



InterGenomics Holstein



Background

- Large international consortia exist for exchange of genotypes in order to perform genomic selection
- Small/other Holstein populations have been searching for ways of ensuring cost efficient solutions for genomic selection
- In small HOL populations are limited chances for commercial-driven implementation of genomic selection
- After the successful implementation of [InterGenomics](#) for BSW the idea of implementing this methodology for small/other HOL populations has arisen
- With some additional input would be possible to amend one additional and relevant project for these small/other HOL populations



The Aim of IgHol project

- use well known methodology, which is routinely used for BSW
- Or
- **implement new methodologies (e.g. international SNP model)**
- that each country (involved in the project) prepares data according to guidelines of InterGenomics evaluation
- countries which have experiences with InterGenomics for BSW can provide support for countries that have no experiences
- when the data will be prepared, **Interbull** will make pilot run – evaluation
- after these (test run) partner countries will check the results and additional opportunity to invite or to join the project will be given to other interested countries



Main steps of the project IgHol

- **Interbull** SC decision for supporting idea
- **Interbull** centre find the possibilities to support idea/initiative
- **Ask potential countries (HOL population) about interest for cooperation in the project**
- Prepare data according **Interbull** file formats for InterGenomics
- Use of InterGenomics methodology for HOL interested populations
- Test run
- Discussion of costs and interest of routine run
- Routine run



Number of Submitted HOL genotypes

Chip	HRV		IRL		PRT		SVN		URY		ZAF		SUM
	F	M	F	M	F	M	F	M	F	M	F	M	
2900			174	266									440
6909			2894	431									3325
18819			3940	1898									5838
26151												45	45
30105												34	34
53218			2965	144									3109
54001			99	249		263							611
54609	72		5	295		555	88		581	251			1847
76999						13	179	343				7	542
139480												2	2
777962			25	2									27
SUM M		0		3285		831		343		251		88	4798
SUM F	72		10102				267		581				11022
SUM F + M	72		10102	3285		831	267	343	581	251		88	15820



Size of the reference population

TRAIT	MACE EBV	NO MACE EBV	S + D	S	D	NO MACE EBV/PA
pro	1432	3224	125	2889	2	208
scs	1409	3247	128	2894	2	223
mas	1394	3262	135	2901	1	225
cwi	1328	3328	117	2923	2	286
rtp	1283	3373	132	2945	1	295
dlo	1259	3397	141	2958	6	292
int	1076	3580	151	3130	8	291



Traits

- 26 traits;
- 6 country scales
 - HRV – 5 traits
 - IRL – 26 traits
- Total 105 country-trait combinations (GBLUP runs)