

French feed back on 2013 Autumn Interbeef test run

Amandine LAUNAY, Eric VENOT



Interbeef Working group meeting – Prague – 21st November 2013



Difference between ITB / FRA evaluations

❖ ~~Model difference: maternal genetic effect in France~~

❖ Foreign data included in French evaluation

Breed	Countries
CHA	Luxemburg, Italia, part of Spain, Nederland (until 2011), Portugal
LIM	Luxemburg, Italia, part of Spain, Belgium, Portugal

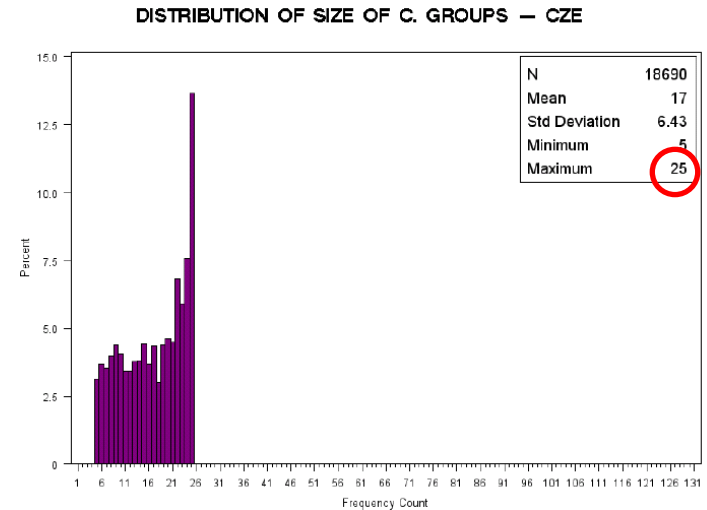
❖ Bi-trait model for Limousine Breed (120d AWW & 210d AWW)

❖ Genetic parameters:

Heritability	CHA		LIM	
	FRA	ITB	FRA	ITB
Direct genetic effect	0.25	0.20	0.36	0.27
Maternal genetic effect	0.10	0.09	0.09	0.08
Maternal Permanent Env. Effect	0.11	0.13	0.09	0.12

New Interbeef genetic parameters

❖ Question about the CG maximum size for CZE?



❖ LIM: low correlations between nordic countries?

❖ CHA: low correlation between CZE and FRA?

Already check with T. Pabiou:

❖ Copy/paste problem for French maternal variances

❖ h^2 computed without the covariance between direct and maternal genetic effects

Results sent by Interbeef

- ❖ Results in line, 1 line per iid x country scale => OK
- ❖ Associated variables:
 - ❖ Number of descendants $\Leftrightarrow$ total number of progeny performances taken into account in Interbeef genetic evaluation? (NPU_ITB)
 - ❖ Number of observations $\Leftrightarrow$ number of own performance (only 0 and 1, very few 2)
 - ⇒ Need to add Number of performances used by ITB in each country specifically (NPU)
 - ⇒ Need to provide the same information as maternal grand sire (NPPU)
 - **Better view of the use of the bulls in the different countries**
 - ❖ General descriptive statistics on data structure in each country would be interesting
 - ❖ Correspondence between recodified CG and fixed effects levels, and the real information

Data used by Interbeef

- ❖ In may 2013 run, 5566 CHA and 3669 LIM performance data sent by France were missing in Interbeef results

=> In this autumn run, it increases to 191 494 CHA and 110 289 LIM.

=> **Point checked by Interbeef?**

- ❖ Still INVALID or NOT VERIFIED animals available in ITB results

=> To be discussed

=> For animals that can't be trace back in any country of origin database: use of a default country code "ITB"

EBV & REL comparisons **CHA**

=> much better correlations than in May

Type of animals	EBV dir or mat	Number of animals considered	EBV Correlation	CD correlation	Mean (std) EBV diff (ITB-FRA)	Mean (std) CD diff (ITB-FRA)
All common animals	dir	4 094 752	0.996	0.89	0.41 (1.0)	0.08(0.06)
	Mat		0.916		0.26 (2.2)	
All bulls published in France	Dir	20 733	0.997	0.92	0.19 (1.1)	0.03
	Mat		0.957		1.18 (2.2)	
All females	Dir	2 308 962	0.995	0.89	0.41 (1.16)	0.09 (0.06)
	Mat		0.927		0.17 (2.1)	
All females with at least one progeny	Dir	1 744 719	0.996	0.60	0.41 (1.0)	0.09 (0.05)
	Mat		0.929			

