Organization of the University, College, and Department

The administration at Purdue includes the Board of Trustees and the President (Dr. France Córdova) and her staff (Figure 1.1). The College of Agriculture is one of ten Colleges on the Purdue campus and the Department of Agronomy is one of eleven academic departments in the College of Agriculture (Figure 1.2). The structure of the departments and colleges does not impede interaction across administrative lines. Agronomy faculty and staff interact in research and education on a regular basis with faculty in other departments and colleges. In addition, six Agronomy faculty hold joint appointments in other departments across campus including Earth and Atmospheric Sciences, Civil Engineering and Statistics.

Dr. France Córdova, began her presidency at Purdue in 2007 and Dr. Randy Woodson, former dean of the College of Agriculture, became Purdue's provost in May 2008. Dr. Jay Akridge became dean of the College of Agriculture in January 2009.

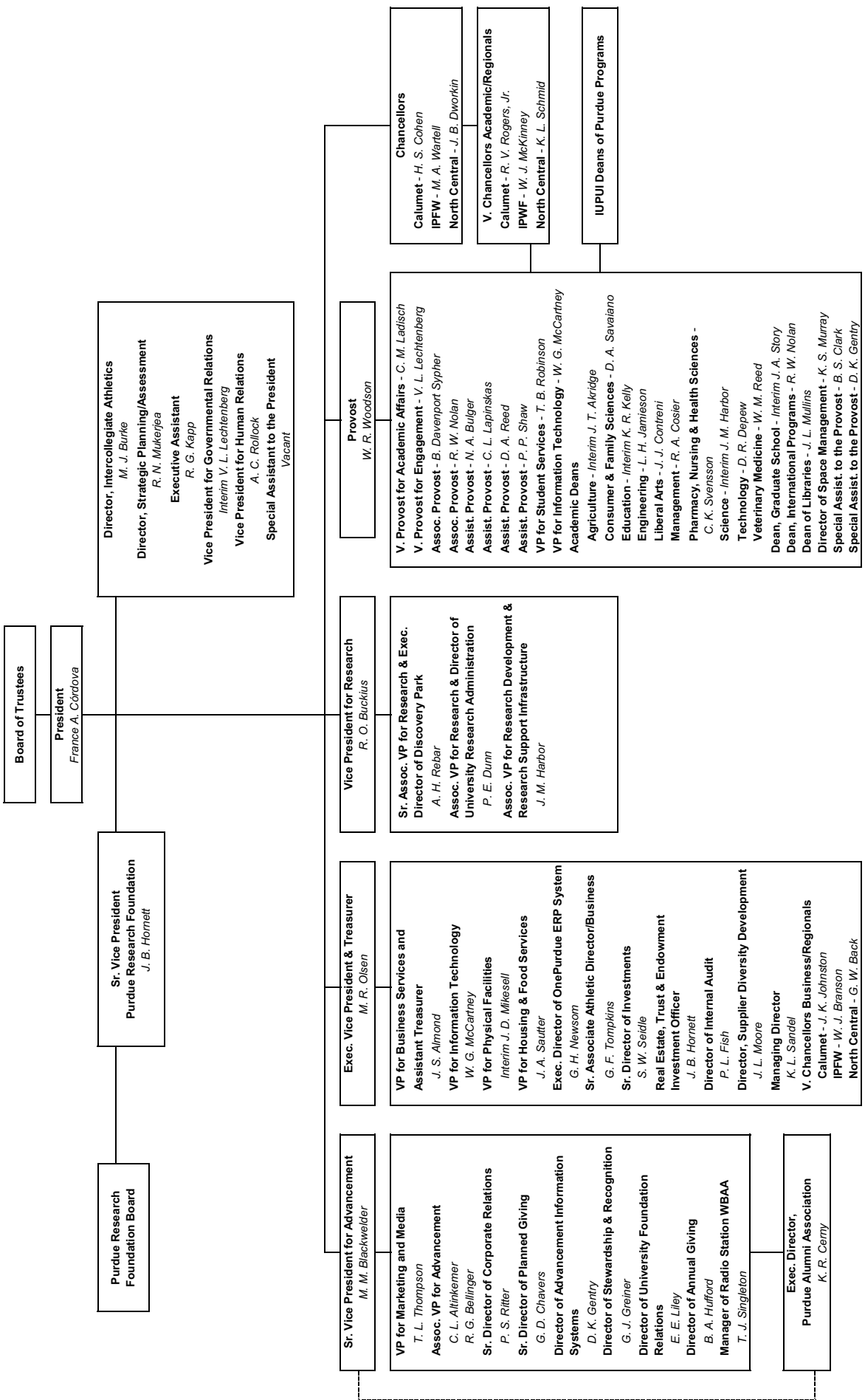
Departments at Purdue University are administered by department heads who report to the dean and the associate deans/directors of the college's Agricultural Research Programs, Office of Academic Programs, Cooperative Extension Service, and International Programs in Agriculture. Strategic planning that is underway at the university and college levels has engaged faculty and staff in the planning process and fostered open communication. In general, faculty and staff perceive that administration is supportive and doing a good job of providing leadership.

