

Certified Organic Field Crops and Hay

U.S. farmers produced field crops and hay under certified organic systems on over 1.3 million planted acres in 2001. Certified organic grain crops were grown on over 450,000 acres (app. table 3). Organic hay and silage crops were certified on over 253,600 acres in 2001 (app. table 9). Certified organic soybeans, dry beans, peas, and lentils were grown on over 211,400 acres in 2001, a 112-percent increase over the previous 4 years (app. table 5). Oilseeds were produced on over 43,700 acres (app. table 7). For the top three certified organic field crops in 2001—wheat, soybeans, and corn—Montana led for wheat and Minnesota was the top producer for corn and soybeans.

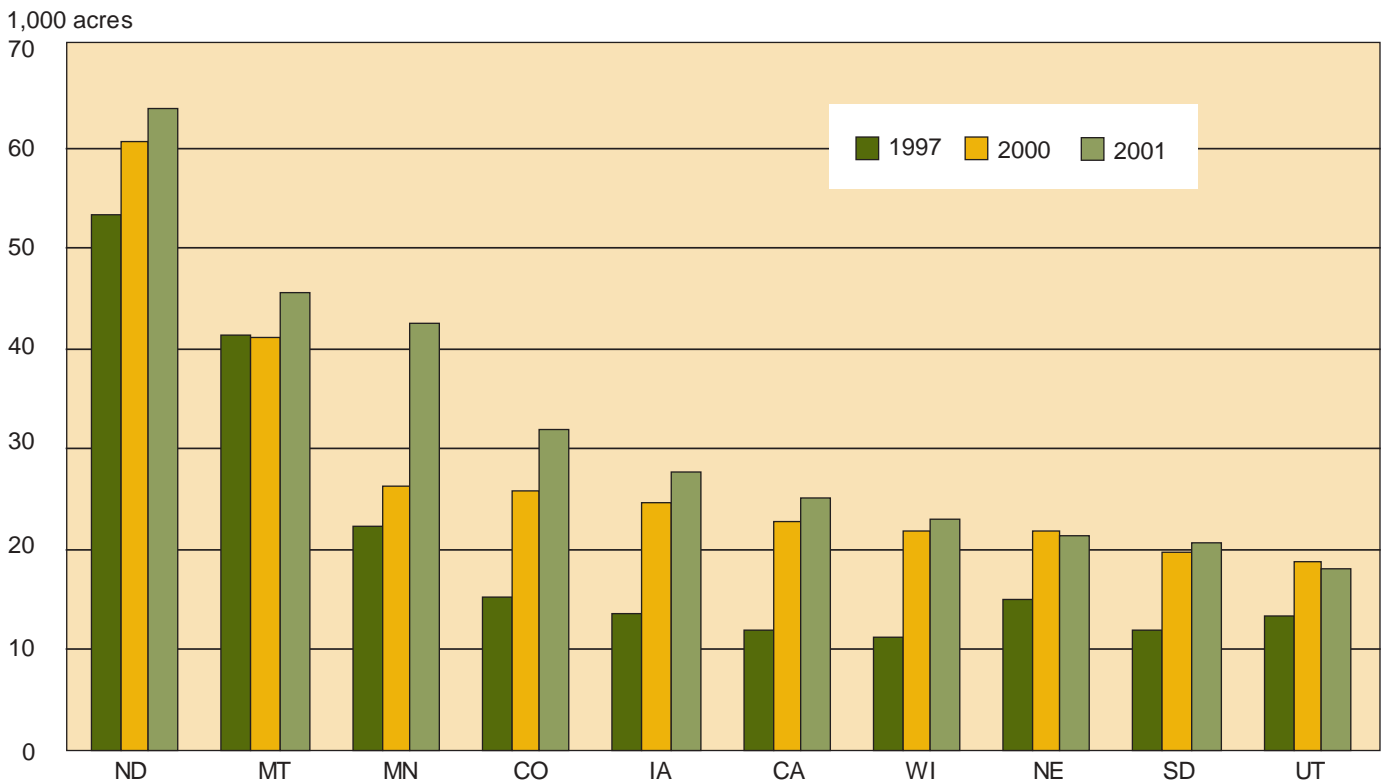
Organic farmers grow a diversity of field crops because of the importance of crop rotation in managing weed, pest, and disease cycles, as well as maintaining good soil tilth and fertility. Organic farmers frequently grow more than one crop on the same acreage during a single year—for example, a green manure or cover crop to build soil fertility and prevent soil erosion, along with a cash crop such as soybeans. Green manure and cover crop acreage is underestimated in this report because only one crop per acre is counted in each year.

