

EBLEX Report: Analysis of “Breed of Dam” for cattle recorded with BCMS 2003-2013

Samuel Boon, EBLEX, May 2014 (Version 1)

Introduction

The breed makeup of the nation’s suckler cows influences not just the beef produced and sold to consumers, but also the productivity and ultimately profitability of those farming systems in which cattle are born and reared.

EBLEX asked the British Cattle Movement Service (BCMS) for a breakdown of the dams of calves recorded on the database on the basis of their breed. BCMS is part of the Rural Payments Agency (RPA)

It is recognised that an analysis of this type of farmer derived data has some limitations. Where crossbreeding arises there is a tendency for the most valuable breed to be reported on the passport. This approach would favour the reporting of certain beef breeds – which may only account for 50% of the genetic makeup of the suckler cow. In the reporting of dairy breeds similar bias may arise.

However, this is a large dataset and for the most part recording protocols have remained consistent over time so relative change over the last decade is still relevant to those interested in assessing which breeds and crosses are influencing the UK beef supply.

Methodology

BCMS data relates to passport applications received for live and dead animals born in Great Britain. Imported cattle are excluded from the data. Cows producing twins or calving twice within the year will be counted more than once.

BCMS report 239 different breed codes. It is understood that these codes/breed types are determined by Breed Societies. These codes were condensed and cleaned for ease of analysis; with each breed allocating to a “Breed Category”. Numerically small breeds with less than 500 records over 10 years were assigned to “Other” – as were categories such as “unknown” or “crossbred beef”.

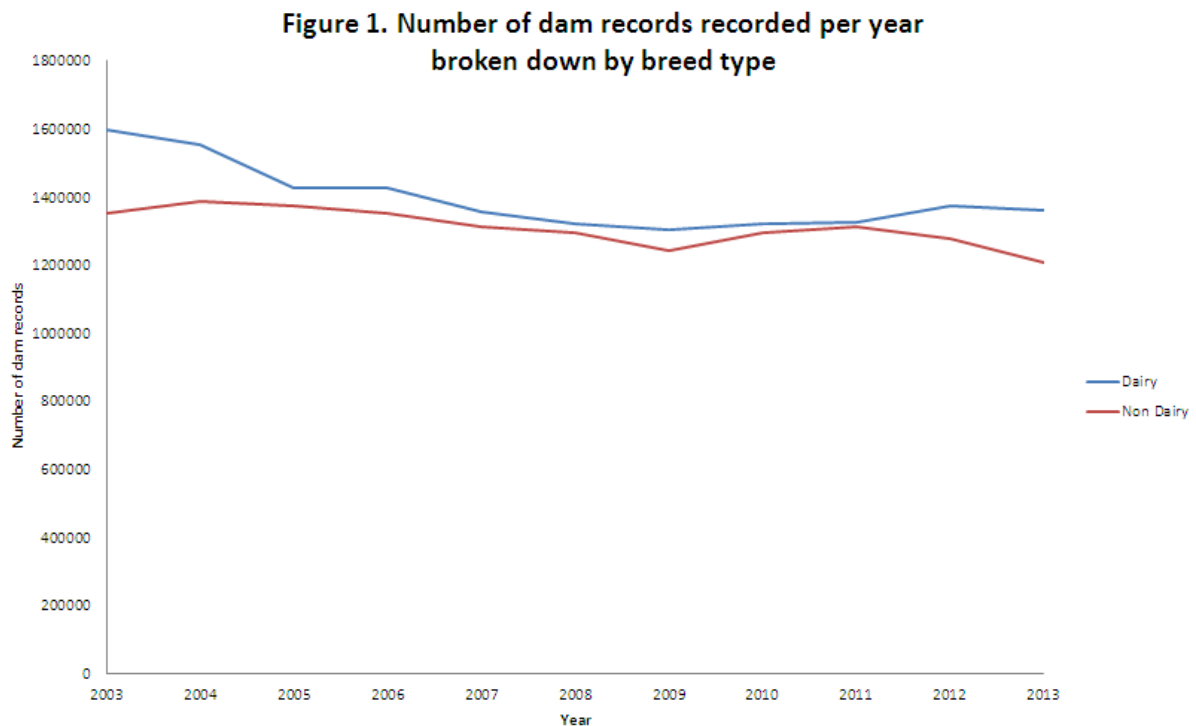
Each breed can be reported to BCMS as either a pure animal or crossbred. This data is reported separately, but for the purposes of this report the pure and crossbred records are combined for to give the overall “breed” numbers reported.

The importance of black and white dairy genetics is recognised and to provide as much clarity as possible Holstein, Friesian and Holstein-Friesian breed numbers are listed separately. Assumptions were also made regarding animals coded as “Devon” (reported here as Red Ruby Devon) and Shorthorn (reported here as Beef Shorthorn).

Results

A point of clarification: The charts that follow report the “number of dam records” – although technically what they report is a deduction about the number of dams – based on the number of calves that were reported to BCMS.

The total number of records has fallen from 2.95/annum to 2.56/annum million records from 2003 to 2013 – with the biggest fall observed in the number of dairy records between 2002 and 2007.



Dairy breeds

Due to the numerical importance of the Friesian, Holstein and Holstein Friesian each strain is collated separately in this dataset. Since 2002 there has been a large reduction in the number of cows recorded as Friesian and an increase in those recorded as Holstein Friesian. It is noted that some changes have arisen in the naming of breeds on BCMS – differences observed in the use of the breed codes for Friesian, British Friesian and British Friesian x for example. It is not clear whether this change represents a true change in breed use or an over representation of Friesian genetics in the recording of cattle in 2002.

This change is largely driven through crossbreeding, as can be seen in Table 1. Large increases can be seen in the number of Jersey cross, Montbeliarde cross and Swedish Red cross dams relative to the growth in dams deemed to be purebred.

