



United States
Department of
Agriculture

National
Agricultural
Statistics
Service



Co St 2 (06)

Capacity of Refrigerated Warehouses

2005 Summary

January 2006

USDA



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General Refrigerated Warehouse Capacity Up 2 Percent

General refrigerated storage capacity in the United States totaled 3.21 billion gross cubic feet on October 1, 2005, an increase of 2 percent since the previous survey was conducted two years ago. While most of the increase was due to new construction, some was due to the increased survey coverage of existing warehouses. This was the 44th biennial survey of refrigerated warehouses. The five States with the largest gross general warehouse capacity (million cubic feet) were: California with 399; Florida, 253; Washington, 195; Wisconsin, 179 and Texas with 153.

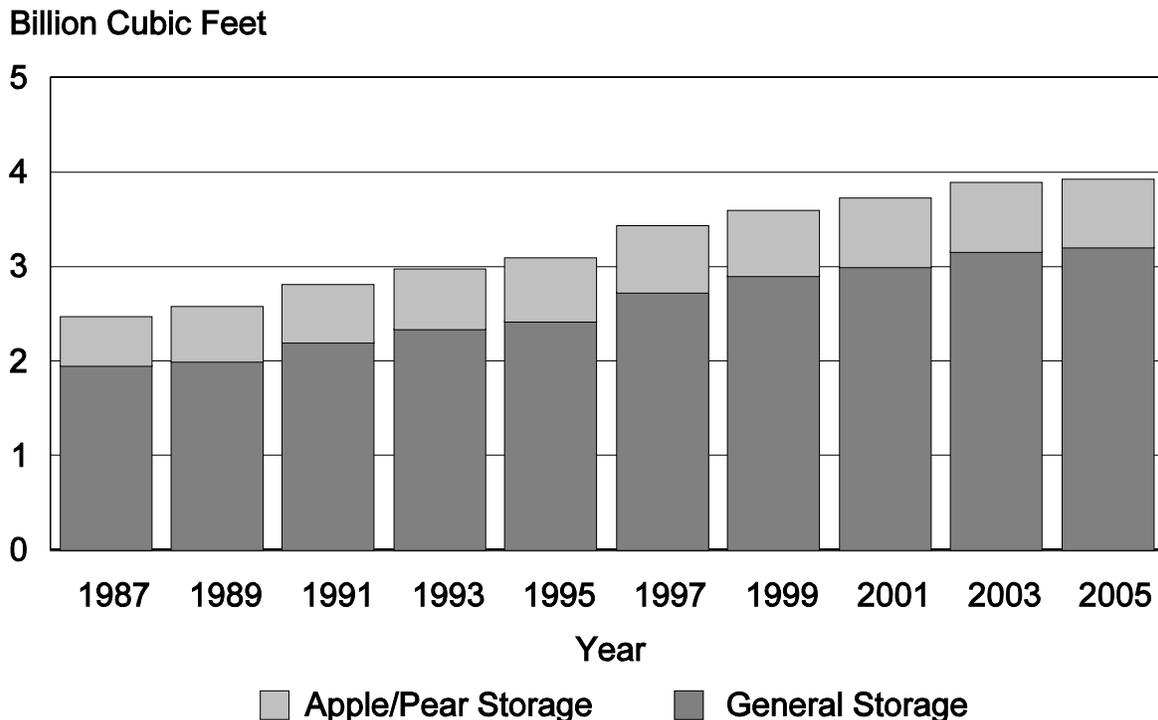
Usable refrigerated space in general storages was 2.58 billion cubic feet, or 80 percent of the gross space. Usable freezer space was 78 percent of the usable refrigerated space with the remaining 22 percent used as cooler space. Convertible refrigerated space was classified as usable freezer space.

Public general warehouse capacity totaled 2.44 billion gross cubic feet in 2005, accounting for 76 percent of the general storage. Public general storage capacity increased 3 percent since 2003 and is 40 percent above the capacity of ten years ago.

Private and semiprivate general warehouse capacity totaled 772 million gross cubic feet, or 24 percent of the general gross refrigerated space.

Apple and pear storage totaled 721 million gross cubic feet, down 2 percent from October 1, 2003. Controlled atmosphere (CA) capacity totaled 173 million bushels, up 2 percent from 2003. The State of Washington had 82 percent of the Nation's CA capacity.