Grain crops. A variety of certified organic grain crops—including wheat, corn, rice, oats, and barley—were grown in 42 States on 457,415 acres in 2001, up 10 percent from the previous year (app. tables 2-3). North Dakota led with nearly 64,000 acres in 2001 (fig. 3). Another 13 States—Arkansas, California, Colorado, Idaho, Iowa, Kansas, Minnesota, Montana, Nebraska, South Dakota, Texas, Utah, and Wisconsin—each had at least 15,000 certified organic acres of grain crops (app. table 3).

Wheat was produced under certified organic farming systems on over 194,600 acres in 2001, corn on over 93,500 acres, and oats and barley on over 30,000 acres each. Certified organic rice production expanded since 1997, with over 31,800 acres in production. Millet was grown on over 23,300 acres, and buckwheat on over 14,300 acres in 2001. Rye and spelt were grown on more than 7,000 acres each. States and private groups certified another 19,300 acres that could not be broken out into acreage for each specific crop.

Montana had the most certified organic wheat acreage, followed by North Dakota. Minnesota had the most corn and rye acreage. North Dakota had the most certified

Figure 3--Certified organic grain acreage, top 10 States



Source: Economic Research Service, USDA.

organic oats and buckwheat, and Michigan had the most acreage of spelt, a wheat substitute for those with wheat allergies. Colorado has the most millet acreage. Idaho was the leading organic barley producer and Arkansas had the most certified organic rice acreage, followed closely by California (app. table 3).

Certified organic corn acreage more than doubled from 1997 to 2001. Although U.S. farm-level organic corn prices have continued to fall every year since their high in 1996, producers received on average \$3.01 per bushel in 2001, a premium of 59 percent over conventional corn prices of \$1.89 per bushel (Bertramsen and Dobbs, 2002). The demand for organically grown corn used for feed grain strengthened as the organic livestock and poultry sector expanded between 1997 and 2001. Wheat acreage was up 55 percent from 1997 estimates, and during 2000 and 2001, average prices for organic spring wheat were almost double those of conventional spring wheat.

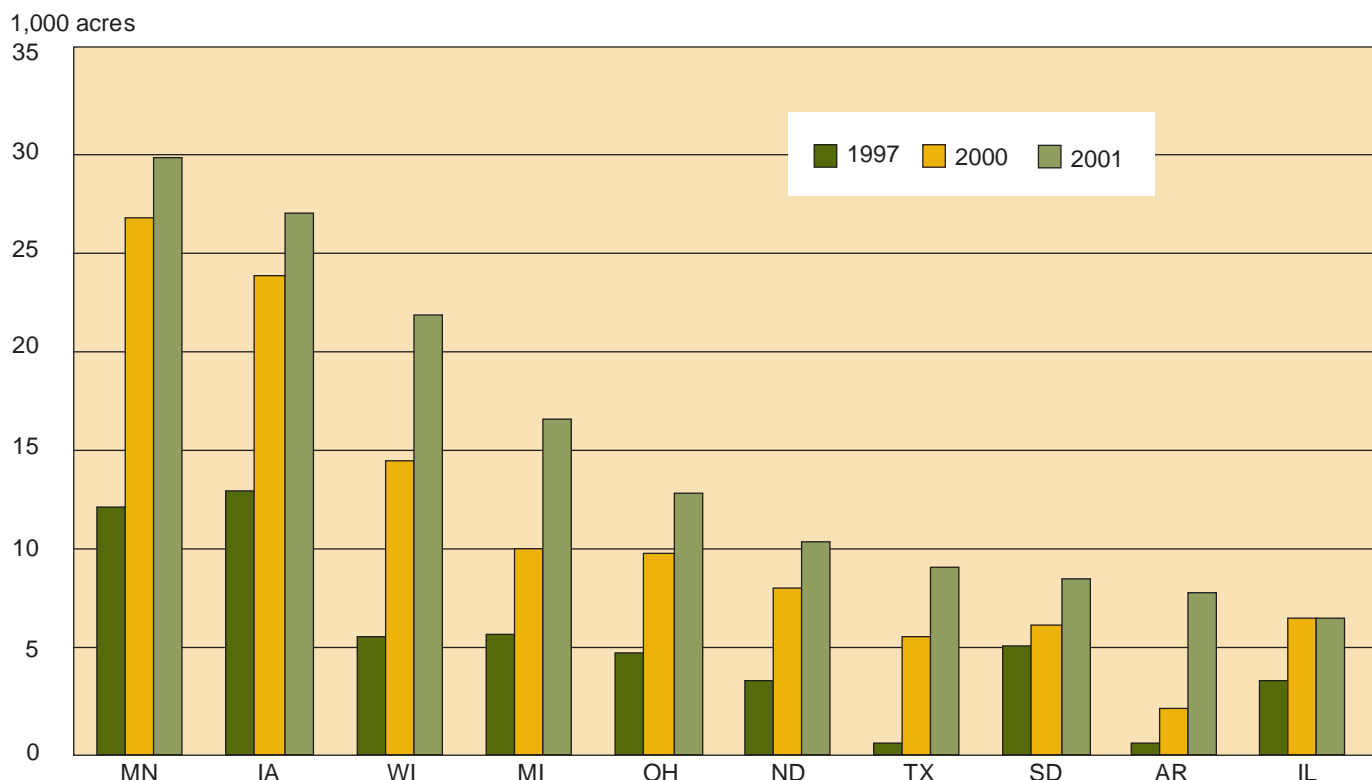
Organic millet and other specialty grains also showed substantial growth between 1997 and 2001, as demand for feed grain and food uses expanded. In the Dakotas, where much organic millet is grown, acreage devoted to millet increased as farmers seeded or reseeded fields in late spring because of poor weather conditions at the