Table 1. Breakdown for some numerically smaller dairy breeds into pure and cross

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Ayrshire Cross	1230	1644	1881	2234	2648	2771	3156	3701	4143	4694	4933
Ayrshire Pure	24494	24377	22197	22758	22057	21556	21821	22073	22368	22527	21554
Brown Swiss Cross	3136	3453	3573	4067	4540	4858	5412	6056	6943	7847	8295
Brown Swiss Pure	2304	2430	2547	2695	2738	2648	2724	2967	3169	3373	3531
Jersey Cross	1962	4360	5848	6916	9791	11734	13799	16511	18236	21546	24163
Jersey Pure	18119	19287	19278	20455	21331	21199	22341	23262	23397	24724	24194
MRI Cross	7103	8118	8577	9028	8842	8757	8463	7972	7150	6527	5680
MRI Pure	4096	4469	4566	4614	4679	4752	4675	4525	4361	4149	3977
Montbeliarde Cross	1680	1988	2375	3021	4021	5640	7454	9266	11679	13941	15029
Montbeliarde Pure	1807	1978	2238	2440	2734	2912	3087	3708	4044	4530	5033
Swedish Red Cross	229	638	1001	1536	1852	3066	5500	8528	11886	15084	17393
Swedish Red Pure	76	157	257	307	367	629	851	1223	1610	1910	2278

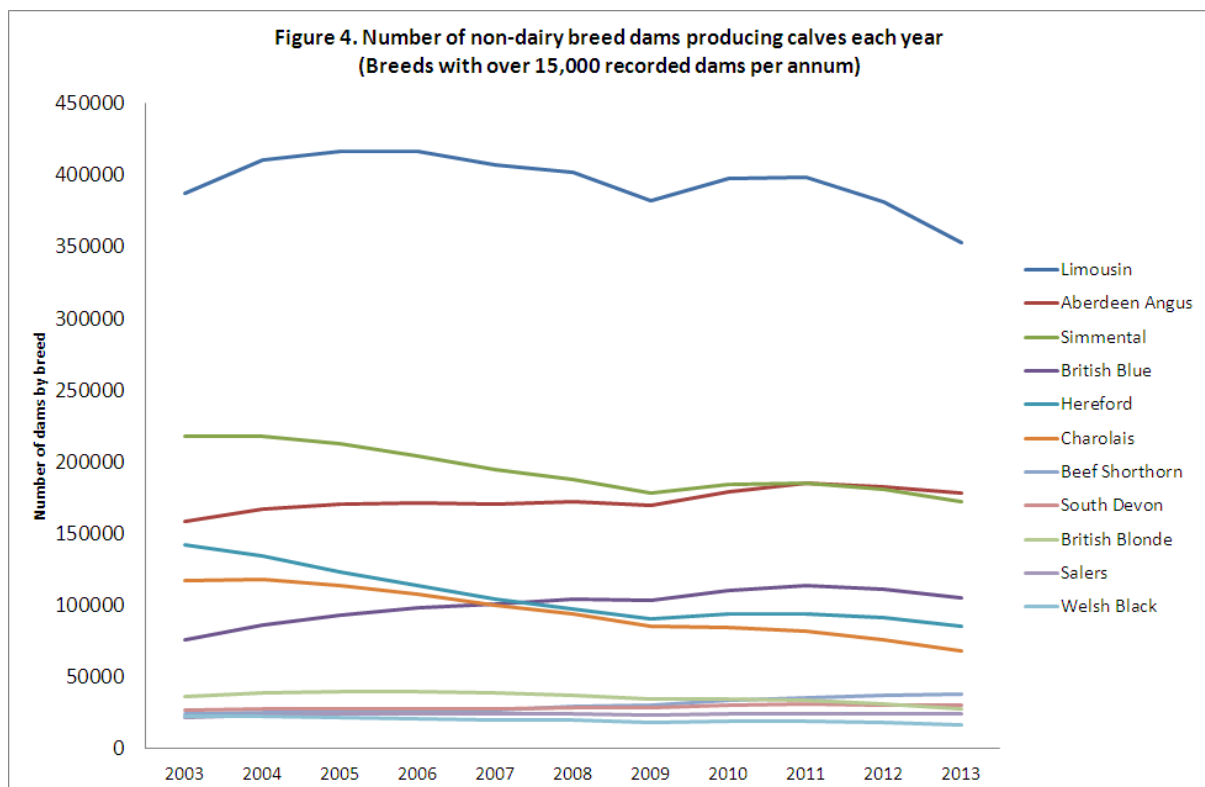
Even if the most influential “crossbred” dairy dam, the Holstein Friesian, is excluded from the count of crossbred dairy dams, the remaining records show that the total number of dairy breed dams that are recorded as crossbred with BCMS has doubled over the last ten years.

Non-Dairy breeds

Amongst those non-dairy breed cows recorded as having produced calves on the BCMS database, approximately 75% are crossbred and 25% purebred. These proportions have hardly changed over time.

The Limousin remains numerically the most important non-dairy breed dam; maternal breeds like the Simmental and Hereford have declined – as has the Charolais; numbers of Aberdeen Angus and British Blue cows have increased.

The accompanying charts show the change in numbers reported for breeds with >15,000 records per annum (Figure 4) and between 2,000-15,000 records per year (Figure 5).



