Asko Mäki-Tanila / Helsingin yliopisto

Suomalaisten ayrshirelehmien (punainen rotu) jalostuksesta seuranneet muutokset

Geneettisten muutosten kuvaajat on tuotettu Tanskan, Ruotsin ja Suomen yhteisessä laskentasysteemissä (NAV) joka on hyväksytty kansainvälisessä Interbull-järjestössä.

Suomalaisessa valinnassa (NTM) ovat tärkeässä asemassa tuotos, rakenne, lisääntymisen säännöllisyys ja terveys. Kaikista näistä on lehmistä käytettävissä monipuoliset laajat tietomäärät ja valinnan tulokset ovat erinomaisia ja samansuuntaisia vuosien yli.



NTM:n painokertoimet (2.5.2016)

	Punaiset rodut	Holstein	Jersey
Tuotos	1.00 / 0.91*	0.75 / 0.68*	0.87 / 0.78*
Kasvu	0.00	0.06	0.00
Hedelmällisyys	0.24	0.31	0.20
Syntymäindeksi	0.13	0.15	0.06
Poikimaindeksi	0.11	0.17	0.06
Utareterveys	0.30	0.35	0.44
Muut hoidot	0.11	0.11	0.04
Sorkkaterveys	0.05	0.08	0.05
Koko	0.00	0.00	0.00
Jalat	0.08	0.12	0.04
Utare	0.35	0.25	0.26
Lypsettävyys	0.09	0.08	0.10
Luonne	0.03	0.03	0.03
Kestävyys	0.07	0.11	0.08
Vasikan elinvoima	0.22	0.14	0.12

*paino sonneilla ja genomitestatuilla naarailla/paino genomitestaamattomilla lehmillä, joilla on omia tuotostietoja laskennassa mukana

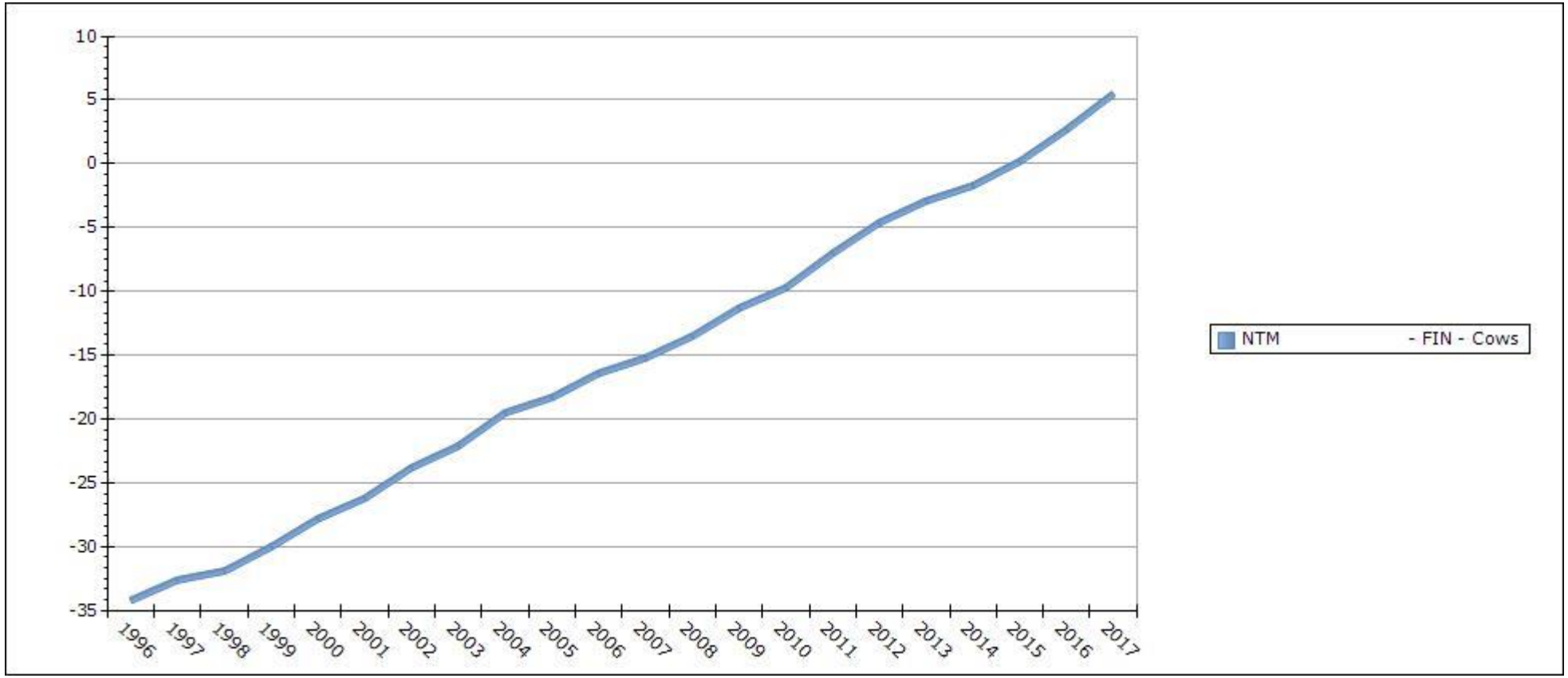
All trends show mean breeding values for all animals born during a certain year. All breeding values are expressed as relative breeding values where the mean within the base group of the breed (cows born 3-5 years before the last evaluation) is 0 for NTM and 100 for sub-indices.