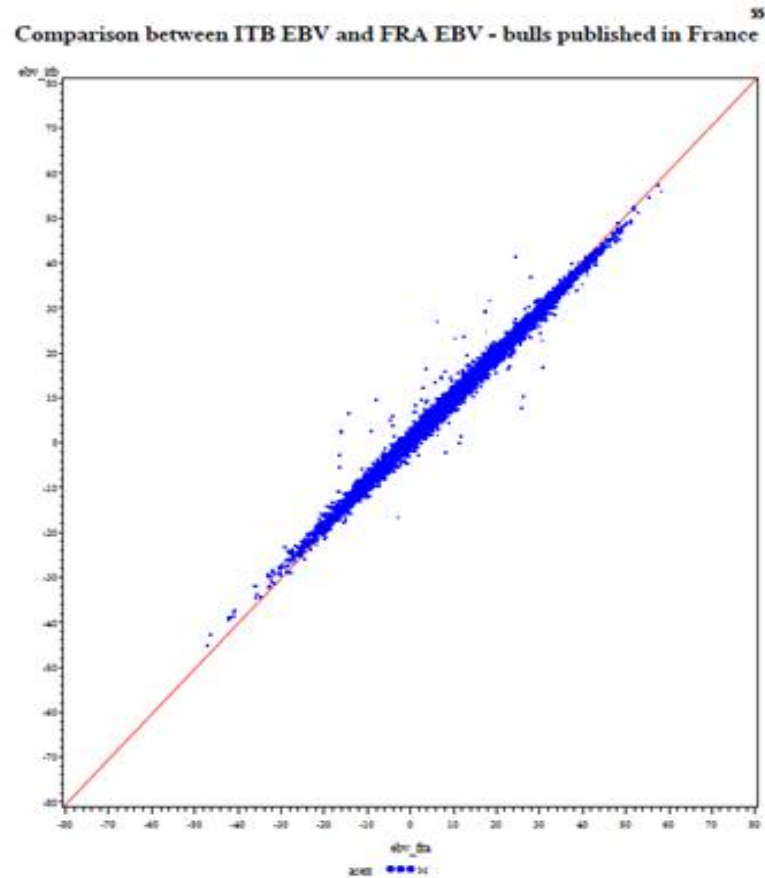
EBV & REL comparisons LIM

=> much better correlations than in May but less than CHA (genetic parameter difference?)

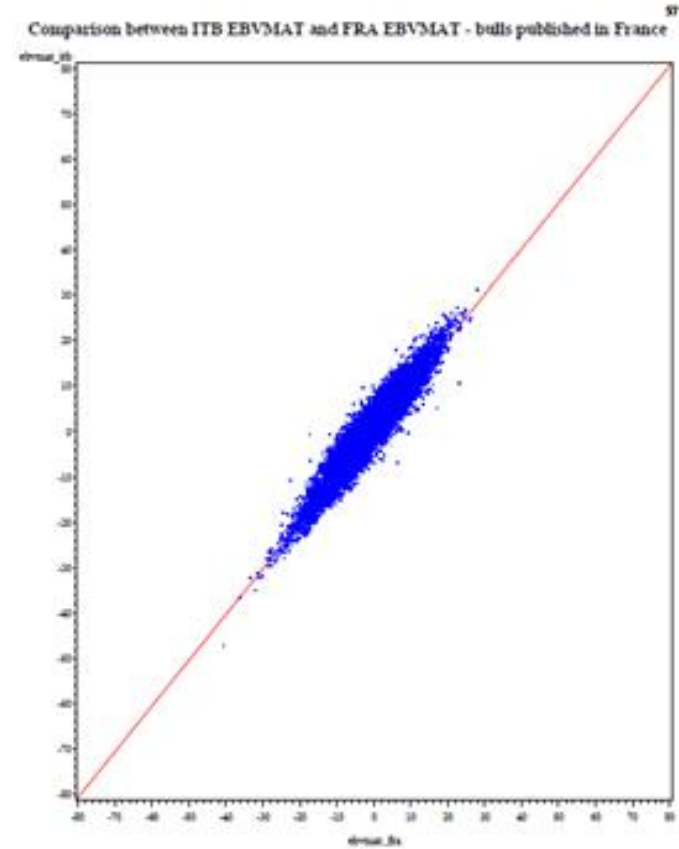
Type of animals	EBV dir or mat	Number of animals considered	EBV Correlation	CD correlation	Mean (std) EBV diff (ITB-FRA)	Mean (std) CD diff (ITB-FRA)
All common animals	dir	2 280 976	0.984	0.85	0.3 (2.8)	0.02 (0.06)
	Mat		0.927		0.05 (1.67)	
All bulls published in France	Dir	14183	0.988	0.72	-0.5 (2.6)	-0.02 (0.06)
	Mat		0.96		0.5 (1.8)	
All females	Dir	1250434	0.984	0.84	0.3 (2.6)	0.04 (0.07)
	Mat		0.93		0.03 (1.7)	
All females with at least one progeny	Dir	1064006	0.985	0.6	0.29 (2.7)	0.03 (0.05)
	Mat		0.93		0.06 (1.7)	