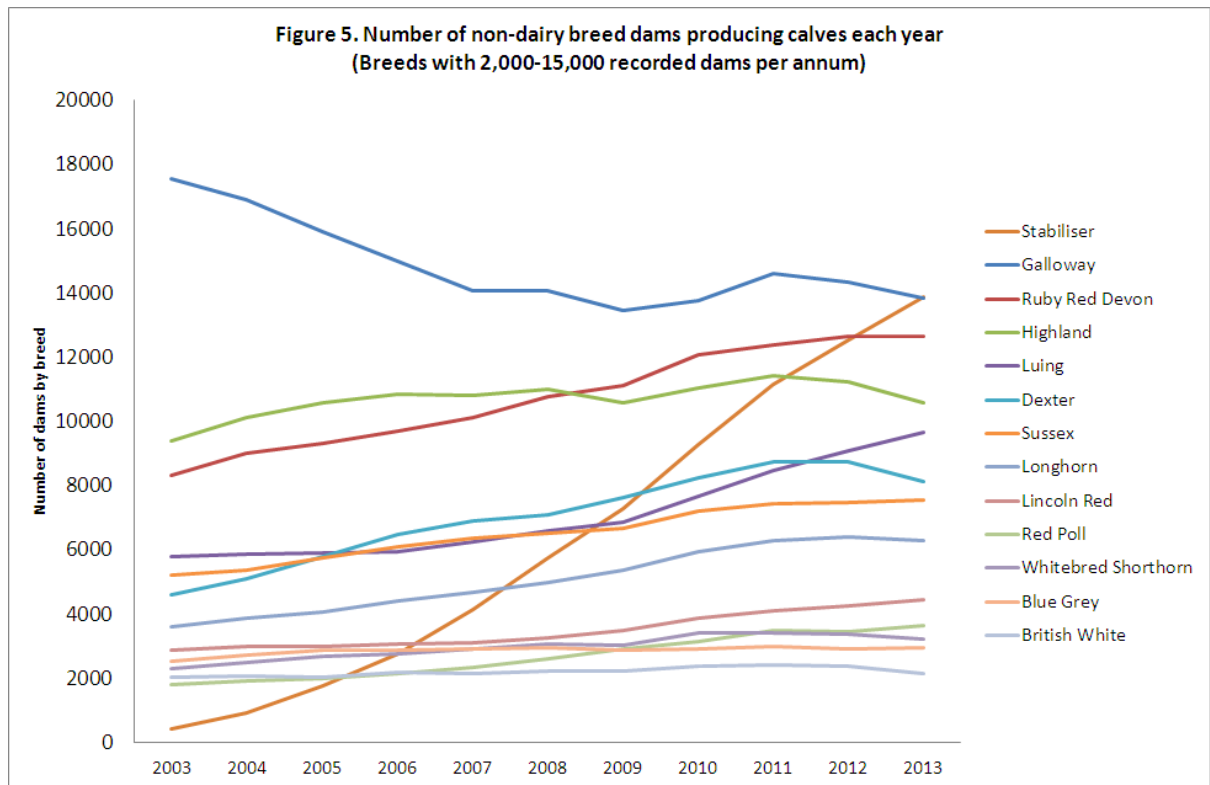


Table 2 Shows those breeds that have shown the biggest proportional increase or decrease over time. When interpreting these charts it should be noted that “unknown” breed has reduced from >43,000 records to <3,000 records – so some of the growth observed will relate to an improvement in the identification of dam breeds. During these two time periods the total number of records fell by 6%.

The fastest growing breed is clearly the Stabiliser – albeit from a numerically small base. Many of the native breeds have either risen in number or are now more accurately recorded on the database, whilst some of the numerically small European breeds seem to have reduced in number.

Significant falls in numerically important breeds are noted in the number of Charolais, Hereford and Simmental breeds.

Table 2: Non-dairy breeds showing the greatest proportional change in numbers

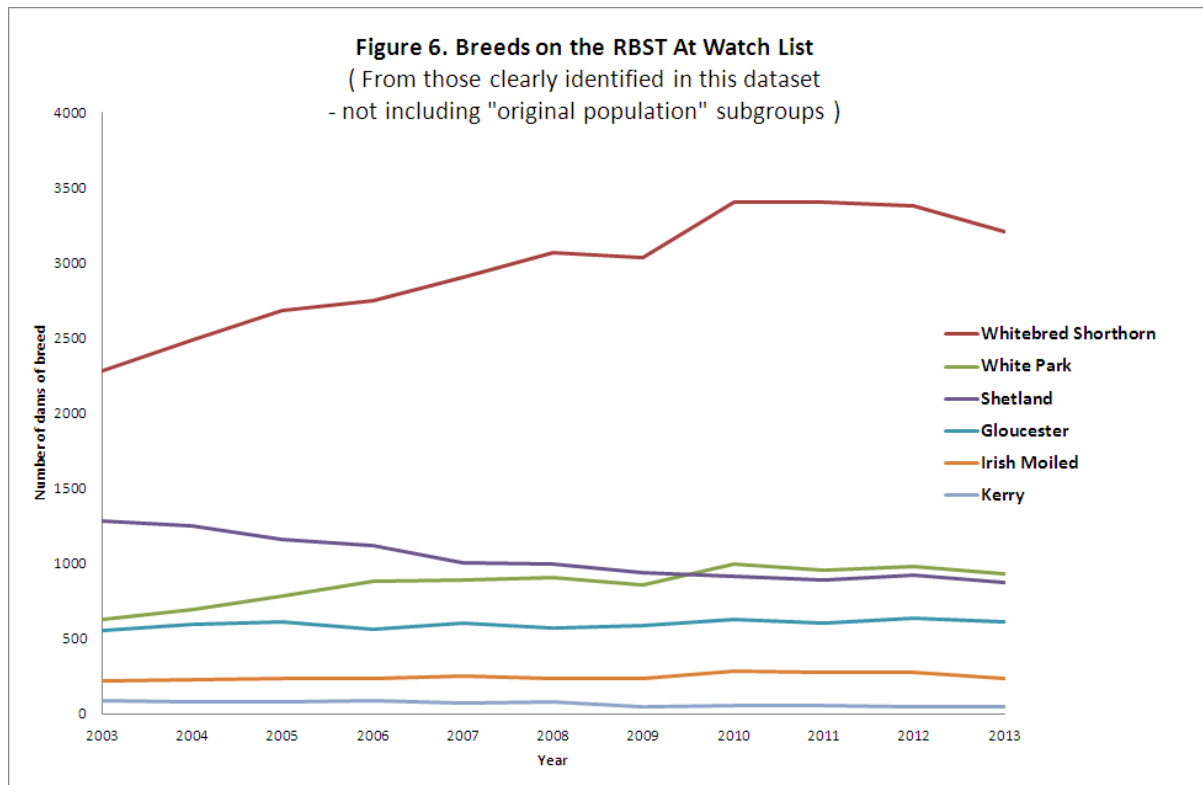
	Average (2003-2005)	Average (2010-2012)	Percentage change (%)		Average (2003-2005)	Average (2010-2012)	Percentage change (%)
Stabiliser	1028	10980	968	Romagnola	721	223	-69
Wagyu	28	97	254	Marchigiana	318	159	-50
Red Poll	1908	3346	75	Kerry	83	52	-37
Bazadaise	1017	1760	73	Piemontese	1640	1037	-37
Dexter	5161	8557	66	Murray Grey	1589	1036	-35
Longhorn	3838	6210	62	Maine Anjou	405	279	-31
Luing	5848	8409	44	Charolais	116009	80478	-31
Beef Shorthorn	24819	35296	42	Hereford	133335	93114	-30
White Park	700	977	40	Aubrac	94	69	-27
Lincoln Red	2947	4065	38	Shetland	1228	906	-26
Whitebred Shorthorn	2481	3392	37	Gelbvieh	1547	1246	-19
Sussex	5438	7367	35	Galloway	16782	14231	-15
Parthenais	443	595	34	Simmental	216092	183246	-15
Water Buffalo	774	1029	33	Welsh Black	22215	18874	-15
British Blue	84937	111627	31	British Blonde	38335	33133	-14

Rare breeds

The Rare Breed Survival Trust publishes an “At Watch List” which covers breeds thought to consist of under 1,500 adult breeding females. Some of the strains of breed on the RBST list can’t be identified in this dataset – including original population Lincoln Red and Hereford. For those breeds where data is available (and the Kerry – a rare Irish breed) data is provided in Figure 5.

