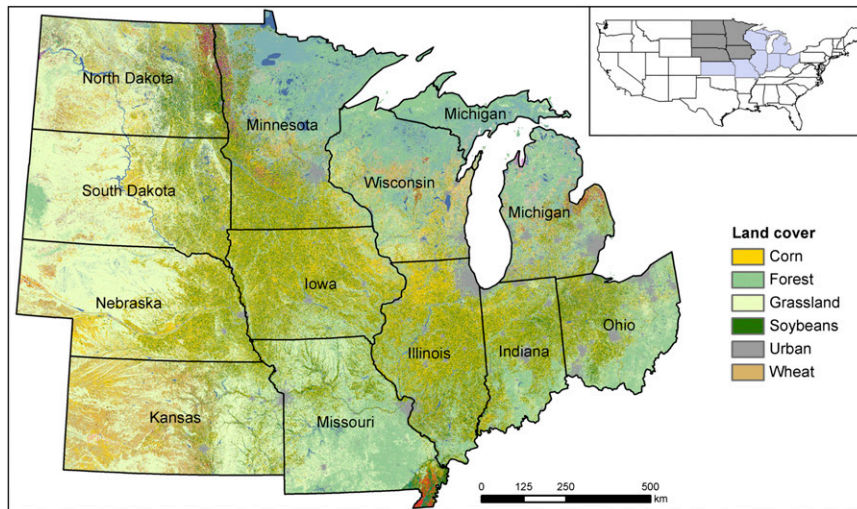# Supporting Information

Wright and Wimberly 10.1073/pnas.1215404110

Fig. S1. The US Corn Belt extending from central Ohio in the east to the Dakotas and Nebraska in the west. Because corn is typically grown in rotation with soybeans, the Corn Belt might be better termed the Corn/Soy Belt. Corn cover is shown in yellow, soybean cover is green. Additional major land cover classes are included in the key. Image based on data from the 2011 National Agricultural Statistics Service Cropland Data Layer (CDL, ref. 1). (*Inset*) The five states comprising the Western Corn Belt are shaded dark gray.

1. US Department of Agriculture, National Agricultural Statistics Service (2012) *Cropland Data Layer Metadata*. Available at www.nass.usda.gov/research/Cropland/metadata/meta.htm. Accessed August 9, 2012.
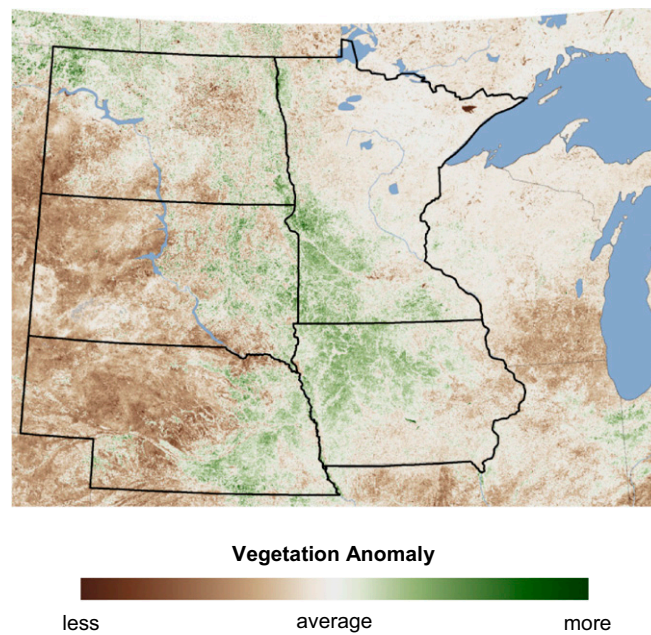
Fig. S2. Vegetation anomalies for the period of June 25 to July 10, 2012. Image constructed from an analysis by the NASA Earth Observatory, downloaded as a geotiff from ref. 1. Anomalies are based on the Normalized Difference Vegetation Index and are relative to average conditions over the period 2002 to 2012 (1).

1. NASA Earth Observatory (2012) Drought Grips the United States. Available at http://earthobservatory.nasa.gov/IOTD/view.php?id=78553. Accessed July 18, 2012.

Fig. S3. Grassland to corn/soy change identified by overlaying the 2006 CDL on the 2011 CDL. (*A*) Change pixels identified as grassland in 2006 that were subsequently classified as corn or soybeans in 2011. This overlay identifies a very large number of small change areas. We assume that most of this speckle is not actual change but arises from classification errors in the source data. (*B*) Majority filtering of the raw change layer. A five-pixel by five-pixel moving window is applied to *A*. The center pixel of the moving window is classified as change if the majority of pixels within the window are change pixels (spatial resolution, 56 m).

Fig. S4. Aggregation of grassland to corn/soy change at 56-m spatial resolution to change at 560-m resolution. (*A*) The binary change layer in Fig. S3*B* (resolution, 56 m) is converted to the percentage of change within 560-m pixels. White indicates no change. (*B*) Smoothing of *A* using a quartic kernel function at a bandwidth of 10 km.