EBV comparisons CHA

Direct EBV



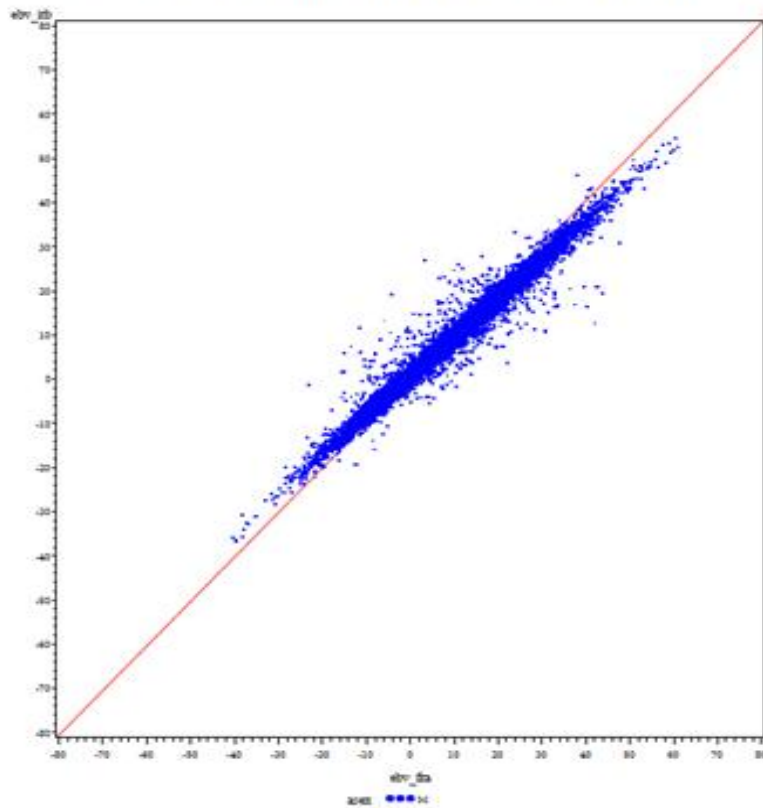
Maternal EBV



EBV comparisons LIM

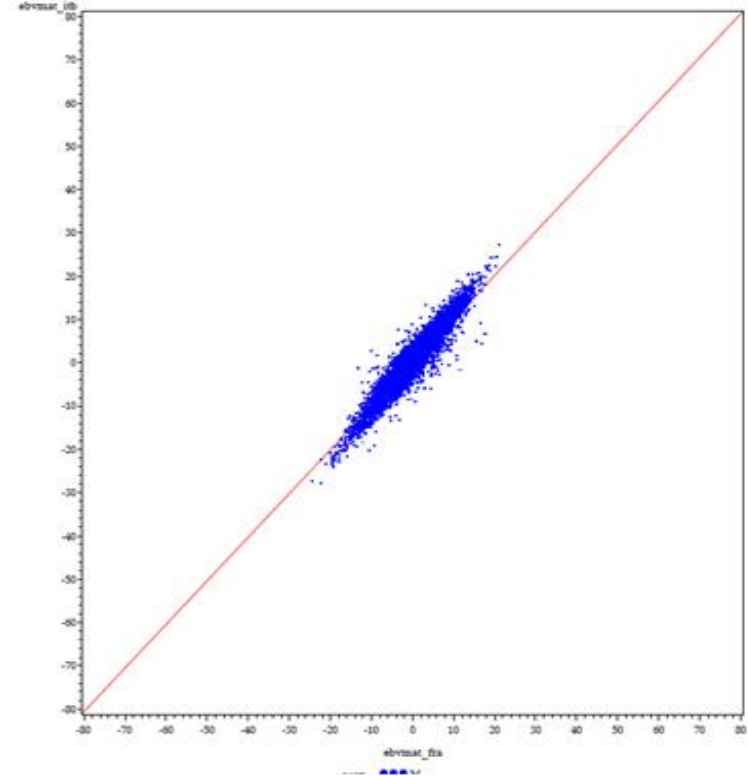
Direct EBV

Comparison between ITB EBV and FRA EBV - bulls published in France



Maternal EBV

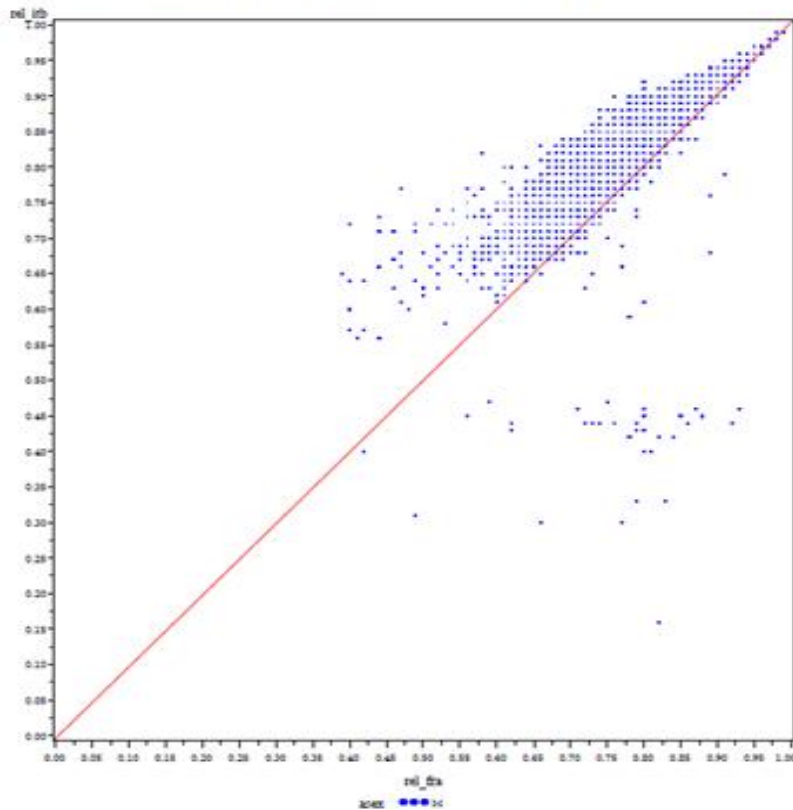
Comparison between ITB EBVMAT and FRA EBVMAT - bulls published in France