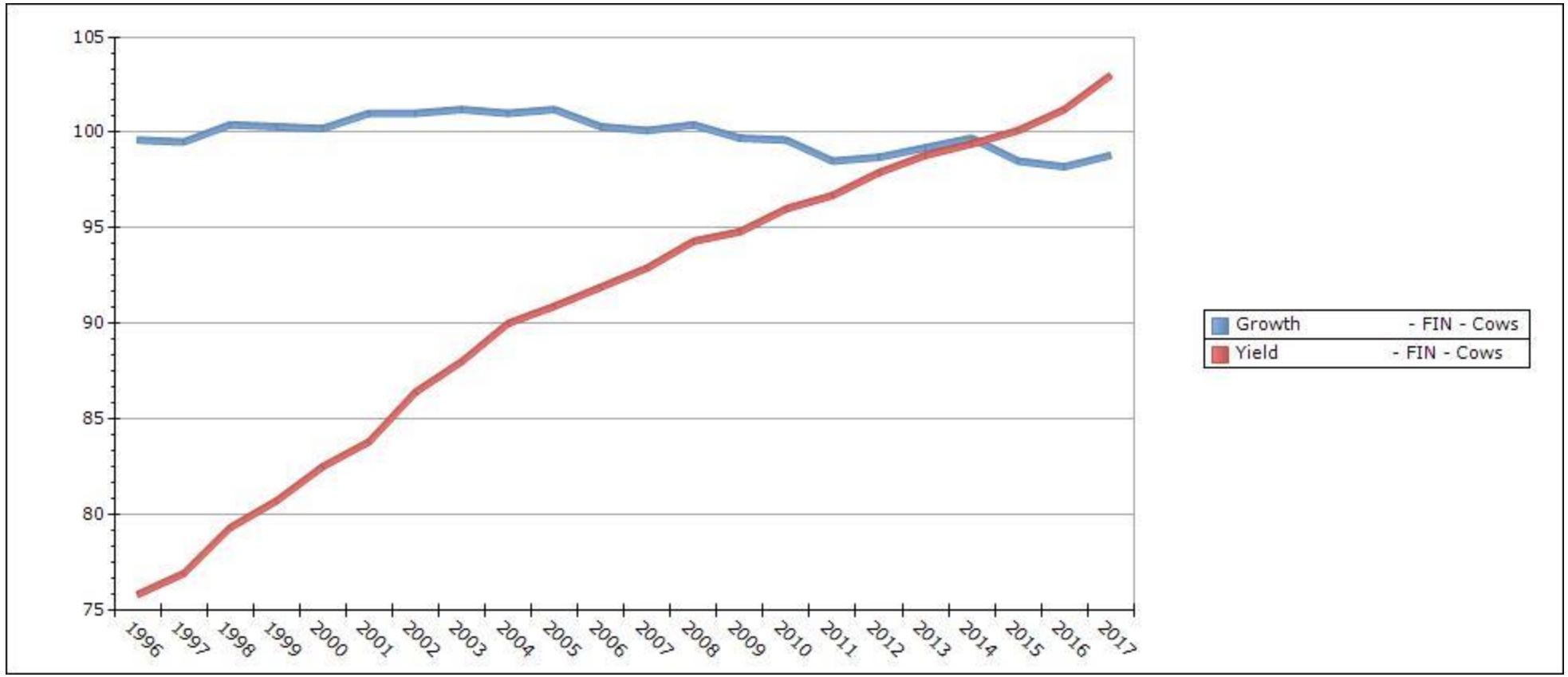
Pystyakselilla 10 tarkoittaa jakauman keskihajontaa. Esimerkiksi maidon vuosituotoksen keskiarvo on tällä hetkellä 9700 kg ja geneettinen keskihajonta 700 kg. Tuotoksessa tällainen geneettinen muutos saadaan noin 5 vuodessa, kestävyydessä vastaavan muutoksen aikaansaantiin menee pitempi aika.

