Working Draft

Agricultural Handbook for Vermont Counties

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Introduction

This handbook is the third in an ongoing series of agricultural data handbooks developed by The Center for Rural Studies, College of Agriculture and Life Sciences at The University of Vermont. This series is designed to facilitate public access to important indicators describing the socio-demographic, economic, cultural, and political changes within the state of Vermont. Data contained in this Agricultural Handbook for Vermont Counties (2005) was keyed to data collected by the USDA's census of agriculture (http://www.nass.usda.gov/census/) and released in subsequent Census of Agriculture reports.

Several features categorize this handbook series. The publication has been designed for ease of use and for reproduction. Tables have been designed to be as easy to read as possible and have been made as large as possible to facilitate reproduction for public use. We have analyzed and discussed key data and trends that we found of interest. It should be noted that throughout the data tables certain information may have been withheld in order to avoid disclosing individual farm data, and that other data may not have been available or applicable. Undisclosed data in the tables is notated with a (D). Not applicable or not available data is notated by (NA). In addition, it should be noted that not all of this data set is comprised of absolute figures, but is in some cases constructed through an imputed sample data set methodology developed by the USDA for this census. This means that not every table's county data will add up to equal the state totals.

Suggestions, comments, and critiques are most welcome. Please contact The Center for Rural Studies at 802-656-3021 or on the web at http://crs.uvm.edu/ with any comments, questions or further data requests. We can also be reached by regular mail at:

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Highlights of 1992 and 2002 Agricultural Census Data for Vermont

Key Statistics	**1992**	**2002**
Number of Farms	5,436	6,571
Market Value of Ag Products Sold	$415,253,000	$473,065,000
Net cash return from ag sales	$71,810,000	$101,678,000
Harvested crop acreage	477,020	454,699
Dairy cow numbers	168,473	150,626
Number of dairy farms	2,373	1,508
All crops (including vegetable and nursery) as a percent of the total market value of agricultural products	9%	15%

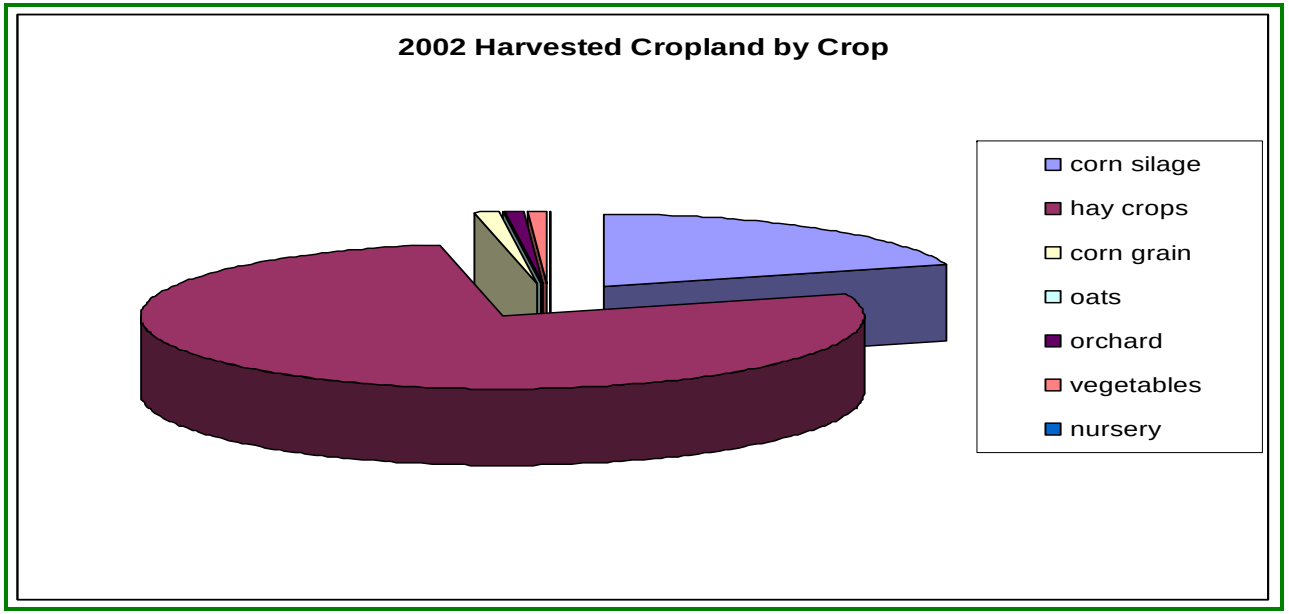


Table 1. Historical Profile of Vermont Agriculture, 1850-2002

Table 1. Historical profile of Vermont Agriculture, 1850-2002

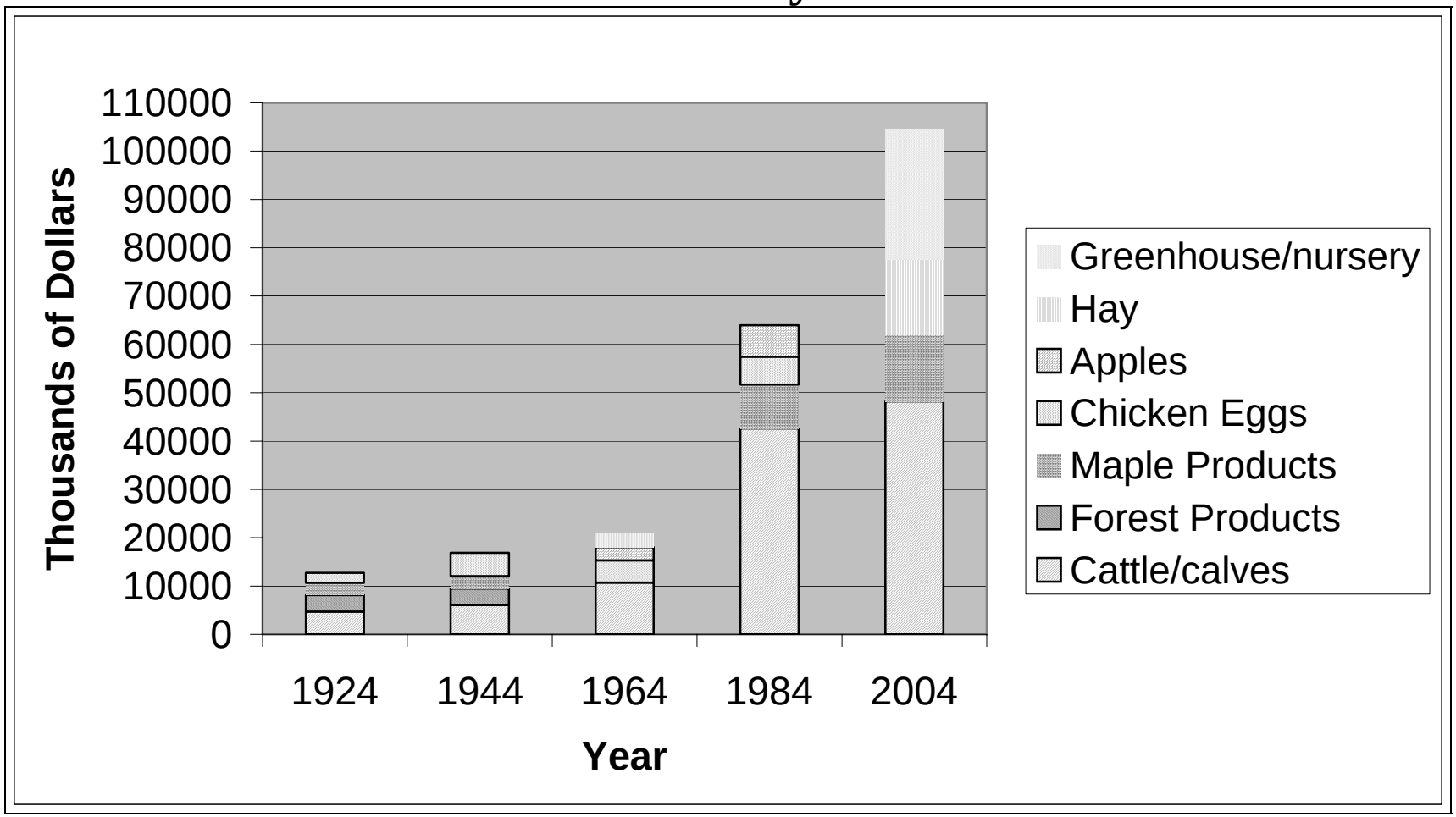
Year	Census Population Estimate	Number of Farms	Total farm acreage	Total cropland acreage	Percent of all VT land in farms*	Percent of land in farms in cropland	Percent of 1880 farms	Percent of 1880 acres in farms	Average acres per farm
2002	616,500	6,571	1,244,909	567,509	21.0%	45.6%	18.5%	25.5%	189
1992	570,115	5,436	1,278,525	658,765	21.6%	51.5%	15.3%	26.2%	235
1987	548,000	5,887	1,407,868	707,970	23.8%	50.3%	16.6%	28.8%	240
1982	516,000	6,315	1,574,441	772,055	26.6%	49.0%	17.8%	32.2%	249
1978	498,000	5,852	1,633,049	806,244	27.6%	49.4%	16.5%	33.4%	279
1974	473,000	5,906	1,667,561	779,344	28.2%	46.7%	16.6%	34.2%	282
1970	444,732	6,874	1,915,520	836,246	32.4%	43.7%	19.4%	39.2%	279
1960	389,881	12,099	2,945,343	1,028,203	49.8%	34.9%	34.1%	60.3%	243
1950	377,747	19,043	3,527,381	1,555,578	59.6%	44.1%	53.6%	72.2%	185
1940	359,231	23,582	3,666,835	1,448,086	61.9%	39.5%	66.4%	75.1%	155
1930	359,910	24,898	3,896,097	1,402,186	65.8%	36.0%	70.1%	79.8%	156
1920	352,428	29,075	4,235,811	1,691,595	71.6%	39.9%	81.9%	86.8%	146
1910	355,956	32,709	4,633,577	1,633,965	78.3%	35.3%	92.1%	94.9%	142
1900	343,641	33,104	4,724,440	2,126,624	79.8%	45.0%	93.2%	96.8%	143
1890	332,407	32,573	4,395,646	2,655,943	74.3%	60.4%	91.7%	90.0%	135
1880	332,286	35,522	4,882,588	3,286,461	82.5%	67.3%	100.0%	100.0%	137
1870	329,760	33,827	4,528,804	3,073,257	76.5%	67.9%	95.2%	92.8%	134
1860	315,098	31,566	4,274,414	2,823,157	72.2%	66.0%	88.9%	87.5%	135
1850	314,120	29,763	4,125,822	2,601,409	69.7%	63.1%	83.8%	84.5%	139

