FARM ECONOMICS: *Facts & Opinions*
FARM BUSINESS MANAGEMENT
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FEFO 10-05
March 29, 2010

CHANGES IN CROP ACRES SINCE FREEDOM TO FARM

The 1995 Farm Bill eliminated many acreage restrictions, thereby allowing farmers to plant what they believe to be their most competitive crops. Evaluating acreage changes across crops will provide indications which crops have been most profitable during the era where farm legislation contains few acreage constraints. From 1990-1994 to 2005-2009, soybeans and corn grew in acres. Crops losing acres were wheat, barley, grain sorghum, corn silage, cotton, peanuts, dry edible beans, and potatoes.

Acreage changes between 1990-1944 and 2005-2009

To evaluate acreage changes, data detailing acres harvested in the United States by year were obtained from the National Agricultural Statistical Service, an agency of the U.S. Department of Agriculture. Data were collected for all crops with over one million acres harvested in 2008. There were thirteen crops with over a million acres: soybeans, corn for grain, hay, rice, wheat, barley, grain sorghum, corn for silage, cotton, peanuts, dry edible beans, potatoes, and sugarbeets (see Table 1). Acres harvested were averaged for the years 1990 through 1994 – the years preceding the passage of the 1995 Farm Bill – and 2005 through 2009.

Table 1. Changes in Acre Harvested by Crop from 1990-1994 to 2005-2009.

	Acres Harvested During Perioc		Change	
Crop	1990 - 1994	2005 - 2009	Acres	Percent
Gains in acres	Thousand acres		(,000)	
Soybeans	58,174	72,210	14,036	24%
Corn for grain	68,660	78,093	9,433	14%
	126,834	150,303	23,469	19%
Stable acres				
Hay	60,054	60,636	582	1%
Rice	2,977	3,002	25	1%
	63,031	63,639	608	1%
Declines in acres				
Wheat	62,830	50,694	(12,136)	-19%
Barley	7,329	3,323	(4,007)	-55%
Grain sorghum	9,761	6,051	(3,710)	-38%
Corn for silage	9,761	6,051	(3,710)	-38%
Cotton	12,384	10,456	(1,928)	-16%
Peanuts	1,762	1,324	(437)	-25%
Dry edible beans	1,795	1,489	(306)	-17%
Potatoes	1,353	1,084	(269)	-20%
Sugarbeets	1,406	1,189	(217)	-15%
	108,382	81,662	(26,720)	-20%

Source: U.S.D.A. National Agricultural Statistical Service.

Between the early 1990s and late 2000s, soybeans were the crop with the largest acreage increase (see Table 1). Soybeans averaged 58.2 million acres harvested in 1990-1994, increasing to 72.2 million acres in 2005-2009, an increase of 14.0 million acres. In percentage terms, the 14.0 million acre increase represented a 24% increase in

soybean acres. Corn also had a sizable increase of 9.4 million acres, or a 14% increase from 1990-1994 to 2005-2009.

Two of the thirteen crops had relatively stable acreage, with acre changes of one percent between 1990-1994 and 2005-2009. These were hay with 60.6 million acres in 2005-2009 and rice with 3.0 million acres in 2005-2009 (see Table 1).

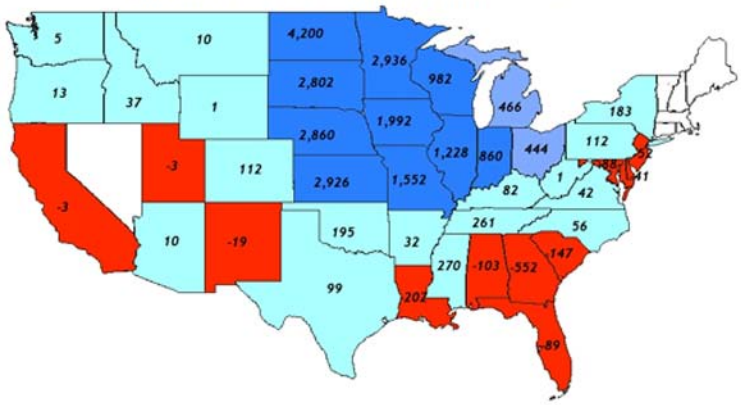
The remaining nine crops had sizable acreage reductions. Wheat had the largest reduction from 62.8 million acres in 1990-1994 to 50.7 million acres in 2005-2009, a reduction of 12.1 million acres. This 12.1 million acre decline represented a 19% decline in wheat harvested. Other crops with over a million acre decrease were barley (-4.0 million acre change), grain sorghum (-3.7 million), corn for silage (-3.7 million), and cotton (-1.9 million acre).

Over the early 1990s through late 2000s period, only soybeans and corn increased. The remaining crops had stable or declining acreages. Since soybeans and corn replaced other crops, profits from soybeans and corn likely exceeded profits from those crops that they replaced.

