French (quick) feed back on first calving implementation run

Eric Venot – Amandine Launay

Slazburg – May 2016, 8th

Comparison between ITB and FRA Calving Ease Evaluation results

- Results received February 24th from ITBC
- CHA and LIM results based on October 2015 data call.

=> Comparison between French national evaluation (Summer 2015) and Interbeef evaluation on the same data.

=> Possible result difference explanations beforehand:

- French national evaluation includes foreign data from different countries (Spain, Italy, Luxemburg…) – data taken as French ones without any distinction.
- French model on Calving: **BI-TRAIT Model Birth Weight x Calving Ease**

French CAE – BW model

- **No genetic parameter difference for France but no BW in Interbeef evaluation**

CHA		CAE		BW	
		DIR	MAT	DIR	MAT
CAE	DIR	0.1	- 0.4	0.83	-0.47
	MAT		0.06	- 0.3	0.69
BW	DIR			0.41	-0.48
	MAT				0.1

LIM		CAE		BW	
		DIR	MAT	DIR	MAT
CAE	DIR	0.05	- 0.56	0.69	-0.19
	MAT		0.02	- 0.45	0.28
BW	DIR			0.48	- 0.61
	MAT				0.05

Comparison of the number of French animals available on the French scale

Breed	Specific to FRA	Common	Specific to Interbeef
CHA	875 566	8 837 282	591 620
LIM	431 843	4 693 093	735 758

Animals from other countries participating to French National evaluation => OK

Animals from other countries than France participating to Interbeef

Comparison of the number of French animals available on the French scale

Breed	Specific to FRA	Common	Specific to Interbeef
CHA	875 566	8 837 282 (94%)	591 620 (6%)
LIM	431 843	4 693 093 (86 %)	735 758 (14 %)

Animals from other countries participating to French National evaluation => OK

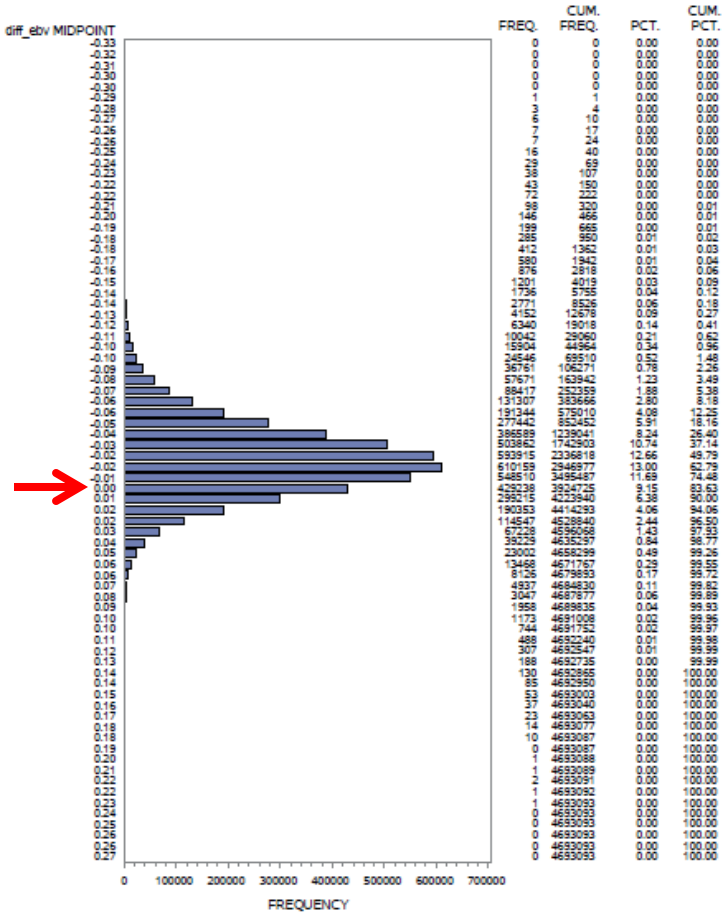
Animals from other countries than France participating to Interbeef

Comparison for different subpopulations for LIM

Pop	NB	Type	EBV DIR	EBV MAT	REL DIR	REL MAT
Common animals	4 693 093	r^2	0.69	0.95	0.82	0.98
		difference	-0.02	0.003	- 0.13	- 0.05
FRA sires with only FRA prog	51 226	r^2	0.82	0.89	0.97	0.99
		difference	- 0.02	0.002	- 0.14	- 0.07
FRA sires with REL > 0.5	20 264	r^2	0.90	0.94	0.96	0.99
		difference	-0.02	0.01	-0.10	-0.05
Published bulls in FRA	1743	r^2	0.89	0.94	0.92	0.97
		difference	-0.02	0.002	-0.11	-0.06
Females with > 1 prog	2 155 859	r^2	0.71	0.85	0.95	0.99
		Difference	- 0.02	0.002	-0.14	-0.05

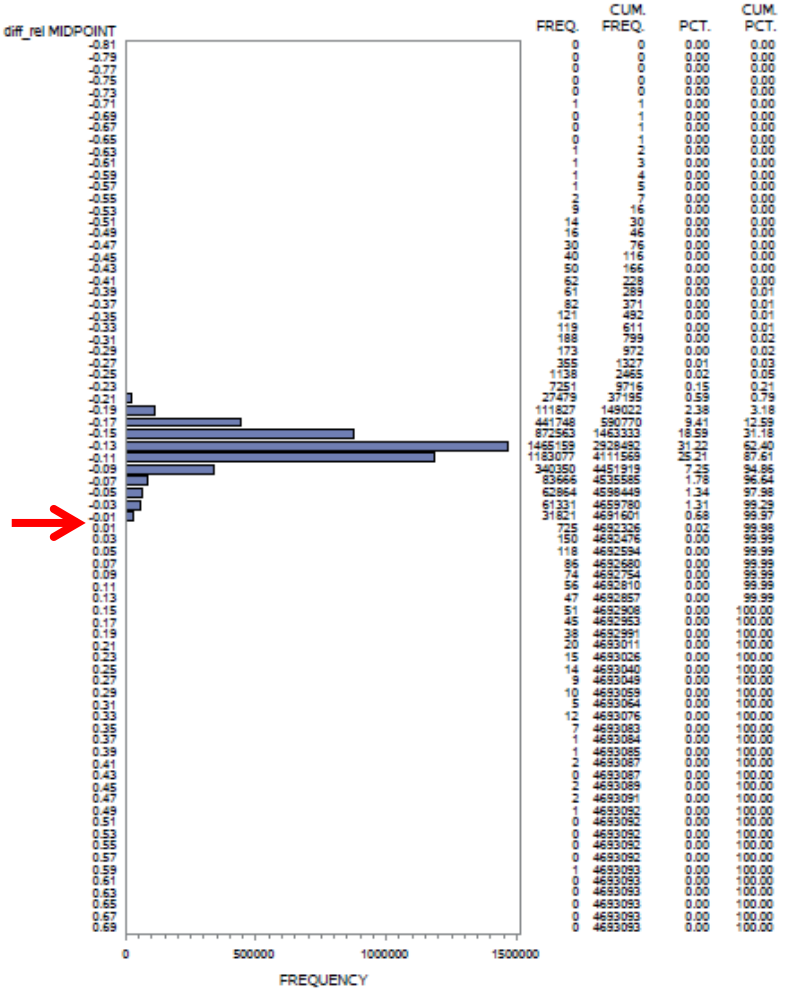
In pictures for common animals – Direct effect