Gross Refrigerated Storage Capacity by Principal Storage Activity, United States, 1987-2005



**Refrigerated Warehouses: Number by Type, State,
and United States, October 1, 2005**

State	General Storages			Apple & Pear Storages			Total
	Public	Private & Semiprvt	Total	Regular	CA	All ¹	
	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
AL	13	8	21				21
AK	2	22	24				24
AZ	7	2	9	1	1	1	10
AR	15	6	21				21
CA	111	82	193	31	11	35	228
CO	8	3	11				11
CT	4	4	8	28	6	28	36
DE	4	6	10	2		2	12
FL	38	26	64				64
GA	32	27	59				59
HI	3	1	4				4
ID	7	15	22	7	5	7	29
IL	26	21	47	10	1	11	58
IN	20	6	26	32	4	34	60
IA	32	9	41		1	1	42
KS	11	1	12	1		1	13
KY	6	1	7	3		3	10
LA	16	9	25				25
ME	2	17	19	19	14	22	41
MD	7	4	11	5	3	6	17
MA	29	31	60	51	23	54	114
MI	24	18	42	126	91	155	197
MN	23	22	45	11	1	11	56
MS	10	3	13				13
MO	22	8	30	4		4	34
MT	2	4	6				6
NE	16	9	25		1	1	26
NV	2	2	4				4
NH	2	2	4	22	10	22	26
NJ	26	11	37	20	3	22	59
NM	1	6	7	1		1	8
NY	29	58	87	123	85	136	223
NC	15	6	21	13	2	14	35
ND	4	1	5				5
OH	18	5	23	60	14	61	84
OK	7	4	11				11
OR	15	24	39	64	18	67	106
PA	36	22	58	147	14	150	208
RI		3	3	5	2	7	10
SC	8	4	12	2		2	14
SD	2	3	5				5
TN	10	4	14				14
TX	33	30	63				63
UT	10	9	19	16	5	17	36
VT		3	3	11	5	12	15
VA	21	13	34	29	11	30	64
WA	43	35	78	185	204	241	319
WV	2	2	4	11	4	13	17
WI	46	69	115	16	3	16	131
WY	1		1				1
US	821	681	1,502	1,056	542	1,187	2,689

¹ Firms with both regular and CA storage are counted once.

**General Refrigerated Warehouses: Number by Size Group,
United States, October 1, 2005**

Size (Cubic Feet)	Public	Private	All
	<i>Number</i>	<i>Number</i>	<i>Number</i>
0-499,999	121	362	483
500,000-999,999	104	112	216
1,000,000-2,499,999	234	113	347
2,500,000-4,999,999	221	72	293
5,000,000 and Over	141	22	163

**Apple and Pear Refrigerated Warehouses: Number by Size Group,
United States, October 1, 2005**

Size (Bushels)	Regular ¹	CA ¹	All
	<i>Number</i>	<i>Number</i>	<i>Number</i>
0-49,999	722	181	657
50,000-99,999	111	102	156
100,000-499,999	178	159	231
500,000-999,999	34	55	72
1,000,000 and Over	11	45	71

¹ Number of operations with regular or CA storage. Many operators have both types in the same building, thus the count of regular plus CA does not equal "All".

**Refrigerated Storage: Gross Capacity by Type of Warehouse,
United States, October 1, 1987-05**

Year	Public	Private and Semi-private	Total ¹
	<i>Million Cubic Feet</i>	<i>Million Cubic Feet</i>	<i>Million Cubic Feet</i>
1987	1,306	1,171	2,476
1989	1,414	1,158	2,571
1991	1,600	1,208	2,808
1993	1,700	1,272	2,972
1995	1,765	1,323	3,088
1997	2,068	1,359	3,427
1999	2,168	1,437	3,606
2001	2,266	1,501	3,767
2003	2,370	1,526	3,896
2005	2,445	1,484	3,929

¹ Totals may not add due to rounding.

Refrigerated Space: By Type of Warehouse, United States, October 1, 2005 ¹

Type	Number	Gross Space			Usable Space		
		Cooler	Freezer	Total	Cooler	Freezer	Total
		<i>1,000 Cubic Feet</i>					
General Public	821	385,045	2,050,728	2,435,773	308,534	1,668,731	1,977,265
Private & Semiprvt	681	331,570	440,154	771,725	258,889	344,882	603,771
Total	1,502	716,615	2,490,883	3,207,497	567,423	2,013,613	2,581,036
Apple Public	18	8,708	562	9,270	7,473	393	7,866
Private & Semiprvt	1,169	702,887	9,064	711,951	583,063	8,442	591,505
Total	1,187	711,595	9,626	721,221	590,536	8,835	599,371
Total	2,689	1,428,210	2,500,508	3,928,718	1,157,959	2,022,449	3,180,408

¹ Totals may not add due to rounding.

