

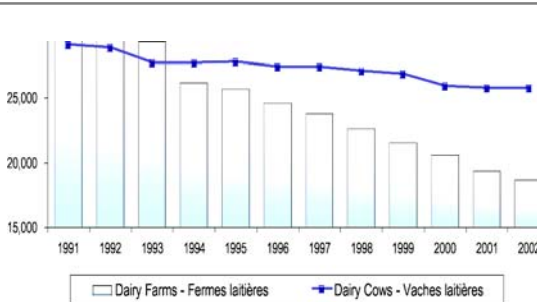
## Trends in the Canadian Dairy Cattle Industry

Brian Van Doormaal  
 Canadian Dairy Network (CDN)

## Dairy Industry Statistics

- 18,673 herds, decreasing an average of 4.7% per year during the past 5 years
- 1,075,300 dairy cows and 513,000 yearling heifers, decreasing an average of 1.3% per year
- Average herd size has increased to 57 cows
- 75% - 80% of cows bred through A.I.
- 400 young sires tested in Canada each year
- 280,000 new animal registrations per year
- 200,000 animal classifications per year
- 12,672 herds and 727,069 cows (68%) on milk recording (54.3% supervised)

## Dairy Farms & Cows



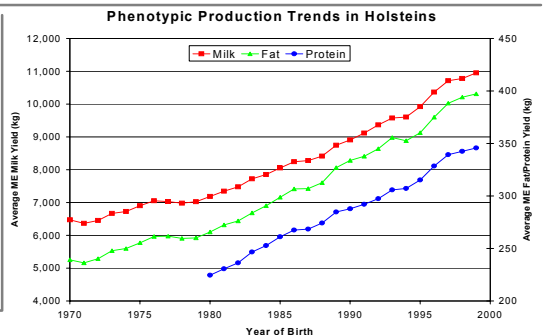
## Countries with >1M Dairy Cows - ICAR 2000 -

COUNTRY PAYS	NO. DAIRY COWS NOMBRE DE VACHES LAIITIÈRE	AVERAGE PRODUCTION PRODUCTION MOYENNE		
		MILK LAIT kg	FAT GRAS %	PROTEIN PROTÉINE %
United States/État-Unis	9,227,000	8,256		
Germany/Allemagne	4,538,600	6,112	4.22	3.41
France	4,395,100	5,660	4.08	3.33
New Zealand/Nouvelle-Zélande	3,269,362	3,668	4.49	3.35
Poland/Pologne	3,097,500	3,653	3.85	3.19
Argentina/Argentine	2,350,000	4,170	3.40	
Australia/Australie	2,170,000	5,000	4.00	3.30
Mexico/Mexique	1,863,977	4,833		
England & Wales/Angleterre	1,845,000	6,143	4.03	3.30
Netherlands/Pays-Bas	1,504,097	7,300		
Ireland/Irlande	1,238,300	4,530	3.70	3.27
Spain/Espagne	1,183,000	4,690	3.74	3.11
Canada	1,141,700	8,532	3.72	3.22
Japan/Japon	1,124,000	7,403	3.90	3.25

## Top 10 Countries for Milk Yield - ICAR 2000 -

COUNTRY PAYS	NO. DAIRY VACHES LAIITIÈRE	AVERAGE PRODUCTION PRODUCTION MOYENNE		
		MILK LAIT kg	FAT GRAS %	PROTEIN PROTÉINE %
Israël	110,770	10,508	3.31	3.08
Canada	1,141,700	8,532	3.72	3.22
United States/État-Unis	9,227,000	8,256		
Sweden/Suède	448,500	7,465	4.18	3.28
Japan/Japon	1,124,000	7,403	3.90	3.25
Netherlands/Pays-Bas	1,504,097	7,300		
Finland/Finlande	364,100	7,143	4.24	3.36
Korea/Coree	300,000	6,872	3.87	
Denmark/Danemark	680,000	6,581	4.32	3.41
England & Wales/Angleterre	1,845,000	6,143	4.03	3.30

## Realized Phenotypic Progress - Holstein -



## Average Production in Holsteins - Official Lactations -



YEAR ANNEE	NO. RECORDS RELEVES	MILK LAIT kg	FAT GRAS kg	FAT GRAS %	PROTEINE PROTEINE kg	PROTEINE PROTEINE %
1992	284,251	8,028	295	3.67	258	3.21
1993	268,842	8,193	304	3.71	263	3.21
1994	278,028	8,309	307	3.69	267	3.21
1995	277,010	8,461	313	3.70	272	3.21
1996	273,795	8,633	321	3.72	279	3.23
1997	273,426	8,697	320	3.68	280	3.22
1998	270,009	8,946	327	3.65	288	3.22
1999	263,502	9,162	335	3.66	295	3.22
2000	253,561	9,350	343	3.67	300	3.21
2001	254,014	9,440	348	3.68	304	3.22
2002	271,531	9,717	354	3.67	312	3.22