Geneettisen muutosten lisäksi lehmien tuotoksen ja kestävyyden parantamiseen voidaan vaikuttaa ravitsemuksella.

ARVOJEN NOUSU KAIKISSA GRAAFEISSA TARKOITTAA HALUTTUA SUUNTAA

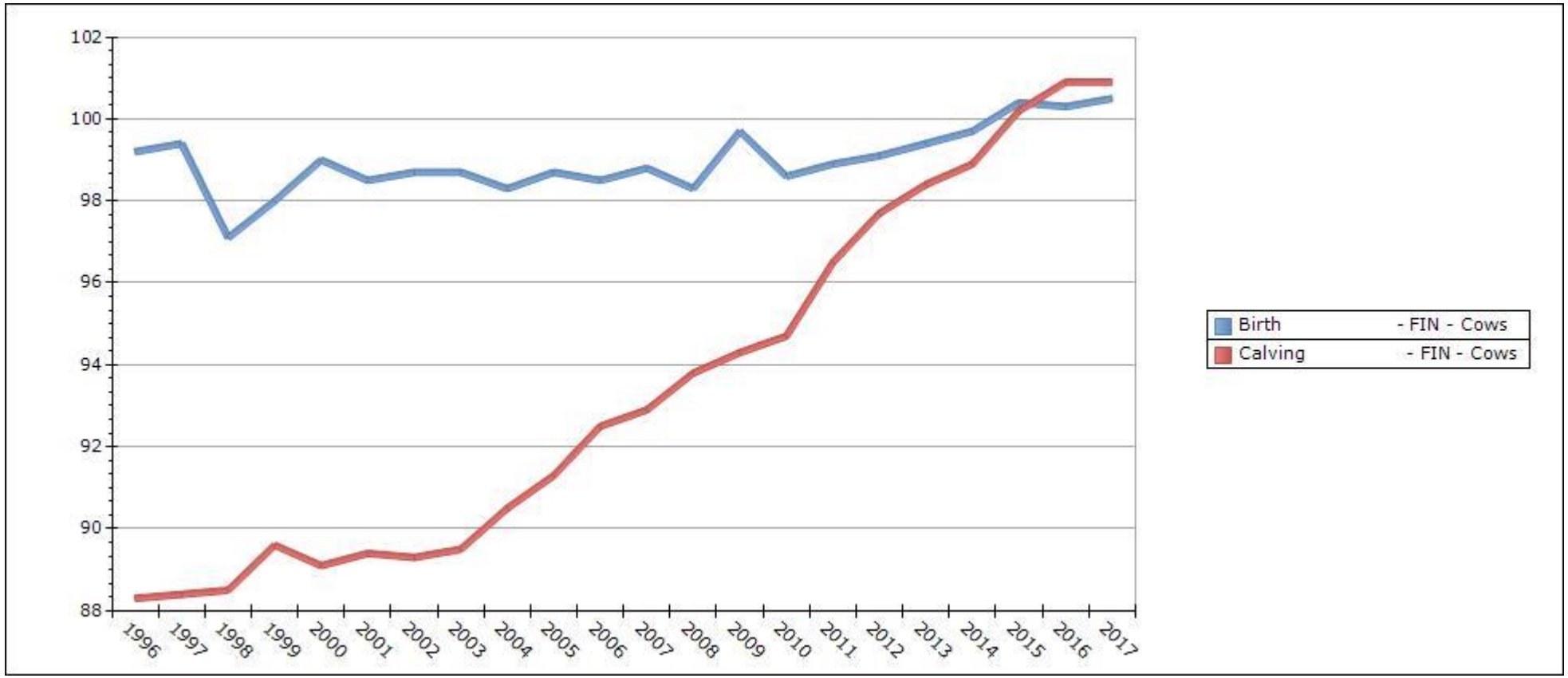
kokonaiskehitys





TUOTOS Yield describes the genetic potential for milk, fat and protein production. This sub-index includes single breeding values for milk, fat and protein in the first three lactations based on records from milk recording.