Geographical Dispersion of Corn and Soybean Increases

Corn and soybean acreage increases between 1990-1994 and 2005-2009 were concentrated in the Great Plains and the greater Corn Belt (see Figure 1). North Dakota had the greatest increase in the sum of both corn and soybean acres between 1990-1994 and 2005-2009. North Dakota has a 4.2 million acre increase in corn and soybean acres. State with over a 2 million acre increase in corn and soybean included Minnesota (2.9 million acre increase), Kansas (2.9 million), Nebraska (2.9 million), and South Dakota (2.9 million). States with between a 1 and 2 million acre increase included Iowa (almost 2.0 million increase), Missouri (1.6 million increase), Illinois (1.2 million increase), and Wisconsin (1.0 million). State with between a .4 and 1.0 million increase included Michigan (.5 million) and Ohio (.4 million). All states with over a .4 million corn and soybean acre increases were either in the Great Plains or the greater Corn Belt.

Figure 1. Corn and Soybean Acre Changes from 1990-1994 to 2005-2009.



For states with over .8 million increase in corn and soybeans, the four crops losing the most acres were wheat, hay, barley, and grain sorghum (see Table 2). However, crops having large losses varied by state. In North Dakota, for example, crops losing acres included wheat (-2.3 million acres) and barley (-1.3 million). In Wisconsin, hay (-1.0 million) was the crop with the largest loss. Crops with over a .2 million loss by state were:

Illinois: hay (-.4 million) and wheat (-.3 million);

Indiana: no crop had over a .2 million loss;

Iowa: hay (-.4 million);

Kansas: wheat (-2.2 million) and grain sorghum (-.4 million);

Minnesota: wheat (-.8 million), barley (-.6 million), and hay (-.3 million);

Missouri: wheat (-.6 million);

Nebraska: grain sorghum (-1.1 million) and wheat (-.3 million);

North Dakota: wheat (-2.3 million) and barley (-1.3 million);

South Dakota: wheat (-.4 million), hay (-.4 million), and barley (-.4 million); and

Wisconsin: hay (-1.0 million).

For none these states, however, did the 13 largest crops losing acres perfectly balance out gains in soybeans and corn. In Illinois, for example, acreage changes in the 13 crops between 1990-1994 and 2005-2009 left a positive .3 million acres (see Table 2). This means that .3 million acres came from some other source, most likely pasture acres.

Table 2. Change in Various Crop Acres from 1990-1994 to 2005-2009 for States with Large Increases in Corn and Soybeans Acres.

	State[1]									
	Illinois	Indiana	Iowa	Kansas	Minn.	Mo.	Nebr.	N.D.	S.D.	Wisc.
	Thousand Acres[2]									
Soybeans	38	838	1,232	1,148	1,696	806	2,100	2,899	1,742	944
Corn	1,190	22	760	1,778	1,240	746	760	1,301	1,060	38
Hay	-394	-63	-445	333	-318	482	-786	-168	-390	-1,014
Rice	0	0	0	0	0	101	0	0	0	0
Wheat	-336	-176	-13	-2,190	-811	-630	-342	-2,341	-391	145
Barley	0	0	0	-6	-624	0	-18	-1,323	-371	-44
Grain sorghum	-128	0	0	-350	0	-464	-1,132	0	0	0
Corn for silage	-27	8	-66	58	-119	-14	-98	-123	21	99
Cotton	0	0	0	54	0	61	0	0	0	0
Peanuts	0	0	0	0	0	0	0	0	0	0
Dry edible bean	0	0	0	-22	27	0	-63	158	13	-4
Potatoes	0	0	0	-22	27	0	-63	158	13	-4
Sugarbeets	0	0	0	0	76	0	-29	35	0	0
Balance[3]	344	630	1,468	780	1,195	1,088	330	596	1,698	159

[1] Abbreviated state names are Minnesota (Minn.), Missouri (Mo.), Nebraska (Nebr.), North Dakota (N.D.), South Dakota (S.D.), and Wisconsin (Wisc.).

[2] Values equal average acres from 2005 through 2009 minus average acres between 1990 through 199.

[3] Equals sum of acre changes across all crops.

Source: U.S.D.A. National Agricultural Statistical Service.

Summary

Soybean and corn had large gains in acres from 1990-1994 to 2005-2009. Wheat, barley, grain sorghum, corn for silage, and cotton experienced large acreage losses. This suggests that soybeans and corn were relatively more profitable than those crops losing acres. A number of reasons could be given for these acreages changes. On the supply side, there appears to be more improvement in soybeans and corn than in the other crops. Soybean and corn have had larger yield increases than many of the other crops losing acres. Moreover, biotechnology varieties and hybrids are widely used for soybeans and corn. Except for cotton, biotechnology seeds are not widely available for the other crops with stable or declining acres. On the demand side, new uses for soybeans and corn will account for some of the acreage changes, with biofuels being a major new use of corn.
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