REFERENCES BASES FOR COMBINED INTERBULL INTERNATIONAL EVALUATIONS AND WALLOON EVALUATION OF SIRES

DISCLAIMER

All breeding values published in the files are expressed on the INTERBULL (HC) base. If needed, users will have to convert them following the rules below.

CONVERSION OF BREEDING VALUES (KG) FOR MILK, FAT AND PROTEIN

Convert the breeding values between the different bases:

- **2020HC = all cows born in 2015**
- **2020BC = Dual-Purpose Belgian Blue cows born in 2015**

with the following conversion factors:

TABLE I: *Conversion factors for breeding values (kg) of Milk, Fat and Protein.*

TRAIT	HC->BC
BV_{KGMILK}	+1953
BV_{KGFAT}	+82
$BV_{KGPROTEIN}$	+64

A specific basis for Eastern Belgian Red and White breed animals is under consideration.

CONVERSION OF BREEDING VALUES FOR PERCENTAGE OF FAT AND PROTEIN

1. Convert the breeding values for milk, fat and protein to the new base.
2. Use the phenotypic mean of production (kgs of milk), % fat and % protein of the new base (see table II) with the following equations to estimate the percentages of the new base:

$$BV_{\%FAT} = \frac{(BV_{KGFAT} * 100) - (BV_{KGMILK} * \%P_{FAT})}{(BV_{KGMILK} + P_{KGMILK})}$$

$$BV_{\%PROTEIN} = \frac{(BV_{KGPROT} * 100) - (BV_{KGMILK} * \%P_{PROTEIN})}{(BV_{KGMILK} + P_{KGMILK})}$$

TABLE II: *Phenotypic mean for production and percentage of Fat and Protein.*

	HC BASE	BC BASE
P_{KGMILK}	7851	4404
$\%P_{FAT}$	4.09	3.78
$\%P_{PROT}$	3.44	3.38

EXAMPLE: CONVERSION FROM THE HC BASE TO THE BC BASE

The table III summarize the 5 breeding values of an animal A on the base HC.

TABLE III: *Breeding values of an animal A in HC base.*

TRAIT	BV_{KGMILK}	BV_{KGFAT}	$BV_{KGPROTEIN}$	$BV_{\%FAT}$	$BV_{\%PROTEIN}$
BV	103	5	6	0.01	0.04

1. Conversion of the kg Breeding Values:

$$BV_{KGMILK} = 103 + 1953 = 2056 \text{ kg}$$

$$BV_{KGFAT} = 5 + 82 = 87\text{kg}$$

$$BV_{KGPROT} = 6 + 64 = 70\text{kg}$$

2. Conversion of percentages Breeding Values:

$$BV_{\%FAT} = \frac{(87 * 100) - (2056 * 3.78)}{(2056 + 4404)} = 0.144$$

$$BV_{\%PROTEIN} = \frac{(70 * 100) - (2056 * 3.38)}{(2056 + 4404)} = 0.008$$