REL comparisons

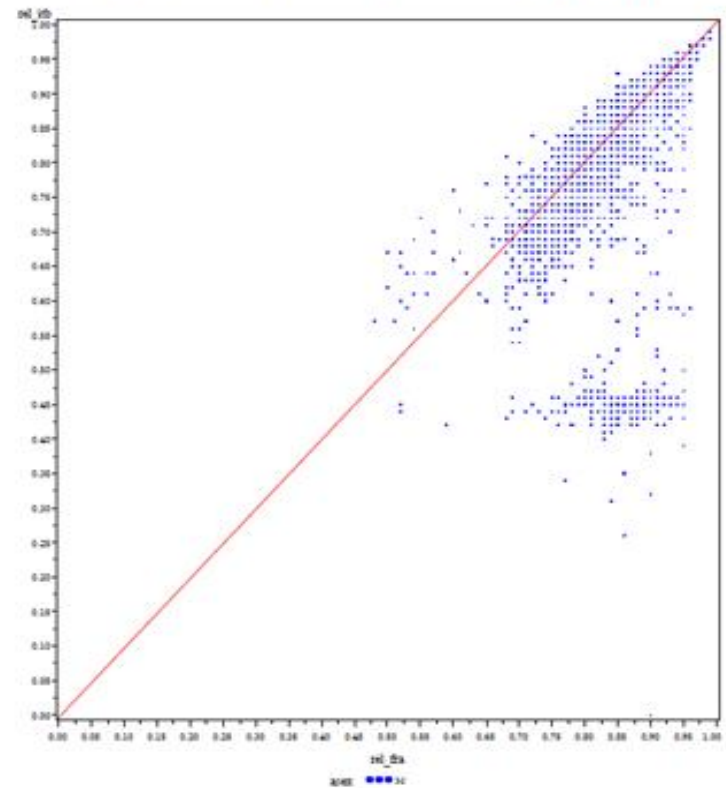
CHA

Comparison between ITB rel and FRA rel - bulls published in France



