

Changes Announced for TPI Formula in April 2011

The Holstein Association USA, Inc. board of directors has approved changes to the Total Performance Index (TPI) formula which will become official with the April 2011 genetic evaluations. Changes to individual traits in the formula are as follows:

Trait	PL	DPR	UDC	FLC	Protein
Change	- 5%	+ 1%	+ 2%	+ 1%	+ 1%

The major TPI breakdowns will change as follows:

Category	Current TPI	April 2011 TPI	Change
Production	42%	43%	+ 1%
Fitness	33%	29%	- 4 %
Type	25%	28%	+ 3 %

The new TPI formula places more weight on highly heritable traits for production and type and less weight on lowly heritable fitness traits. The heritability for a trait indicates the percentage of variation in the trait that is due to genetic (as opposed to environmental) factors. Therefore, traits with higher heritability can be changed more quickly through selective breeding. Stature is the most heritable trait at .42 (42%). The heritability for Milk, Fat and Protein is .30. The heritabilities for the udder traits ranges from .23 to .32. By comparison, the heritabilities for DPR, PL and SCS are .04, .08 and .12, respectively.

Average PTAs for the top 100 TPI bulls would change as follows:

Trait	Dec. 2010 TPI	New TPI
Milk	+912	+937
Fat	+47.5	+48
Protein	+31.6	+32.7
Type	+1.51	+1.57
UDC	+1.25	+1.30
FLC	+1.26	+1.32
Stature	+1.16	+1.28
Dairy Form	+0.89	+0.96
PL	+3.49	+3.26
DPR	+0.70	+0.56
SCS	2.78	2.79

Sources

TPI info: Holstein Association USA
 Production and fitness heritabilities: USDA-ARS
 Type heritabilities: Holstein Association USA

World Wide Sires, Ltd. remains at the forefront in providing exceptional genetics for outstanding type and phenomenal production. A leading exporter of U.S. livestock semen, World Wide Sires represents Accelerated Genetics and Select Sires in Europe, Africa, Asia, the Middle East, and Oceania.

For more information, please contact:

World Wide Sires, Ltd.
 5545 Avenida de los Robles
 Visalia, California, USA 93291
 Phone: 559-622-2222
 Fax: 559-741-2828
 info@wwsires.com
 www.wwsires.com