The “Whitebred Shorthorn” (a category which includes Whitebred Shorthorn crosses) seems reasonably buoyant considering their “Critical less than 150 cows status”. However on closer inspection the data is heavily influenced by crossbred cattle, probably the “Blue Grey” – a cross with the Galloway. There were 3084 Whitebred Shorthorn cross dams reported in 2012, but only 289 purebred cows. Interestingly “Blue Grey” is also Breed category on BCMS in its own right.

The decline in Shetland numbers would be an obvious area for concern.



Summary

Whilst it is recognised that there are limitations in the allocation of breed on the basis outlined here, this data provides a useful snapshot of the genetics used within the British beef industry.

Within the dairy sector Holstein-Friesian genetics still have a dominant role, but over the last decade there has been an increasing amount of crossbreeding with non-black and white genetics.

Within the beef sector the Limousin has remained the dominant beef breed used to breed suckler cows – Aberdeen Angus genetics have overtaken Simmental genetics to be the next most widely recorded breed of cow being kept. The fall in the influence of the Hereford and the rise in the use of the British Blue are also noteworthy.

Amongst the numerically smaller breeds, the Stabiliser has shown the fastest increase in growth over the last 10 years.

Acknowledgments

This work would not have been possible without the assistance of the British Cattle Movement Service (BCMS). Debbie Butcher in the AHDB Market Intelligence Team and Mary Vickers, EBLEX have also provided their technical expertise.

Appendix 1.

Summary of BCMS data analysed by EBLEX: Number of records of the breed of dams of calves recorded through BCMS (broken down by breed and cross)

BCMS DAM BREED CODE	BCMS DAM BREED	EBLEX BREED NAME	Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
AAX	ABERDEEN ANGUS X	Aberdeen Angus	Non Dairy	123,246	129117	131034	130232	129234	130390	128039	135469	138841	136673	133487
CAX	CANADIAN ANGUS X	Aberdeen Angus	Non Dairy	225	211	180	150	117	101	76	58	49	26	21
AA	ABERDEEN ANGUS	Aberdeen Angus	Non Dairy	34,498	37228	38991	40594	40831	41678	41274	43901	45829	45976	44402
CA	CANADIAN ANGUS	Aberdeen Angus	Non Dairy	32	28	26	17	19	10	7	6	3	2	0
AUX	AUBRAC X	Aubrac	Non Dairy	16	22	22	16	19	18	18	18	14	11	15
AU	AUBRAC	Aubrac	Non Dairy	74	76	73	77	68	74	55	61	54	49	45
AYX	AYRSHIRE X	Ayrshire	Dairy	1,230	1644	1881	2234	2648	2771	3156	3701	4143	4694	4933
AY	AYRSHIRE	Ayrshire	Dairy	24,494	24377	22197	22758	22057	21556	21821	22073	22368	22527	21554
BAZX	BAZADAISE X	Bazadaise	Non Dairy	587	731	887	982	1060	1124	1114	1222	1331	1316	1272
BAZ X	BAZADAISE X	Bazadaise	Non Dairy	24	28	19	19	17	9	9	7	4	3	4
BAZ	BAZADAISE	Bazadaise	Non Dairy	225	272	278	340	377	385	397	458	472	467	467
SHOX	SHORTHORN X	Beef Shorthorn	Non Dairy	13,021	13272	13012	12968	13138	13720	13972	15210	15804	15936	15696
BSHX	BEEF SHORTHORN X	Beef Shorthorn	Non Dairy	1,857	2113	2556	3086	3832	4658	5203	6192	7045	7868	8385
SHO	SHORTHORN	Beef Shorthorn	Non Dairy	7,655	7484	6953	6727	6536	6350	6134	6378	6154	6317	6182
BSH	BEEF SHORTHORN	Beef Shorthorn	Non		2080	2591	3016	3593	4134	4755	5560	6377	7024	7362

			Dairy	1,736										
BSHO	BEEF SHORTHORN	Beef Shorthorn	Non Dairy	51	41	35	33	27	21	17	10	6	6	4
BI	BISON	Bison	Non Dairy	58	71	67	96	78	96	70	74	78	55	92
BALX	BLUE ALBION X	Blue Albion	Non Dairy	114	139	116	145	148	175	186	187	170	157	135
BAL	BLUE ALBION	Blue Albion	Non Dairy	202	204	175	178	191	173	143	161	144	117	97
BLGX	BLUE GREY X	Blue Grey	Non Dairy	240	203	159	136	90	73	45	45	42	62	80
BLG	BLUE GREY	Blue Grey	Non Dairy	2,289	2507	2704	2738	2805	2857	2815	2871	2928	2865	2850
BAX	BLONDE D'AQUITAINE X	British Blonde	Non Dairy	28,529	30638	31567	31811	31112	30318	27959	28407	27380	25170	22519
BARX	BLONDE D'AQU (RED) X	British Blonde	Non Dairy	525	471	467	420	368	314	273	226	161	106	75
BABX	BLONDE D'AQU(BLACK)X	British Blonde	Non Dairy	465	450	416	396	327	278	221	183	135	104	64
BAWX	BLONDE D'AQU(WHITE)X	British Blonde	Non Dairy	127	127	118	99	93	74	66	53	40	34	18
BAR	BLONDE D'AQU (RED)	British Blonde	Non Dairy	53	45	40	37	36	31	24	17	13	10	6
BAW	BLONDE D'AQU(WHITE)	British Blonde	Non Dairy	3	4	2	4	1	3	2	1	1	0	0
BAB	BLONDE D'AQU(BLACK)	British Blonde	Non Dairy	11	13	12	13	8	9	5	8	5	3	2
BA	BLONDE D'AQUITAINE	British Blonde	Non Dairy	6,751	7150	7021	7051	6891	6426	6070	5967	5906	5468	4867
BBX	BELGIAN BLUE X	British Blue	Non Dairy	63,712	72694	79719	84812	87743	91701	91304	98632	99984	87980	69570
BRBX	BRITISH BLUE X	British Blue	Non Dairy		1	1	3	2	8	12	121	1731	11846	25269
BB	BELGIAN BLUE	British Blue	Non Dairy	12,403	13212	13070	13202	12679	12407	11715	11797	11302	9810	7404
BRB	BRITISH BLUE	British Blue	Non Dairy						1	8	40	210	1428	2776