Gross Refrigerated Space: By Type of Warehouse, United States, October 1, 1987-05 ¹

Type	1987	1989	1991	1993	1995
	<i>1,000 Cubic Feet</i>				
General Public	1,285,860	1,391,901	1,572,879	1,678,461	1,741,585
Private and Semiprivate	676,369	603,402	624,005	658,893	674,649
Total	1,962,229	1,995,303	2,196,884	2,337,354	2,416,234
Apple Public	19,750	21,945	27,227	21,645	23,419
Private and Semiprivate	494,404	554,150	584,296	613,093	647,993
Total	514,154	576,095	611,523	634,737	671,412
Total, All	2,476,384	2,571,397	2,808,407	2,972,092	3,087,646
	1997	1999	2001	2003	2005
	<i>1,000 Cubic Feet</i>				
General Public	2,043,908	2,146,643	2,251,943	2,357,080	2,435,773
Private and Semiprivate	683,372	756,505	788,853	802,454	771,725
Total	2,727,280	2,903,152	3,040,796	3,159,535	3,207,497
Apple Public	23,907	21,690	14,183	12,517	9,270
Private and Semiprivate	675,838	680,736	712,412	723,499	711,951
Total	699,745	702,426	726,595	736,016	721,221
Total, All	3,427,025	3,605,578	3,767,394	3,895,551	3,928,718

¹ Totals may not add due to rounding.

**General Storages: Gross and Usable Refrigerated Space
by State and United States, October 1, 2005^{1 2}**

State	Gross Space			Usable Space		
	Public	Private & Semiprvt	Total	Public	Private & Semiprvt	Total
	<i>1,000 Cubic Feet</i>					
AL	26,855	1,093	27,948	22,805	891	23,697
AK	*	*	2,046	*	*	1,877
AZ	*	*	14,050	*	*	11,729
AR	72,663	6,569	79,233	60,763	5,686	66,449
CA	274,173	125,322	399,495	221,283	101,407	322,690
CO	16,220	1,078	17,298	12,667	775	13,442
CT	*	*	5,348	*	*	3,855
DE	15,356	13,676	29,031	10,107	10,604	20,711
FL	115,302	137,543	252,845	94,057	113,653	207,710
GA	113,674	11,274	124,948	89,972	9,584	99,557
HI	*	*	*	*	*	*
ID	36,639	25,132	61,771	31,700	20,220	51,919
IL	125,086	26,403	151,489	94,609	20,279	114,888
IN	*	*	82,731	*	*	72,068
IA	78,344	14,308	92,651	64,802	10,502	75,304
KS	*	*	44,490	*	*	32,211
KY	*	*	23,021	*	*	19,890
LA	*	*	18,693	*	*	17,355
ME	*	*	12,355	*	*	7,011
MD	20,604	6,954	27,558	15,750	5,324	21,074
MA	70,719	16,090	86,808	62,279	11,684	73,963
MI	67,005	25,246	92,252	52,878	21,159	74,037
MN	51,789	22,919	74,708	40,117	17,084	57,201
MS	*	*	21,814	*	*	17,632
MO	106,187	7,450	113,637	87,570	6,047	93,617
MT	*	*	987	*	*	764
NE	*	*	49,141	*	*	37,825
NV	*	*	*	*	*	*
NH	*	*	*	*	*	*
NJ	73,252	8,957	82,209	58,723	7,108	65,831
NM	*	*	2,400	*	*	1,976
NY	59,089	36,250	95,339	48,713	30,431	79,144
NC	47,568	13,699	61,267	40,398	9,971	50,370
ND	*	*	9,246	*	*	7,045
OH	55,812	7,200	63,012	45,528	5,780	51,308
OK	11,228	3,960	15,188	8,744	3,239	11,983
OR	73,101	35,607	108,707	60,838	27,816	88,655
PA	133,029	16,061	149,090	113,581	12,455	126,036
RI	*	*	*	*	*	*
SC	20,463	1,879	22,342	16,593	1,540	18,133
SD	*	*	11,460	*	*	5,782
TN	25,783	8,122	33,905	20,847	5,057	25,904
TX	129,610	23,222	152,832	96,438	18,669	115,107
UT	20,954	11,581	32,535	17,685	9,329	27,015
VT	*	*	*	*	*	*
VA	41,168	19,071	60,239	35,100	16,506	51,606
WA	146,390	49,035	195,424	115,841	37,738	153,579
WV	*	*	2,420	*	*	1,096
WI	136,006	42,747	178,753	114,252	28,604	142,856
WY	*	*	*	*	*	*
Oth Sts	271,703	53,280	24,783	222,626	34,629	19,139
US	2,435,773	771,725	3,207,497	1,977,265	603,771	2,581,036

* Not published to avoid disclosure of individual operations. Included in "Other States" and U.S. totals.