Distribution of EBV differences (EBV_ITB - EBV_FRA) - common animals



diff_ebv MIDPOINT	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-0.33	0	0	0.00	0.00
-0.32	0	0	0.00	0.00
-0.31	0	0	0.00	0.00
-0.30	0	0	0.00	0.00
-0.29	0	0	0.00	0.00
-0.28	1	1	0.00	0.00
-0.27	3	4	0.00	0.00
-0.26	6	10	0.00	0.00
-0.26	7	17	0.00	0.00
-0.25	7	24	0.00	0.00
-0.24	16	40	0.00	0.00
-0.23	29	69	0.00	0.00
-0.22	38	107	0.00	0.00
-0.21	43	150	0.00	0.00
-0.21	72	222	0.00	0.00
-0.21	98	320	0.00	0.01
-0.20	146	466	0.00	0.01
-0.19	199	665	0.00	0.01
-0.18	285	950	0.01	0.02
-0.18	412	1362	0.01	0.03
-0.17	580	1942	0.01	0.04
-0.16	876	2818	0.02	0.06
-0.15	1201	4019	0.03	0.09
-0.14	1736	5755	0.04	0.12
-0.14	2771	8526	0.06	0.18
-0.13	4152	12678	0.09	0.27
-0.12	6340	19018	0.14	0.41
-0.11	10042	29060	0.21	0.62
-0.10	15804	44864	0.34	0.96
-0.10	24546	69510	0.52	1.48
-0.09	36761	106271	0.78	2.26
-0.08	57671	163942	1.23	3.49
-0.07	88417	252359	1.88	5.38
-0.06	131307	383666	2.80	8.18
-0.06	191344	575010	4.08	12.25
-0.05	277442	852452	5.91	18.16
-0.04	386589	1239041	8.24	26.40
-0.03	503862	1742903	10.74	37.14
-0.02	593915	2336818	12.66	49.79
-0.02	610159	2946977	13.00	62.79
-0.01	548510	3495487	11.69	74.48
-0.01	429238	3924726	9.15	83.63
0.01	298215	4223940	6.36	90.00
0.02	190353	4414293	4.06	94.06
0.02	114547	4528840	2.44	96.50
0.03	67228	4596068	1.43	97.93
0.04	38229	4634297	0.84	98.77
0.05	23002	4658299	0.49	99.26
0.06	13468	4671767	0.29	99.55
0.06	8126	4679893	0.17	99.72
0.07	4937	4684830	0.11	99.82
0.08	3047	4687877	0.06	99.89
0.09	1958	4689835	0.04	99.93
0.10	1173	4691008	0.02	99.96
0.10	744	4691752	0.02	99.97
0.11	488	4692240	0.01	99.98
0.12	307	4692547	0.01	99.99
0.13	188	4692735	0.00	99.99
0.14	130	4692865	0.00	100.00
0.14	85	4692950	0.00	100.00
0.15	53	4693003	0.00	100.00
0.16	37	4693040	0.00	100.00
0.17	23	4693063	0.00	100.00
0.18	14	4693077	0.00	100.00
0.18	10	4693087	0.00	100.00
0.19	0	4693087	0.00	100.00
0.20	1	4693088	0.00	100.00
0.21	1	4693089	0.00	100.00
0.22	2	4693091	0.00	100.00
0.22	1	4693092	0.00	100.00
0.23	1	4693093	0.00	100.00
0.24	0	4693093	0.00	100.00
0.25	0	4693093	0.00	100.00
0.26	0	4693093	0.00	100.00
0.26	0	4693093	0.00	100.00
0.27	0	4693093	0.00	100.00

Distribution of rel differences (rel_ITB_FRA - rel_FRA) - common animals



diff_rel MIDPOINT	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
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-0.75	0	0	0.00	0.00
-0.73	0	0	0.00	0.00
-0.71	1	1	0.00	0.00
-0.69	0	1	0.00	0.00
-0.67	0	1	0.00	0.00
-0.65	0	1	0.00	0.00
-0.63	1	2	0.00	0.00
-0.61	1	3	0.00	0.00
-0.59	1	4	0.00	0.00
-0.57	1	5	0.00	0.00
-0.55	2	7	0.00	0.00
-0.53	9	16	0.00	0.00
-0.51	14	30	0.00	0.00
-0.49	16	46	0.00	0.00
-0.47	30	76	0.00	0.00
-0.45	40	116	0.00	0.00
-0.43	50	166	0.00	0.00
-0.41	62	228	0.00	0.00
-0.39	61	289	0.00	0.01
-0.37	82	371	0.00	0.01
-0.35	121	492	0.00	0.01
-0.33	119	611	0.00	0.01
-0.31	188	799	0.00	0.02
-0.29	173	972	0.00	0.02
-0.27	355	1327	0.01	0.03
-0.25	1138	2465	0.02	0.05
-0.23	7251	9716	0.15	0.21
-0.21	27479	37195	0.59	0.79
-0.19	111827	149022	2.38	3.18
-0.17	441748	590770	9.41	12.59
-0.15	872563	1463333	18.59	31.18
-0.13	1465159	2928492	31.22	62.40
-0.11	1183077	4111569	25.21	87.61
-0.09	340350	4451919	7.25	94.86
-0.07	83666	4535585	1.78	96.64
-0.05	62864	4598449	1.34	97.98
-0.03	61331	4659780	1.31	99.29
-0.01	31821	4691601	0.68	99.97
0.01	725	4692326	0.02	99.98
0.03	150	4692476	0.00	99.99
0.05	118	4692594	0.00	99.99
0.07	86	4692680	0.00	99.99
0.09	74	4692754	0.00	99.99
0.11	56	4692810	0.00	99.99
0.13	47	4692857	0.00	99.99
0.15	51	4692908	0.00	100.00
0.17	45	4692953	0.00	100.00
0.19	38	4692991	0.00	100.00
0.21	20	4693011	0.00	100.00
0.23	15	4693026	0.00	100.00
0.25	14	4693040	0.00	100.00
0.27	8	4693048	0.00	100.00
0.29	10	4693058	0.00	100.00
0.31	5	4693064	0.00	100.00
0.33	12	4693076	0.00	100.00
0.35	7	4693083	0.00	100.00
0.37	1	4693084	0.00	100.00
0.39	1	4693085	0.00	100.00
0.41	2	4693087	0.00	100.00
0.43	0	4693087	0.00	100.00
0.45	2	4693089	0.00	100.00
0.47	2	4693091	0.00	100.00
0.49	1	4693092	0.00	100.00
0.51	0	4693092	0.00	100.00
0.53	0	4693092	0.00	100.00
0.55	0	4693092	0.00	100.00
0.57	0	4693092	0.00	100.00
0.59	1	4693093	0.00	100.00
0.61	0	4693093	0.00	100.00
0.63	0	4693093	0.00	100.00
0.65	0	4693093	0.00	100.00
0.67	0	4693093	0.00	100.00
0.69	0	4693093	0.00	100.00

