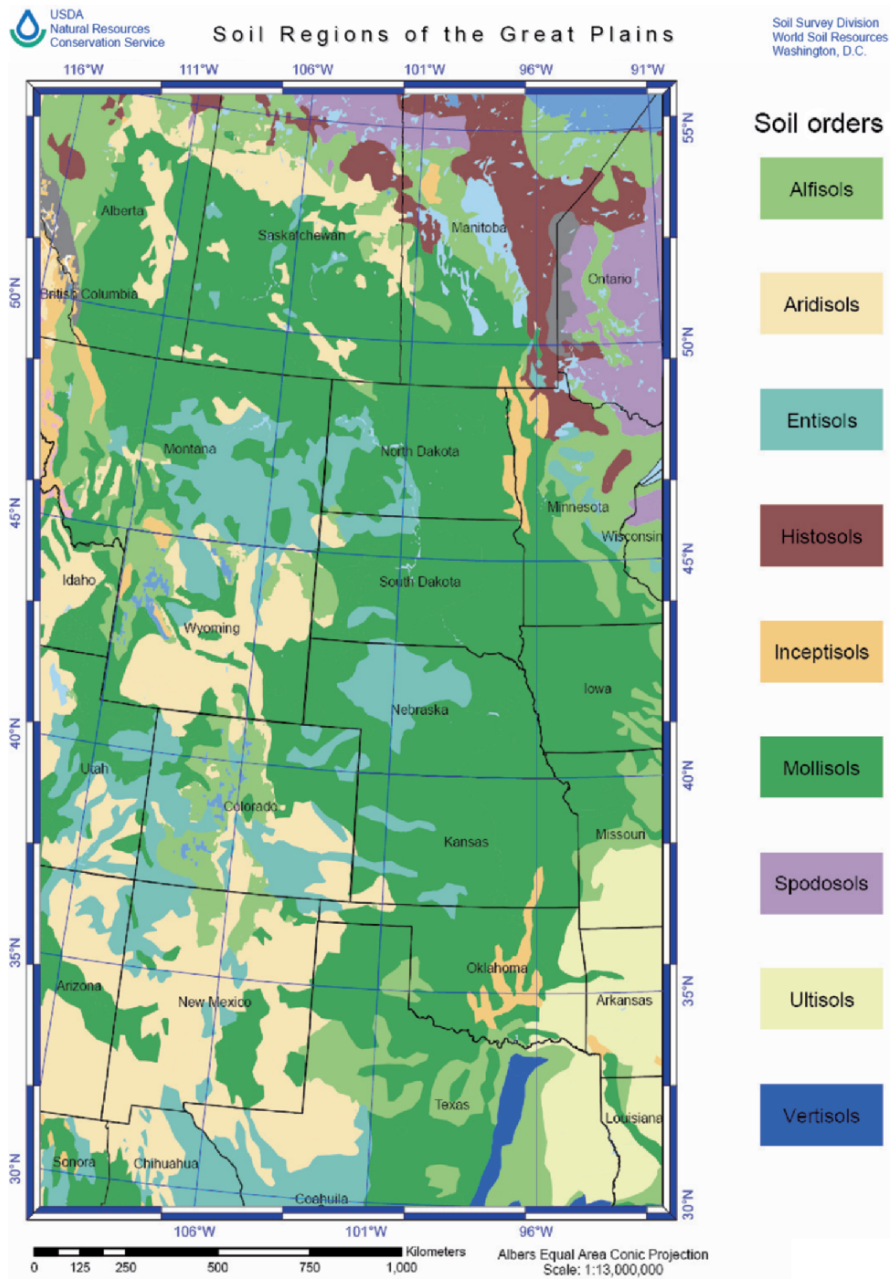
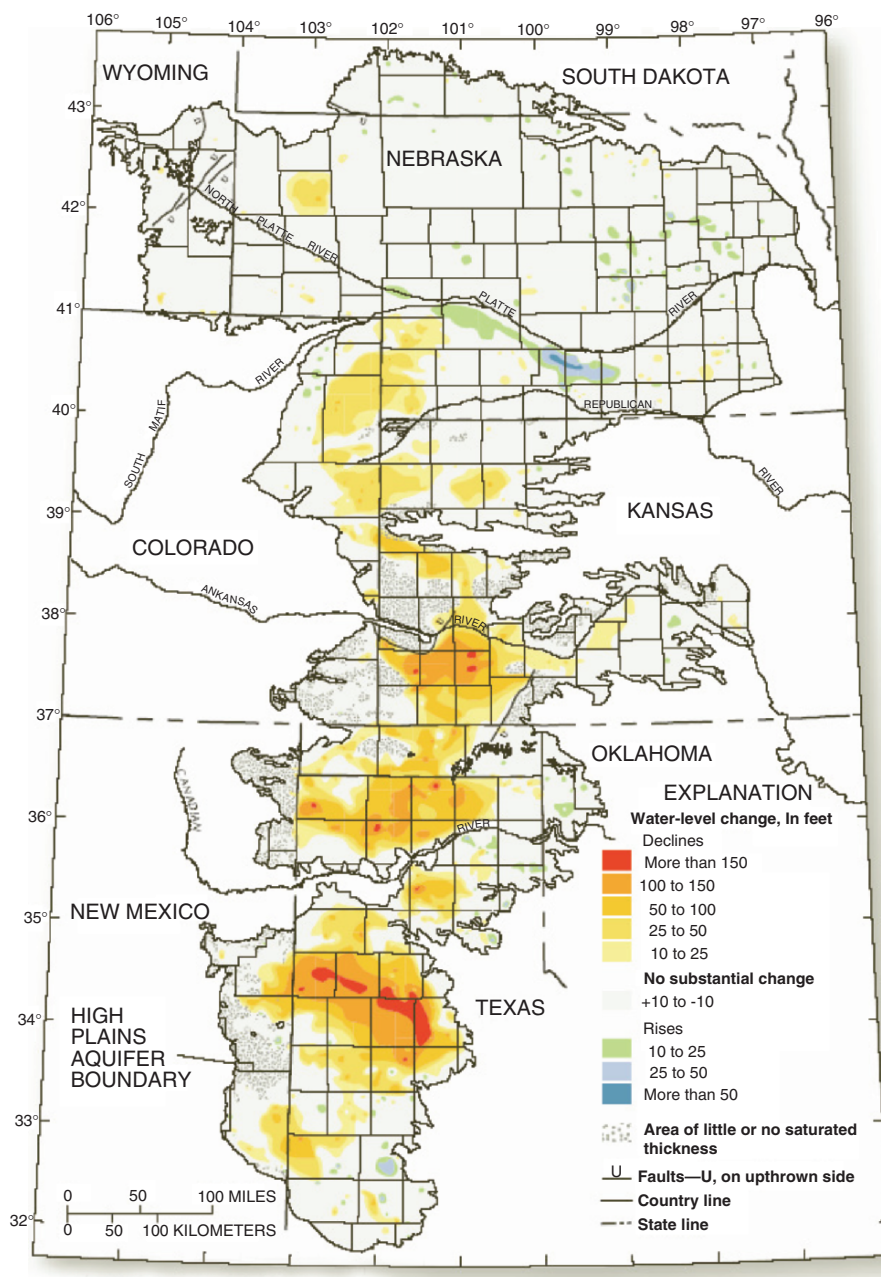


