

DOMESTIC DAIRY SEMEN SALES (1)

UNITS OF SEMEN

BREED	2019	2018	%+/-
HOLSTEIN	15,905,670	17,968,092	-11.48%
JERSEY	2,994,244	3,276,210	-8.61%
R&W/RED HOLSTEIN	288,239	212,562	35.60%
HOLSTEIN-RED CARRIER	143,235	219,423	-34.72%
BROWN SWISS	82,277	89,757	-8.33%
AYRSHIRE	26,871	28,225	-4.80%
GUERNSEY	26,604	27,868	-4.54%
MILKING SHORTHORN	13,463	16,798	-19.85%
DAIRY CROSSBREED	9,492	23,068	-58.85%
OTHER DAIRY	7,614	4,529	68.12%
TOTAL	<u>19,497,709</u>	<u>21,866,532</u>	<u>-10.83%</u>

DAIRY SEMEN IMPORT SALES (1)

UNITS OF SEMEN

BREED	2019	2018	%+/-
HOLSTEIN	119,031	8,869	1242.10%
NORWEGIAN RED	63,473	74,743	-15.08%
MONTBELIARDE	31,898	40,648	-21.53%
JERSEY	30,963	4,309	618.57%
FLECKVIEH	17,799	0	0.00%
DAIRY CROSSBREED	11,625	15,338	-24.21%
SWEDISH RED	11,376	15,755	-27.79%
OTHER DAIRY	3,020	94	3112.77%
TOTAL	<u>289,185</u>	<u>159,756</u>	<u>81.02%</u>

CUSTOM FROZEN DAIRY SEMEN (1)

UNITS OF SEMEN

BREED	2019	2018	%+/-
HOLSTEIN	1,256,884	2,008,126	-37.41%
JERSEY	79,757	354,257	-77.49%
BROWN SWISS	50,924	119,492	-57.38%
HOLSTEIN-RED CARRIER	50,809	0	0.00%
GUERNSEY	19,903	5,499	261.94%
R&W/RED HOLSTEIN	17,987	11,857	51.70%
SWEDISH RED	9,819	0	0.00%
FLECKVIEH	8,231	0	0.00%
AYRSHIRE	3,329	6,042	-44.90%
MILKING SHORTHORN	1,575	579	172.02%
OTHER DAIRY	2,442	13,172	-81.46%
TOTAL	<u>1,501,660</u>	<u>2,519,024</u>	<u>-40.39%</u>

DAIRY SEMEN EXPORT SALES (1)

UNITS OF SEMEN

BREED	2019	2018	%+/-
HOLSTEIN	23,174,565	22,383,335	3.53%
JERSEY	1,325,373	1,287,746	2.92%
R&W/RED HOLSTEIN	523,243	437,831	19.51%
HOLSTEIN-RED CARRIER	223,048	141,906	57.18%
BROWN SWISS	186,136	218,843	-14.95%
AYRSHIRE	77,233	58,642	31.70%
MONTBELIARDE	10,153	12,713	-20.14%
GUERNSEY	8,195	12,285	-33.29%
DAIRY CROSSBREED	4,600	3,914	17.53%
MILKING SHORTHORN	1,561	2,012	-22.42%
OTHER DAIRY	986	1,189	-17.07%
TOTAL	25,535,093	24,560,416	3.97%

DAIRY SEMEN EXPORT SALES (2)

UNITS OF SEMEN

	2019	2018	%+/-
WORLD TOTAL	26,499,994	24,339,896	8.87%

DAIRY SEMEN EXPORT SALES (2)

DOLLAR VALUE

	2019	2018	%+/-
WORLD TOTAL	\$203,586,082	\$186,666,694	9.06%

DOMESTIC BEEF SEMEN SALES (1)
UNITS OF SEMEN

BREED	2019	2018	%+/-
ANGUS	3,171,338	2,400,214	32.13%
LIMOUSIN	783,344	501,706	56.14%
SIMMENTAL	773,200	570,054	35.64%
CROSSBREED	542,294	114,106	375.25%
CHAROLAIS	222,077	78,353	183.43%
RED ANGUS	144,924	142,192	1.92%
POLLED HEREFORD	106,671	81,883	30.27%
WAGYU	33,939	27,788	22.14%
HEREFORD	14,483	25,229	-42.59%
GELBIEH	7,908	37,364	-78.84%
BRAHMAN	6,045	8,424	-28.24%
MAINE ANJOU	5,949	6,219	-4.34%
BRANGUS	4,515	4,840	-6.71%
GYR	2,569	2,715	-5.38%
CHIANINA	2,234	3,844	-41.88%
BRAHMAN (RED)	2,023	782	158.70%
SHORTHORN	1,964	2,817	-30.28%
OTHER BEEF (a)	3,789	27,996	-86.47%
TOTAL	<u>5,829,266</u>	<u>4,036,526</u>	<u>44.41%</u>

(a) Other Beef includes: Aberdeen, American Breed, Amerifax, Beefmaster, Belgian Blue, Belted Galloway, Black Hereford, Brangus (Red), Braunvieh, Chi-Maine, Dutch Belted, Indu-Brazil, Lowline, Murray Grey, Nellore, Normande, Piedmontese, Salers, Scotch Highland, Scotch Shorthorn, Senapol, Texas Longhorn, White Park, and Misc. Beef.

