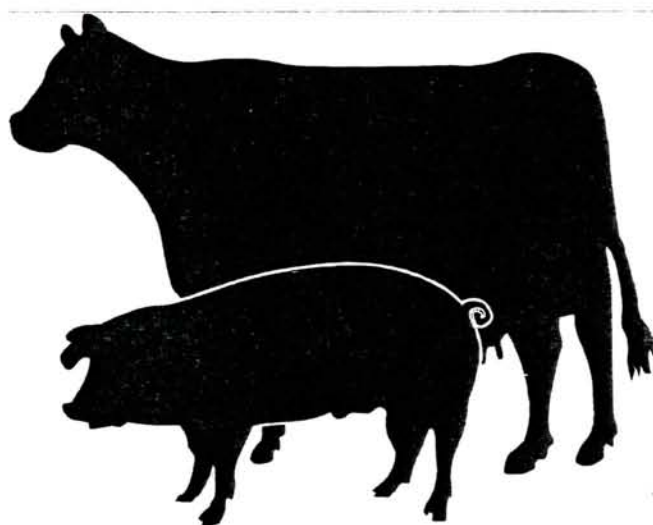


**JÕUDLUSKONTROLI KESKUS**

**EESTI  
JÕUDLUSKONTROLI  
AASTARAAMAT  
2001**



***RESULTS OF ANIMAL  
RECORDING IN ESTONIA***

***2001***

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## Sisukord

|  | <i>Contents</i> |
|--|-----------------|
| Eessõna.....   | 5               |
| <i>Foreword</i>  |                 |
| Jõudluskontrolli Keskus .....  | 7               |
| <i>Animal Recording Centre</i>   |                 |
| 1. Veiste jõudluskontrolli dünaamika Eestis .....                              | 8               |
| <i>Development of milk recording in Estonia</i>                                |                 |
| 2. Aastalehmade arv tõugude viisi aastatel 1964-2001 .....                     | 9               |
| <i>Average no. of cows in milk recording by different breeds 1964-2001</i>     |                 |
| 3. Karjade suurus ja arv aastatel 1990-2001 .....                              | 9               |
| <i>Size and number of herds in milk recording 1990-2001</i>                    |                 |
| 4. Toodang aastalehma kohta tõugude viisi .....                                | 10              |
| <i>Productivity of Estonian dairy breeds</i>                                   |                 |
| 5. Toodang aastalehma kohta maakondades .....                                  | 11              |
| <i>Annual average productivity of Estonian dairy herds in counties</i>         |                 |
| 6. 305 päeva laktatsiooni toodang tõugude viisi .....                          | 11              |
| <i>305-d. lactation productivity by breeds</i>                                 |                 |
| 7. 305 päeva laktatsiooni keskmine toodang laktatsiooni algusaasta järgi ..... | 12              |
| <i>Avg. 305-d. lactation productivity by beginning year of lactation</i>       |                 |
| 8. 305 päeva laktatsiooni piimatoodang laktatsiooni algusaasta järgi .....     | 13              |
| <i>Avg. 305-d. lactation productivity by beginning year of lactation</i>       |                 |
| 9. Karjade jagunemine piimatoodangu järgi aastalehma kohta .....               | 14              |
| <i>Distribution of herds by annual average productivity per cow</i>            |                 |
| 10. Lehmade jagunemine 305 päeva laktatsiooni piimatoodangu järgi .....        | 14              |
| <i>Distribution of cows by 305-d. lactation milk productivity</i>              |                 |
| 11. Lehmade jagunemine 305 päeva laktatsiooni piimavalgu toodangu järgi .....  | 15              |
| <i>Distribution of cows by 305-d. lactation protein productivity</i>           |                 |
| 12. 305 päeva laktatsiooni toodangu sõltuvus poegimiskuust .....               | 15              |
| <i>305-d. lactation productivity by month of calving</i>                       |                 |
| 13. Karja suurus ja toodangu näitajad .....                                    | 16              |
| <i>Milk recording results by herd size</i>                                     |                 |
| 14. Kontrollpäeva piimatoodang ja somaatiliste rakkude arv tuh/ml .....        | 17              |
| <i>Milk per cow and SCC/ml on test day</i>                                     |                 |
| 15. Kontrollpäeva piima rasva- ja valgusisaldus .....                          | 17              |
| <i>Fat and protein content of milk on test day</i>                             |                 |
| 16. Veiste kunstlik seemendus ning tiinestumine .....                          | 18              |
| <i>Artificial insemination and non-return rate</i>                             |                 |
| 17. Poegimiste ja vasikate arv .....   | 19              |
| <i>Calves born</i>   |                 |
| 18. Kinnisperioodi pikkus päevades .....                                       | 19              |
| <i>Days dry on cows in milk recording</i>                                      |                 |
| 19. Uuslõpsiperioodi pikkus päevades .....                                     | 20              |
| <i>Servic period</i>   |                 |
| 20. Lehmade karjast väljamineku põhjused .....                                 | 20              |
| <i>Culling reasons</i>   |                 |
| 21. Lehmade jagunemine poegimisvahemiku pikkuse järgi .....                    | 21              |
| <i>Distribution of cows by calving interval</i>                                |                 |
| 22. Lehmade jagunemine vanuse järgi .....                                      | 21              |
| <i>No. of cows by breed and age groups</i>                                     |                 |
| 23. Tõukarjade toodang aastalehma kohta tõugude viisi .....                    | 22              |
| <i>Productivity of herdbook herds</i>  |                 |
| 24. 305 päeva laktatsiooni toodang tõukarjades .....                           | 22              |
| <i>305-d. lactation productivity in herdbook herds</i>                         |                 |
| 25. Lehmade arv tõugude viisi maakondades .....                                | 23              |
| <i>No. of cows of different breeds in counties</i>                             |                 |
| 26. Karjade arv ning keskmine karja suurus maakondades .....                   | 23              |
| <i>No. of herds and average herd size in counties</i>                          |                 |
| 27. 305 päeva laktatsiooni toodang maakondades .....                           | 24              |
| <i>305-d. lactation productivity in counties by breeds</i>                     |                 |
| 28. Lehmade vanus esimesel poegimisel .....                                    | 26              |
| <i>Age at 1st calving</i>  |                 |
| 29. Piimatoodang aastalehma kohta maakondades .....                            | 27              |
| <i>Annual milk yield per cow in counties</i>                                   |                 |