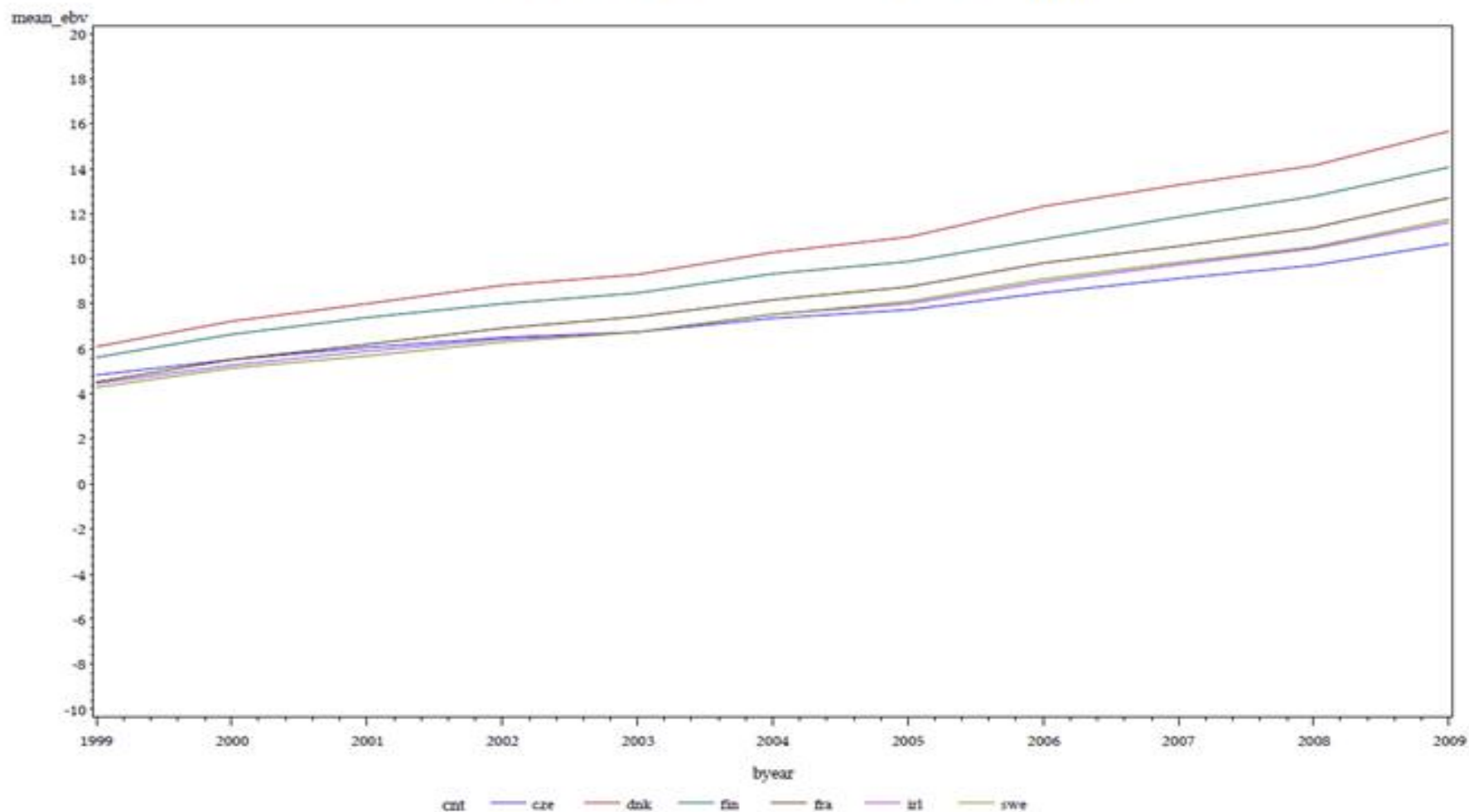
LIM

Comparison between ITB rel and FRA rel - bulls published in France

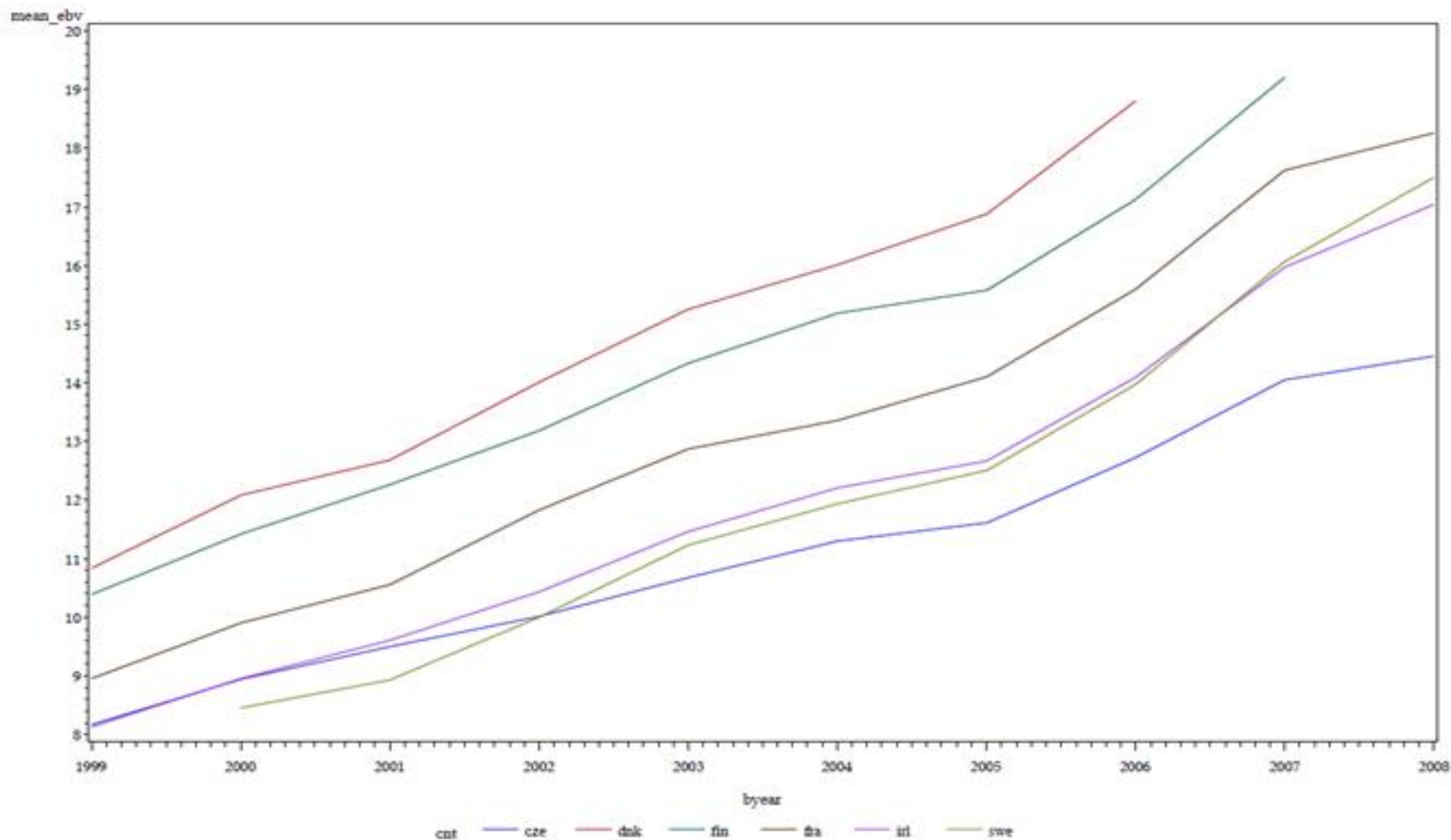