Figure 2-6. Soil regions of the North American Great Plains (Courtesy of US Department of Agriculture, Natural Resources Conservation Service, Soil Survey Division, World Soil Resources, Washington, DC.)



Figure 2-7. A typical Mollisol showing its dark colored surface horizon relatively high in content of organic matter (Adapted from US Department of Agriculture, Natural Resources Conservation Service, <http://soils.usda.gov/technical/classification/orders/mollisols.html>)



Base from U.S. Geological Survey digital data, 1:2,000,000
 Albers Equal-Area projection, Horizontal datum NAD83,
 Standard parallels 29°30' and 45°30', central meridian 101°

Figure 2-8. Water-level changes in the High Plains aquifer, predevelopment to 2003 (McGuire 2004, <http://pubs.usgs.gov/fs/2004/3097/pdf/fs-2004-3097.pdf>)



Figure 2-10. A view of shortgrass prairie near Ft. Collins, Colorado. (Adapted from Long Term Ecological Research Network, http://savanna.lternet.edu/gallery/sgs/SGS_010016_1)

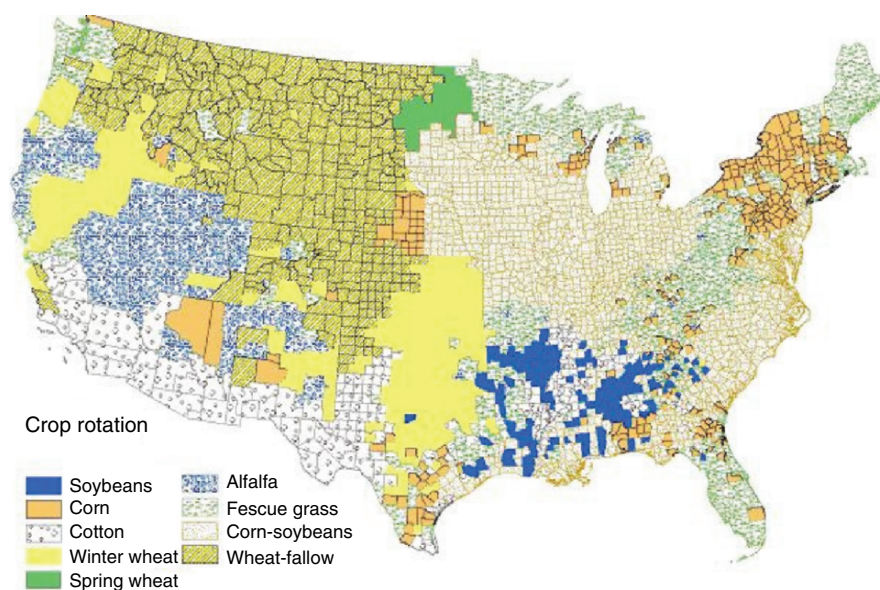


Figure 4-1. The predominant crop by county averaged from the 1985 to 1997 US Natural Resources Inventory. (Courtesy of C. Brosch and R.C. Izaurralde, Joint Global Change Research Institute, College Park, Maryland)

