



Traditionally, there are basically three (independent) direct criteria to evaluate the reproduction of cows, viz:

- Age first calving (AFC);
- Average inter-calving period (average ICP) and
- Days since last calving (DSLCL).

The reproduction index (RI) was born out of a need for a combined value to evaluate a cow's total reproduction. The RI takes the AFC and average ICP into consideration, so that cows with, for example, a relatively high AFC but low average ICP can be compared directly with cows with a relatively low AFC but higher average ICP.

Through the use of RI, cows with different AFCs and average ICPs can be directly compared, e.g. a cow that calved at 36, 48 and 60 months of age, will have the same RI as a cow that calved at 30, 48 and 60 months of age. Please note that the RIs standard of comparison is based on the average reproduction performance (AFC and average ICP) of all cows (regardless of breed) participating in the National Beef Recording and Improvement Scheme.

Ideally DSLCL should also be taken into account in the calculation of the RI, in order for the RI to give a picture of the total reproduction of a cow. This would however mean that in the calculation of the RI, the age of the cow at last calving should be replaced with the cow's age on the date of calculation. This, however, creates other problems, as the RI value then dependent on the time the RI calculation is done, for example:

- If the RI calculation date is within the calving season, the cows that have already calved (i.e. low DSLCL) will have good RIs, while the cows that have not calved (i.e. high DSLCL) will have bad RIs;
- If the RI calculation date is after the summer calving season, the cows that calved during the summer calving season (i.e. low DSLCL) get good RIs, while the cows that calved during the winter calving season (i.e. high DSLCL) get bad RIs.

For this reason DSLCL is not considered in the calculation of the RI.

REPRODUCTION INDEX

WHAT IS IT?

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For embryo donor cows, flushings are considered in the calculation of the average ICP and RI, provided the flushing(s) is on record at Logix / Intergis). This is done by excluding the ICP following the flushing from the calculation of the cow's average ICP and RI. In this way it is ensured that the RI of embryo donor cows is not affected negatively by a prolonged ICP due to a flushing.

For first acceptance animals the exact date of birth and/or the historical number of calves prior to recording of the cow on Logix/Intergis usually not available. For this reason, only the cow's average ICP (from calving dates recorded on Logix/Intergis) is considered in relation to the ICP standard used in the formula. AFC is therefore not considered in the calculation of the RI for first acceptance cows.

The reproduction index thus provides an easy and quick way to evaluate the reproduction performance (AFC and average ICP) of a cow in one value.