NB: White ban problem raised in May 2013 solved?

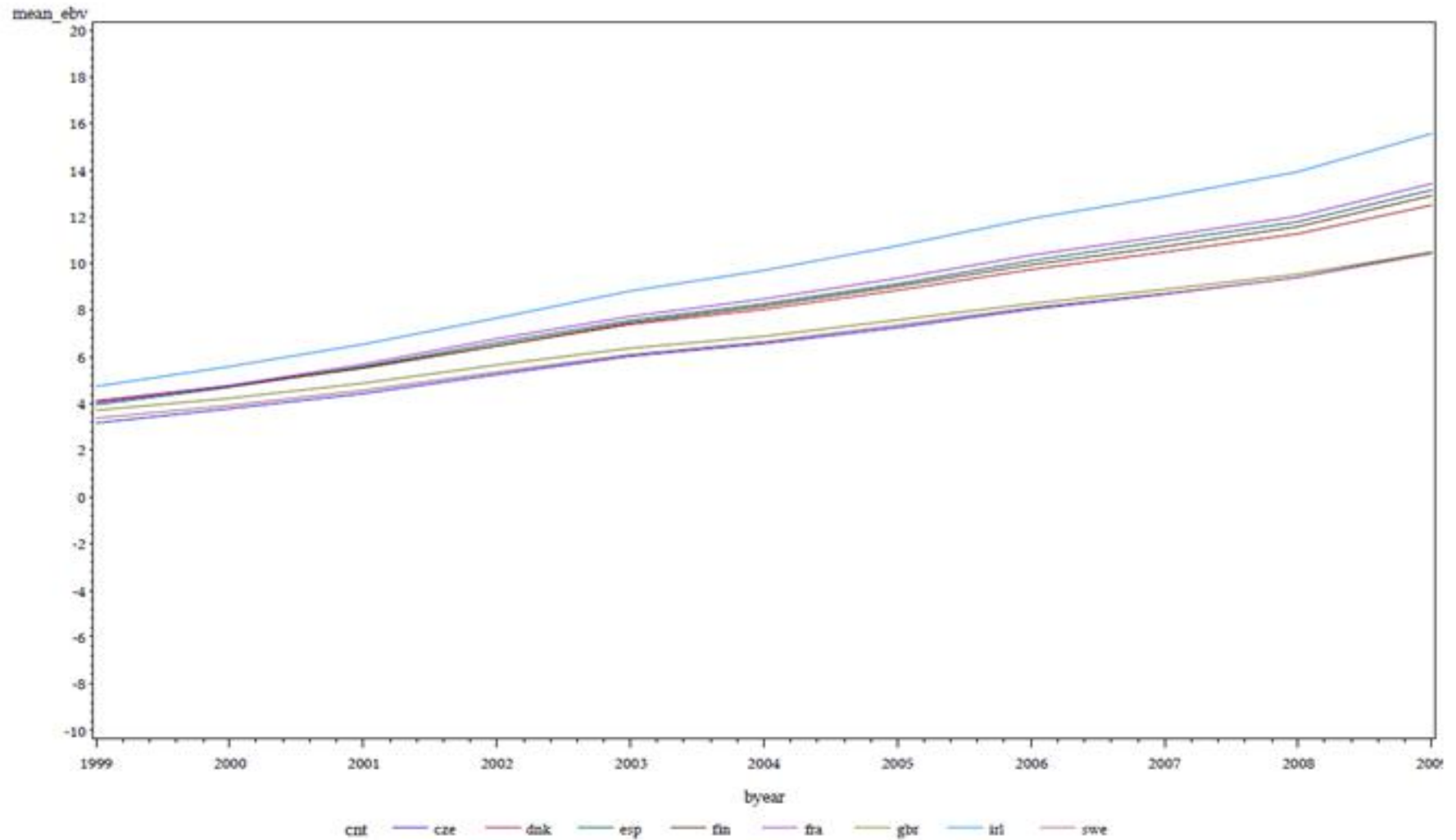
Genetic trend for aww CHA 1309 - all animals



