



Beef performance recording

ITALY

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A.I.A.

Beef Cattle system

In Italy performance recording is performed by A.I.A. (Associazione Italiana Allevatori) while herdbook keeping is performed by different A.N.A. (Associazione Nazionale Allevatori)

All herdbooks are associated to A.I.A.; farmers are associated to herdbooks.

Beef Cattle Breeds in Italy

- 3 main Herdbooks
 - **ANABIC** (Chianina, Marchigiana, Romagnola, Podolica, Maremmana)
 - **ANABORAPI** (Piemontese)
 - **ANACLI** (Charolaise, Limousine)
- Other minor breeds (conservation, no selection)
 - Calvana
 - Mucca Pisana
 - Garfagnina
 - Pontremolese



Limousine



Charolaise



Piemontese



Chianina



Maremmana



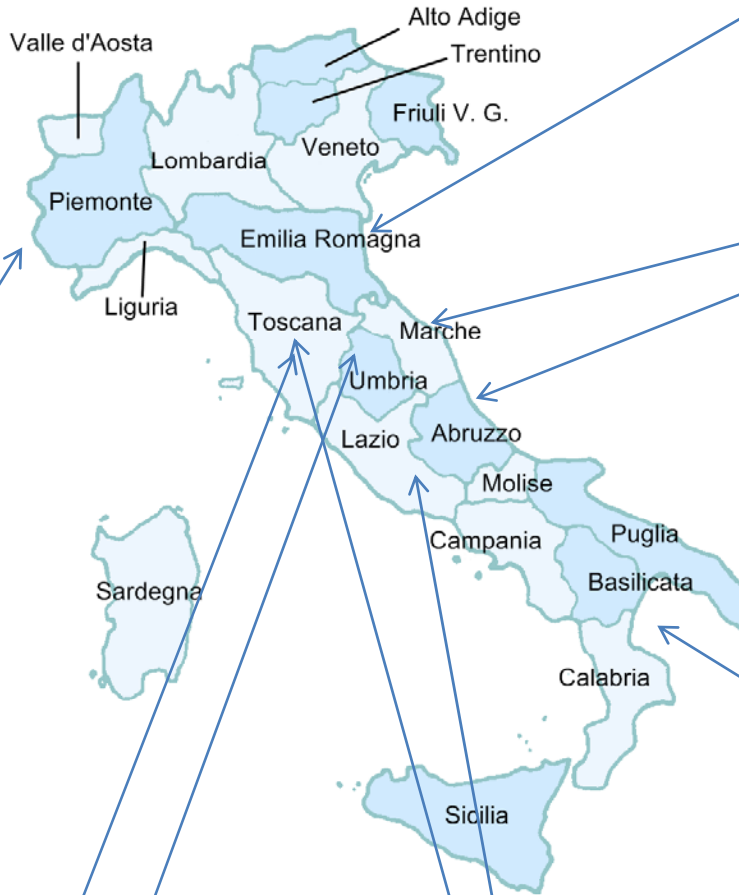
Romagnola



Marchigiana



Podolica



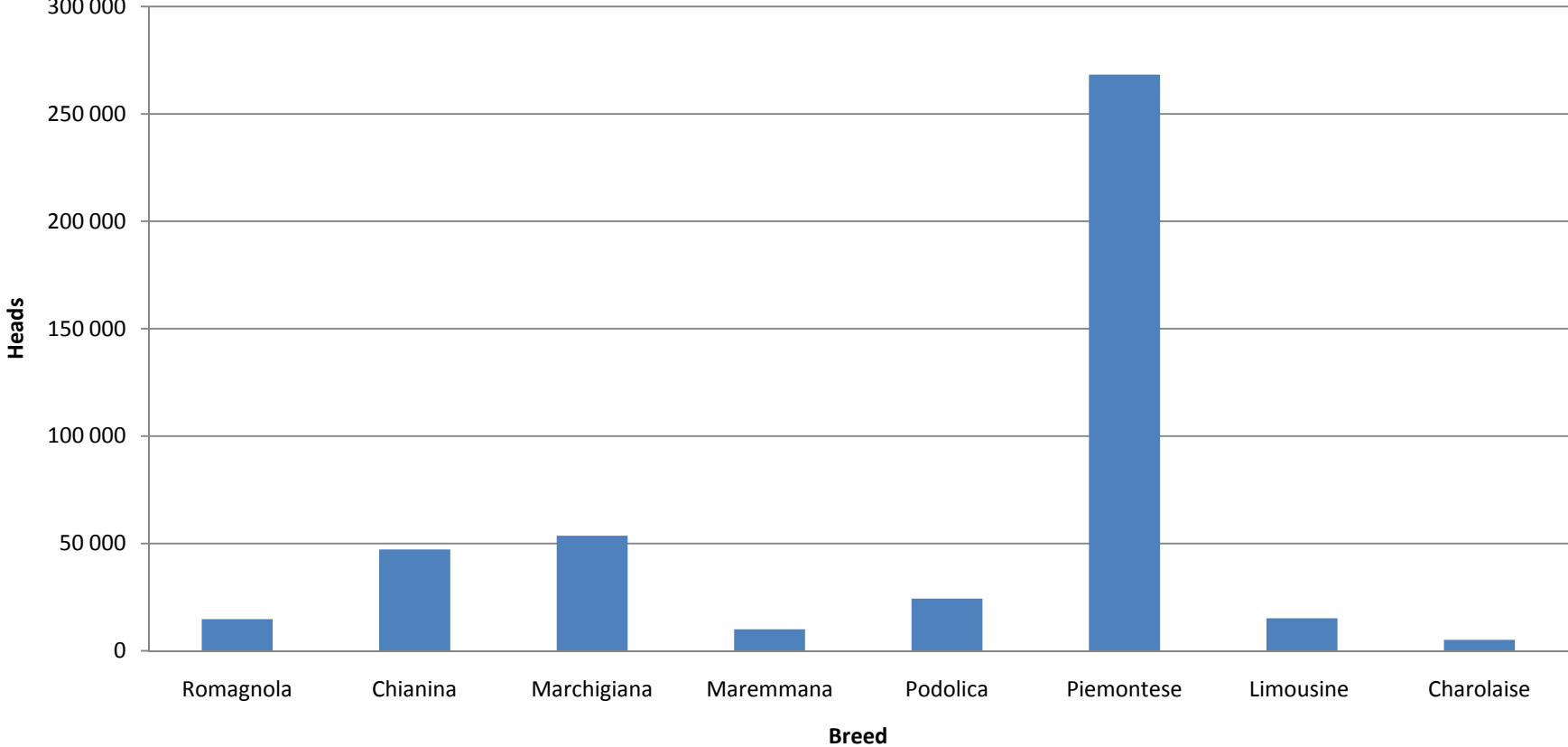
Herdbook heads, by year

Year	Romagnola	Chianina	Marchigiana	Maremmana	Podolica	All
1957	8.298	13.115	11.233	1.469		34.115
1967	15.276	14.395	30.403	4.580		64.654
1970	19.780	14.428	40.363	4.146		78.717
1975	19.249	28.169	31.310	5.678		84.406
1980	17.545	22.744	23.510	4.323		68.122
1985	15.450	25.002	42.238	9.238	34.121	126.049
1990	17.795	35.873	60.407	7.129	29.453	150.657
1995	14.408	30.622	49.227	4.613	20.774	119.644
2000	14.334	28.455	42.320	4.894	15.980	105.983
2001	14.371	30.411	41.930	5.840	17.231	109.783
2002	15.479	32.296	45.327	6.762	21.477	121.341
2003	16.602	35.743	46.030	7.938	23.933	130.246
2004	16.053	38.073	47.938	8.165	25.139	135.368
2005	15.998	40.742	49.305	8.467	25.064	139.576
2006	16.723	42.663	50.077	8.812	24.018	142.293
2007	16.494	44.153	53.057	9.811	24.254	147.769
2008	15.705	46.673	53.314	9.458	23.935	149.085
2009	15.416	46.553	52.344	9.212	23.370	146.895
2010	14.770	47.236	53.592	10.029	24.335	149.962

Year	Piemontese
1957	851
1967	5.000
1970	7.000
1975	-
1980	37.114
1985	43.562
1990	79.934
1995	95.064
2000	117.427
2001	152.000
2002	159.850
2003	188.706
2004	194.674
2005	201.975
2006	210.397
2007	229.121
2008	245.923
2009	257.600
2010	268.305

Source: A.I.A.

Recorded cows, by breed - Italy



Source: A.I.A.

Recorded heads, by year

Year	Beef Cattle
1990	106.425
1995	131.439
2000	174.005
2001	181.660
2002	193.113
2003	216.280
2004	230.789
2005	248.167
2006	260.261