INSTITUT DE L'ELEVAGE

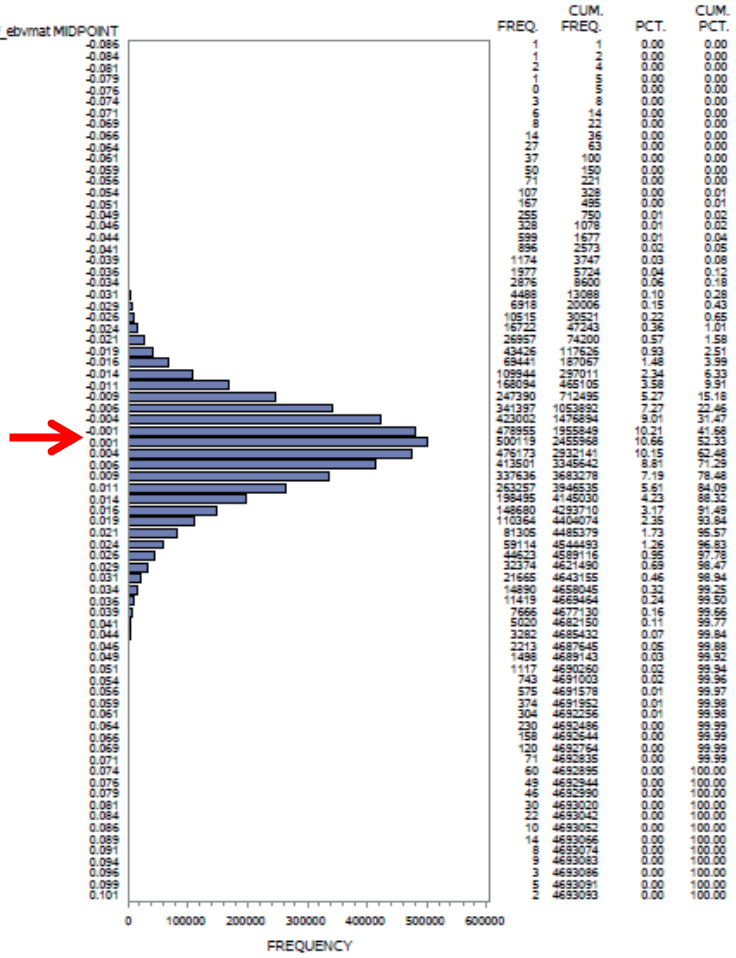
3G UMT

GABI Génétique Animale et Biologie Intégrative

INRA SCIENCE & IMPACT

In pictures for common animals – Maternal effect

Distribution of EBVMAT differences (EBVMAT_ITB - EBVMAT_FRA) - common animals



diff_ebvmat MIDPOINT	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-0.086	1	1	0.00	0.00
-0.084	1	2	0.00	0.00
-0.081	2	4	0.00	0.00
-0.079	1	5	0.00	0.00
-0.076	0	5	0.00	0.00
-0.074	3	8	0.00	0.00
-0.071	6	14	0.00	0.00
-0.069	8	22	0.00	0.00
-0.066	14	36	0.00	0.00
-0.064	27	63	0.00	0.00
-0.061	37	100	0.00	0.00
-0.059	50	150	0.00	0.00
-0.056	71	221	0.00	0.00
-0.054	107	328	0.00	0.01
-0.051	167	495	0.00	0.01
-0.049	255	750	0.01	0.02
-0.046	328	1078	0.01	0.02
-0.044	599	1677	0.01	0.04
-0.041	896	2573	0.02	0.05
-0.039	1174	3747	0.03	0.08
-0.036	1977	5724	0.04	0.12
-0.034	2876	8600	0.06	0.18
-0.031	4488	13088	0.10	0.28
-0.029	6918	20006	0.15	0.43
-0.026	10515	30521	0.22	0.65
-0.024	16722	47243	0.36	1.01
-0.021	26957	74200	0.57	1.58
-0.019	43426	117626	0.93	2.51
-0.016	69441	187067	1.48	3.99
-0.014	109944	297011	2.34	6.33
-0.011	168084	465105	3.58	9.91
-0.009	247390	712495	5.27	15.18
-0.006	341397	1053892	7.27	22.46
-0.004	423002	1476894	9.01	31.47
-0.001	478955	1955849	10.21	41.68
0.001	500119	2455968	10.66	52.33
0.004	475172	2931141	10.15	62.48
0.006	413501	3344642	8.81	71.29
0.009	337636	3683278	7.19	78.48
0.011	263257	3946535	5.61	84.09
0.014	198495	4145030	4.23	88.32
0.016	148580	4293710	3.17	91.48
0.019	110364	4404074	2.35	93.84
0.021	81305	4485379	1.73	95.57
0.024	59114	4544493	1.26	96.83
0.026	44623	4589116	0.95	97.78
0.029	32374	4621490	0.69	98.47
0.031	21665	4643155	0.46	98.94
0.034	14890	4658045	0.32	99.25
0.036	11419	4669464	0.24	99.50
0.039	7666	4677130	0.16	99.66
0.041	5020	4682150	0.11	99.77
0.044	3282	4685432	0.07	99.84
0.046	2213	4687645	0.05	99.88
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0.051	1117	4690260	0.02	99.94
0.054	743	4691003	0.02	99.96
0.056	575	4691578	0.01	99.97
0.059	374	4691952	0.01	99.98
0.061	304	4692256	0.01	99.98
0.064	230	4692486	0.00	99.99
0.066	158	4692644	0.00	99.99
0.069	120	4692764	0.00	99.99
0.071	71	4692835	0.00	99.99
0.074	60	4692895	0.00	100.00
0.076	49	4692944	0.00	100.00
0.079	46	4692990	0.00	100.00
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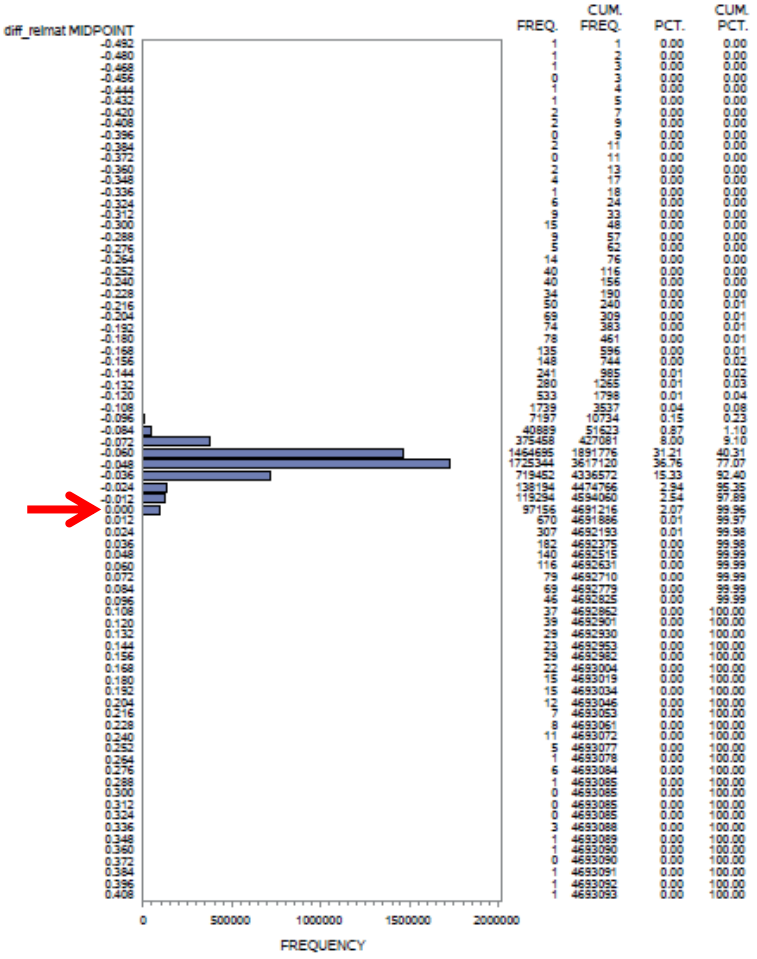
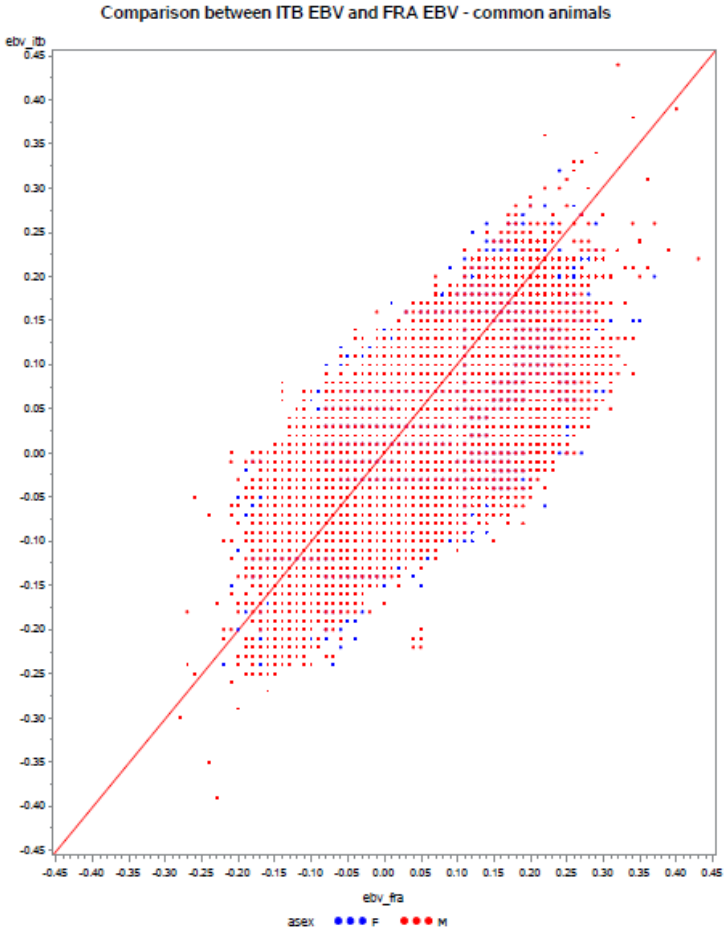
0.084	22	4693042	0.00	100.00
0.086	10	4693052	0.00	100.00
0.089	14	4693066	0.00	100.00
0.091	8	4693074	0.00	100.00
0.094	9	4693083	0.00	100.00
0.096	3	4693086	0.00	100.00
0.099	5	4693091	0.00	100.00
0.101	2	4693093	0.00	100.00