KASVU Growth describes the genetic potential for carcass gain and carcass conformation score. It includes single breeding values for daily carcass gain and carcass conformation score based on slaughter results from male calves.



VASIKKAKUOLLEISUUS Birth describes the genetic potential to be born easily and alive. The index includes breeding values for survival (direct) and calving ease (direct) based on calving records from first five lactations.

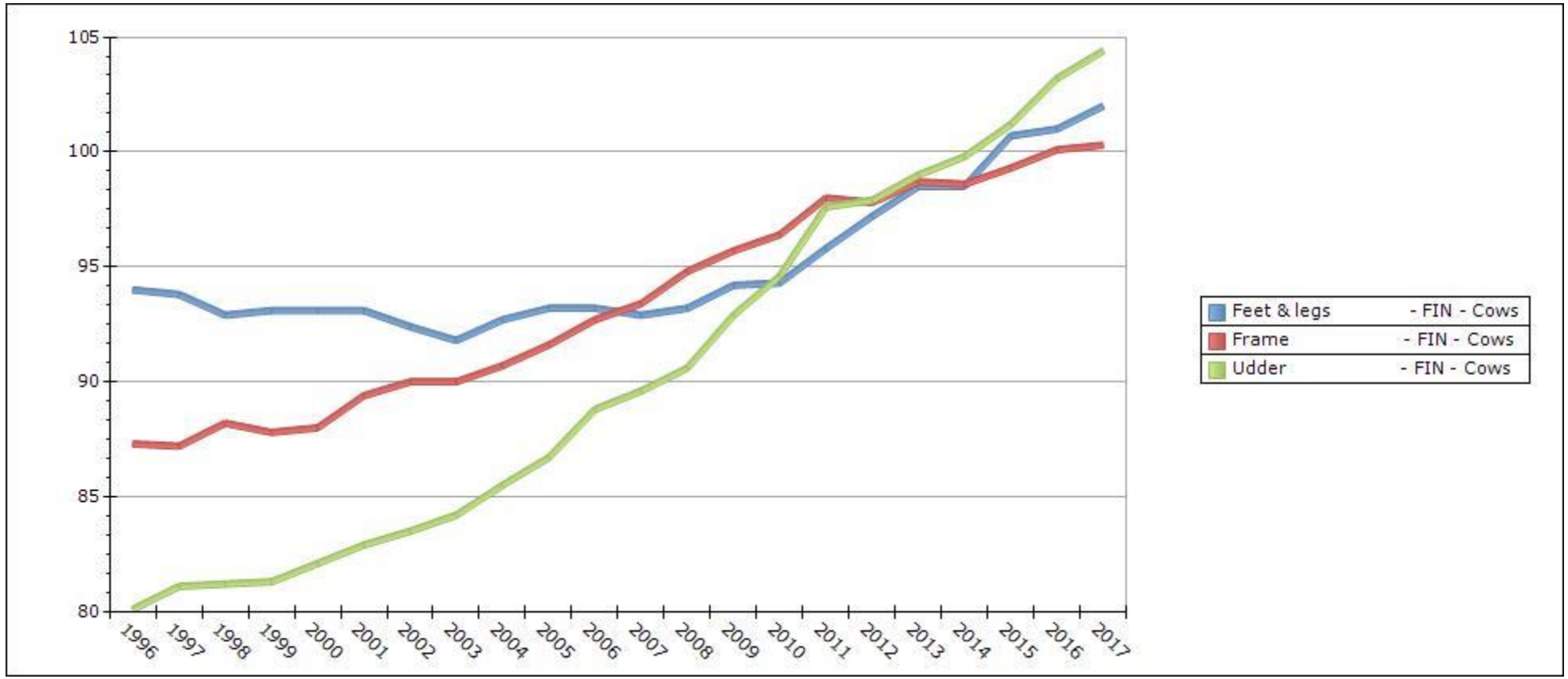
POIKIMAVAIKEUDET Calving describes the genetic potential for easy calvings and live-born calves. The index includes breeding values for survival (maternal) and calving ease (maternal) based on calving records from first five lactations.