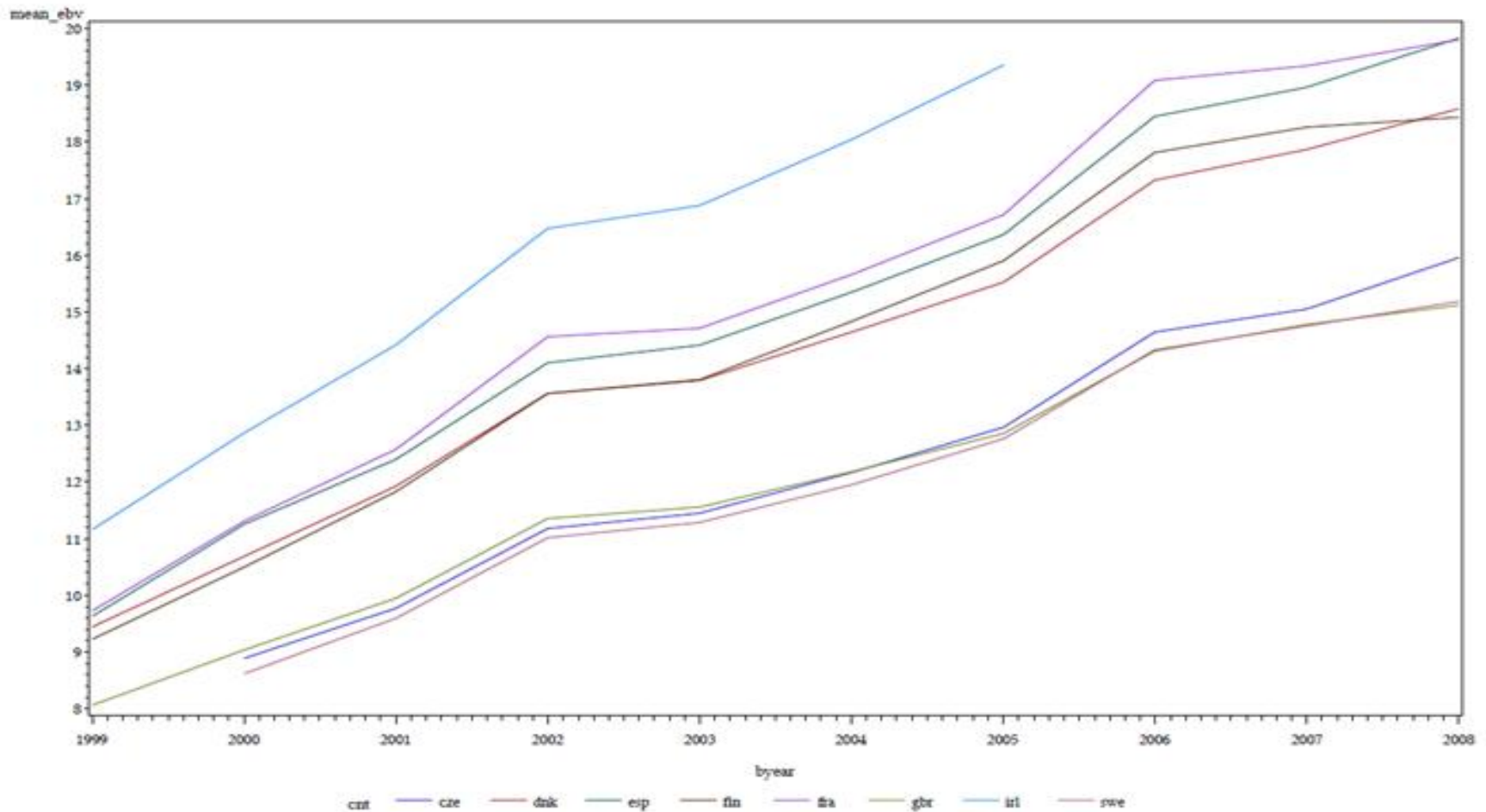
Genetic trend for aww CHA 1309 - males with 25 progenies



Genetic trend for aww LIM 1309 - all animals



Genetic trend for aww LIM 1309 - males with 25 progenies



=> Genetic trends validation to be foreseen with Interbull Center experience?