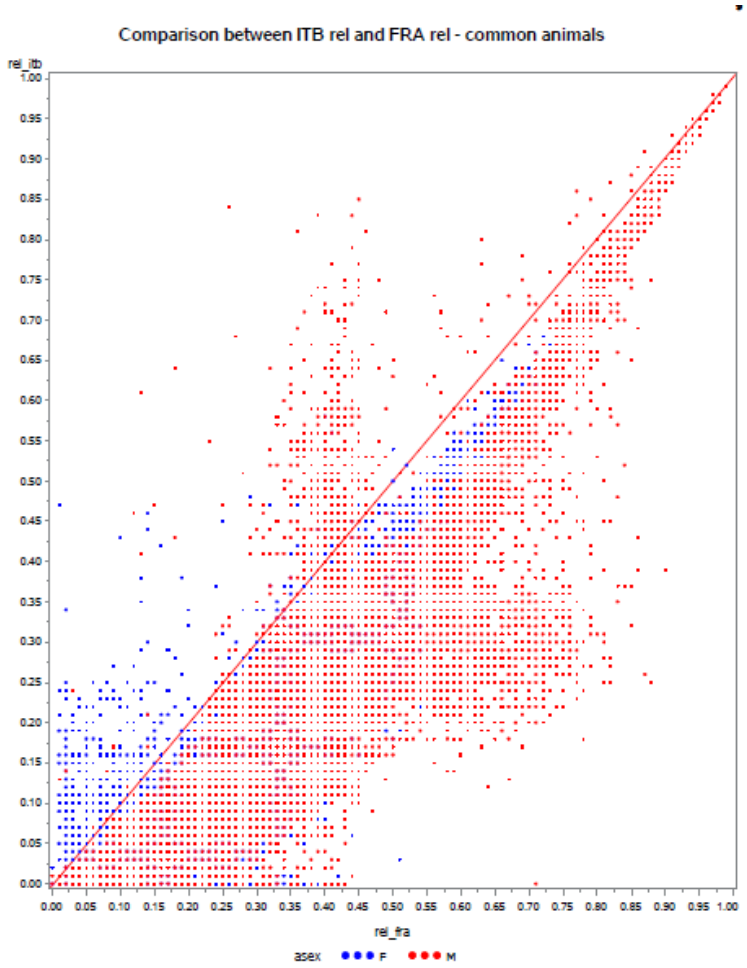
Distribution of relMAT differences (relmat_itb_FRA - relmat_FRA) - common animals