## Milk-Recorded Herds



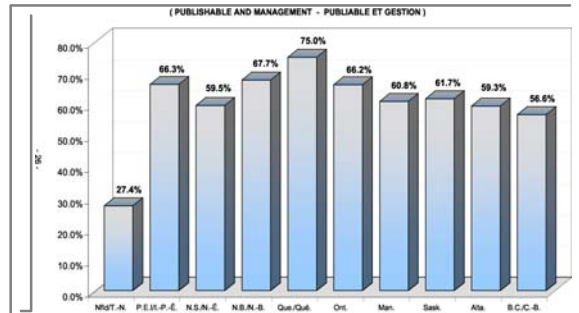
YEAR ANNEE	Nfld T.-N.	P.E.I. I.-P.-E.	N.S. N.-E.	N.B. N.-B.	Que. Qué.	Ont. Ont.	Man. Man.	Sask. Sask.	Alta. Alta.	B.C. C.-B.	CANADA CANADA
1992	31	222	308	288	7,967	5,404	482	338	879	581	16,590
1993	25	220	308	283	7,790	5,308	530	330	853	582	16,229
1994	20	219	310	277	7,637	5,338	488	315	843	575	16,022
1995	20	213	303	264	7,923	5,231	471	303	815	583	16,126
1996	19	217	294	255	7,666	5,042	457	290	788	505	15,533
1997	19	213	276	251	7,211	4,853	460	282	752	477	14,794
1998	17	204	265	242	7,319	4,634	450	264	707	495	14,597
1999	13	190	253	246	7,139	4,495	381	239	703	453	14,112
2000	15	192	239	237	6,796	4,323	362	223	620	428	13,435
2001	18	189	233	230	6,592	4,318	333	203	596	415	13,127
2002	17	181	226	230	6,332	4,199	308	195	570	414	12,672

## Milk-Recorded Cows

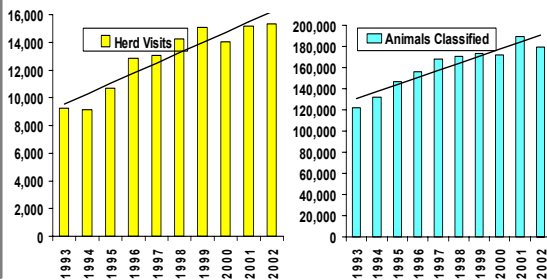


YEAR ANNEE	Nfld T.-N.	P.E.I. I.-P.-E.	N.S. N.-E.	N.B. N.-B.	Que. Qué.	Ont. Ont.	Man. Man.	Sask. Sask.	Alta. Alta.	B.C. C.-B.	CANADA CANADA
1992	2,291	8,165	15,297	13,137	295,819	243,930	23,845	18,345	57,242	47,074	725,145
1993	1,569	8,450	15,126	13,529	301,418	242,511	24,017	17,760	55,628	47,264	727,272
1994	1,332	8,472	15,388	13,398	313,114	252,159	25,857	18,020	58,679	48,706	755,125
1995	1,513	8,746	15,782	13,401	321,043	252,319	26,159	18,189	59,291	48,064	764,507
1996	1,488	9,047	15,569	13,711	324,216	249,682	25,539	17,876	60,334	48,305	765,767
1997	1,510	9,688	15,351	13,472	307,519	246,273	26,096	18,733	60,533	48,774	747,949
1998	1,248	9,107	14,851	13,281	315,199	237,459	26,844	18,240	57,696	46,076	740,001
1999	920	9,067	14,564	13,787	311,209	243,708	24,627	18,347	60,217	44,205	740,651
2000	1,043	9,651	14,345	13,104	308,426	236,074	25,320	18,467	55,108	42,918	724,456
2001	1,162	9,694	14,591	13,045	305,240	245,471	24,664	18,182	56,436	43,806	732,261
2002	1,259	9,745	14,403	13,070	302,398	245,505	24,633	18,502	54,572	42,982	727,069