|   |   |    |
|---|---|----|
| 30.                                     | Toodang aastalehma kohta maakondades tõugude viisi.....   | 28 |
|   | <i>Annual productivity of Estonian dairy breeds in counties</i>   |    |
| 31.                                     | Suurima 305 päeva laktatsiooni piima rasva ja -valgutoodanguga lehmad .....                               | 29 |
|   | <i>Top cows ranked by 305-d. lactation fat and protein productivity</i>                                   |    |
| 32.                                     | Suurima eluea piimatoodanguga lehmad 2001. a. ....  | 31 |
|   | <i>Best lifetime production cows</i>  |    |
| 33.                                     | Parimad jõudluskontrollikarjad rasva- ja valgutoodangu järgi.....   | 32 |
|   | <i>Best dairy herds by fat and protein productivity</i>   |    |
|   | Geneetiline hindamine .....   | 37 |
|   | <i>Genetic Evaluation for Yield traits</i>  |    |
|   | BLUP-kontrollpäeva loomamudeli kasutamise tingimused veiste jõudlustunnuste aretusväärtuste hindamisel .. | 37 |
|   | <i>Facts on Estimation of Breeding Values in Estonia</i>  |    |
| 34.                                     | Pullide aretusväärtuste keskmised sünniaastate järgi .....  | 39 |
|   | <i>Estimated breeding values (EBV) of sires by year of birth</i>  |    |
| 35.                                     | Lehmade aretusväärtuste keskmised sünniaastate järgi .....  | 39 |
|   | <i>Estimated breeding values (EBV) of cows by year of birth</i>   |    |
| <b>Sigade jõudluskontrolli näitajad</b> |   |    |
|   | <i>Results of performance recording of pigs</i>   |    |
| 36.                                     | Emiste seemendamise / paaritamise tulemused .....   | 40 |
|   | <i>Results of inseminations</i>   |    |
| 37.                                     | Emiste poegimistulemused .....  | 40 |
|   | <i>Results of farrowing</i>   |    |
| 38.                                     | Emiste imetamisperioodi näitajad .....  | 40 |
|   | <i>Reproduction traits of sows</i>  |    |
| 39.                                     | Emiste kasutamise efektiivsus .....   | 41 |
|   | <i>Sow using effectiveness</i>  |    |
| 40.                                     | Aastaemiste jõudlusnäitajad aastatel 1998–2001.....   | 41 |
|   | <i>Results of sow per year performance 1998-2001</i>  |    |
| 41.                                     | Emiste reproduktsioonijõudluse näitajad tõugude viisi .....   | 42 |
|   | <i>Reproduction performance data of sows of different breeds</i>  |    |
| 42.                                     | Majanduslikud näitajad emiste kasutamisel.....  | 42 |
|   | <i>Economic values in using sows</i>  |    |
| 43.                                     | Põhikarja sigade arv maakondades.....   | 43 |
|   | <i>No of pigs by county</i>   |    |
| 44.                                     | Farmid elusalt sündinud põrsaste arvu järgi pesakonnas.....   | 44 |
|   | <i>Farms by alive born piglets per litter</i>   |    |
| 45.                                     | Farmid võõrutatud põrsaste arvu järgi pesakonnas aastaemise kohta.....                                    | 45 |
|   | <i>Farms by no of weaned piglets per sow per year</i>   |    |
| 46.                                     | Karja suurus ja emiste kasutamine .....   | 46 |
|   | <i>Herd size and sow using</i>  |    |
| 47.                                     | Tiinestuvus aastate lõikes .....  | 46 |
|   | <i>Conception rate of sows by year</i>  |    |
|   | BLUP-loomamudeli kasutamise tingimused sigade aretusväärtuse hindamisel .....                             | 46 |
|   | <i>Genetic Evaluation for Pigs. Facts on Estimation of Breeding Values in Estonia</i>                     |    |
| 48.                                     | Seemendusjaama kultide kasutamine .....   | 48 |
|   | <i>Using of IS boars</i>  |    |
| 49.                                     | Keskmised näitajad karjatestil (90 kg juures).....  | 48 |
|   | <i>Average results on farm test</i>   |    |
| 50.                                     | Keskmised näitajad karjatestil aretuskarjades .....   | 49 |
|   | <i>Average results on farm test in breeding farms</i>   |    |
| 51.                                     | Keskmised näitajad karjatestil tõuti.....   | 49 |
|   | <i>Average results of different breeds on farm test</i>   |    |
| 52.                                     | Peki paksuse geneetiline trend tõugude viisi .....  | 50 |
|   | <i>Genetic trend of backfat by breeds</i>   |    |
| 53.                                     | Lihassilma läbimõõdu geneetiline trend tõugude viisi.....   | 50 |
|   | <i>Genetic trend of muscle depth by breeds</i>  |    |
| 54.                                     | Viljakuse geneetiline trend tõugude viisi .....   | 50 |
|   | <i>Genetic trend of fertility by breeds</i>   |    |
| 55.                                     | Massi-iibe geneetiline trend tõugude viisi .....  | 51 |
|   | <i>Genetic trend of daily gain by breeds</i>  |    |
| 56.                                     | Hinnatud kultide ja emiste keskmised aretusväärtused .....  | 51 |
|   | <i>Estimated Breeding Values (EBV) of boars and sows</i>  |    |
| 57.                                     | Tartu seemendusjaama kultide järglaste keskmised aretusväärtused .....                                    | 51 |
|   | <i>Avg. Estimated Breeding Values (EBV) of Tartu AIS boars</i>  |    |