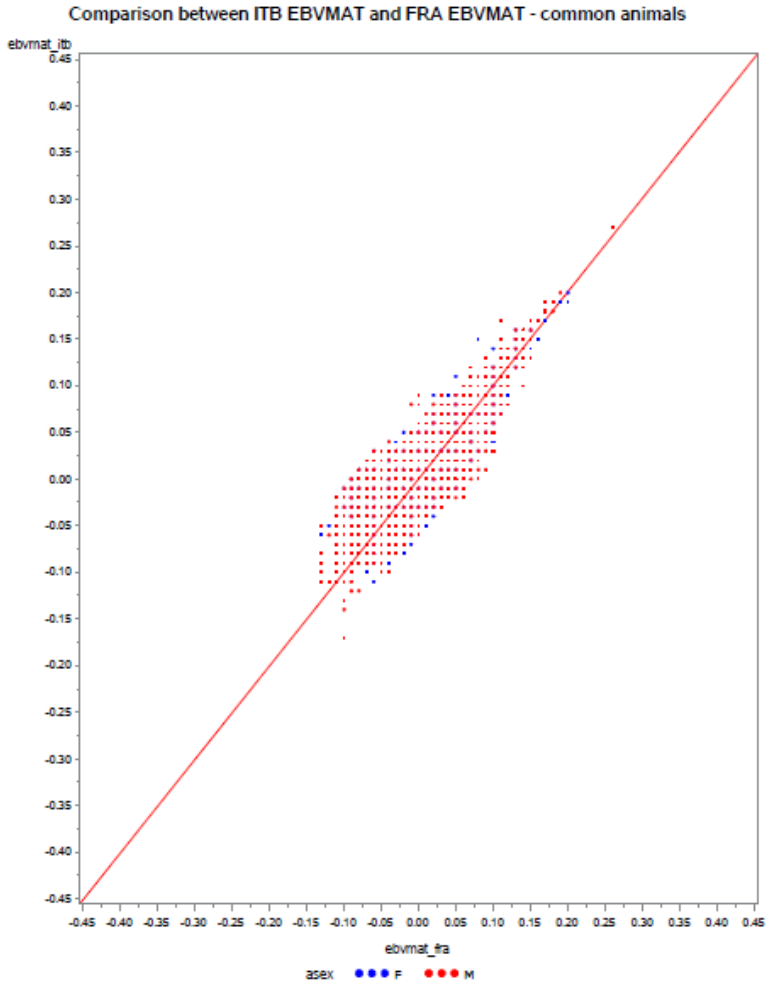
diff_relmat MIDPOINT	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
-0.492	1	1	0.00	0.00
-0.480	1	2	0.00	0.00
-0.468	1	3	0.00	0.00
-0.456	0	3	0.00	0.00
-0.444	1	4	0.00	0.00
-0.432	1	5	0.00	0.00
-0.420	2	7	0.00	0.00
-0.408	2	9	0.00	0.00
-0.396	0	9	0.00	0.00
-0.384	2	11	0.00	0.00
-0.372	0	11	0.00	0.00
-0.360	2	13	0.00	0.00
-0.348	4	17	0.00	0.00
-0.336	1	18	0.00	0.00
-0.324	6	24	0.00	0.00
-0.312	9	33	0.00	0.00
-0.300	15	48	0.00	0.00
-0.288	9	57	0.00	0.00
-0.276	5	62	0.00	0.00
-0.264	14	76	0.00	0.00
-0.252	40	116	0.00	0.00
-0.240	40	156	0.00	0.00
-0.228	34	190	0.00	0.00
-0.216	50	240	0.00	0.01
-0.204	69	309	0.00	0.01
-0.192	74	383	0.00	0.01
-0.180	78	461	0.00	0.01
-0.168	135	596	0.00	0.01
-0.156	148	744	0.00	0.02
-0.144	241	985	0.01	0.03
-0.132	280	1265	0.01	0.03
-0.120	533	1798	0.01	0.04
-0.108	1739	3537	0.04	0.08
-0.096	7197	10734	0.15	0.23
-0.084	40899	51633	0.87	1.10
-0.072	375458	427091	8.00	9.10
-0.060	1464695	1891776	31.21	40.31
-0.048	1725344	3617120	36.76	77.07
-0.036	719452	4336572	15.33	92.40
-0.024	138194	4474766	2.94	95.35
-0.012	119294	4594060	2.54	97.89
0.000	97156	4691216	2.07	99.96
0.012	570	4691886	0.01	99.97
0.024	307	4692193	0.01	99.98
0.036	182	4692376	0.00	99.98
0.048	140	4692516	0.00	99.99
0.060	115	4692631	0.00	99.99
0.072	79	4692710	0.00	99.99
0.084	69	4692779	0.00	99.99
0.096	46	4692825	0.00	99.99
0.108	37	4692862	0.00	100.00
0.120	39	4692901	0.00	100.00
0.132	29	4692930	0.00	100.00
0.144	23	4692953	0.00	100.00
0.156	29	4692982	0.00	100.00
0.168	22	4693004	0.00	100.00
0.180	15	4693019	0.00	100.00
0.192	15	4693034	0.00	100.00
0.204	12	4693046	0.00	100.00
0.216	7	4693053	0.00	100.00
0.228	8	4693061	0.00	100.00
0.240	11	4693072	0.00	100.00
0.252	5	4693077	0.00	100.00
0.264	1	4693078	0.00	100.00
0.276	6	4693084	0.00	100.00
0.288	1	4693085	0.00	100.00
0.300	0	4693085	0.00	100.00
0.312	0	4693085	0.00	100.00
0.324	0	4693085	0.00	100.00
0.336	3	4693088	0.00	100.00
0.348	1	4693089	0.00	100.00
0.360	1	4693090	0.00	100.00
0.372	0	4693090	0.00	100.00
0.384	1	4693091	0.00	100.00
0.396	1	4693092	0.00	100.00
0.408	1	4693093	0.00	100.00

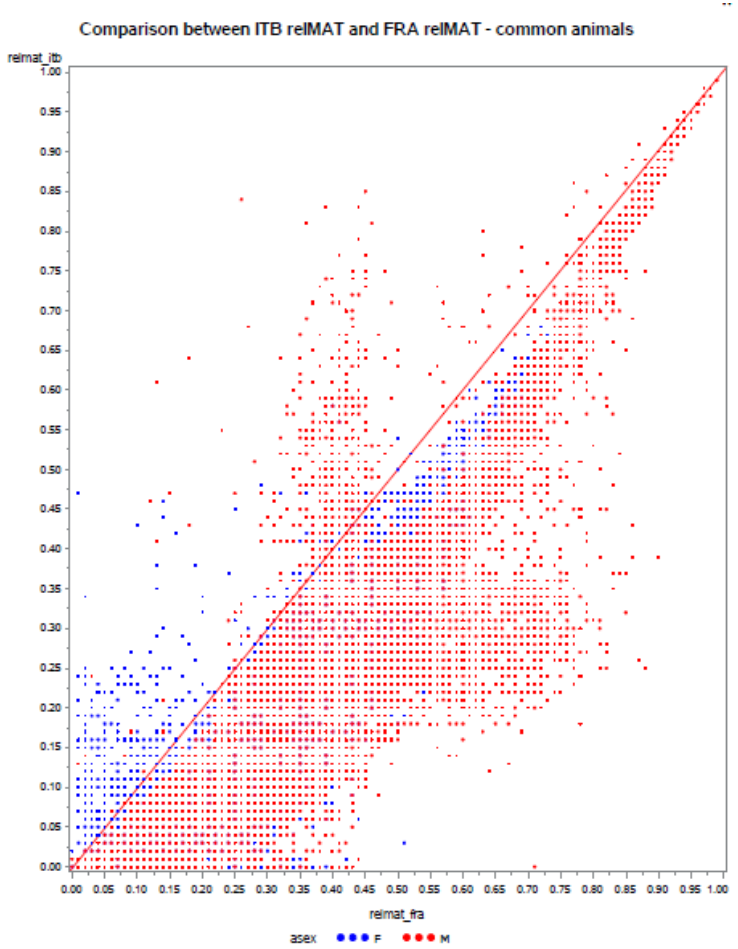
In pictures for common animals – Direct effect