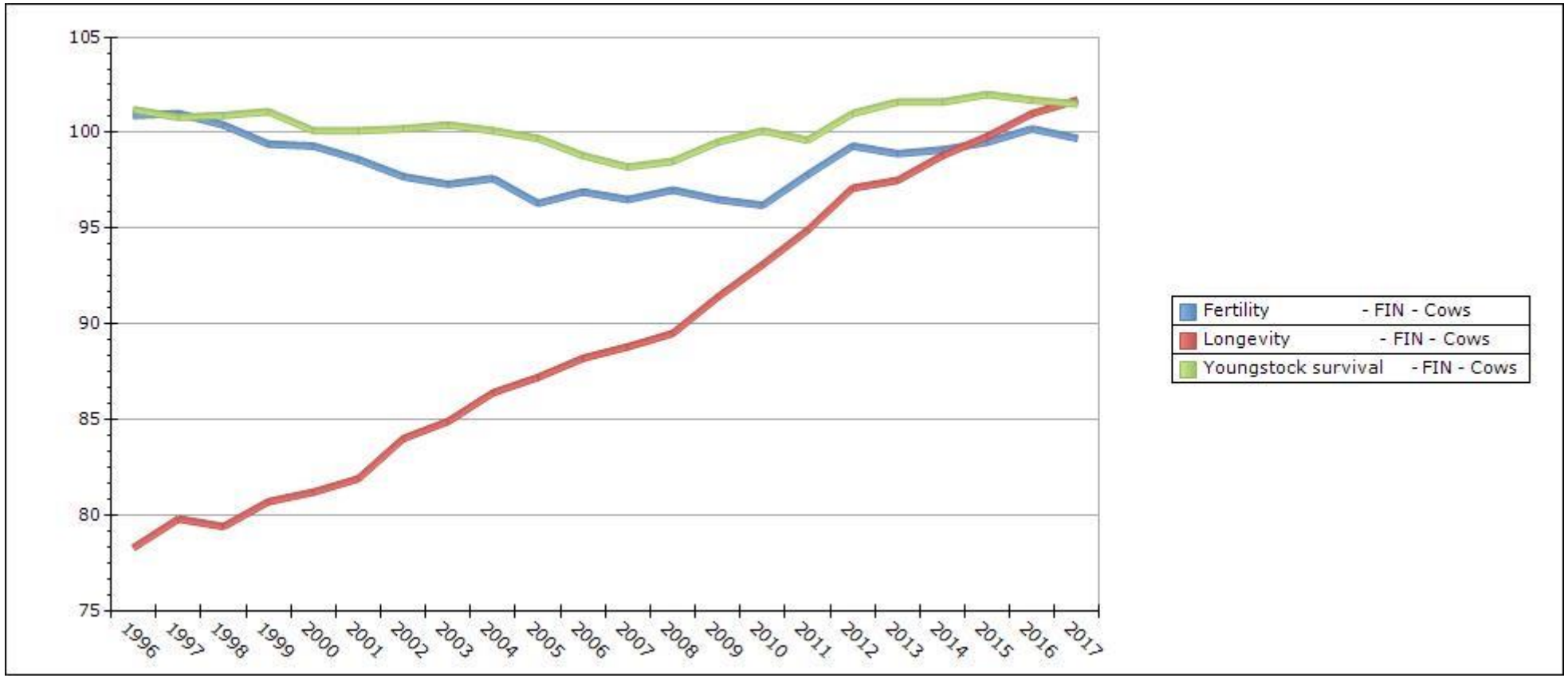
SORKKATERVEYS Claw health describes the genetic ability to resist claw diseases. It includes breeding values for seven different claw disorders from records made by hoof trimmers in the first three lactations.

UTARETERVEYS Udder health describes the genetic ability to resist mastitis. It includes breeding values for udder health in the first three lactations based on records on clinical mastitis made by veterinarians. Cell count and some udder conformation traits are used as indicator traits in NAV model for udder health.