Source: US Census http://www.census.gov/
** Calculated using the 1990 Census of Population and Housing total acreage for VT of 5,919,552*

Graph 1. Cash Receipts Over Time of Vermont's Top Four Agricultural Commodities After Dairy

Dairy dominated Vermont’s agricultural commodities for the data points presented on the following page. After removing dairy from the data set it is easier to see trends occurring in the next top four commodities for the selected years. It should also be noted that data for the greenhouse/nursery commodities began being collected in 1992 and thus is not presented in the earlier data sets.

Graph 1. Cash Receipts Over Time of Vermont's Top Four Agricultural Commodities After Dairy



II. Farm Characteristics

Table 2. Farms Inventory

In the decade from 1992 to 2002, farm numbers in Vermont rose 20.9%, an increase of 1,135 farms to a total of 6,571 farms as of 2002. Because the total acreage in farms dropped modestly (-2.9%), the average size of a farm was 189 acres in 2002, down from 235 acres in1992, a 19.6% decline. This data indicates that more people are farming smaller parcels in Vermont in 2002 compared to 10 years earlier.

The greatest percentage increase in farm numbers occurred in Bennington (48.1%), Windham (47%), Orange (41.7%), Lamoille (39.6%) and Windsor (38%). The greatest absolute increases in farm numbers occurred in Orange (200), Windsor (192), Rutland (130), Windham (127) and Washington (95) Counties. The only county to see a decline in farm numbers was Addison (7 fewer farms, a decline of 1%).

The decline in acres of land in farms was modest, a drop of less than 34,000 acres out of about 1.2 million acres total. Some areas of the state experienced more rapid and more dramatic declines in farm acreage than others as a result of other pressures on land use patterns. For example, Grand Isle County experienced a 34% decline in farm acres, a loss of 8,559 acres. As a percent of land in farming, the other Counties to lose more than ten percent of farmland were Caledonia (-12.8%) and Orleans (-11.5%). The greatest losses of farmland (in terms of numbers of acres taken out of farming occurred in the following Counties: Orleans (-17,263), Addison (-16,301), Franklin (-13,388), Caledonia (-12,386), and Rutland (-11,471). These farmland losses were offset by sizeable increases in acres of land in farms in the following Counties: Windham (17,609), Orange (17,051), Lamoille (12,472) and Bennington (7,444).

The largest average farms by acreage are in the dairy Counties of Addison (286), Franklin (247), and Orleans (227). The smallest average farmland holdings are in Washington (127), Windsor (129), Windham (155), Orange and Chittenden Counties (162 each).

Table 2. Farms inventory

	Number of farms			Acres of land in farms			Average size of farms (Acres)		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	683	676	-1.0%	209,677	193,376	-7.8%	307	286	-6.8%
Bennington	154	228	48.1%	33,682	41,126	22.1%	219	180	-17.8%
Caledonia	430	505	17.4%	96,704	84,318	-12.8%	225	167	-25.8%
Chittenden	405	473	16.8%	82,849	76,679	-7.4%	205	162	-21.0%
Essex	74	98	32.4%	17,710	19,838	12.0%	239	202	-15.5%
Franklin	728	770	5.8%	203,503	190,115	-6.6%	280	247	-11.8%
Grand Isle	108	99	-8.3%	24,848	16,289	-34.4%	230	165	-28.3%
Lamoille	227	317	39.6%	41,348	53,820	30.2%	182	170	-6.6%
Orange	480	680	41.7%	93,364	110,415	18.3%	195	162	-16.9%
Orleans	549	583	6.2%	149,503	132,240	-11.5%	272	227	-16.5%
Rutland	493	623	26.4%	132,674	121,203	-8.6%	269	195	-27.5%
Washington	330	425	28.8%	58,891	53,942	-8.4%	178	127	-28.7%
Windham	270	397	47.0%	43,987	61,596	40.0%	163	155	-4.9%
Windsor	505	697	38.0%	89,785	89,952	0.2%	178	129	-27.5%
Vermont	5,436	6,571	20.9%	1,278,525	1,244,909	-2.6%	235	189	-19.6%

Source: 1992 and 2002 USDA Census of Agriculture

Table 3. Farms by Size

During the last decade, there were dramatic increases in farms over 1,000 acres (up 72%) and those under 50 acres (up 115%). The more traditionally sized farms found in the middle 180 to 999 acre category declined approximately 22%. Vermont farmers appear to be making the decision either to grow by enlarging their farms or operate more intensively on small land bases.