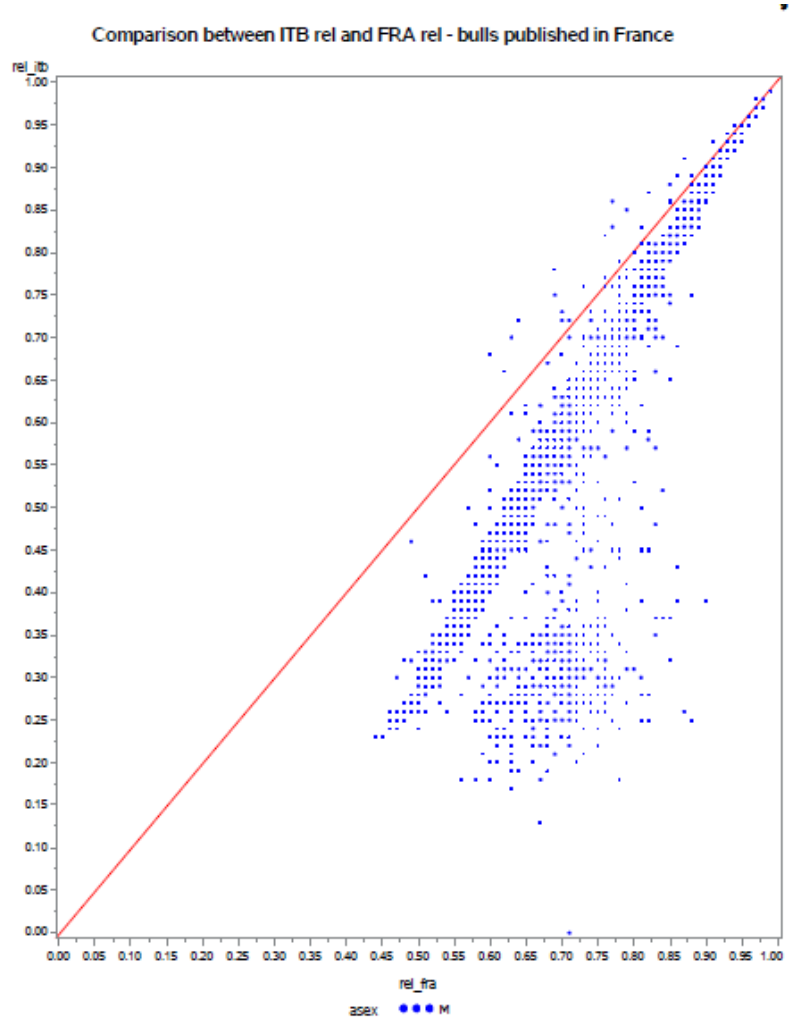


In pictures for common animals – Maternal effect





REL – Direct effect for bulls published in France LIM

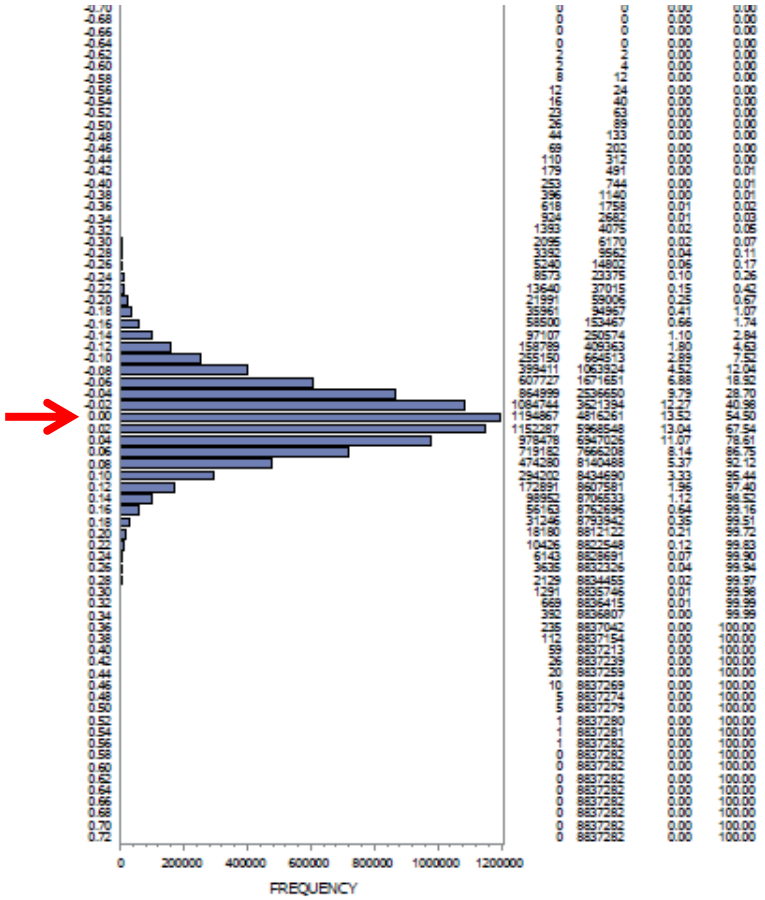


Comparison for different subpopulations for CHA

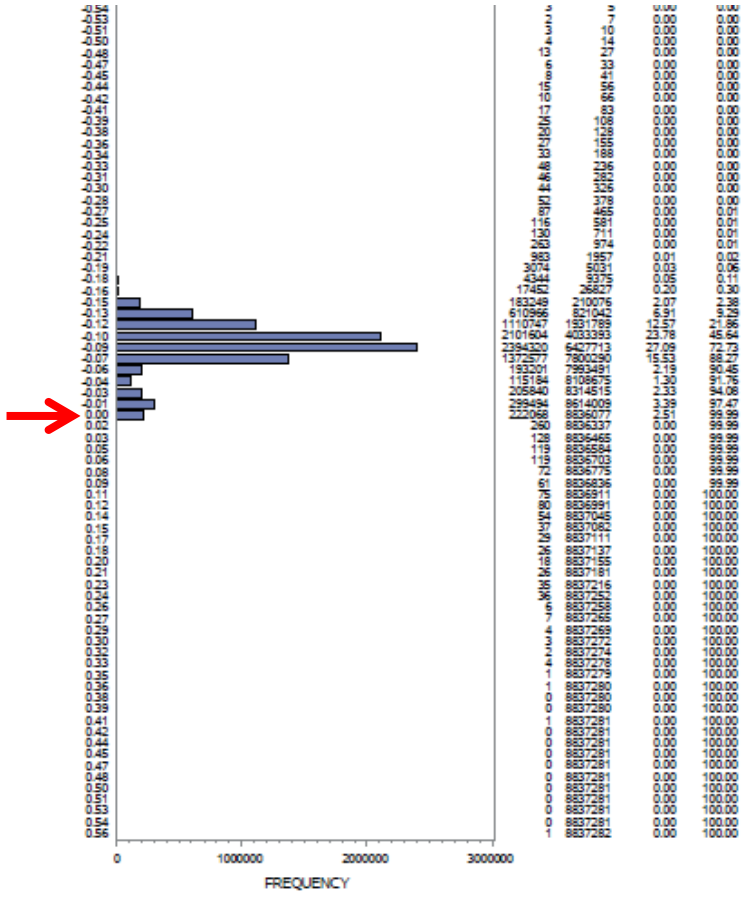
Pop	NB	Type	EBV DIR	EBV MAT	REL DIR	REL MAT
Common animals	8 837 282	r^2	0.84	0.96	0.96	0.997
		difference	0.002	0.005	-0.09	-0.01
FRA sires with REL > 0.5	72 146	r^2	0.92	0.97	0.99	0.997
		difference	0.004	0.003	-0.10	-0.03
Published bulls in FRA	24 486	r^2	0.94	0.98	0.99	0.995
		difference	- 0.004	0.006	-0.08	-0.05
Females with > 1 prog	3 905 012	r^2	0.84	0.97	0.97	0.996
		Difference	0.003	0.005	-0.10	-0.01