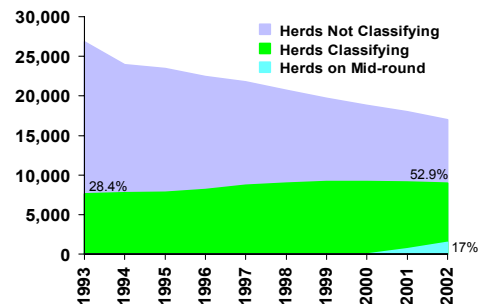
## % Cows on Milk Recording



## Holstein Type Classification

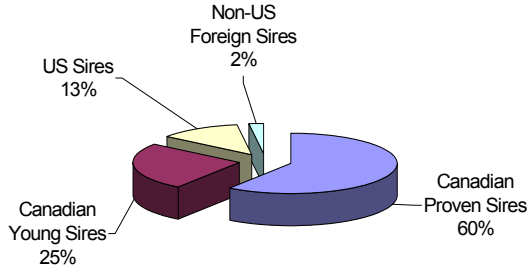


## Type Classification Market Share



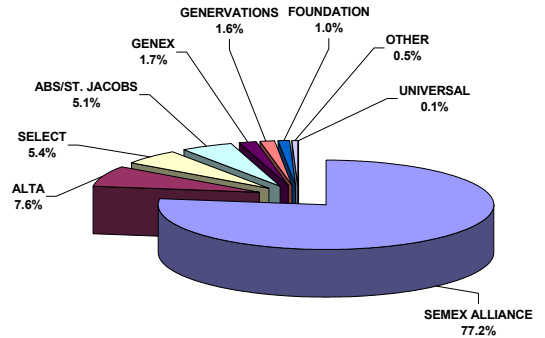
## Market Share by Source

(Canadian Registered Holsteins Born in 2002)



## Market Share by A.I. Organization

(Canadian Registered Holsteins Born in 2002)



## Genetic Evaluations in Canada



### Production:

- Yields of Milk, Fat and Protein
- Fat and Protein deviations
- Somatic Cell Score
- Lactation Persistency
- Each trait analyzed separately for lactations 1, 2 and 3 and then combined into an overall value

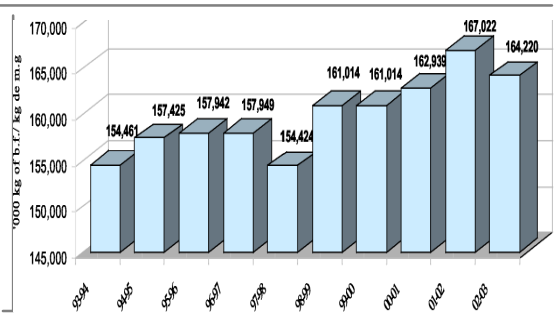
### Conformation (approximately 30 traits)

### Auxiliary (bulls only):

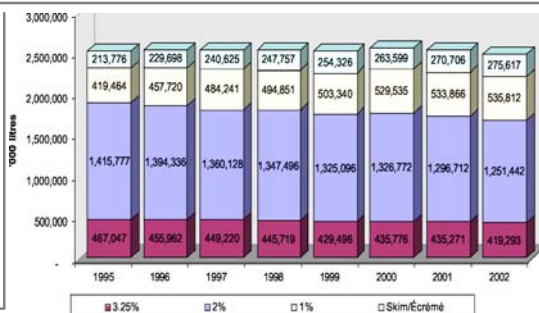
- Herd Life, Milking Speed & Temperament, Calving Ease (Direct and Maternal)
- 56-Day Non-Return Rate

## National Quota ('000 kg Fat)

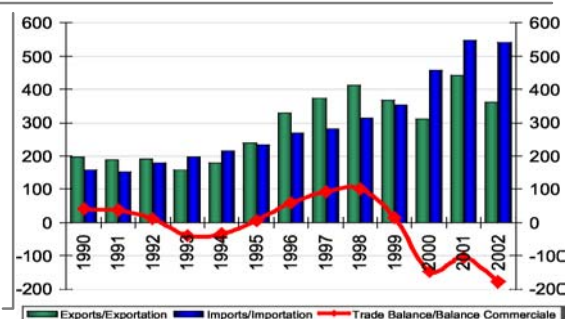
(National Quota)



## Milk Consumption Trend



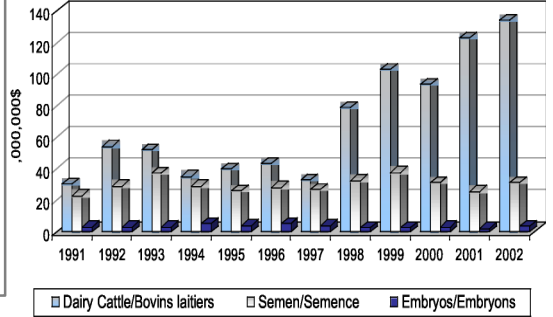
## Canadian Trade Balance - Dairy Products -