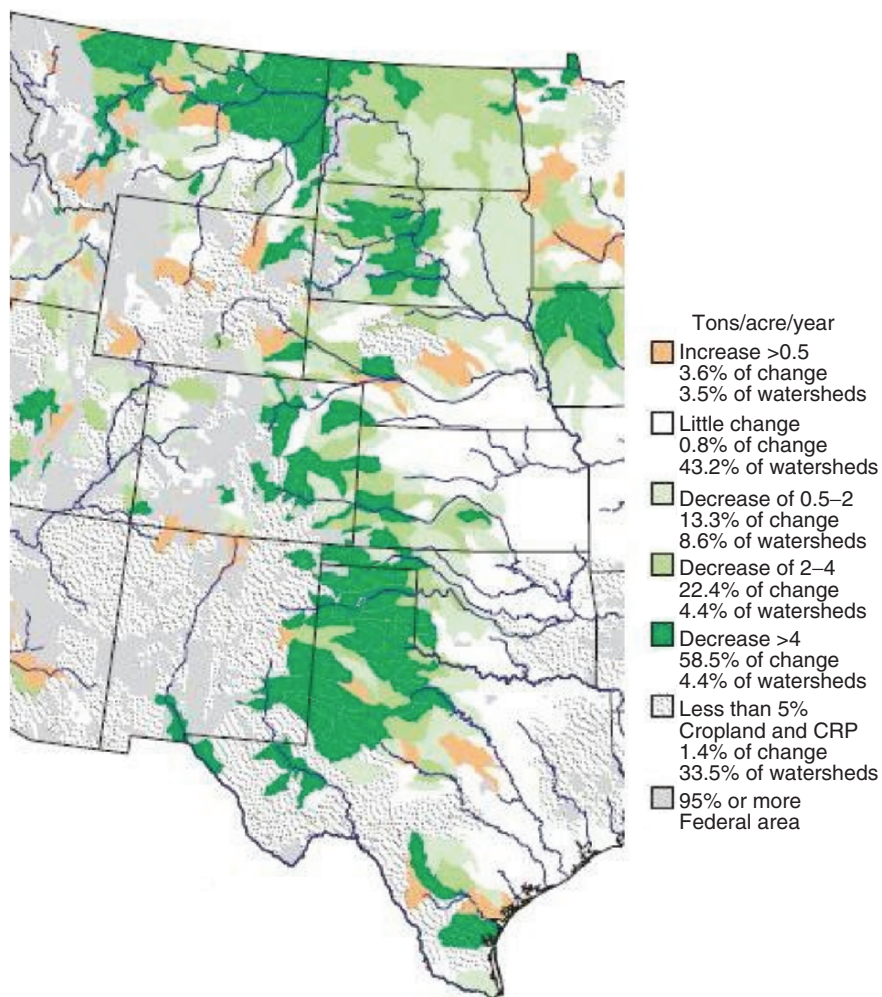


Figure 4-5. Change in average annual soil erosion by wind on cropland and CRP land, 1982–1997. (Source: US Department of Agriculture Natural Resources Conservation Service, <http://www.nrcs.usda.gov/technical/land/erosion.html>)