In pictures for common animals – Direct effect

Distribution of EBV differences (EBV_ITB - EBV_FRA) - common animals



Distribution of rel differences (rel_ITB_FRA - rel_FRA) - common animals



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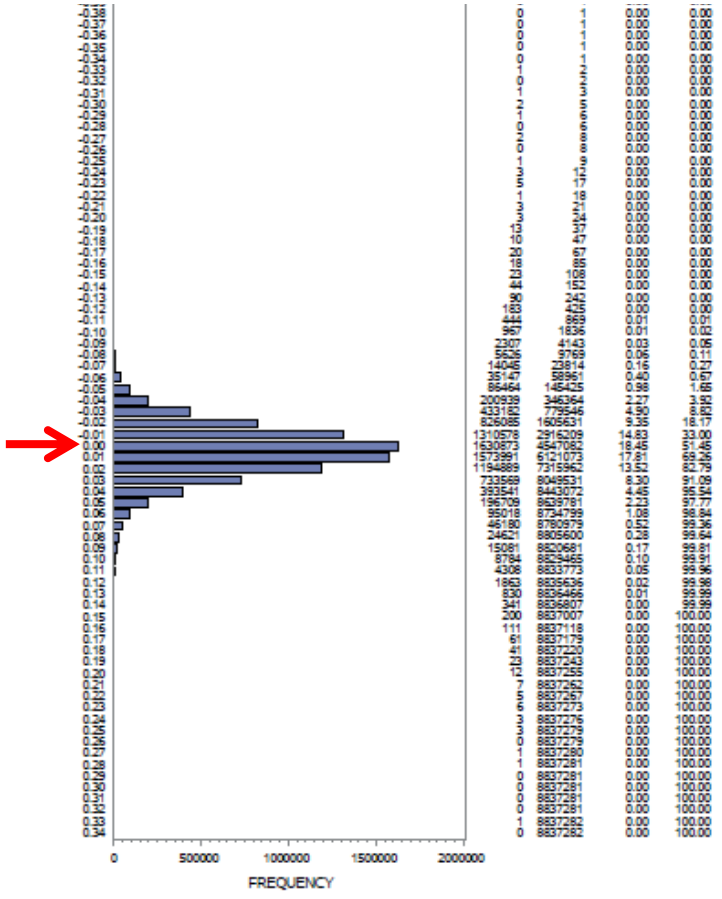
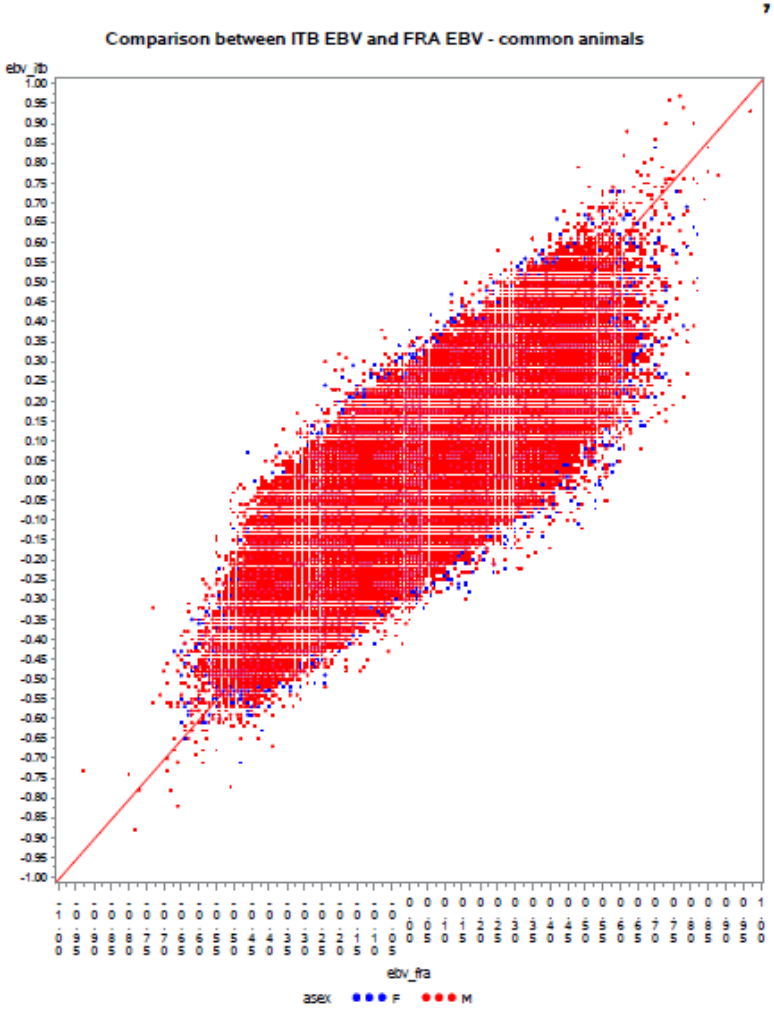
In pictures for common animals – Maternal effect

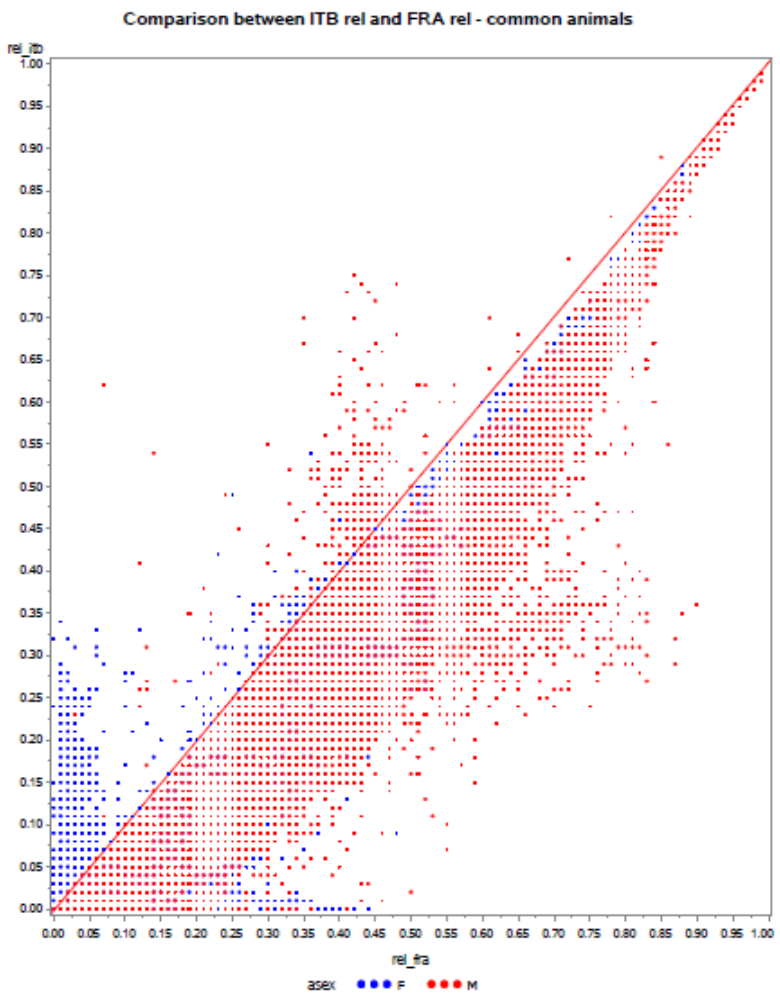
Distribution of EBVMAT differences (EBVMAT_ITB - EBVMAT_FRA) - common animals



