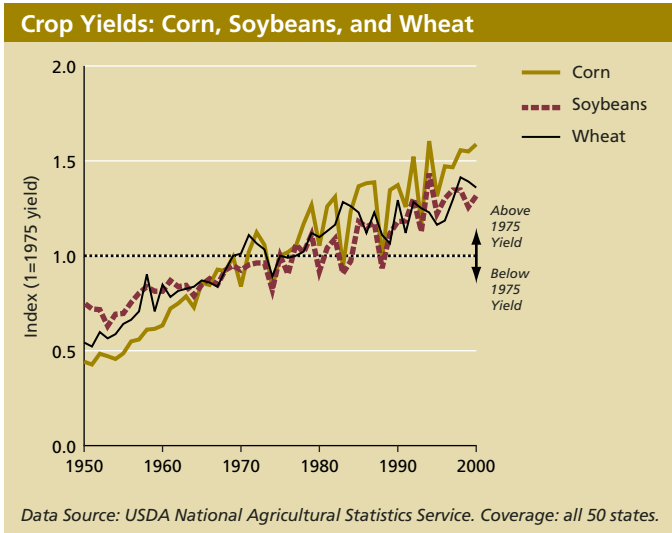


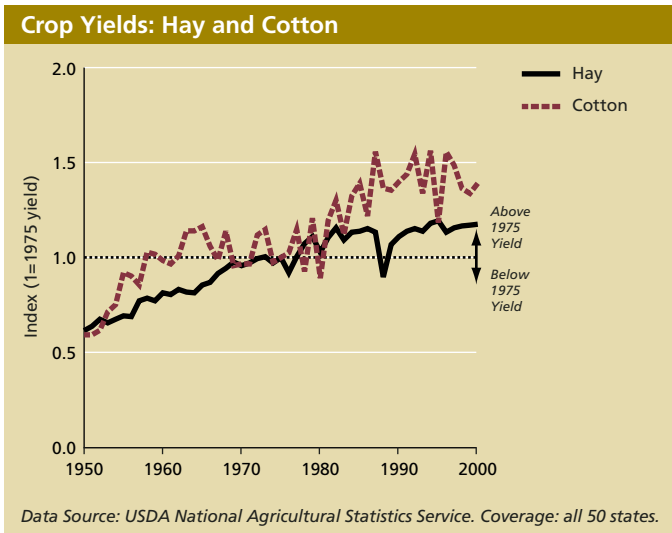
SYSTEM DIMENSIONS	CHEMICAL AND PHYSICAL	BIOLOGICAL COMPONENTS	HUMAN USES
Extent Pattern	Nutrients, Carbon, Oxygen Contaminants Physical	Plants and Animals Communities Ecological Productivity	<b>Food, Fiber, and Water</b> Recreation and Other Services

## ● Major Crop Yields



**What Is This Indicator, and Why Is It Important?** This indicator reports the yield of corn, soybeans, wheat, hay, and cotton, as an index with 1975 as the base year. Values above 1.0 indicate higher yields, typically measured as tons or bushels per acre, than in 1975; values below 1.0 indicate lower yields than in 1975. These five crops account for about 90% of harvested acreage in the United States and more than half the monetary value of all crops (p. 108).

Increasing the amount of food grown per acre has allowed U.S. agriculture to produce more food and fiber without corresponding increases in farm acreage. The total acreage used for agricultural production has declined slightly over the past half-century (p. 91), and a significant increase in the acreage devoted to agriculture is generally considered unlikely.



**What Do the Data Show?** Per-acre yields of the major crops grown in the United States have increased dramatically over the past 50 years. Yields for three of the five major crops (corn, wheat, and cotton) more than doubled over this period, with corn yields increasing almost fourfold. Of these five major crops, soybean yields increased the least, but even they nearly doubled over the period.

**Discussion** Increases in crop yields are believed to result from a combination of factors. These include improvements in breeding, changes in cultivation practices, and increased use of a variety of inputs, including pesticides and fertilizers. More intensive use of farmland is thought to play an important role in

improving yields, but it may also have negative effects, such as increased concentrations of nitrogen, phosphorus, or pesticides in streams, lakes, and coastal waters (see the farmland nitrogen and phosphorus indicators, pp. 95 and 96, the farmland pesticide indicator, p. 97, and the national nitrogen indicator, p. 46).

The technical note for this indicator is on page 238.