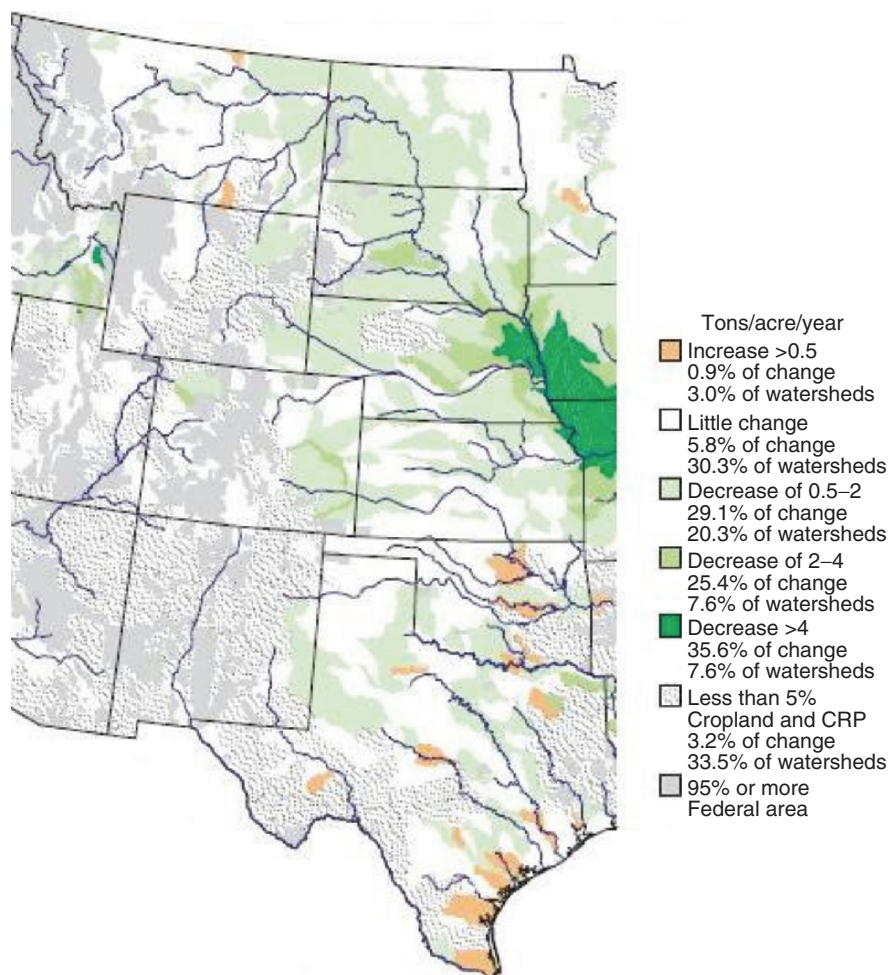


Figure 4-6. Change in average annual soil erosion by water on cropland and CRP land, 1982–1997.
(Source: US Department of Agriculture Natural Resources Conservation Service, <http://www.nrcs.usda.gov/technical/land/erosion.html>)

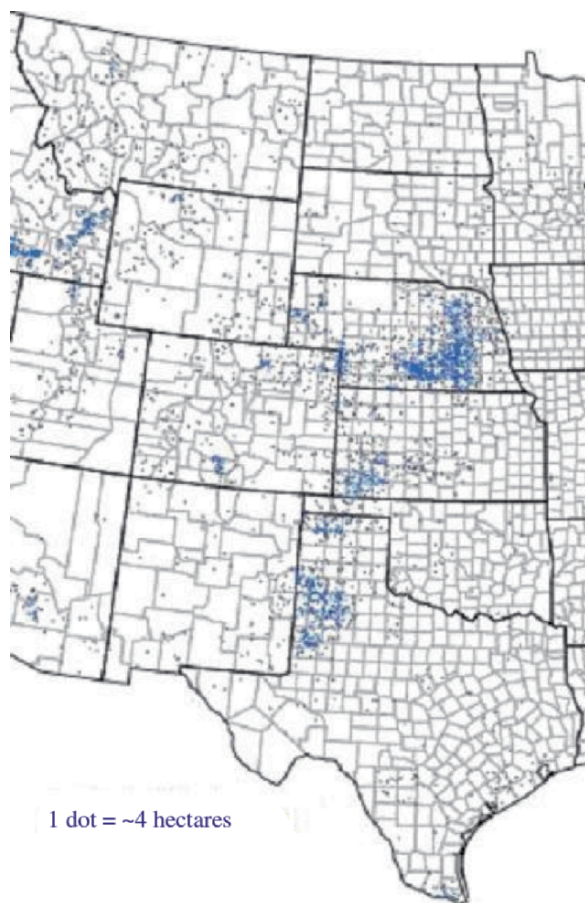


Figure 4-7. Irrigated land in the USA, 2002. (Source: 2002 US Census of Agriculture, Map 02-M079)

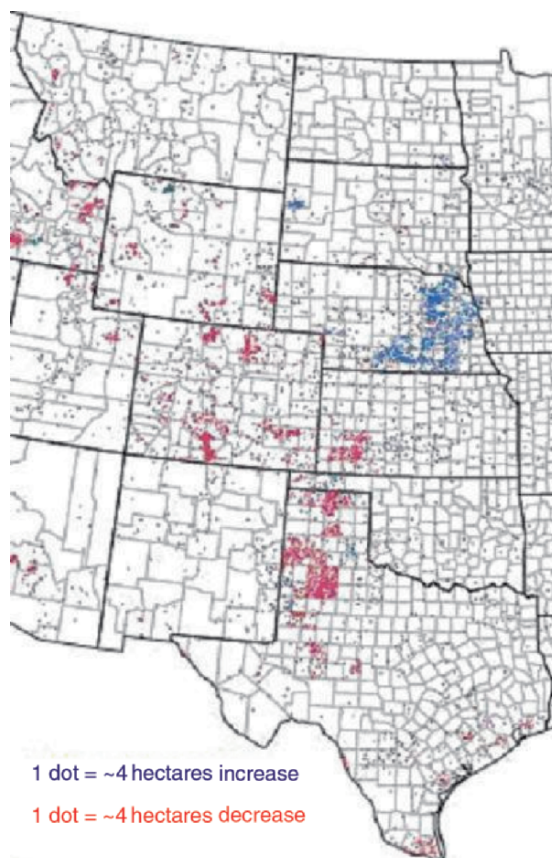


Figure 4-8. Change in area of irrigated land in the USA, 1997–2002. (Source: 2002 US Census of Agriculture, Map 02-M080)