¹ Totals may not add due to rounding.

² Includes frozen juice tank storage capacity.

**General Storages: Gross and Usable Cooler Space
by State and United States, October 1, 2005^{1 2}**

State	Gross Space			Usable Space		
	Public	Private & Semiprvt	Total	Public	Private & Semiprvt	Total
	<i>1,000 Cubic Feet</i>					
AL	*	*	4,689	*	*	4,236
AK		163	163		495	495
AZ	*	*	*	*	*	*
AR	*	*	*	*	*	*
CA	56,698	80,998	137,696	45,816	64,976	110,792
CO	*	*	5,294	*	*	3,838
CT	*	*	*	*	*	*
DE		*	*		*	*
FL	17,337	75,711	93,047	14,301	64,990	79,291
GA	30,732	6,774	37,506	24,622	5,860	30,482
HI	*	*	*	*	*	*
ID	*	*	4,885	*	*	3,585
IL	16,334	10,036	26,370	11,687	8,137	19,824
IN	13,393	528	13,920	12,213	387	12,600
IA	*	*	18,129	*	*	13,458
KS	*	*	8,362	*	*	5,408
KY	*	*	6,384	*	*	4,883
LA	*	*	1,629	*	*	1,450
ME	*	*	261	*	*	226
MD	*	*	2,295	*	*	1,842
MA	*	*	15,297	*	*	12,327
MI	8,714	5,090	13,804	6,896	4,408	11,304
MN	7,313	8,082	15,395	5,972	5,347	11,319
MS	*	*	*	*	*	*
MO	*	*	31,562	*	*	26,105
MT	*	*	*	*	*	*
NE	*	*	8,833	*	*	6,190
NV	*	*	*	*	*	*
NH	*	*	*	*	*	*
NJ	*	*	27,300	*	*	21,523
NM	*	*	*	*	*	*
NY	11,595	15,923	27,518	9,111	13,109	22,220
NC	*	*	5,184	*	*	4,005
ND	*	*	*	*	*	*
OH	4,983	3,706	8,689	3,828	3,265	7,093
OK	*	*	4,327	*	*	3,555
OR	2,456	2,834	5,290	1,972	1,940	3,911
PA	*	*	25,964	*	*	21,049
RI		*	*		*	*
SC	378	392	769	312	270	581
SD	*	*	*	*	*	*
TN	*	*	429	*	*	322
TX	17,712	13,303	31,016	13,236	10,640	23,876
UT	*	*	2,881	*	*	2,224
VT		*	*		*	*
VA	12,146	8,585	20,731	9,447	7,542	16,989
WA	6,435	4,000	10,435	5,050	2,593	7,642
WV	*	*	*	*	*	*
WI	41,878	32,834	74,712	34,261	20,818	55,079
WY	*	*	*	*	*	*
Oth Sts	136,938	62,615	25,850	109,812	44,113	17,699
US	385,045	331,570	716,615	308,534	258,889	567,423

* Not published to avoid disclosure of individual operations. Included in "Other States" and U.S. totals.

¹ Totals may not add due to rounding.

² Includes frozen juice tank storage capacity.