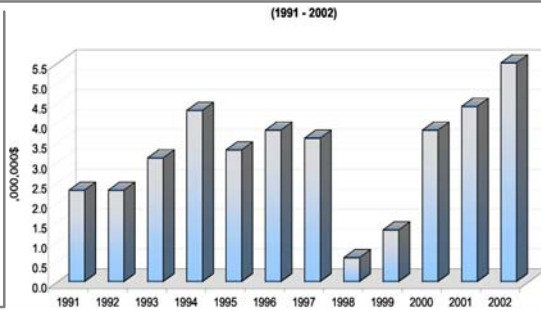
## Dairy Cattle Genetic Exports

- The focus of genetic improvement programs in Canada has always been the domestic needs of producers
- Canada has maintained a strong international marketplace using this approach
  - Meet the needs for Canada and the same genetics will be sought-after in other countries
- Export statistics for 2002:
  - Live dairy animals: \$ 18 M for registered females \$ 116 M for not specified
  - Dairy Semen: \$ 31 M
  - Dairy embryos: \$ 3.5 M
  - TOTAL: \$ 168 M**

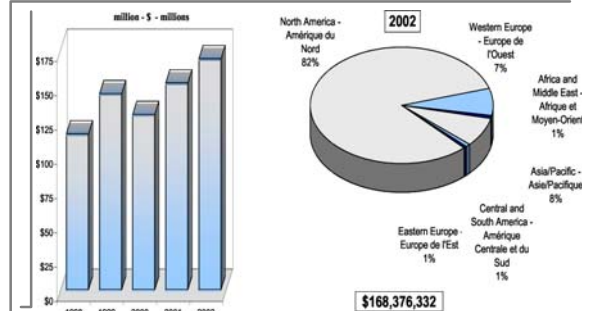
## Dairy Cattle Genetics Exports



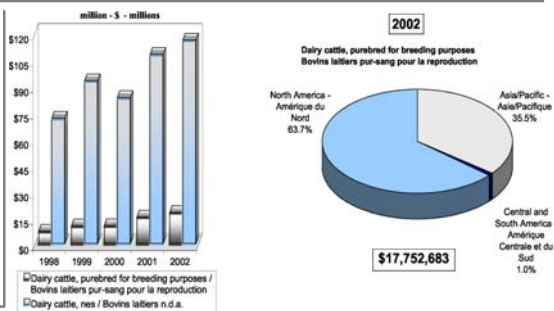
## Dairy Cattle Genetics Imports - Cattle, Semen & Embryos -



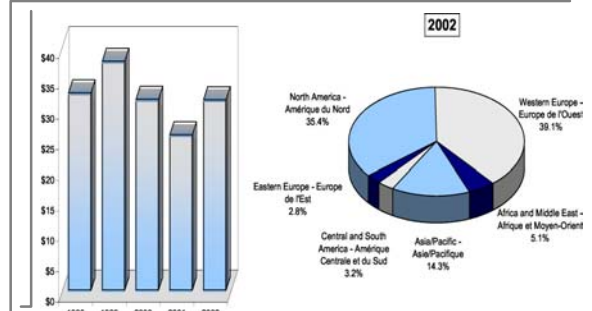
## Dairy Cattle Genetics Exports



## Live Cattle Exports (Herdbook)



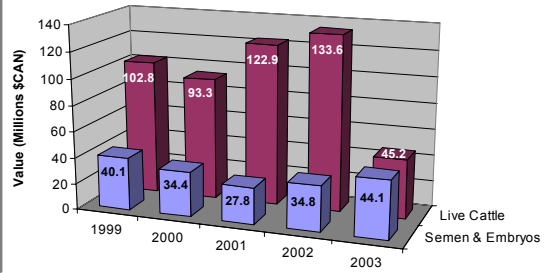
## Semen Exports



## Canadian Dairy Exports - 2003

Product / Produit	Value / Valeur (\$ CAN)					% Change (2002-03)
	1999	2000	2001	2002	2003	
Purebred / Pur-sang	10,056,980	10,214,831	15,186,343	17,752,683	5,487,323	-69.1
Purity not identified / Purité non-identifiée	92,758,545	83,118,857	107,761,296	115,893,897	39,747,767	-65.7
Semen / Semence	37,593,065	31,324,122	25,478,658	31,291,465	40,385,185	29.1
Embryos / Embryons	2,502,131	3,099,633	2,275,845	3,477,291	3,748,915	7.8
<b>TOTAL</b>	<b>142,910,721</b>	<b>127,757,443</b>	<b>150,702,142</b>	<b>168,415,336</b>	<b>89,369,190</b>	<b>-46.9</b>

## Impact of BSE in May 2003



## Impact of BSE in May 2003

- Export markets closed
- Prices for live cattle drop quickly
- Immediate reaction was to keep replacements rather sell for next to nothing
- Milking population increases from June to October
- As winter arrived, farmers lack space to house whole herd
  - Forced to remove some animals at very low prices
- Currently, farm profit margins are very tight
  - No sign of relief in relatively near future