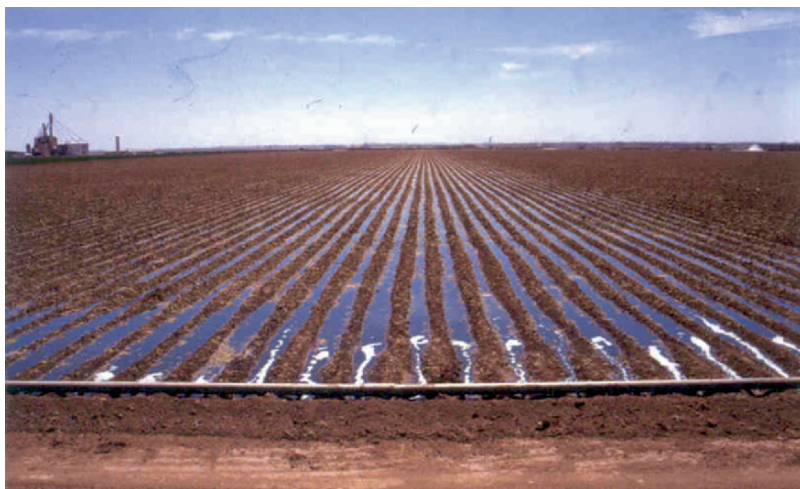


Figure 4-9. Furrow irrigation with gated-pipe. (Source: <http://www.wtamu.edu/~crobinson/Irrigation/furgateinfo.html>)



Figure 4-10. Center pivot irrigation system. (Source: <http://www.ars.usda.gov/is/graphics/photos/oct00/k9072-1.htm>)

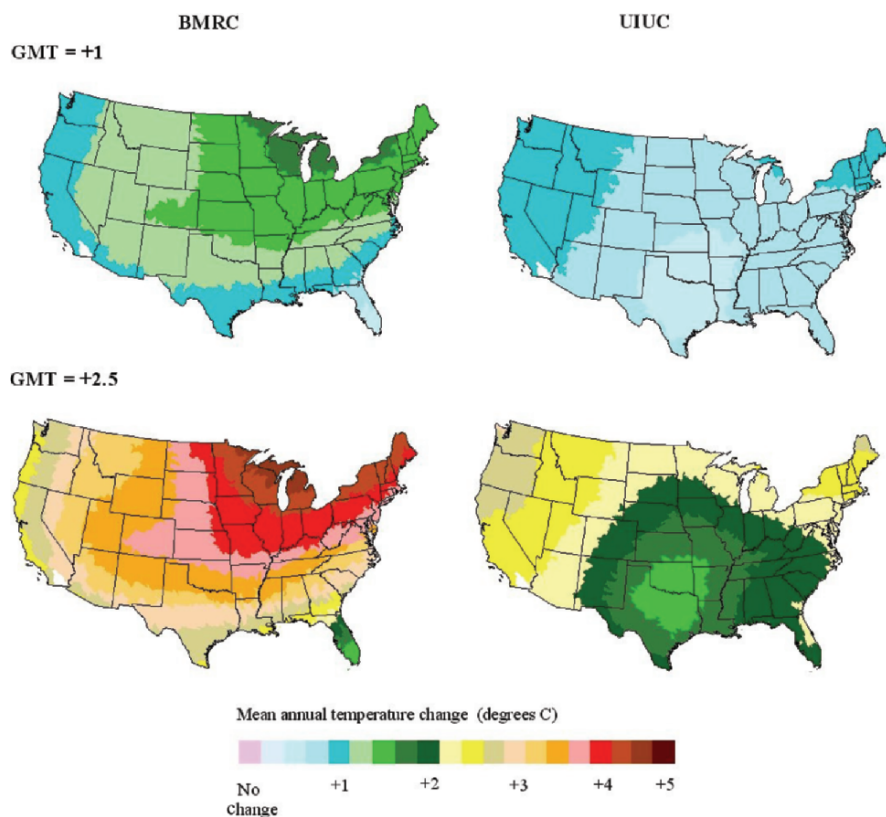


Figure 5-3a. Mean annual temperature change from baseline for the BMRC and UIUC GCMs used in the JGCRI study (Source: Smith et al. 2005)