## Eessõna

Eestis on piimakarja kasvatamisel tulevikku. Kui meie piimasektor oleks kaitstud turgu reguleerivate võtetega nagu seda teeb Euroopa Liit oma liikmesriikides, siis tunneksime ennast täna ilmselt veelgi kindlamalt. Eestis toodetakse kvaliteetset piima ning enamik piima töötlevaid ettevõtteid on viinud oma tootmise vastavusse Euroopa Liidu nõuetega. Piimasektori arengu tagamiseks ei saa Eesti kindlasti leppida tänasest tootmismahust väiksemate EL-i kvootidega. Parimaid tulemusi võime aga saavutada vaid ühises koostöös – läbi aktiivse tegutsemise piimatootjate ühistutes.

2001. aastal tõusis jõudluskontrolli aluste 101636 aastalehma toodang rekordilisele tasemele - 5490 kg piima lehma kohta aastas. Selline suurepärase tulemus ei ole kindlasti veel lagi Eesti lehmade tootmispotentsiaalile. Selle väite tõestamiseks võib tuua Maasikamäe Piimakarja OÜ Lääne-Virumaalt, kus 2001. aasta toodang oli 10440 kg piima lehma kohta.

Eesti jõudluskontrolli süsteemi töökindlus ja vastava andmekogu täpsus ning usaldusväärsus võimaldab jõudluskontrolli andmeid kasutada nii rahvusvahelise pullide hindamise süsteemis INTERBULL, kui ka riiklike otsetoetuste taotlemise liasingimusena. Hea koostöö karjakasvatajate, aretusühistute ning Jõudluskontrolli Keskuse vahel on selgrooks tõuaretuseks vajalike andmete kogumisele ja nende alusel efektiivsete majanduslike otsuste langetamisele karjakasvataja poolt.

INTERBULL-is hinnatud pullide seas on holsteini tõugu Eestis asuv Hollandi päritolu pull Etazon Lambro stabiilselt maailma esikümnes.

Jõudluskontrolli tulemuste internetipõhiseks kasutamiseks loodud programmile VISSU on Jõudluskontrolli Keskuses (JKK) välja arendatud ka kiirem ja lihtsam programm VISSUKE. Alates 2002. a algusest on uue teenusena võimalus saada JKK-lt koheselt teade oma e-posti aadressile ning isegi sõnumina mobiiltelefonile viimase kontroll-lüpsi andmete töötlemise tulemuste valmimise kohta. Internetiteenuste arendamisega loomakasvatajatele oleme püüdnud info kiirema pakkumise kaudu kaasa aidata parimate majanduslike otsuste tegemisele farmis.

Seakasvatajad on hakanud aretuslaste otsuste langetamisel laialdaselt kasutama sigade geneetilise hindamise tulemusi. Klientidele on loodud võimalus teha erinevaid päringuid otse JKK andmebaasist. Ristandaretusprogrammi raames on jätkuvalt suurenenud kunstliku seemenduse kasutamine farmides ja järjest rohkem mõistetakse süstemaatilise testimise osatähtsust kui geneetilise hindamise alust. Kõik see omakorda tagab hinnatud aretusväärtustele suurema usaldusvääruse ja võimaldab hea tõumaterjali kiiret paljundamist.

JKK teostab ka lihaveiste ning kitsede jõudluskontrolli. Aastavahetusel oli jõudluskontrollis 68 lihaveisekarja ja 3 kitskarja. 2001. aastal alustasime hobuste märgistamist elektronkiipidega. Aasta lõpuks oli märgistatud 104 hobust.

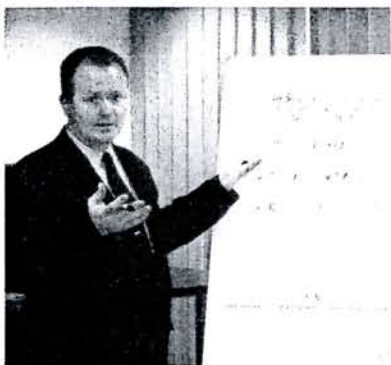
Õnnitlen parimaid loomaomanikke, kelle karjades 2001. aastal toodetud piimas oli Eesti madalaim somaatiliste rakkude arv:

1...10 aastalehmaga karjadest pr. Maie Klaar Võrumaalt

11...99 aastalehmaga karjadest pr. Reet Lilleorg Jõgevamaalt

100... aastalehmaga karjadest Abaja PÜ Järvamaalt

Soovin kõigile Eesti karjakasvatajatele edu ja üksmeelt ühises tegutsemises ning tänan meeldiva koostöö ja kõrgete tõuaretuslike tulemuste saavutamise eest.



