



2018 Interbull Technical Workshop in Dubrovnik, Croatia

IG-HOL 2nd Research run results Slovenian point of view

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Introduction

- Slovenia has been part of InterGenomics from the beginning
- InterGenomics in BSW
 - Very good experience
 - In routine selection since first official run
- IG-HOL
 - Verified methodology
 - Are first results enough good for routine selection?

Correlations: DGV - GEBV



| Trait | Sex | Corr | Rank corr | N |
|--------------------|------|-------|-----------|------|
| Protein Yield | Male | 0.989 | 0.984 | 7173 |
| Somatic Cell Count | Male | 0.984 | 0.981 | 7173 |
| Stature | Male | 0.967 | 0.971 | 7173 |
| Overall Score | Male | 0.958 | 0.970 | 7173 |
| Longevity | Male | 0.976 | 0.974 | 7173 |

Correlations: GEBV - nBV

| Trait | Sex | Corr | Rank corr | N |
|--------------------|------|-------|-----------|-----|
| Protein Yield | Male | 0.698 | 0.784 | 465 |
| Somatic Cell Count | Male | 0.833 | 0.826 | 465 |
| Stature | Male | 0.836 | 0.898 | 441 |
| Overall Score | Male | 0.763 | 0.880 | 441 |
| Longevity | Male | 0.764 | 0.762 | 429 |

Correlations: DGV - nBV

| Trait | Sex | Corr | Rank corr | N |
|--------------------|--------|-------|-----------|-----|
| Protein Yield | Male | 0.700 | 0.777 | 467 |
| | Female | 0.311 | 0.310 | 535 |
| Somatic Cell Count | Male | 0.822 | 0.814 | 467 |
| | Female | 0.445 | 0.432 | 535 |
| Overall Score | Male | 0.775 | 0.882 | 438 |
| | Female | 0.722 | 0.716 | 479 |
| Longevity | Male | 0.757 | 0.753 | 431 |

Correlations: DGV – GEBV

2nd vs. 1st run



| Trait | Sex | Corr 2 nd | Corr 1 st | N 2 nd | N 1 st |
|--------------------|------|-------------------------|-------------------------|----------------------|----------------------|
| Protein Yield | Male | 0.989 | 0.954 | 7173 | 4656 |
| Somatic Cell Count | Male | 0.984 | 0.950 | 7173 | 4656 |
| Stature | Male | 0.967 | 0.957 | 7173 | 4656 |
| Overall Score | Male | 0.958 | 0.944 | 7173 | 4656 |
| Longevity | Male | 0.976 | 0.937 | 7173 | 4656 |

Correlations: GEBV – nBV

2nd vs. 1st run

| Trait | Sex | Corr 2 nd | Corr 1 st | N 2 nd | N 1 st |
|--------------------|------|-------------------------|-------------------------|----------------------|----------------------|
| Protein Yield | Male | 0.698 | 0.716 | 465 | 393 |
| Somatic Cell Count | Male | 0.833 | 0.841 | 465 | 393 |
| Stature | Male | 0.836 | 0.817 | 441 | 380 |
| Overall Score | Male | 0.763 | 0.729 | 441 | 376 |
| Longevity | Male | 0.764 | 0.763 | 429 | 364 |

Correlations: DGV – nBV

2nd vs. 1st run

| Trait | Sex | Corr 2 nd | Corr 1 st | N 2 nd | N 1 st |
|--------------------|--------|-------------------------|-------------------------|----------------------|----------------------|
| Protein Yield | Male | 0.700 | 0.727 | 467 | 393 |
| | Female | 0.311 | 0.363 | 535 | 202 |
| Somatic Cell Count | Male | 0.822 | 0.838 | 467 | 393 |
| | Female | 0.445 | 0.372 | 535 | 202 |
| Overall Score | Male | 0.775 | 0.746 | 438 | 376 |
| | Female | 0.722 | 0.768 | 479 | 173 |
| Longevity | Male | 0.757 | 0.760 | 431 | 364 |

Correlations: DGV – GEBV HOL vs. BSW 2018



| Trait | Sex | Corr HOL | Corr BSW | N HOL | N BSW |
|--------------------|------|-------------|-------------|----------|----------|
| Protein Yield | Male | 0.989 | 0.996 | 7173 | 29270 |
| Somatic Cell Count | Male | 0.984 | 0.995 | 7173 | 29270 |
| Stature | Male | 0.967 | 0.995 | 7173 | 29270 |
| Overall Score | Male | 0.958 | 0.996 | 7173 | 29270 |
| Longevity | Male | 0.976 | 0.997 | 7173 | 29270 |

Correlations: GEBV - nBV

HOL vs. BSW 2018

| Trait | Sex | Corr HOL | Corr BSW | N HOL | N BSW |
|--------------------|------|-------------|-------------|----------|----------|
| Protein Yield | Male | 0.698 | 0.712 | 465 | 564 |
| Somatic Cell Count | Male | 0.833 | 0.764 | 465 | 563 |
| Stature | Male | 0.836 | 0.830 | 441 | 545 |
| Overall Score | Male | 0.763 | 0.736 | 441 | 540 |
| Longevity | Male | 0.764 | 0.800 | 429 | 496 |

Correlations: DGV – nBV

HOL vs. BSW 2018

| Trait | Sex | Corr HOL | Corr BSW | N HOL | N BSW |
|--------------------|--------|-------------|-------------|----------|----------|
| Protein Yield | Male | 0.700 | 0.717 | 467 | 566 |
| | Female | 0.311 | 0.428 | 535 | 856 |
| Somatic Cell Count | Male | 0.822 | 0.746 | 467 | 565 |
| | Female | 0.445 | 0.431 | 535 | 856 |
| Overall Score | Male | 0.775 | 0.740 | 438 | 542 |
| | Female | 0.722 | 0.666 | 479 | 775 |
| Longevity | Male | 0.757 | 0.786 | 431 | 498 |

Conclusions

- High correlations between DGV and GEBV
 - Conformation of good methodology
- Not so high correlation between GEBV and nBV & quite low correlation between DGV and nBV (female exc. Conf.)
 - Not enough large reference population?
 - Low genetics relationship between countries?
- Use of IG-HOL results in routine selection
 - Better than PA
 - With reference population increase will increase correlations?
 - Inclusion of common bulls from other countries origin (CAN, ...?)