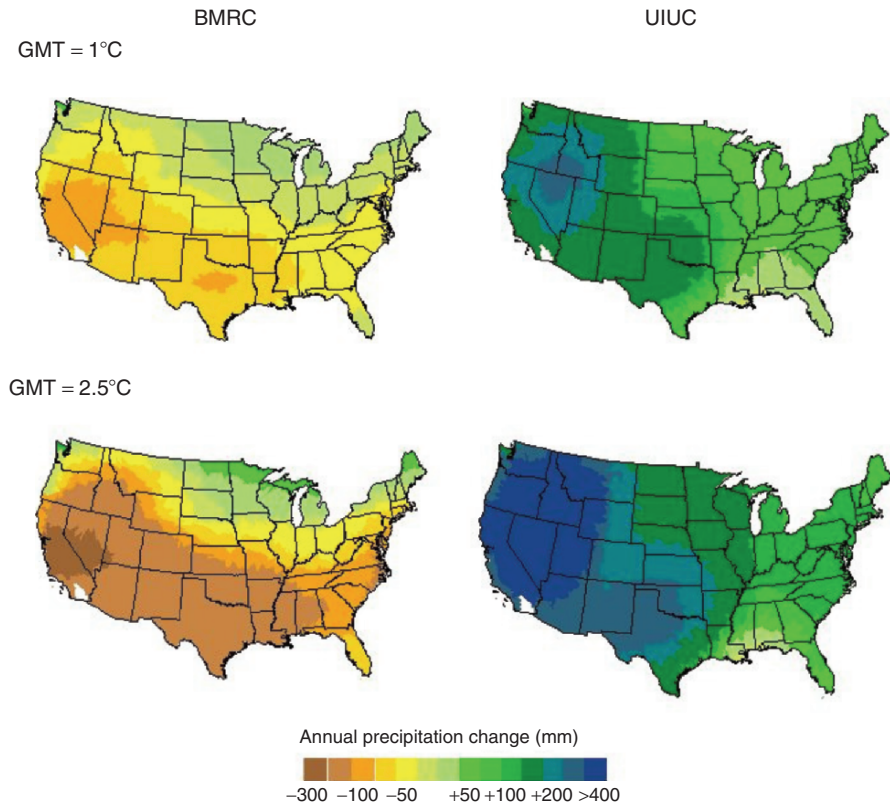


Figure 5-3b. Mean annual precipitation change from baseline for the BMRC and UIUC GCMs used in the JGCRI study (Source: Smith et al. 2005)

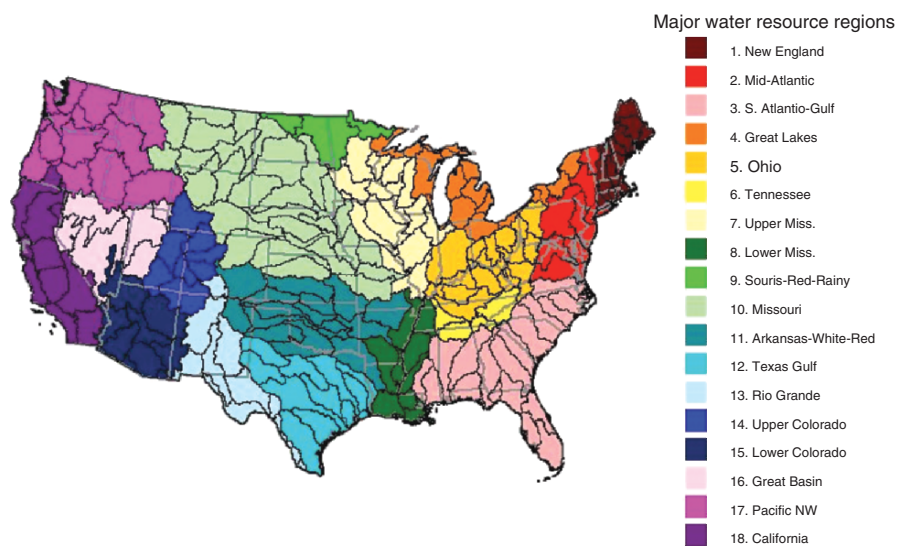


Figure 5-4. Major Water Resource Regions of the conterminous USA as defined by US Geological Survey (1987). The 204 modeling regions used in the JGCRI study are shown