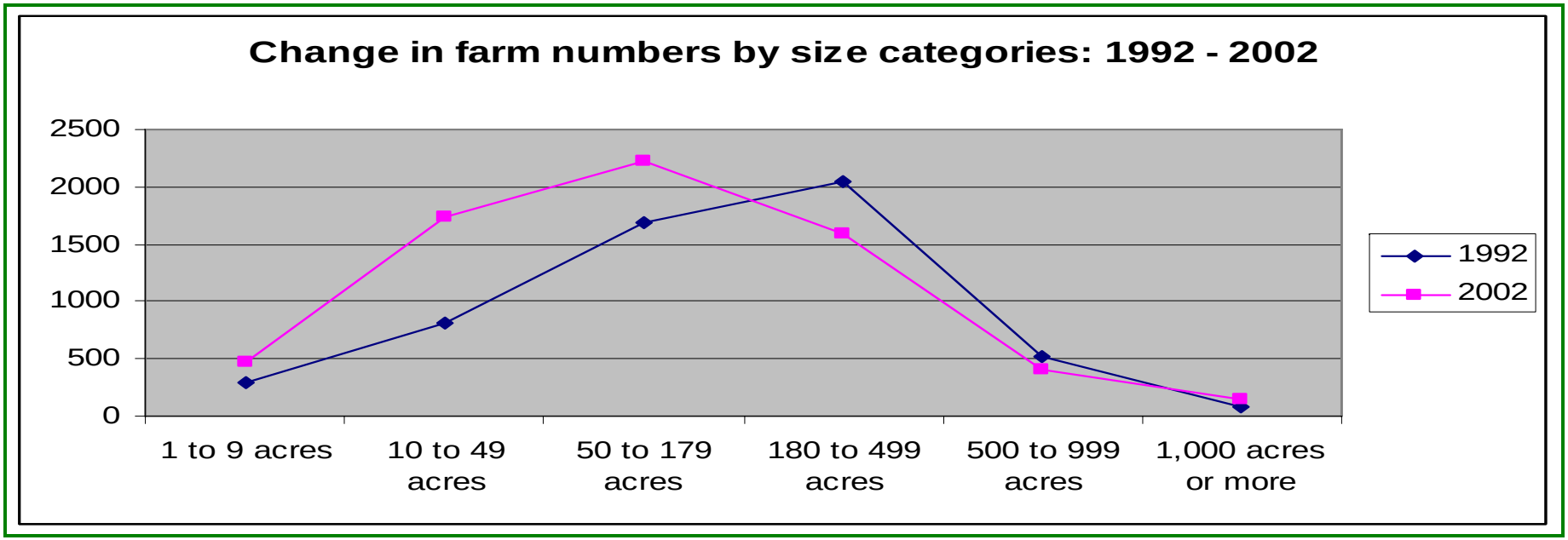


Table 3. Farms by Size

	1 to 9 acres			10 to 49 acres			50 to 179 acres			180 to 499 acres			500 to 999 acres			1,000 acres or more		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	25	48	92.0%	101	167	65.3%	139	170	22.3%	291	180	-38.1%	105	66	-37.1%	22	45	104.5%
Bennington	18	33	83.3%	36	69	91.7%	46	64	39.1%	40	42	5.0%	10	13	30.0%	4	7	75.0%
Caledonia	12	20	66.7%	52	135	159.6%	154	194	26.0%	168	118	-29.8%	42	36	-14.3%	2	2	0.0%
Chittenden	36	47	30.6%	82	143	74.4%	126	153	21.4%	118	94	-20.3%	36	26	-27.8%	7	10	42.9%
Essex	8	3	-62.5%	8	28	250.0%	21	33	57.1%	28	22	-21.4%	6	11	83.3%	3	1	-66.7%
Franklin	24	30	25.0%	69	164	137.7%	192	241	25.5%	345	244	-29.3%	85	63	-25.9%	13	28	115.4%
Grand Isle	10	10	0.0%	21	25	19.0%	21	35	66.7%	39	23	-41.0%	17	6	-64.7%	0	0	0%
Lamoille	12	27	125.0%	47	67	42.6%	71	121	70.4%	84	83	-1.2%	12	16	33.3%	1	3	200.0%
Orange	16	46	187.5%	64	162	153.1%	186	265	42.5%	187	174	-7.0%	24	26	8.3%	3	7	133.3%
Orleans	16	18	12.5%	48	121	152.1%	165	200	21.2%	246	181	-26.4%	64	51	-20.3%	10	12	20.0%
Rutland	38	49	28.9%	71	161	126.8%	142	213	50.0%	165	139	-15.8%	66	48	-27.3%	11	13	18.2%
Washington	24	30	25.0%	63	131	107.9%	113	170	50.4%	114	83	-27.2%	12	8	-33.3%	4	3	-25.0%
Windham	22	48	118.2%	60	134	123.3%	99	124	25.3%	74	57	-23.0%	12	23	91.7%	3	11	266.7%
Windsor	31	68	119.4%	85	231	171.8%	217	233	7.4%	140	146	4.3%	29	13	-55.2%	3	6	100.0%
Vermont	292	477	63.4%	807	1,738	115.4%	1,692	2,216	31.0%	2,039	1,586	-22.2%	520	406	-21.9%	86	148	72.1%

Source: 1992 and 2002 USDA Census of Agriculture

Table 4. Farm Valuation

Real estate values have appreciated substantially in the past decade, with the greatest impact on agriculture being felt in the north and western parts of the state. Rutland County experienced the greatest percentage change in farmland value with a 42.8% increase. Lamoille County followed closely behind with a 40.9% increase in average value of real estate per farm. Orleans, Windsor, Franklin, Addison and Grand Isle Counties all had average per farm value increases of around 30% or more, and all exceeded the average increase in the state as a whole.

On a per acre basis the most dramatic increases in farmland values were in Rutland (+96%), Windsor (+95%) and Grand Isle (+83%) Counties. The lowest per acre increases were in Bennington, Chittenden and Windham Counties.

Surprisingly, the average value of land and buildings on farms declined 23% in Chittenden County. Presumably this is a result of more small-scale agricultural enterprises getting established in Chittenden County along with a decline in dairy production there. As a result, the average amount of real estate holdings declined on a per farm basis. The average value of farmland in Chittenden County on a per acre basis increased nearly 22%, less than half the rate of increase across the rest of the state.

Machinery and equipment investments are highest in the three dairy Counties and Grand Isle. The average investment per farm was over $100,000 in Addison, Franklin and Grand Isle Counties and about $85,000 in Orleans County.

Table 4. Farm Valuation

	Estimated market value of land and buildings						Estimated market value of all machinery and equipment		
	Average per farm (dollars)			Average per acre (dollars)			Average per farm (dollars)		
	1992	2002	% Change	1992	2002	% Change	1992	2002	% Change
Addison	365,488	474,864	29.9%	1,125	1,795	59.6%	73,316	104,007	41.9%
Bennington	396,133	372,842	-5.9%	1,708	1,718	0.6%	40,427	52,184	29.1%
Caledonia	256,994	307,705	19.7%	1,202	2,013	67.5%	43,283	57,188	32.1%
Chittenden	437,301	335,682	-23.2%	2,027	2,466	21.7%	37,839	56,069	48.2%
Essex	248,429	278,089	11.9%	1,038	1,417	36.5%	53,927	52,340	-2.9%
Franklin	293,386	391,243	33.4%	1,064	1,521	43.0%	69,808	102,269	46.5%
Grand Isle	391,560	504,156	28.8%	1,738	3,182	83.1%	70,306	101,040	43.7%
Lamoille	235,037	331,173	40.9%	1,312	2,045	55.9%	41,730	46,418	11.2%
Orange	267,669	318,322	18.9%	1,309	1,838	40.4%	45,794	41,066	-10.3%
Orleans	285,750	390,921	36.8%	1,077	1,536	42.6%	56,347	84,936	50.7%
Rutland	341,776	488,173	42.8%	1,341	2,632	96.3%	46,233	56,757	22.8%
Washington	253,111	302,318	19.4%	1,466	2,384	62.6%	34,363	38,080	10.8%
Windham	378,947	397,796	5.0%	1,990	2,442	22.7%	43,372	61,718	42.3%
Windsor	324,043	433,007	33.6%	1,815	3,544	95.3%	30,810	49,394	60.3%
Vermont	318,131	386,695	21.6%	1,342	2,051	52.8%	50,911	66,094	29.8%

Source: 1992 and 2002 USDA Census of Agriculture

III. Market Value of Agricultural Products

Table 5. Farm Expenses and Income

Production expenses per farm were highest in the three dairy Counties of Franklin ($95,000), Addison ($90,000) and Orleans ($51,000).

The greatest rates of change in farm expenses were recorded in Windsor (+72%), Windham (+62%), and Orange (+60%) Counties.

Since Average Expenses per Farm Unit can be used as a proxy to identify the size of individual farm operations, the largest farms in the state are in Addison, Franklin, Orleans and Grand Isle Counties. Meanwhile the smallest average farm sizes are found in Windsor, Washington, Bennington, Rutland and Lamoille Counties.

Productivity of farming regions is measured by the net cash return from agricultural sales for the whole county. By this measure, Franklin, Addison, and Orleans Counties far outrank all other regions of the state. In fact the net cash return from agricultural sales is almost as high in these three Counties ($68 million) as in all the rest of the state combined ($74 million).

The most profitable farms, as measured by net cash return from agricultural sales per farm unit, were in the large dairy producing areas of Addison, Franklin, and Orleans Counties.

Profitability increased most dramatically in Chittenden (+151%), Essex (+62%), and Grand Isle (+52%) Counties followed by the three dairy Counties of Addison, Orleans, and Franklin. Profitability declined in Windsor (the only county to have negative net cash farm returns in both 1992 and 2002), Lamoille, Rutland and Bennington Counties.

Table 5. Farm Expenses and Income

	Production expenses						Net cash income of operation					
	Total production expenses (Thousands of dollars)			Average expenses per farm unit			Net cash return from agricultural sales (Thousands of dollars)			Average net cash return from agricultural sales per farm unit		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	76,433	90,315	18.2%	111,744	133,405	19.4%	17,205	24,567	42.8%	25,154	36,287	44.3%
Bennington	6,009	8,356	39.1%	38,769	36,649	-5.5%	667	869	30.3%	4,306	3,813	-11.4%
Caledonia	19,317	21,577	11.7%	45,028	42,391	-5.9%	4,060	5,867	44.5%	9,465	11,527	21.8%
Chittenden	18,377	22,682	23.4%	45,262	47,852	5.7%	2,328	6,834	193.6%	5,733	14,418	151.5%
Essex	5,221	5,662	8.4%	70,560	60,880	-13.7%	686	1,396	103.5%	9,269	15,010	61.9%
Franklin	74,338	94,995	27.8%	102,253	123,853	21.1%	102,253	27,469	-73.1%	26,019	35,814	37.6%
Grand Isle	7,934	8,657	9.1%	73,463	87,446	19.0%	745	1,038	39.3%	6,902	10,484	51.9%
Lamoille	11,330	12,878	13.7%	49,692	39,993	-19.5%	2,660	2,144	-19.4%	11,665	6,659	-42.9%
Orange	20,003	32,092	60.4%	41,501	47,333	14.1%	4,038	6,011	48.9%	8,378	8,865	5.8%
Orleans	43,324	51,146	18.1%	78,771	88,335	12.1%	11,208	16,271	45.2%	20,379	28,103	37.9%
Rutland	22,802	23,951	5.0%	46,251	38,383	-17.0%	5,787	5,237	-9.5%	11,738	8,393	-28.5%
Washington	10,845	14,249	31.4%	32,963	33,685	2.2%	1,720	2,453	42.6%	5,229	5,799	10.9%
Windham	11,662	18,875	61.9%	43,191	47,186	9.2%	1,796	3,291	83.2%	6,654	8,226	23.6%
Windsor	12,888	22,283	72.9%	25,623	31,697	23.7%	-9	-1,769	19555.6%	-17	-2,517	14705.9%
Vermont	340,482	427,717	25.6%	62,612	65,042	3.9%	71,810	101,678	41.6%	13,205	15,462	17.1%

Source: 1992 and 2002 USDA Census of Agriculture

Table 6. Farms by Value of Sales

In 2002, 41% of all farms had sales of less than $2,500 and 18% of farms had sales of more than $100,000. The remaining 41% of farms fall in the middle categories of sales between $2,500 and $100,000.