The department engages in continuous strategic planning and multiple venues have been created to encourage this process to happen. We have departmental retreats nearly every year to focus on and improve aspects of our tripartite mission. Departmental meetings of the entire faculty and staff take place the first and last week of each academic semester. Faculty meetings are scheduled every two weeks throughout each semester. The department head holds town hall meetings of each of the staff groups (Administrative/Professional, Service Staff, and Clerical Staff) each semester to provide department updates and to address issues of concern by the individual groups. The department head also meets each semester with the graduate students in a town hall arrangement to address issues related to the graduate program. The department head meets with the Department Head Advisory Committee (a committee of faculty representatives) at least once per semester and often more frequently to get their thoughts about new initiatives and direction. Finally, the head and faculty meet with the advisory council of external stakeholders twice each year to discuss strategies.

A number of standing and ad hoc committees are appointed each year (Appendix E), but those with major ongoing responsibilities include:

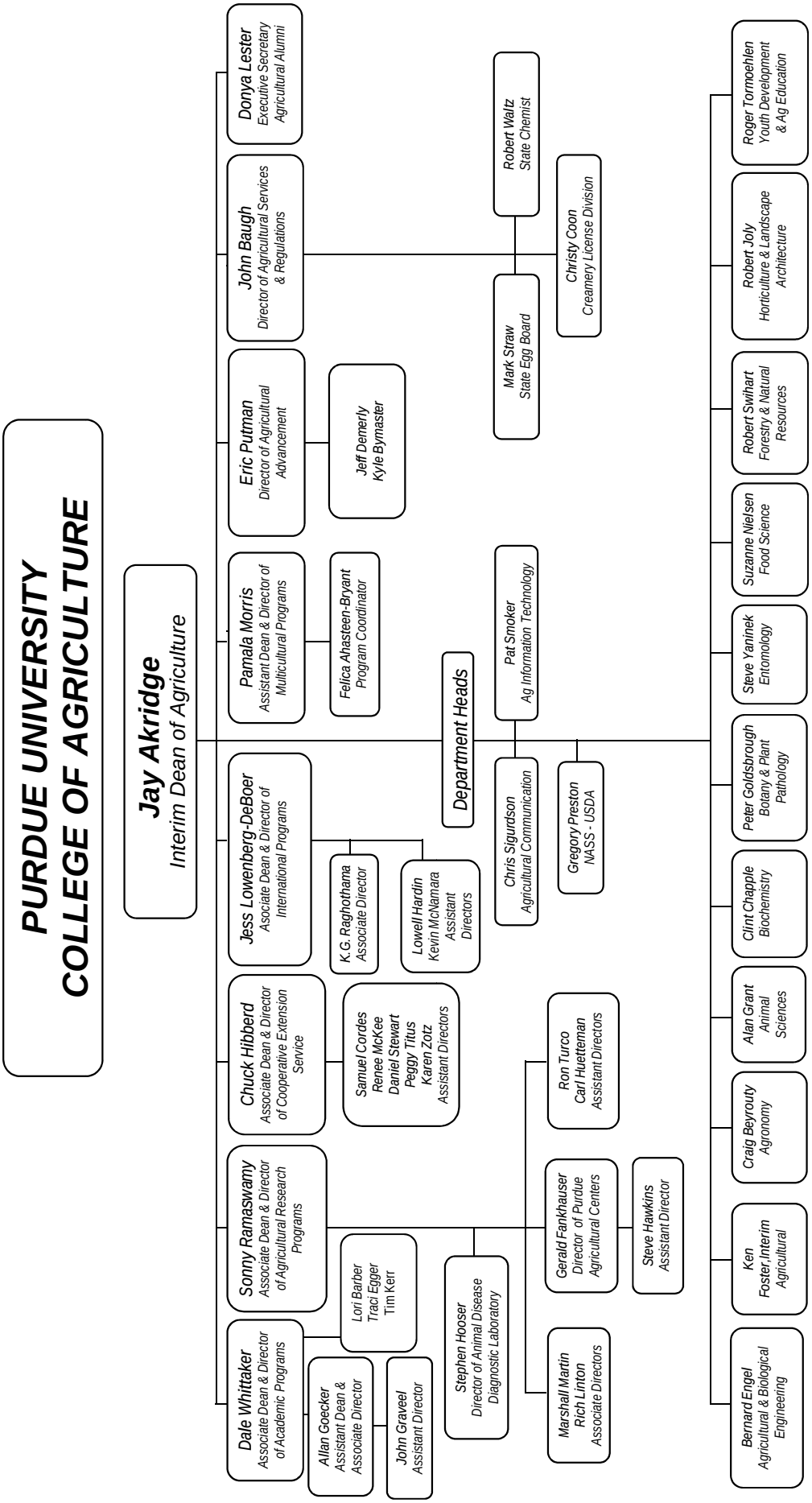
Department Head Advisory
Extension
Graduate Studies
Seminars
Teaching
Curriculum