**Toomas Murulo**  
Jõudluskontrolli Keskuse direktor

## **Foreword**

---

*In Estonia dairy herd breeding has good prospects for the future. If our dairy sector were protected by market regulations, as is the case in the member states of the European Union, we would even feel safer about the future. High quality milk is produced in Estonia, and most milk processing enterprises have brought their facilities into conformity with the European Union requirements. Therefore, if we are to maintain the dairy sector development, we can not accept the milk quota established by the EU, which are smaller than the present production capacities. The best results can only be achieved through co-operation and active participation in dairy producers' co-operatives.*

*In 2001, the production of 101,636 cows under animal recording reached the record level – 5,490 kg of milk per cow per annum. Nevertheless, such an excellent result is not yet the ceiling for the milk production capacities of Estonian dairy cows. This statement can be proved by the result achieved by the dairy herd of Maasikamäe Pii-makari OÜ in Lääne-Viru County where the total output of 2001 was 10,440 kg of milk per cow.*

*The reliability of Estonian animal recording system and the accuracy and authenticity of the related database provide an opportunity for using animal recording data both within the international bull evaluation system INTERBULL and as an additional eligibility criterion for national support applications. Good co-operation between dairy producers, breeders' associations and the Animal Recording Centre is the basis for gathering data on breeding. Cattle breeders can use these data for making sound economic decisions.*

*Etazon Lambro, a Holstein bull of Dutch origin, presently living in Estonia, continues holding its place among the top ten of INTERBULL bulls.*

*A faster and more easily used computer program VISSUKE has been developed by the Animal Recording Centre (ARC) as an addition to the on-line animal recording software VISSU. Since the beginning of 2002 the customers have had an opportunity to enjoy a new type of service: the ARC can send them immediately a notice about the results of the last control milking, and it can even be sent as a mobile phone message or e-mail. The provision of Internet services for cattle breeders is our contribution to the sound economic decision making process on the farm.*

*An increasing number of pig breeders are using the results of the genetic evaluation of pigs for making breeding decisions. The customers are given an opportunity to send their inquiries directly to the ARC database. The utilization of artificial insemination services has considerably increased within the framework of the crossbreeding programme, breeders are becoming increasingly aware of the importance of systematic testing as the basis for genetic evaluation. All this contributes to the reliability of breeding values and provides opportunities for fast multiplication of breeding material.*

*The ARC also provides animal recording services for beef cattle and goats. At the turn of the year, 68 beef herds and 3 goat herds were under animal recording. In 2001 we initiated the identification of horses with electronic chips. By the end of the year 104 horses were identified.*

*I would like to congratulate the best herd owners. Milk produced by their herds had the lowest somatic cell count in Estonia in 2001:*

*Herds with 1...10 dairy cows – Mrs. Maie Klaar from Võru County*

*Herds with 11...99 dairy cows – Mrs. Reet Lilleorg from Jõgeva County*

*Herds with more than 100 cows – Abaja PÜ (agricultural co-operative) from Järva County*

*I wish all the cattle breeders success and harmony in their further co-operation. I would also like to express my gratitude for the pleasant co-operation and excellent breeding results.*