There was a 102% increase in the number of farms in the lowest category of sales (less than $2,500). Altogether, there were 1,750 more farms in 2002 with annual sales below $50,000 than there were in 1992.

The number of farms in the two highest sales categories ($50,000 to $99,999 and more than $100,000) had declines of 44.6% and 20.3%, respectively. There were 615 fewer farms with sales in excess of $50,000 in 2002 than existed in 1992.

This data does not reveal the percentage of total agricultural production by farms of various sizes. While the majority of farms fall in the smallest value of sales categories, it is likely that the majority of total agricultural sales occur on farms with sales in excess of $100,000. In the future, more categories above the $100,000 thresh hold and fewer categories below that level would be more revealing about the range and scope of individual farm sizes and their contribution to the total value of agricultural production in the state.

Table 6. Farms by Value of Sales

	Less than $2,500			$2,500 to $4,999			$5,000 to $9,999			$10,000 to $24,999			$25,000 to $49,999			$50,000 to $99,999			$100,000 or more		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	110	227	106.4%	40	51	27.5%	49	51	4.1%	56	44	-21.4%	29	42	44.8%	84	45	-46.4%	315	216	-31.4%
Bennington	57	120	110.5%	22	22	0.0%	21	17	-19.0%	17	34	100.0%	7	12	71.4%	10	8	-20.0%	20	15	-25.0%
Caledonia	111	204	83.8%	55	57	3.6%	53	54	1.9%	24	59	145.8%	29	27	-6.9%	72	32	-55.6%	86	72	-16.3%
Chittenden	111	198	78.4%	56	60	7.1%	61	37	-39.3%	34	54	58.8%	19	24	26.3%	48	33	-31.3%	76	67	-11.8%
Essex	20	38	90.0%	5	17	240.0%	6	12	100.0%	9	3	-66.7%	2	6	200.0%	12	6	-50.0%	20	16	-20.0%
Franklin	83	217	161.4%	38	66	73.7%	57	53	-7.0%	41	72	75.6%	42	34	-19.0%	107	58	-45.8%	360	270	-25.0%
Grand Isle	20	43	115.0%	9	8	-11.1%	12	9	-25.0%	12	5	-58.3%	7	6	-14.3%	17	5	-70.6%	31	23	-25.8%
Lamoille	62	137	121.0%	19	31	63.2%	32	31	-3.1%	18	31	72.2%	10	25	150.0%	39	23	-41.0%	47	39	-17.0%
Orange	131	296	126.0%	45	79	75.6%	59	69	16.9%	51	58	13.7%	42	40	-4.8%	63	43	-31.7%	89	95	6.7%
Orleans	76	152	100.0%	40	55	37.5%	36	76	111.1%	46	56	21.7%	45	51	13.3%	114	50	-56.1%	192	143	-25.5%
Rutland	149	306	105.4%	50	58	16.0%	51	51	0.0%	36	53	47.2%	36	43	19.4%	61	34	-44.3%	110	78	-29.1%
Washington	113	196	73.5%	51	44	-13.7%	41	44	7.3%	33	55	66.7%	25	34	36.0%	31	19	-38.7%	36	33	-8.3%
Windham	100	188	88.0%	36	46	27.8%	29	31	6.9%	27	46	70.4%	20	20	0.0%	17	14	-17.6%	41	52	26.8%
Windsor	183	351	91.8%	85	105	23.5%	60	75	25.0%	63	63	0.0%	37	32	-13.5%	35	23	-34.3%	42	48	14.3%
Vermont	1,326	2,673	101.6%	551	699	26.9%	567	610	7.6%	467	633	35.5%	350	396	13.1%	710	393	-44.6%	1,465	1,167	-20.3%

Source: 1992 and 2002 USDA Census of Agriculture

Table 7. Market Value of Agricultural Products Sold

Not surprisingly, market value of agricultural products is greatest in the dairy Counties of Franklin, Addison and Orleans Counties. Also not surprisingly, market value of agricultural products is lowest in Essex and Bennington Counties. Livestock sales exceed $100 million in Franklin County and stand at $95 million and $54 million in Addison and Orleans Counties, respectively. Value of livestock sales have increased most dramatically in Franklin, Orange and Addison Counties, while declines have been experienced in Lamoille, Rutland, Caledonia, and Washington Counties.

The greatest changes in market value of agricultural product sales occurred in Chittenden County (+31%), Windham County (+30%), and Orange County (+29%), presumably attributable to growing sales of crops including vegetable, greenhouse and nursery growth. Sales of all crops exceed $6 million per year in the above three Counties as well as Addison and Franklin Counties.

As a percentage of the total market value of agricultural products, livestock products are most concentrated in Orleans, Franklin and Addison Counties (all at or above 90% of all sales represented by livestock sales), and lowest in Windham, Chittenden, Windsor, and Bennington Counties (all at or above 30% of all sales represented by crop sales).

For the state in 2002, livestock products represent 85% of the market value of agricultural products sold and all crops represent 15% of agricultural sales. In 1992, livestock products were 91% and all crops were 9% of total agricultural sales. This change denotes a substantial increase in the relative value and importance of crops (primarily vegetables and nursery crops) as a percentage of the total market value of agricultural products.

Table 7. Market Value of Agricultural Products Sold

	Thousands of dollars			Average per farm (Dollars)			All crops incl. greenhouse, nursery (Thousands of dollars)			Livestock, poultry, and their products (Thousands of dollars)		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	93,598	105,923	13.2%	137,039	156,691	14.3%	7,930	11,299	42.5%	85,668	94,624	10.5%
Bennington	6,685	7,818	16.9%	43,412	34,292	-21.0%	1,530	2,395	56.5%	5,156	5,424	5.2%
Caledonia	24,572	23,789	-3.2%	57,145	47,107	-17.6%	2,033	4,047	99.1%	22,539	19,742	-12.4%
Chittenden	21,306	28,109	31.9%	52,607	59,427	13.0%	4,426	10,369	134.3%	16,880	17,740	5.1%
Essex	5,907	6,790	14.9%	79,829	69,283	-13.2%	497	969	95.0%	5,410	5,821	7.6%
Franklin	94,107	115,435	22.7%	129,268	149,915	16.0%	1,957	6,885	251.8%	92,150	108,550	17.8%
Grand Isle	8,765	9,236	5.4%	81,157	93,292	15.0%	1,280	1,464	14.4%	7,485	7,772	3.8%
Lamoille	13,503	13,732	1.7%	59,482	43,319	-27.2%	835	3,772	351.7%	12,668	9,961	-21.4%
Orange	24,760	32,008	29.3%	51,584	47,070	-8.8%	2,472	6,078	145.9%	22,288	25,929	16.3%
Orleans	54,845	57,340	4.5%	99,899	98,354	-1.5%	1,405	3,246	131.0%	53,439	54,094	1.2%
Rutland	27,347	23,987	-12.3%	55,470	38,503	-30.6%	2,337	4,127	76.6%	25,010	19,860	-20.6%
Washington	12,756	14,739	15.5%	38,654	34,680	-10.3%	1,609	3,880	141.1%	11,147	10,859	-2.6%
Windham	14,086	18,321	30.1%	52,170	46,150	-11.5%	4,125	7,652	85.5%	9,961	10,669	7.1%
Windsor	13,017	15,838	21.7%	25,775	22,723	-11.8%	3,048	5,400	77.2%	9,969	10,438	4.7%
Vermont	415,253	473,065	13.9%	76,389	71,993	-5.8%	35,483	71,583	101.7%	379,770	401,482	5.7%

Source: 1992 and 2002 USDA Census of Agriculture

IV. Operator Characteristics

Table 8. Farm Operator Characteristics

Table 8. Farm Operator Characteristics

The total number of farm operations in Vermont where farming is the primary activity of the operator has remained relatively stable at approximately 3,500 farms. Over the last decade, this number has declined by less than 1%.

On the other hand, the number of operations where the principal operator works at least some days off the farm has increased nearly 50%, with most of this increase coming from operations run by part-time farmers working more than 200 days off the farm (such farms increasing more than 76%).

The greatest increase in operations run as the primary occupation of the operator has occurred in Bennington and Windham Counties (62% and 31%, respectively). The number of farms where farming is the primary occupation of the operator is greatest in Franklin (504), Addison (405), Orleans (395), Rutland (312), Windsor (311), and Orange (304) Counties.

Decreases in farms run as the primary occupation of the operator have occurred in Grand Isle, Addison, Franklin, Caledonia, Orleans, and Orange Counties.

The greatest number of part-time farms (as measured by principal operator working 200 or more days off the farm) are in Orange (301), Rutland (268), Franklin (242), and Windsor (240) Counties.