BWX	BRITISH WHITE X	British White	Non Dairy	586	539	547	574	517	547	549	581	580	576	534
BW	BRITISH WHITE	British White	Non Dairy	1,435	1537	1480	1617	1639	1667	1685	1779	1826	1782	1610
BSX	BROWN SWISS X	Brown Swiss	Dairy	3,136	3453	3573	4067	4540	4858	5412	6056	6943	7847	8295
BS	BROWN SWISS	Brown Swiss	Dairy	2,304	2430	2547	2695	2738	2648	2724	2967	3169	3373	3531
CHX	CHAROLAIS X	Charolais	Non Dairy	85,052	86310	83441	79274	73708	68581	62151	62011	59735	54943	48750
CH	CHAROLAIS	Charolais	Non Dairy	31,790	31299	30136	28618	26391	25054	22801	22449	21814	20482	18929
DSX	DAIRY SHORTHORN X	Dairy Shorthorn	Dairy	559	765	870	982	1072	1262	1485	1838	2082	2540	2924
DS	DAIRY SHORTHORN	Dairy Shorthorn	Dairy	2,644	2859	3248	3458	3593	3671	3646	3565	3449	3573	3384
DSHO	DAIRY SHORTHORN	Dairy Shorthorn	Dairy	87	87	71	46	43	41	197	508	861	1139	1273
NDS	NORTHERN DAIRY SH	Dairy Shorthorn	Dairy									3	8	20
DRX	DANISH RED X	Danish Red	Dairy	18	20	58	187	241	283	383	505	700	932	1034
DR	DANISH RED	Danish Red	Dairy	67	74	91	159	225	313	325	380	379	556	834
DEXX	DEXTER X	Dexter	Non Dairy	179	198	220	230	261	265	282	327	352	289	287
DEX	DEXTER	Dexter	Non Dairy	4,378	4847	5530	6200	6609	6807	7329	7883	8352	8427	7843
DE	DEXTER	Dexter	Non Dairy	46	44	41	33	28	19	16	16	16	8	6
BFX	BRITISH FRIESIAN X	Friesian	Dairy	10,376	12101	13687	15767	17034	18888	21087	23890	27489	32440	36646
FRX	FRIESIAN X	Friesian	Dairy	14,444	11747	8380	6391	4314	3025	1921	1265	720	380	180
FR	FRIESIAN	Friesian	Dairy	622,680	492676	347262	251677	167450	110972	67668	40353	21148	9944	3980
BF	BRITISH FRIESIAN	Friesian	Dairy	128,142	154096	170791	188445	191899	194073	189990	189708	185154	182740	174237

RWFR	RED & WHITE FRIESIAN	Friesian	Dairy	283	272	177	152	122	89	101	121	136	115	82
GAX	GALLOWAY X	Galloway	Non Dairy	5,160	4556	3913	3379	2902	2542	2132	2067	1978	1855	1556
BGX	BELTED GALLOWAY X	Galloway	Non Dairy	539	593	624	663	639	714	722	798	876	890	874
DGX	DUN GALLOWAY X	Galloway	Non Dairy	42	39	36	24	20	16	14	14	8	9	4
WGX	WHITE GALLOWAY X	Galloway	Non Dairy	14	15	16	10	12	16	17	19	16	17	22
BG X	BELTED GALLOWAY X	Galloway	Non Dairy	3	2	1	2	1	1			0		0
RGX	RIGGITGALLOWAY CROSS	Galloway	Non Dairy								4	5	7	11
GA	GALLOWAY	Galloway	Non Dairy	9,694	9455	9060	8461	8036	8025	7709	7533	7917	7558	7248
BG	BELTED GALLOWAY	Galloway	Non Dairy	1,634	1759	1799	1990	2083	2368	2479	2902	3343	3571	3717
WG	WHITE GALLOWAY	Galloway	Non Dairy	220	255	255	277	256	300	328	362	404	378	348
DG	DUN GALLOWAY	Galloway	Non Dairy	244	228	185	159	110	94	59	40	31	19	7
RG	RIGGIT GALLOWAY	Galloway	Non Dairy	1	2	2	2	3	5	6	13	24	35	44
GASX	GASCONNE X	Gasconne	Non Dairy	105	98	117	113	101	94	87	74	59	55	45
GAS	GASCONNE	Gasconne	Non Dairy	67	80	80	70	89	83	98	108	114	141	133
GEX	GELBIEH X	Gelbvieh	Non Dairy	958	960	1078	948	904	833	879	915	824	740	620
GE	GELBIEH	Gelbvieh	Non Dairy	545	549	551	533	534	458	451	453	431	375	331
GLX	GLOUCESTER X	Gloucester	Non Dairy	97	96	87	85	85	82	93	107	97	91	76
GL	GLOUCESTER	Gloucester	Non Dairy	456	495	521	479	521	486	493	518	509	547	533
GUX	GUERNSEY X	Guernsey	Dairy	202	246	246	311	288	312	350	362	364	385	316

GU	GUERNSEY	Guernsey	Dairy	8,015	7971	7342	6767	6242	5753	5285	5053	4793	4668	4410
HEX	HEREFORD X	Hereford	Non Dairy	90,979	85840	79198	74093	68711	66324	62869	67917	69592	68554	64657
HX	HEREFORD X	Hereford	Non Dairy	21,321	19096	16093	13358	10372	7969	5629	4016	2602	1494	735
HEBLX	HEREFORD (BLACK) X	Hereford	Non Dairy	5,732	5644	5150	4659	3988	3345	2683	2136	1568	1076	592
HERX	HEREFORD (RED) X	Hereford	Non Dairy	2,793	2476	2069	1748	1408	1105	778	643	480	331	186
HEBRX	HEREFORD (BROWN) X	Hereford	Non Dairy	5	7	4	6	4	3	1	1	0	1	0
HER	HEREFORD (RED)	Hereford	Non Dairy	883	811	642	548	432	314	250	189	136	78	45
HEBL	HEREFORD (BLACK)	Hereford	Non Dairy	711	660	569	445	350	265	198	150	112	82	42
HEBR	HEREFORD (BROWN)	Hereford	Non Dairy	9	8	7	4	8	3	3	1	0		0
HE	HEREFORD	Hereford	Non Dairy	13,283	14064	14580	15004	15306	15795	16063	17725	18834	19175	19084
H	HEREFORD	Hereford	Non Dairy	6,408	5885	5078	4149	3270	2467	1727	1223	751	475	195
HIX	HIGHLAND X	Highland	Non Dairy	805	858	871	890	908	917	841	900	935	935	892
HLX	HIGHLAND X	Highland	Non Dairy	206	198	186	154	132	115	70	72	52	38	19
HI	HIGHLAND	Highland	Non Dairy	6,306	7101	7785	8255	8438	8849	8842	9413	9893	9885	9464
HL	HIGHLAND	Highland	Non Dairy	2,087	1947	1752	1532	1346	1112	840	654	521	376	197
HOX	HOLSTEIN X	Holstein	Dairy	7,723	8428	8167	8452	8328	8045	8109	8225	8790	9052	9340
BHX	BRITISH HOLSTEIN X	Holstein	Dairy	3,652	3136	2176	1628	1083	759	679	835	990	1212	1442
HO	HOLSTEIN	Holstein	Dairy	77,987	89234	91842	103640	104468	106618	113311	120487	124087	131347	128680
BH	BRITISH HOLSTEIN	Holstein	Dairy	20,145	16594	11982	8981	6108	4137	3549	3384	3987	4994	5839