start of the 2000 and 2001 growing seasons. Millet is often used as feed for organic beef and other livestock production, and although organic dairy cows aren't currently being raised in North Dakota, organic dairies exist in nearby States. Organic millet is also used for cereal products, flour, millet hull fillings (for pillows), and feed for house pets and birds.

Certified organic grain acreage was well under 1 percent of the U.S. total for corn, wheat, barley, oats, and rye. However, 1 percent of the rice, 4 percent of the millet, and substantial proportions of buckwheat and spelt were grown under certified organic systems in 2001. Since 1997, a number of new independent companies and large corporate entities have begun operating certified organic mills that handle specialty flours.

Soybeans, dry beans, dry peas, and lentils. U.S. growers in 32 States produced over 174,400 acres of certified organic soybeans in 2001, up 28 percent from the previous year (app. tables 4-5). Certified organic soybean acreage is more than double 1997 acreage. Six States had at least 10,000 acres of this crop in 2001, and Minnesota led with nearly 30,000 acres (fig. 4). A much higher share of organic than conventionally grown soybeans are sold for food uses.

Figure 4--Certified organic soybean acreage, top 10 States



Source: Economic Research Service, USDA

Annual organic soybean prices have fallen from a high in 1998, but certified producers still received on average more than twice the conventional prices for their crop in both 2000 and 2001 (Bertramsen and Dobbs, 2002.)

Although market outlets for the highest quality food-grade soybeans—typically the Vinton 81 and HP204 varieties—were still relatively easy to find in 2001, competition for the Japanese market and other fast-growing international export markets is likely to increase considerably over the coming decade. The use of conventional soybeans for soy-based food products in the United States could also affect market growth potential for organically grown soybeans. However, the domestic market for organically grown feed grain is expanding, and while it commands a lower price than food-grade organic soybeans, the soybean varieties used for this market are higher-yielding and may be easier to grow.

The number of States producing certified organic dry beans, lentils, and peas—and acreage for these crops—also expanded from 2000 to 2001 (app. tables 4-5). Dry beans were grown on over 15,000 acres in 2001, and Colorado had more than a third of those acres. Certified organic dry peas and lentils were grown on over 9,300 acres. North Dakota led with over 3,500 acres. Organic dry peas and lentils accounted for over 2 percent of the