Figure 1.1. Purdue University organizational chart



Note: V = Vice; VP = Vice President

Figure 1.2. Purdue University College of Agriculture organizational chart



Summary of Indiana Agriculture

Agriculture is essential to Indiana's economy as evidenced by the creation of the Indiana State Department of Agriculture in 2005. The number of Indiana farm units has dropped by 1,500 since 2002 to 58,000 on 15 million acres with an average farm size of 255 acres. Corn and soybean are the dominant agronomic crops grown in the state. In 2007, 6.37 million acres of corn and 4.68 million acres of soybeans were harvested. Indiana ranked fifth for corn production and fourth for soybean production in 2007 (Table 1.1).

Table 1.1. Dominant agronomic crops in Indiana in 2007

Commodity	***Acres Planted***	***Yield***	***Production***	***Price per Unit***	***Indiana's Rank***
Corn	6.5 million	155 bu/ac	987 million bu.	4.5 dol/bu	5th
Soybean	4.7 million	45 bu/ac	211 million bu.	10.5 dol/bu	4th
Wheat	.42 million	57 bu/ac	21 million bu.	5.45 dol/bu	15th
Hay	.67 million	2.3 t/ac	1.5 million tons	137 dol/tun	28th

Data from the USDA and Purdue University 2006-2007 Indiana Agricultural Statistics

Indiana Exports

Indiana exports have had continued growth over the last five years. Corn was the largest agricultural export in 2007 with 35% of the crop exported and accounted for 8% of the U.S. export. Soybeans are the second largest export with 24% of the crop exported and accounted for 9% of the U.S. export.

Table 1.2. The value (in millions of dollars) of agricultural commodities exported from Indiana since 2002

Fiscal Year	***Wheat & Products***	***Total Feed Grains***	***Soybeans & Products***
2002	$ 82	$ 436	$ 637
2003	$ 74	$ 478	$ 688
2004	$ 103	$ 608	$ 828
2005	$ 91	$ 519	$ 752
2006	$ 97	$ 657	$ 739

Data from the USDA and Purdue University 2006-2007 Indiana Agricultural Statistics

Biofuel Plants in Indiana

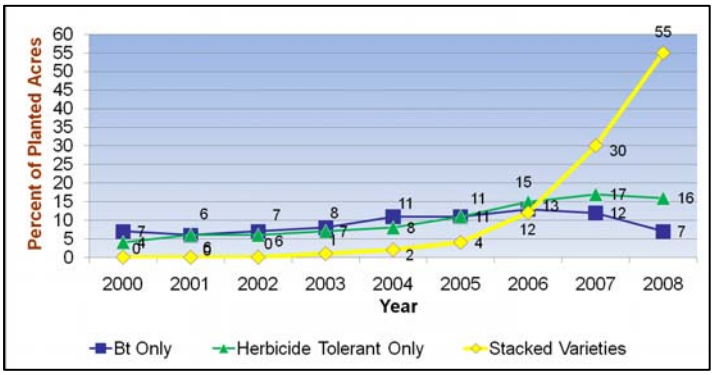
Indiana had only one ethanol plant in January 2005, but has nine operational manufacturing plants today, according to the Indiana State Department of Agriculture. By 2009, an estimated 13 ethanol plants with more than 1 billion gallons in capacity and 7 biodiesel plants with 135 million gallons in capacity are expected in Indiana. It is estimated that the 13 ethanol plants will require 423 million bushels of corn to produce the 1 billion gallons of ethanol. Future Indiana exports of corn will likely decrease due to current and future biofuel plants.