**General Storages: Gross and Usable Freezer Space
by State and United States, October 1, 2005^{1,2}**

State	Gross Space			Usable Space		
	Public	Private & Semiprvt	Total	Public	Private & Semiprvt	Total
	<i>1,000 Cubic Feet</i>					
AL	*	*	23,259	*	*	19,461
AK	*	*	1,883	*	*	1,382
AZ	*	*	*	*	*	*
AR	*	*	*	*	*	*
CA	217,475	44,323	261,799	175,467	36,431	211,897
CO	*	*	12,005	*	*	9,604
CT	*	*	*	*	*	*
DE	*	*	*	*	*	*
FL	97,965	61,833	159,798	79,755	48,663	128,419
GA	82,942	4,500	87,442	65,350	3,724	69,074
HI	*	*	*	*	*	*
ID	*	*	56,887	*	*	48,334
IL	108,752	16,367	125,119	82,922	12,142	95,064
IN	*	*	68,811	*	*	59,468
IA	*	*	74,522	*	*	61,845
KS	*	*	36,128	*	*	26,802
KY	16,637	*	16,637	15,007	*	15,007
LA	*	*	17,064	*	*	15,905
ME	*	*	12,094	*	*	6,784
MD	*	*	25,263	*	*	19,232
MA	*	*	71,512	*	*	61,636
MI	58,291	20,156	78,447	45,982	16,751	62,733
MN	44,476	14,837	59,313	34,145	11,737	45,882
MS	*	*	*	*	*	*
MO	*	*	82,075	*	*	67,512
MT	*	*	*	*	*	*
NE	34,467	5,840	40,307	28,367	3,268	31,635
NV	*	*	*	*	*	*
NH	*	*	*	*	*	*
NJ	*	*	54,909	*	*	44,308
NM	*	*	*	*	*	*
NY	47,494	20,327	67,821	39,602	17,322	56,924
NC	*	*	56,083	*	*	46,365
ND	*	*	*	*	*	*
OH	50,829	3,494	54,323	41,700	2,515	44,215
OK	10,524	337	10,861	8,129	299	8,428
OR	70,645	32,772	103,417	58,867	25,877	84,743
PA	*	*	123,126	*	*	104,987
RI	*	*	*	*	*	*
SC	20,085	1,487	21,573	16,281	1,270	17,551
SD	*	*	*	*	*	*
TN	*	*	33,476	*	*	25,582
TX	111,898	9,918	121,816	83,202	8,029	91,231
UT	*	*	29,654	*	*	24,791
VT	*	*	*	*	*	*
VA	29,022	10,486	39,508	25,653	8,964	34,617
WA	139,955	45,034	184,989	110,791	35,145	145,937
WV	*	*	*	*	*	*
WI	94,127	9,913	104,040	79,990	7,786	87,777
WY	*	*	*	*	*	*
Oth Sts	815,144	138,527	174,922	677,521	104,963	138,481
US	2,050,728	440,154	2,490,883	1,668,731	344,882	2,013,613

* Not published to avoid disclosure of individual operations. Included in "Other States" and U.S. totals.

¹ Totals may not add due to rounding.

² Includes frozen juice tank storage capacity.

**Apple and Pear Storages: Gross and Usable Refrigerated Space, Regular
and CA Capacity by State and United States, October 1, 2005^{1 2}**