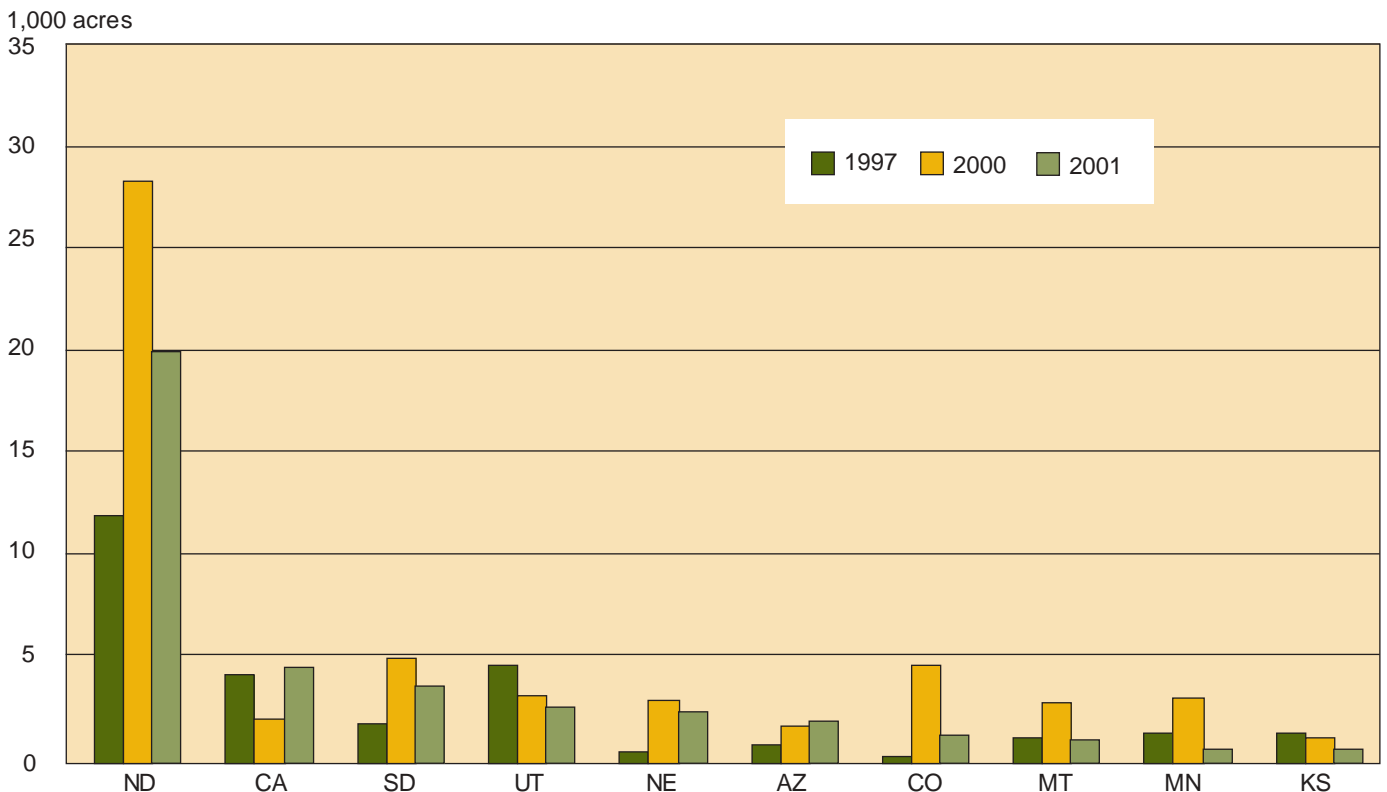
total dry pea and lentil acreage in the United States in 2001, while organic soybeans accounted for only about 0.24 percent of the total (table 4).

Certifiers reported nearly 12,500 acres of soybeans, dry peas, lentils, and other legumes that could not be broken out into acreage for each specific crop.

Oilseeds. Certified organic oilseeds—primarily flax and sunflowers—were grown in 21 States on almost 44,000 acres in 2001, down 20 percent from the previous year (app. tables 6-7). By 2001, certified organic flax acreage had surpassed sunflower acreage, and was grown on over 20,600 acres, up 157 percent from 1997 acreage. Certified organic sunflowers were grown on almost 15,300 acres in 2001, up 40 percent from 1997 acreage. North Dakota was by far the biggest producer of certified organic oilseeds, with over 16,400 acres of flax and almost 3,800 acres of sunflowers. South Dakota was the second largest grower of flax and sunflowers.

Approximately 7,700 acres of certified organic oilseeds were unclassified in 2001. California certification organizations reported 2,500 safflower acres in the other/unclassified oilseed category. Certified organic oilseed acreage dropped from 2000 to 2001 partially due

Figure 5--Certified organic flax, sunflowers, and other oilseeds, top 10 States



Source: Economic Research Service, USDA.