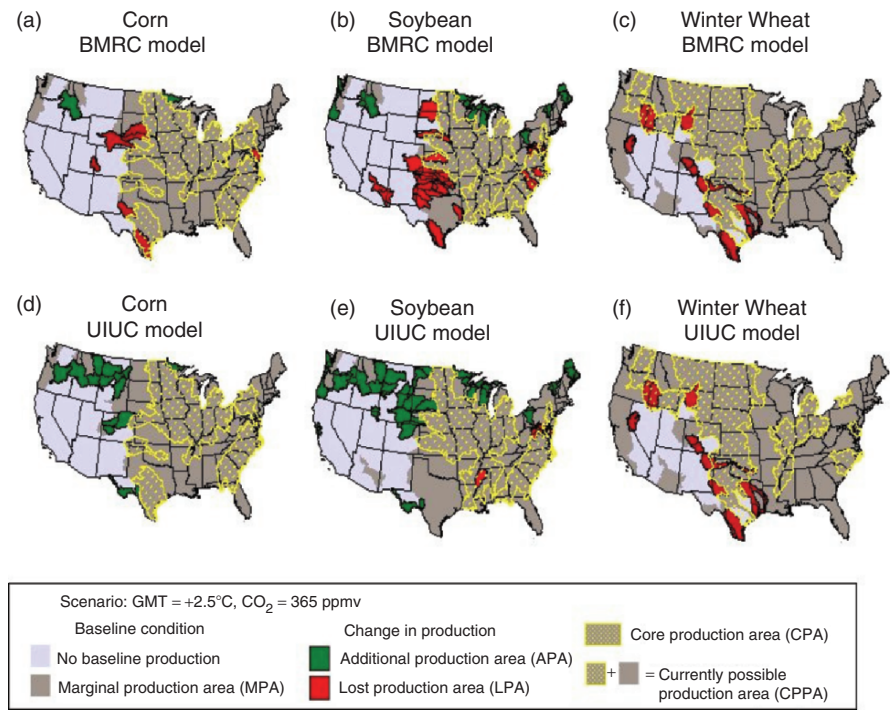


Figure 5-5. Regions projected to enter or leave production for three grain crops with the BMRC and UIUC GCMs at a global mean temperature increase of +2.5°C and CO₂ concentration of 365 ppmv (Source: Thomson et al. 2005a)

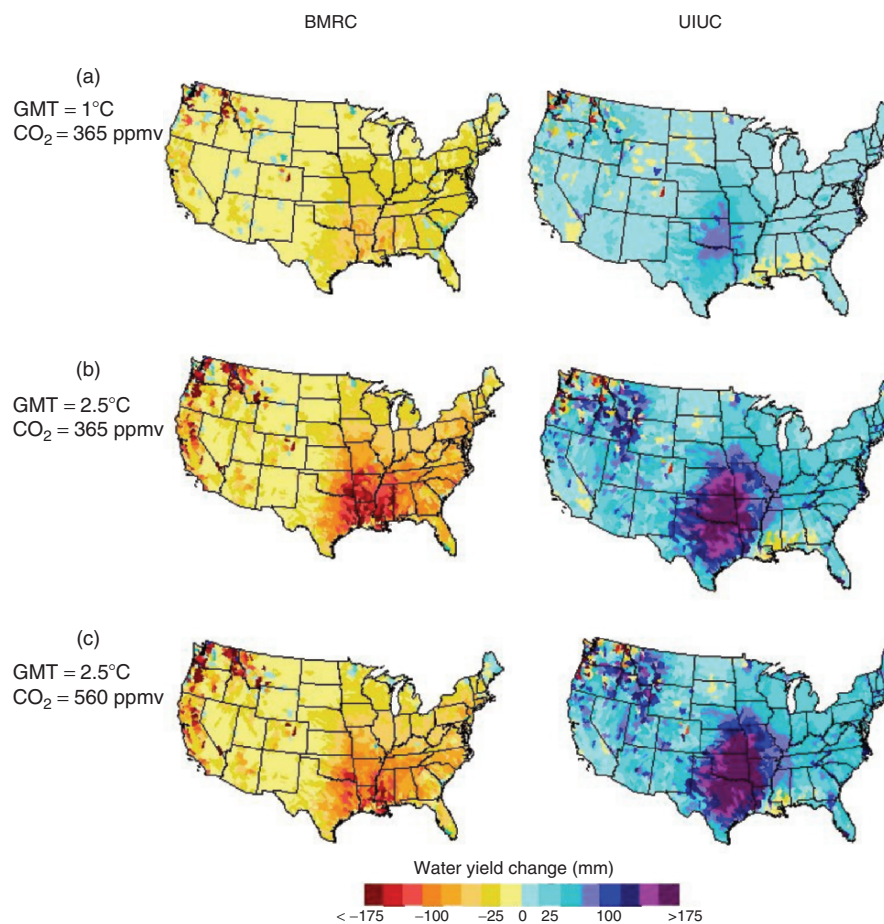


Figure 5-6. Water yield change from baseline (mm) for two GCMs with increasing global mean temperature (GMT) with and without the CO₂-fertilization effect (Thomson et al. 2005b)