HFX	HOLSTEIN FRIESIAN X	Holstein Friesian	Dairy	31,588	34663	35534	39045	40124	42741	44673	47416	49298	53183	55110
HF	HOLSTEIN FRIESIAN	Holstein Friesian	Dairy	599,732	643531	650218	710467	716523	727243	741255	759728	768764	797258	789923
IMX	IRISH MOILED X	Irish Moiled	Non Dairy	43	57	49	46	63	59	51	76	75	77	51
IM	IRISH MOILED	Irish Moiled	Non Dairy	171	171	185	189	189	177	183	203	196	198	184
JEX	JERSEY X	Jersey	Dairy	1,947	4341	5834	6905	9781	11705	13474	15950	17437	20054	21951
JYX	JERSEY X	Jersey	Dairy	15	19	14	11	10	29	325	561	799	1492	2212
JE	JERSEY	Jersey	Dairy	17,906	19112	19185	20394	21281	20798	20489	19956	18901	20143	20354
JY	JERSEY	Jersey	Dairy	213	175	93	61	50	401	1852	3306	4496	4581	3840
KEX	KERRY X	Kerry	Non Dairy	9	15	8	7	11	17	10	12	11	8	7
KE	KERRY	Kerry	Non Dairy	79	66	72	76	57	57	38	40	45	40	41
LIMX	LIMOUSIN X	Limousin	Non Dairy	233,284	258186	271738	279510	281467	286900	280585	299883	307455	298910	280518
LIX	LIMOUSIN X	Limousin	Non Dairy	41,138	37863	33207	28921	23955	19584	14824	11276	7709	4878	2558
LMX	LIMOUSIN X	Limousin	Non Dairy	32,508	29552	25522	21549	17469	13618	9468	7072	4906	2977	1460
LIMBX	LIMOUSIN (BLACK) X	Limousin	Non Dairy	11,239	11086	10272	9512	8478	7460	6040	5142	3883	2740	1639
LIMRX	LIMOUSIN (RED) X	Limousin	Non Dairy	5,827	5769	5426	4921	4366	3825	3183	2654	2053	1513	959
LIM X	LIMOUSIN X	Limousin	Non Dairy	161	152	135	117	111	75	72	52	35	25	14
LIMR	LIMOUSIN (RED)	Limousin	Non Dairy	1,924	1888	1691	1464	1222	1045	852	697	544	408	233
LIM	LIMOUSIN	Limousin	Non Dairy	44,456	50979	54967	58413	60191	61935	61753	66229	68737	67733	64214
LI	LIMOUSIN	Limousin	Non Dairy	10,607	9698	8561	7505	6173	5011	3720	2832	1888	1168	596

LM	LIMOUSIN	Limousin	Non Dairy	5,416	4928	4308	3657	2962	2294	1631	1196	759	432	198
LIMB	LIMOUSIN (BLACK)	Limousin	Non Dairy	889	836	724	651	547	432	351	294	216	157	100
LRX	LINCOLN RED X	Lincoln Red	Non Dairy	824	833	807	886	884	956	985	1131	1192	1233	1273
LR	LINCOLN RED	Lincoln Red	Non Dairy	2,061	2155	2160	2182	2234	2297	2486	2717	2895	3028	3169
LHX	LONGHORN X	Longhorn	Non Dairy	941	974	1000	949	976	1002	1006	1082	1066	1041	1008
LH	LONGHORN	Longhorn	Non Dairy	2,668	2880	3051	3438	3687	3976	4337	4855	5213	5373	5289
LUX	LUING X	Luing	Non Dairy	1,533	1417	1334	1211	1163	1152	1218	1424	1585	1738	1998
LU	LUING	Luing	Non Dairy	4,259	4456	4546	4725	5066	5433	5632	6241	6879	7360	7667
MAX	MAINE ANJOU X	Maine Anjou	Non Dairy	331	337	320	277	261	248	217	193	215	219	211
MA	MAINE ANJOU	Maine Anjou	Non Dairy	81	81	66	71	64	67	46	75	76	58	38
MARX	MARCHIGIANA X	Marchigiana	Non Dairy	315	311	327	331	276	255	202	188	147	141	102
MRIX	MEUSE RHINE ISSEL X	Meuse Rhine Isssel	Dairy	7,103	8118	8577	9028	8842	8757	8463	7972	7150	6527	5680
MRI	MEUSE RHINE ISSEL	Meuse Rhine Isssel	Dairy	4,096	4469	4566	4614	4679	4752	4675	4525	4361	4149	3977
MOX	MONTBELIARDE X	Montbeliarde	Dairy	1,680	1988	2375	3021	4021	5640	7454	9266	11679	13941	15029
MO	MONTBELIARDE	Montbeliarde	Dairy	1,807	1978	2238	2440	2734	2912	3087	3708	4044	4530	5033
MGX	MURRAY GREY X	Murray Grey	Non Dairy	727	675	623	626	504	465	413	406	355	357	318
MG	MURRAY GREY	Murray Grey	Non Dairy	886	941	916	854	806	715	692	702	651	637	634
NOX	NORMANDE X	Normande	Dairy	639	602	555	512	501	536	498	479	462	404	377
NO	NORMANDE	Normande	Dairy	155	141	177	158	168	178	193	191	189	199	205

