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TIME TO CHECK RELATIVE CORN AND SOYBEAN YIELDS

Enactment of the 2002 Farm Bill, along with a recent change in relative corn and soybean prices, has caused corn to be more profitable when compared to soybeans. As a result, Illinois farmers may be considering planting more corn acres and less soybean acres.

A key variable in this decision is relative corn and soybean yields on a farm. A switch to corn likely will be more profitable when corn yields are higher relative to soybean yields. In this *Illinois Farm Economics: Facts and Opinions*, we examine corn yields relative to soybean yields. We do this by calculating a corn-to-soybean yield ratio. This ratio equals the corn yield divided by the soybean yield. A higher corn-to-soybean yield ratio means that corn yield is higher relative to soybean yield than for a situation with a lower ratio.

Corn-to-Soybean Ratios

Table 1 shows corn-to-soybean yield ratios for farms enrolled in Illinois Farm Business Farm Management (FBFM). To be included in Table 1, a farm had to have yields for every year between 1996 through 2001. For all farms, corn yield averaged 150 bu. per acre between 1996 through 2001, soybean yield average 57 bu. per acre, and the corn-to-soybean yield ratio was 3.16 (see Table 1).

Corn-to-soybean yield ratios vary across the state, as illustrated by corn-to-soybean yield ratios by Crop Reporting District. The West Southwest CRD has the highest ratio (3.27) while the southwest CRD has the lowest ratio (2.96). This suggests that planting more corn and less soybean in the west southwest CRD will likely be more profitable than in the southwest CRD.

Table 1. Average Yields for 1996 through 2001, Farms Enrolled in Illinois FBFM.

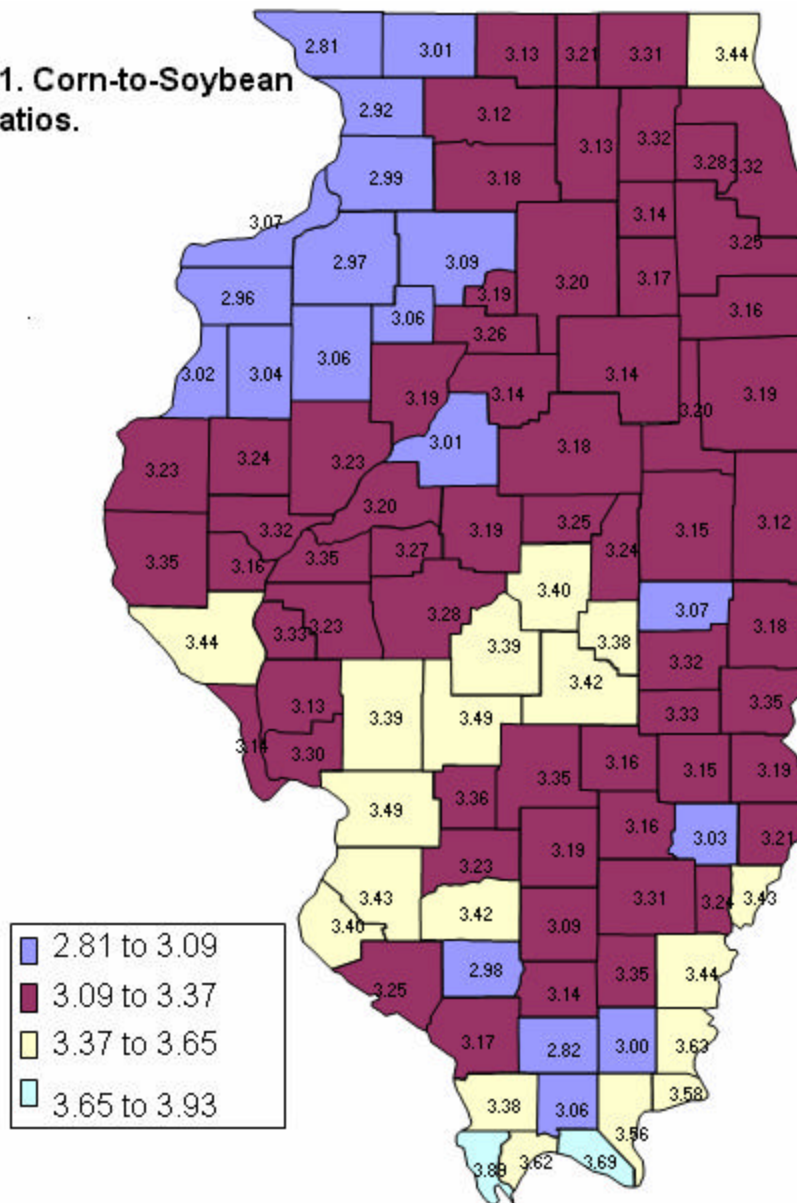
Crop Reporting District	Corn Yield ¹	Soybean Yield ¹	Yield Ratio ²
Northwest	153	51	2.99
Northeast	156	48	3.23
West	150	48	3.11
Central	157	48	3.23
East	147	46	3.21
West Southwest	156	48	3.27
East Southeast	137	44	3.12
Southwest	126	42	2.96
Southeast	126	42	2.99
State	150	47	3.16

¹ Bushels per acre.

² Corn yield divided by soybean yield

A more detailed geographical look at these ratios can be seen in Figure 1. This figure shows corn-to-soybean yield ratios by county. In constructing these ratios, county yields obtained through the National Agricultural Statistics Service were averaged from 1997 through 2001.

Figure 1. Corn-to-Soybean Yield Ratios.



Dispersion of high and low county corn-to-soybean ratios is geographically related (see Figure 1). An area in south-central Illinois has high corn-to-soybean ratios (Madison, Macoupin, Montgomery, Christian, Macon, Shelby, and Moultrie counties). Also an area in southern Illinois near the Mississippi, Ohio, and Wabash rivers has high ratios.

Counties with low corn-to-soybean ratios tend to be located in the northwest part of the state (see Figure 1). A stretch of counties from Jo Daviess and Stephenson in the north down to Henderson, Warren, and Knox counties in the south have low corn-to-soybean yield ratios. Williamson, Saline, and Johnson counties in southern Illinois also have low ratios.

Summary

Areas where corn yields are higher relative to soybean acres are areas in which more acres are likely to shift to corn. Areas in the state where this is likely to be most profitable is in south-central Illinois and some counties in southern Illinois near the Mississippi, Ohio, and Wabash rivers.

Before deciding to switch to more corn, farmers should examine their own yield histories. There is considerable variability in corn-to-soybean ratios from farm to farm.

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