

COUNTRY'S NAME	HUNGARY																
Production traits	Milk , fat and protein																
Breed	Holstein-Friesian																
Trait definition and unit of measurement	Milk, fat and protein (kg)																
Criteria for inclusion and extension of records	Record included if birth date and parents or country of origin are known. Only records ≥ 240 DIM are included, all extended to 305 days using standard lactation curves (linear inter/extrapolation)																
Time period for data inclusion																	
Sire categories	Only AI bulls: Domestic, imported, and ET																
Number of lactations included in the evaluation	Three																
Environmental effects: Pre-adjustment	Age at calving, days open (current), heterosis-recombination loss Adjustment factors last updated: 1997																
Base for age pre-adjustment	27 months																
Method (model) of genetic evaluation	ST – R – BLUP – AM																
Environmental effects in the genetic evaluation model	Fixed: Herd-Parity-Year-Season, Month of Calving, Random: PE, Additive Genetic Effect Of Cow																
Use of genetic groups	Phantom groups by breed and, country of origin / date of birth (when available).																
Genetic parameters in the evaluation	<table> <thead> <tr> <th></th> <th>h^2</th> <th>t</th> <th>σ_p^2</th> </tr> </thead> <tbody> <tr> <td>Milk:</td> <td>0.25</td> <td>0.5</td> <td>937024</td> </tr> <tr> <td>Fat:</td> <td>0.20</td> <td>0.4</td> <td>1296</td> </tr> <tr> <td>Protein:</td> <td>0.20</td> <td>0.4</td> <td>784</td> </tr> </tbody> </table>		h^2	t	σ_p^2	Milk:	0.25	0.5	937024	Fat:	0.20	0.4	1296	Protein:	0.20	0.4	784
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System validation	Trend estimation (Interbull Method I & II), correlation with previous estimation, data quality check																
Expression of genetic evaluations	EBV																
Genetic (reference) base	Cow population born in 1990																
Next base change	2000																
Criteria for official publication of evaluations	Rpt $\geq 60\%$, number of herds ≥ 10 , number of daughters tested for type ≥ 5																
Number of evaluations / publications per year	Two (February and August)																
Use in production / total merit index	HGI= Holstein Global Index = $(1 \cdot BV_{\text{Fat}} / sd_{\text{FAT}})$ $+ (3 \cdot BV_{\text{Protein}} / sd_{\text{PROT}})$ $+ (1.6 \cdot BV_{\text{Udd.Comp.Index}} / sd_{\text{UCI}})$ $+ (1.6 \cdot BV_{\text{F\&Legs Ind.}} / sd_{\text{FLI}})$																
Anticipated changes in the near future	Inclusion of records shorter than 240 days																
Key reference on methodology applied	Same source code as used by NRS in the Neatherlands																
Key organization: name, address, phone, fax, e-mail, web site	National Institute for Agricultural Quality Control H-1024 Budapest, Keleti Károly u. 24. Tel: +36-1-2123-127, Fax: +36-1-2125-502 e-mail: ZsolteszS@ommi.hu																

COUNTRY: Hungary											
*Number of AI bulls (NB) tested, means (X), and standard deviations (SD) of proofs (kg, %) from most recent run, by bulls' year of first proof (YP) and breed.											
YP	NB	Milk		Fat		Protein		Fat %		Protein %	
		X	SD	X	SD	X	SD	X	SD	X	SD
Breed Black and White and Red and White Holsteins											
1981	55	44	-	-0	-	1	-	-0.02	-	0.01	-
1982	123	-56	-	-2	-	-2	-	0.01	-	0.00	-
1983	147	32	-	1	-	1	-	0.00	-	0.01	-
1984	182	-55	-	0	-	-1	-	0.04	-	0.01	-
1985	119	39	-	0	-	2	-	-0.02	-	0.02	-
1986	130	132	-	4	-	5	-	-0.01	-	0.01	-
1987	145	159	-	8	-	7	-	0.04	-	0.03	-
1988	133	243	-	5	-	8	-	-0.07	-	0.00	-
1989	123	217	-	7	-	8	-	-0.02	-	0.01	-
1990	93	351	-	10	-	12	-	-0.04	-	0.01	-
1991	55	342	-	7	-	11	-	-0.10	-	0.01	-
1992	39	332	-	14	-	14	-	0.04	-	0.07	-
1993	39	517	-	15	-	20	-	-0.07	-	0.06	-

* Only bulls with Rpt. \geq 60%

COUNTRY: Hungary											
Average of adjusted production records (kg) included in the most recent evaluation run, by daughters' year of production (YP) and breed.											
YP	NB	Milk		Fat		Protein		Fat %		Protein %	
		X	SD	X	SD	X	SD	X	SD	X	SD
Breed Black and White and Red and White Holsteins											
1981		4465		165.1		143.7		-		-	
1982		5119		189.4		165.1		-		-	
1983		5150		189.0		167.6		-		-	
1984		5080		186.9		165.4		-		-	
1985		5239		191.7		171.7		-		-	
1986		5306		194.3		173.9		-		-	
1987		5335		200.0		174.5		-		-	
1988		5526		204.4		178.7		-		-	
1989		5498		205.5		177.4		-		-	
1990		5768		211.2		186.7		-		-	
1991		5914		212.5		192.1		-		-	
1992		6198		226.1		207.6		-		-	
1993		6942		247.6		232.8		-		-	