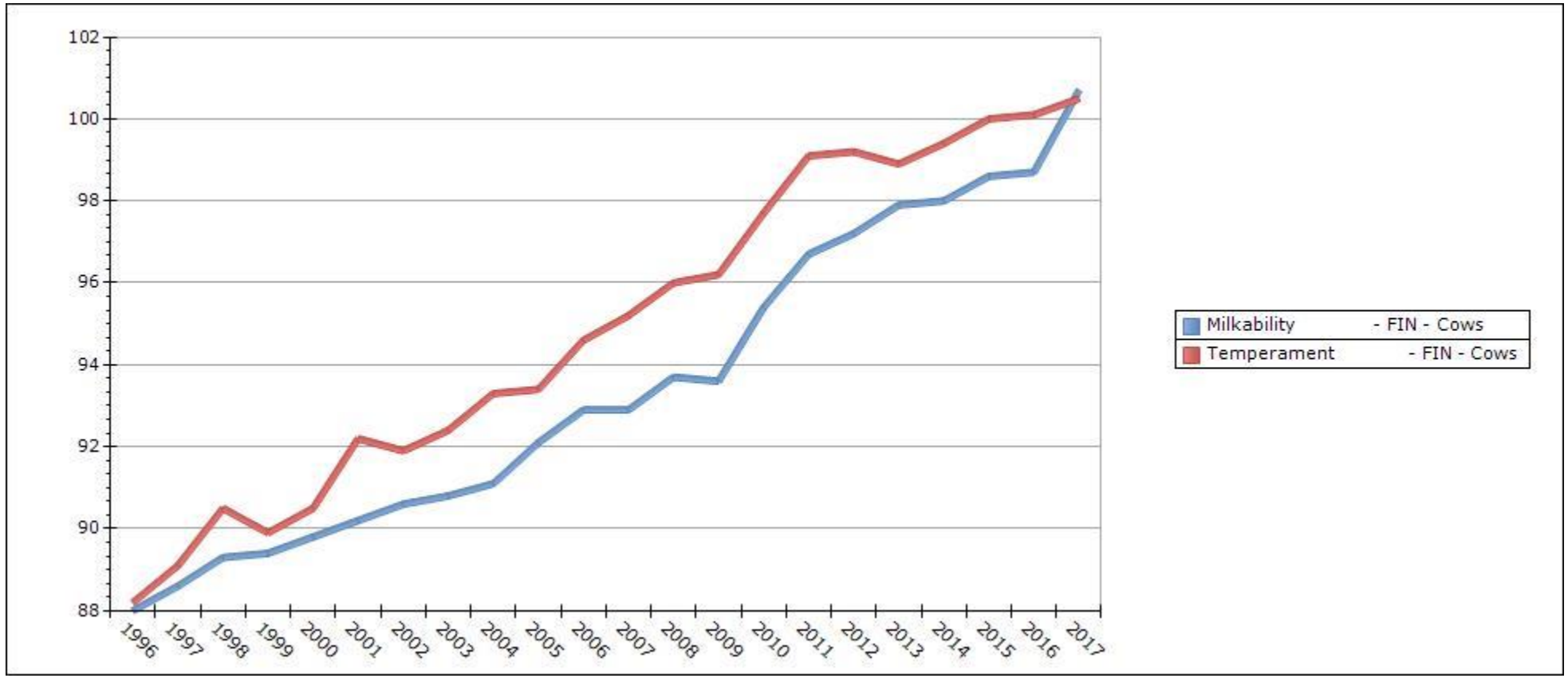
NS. MUU TERVEYS General health describes the genetic potential to resist reproductive, metabolic and feet and leg diseases. It includes breeding values for early and late reproductive disorders, metabolic diseases as well as feet and leg problems based on health records made by veterinarian in the first three lactations.



JALAT Feet & legs describes the genetic potential for feet and leg conformation. It includes breeding values for five feet and leg classification records in the first three lactations made by official classifiers.
RAKENNE Frame describes the genetic potential for body conformation where a higher value indicates larger cows. It includes breeding values for up to seven (depending on breed) body classification records in the first three lactations made by official classifiers.
UTARERAKENNE Udder describes the genetic potential for udder conformation. It includes breeding values for ten udder classification records in the first three lactations made by official classifiers.



LISÄÄNTYMISEN SÄÄNNÖLLISYYS Fertility describes genetic potential to start or resume heat cycle after calving, to show oestrus and to conceive at insemination. It includes breeding values for interval from first to last insemination, interval from calving to first insemination, number of inseminations based on insemination records on heifers and cows from first three lactations. Non-return rate and heat strength are used as an indicator trait in NAV model for fertility.
KESTÄVYYS Longevity describes the genetic potential for a long productive life. It includes breeding value for time from first calving to the end of third lactation based on records from milk recording. Other time periods are used as indicator traits in NAV model for longevity.
VASIKAN ELINVOIMA Youngstock survival describes the genetic potential for survival in youngstock. It includes breeding values for early (first month, separate for male and heifer calves) and late rearing period (up to six months for male calves and 15 months for heifers).



LYPSYNOPEUS Milkability describes the genetic potential for milking speed (flow of fat + protein) where a higher value indicates faster flow. It is based on herd owners' assessment on a cow's milkability in first lactation compared to other cows in the same herd. Also information from electronic milk recording from AMS and milking parlours is included.

LUONNE Temperament describes the genetic potential for temperament where a higher value indicates cows that are easy to handle. It is based on herd owners' assessment on a cow's temperament compared to other cows in the same herd.