Table 8. Farm Operator Characteristics

	Operators by primary occupation						Principal operator by days worked off farm					
	Farming			Other			Any days worked off farm			200 days or more off farm		
	1992	2002	% Change	1992	2002	% Change	1992	2002	% Change	1992	2002	% Change
Addison	499	405	-18.8%	184	271	47.3%	236	316	33.9%	129	208	61.2%
Bennington	80	130	62.5%	74	98	32.4%	80	122	52.5%	53	99	86.8%
Caledonia	271	250	-7.7%	159	255	60.4%	203	275	35.5%	114	193	69.3%
Chittenden	220	222	0.9%	185	251	35.7%	192	280	45.8%	123	192	56.1%
Essex	50	51	2.0%	24	47	95.8%	23	53	130.4%	14	29	107.1%
Franklin	562	504	-10.3%	166	266	60.2%	238	366	53.8%	129	242	87.6%
Grand Isle	78	52	-33.3%	30	47	56.7%	42	49	16.7%	26	37	42.3%
Lamoille	142	150	5.6%	85	167	96.5%	113	180	59.3%	64	131	104.7%
Orange	309	304	-1.6%	171	376	119.9%	225	408	81.3%	122	301	146.7%
Orleans	426	395	-7.3%	123	188	52.8%	200	264	32.0%	91	138	51.6%
Rutland	278	312	12.2%	215	311	44.7%	257	376	46.3%	148	268	81.1%
Washington	170	210	23.5%	160	215	34.4%	167	239	43.1%	100	152	52.0%
Windham	145	190	31.0%	125	207	65.6%	151	223	47.7%	85	144	69.4%
Windsor	272	311	14.3%	233	386	65.7%	275	391	42.2%	146	240	64.4%
Vermont	3,502	3,486	-0.5%	1,934	3,085	59.5%	2,402	3,542	47.5%	1,344	2,374	76.6%

Source: 1992 and 2002 USDA Census of Agriculture

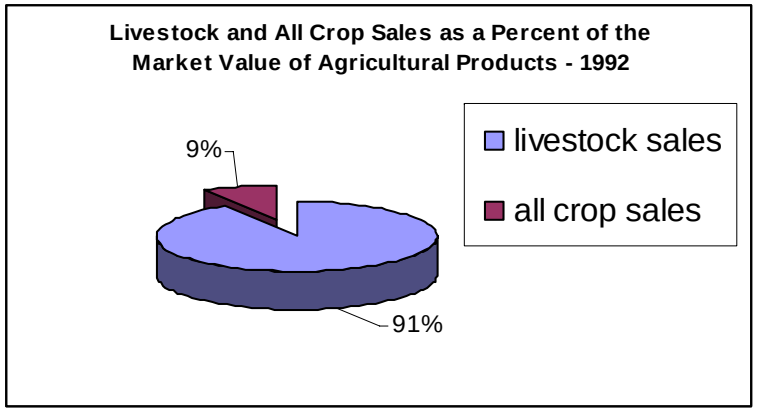
V. Cropland and Crops Harvested Characteristics

Table 9. Croplands inventory

Total cropland inventory in the state has declined nearly 14% in the last decade by 91,256 acres. Harvested cropland acreage has declined less dramatically with 22,300 fewer acres harvested in 2002 compared to 1992. Of this net loss, 95% (-21,300 acres) has taken place from Grand Isle south to Rutland County in the Champlain Valley region of the state.

The greatest absolute losses of total cropland acreage have occurred in Addison (-17,500 acres), Orleans, (-15,900 acres), Rutland (-11,600 acres) and Chittenden (-10,500 acres) Counties. Only Orange County saw an increase in cropland acreage with an addition of 2,900 acres. Harvested cropland acreage remained greatest in Addison (107,000 acres), Franklin (81,000 acres) and Orleans (53,800 acres) Counties.

The highest percentage loss of harvested cropland over the decade occurred in Grand Isle (-35%), Washington (-16%), Chittenden (-14.7%), and Rutland (-13.9%) Counties. Apparently, the same well-drained, limited slope land that is most productive for agriculture is also the most desirable for non-farm development, and the greatest losses of such cropland have occurred in areas of the state with high development pressures for land uses other than farming.



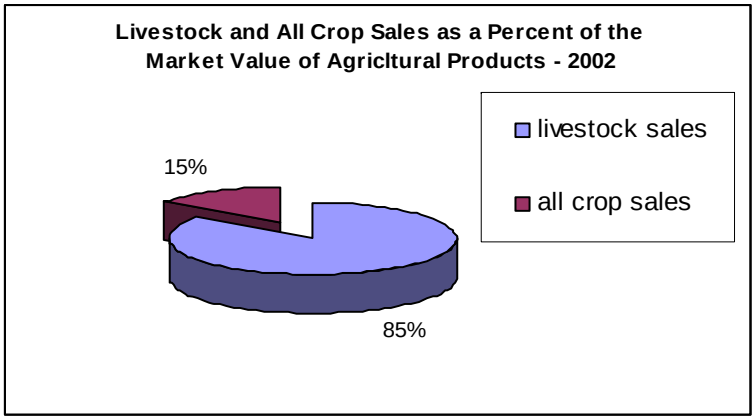


Table 9. Croplands inventory

	Total cropland (Acres)			Number of farms with harvested cropland			Harvested cropland (Acres)			Number of farms with irrigated land			Irrigated land (Acres)		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	141,626	124,099	-12.4%	614	488	-20.5%	113,174	107,173	-5.3%	33	50	51.5%	423	399	-5.7%
Bennington	13,383	13,379	0.0%	131	143	9.2%	9,645	9,745	1.0%	13	30	130.8%	66	79	19.7%
Caledonia	43,581	35,622	-18.3%	386	359	-7.0%	29,762	28,751	-3.4%	11	31	181.8%	18	92	411.1%
Chittenden	45,067	34,612	-23.2%	332	299	-9.9%	32,410	27,648	-14.7%	25	43	72.0%	272	175	-35.7%
Essex	8,108	8,040	-0.8%	61	77	26.2%	6,202	6,806	9.7%	3	3	0.0%	(D)	(D)	NA
Franklin	105,693	97,853	-7.4%	654	539	-17.6%	77,393	80,958	4.6%	19	34	78.9%	507	246	-51.5%
Grand Isle	18,111	12,032	-33.6%	95	81	-14.7%	14,134	9,155	-35.2%	5	16	220.0%	34	84	147.1%
Lamoille	22,025	18,359	-16.6%	188	203	8.0%	14,228	13,572	-4.6%	8	27	237.5%	38	137	260.5%
Orange	41,369	44,285	7.0%	421	450	6.9%	26,775	32,060	19.7%	23	48	108.7%	91	152	67.0%
Orleans	81,876	65,963	-19.4%	485	421	-13.2%	58,154	53,761	-7.6%	13	33	153.8%	(D)	(D)	NA
Rutland	57,342	45,705	-20.3%	426	400	-6.1%	39,915	34,380	-13.9%	26	40	53.8%	121	207	71.1%
Washington	26,226	20,851	-20.5%	281	255	-9.3%	18,160	15,240	-16.1%	25	31	24.0%	119	162	36.1%
Windham	18,467	18,042	-2.3%	226	244	8.0%	13,216	13,847	4.8%	23	71	208.7%	169	336	98.8%
Windsor	35,891	28,667	-20.1%	441	414	-6.1%	23,852	21,603	-9.4%	28	51	82.1%	148	150	1.4%
Vermont	658,765	567,509	-13.9%	4,741	4,373	-7.8%	477,020	454,699	-4.7%	255	508	99.2%	2,123	2,335	10.0%

Source: 1992 and 2002 USDA Census of Agriculture

Table 10. Vegetables Harvested for Sale

As a percentage of harvested cropland acreage in the state, vegetable production occurs less than 1% of available acreage. Nevertheless, there has been a 14% increase in total acreage devoted to vegetable production in the past ten years, increasing from 2,500 acres to 2,900 acres. Chittenden County continues to rank first in the state in terms of total acres of land used for vegetables (515 acres). Windsor County had the most vegetable farms (45) followed by Chittenden County (41).

For Counties that had at least 10 vegetable farms in 1992, Lamoille County saw the greatest increase in vegetable farming activity with double the number of farms. The number of vegetable farms in Addison and Caledonia Counties grew by 64.5% and 61% respectively with a corresponding near doubling of acreage devoted to vegetable production in each of these Counties.

Overall, Vermont experienced about a 25% increase in vegetable farm operations in the past decade, with more than 400 operations as of 2002.

Average number of acres per vegetable operation was highest in Chittenden County at 13, followed by Franklin (9), Grand Isle (9) and Lamoille, Orange, Windham, and Rutland at 8 acres average per farm, each.

Table 10. Vegetables Harvested for Sale inventory

	Number of farms harvesting vegetables for sale			Acres of land used for vegetables for sale		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	31	51	64.5%	132	258	95.5%
Bennington	19	17	-10.5%	120	76	-36.7%
Caledonia	23	37	60.9%	90	168	86.7%
Chittenden	30	41	36.7%	546	515	-5.7%
Essex	1	3	200.0%	(D)	(D)	NA
Franklin	17	22	29.4%	101	193	91.1%
Grand Isle	11	10	-9.1%	71	85	19.7%
Lamoille	10	20	100.0%	(D)	169	NA
Orange	22	34	54.5%	197	276	40.1%
Orleans	21	22	4.8%	50	(D)	NA
Rutland	38	38	0.0%	304	300	-1.3%
Washington	30	34	13.3%	296	253	-14.5%
Windham	34	39	14.7%	344	303	-11.9%
Windsor	43	45	4.7%	240	228	-5.0%
Vermont	330	413	25.2%	2,534	2,893	14.2%

Source: 1992 and 2002 USDA Census of Agriculture

Table 11. Orchards inventory

Over the ten-year period, acres of land devoted to orchards declined by 27% or 1,342 fewer acres. Over half of this decrease occurred in Addison County (-795 acres). Orchard acreage continues to be highest in Addison County (1,328 acres) more than double the next highest county (Windham at 643 acres).