NRX	NORWEGIAN RED X	Norwegian Red	Dairy	32	27	31	38	48	437	1086	1770	2586	3395	4260
NR	NORWEGIAN RED	Norwegian Red	Dairy	16	14	12	9	10	28	68	130	150	233	311
CHIX	CHIANINA X	Other	Non Dairy	115	85	74	59	42	34	37	28	23	32	28
SBX	SWISS BRAUNVIEH X	Other	Non Dairy	29	39	69	56	52	42	45	39	35	39	26
ROTX	ROTEBUNDE X	Other	Non Dairy	22	17	15	34	51	33	29	38	52	70	80
BRX	BRAHMAN X	Other	Non Dairy	23	28	27	26	36	32	33	30	27	23	12
TBX	TYRONE BLACK X	Other	Non Dairy	18	18	27	34	33	33	30	27	26	21	11
BX	BEEF X	Other	Non Dairy	60	44	24	16	13	14	7	4	3	2	0
GBX	GRONINGER BLAARKOP X	Other	Non Dairy	10	13	21	19	30	22	22	26	21	21	15
ARX	ANGLER ROTVIEH X	Other	Non Dairy	9	12	14	18	16	19	11	15	10	22	20
SOBX	SWISS ORIG BRAUNV X	Other	Non Dairy	12	12	16	23	21	17	8	8	6	6	6
OEX	OLD ENGLISH X	Other	Non Dairy	13	14	12	15	15	8	5	8	6	4	5
PINX	PINZGAUER X	Other	Non Dairy	8	6	8	5	3	4	3	5	5	8	10
EPX	ENGLISH PARK X	Other	Non Dairy	2	1	2	3	7	9	6	6	6	5	2
SGX	SWISS GREY X	Other	Non Dairy	1	8	4	6	4	3	1		2		0
BLPX	BLACK POLL X	Other	Non Dairy	6	2	4	1	1	2	2	1	0	1	0
FEX	FRISONA ESPAGNOLA X	Other	Non Dairy	2	3	1	3	4	3	3	2	0	1	1
DBX	DANISH BLUE X	Other	Non Dairy	3	3	1	2	2	2	1		0		0
BPX	BRETONNE PIE-NOIRE X	Other	Non Dairy	3	3	1						1		0

MALX	MALKEKORTHORN X	Other	Non Dairy	2	2	2				1	2	3	1	0
AMX	ARMORICAINE X	Other	Non Dairy				2	2	2	1		1	1	1
EFBX	EAST FINNISH BROWN X	Other	Non Dairy	2	1	1	1		1	1	1	1		0
CHLX	CHILLINGHAM X	Other	Non Dairy	2		1	1		1	1	1	1	0	2
VNX	VALDOSTANA NERA X	Other	Non Dairy		1	1	1					0		0
CB	CROSS BREED BEEF	Other	Non Dairy	5,300	4296	3221	2375	1602	956	354	278	249	209	183
CD	CROSS BREED DAIRY	Other	Non Dairy	495	356	245	262	268	338	507	719	1246	1711	2279
SPX	SPECKLE PARK CROSS	Other	Non Dairy									0	15	39
ERX	ESTONIAN RED CROSS	Other	Non Dairy						2	3	1	4	4	2
YK	YAK	Other	Non Dairy		2	1	4	3	4	4	1	2	2	2
GAY	GAYAL	Other	Non Dairy	2		2						0		0
CHL	CHILLINGHAM	Other	Non Dairy	2	3	1	4	3	2	2	2	1	0	0
BR	BRAHMAN	Other	Non Dairy	24	21	19	24	21	19	9	6	9	7	6
ZE	ZEBU	Other	Non Dairy	6	4	6	4	6	7	5	6	10	14	11
DZE	DWARF ZEBU	Other	Non Dairy		1							1	2	1
BRO	BALTATA ROMANEASCA	Other	Non Dairy	3	3	3	1	4	3	4	2	1	2	2
TB	TYRONE BLACK	Other	Non Dairy	2	1	1	3	1	1	1		0	0	0
HK	HECK	Other	Non Dairy							2	5	3	5	5
ROT	ROTEBUNDE	Other	Non Dairy	4	1	2	2	6	5	6	6	5	6	6

ER	ESTONIAN RED	Other	Non Dairy							4	6	7	8	8
SOB	SWISS ORIG BRAUNVIEH	Other	Non Dairy	30	47	29	28	15	6	6	8	5	4	6
SB	SWISS BRAUNVIEH	Other	Non Dairy	27	26	18	24	13	10	19	24	32	29	45
AR	ANGLER ROTVIEH	Other	Non Dairy	7	12	12	11	9	14	12	11	21	17	19
SG	SWISS GREY	Other	Non Dairy	4	6	5	4	3	3	3	2	2	2	0
FE	FRISONA ESPAGNOLA	Other	Non Dairy	6	9	9	13	8	16	15	14	12	8	7
AN	ANKOLE	Other	Non Dairy	3	3	2		2	1	1		0	0	1
BLP	BLACK POLL	Other	Non Dairy	2	2	2	2	1	1	1	1	1		0
BEL	BEEFALO	Other	Non Dairy		12	12						0	3	14
MAR	MARCHIGIANA	Other	Non Dairy	67	63	64	48	36	37	20	28	20	21	10
CHI	CHIANINA	Other	Non Dairy	22	13	19	11	9	7	7	7	1	1	2
RE	REGGIANA	Other	Non Dairy	1	1	1	1	1		2	1	1		0
ALL	AUSTRALIAN LOWLINE	Other	Non Dairy								2	13	14	27
AM	ARMORICAINE	Other	Non Dairy			1	2	2	2	3	2	3	1	1
VA	VAYNOL	Other	Non Dairy	10	13	7	12	10	9	11	13	5	10	4
GB	GRONINGER BLAARKOP	Other	Non Dairy	8	7	6	8	6	7	13	11	11	12	6
BP	BRETONNE PIE-NOIRE	Other	Non Dairy	7	3	8	5	6	7	2	7	7	4	1
EP	ENGLISH PARK	Other	Non Dairy	10	7	4	4	2	3	3		4	3	3
SP	SPECKLE PARK	Other	Non Dairy								3	8	20	16