Publi file analysis

- ❖ Females are available in this file: **not only bulls?**
=> France didn't provide publishable females in France
- ❖ A certain number of females are complying the Interbeef publication rules
⇔ means that these females have a minimum of 25 progenies
=> check done in the IDEA table for dam LIMFRAF00193008827. It looks like **ET**.
=> “non identified Embryo transfer” should be checked discarded from the analysis
- ❖ Some ITB publishable animals are INVALID in IDEA (ex: CHAFRAM000000000786)
- ❖ Reminder on the signification of number of observations (possible values only 0,1 or 2, with 2 for only 1 or 2 animals)
- ❖ **16 LIM and 8 CHA bulls sent by France and publishable in France are not available in these Interbeef results (bulls with REL > 0.75 in France)**

Publi file analysis

General description of interbeef published animals by country/Orig/sex
pubITB= Animals with ITB pub rules OK
pubNAT_NOITBrules= Animals with ITB pub rules = no (published in the country)

- ❖ General description of Interbeef publication / country / FOR and NAT
 - ❖ Better insight into Interbeef interest for each country with the actual information on the bulls that are officially published in each country.
- ➔ Easier at the Interbeef level

COUNTRY	TYP	SEX	TOT	pubITB	pubNAT_NOITBrules	pct_pubITB
cze	FOR	F	8708	91	8617	1.0
cze	FOR	M	25087	23951	1136	95.5
cze	NAT	F	13920	5	13915	0.0
cze	NAT	M	11413	164	11249	1.4
dnk	FOR	F	224	96	128	42.9
dnk	FOR	M	24041	23967	74	99.7
dnk	NAT	F	11014	0	11014	0.0
dnk	NAT	M	8590	148	8442	1.7
fin	FOR	F	96	96	0	100.0
fin	FOR	M	23956	23956	0	100.0
fin	NAT	F	8497	0	8497	0.0
fin	NAT	M	8500	159	8341	1.9
fra	FOR	F	7	7	0	100.0
fra	FOR	M	901	900	1	99.9
fra	NAT	F	89	89	0	100.0
fra	NAT	M	24551	23215	1336	94.6
irl	FOR	F	6657	95	6562	1.4
irl	FOR	M	28091	24044	4047	85.6
irl	NAT	F	25774	1	25773	0.0
irl	NAT	M	12302	71	12231	0.6
swe	FOR	F	95	95	0	100.0
swe	FOR	M	23809	23809	0	100.0
swe	NAT	F	1296	1	1295	0.1
swe	NAT	M	389	306	83	78.7

TOP 1000 bulls CHA

CHA TOP 1000 Interbeef bulls

Origin of the bulls	Country scale considered																	
	CZE			DNK			FIN			FRA			IRL			SWE		
	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean
FRA	603	1	503	868	1	489	482	2	560	973	1	498	626	1	529	927	1	506
CZE	367	4	510	5	305	624	4	298	491	0			9	276	617	1	740	740
FIN	16	32	403	15	112	530	499	1	447	12	95	579	18	22	319	24	26	500
IRL	9	5	269	3	195	398	8	115	394	3	313	511	327	2	457	3	222	350
SWE	2	24	364	6	102	527	4	54	380	10	67	691	12	51	502	41	4	376
DNK	1	96	96	102	68	594	1	381	381	1	573	573	1	691	691	2	695	741
(GBR)	2	3	87	1	6	6	2	14	491	1	10	10	4	4	83	2	2	383

TOP 1000 bulls LIM

LIMOUSINE TOP 1000 Interbeef bulls

Origin of the bulls	Country scale considered																							
	CZE			DNK			FIN			FRA			IRL			SWE			ESP			GBR		
	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean	Nb of bulls	Best rank	Rank mean
FRA	779	3	499	487	10	534	565	12	548	946	2	501	634	3	502	866	3	512	612	2	496	114	30	602
GBR	99	1	422	112	1	359	61	2	463	39	1	490	97	1	428	95	1	381	44	1	484	877	1	486
DNK	8	35	380	373	3	494	7	83	451	1	557	557	11	27	524	7	122	725	3	352	540	1	291	291
FIN	8	117	424	9	99	489	358	1	429	5	280	484	12	19	312	8	59	350	5	311	574	3	451	747
IRL	8	63	560	8	62	501	6	215	702	5	206	661	236	7	530	8	74	567	3	176	384	4	297	545
ESP	6	97	359	9	258	682	1	509	509	2	319	362	6	257	632	3	225	503	331	14	510	1	989	989
SWE	4	176	664	1	918	918	1	964	964	0			2	289	572	10	89	500	0			0		
CZE	85	83	619	0			0			0			0		0	0			0			0		

FRENCH FEED BACK CONCLUSION

- ❖ Much better results than in May 2013 !!
- ❖ Several checks to be performed:
 - Consequence of LIM genetic parameter change
 - FRA animals (included bulls with high reliability) sent but missing in the results
 - Invalid and unverified animals: point to solve
 - « Non identified Embryo Transfer » to be discarded
 - Publication of females
- ❖ Other information to be provided by Interbeef:
 - number of performances used by ITB in each country
 - details on ITB excluded animals
 - general description of Interbeef publication for each country based on national publication files