**Toomas Murulo**  
**Director of the Estonian Animal Recording Centre**



**Jõudluskontrolli Keskus****Estonian Animal Recording Centre**

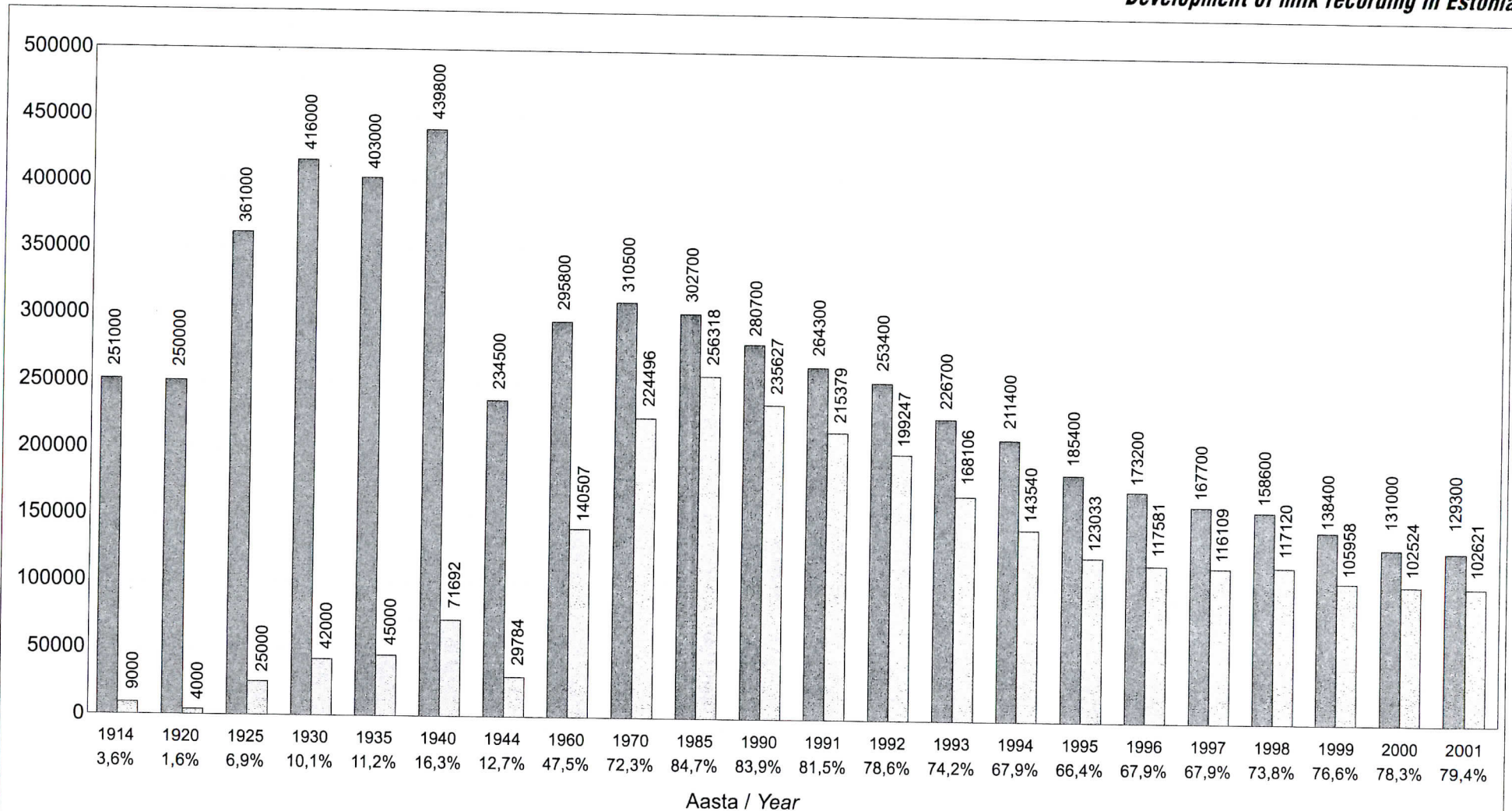
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# 1. Veiste jõudluskontrolli dünaamika Eestis

## Development of milk recording in Estonia



Lehmade koguarv\* Cows total
  Lehmade arv jõudluskontrollis Cows in milk recording

\*Eesti Statistikaamet Statistical Office of Estonia

**2. Aastalehmade arv tõugude viisi aastatel 1964-2001***Average no. of cows in milk recording by different breeds 1964-2001*