No-till or Stip-till

Prior to 1998 only 16% of corn and 55% of soybean acres were planted to a no-till system in Indiana. By 2007, 29% of corn and 68% of soybean acreage was planted to either no-till or strip-till systems. This represents a 13% increase in conservation tillage adoption for Indiana's two major crops.

Adoption of Transgenic Corn and Soybeans

Figure 1.3. Adoption of genetically engineered seed in Indiana

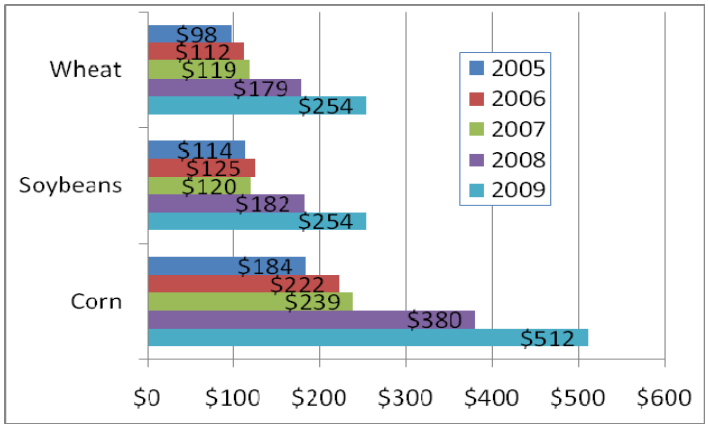


Biotech traits are increasingly being used and influencing the seed market (Figure 1.3). Indiana soybean acres have been dominated by herbicide tolerant varieties for a number of years and are currently planted on over 95% of acres, and the seed corn market is now rapidly moving that way. The largest increases have been in hybrids that offer a package of herbicide as well as insect resistance.

Information from Top Farmer Newsletter by Bruce Erickson

Crop Input Prices

Figure 1.4. Estimated variable production costs, by year, for average quality Indiana land: 158 bu/A corn after soybeans, 49 bu/A beans, 70 bu/A wheat



In the last year the cost of growing corn, soybeans, and wheat increased dramatically (Figure 1.4). The reason for the increase is higher nitrogen fertilizer and fuels. The overriding reason for these numbers is that market prices for a wide range of crops are relatively high worldwide, substantially increasing the demand for fertilizers, but at the same time fertilizer industry production and distribution capacity has been unable to keep up with this demand. Agronomy's soil fertility research assists with making N rate recommendations for maximum grain yield and maximum dollar return.

Information from Top Farmer Newsletter by Bruce Erickson

Soils of Indiana

Indiana's soil is the natural resource that defines its agricultural practices and affects the impacts of land-use on water quality. Three broad areas of soils are recognized in Indiana: (1) the steep, rolling, unglaciated area of southern Indiana, (2) an older glaciated area in southern Indiana, and (3) the surface left by a more recent glaciation in the northern two-thirds of the state (Figure 1.5). In the northern two-thirds of the state the soils were developed on Wisconsinan Till and the soils are generally very productive for row crop agriculture with some land management inputs. Some of the limiting factors of these soils include poor drainage, water erosion, wind erosion, near-surface compaction, flooding and sandy areas which are droughty. These soils generally require tile drainage and other water management strategies to maximize yield. The steep topography in the unglaciated area of southern Indiana limits row crop production, which leads to animal agriculture and forage production dominating agriculture production in this area. The older Illinoisan Till in southern Indiana has animal agriculture, forages, and row crops. The Illinoisan Till area has broad flat regions dissected by natural erosional processes. This area typically requires more fertility inputs and utilizes tile drainage in some landscapes. The distribution of soil associations in Indiana is shown in the Soil Association Map (Figure 1.6).

Soil Region A in northwestern Indiana is a large area of eolian sands, glacial outwash, lacustrine and associated moraines.

Soil Region B in northeastern Indiana has a high percentage of poorly drained soil due to the flat topography, compact glacial till parent materials, and fine textures. Most soils of Region B and Region C have been drained to improve their potential for crop production.

Soil Region C in Central Indiana also has a high percentage of poorly drained loamy soils. The soils have high water tables due to shallow compact till which restricts vertical water movement.

Soil Region D in southwestern Indiana includes soils formed from loess and eolian sand. It also contains several floodplains along the rivers and streams that cross the area.

Soil Region E in south central Indiana was not glaciated and includes soils on steep slopes formed from weathered sandstone shale, and limestone bedrock. This area also includes karst landscapes that feature sinkholes where limestone has been dissolved.

