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Roger's Record News

Progressive Performance Ranking (PPR)

Effective May, 2007

So What is PPR?

Progressive Performance Ranking is the *new* ranking system for Brown Swiss sires and cows and PPR is the new buzz word.

The Brown Swiss Board of Directors, upon recommendation from the Genetics Committee, adopted the following changes regarding the publishing of genetic evaluations to be effective with the May 2007 AIPL release.

In the year of the Association's Centennial celebration (1980), the first index to rank bulls was developed. July of 1980 saw the first Type Evaluations (PDT) and the first Production-Type Index (PTI). This first index was just as the name implies, Production (PDS) and Type (PDT). During the past 27 years this PTI formula has seen many revisions. For several years now, this index has included many other functional traits beside production and Type. PPR is the new Ranking (R) of sire Performance (P) for the Progressive (P) breed, Brown Swiss.

The New PPR Formula-

The new formula for PPR will continue to emphasize production (62% of the weight) while including functional traits which will allow cows to lead a long and profitable life. A comparison of the old PTI and "New PPR" weightings are given below.

PPR Weights (Percentage)								
	Protein	Fat	SCS	PL	UDC	FLC	PTAT	DPR
New PPR	44	18	8	12	10	4	-	4
Old PTI	45	20	8	8	10	3	3	3

The effective changes are as follows:

- a) The total weight on production (protein and fat) remains the main focus of sire selection to allow Brown Swiss to continue to compete in the market place and the commercial herd. The total weight of 62% is only slightly less than the previous value at 65%.
- b) Somatic cell will remain at 8% as Brown Swiss have a substantial advantage in this trait compared to other dairy breeds and do not want to lose that advantage.
- c) Productive Life has become an increased focal point among the dairy industry. Seeing a need to improve this trait a substantial increase was placed on this trait, raising the weight from 8 to 12%, a 50% increase.
- d) The type traits of Udder Composite (UDC)-remained at 10%, and Foot & Leg Composite (FLC)-increased from 3 to 4%, remain the main type areas of selection. Due to the low heritability of Rear Legs-Rear View, it will not be added to the FLC at this time.
- e) Daughter Pregnancy Rate, another functional and fertility trait was increased slightly from 3 to 4%. Due to the delay in collecting sufficient data for this trait, high reliabilities are limited on most bulls.

In summary the new PPR formula maintains 62% weight on production while increasing Productive Life substantially. The Udder Composite and Foot & Leg Composite formulas did not change.

Thus, the new PPR formula is as follows:

$$[44 (PTA_{protein}/SD_{protein}) + 18 (PTA_{fat}/SD_{fat}) - 8 ((PTA_{SCS}-3.06)/SD_{SCS}) + 12 (PTA_{PL}/SD_{PL}) + 10 (UDC/SD_{UDC}) + 4 (FLC/SD_{FLC}) + 4 (DPR/SD_{DPR})]$$

- where: SCS = Somatic Cell Score (Subtracted from the PTA value is the mean plus one-half standard deviation)
 PL = Productive Life
 UDC = Udder Composite (See Formula below)
 FLC = Foot & Leg Composite (See Formula below)
 DPR = Daughter Pregnancy Rating
 SD = Standard Deviation of corresponding traits follow:

Trait	Standard Deviation
Protein	15.9
Fat	22.1
SCS	.12
PL	2.1
UDC	.65
FLC	.90
DPR	1.4

Cow Evaluations

Genetic evaluations for cows will now also be labeled as Progressive Performance Rankings (PPR) and the formula will be identical to the formula of PPR for bulls. The current Cow Performance Index (CPI) formula had not been updated recently and did not correspond directly to the old □

The Genetics Committee and Board believe this new formula (PPR) will help breeders make selections which will result in longer-lasting cows (high PL) with quality milk (low SCS) and, most importantly, which will produce large amounts of high-component milk and improve profitability.