The total number of farms with land in orchard remained stable at about 260 operations.

Orange County had the greatest percentage decrease in orchard acreage dropping 64% or 131 acres.

Table 11. Orchards inventory

	Number of farms with land in orchards			Acres of land in orchards		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	48	42	-12.5%	2,123	1,328	-37.4%
Bennington	11	19	72.7%	358	361	0.8%
Caledonia	11	21	90.9%	44	114	159.1%
Chittenden	26	16	-38.5%	197	151	-23.4%
Essex	1	2	100.0%	(D)	(D)	NA
Franklin	14	13	-7.1%	64	57	-10.9%
Grand Isle	5	12	140.0%	202	158	-21.8%
Lamoille	11	12	9.1%	(D)	(D)	NA
Orange	20	21	5.0%	205	74	-63.9%
Orleans	15	9	-40.0%	54	44	-18.5%
Rutland	21	21	0.0%	249	159	-36.1%
Washington	14	18	28.6%	62	158	154.8%
Windham	29	29	0.0%	856	643	-24.9%
Windsor	32	26	-18.8%	460	241	-47.6%
Vermont	258	261	1.2%	4,894	3,552	-27.4%

Source: 1992 and 2002 USDA Census of Agriculture

Table 12. Oats Harvested

Oats are a relatively minor crop for the state in terms of both acreage and production. Total oats production is 45% lower than it was ten years ago.

Table 12. Oats inventory

	Number of farms producing Oats for grain			Acres of land used for Oats for grain			Bushels of Oats for grain		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	10	8	-20.0%	198	125	-36.9%	9,869	4,396	-55.5%
Bennington	2	3	50.0%	(D)	31	NA	(D)	1,260	NA
Caledonia	0	0	0.0%	0	0	0.0%	0	0	0.0%
Chittenden	3	1	-66.7%	(D)	(D)	NA	5,880	(D)	NA
Essex	0	1	NA	0	(D)	NA	0	(D)	NA
Franklin	2	3	50.0%	(D)	71	NA	(D)	1,540	NA
Grand Isle	1	0	-100.0%	(D)	0	NA	(D)	0	NA
Lamoille	1	0	-100.0%	(D)	0	NA	(D)	0	NA
Orange	3	1	-66.7%	(D)	(D)	NA	(D)	(D)	NA
Orleans	3	5	66.7%	49	74	51.0%	(D)	3,210	NA
Rutland	3	1	-66.7%	65	(D)	NA	(D)	(D)	NA
Washington	0	2	NA	0	(D)	NA	0	(D)	NA
Windham	0	0	0.0%	0	0	0.0%	0	0	0.0%
Windsor	0	1	NA	0	(D)	NA	0	(D)	NA
Vermont	28	26	-7.1%	489	412	-15.7%	28,885	15,663	-45.8%

Source: 1992 and 2002 USDA Census of Agriculture

Table 13. Hay and Haylage, Alfalfa, Grass Silage, and Green Chop Hay

By 2002, Vermont had 14% fewer acres, but saw a 31% increase in total hay crop production. This signifies dramatic changes in management practices resulting in higher yields per acre. Management changes responsible for these yield increases probably include a gradual shift from grass species toward legumes, increased number of cuttings per season, and improved fertilization of hay land following the implementation of manure and nutrient management plans put into place over the decade. Hay crop yield averaged 2.9 tons per acre for the state. Productivity was highest in Franklin, Addison and Orleans Counties (3.6, 3.2 and 3.1 tons per acre, respectively).

Overall, 77% of Vermont's harvested cropland was devoted to hay crops (350,000 out of 455,000 harvested acres).

Hay crop acreage closely mirrors dairy production with the greatest concentration of hay crop production in Addison (80,600 acres), Franklin (54,400 acres) and Orleans (42,700 acres) Counties. These three Counties have 51% of all the states hay crop acreage.

Table 13. Hay and Haylage, Alfalfa, Grass Silage, and Green Chop Hay inventory

	Number of farms			Acres of land			Dry tons		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	538	401	-25.5%	95,434	80,608	-15.5%	182,218	257,010	41.0%
Bennington	103	75	-27.2%	7,684	7,089	-7.7%	14,098	14,791	4.9%
Caledonia	358	300	-16.2%	27,962	24,382	-12.8%	47,549	69,034	45.2%
Chittenden	271	209	-22.9%	27,125	21,630	-20.3%	51,079	61,887	21.2%
Essex	55	53	-3.6%	5,198	4,752	-8.6%	8,966	14,155	57.9%
Franklin	623	477	-23.4%	59,578	54,369	-8.7%	129,553	194,711	50.3%
Grand Isle	85	62	-27.1%	11,219	6,714	-40.2%	20,118	19,072	-5.2%
Lamoille	164	151	-7.9%	12,160	11,130	-8.5%	22,468	27,356	21.8%
Orange	385	382	-0.8%	24,893	27,022	8.6%	41,612	65,294	56.9%
Orleans	461	359	-22.1%	54,225	42,738	-21.2%	104,909	133,646	27.4%
Rutland	364	320	-12.1%	33,808	28,334	-16.2%	64,356	64,666	0.5%
Washington	230	191	-17.0%	16,438	12,511	-23.9%	31,413	30,026	-4.4%
Windham	175	153	-12.6%	10,351	10,357	0.1%	21,441	27,975	30.5%
Windsor	388	319	-17.8%	22,477	18,625	-17.1%	36,451	37,785	3.7%
Vermont	4,200	3,452	-17.8%	408,552	350,261	-14.3%	776,231	1,017,408	31.1%

Source: 1992 and 2002 USDA Census of Agriculture

Table 14. Corn Harvested for Grain or Seed

Grain corn production represents less than 5% of total corn harvested and only about 1% of harvested cropland in the state. There were 30% fewer acres devoted to grain corn in 2002 than in 1992.

Table 14. Corn for Grain or Seed inventory

	Number of farms			Acres of Land			Bushels			Bushels per Acre		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	44	20	-54.5%	3,370	1,279	-62.0%	321,902	153,559	-52.3%	95.5	120.1	25.7%
Bennington	9	6	-33.3%	301	69	-77.1%	36,958	7,620	-79.4%	122.8	110.4	-10.1%
Caledonia	6	3	-50.0%	106	(D)	NA	10,890	(D)	NA	102.7	NA	NA
Chittenden	11	7	-36.4%	662	331	-50.0%	72,482	42,367	-41.5%	109.5	128.0	16.9%
Essex	0	0	0.0%	0	0	0.0%	0	0	0.0%	0.0	0.0	0.0%
Franklin	23	16	-30.4%	894	1,565	75.1%	84,950	184,510	117.2%	95.0	117.9	24.1%
Grand Isle	5	3	-40.0%	311	227	-27.0%	29,690	(D)	NA	95.5	NA	NA
Lamoille	6	4	-33.3%	336	313	-6.8%	36,856	45,410	23.2%	109.7	145.1	32.3%
Orange	7	3	-57.1%	153	27	-82.4%	18,474	2,754	-85.1%	120.7	102.0	-15.5%
Orleans	5	5	0.0%	109	170	56.0%	4,645	14,900	220.8%	42.6	87.6	105.7%
Rutland	15	9	-40.0%	896	598	-33.3%	73,578	88,080	19.7%	82.1	147.3	79.4%
Washington	0	4	NA	0	246	NA	0	27,450	NA	0.0	111.6	NA
Windham	8	3	-62.5%	276	(D)	NA	24,245	(D)	NA	87.8	NA	NA
Windsor	4	3	-25.0%	153	133	-13.1%	13,074	14,565	11.4%	85.5	109.5	28.2%
Vermont	143	86	-39.9%	7,567	5,130	-32.2%	727,744	624,813	-14.1%	96.2	121.8	26.6%

Source: 1992 and 2002 USDA Census of Agriculture

Table 15. Corn Harvested for Silage or Green Chop

Over the past ten years, there has been a 6% increase in acreage (about 5,300 more acres) with a 9% increase in total production. Yield of corn silage (tons per acre) has increased 3% from 15.8 tons in 1992 to 16.3 tons in 2002 statewide. The highest yielding region of the state is Windham County with nearly 22 tons per acre, presumably due to well drained soils in the Connecticut River Valley and a longer growing season than most other regions of the state.

Overall, corn silage production represents 20% of 2002 cropland harvested in Vermont, which is up from 18% in 1992. Corn silage is primarily grown to feed the state's dairy herd, so corn silage acreage is concentrated in the three dairy Counties: 25,300 acres in Franklin, 24,300 acres in Addison and 10,200 acres in Orleans Counties. These three Counties represent two thirds of all corn silage acreage in the state.