| Aasta<br>Year | Aastalehmi Avg. no. of cows |           |      |        |            |      |        |          | Kokku<br>Total |        |
|---------------|-----------------------------|-----------|------|--------|------------|------|--------|----------|----------------|--------|
|               | arv no                      | EPK<br>ER | %    | arv no | EHF<br>EHF | %    | arv no | EK<br>EN |                | %      |
| 1964          | 97524                       |           | 67.6 | 45804  |            | 31.8 | 873    |          | 0.6            | 144201 |
| 1965          | 116184                      |           | 69.2 | 50750  |            | 30.2 | 877    |          | 0.5            | 167811 |
| 1970          | 151100                      |           | 68.7 | 67628  |            | 30.8 | 1131   |          | 0.5            | 219867 |
| 1975          | 168053                      |           | 66.0 | 85452  |            | 33.5 | 1198   |          | 0.5            | 254703 |
| 1980          | 162153                      |           | 61.8 | 99308  |            | 37.8 | 984    |          | 0.4            | 262445 |
| 1985          | 146781                      |           | 56.4 | 112643 |            | 43.3 | 945    |          | 0.4            | 260369 |
| 1990          | 121125                      |           | 49.1 | 125235 |            | 50.7 | 566    |          | 0.2            | 246926 |
| 1991          | 107873                      |           | 47.0 | 121077 |            | 52.8 | 549    |          | 0.2            | 229499 |
| 1992          | 94610                       |           | 44.6 | 116722 |            | 55.1 | 577    |          | 0.3            | 211909 |
| 1993          | 74543                       |           | 41.2 | 106033 |            | 58.5 | 563    |          | 0.3            | 181139 |
| 1994          | 59691                       |           | 39.3 | 91676  |            | 60.3 | 564    |          | 0.4            | 151931 |
| 1995          | 49285                       |           | 38.0 | 79767  |            | 61.5 | 555    |          | 0.4            | 129607 |
| 1996          | 43537                       |           | 36.6 | 74968  |            | 63.0 | 570    |          | 0.5            | 119076 |
| 1997          | 40118                       |           | 34.9 | 74186  |            | 64.6 | 535    |          | 0.5            | 114838 |
| 1998          | 38705                       |           | 33.1 | 77717  |            | 66.5 | 504    |          | 0.4            | 116926 |
| 1999          | 33820                       |           | 30.8 | 75589  |            | 68.8 | 472    |          | 0.4            | 109881 |
| 2000          | 29875                       |           | 29.3 | 71799  |            | 70.3 | 443    |          | 0.4            | 102117 |
| 2001          | 27981                       |           | 27.5 | 73173  |            | 72.0 | 481    |          | 0.5            | 101636 |

**3. Karjade suurus ja arv aastatel 1990-2001***Size and number of herds in milk recording 1990-2001*

| Karja<br>suurus,<br>lehma<br><br>Herd size | 2001                   |      | 2000                   |      | 1998                   |      | 1996                   |      | 1994                   |      | 1992                   |      | 1990                   |      |
|--|------------------------|------|------------------------|------|------------------------|------|------------------------|------|------------------------|------|------------------------|------|------------------------|------|
|  | karjade                |      | karjade                |      | karjade                |      | karjade                |      | karjade                |      | karjade                |      | karjade                |      |