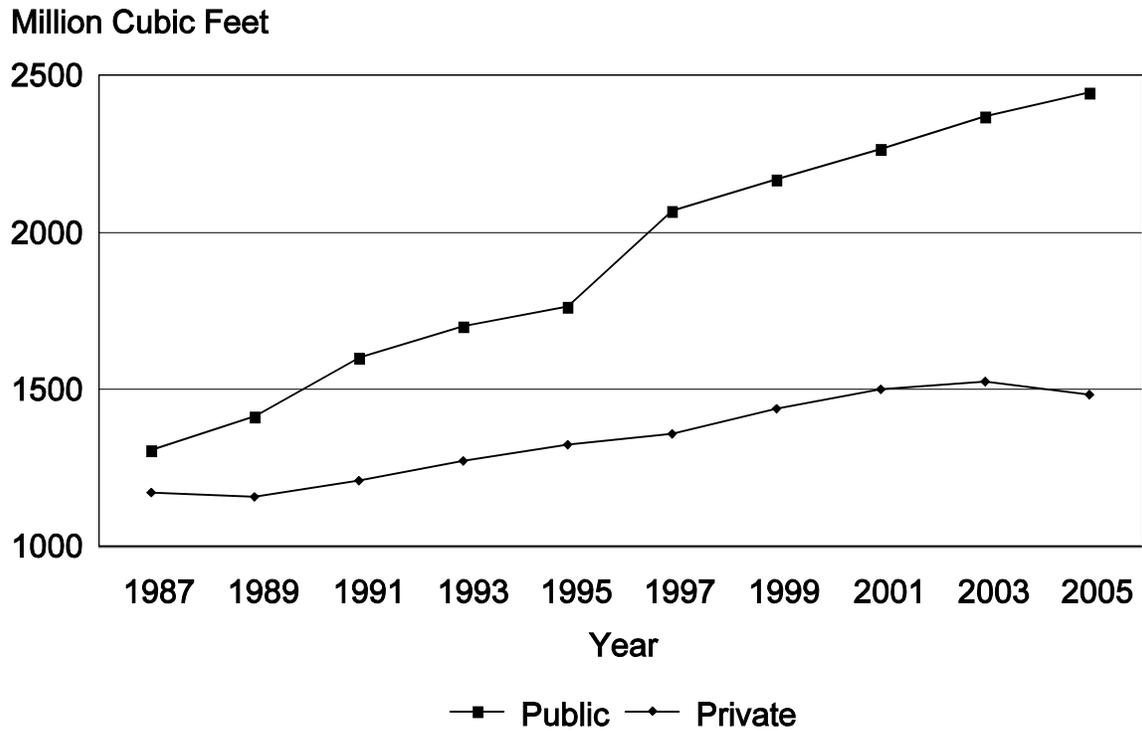
State	Refrigerated Space		Apple Storage Capacity		
	Gross	Usable	Regular	Controlled Atmosphere	Total
	<i>1,000 Cubic Feet</i>	<i>1,000 Cubic Feet</i>	<i>1,000 Bushels</i>	<i>1,000 Bushels</i>	<i>1,000 Bushels</i>
CA	32,239	24,310	6,458	2,154	8,612
CT	1,240	1,042	245	115	360
ID	4,777	4,092	1,059	821	1,880
IL	1,098	946	262	8	270
IN	2,169	1,702	358	193	551
KY	117	97	33		33
ME	3,111	2,760	522	728	1,250
MD	1,390	1,115	173	354	527
MA	4,275	3,601	781	451	1,232
MI	33,717	29,278	4,853	7,175	12,028
MN	763	573	224	33	257
NH	1,767	1,547	306	397	703
NJ	2,275	1,930	536	130	666
NY	32,839	29,032	4,432	7,717	12,149
NC	3,769	3,409	946	390	1,336
OH	3,570	2,918	824	333	1,157
OR	55,672	44,922	8,654	3,889	12,543
PA	19,619	15,746	4,008	2,066	6,074
RI	96	87	24	4	28
UT	3,310	2,639	430	414	844
VT	2,192	1,899	301	512	813
VA	12,194	10,508	1,832	1,951	3,783
WA	488,733	406,858	55,215	142,612	197,827
WV	6,744	5,559	1,689	338	2,027
WI	1,041	870	246	112	358
Oth Sts	2,505	1,932	457	7	464
US	721,221	599,371	94,865	172,904	267,769

* Not published to avoid disclosure of individual operations. Included in "Other States" and U.S. totals.

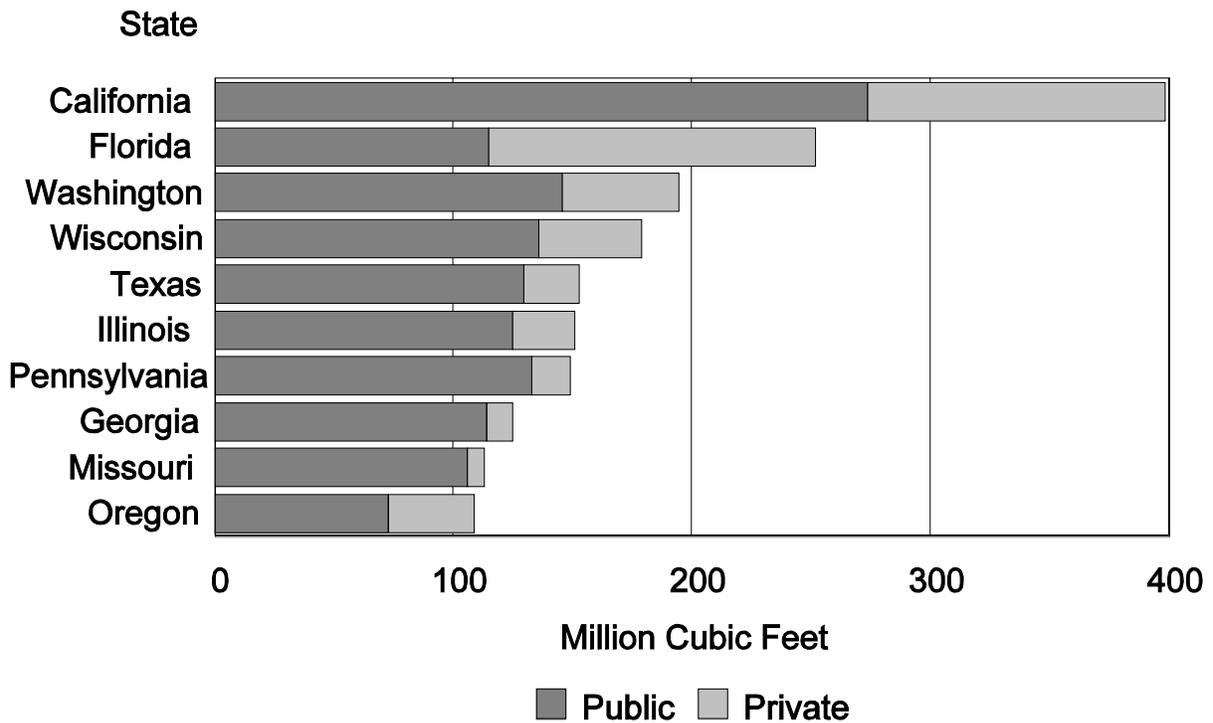
¹ Totals may not add due to rounding.