Franklin County has the most farms growing corn silage (198) followed by Addison (163) and Orange Counties (96).

The greatest production declines (tons of production) in corn silage have occurred in Lamoille and Grand Isle Counties with about a 43% drop in total tons harvested for each county.

Both Washington and Caledonia Counties experienced dramatic yield increases of nearly 30% more corn harvested per acre during the decade, far outpacing the rate of increase throughout the rest of the state. Of the three dairy Counties, only Orleans has a corn silage yield per acre above the state average.

Table 15. Corn for Silage or Green Chop inventory

	Number of farms			Acres of land			Tons (green)			Tons per Acre		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	294	163	-44.6%	21,777	24,330	11.7%	302,684	364,777	20.5%	13.9	15	7.9%
Bennington	32	22	-31.3%	1,804	1,884	4.4%	29,408	30,180	2.6%	16.3	16	-1.7%
Caledonia	70	54	-22.9%	3,113	3,543	13.8%	44,390	65,895	48.4%	14.3	18.6	30.4%
Chittenden	67	43	-35.8%	4,851	4,525	-6.7%	77,493	76,076	-1.8%	16	16.8	5.2%
Essex	20	13	-35.0%	1,197	1,505	25.7%	19,467	24,803	27.4%	16.3	16.5	1.3%
Franklin	311	198	-36.3%	21,532	25,328	17.6%	366,384	402,911	10.0%	17	15.9	-6.5%
Grand Isle	45	16	-64.4%	3,210	1,884	-41.3%	48,487	27,800	-42.7%	15.1	14.8	-2.3%
Lamoille	52	21	-59.6%	2,502	1,589	-36.5%	42,318	24,161	-42.9%	16.9	15.2	-10.1%
Orange	109	96	-11.9%	4,043	4,928	21.9%	68,817	89,822	30.5%	17	18.2	7.1%
Orleans	80	71	-11.3%	6,992	10,193	45.8%	113,621	182,008	60.2%	16.3	17.9	9.9%
Rutland	170	92	-45.9%	7,680	5,471	-28.8%	123,128	79,798	-35.2%	16	14.6	-9.0%
Washington	49	19	-61.2%	2,507	1,965	-21.6%	37,315	37,695	1.0%	14.9	19.2	28.9%
Windham	40	23	-42.5%	2,213	2,110	-4.7%	42,750	46,258	8.2%	19.3	21.9	13.5%
Windsor	80	37	-53.8%	2,603	2,057	-21.0%	45,895	34,618	-24.6%	17.6	16.8	-4.5%
Vermont	1,419	868	-38.8%	86,024	91,312	6.1%	1,362,157	1,486,802	9.2%	15.8	16.3	2.8%

Source: 1992 and 2002 USDA Census of Agriculture

Table 16. Nursery, Greenhouse, Floriculture, Mushrooms, Sod, and Vegetable Seeds Grown for Sale

These agricultural products represent the big story about the changing face of agriculture in Vermont over the last decade. Statistics were not even maintained on these crops prior to 2002. There are now 432 such operations, with 558 acres in the open and more than 2.2 million square feet in greenhouse space. If the data was available, it is expected that the dollar value of total production from these operations would be substantial and represent a significant portion of the total growth in agricultural value output.

The largest average size of greenhouse operators (measured by square feet under protection per farm) are in Chittenden (10,700 sq. ft.), Bennington (6,274 sq. ft.), and Orange (6,067 sq. ft.) Counties.

The largest operators (in terms of acres in the open per farm) are in Lamoille (2.7), Washington, (2.2), and Chittenden and Orleans Counties (2.0 acres each).

The most farms are in Windham (65), Addison and Chittenden (42 each), Orange (37) and Windsor (36) Counties.

The most greenhouse space is in Chittenden, followed by Windham and Orange Counties.

The most acres in the open are in Chittenden, followed by Washington and Orleans Counties.

Table 16. Nursery, Greenhouse, Floriculture, Mushrooms, Sod, and Vegetable Seeds Grown for Sale *

	Farms			Sq. ft. under glass or other protection			Acres in the open		
	1992	2002	% Change	1992	2002	% Change	1992	2002	% Change
Addison	NA	42	NA	NA	149,026	NA	NA	32	NA
Bennington	NA	27	NA	NA	169,408	NA	NA	48	NA
Caledonia	NA	28	NA	NA	151,610	NA	NA	44	NA
Chittenden	NA	42	NA	NA	447,627	NA	NA	82	NA
Essex	NA	1	NA	NA	0	NA	NA	(D)	NA
Franklin	NA	26	NA	NA	113,555	NA	NA	(D)	NA
Grand Isle	NA	7	NA	NA	12,850	NA	NA	13	NA
Lamoille	NA	23	NA	NA	98,171	NA	NA	62	NA
Orange	NA	37	NA	NA	224,496	NA	NA	23	NA
Orleans	NA	33	NA	NA	72,848	NA	NA	65	NA
Rutland	NA	32	NA	NA	133,732	NA	NA	28	NA
Washington	NA	33	NA	NA	181,933	NA	NA	71	NA
Windham	NA	65	NA	NA	320,392	NA	NA	45	NA
Windsor	NA	36	NA	NA	180,777	NA	NA	30	NA
Vermont	NA	432	NA	NA	2,256,425	NA	NA	558	NA

** 2002 was the first Ag Census year for which this data is available. Source: 1992 and 2002 USDA Census of Agriculture*

VI. Livestock Inventories

Table 17. Cattle and Calves Inventory

The cattle and calves inventory is not a terribly enlightening statistic because it appears to combine beef and milk cows, adult animals and replacements. Most of these animals are found on Vermont's dairy farms. The number of farms producing and selling cattle has declined while the total cattle inventory has also declined, but at a more gradual rate. As a result, the average size of the remaining cattle farms has increased. For a more thorough analysis of dairy cattle inventory, see Table 18.

Table 17. Cattle and Calves inventory

	Number of farms producing cattle and calves			Number of cattle and calves			Number of farms selling cattle and calves			Number of cattle and calves sold		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	485	330	-32.0%	65,269	64,602	-1.0%	475	277	-41.7%	30,458	24,952	-18.1%
Bennington	78	71	-9.0%	4,591	3,894	-15.2%	73	42	-42.5%	1,803	1,470	-18.5%
Caledonia	280	210	-25.0%	19,540	15,164	-22.4%	272	157	-42.3%	8,129	4,985	-38.7%
Chittenden	192	139	-27.6%	15,914	13,421	-15.7%	183	113	-38.3%	6,959	5,549	-20.3%
Essex	49	43	-12.2%	4,497	4,172	-7.2%	47	28	-40.4%	1,592	1,045	-34.4%
Franklin	605	459	-24.1%	65,838	67,371	2.3%	605	383	-36.7%	38,843	57,014	46.8%
Grand Isle	68	42	-38.2%	6,632	5,240	-21.0%	62	33	-46.8%	2,282	1,660	-27.3%
Lamoille	137	95	-30.7%	10,492	7,014	-33.1%	133	81	-39.1%	4,935	3,133	-36.5%
Orange	331	288	-13.0%	20,246	19,395	-4.2%	285	229	-19.6%	8,021	7,004	-12.7%
Orleans	426	313	-26.5%	43,862	40,081	-8.6%	414	265	-36.0%	19,328	14,640	-24.3%
Rutland	316	250	-20.9%	23,127	16,571	-28.3%	295	169	-42.7%	9,663	5,407	-44.0%
Washington	182	131	-28.0%	10,758	9,247	-14.0%	160	92	-42.5%	4,301	2,691	-37.4%
Windham	123	83	-32.5%	7,399	7,972	7.7%	103	71	-31.1%	3,963	2,865	-27.7%
Windsor	286	226	-21.0%	12,353	9,475	-23.3%	271	164	-39.5%	5,438	3,829	-29.6%
Vermont	3,558	2,680	-24.7%	310,518	283,619	-8.7%	3,378	2,104	-37.7%	145,715	136,244	-6.5%

Source: 1992 and 2002 USDA Census of Agriculture

Table 18. Beef Cow Inventory

Compared to ten years earlier, there are about 50 more beef operations (a 5% increase in farms) raising 500 fewer animals. With only slightly more than 11,000 animals in the whole state, the average beef operation is very small in Vermont having only 10 animals per farm. The average number of animals per farm varies little across the Counties.

The most animals are in Windsor, Rutland, Orange, and Addison Counties, with those four Counties representing 51% of the state's entire beef herd.

