

# Repromax – The Semex Project for Improved Conception Rates

*Repromax – for over a year the Canadian organization Semex has used that trade name to mark and to globally promote their leading sires for conception rate. However, Repromax appears to be a bit more than just a pure marketing tool. It's not just an internal listing of the best Semex sires for semen fertility; it is a very well scientifically thought-out project that includes several sources of information. We are talking about an international breeding value for fertility.*

commercial milk producers. The fact that the basic concept behind the product Repromax developed by Semex differs from those of many other suppliers results from its international alignment and the mix of information sources.

### COSTS

The fact that fertility has increasingly taken center stage in recent years has not necessarily got something to do with a substantial decline of the conception rates especially within the Holstein breed. No, in fact the conviction gained acceptance that fertility is one of the economically most important traits to work on when it comes to dairy cattle breeding. Each heat of a cow not leading to a desired pregnancy puts the breeder to expense. The bigger the number of animals in a herd the higher the costs caused by such deficits in the fertility area. The economic importance of fertility result-

No, it is not that Semex has reinvented the wheel or that they could provide a magic formula for the problems in the fertility area. In recent years the increasing importance of functional traits, especially fertility, has prompted virtually all leading breeding organizations around the globe to increasingly focus on that topic. Today fertility is one of the most important central issues in the dairy cattle industry and must

be seen almost on a par with production and conformation. Thus, over the past years many semen suppliers have switched over to specially mark their leading bulls for semen or daughter fertility. So, whoever is on the lookout for bulls with good proofs for those traits not only hits on Repromax but on a whole string of different product names that – in the era of extensive marketing – target the needs of many breeders and



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*Developed by Semex scientists, "Repromax" is an index exclusively for their own sire line-up and includes fertility data and proofs from the US and Canada. Under the trade name of Repromax, Semex markets their sires with the best semen fertility results.*

### REPROMIX HOLSTEIN

Under the trade name of "Repromix", Semex offers semen doses to their customers that are a "cocktail" mixed of semen of 3 different Holstein sires. For that semen mix, they select CVM-free sires combining very good high-reliability fertility proofs with good figures for conformation, production, and fitness. Semex not only offers Repromix Holstein but also cocktails with bulls from other breeds as well as blends of sires from different breeds.

ed in the fact that this trait receives so much more attention now. While data centers around the world have enhanced the breeding values for semen fertility and daughter fertility in recent years, numerous AI organizations have taken up the topic of fertility, too, with Semex not being an exception. Under the trade name of Repromax they came up with a group of sires excelling at significantly above-average conception rates. The improvement of semen fertility – that's the goal of Repromax. Basically Repromax is not just a new single-trait proof or a pure trade name but a blend of both. It is also worth mentioning that there is no methodology hidden behind Repromax that would improve the fertilization ability and the semen fertility of sires by means of mechanical, chemical, or other modifications carried out directly. In addition Repromax exclusively relates to sires from the Semex breeding program.

### COMBINATION

So how does Repromax work? In total, fertility information on over 3,000 bulls (including Jersey bulls) is hidden behind the Repromax values calculated by Semex scientists. Repromax is a fertility index combining the non-return rates (NRR) from Canada, Agri-Tech analyses (ATA) from 12 western US states, and the SCR proofs (sire conception rate) calculated by the US data center within one value from August 2008 on. In fact, an index with a truly international approach is hidden behind Repromax. The NRR data are provided by the Canadian data center, CDN. Exclusively insemination data from the previous year are being inte-

grated in the calculation of the NRR56 (monitoring at day 56 after insemination). While the NRR data exclusively consider whether or not a further insemination has taken place within a particular period, the ATA data (relative pregnancy rate) are based on direct pregnancy tests carried out by vets within 75 days after the last insemination. With it, the ATA information from the US incorporated into the Repromax index are more reliable than the pure non-return rates. Moreover, the American data center, USDA-AIPL, includes the ATA information also in the calculation of the SCR proof. The SCR is not only based on the ATA information but also on data resulting from an additional insemination, a calving that took place at a later date, or a pregnancy test. The 3 data sources (NRR, ATA, SCR) are included in the Repromax index with defined weights. By the way, after each proof round that index is newly calculated on the basis of the latest figures and models. However, the results are not published but remain at Semex for internal use.

### CLOSED LIST

'The true intention for the creation of a particular breeding value for fertility was to make available more information to our customers than the respective fertility proofs in individual countries can provide. The combination of fertility data from different countries was and still is the basic idea behind Repromax,' explains Brad Sayles of Semex.

So why don't they publish the results – the Repromax indexes of individual bulls? 'Well, to us the point is not to present the best or the poorest fertility bulls. When it comes to traits with low reliability – and fertility definitely is among them – one should refrain from fuzzy comments on distances between sires. To us it is decisive to separate at an increased reliability the better fertility bulls from the poorer ones. Especially during the hot summer months our clients inquire about those bulls breeding back their cows as quickly as possible. We now can provide them with a list of bulls with significantly above-average conception rates. Then again, the range of positive Repromax bulls is still wide enough that each breeder has sufficient room to make alternative selections,' comments Sayles. ●



STEPHAN SCHNEIDER

*At 11.4 the Australian bull Ladino Park Talent has by far the highest SCR in the US and therefore is a well-established member of the group of the Semex Repromax sires.*

### Ladino Park Talent

In August 2008 the breeding value for "expected relative conception rate" (ERCR) has been replaced by the "sire conception rate" (SCR) proof. The SCR plays a significant role in the selection of bulls marketed as Repromax sires. Sires with a positive SCR are not automatically admitted to the group of Repromax bulls, though they have very-good or excellent chances. The current superstar among the high-SCR sires clearly is Ladino Park Talent RC. Sired by Storm and out of Markwell Leader Rose, Talent has 11.4 for SCR based on his more than 4,000 daughters in the US. At present none of his rivals can even get close to matching him in that regard. Talent's figure means that his conception rate is over 11% above the average in the US. And of course he is marketed as a Repromax sire, too. However, high SCR figures do not automatically guarantee high proofs also on the maternal side. Talent's proof for maternal fertility (DPR) stands at just –1.8.

By the way, the 2 highest US sires for SCR are Lady-Manor Marcellus (Boliver x BW Marshall) and Honeycrest Zenith Firsby (Zenith x O-Man). Those 2 bulls in the CRI line-up have an SCR of 6.4 and 6.3 respectively.



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