in fertilizer used from 1964 to 1969, 2.6 million tons of the 4 million ton increase in the tons of fertilizer used from 1959 to 1964, and 7.2 million tons of the 11.3 million ton increase in the tons of fertilizer used from 1954 to 1969.

The decrease in the acres fertilized and tons of fertilizer used on cotton was a result of the decrease in acres of cotton harvested, while the increase in the tons of fertilizer used on hay and cropland pasture and other pasture was largely due to the increases in acres fertilized. The acreage of corn fertilized has increased slightly from 1964 to 1969, but the tonnage increased by almost one-third. The largest increase in acres fertilized and tons of fertilizer used on crops from 1964 to 1969 has been on wheat, sorghums for all purposes, soybeans, and barley.

For 1964 to 1969, the average number of pounds per acre applied to all crops increased 10 percent. The rate for corn increased by about one-third. Increases in the plant nutrient content of the fertilizers may be a more important factor in the increased productivity in crop production than changes in gross tonnage applied.

For crops in States for which comparable data are available from prior censuses, the most significant increases in the use of fertilizer occurred for sorghums and soybeans. The comparable data for five selected crops are shown in table 14.

Table 14. Acres Fertilized for Selected Crops: 1959 to 1969

	Acres fertilized[1] (1,000)			Tons (1,000)		
	1969	1964	1959	1969	1964	1959
Wheat	21,218	21,860	16,520	1,547	1,591	1,287
Sorghums	8,542	6,306	2,303	865	485	151
Soybeans for beans	7,663	4,507	2,543	831	469	257
Tobacco	586	669	647	583	612	521
Irish potatoes	1,001	957	857	525	487	443

[1]Represents totals for States for which comparable data are available for the three censuses.

Use on Irrigated and Nonirrigated Farms

There was a total of 32.1 million acres of crops fertilized on class 1-5 irrigated farms in 1969. This acreage accounted for over 20 percent of the total acres fertilized in the United States. Also, there was a total of 6.6 million tons of fertilizer used on class 1-5 irrigated farms in the United States. This was over 25 percent of the total tons of fertilizer applied in 1969. Data for fertilizer use on irrigated and nonirrigated farms are shown in the following table.

Table 15. Use of Fertilizer on Irrigated and Nonirrigated Farms: 1969

	Acres harvested	Acres irrigated	Acres fertilized	Tons of fertilizer applied: Dry	Tons of fertilizer applied: Liquid
		Irrigated farms			
United States	50,385,527	33,059,581	32,101,023	4,920,321	1,717,978
The Northeast	426,544	175,891	377,085	198,107	7,531
The North Central	10,252,965	4,853,616	6,347,683	442,227	451,601
The South	17,336,632	9,719,848	12,354,918	2,285,868	533,835
The West	22,369,395	18,310,229	13,021,340	1,994,119	725,010
		Nonirrigated farms			
United States	2,139,326,770	(X)	106,600,294	13,231,962	3,645,924
The Northeast	8,152,544	(X)	4,157,490	956,168	50,821
The North Central	143,636,265	(X)	70,642,548	7,105,258	2,575,786
The South	47,444,424	(X)	25,984,763	4,865,111	881,023
The West	14,699,727	(X)	5,815,500	305,426	138,292

Over 63 percent of the crops harvested on irrigated farms are fertilized as compared to less than 50 percent of the crops harvested on nonirrigated farms. Also, there were 413 pounds per acre of fertilizer applied to crops on irrigated farms as compared to 316 pounds per acre of fertilizer applied to nonirrigated farms in 1969. There is a substantial difference in the fertilizer application rate per acre between regions for crops on both irrigated and nonirrigated class 1-5 farms. (See table 16.) For additional information see chapter 9.

Table 16. Fertilizer Usage on Crops Harvested on Irrigated and Nonirrigated Farms: 1969

	Irrigated farms			Nonirrigated farms	
	Percent of crops irrigated	Percent of crops fertilized	Pounds of fertilizer applied per acre	Percent of crops fertilized	Pounds of fertilizer applied per acre
United States	65.6	63.7	413.6	49.8	316.7
The Northeast	41.2	88.4	1,090.7	51.0	484.4
The North Central	47.3	61.9	282.0	49.2	274.1
The South	56.1	71.3	456.5	54.8	442.3
The West	81.9	58.2	417.6	39.6	152.6

USE OF LIME AND LIMING MATERIALS

In 1969, about one out of 10 class 1-5 farms reported the use of lime and liming materials. Both the number of class 1-5 farms and the proportion of farms reporting the use of lime have decreased since 1964. The proportion of farms using lime has decreased from 19.8 to 15.0 percent. In 1969, 262 thousand class 1-5 farms reported 10.1 million acres limed and 18.7 million tons of lime used.

States in the North Central Region accounted for 42.6 percent of the acreage limed on class 1-5 farms, but because of a heavier rate of application per acre, these States account for 56.9 percent of the total tons used. The three leading States in tons of lime used were Illinois, Missouri, and Iowa. They accounted for 37.8 percent of the total tons on class 1-5 farms.

Of the 262 thousand class 1-5 farms reporting the use of lime, over one-half used less than 50 tons in 1969. About 10 percent of the farms used 500 tons or more. As shown in table 17, the distribution of farms by the tonnage of lime used varied by region.

Table 17. Percent Distribution of Farms Reporting by Tons of Lime Used: 1969

	United States	Northeast	North Central	South	West
Total	100.0	100.0	100.0	100.0	100.0
1 to 49 tons	56.5	72.5	43.4	65.8	73.0
50 to 99 tons	22.5	17.8	27.9	18.3	13.1
100 to 199 tons	13.8	7.5	18.7	10.3	8.0
200 to 499 tons	6.1	2.0	8.6	4.6	4.3
500 to 999 tons	0.8	0.2	1.1	0.7	1.1
1,000 tons and over	0.2	(1)	0.2	0.3	0.5

[1]Less than 0.05 percent.

The tons of lime and liming materials used on class 1-5 farms in 1969 were 12.9 percent less than in 1964 while the acreage limed decreased 5.5 percent. The decrease from 1964 to 1969 in tons of lime and liming materials used was largely the result of