BEEF SEMEN IMPORT SALES (1)
UNITS OF SEMEN

BREED	2019	2018	%+/-
ANGUS	955	40	2287.50%
PIEDMONTESE	499	0	0.00%
RED DANE	132	208	-36.54%
OTHER BEEF (b)	15	12	25.00%
TOTAL	<u>1,601</u>	<u>260</u>	<u>515.77%</u>

(b) Other Beef includes: Limousin and Texas Longhorn.

BEEF SEMEN EXPORT SALES (1)

UNITS OF SEMEN

BREED	2019	2018	%+/-
ANGUS	4,597,267	3,329,223	38.09%
RED ANGUS	236,635	284,788	-16.91%
BRANGUS	108,068	78,736	37.25%
POLLED HEREFORD	89,943	66,926	34.39%
SIMMENTAL	88,945	65,444	35.91%
CROSSBREED	46,037	6,299	630.86%
CHAROLAIS	41,558	28,179	47.48%
BRAHMAN (RED)	32,810	23,390	40.27%
WAGYU	27,097	8,702	211.39%
BRANGUS (RED)	16,458	6,891	138.83%
GYR	16,087	17,909	-10.17%
BRAHMAN	15,437	19,343	-20.19%
LIMOUSIN	10,425	19,022	-45.20%
OTHER BEEF (c)	6,723	22,283	-69.83%
TOTAL	<u>5,333,490</u>	<u>3,977,135</u>	<u>34.10%</u>

(c) Other Beef includes: American Breed, Amerifax, Belgian Blue, Brahmousin, Braunvieh, Chianina, Chi-Maine, Gelbvieh, Guzerat, Horned Hereford, Lowline, Maine-Anjou, Nellore, Normande, Polled Shorthorn, Senapol and Misc. Beef.

BEEF SEMEN EXPORT SALES (2)

UNITS OF SEMEN

	2019	2018	%+/-
WORLD TOTAL	<u>5,771,728</u>	<u>3,741,667</u>	<u>54.26%</u>

BEEF SEMEN EXPORT SALES (2)

DOLLAR VALUE

	2019	2018	%+/-
WORLD TOTAL	<u>\$16,228,611</u>	<u>\$13,292,981</u>	<u>22.08%</u>

CUSTOM FROZEN BEEF SEMEN (1)

UNITS OF SEMEN

BREED	2019	2018	%+/-
ANGUS	1,239,893	1,088,935	13.86%
SIMMENTAL	639,203	426,924	49.72%
WAGYU	160,938	128,365	25.38%
CROSSBREED	145,518	137,441	5.88%
CHAROLAIS	142,570	58,538	143.55%
BEEFMASTER	115,808	104,841	10.46%
RED ANGUS	83,767	205,249	-59.19%
BRANGUS	71,131	71,729	-0.83%
POLLED HEREFORD	68,751	85,149	-19.26%
BRAHMAN	50,098	60,009	-16.52%
HEREFORD	46,557	56,210	-17.17%
GELBVIEWH	43,576	72,821	-40.16%
SANTA GERTRUDIS	29,156	12,920	125.67%
AMERICAN BREED	27,459	0	0.00%
LIMOUSIN	23,837	737,037	-96.77%
SHORTHORN	21,366	26,157	-18.32%
RED BRANGUS	20,770	2,979	597.21%
CHI-MAINE	19,061	10,892	75.00%
BELGIAN BLUE	18,831	16,135	16.71%
BRAHMAN (RED)	18,524	5,006	270.04%
MAINE ANJOU	17,086	40,323	-57.63%
AMERICAN BUCKING BULL	14,797	11,493	28.75%
CHIANINA	14,025	36,701	-61.79%
SHORTHORN (SCOTCH)	8,879	12,894	-31.14%
DUTCH BELTED	8,414	8,737	-3.70%
TEXAS LONGHORN	7,905	15,333	-48.44%
SALERS	5,409	3,883	39.30%
BRAUNVIEWH	5,631	3,247	73.42%
BLACK HEREFORD	5,411	13,114	-58.74%
ABERDEEN	5,238	8,898	-41.13%
BRITISH WHITE	4,463	250	1685.20%
SIMBRAH	3,971	3,711	7.01%
AMERICAN AKAUSHI	3,142	0	0.00%
SOUTH DEVON	2,456	6,500	-62.22%
PIEDMONTESE	1,389	4,981	0.00%
OTHER BEEF (d)	26,339	196,653	-86.61%
TOTAL	<u>3,121,369</u>	<u>3,674,055</u>	<u>-15.04%</u>

(d) Other Beef includes: Amerifax, Ankole Watusi, Barzona, Beefalo, Belted Galloway, Bonsmara, Braford, Chi-Angus, Corriente, Crossbreed, Devon, Dexter, Galloway, Gelbray, Guzerat, Gyr, Indu-Brazil, Irish Black, Marchigiana, Mashona, Murray Grey, Nellore, Normande, Pinzgauer, Red Poll, Romagnola, Scotch Highland, Tarentaise, White Park and Misc. Beef.

(1) Based on Quarterly Reports of Semen Sold and Custom Frozen

(2) Based on Quarterly Survey of Semen Sold for Export