|  | arv<br>No. of<br>herds | %    | arv<br>No. of<br>herds | %    | arv<br>No. of<br>herds | %    | arv<br>No. of<br>herds | %    | arv<br>No. of<br>herds | %    | arv<br>No. of<br>herds | %    | arv<br>No. of<br>herds | %    |
| 1...2                                      | 609                    | 20.1 | 676                    | 21.1 | 310                    | 11.3 | 639                    | 24.4 | 1230                   | 35.5 |                        |      |                        |      |
| 3...4                                      | 512                    | 16.9 | 567                    | 17.7 | 322                    | 11.8 | 498                    | 19.0 | 735                    | 21.2 |                        |      |                        |      |
| 5...6                                      | 371                    | 12.3 | 408                    | 12.7 | 452                    | 16.5 | 303                    | 11.5 | 326                    | 9.4  |                        |      |                        |      |
| 7...8                                      | 263                    | 8.7  | 307                    | 9.6  | 312                    | 11.4 | 193                    | 7.4  | 219                    | 6.3  |                        |      |                        |      |
| 9...10                                     | 203                    | 6.7  | 215                    | 6.7  | 223                    | 8.2  | 158                    | 6.0  | 126                    | 3.6  |                        |      |                        |      |
| 11...50                                    | 716                    | 23.7 | 693                    | 21.6 | 684                    | 25.0 | 366                    | 13.9 | 261                    | 7.5  |                        |      |                        |      |
| 51...100                                   | 103                    | 3.4  | 99                     | 3.1  | 124                    | 4.5  | 119                    | 4.5  | 151                    | 4.4  |                        |      |                        |      |
| <100                                       | 2777                   | 91.9 | 2965                   | 92.3 | 2427                   | 88.8 | 2276                   | 86.7 | 3048                   | 87.9 | 46                     | 10.7 | 7                      | 2.1  |
| 101...300                                  | 173                    | 5.7  | 169                    | 5.3  | 217                    | 7.9  | 263                    | 10.1 | 294                    | 8.5  | 99                     | 23.1 | 24                     | 7.1  |
| 301...600                                  | 52                     | 1.7  | 57                     | 1.8  | 66                     | 2.4  | 64                     | 2.4  | 102                    | 2.9  | 158                    | 36.9 | 107                    | 31.5 |
| 601...900                                  | 15                     | 0.5  | 13                     | 0.4  | 15                     | 0.5  | 13                     | 0.5  | 16                     | 0.5  | 83                     | 19.3 | 114                    | 33.4 |
| 901...1200                                 | 2                      | 0.1  | 3                      | 0.1  | 4                      | 0.1  | 5                      | 0.2  | 5                      | 0.1  | 27                     | 6.3  | 54                     | 15.9 |
| 1201...                                    | 4                      | 0.1  | 4                      | 0.1  | 3                      | 0.1  | 3                      | 0.1  | 4                      | 0.1  | 16                     | 3.7  | 34                     | 10.0 |
| <b>Kokku<br/>Total</b>                     | 3023                   | 100  | 3211                   | 100  | 2732                   | 100  | 2624                   | 100  | 3469                   | 100  | 429                    | 100  | 340                    | 100  |