Table 4—Certified organic and total U.S. acreage, selected crops, 1995-2001

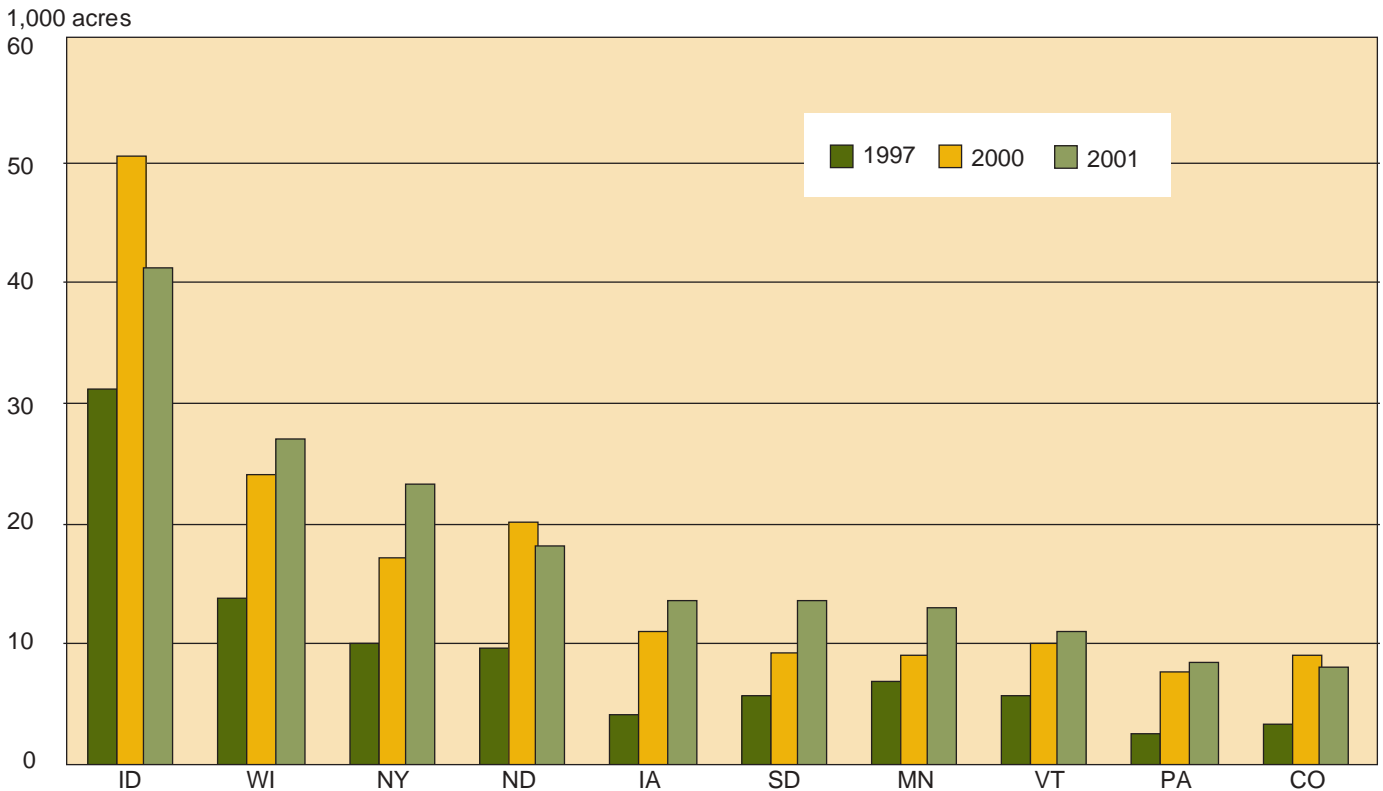
Item	Total certified organic				Change, 1997- 2001	U.S. cropland 2001 ¹	Certified organic/ total
	1995	1997	2000	2001			
	-----Acres-----				Percent	Acres	Percent
U.S. total	914,800	1,346,558	2,029,073	2,343,924	74	828,029,449	0.28
Total pasture and rangeland	276,300	496,385	810,167	1,039,090	109	461,351,095	0.23
Total cropland	638,500	850,173	1,218,905	1,302,392	53	366,678,354	0.36
Grains--							
Corn	32,650	42,703	77,912	93,551	119	75,752,000	0.12
Wheat	96,100	125,687	181,262	194,640	55	59,617,000	0.33
Oats	13,250	29,748	29,771	33,254	12	4,403,000	0.76
Barley	17,150	29,829	41,904	31,478	6	4,967,000	0.63
Sorghum	--	3,075	1,602	938	-69	--	--
Rice	8,400	11,043	26,870	31,839	188	3,132,000	1.02
Spelt	12,350	1,704	12,606	7,639	348	--	--
Millet	18,550	12,285	15,103	23,366	90	580,000	4.03
Buckwheat	13,250	7,616	10,599	14,311	88	--	--
Rye	2,900	4,365	7,488	7,056	62	1,328,000	0.53
Beans--							
Soybeans	47,200	82,143	136,071	174,467	112	73,000,000	0.24
Dry beans	--	4,641	14,010	15,080	225	1,429,900	1.05
Dry peas & lentils	5,900	5,187	10,144	9,362	80	443,537	2.11
Oilseeds--							
Flax	5,850	8,053	25,076	20,672	157	585,000	3.53
Sunflowers	14,200	10,894	19,342	15,295	40	2,653,000	0.58
Hay and silage--							
All types	84,100	126,797	231,207	253,641	100	63,511,000	0.40
Vegetables--							
Tomatoes	--	2,322	3,063	3,451	49	381,870	0.90
Lettuce	--	5,743	11,410	16,073	180	335,200	4.80
Carrots	--	3,323	5,665	4,757	43	119,640	3.98
Fruits--							
Tree nuts	--	4,908	4,468	5,883	20	814,000	0.72
Citrus	--	6,099	6,509	9,741	60	1,089,900	0.89
Apples	--	8,846	9,270	12,189	38	431,200	2.83
Grapes	--	19,299	12,575	14,532	-25	977,970	1.49
Herbs, nursery, and greenhouse--							
Herbs, culinary and medicinal	--	6,407	4,288	5,677	-11	17,041	33.32
Herbs, wildcrafted	--	83,888	36,545	8,498	-90	--	--
Other cropland--							
Cotton	32,850	9,974	15,027	11,456	15	15,787,800	0.07
Peanuts	--	2,969	2,085	4,653	57	1,543,000	0.30
Potatoes	--	4,335	5,433	7,533	74	1,267,100	0.59
Trees for maple syrup	10,200	13,858	11,965	12,030	-13	120,863	9.95
Fallow	--	31,798	57,688	72,595	128	--	--