Soil Region F in southeastern Indiana includes soils formed in loess over Illinoisan drift. This area is characterized by flat areas with severe drainage problems and steeply sloping water erodible areas at the edges of these broad flats.

All 92 Indiana counties have been initially surveyed, have published soil survey reports, and are now digitized and available online at the Soil Data Mart and Web Soil Survey. The wealth of digital soil information and the high resolution DEM (1.5 m) are a tremendous asset to agricultural and natural resource research in Indiana. Completion of the initial surveys and ongoing efforts for updating soil surveys is a combined effort of the U.S. Natural Resources Conservation Service, Purdue University Agricultural Experiment Station, and the Indiana Department of Natural Resources.

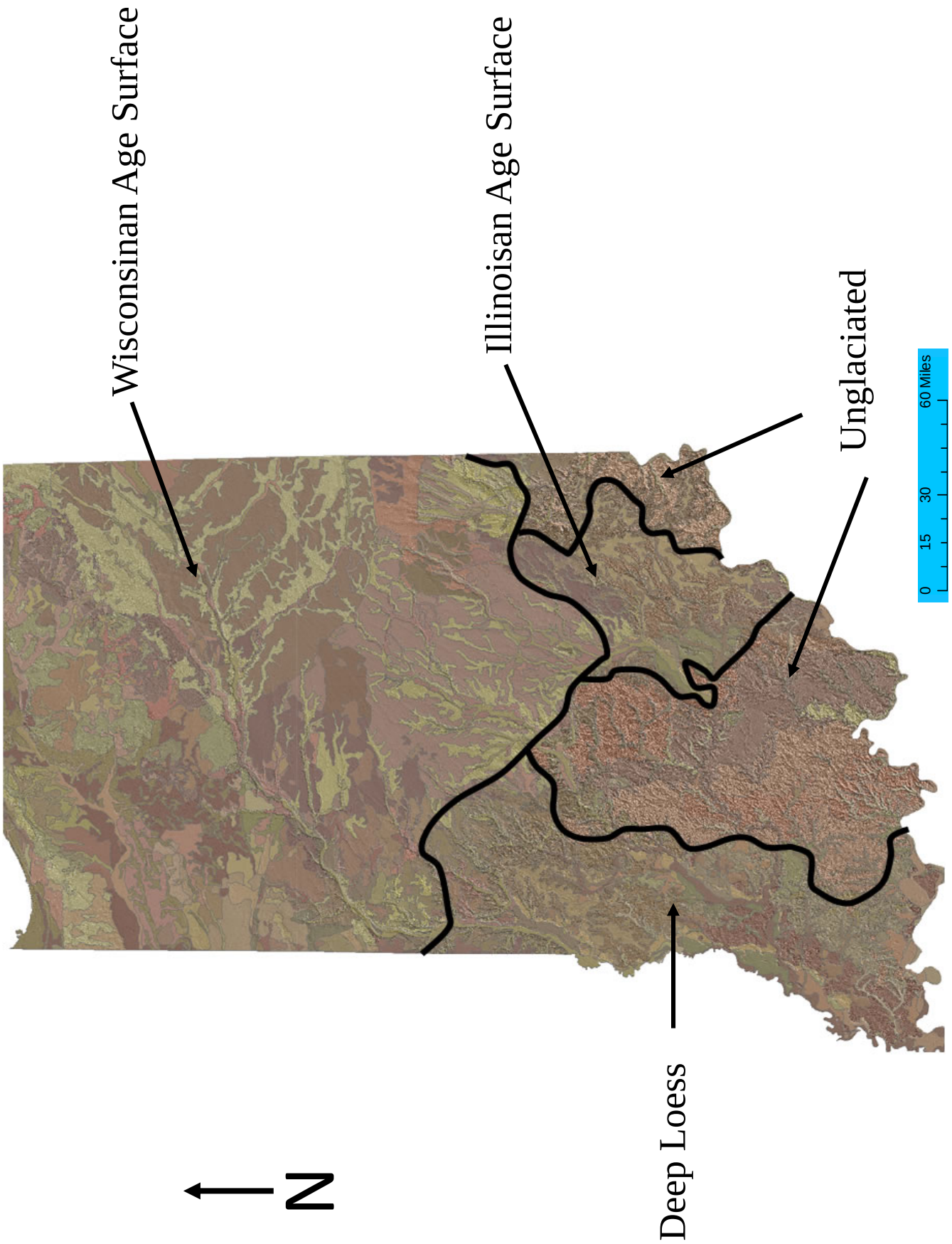


Figure 1.5. Soils and geomorphic surfaces of Indiana

Figure 1.6. Soil associations in Indiana