2007	270.430
2008	290.599
2009	291.722
2010	311.110

Source: A.I.A.

Recording methods

- Piemontese:
 - No live weight
 - Each month: reproductive traits (calving ease, etc) recorded by official technician
- Chianina, Marchigiana, Romagnola, Maremmana, Podolica
 - Weights and reproductive traits 1 or 2 times per year (up about two years of age)
 - Limousine, Charolaise:

Allowed Recording methods



Recording Method	Recording Frequency	Recorded weight	Type of recorded trait
A	4,8,13,26 wks	P,M,N	T
B	4,8,13,26 wks	N	R

P = Scale weight

M = Chest girth measure, then transformation in live weight

N = no weights recorded

T = Both weight and reproductive traits

R = Only reproductive traits

Situation by breeds

- Piemontese: Only reproductive traits, once per month, official recorder
- Chianina, Marchigiana, Romagnola, Podolica, Maremmana: Weights and reproductive traits, once or twice per year, official recorder
- Limousine, Charolais: twice in the first year of age, to take weights at around 4 and 7 months

Selection

Chianina, Marchigiana, Romagnola, Podolica, Maremmana:

- Young males: Performance test (growth rate, etc)
- IST (bull selection index = 50% growth rate + 50% muscularity)
- IM (morphology index = $x \cdot \text{Legs} + y \cdot \text{size} + z \cdot \text{muscularity}$)
- ISV (cow selection index = 50% IST + 50% IM)
- To be done:
 - Maternal effect index
- On study: Carcass traits

Selection

Piemontese:

- Young males: Performance test (Productive traits, muscularity)
- On field: calving ease + calf muscularity, birth weight, biometrical measures
- On field: morphological evaluation on primiparous cows
- Economical weights

Two kind of indexes:

- Breeding index = sire to generate good cows
- Meat index = sire to generate beef animals

Trait	Sire		Cows	
	Meat Index	Breeding Index	Meat Index	Breeding Index
Growing	14%	14%	10%	10%
Muscularity	20%	20%	14%	14%
Birth ease	40%	20%	40%	20%
Calving ease	20%	40%	20%	40%
Limbs	6%	6%	4%	4%
Morphological Indices	–	–	4%	4%
Size	–	–	6%	6%
Muscularity	–	–	2%	2%
Limbs				

Research

- Slaughter traits
- genetic parameters of BCS and in particular its relation with the fertility trait

Limousine

- Collaboration ANACLI – AIA for the use of carcass traits and classification for selection in Italy