² Firms in this table store only apples or pears. Nearly all the storages are private and nearly all the space is cooler, thus public use and freezer space breakouts are not presented at the State level. See page 4 for U.S. totals.

General and Apple Storages: Gross Refrigerated Space by Type, October 1, 1987-2005

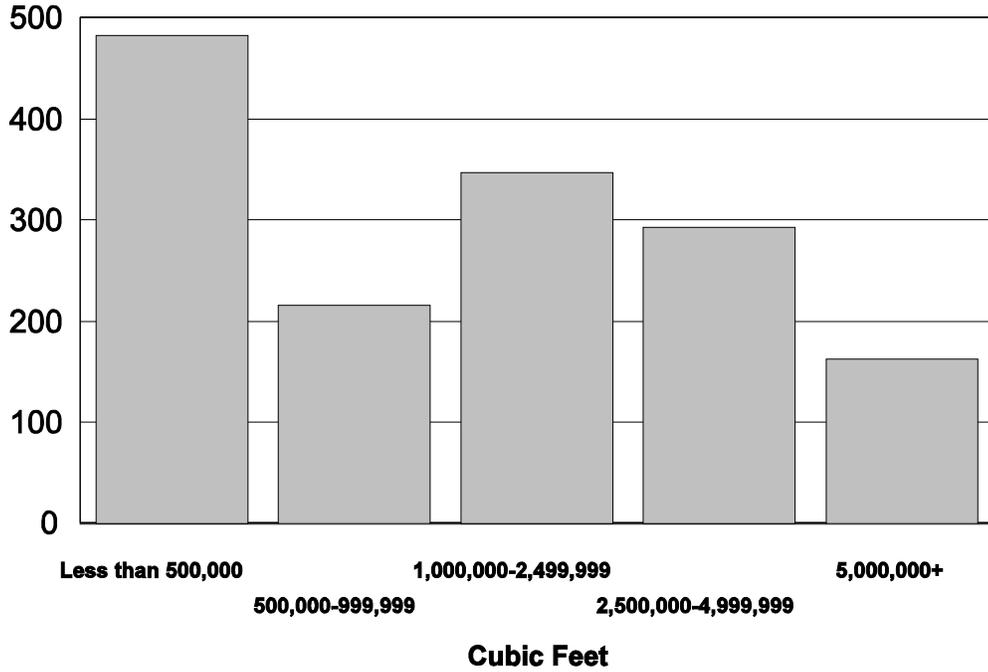


General Storages: Gross Refrigerated Space, 10 Largest States, October 1, 2005



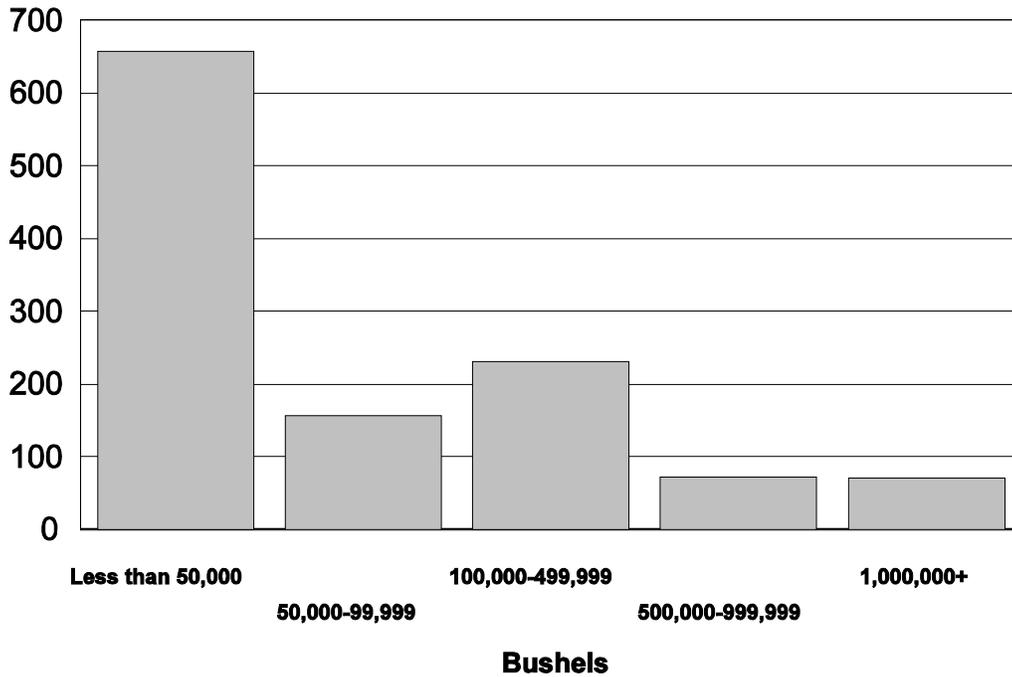
**General Refrigerated Warehouses: Number of Facilities
by Size Group, United States, October 1, 2005**

Number of Facilities



**Apple and Pear Refrigerated Warehouses: Number of
Facilities by Size Group, United States, October 1, 2005**

Number of Facilities



Definitions

General storages: Includes refrigerated facilities classified as general storages, plus facilities classified as storing only cheese, meat, or citrus concentrates.

Public general storages: Refrigerated facilities maintained for storing food for others at specified rates per unit.

Private and semiprivate general storages: Refrigerated facilities maintained by an operator to facilitate his principal function as a producer, processor, or manufacturer of food products. The space is used to store the owner's products, although some space may be used by others at specified rates per unit stored. Working space, chill rooms, and curing rooms in meat storages are not included in the storage statistics.

Apple and pear storages: Refrigerated facilities maintained exclusively for storing apples or pears. Storages operated by cooperatives for use by members are included as private storages.

Cooler space: Space that maintains temperatures between 0 and 50 degrees Fahrenheit.

Freezer space: Space that maintains temperatures at 0 degrees Fahrenheit or lower.

Controlled atmosphere (CA) space: Sealed cooler space in which the oxygen and carbon dioxide content is controlled to extend the storage life of apples or pears.

Gross space: Total area under refrigeration, measured from wall to wall and from floor to ceiling.