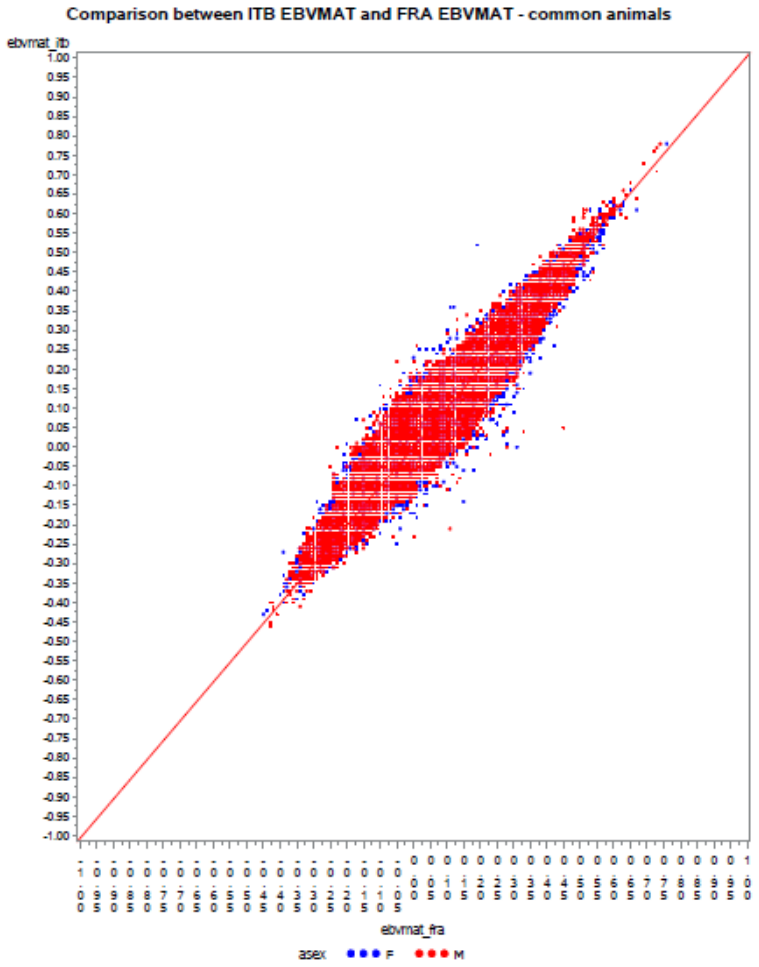
Distribution of relMAT differences (relmat_itb_FRA - relmat_FRA) - common animals

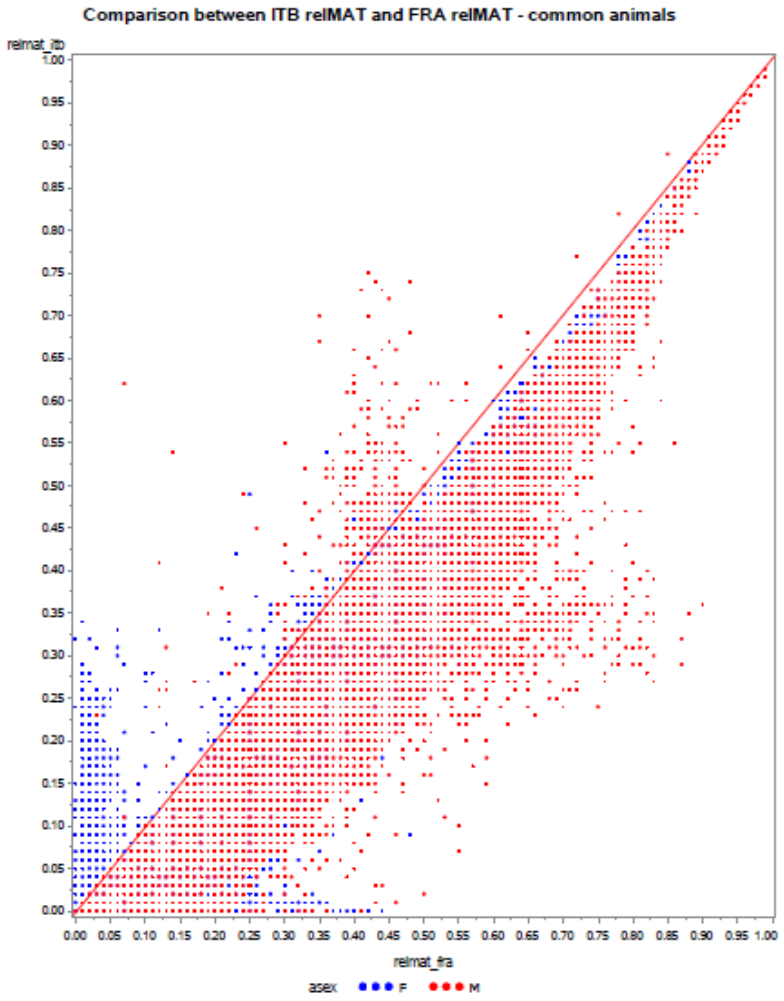
In pictures for common animals – Direct effect



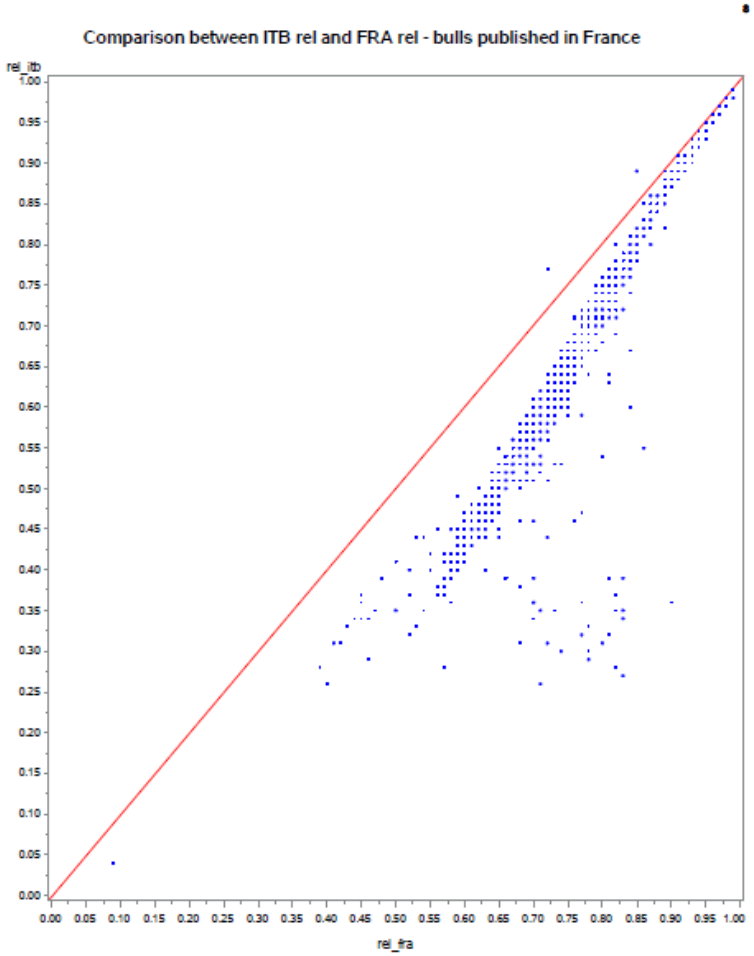


In pictures for common animals – Maternal effect





REL – Direct effect for bulls published in France CHA



French feed back conclusion

- Very first check results
- Correlations between EBV's high but high enough with regards to French data amount or for example of subpopulation of bulls with only perf in France
- Correlations between REL too low for all subpopulations.

=> Need to take Birth Weight into account in Interbeef evaluation for France.

Thanks to CZE team for these results.