Table 18. Beef Cows inventory

	Number of farms producing beef cows			Number of beef cows			Average beef cows per farm		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	97	112	15.5%	1,337	1,209	-9.6%	13.8	10.8	-21.7%
Bennington	44	51	15.9%	481	424	-11.9%	10.9	8.3	-23.9%
Caledonia	75	81	8.0%	705	530	-24.8%	9.4	6.5	-30.4%
Chittenden	64	62	-3.1%	1,106	663	-40.1%	17.3	10.7	-38.1%
Essex	11	23	109.1%	(D)	169	NA	NA	7.3	NA
Franklin	84	116	38.1%	702	998	42.2%	8.4	8.6	2.9%
Grand Isle	19	19	0.0%	(D)	239	NA	NA	12.6	NA
Lamoille	45	40	-11.1%	214	424	98.1%	4.8	10.6	122.9%
Orange	113	127	12.4%	840	1,247	48.5%	7.4	9.8	32.1%
Orleans	76	80	5.3%	1,168	634	-45.7%	15.4	7.9	-48.4%
Rutland	108	132	22.2%	1,681	1,602	-4.7%	15.6	12.1	-22.0%
Washington	81	75	-7.4%	819	786	-4.0%	10.1	10.5	3.6%
Windham	53	32	-39.6%	381	614	61.2%	7.2	19.2	166.9%
Windsor	178	151	-15.2%	2,143	1,737	-18.9%	12.0	11.5	-4.5%
Vermont	1,048	1,101	5.1%	11,812	11,276	-4.5%	11.3	10.2	-9.1%

Source: 1992 and 2002 USDA Census of Agriculture

Table 19. Milk Cows Inventory

Vermont agriculture has been led by milk production for over a century and dairy cattle continue to exert their influence in 2002. Three Counties, Franklin, Addison and Orleans, represent 64% of all the milk cows in the state. Franklin County has the most cows (40,500) followed by Addison (32,800) and Orleans (22,800).

The fewest dairy cows are found in Bennington and Essex Counties.

Vermont's dairy farm numbers have declined 36.5% (from 2,373 to 1,508) over the past ten years, with a less gradual decline in the total dairy herd from 168,500 cows to 150,600 (a 10.6% decline in cow numbers). As a result, the state has experienced an increasing size for its dairy farms from 71 milk cows per farm on average to 100 milk cows. The largest average sized farms are found in Addison (148 cows), Franklin (129 cows) and Grand Isle (113 cows) Counties.

The smallest herds are in Orange and Windsor Counties (49 and 59 cows, respectively).

Table 19. Milk Cows inventory

	Number of farms producing milk cows			Number of milk cows			Average milk cows per farm		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	365	222	-39.2%	34,912	32,797	-6.1%	95.6	147.7	54.5%
Bennington	34	24	-29.4%	2,083	1,907	-8.4%	61.3	79.5	29.7%
Caledonia	187	104	-44.4%	10,508	7,716	-26.6%	56.2	74.2	32.0%
Chittenden	108	73	-32.4%	7,497	7,352	-1.9%	69.4	100.7	45.1%
Essex	35	23	-34.3%	(D)	2,265	NA	NA	98.5	NA
Franklin	483	315	-34.8%	41,090	40,492	-1.5%	85.1	128.5	51.1%
Grand Isle	45	25	-44.4%	(D)	2,816	NA	NA	112.6	NA
Lamoille	96	51	-46.9%	6,207	3,998	-35.6%	64.7	78.4	21.2%
Orange	202	164	-18.8%	9,641	9,643	0.0%	47.7	58.8	23.2%
Orleans	354	212	-40.1%	26,808	22,794	-15.0%	75.7	107.5	42.0%
Rutland	194	121	-37.6%	10,842	7,563	-30.2%	55.9	62.5	11.8%
Washington	96	59	-38.5%	4,875	4,279	-12.2%	50.8	72.5	42.8%
Windham	62	48	-22.6%	3,649	3,764	3.2%	58.9	78.4	33.2%
Windsor	112	67	-40.2%	4,147	3,240	-21.9%	37.0	48.4	30.6%
Vermont	2,373	1,508	-36.5%	168,473	150,626	-10.6%	71.0	99.9	40.7%

Source: 1992 and 2002 USDA Census of Agriculture

Table 20. Sheep and Lambs Inventory

The sheep industry has declined over the last decade with 6% more farms in 2002 (29 more farms) producing 14% fewer animals than in 1992. Windham County continues to have the most sheep.

Table 20. Sheep and Lambs inventory

	Number of farms producing sheep and lambs			Number of sheep and lambs		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	47	56	19.1%	2,113	1,737	-17.8%
Bennington	31	30	-3.2%	622	626	0.6%
Caledonia	35	44	25.7%	764	733	-4.1%
Chittenden	42	41	-2.4%	1,828	1,003	-45.1%
Essex	6	4	-33.3%	23	115	400.0%
Franklin	35	29	-17.1%	988	716	-27.5%
Grand Isle	7	5	-28.6%	(D)	155	NA
Lamoille	18	19	5.6%	(D)	970	NA
Orange	63	60	-4.8%	1,868	1,813	-2.9%
Orleans	31	33	6.5%	378	607	60.6%
Rutland	45	53	17.8%	1,495	1,663	11.2%
Washington	39	28	-28.2%	931	505	-45.8%
Windham	27	44	63.0%	3,338	2,544	-23.8%
Windsor	59	68	15.3%	2,254	1,556	-31.0%
Vermont	485	514	6.0%	17,145	14,743	-14.0%

Source: 1992 and 2002 USDA Census of Agriculture

Table 21. Poultry Inventory

Two or three commercially sized layer operations in Vermont represent 85% of all the layers present in 2002. Turkey production is also concentrated on less than half a dozen farms in the state. Because production is concentrated on a relatively few farms, most of this data is withheld to protect the confidentiality of the individual operators.

Table 21. Poultry inventory

	Number of farms producing layers 20 weeks old and older			Number of layers 20 weeks old and older			Number of farms selling broilers and other meat-type chickens			Number of broilers and other meat-type chickens sold		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	58	88	51.7%	(D)	(D)	NA	5	15	200.0%	745	(D)	NA
Bennington	19	18	-5.3%	(D)	587	NA	3	1	-66.7%	(D)	(D)	NA
Caledonia	43	88	104.7%	1,112	2,268	104.0%	2	13	550.0%	(D)	405	NA
Chittenden	28	68	142.9%	(D)	1,382	NA	4	14	250.0%	190	(D)	NA
Essex	7	10	42.9%	(D)	440	NA	0	3	NA	0	300	NA
Franklin	31	67	116.1%	(D)	(D)	NA	2	4	100.0%	(D)	45	NA
Grand Isle	10	15	50.0%	(D)	200	NA	0	2	NA	0	(D)	NA
Lamoille	20	37	85.0%	(D)	(D)	NA	4	14	250.0%	295	(D)	NA
Orange	53	76	43.4%	1,680	2,406	43.2%	4	22	450.0%	196	(D)	NA
Orleans	41	71	73.2%	(D)	3,176	NA	7	15	114.3%	440	675	53.4%
Rutland	39	73	87.2%	1,836	2,296	25.1%	1	9	800.0%	(D)	443	NA
Washington	49	44	-10.2%	1,443	1,595	10.5%	6	15	150.0%	578	(D)	NA
Windham	46	67	45.7%	1,615	2,040	26.3%	3	9	200.0%	222	(D)	NA
Windsor	64	117	82.8%	1,428	2,441	70.9%	10	10	0.0%	2,551	1,015	-60.2%
Vermont	508	839	65.2%	(D)	211,968	NA	51	146	186.3%	7,266	113,776	1465.9%

Source: 1992 and 2002 USDA Census of Agriculture

Table 22. Hogs and Pigs Inventory

The swine industry is not a significant economic presence in the state. 206 farms produced 2,019 hogs, or less than 10 hogs per farm. Swine production appears to be a part-time enterprise, perhaps in conjunction with other enterprises within diversified farming operations.

Table 22. Hogs and Pigs inventory

	Number of farms producing hogs and pigs			Number of hogs and pigs			Number of farms selling hogs and pigs			Number of hogs and pigs sold		
	1992	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**	**1992**	**2002**	**% Change**
Addison	41	18	-56.1%	346	123	-64.5%	16	17	6.3%	1,002	278	-72.3%
Bennington	14	3	-78.6%	82	17	-79.3%	8	0	-100.0%	267	0	-100.0%
Caledonia	26	20	-23.1%	108	138	27.8%	15	23	53.3%	142	150	5.6%
Chittenden	21	7	-66.7%	234	302	29.1%	19	14	-26.3%	576	873	51.6%
Essex	8	5	-37.5%	34	16	-52.9%	7	3	-57.1%	118	(D)	NA
Franklin	35	20	-42.9%	264	106	-59.8%	16	17	6.3%	284	88	-69.0%
Grand Isle	8	3	-62.5%	141	23	-83.7%	7	3	-57.1%	182	16	-91.2%
Lamoille	9	9	0.0%	53	113	113.2%	10	6	-40.0%	190	(D)	NA
Orange	35	35	0.0%	337	362	7.4%	27	28	3.7%	626	843	34.7%
Orleans	33	13	-60.6%	145	51	-64.8%	14	17	21.4%	558	68	-87.8%
Rutland	28	21	-25.0%	398	177	-55.5%	17	20	17.6%	761	340	-55.3%
Washington	24	12	-50.0%	300	212	-29.3%	17	10	-41.2%	280	472	68.6%
Windham	21	22	4.8%	441	179	-59.4%	14	22	57.1%	752	379	-49.6%
Windsor	44	18	-59.1%	855	200	-76.6%	41	26	-36.6%	1,689	1,080	-36.1%
Vermont	347	206	-40.6%	3,738	2,019	-46.0%	228	206	-9.6%	7,427	4,933	-33.6%

Source: 1992 and 2002 USDA Census of Agriculture