MAL	MALKEKORTHORN	Other	Non Dairy	3	1	1						0		0
OE	OLD ENGLISH	Other	Non Dairy	16	18	27	20	15	14	10	4	4	1	1
CON	CONTINENTAL	Other	Non Dairy	28	23	25	22	16	7	6	3	2	2	3
OO	OTHER BREEDS	Other	Non Dairy	508	395	313	244	175	106	76	34	33	13	4
NS	NOT SUPPLIED	Other	Non Dairy	35,607	25980	16884	10972	6486	3600	1295	910	551	341	138
OB	OTHER BEEF	Other	Non Dairy	781	735	649	565	440	350	245	163	92	43	25
OD	OTHER DAIRY	Other	Non Dairy	276	223	142	97	58	44	34	28	20	7	7
HS	HUNGARIAN STEPPE	Other	Non Dairy											2
LV	LAKENVELDER	Other	Non Dairy											2
PAX	PARTHENAIS X	Parthenais	Non Dairy	306	336	369	394	383	401	432	488	510	468	441
PA	PARTHENAIS	Parthenais	Non Dairy	94	106	117	95	114	112	107	117	114	89	84
PIX	PIEMONTESE X	Piemontese	Non Dairy	1,307	1324	1299	1237	1158	1110	929	922	821	760	650
PI	PIEMONTESE	Piemontese	Non Dairy	339	346	304	309	269	256	237	223	204	180	180
PIN	PINZGAUER	Pinzgauer	Non Dairy	1	2	1	1		1	2		1	1	0
RPX	RED POLL X	Red Poll	Non Dairy	300	328	374	395	437	479	549	578	638	605	605
RP	RED POLL	Red Poll	Non Dairy	1,497	1591	1633	1751	1906	2107	2373	2546	2848	2823	3022
ROX	ROMAGNOLA X	Romagnola	Non Dairy	664	608	537	465	390	334	266	233	202	165	127
RO	ROMAGNOLA	Romagnola	Non Dairy	137	114	103	79	63	47	37	28	24	18	10
DEVX	DEVON X	Ruby Red Devon	Non Dairy	3,382	3640	3639	3717	3687	3719	3526	3626	3496	3370	3233

NDX	NORTH DEVON X	Ruby Red Devon	Non Dairy	227	210	181	125	92	67	46	30	20	12	9
DEV	DEVON	Ruby Red Devon	Non Dairy	4,351	4819	5253	5664	6167	6850	7452	8358	8832	9224	9386
ND	NORTH DEVON	Ruby Red Devon	Non Dairy	366	327	250	197	152	114	91	52	29	23	9
SAX	SALERS X	Salers	Non Dairy	17,887	19396	20003	19953	20086	19616	18701	19123	19348	18961	18563
SA	SALERS	Salers	Non Dairy	3,508	3927	4079	4241	4381	4496	4417	4922	5217	5364	5773
SHX	SHETLAND X	Shetland	Non Dairy	645	570	452	368	304	271	222	226	205	206	208
SH	SHETLAND	Shetland	Non Dairy	634	681	703	747	703	722	715	685	682	713	662
SMX	SIMMENTAL X	Simmental	Non Dairy	186,838	186323	181139	172773	164360	158217	149548	154112	154866	150048	142424
FKVX	FLECKVIEH CROSS	Simmental	Non Dairy							19	79	188	469	902
SM	SIMMENTAL	Simmental	Non Dairy	30,993	31709	31275	31324	30376	29721	28812	29930	29942	29674	28232
FKV	FLECKVIEH	Simmental	Non Dairy						1	36	87	141	201	275
SDX	SOUTH DEVON X	South Devon	Non Dairy	5,986	6649	7016	7310	7781	8180	8529	9288	9786	9815	9948
DVX	SOUTH DEVON X	South Devon	Non Dairy	1,157	1034	890	760	592	475	366	265	205	123	61
SD	SOUTH DEVON	South Devon	Non Dairy	16,921	17696	17755	18081	18029	18715	18998	19824	20501	20355	19730
DV	SOUTH DEVON	South Devon	Non Dairy	2,307	2037	1790	1582	1223	975	739	512	328	185	89
STX	STABILISER X	Stabiliser	Non Dairy	333	817	1544	2373	3532	4866	6075	7486	8708	9456	10200
ST	STABILISER	Stabiliser	Non Dairy	66	103	220	386	607	883	1211	1794	2424	3071	3674
SUX	SUSSEX X	Sussex	Non Dairy	1,909	1993	2194	2333	2439	2464	2411	2538	2596	2523	2460
SU	SUSSEX	Sussex	Non Dairy	3,285	3367	3567	3760	3931	4049	4258	4664	4836	4945	5070

SRWX	SWEDISH RED&WHITE X	Swedish Red	Dairy	229	638	1001	1536	1851	3064	5497	7734	9396	10338	10410
SRX	SWEDISH RED CROSS	Swedish Red	Dairy					1	2	3	794	2490	4746	6983
SR	SWEDISH RED	Swedish Red	Dairy						13	58	142	394	671	928
SRP	SWEDISH RED POLLED	Swedish Red	Dairy									6	15	16
SRW	SWEDISH RED & WHITE	Swedish Red	Dairy	76	157	257	307	367	616	793	1081	1210	1224	1334
WAX	WAGYU CROSS	Wagyu	Non Dairy			15		11	23	24	24	29	40	50
WA	WAGYU	Wagyu	Non Dairy		17	23	29	51	65	70	48	77	74	69
BU	WATER BUFFALO	Water Buffalo	Non Dairy	776	786	759	855	1061	993	1127	1069	924	1094	984
WBX	WELSH BLACK X	Welsh Black	Non Dairy	4,585	4782	4586	4409	4160	4033	3779	3888	3760	3584	3211
WWX	WELSH WHITE X	Welsh Black	Non Dairy	29	28	30	29	36	32	36	26	32	28	31
BWBX	BELTED WELSH BLACK X	Welsh Black	Non Dairy	2	1	3	3	1	5	2	8	10	8	11
WB	WELSH BLACK	Welsh Black	Non Dairy	17,933	17524	16831	16178	15563	15344	14546	15264	15149	14482	12914
BWB	BELTED WELSH BLACK	Welsh Black	Non Dairy	56	66	62	65	65	67	58	61	79	69	81
WW	WELSH WHITE	Welsh Black	Non Dairy	47	43	38	51	55	46	39	47	57	70	65
WPX	WHITE PARK X	White Park	Non Dairy	83	101	116	126	130	135	107	130	112	119	110
WP	WHITE PARK	White Park	Non Dairy	541	592	666	751	762	768	752	869	845	856	821
WSX	WHITEBRED S/HORN X	Whitebred Shorthorn	Non Dairy	2,146	2334	2519	2585	2732	2879	2817	3148	3131	3084	2916
WS	WHITEBRED SHORTHORN	Whitebred Shorthorn	Non Dairy	137	148	160	161	173	190	218	254	271	289	287