Usable space: Actual area used for storing commodities. Gross space less an allowance for aisles, posts, coils, blowers, etc.

Number of storages: Storages at different locations are counted separately even though operated by the same management.

Survey Procedures and Reliability

Survey procedures: Questionnaires were mailed about the 20th of September to operators of over 3,000 public and private cold storage warehouses. Two thousand six hundred eighty-nine firms met the qualifications that their warehouses were artificially cooled to a temperature of 50 degrees Fahrenheit or lower, and normally stored food products for 30 days or more. The other firms who received questionnaires either did not qualify or the plants had ceased being cold storage facilities during the past two years. The list included specialized storage facilities meeting the 30 day requirement, such as fruit houses, dairy manufacturing plants, frozen fruit, fruit juice, and vegetable processors, and poultry and meat packing plants. Wholesalers, jobbers, packer branch houses, and frozen food processors whose entire inventories are turned over more than once a month were excluded. Firms that did not respond were mailed a second request and/or phoned or visited.

Estimating procedures: Data for reporting firms were added to estimates for non-reporting firms to obtain State and National totals. Estimates for non-reporting firms were set based on previous reports or administrative data.

Revision policy: These data are considered to be final and will not be revised.

Reliability: Usable reports were received from about 2,073 firms which represent about 71 percent of the total capacity tabulated. The numbers published should be considered to be minimum figures as there are cold storage firms that are not known to NASS. Special care in identifying individual plants minimizes duplication. Survey data are also subject to non-sampling errors such as omissions and mistakes in reporting and processing the data. While these errors cannot be measured directly, they are minimized by carefully reviewing all reported data for consistency and reasonableness.

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