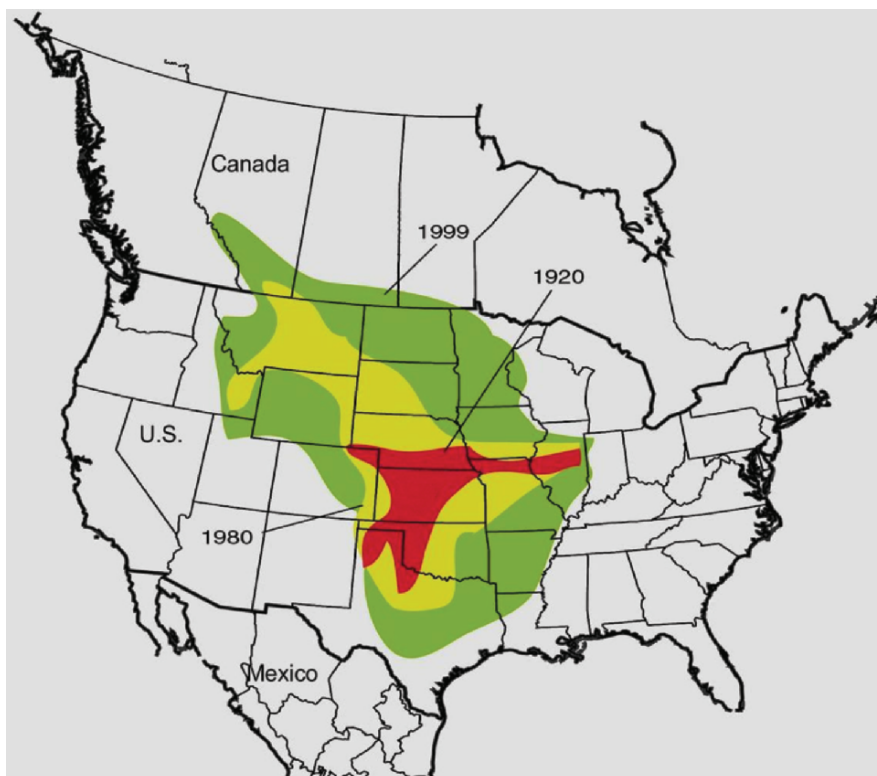


Figure 6-9. Spread of winter wheat culture from 1920 to 1999. Figure covering 1920 and 1980 from Rosenberg (1982); updated to 1999 by W.E. Easterling in 2004

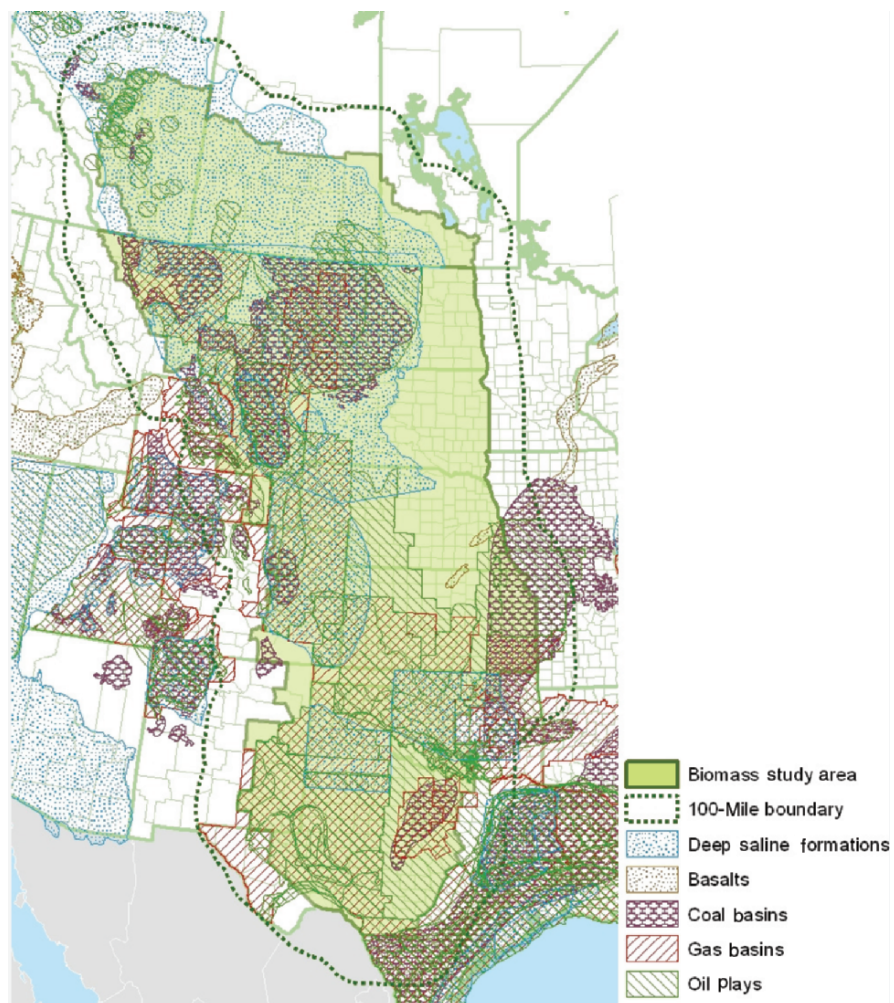


Figure 6-10. Geologic CO₂ storage potential within the North American Great Plains and the surrounding 160km (100 miles). (Courtesy of J.J. Dooley and C.L. Davidson, Pacific Northwest National Laboratory)

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