-- = Not available.

¹ *Agricultural Statistics 2002* and ERS, *Vegetable and Melon Situation and Outlook Yearbook, 2002*.

Sources: 1995, Agrisystems International; 1997, 2000, 2001, Economic Research Service, USDA.

Figure 6--Certified organic hay and silage, top 10 States



Source: Economic Research Service, USDA.

to weather-related problems in North Dakota, but perhaps also mirroring the volatility shown in the conventional market for oilseeds.

Certified organic flax represented about 3.5 percent of the total U.S. flax acreage in 2001. Flax is rich in Omega-3 fatty acids and fiber, and is used to make oil for food use and various prepared breads and cereals. Demand in the U.S. and European Union for flax increased over the study period and organic flax prices averaged about double those for conventional flax during 1997-2001.

As health benefits of flax have captured consumer attention, farmers and food processors are experimenting with additional innovative uses of flax. For example, some farmers are modifying livestock diets to produce beef and eggs with higher levels of Omega-3 fatty acids.

Hay and silage. Hay and silage crops were grown under certified organic farming systems in over 40 States on over 253,600 acres in 2001, up nearly 10 percent from

the previous year (app. tables 8-9). Acreage for these crops in 2001 more than doubled from 1997 acreage, as the number of organic milk cows grew four-fold during this period. Despite this expansion, certified organic hay and silage crops in 2001 still represented just 0.4 percent of total U.S. acreage.

In 2001, certifiers reported more than 116,600 acres of organic alfalfa hay, 32,000 acres of haylage and silage, nearly 15,600 acres of hay and pasture, and 89,300 acres of unclassified hay and silage. Idaho was the top organic hay and silage producer, with over 39,600 acres of alfalfa hay (fig. 6). Seven other States—Iowa, Minnesota, New York, North Dakota, South Dakota, Vermont, and Wisconsin—had at least 10,000 acres each. All of these States had certified organic livestock production in 2001.

Certified organic hay and silage acreage was up almost 10 percent from 2000 to 2001, jumping 35 percent in New York, 43 percent in Minnesota, and 45 percent in South Dakota.