## 4. Toodang aastalehma kohta tõugude viisi

## Productivity of Estonian dairy breeds

| Aasta<br>Year | Eesti punane <i>Estonian Red</i> |                    |      |                        | Eesti holstein <i>Estonian Holstein</i> |                     |                    |      | Eesti maakari <i>Estonian Native</i> |      |                     |                    | Tõugude keskmine <i>Breeds average</i> |                        |      |      |     |      |     |      |
|---------------|----------------------------------|--------------------|------|------------------------|---|---------------------|--------------------|------|--------------------------------------|------|---------------------|--------------------|--|------------------------|------|------|-----|------|-----|------|
|               | piima<br>kg<br>milk              | rasva<br>kg<br>fat | %    | valku<br>kg<br>protein | %                                       | piima<br>kg<br>milk | rasva<br>kg<br>fat | %    | valku<br>kg<br>protein               | %    | piima<br>kg<br>milk | rasva<br>kg<br>fat | %                                      | valku<br>kg<br>protein | %    |      |     |      |     |      |
| 1964          | 2551                             | 93                 | 3.63 |                        |   | 2799                | 100                | 3.55 |                                      |      | 2588                | 104                | 4.01                                   |                        |      | 2630 | 95  | 3.61 |     |      |
| 1966          | 2969                             | 109                | 3.68 |                        |   | 3180                | 115                | 3.61 |                                      |      | 2832                | 119                | 4.18                                   |                        |      | 3030 | 111 | 3.66 |     |      |
| 1968          | 3165                             | 117                | 3.71 |                        |   | 3414                | 124                | 3.62 |                                      |      | 3030                | 130                | 4.30                                   |                        |      | 3242 | 119 | 3.68 |     |      |
| 1970          | 3167                             | 118                | 3.72 |                        |   | 3457                | 126                | 3.65 |                                      |      | 3003                | 129                | 4.28                                   |                        |      | 3256 | 120 | 3.69 |     |      |
| 1972          | 3201                             | 121                | 3.79 |                        |   | 3510                | 130                | 3.71 |                                      |      | 2898                | 126                | 4.33                                   |                        |      | 3297 | 124 | 3.76 |     |      |
| 1974          | 3416                             | 131                | 3.82 |                        |   | 3708                | 139                | 3.75 |                                      |      | 3147                | 137                | 4.36                                   |                        |      | 3512 | 133 | 3.80 |     |      |
| 1976          | 3547                             | 137                | 3.87 |                        |   | 3804                | 143                | 3.76 |                                      |      | 3405                | 149                | 4.39                                   |                        |      | 3635 | 139 | 3.83 |     |      |
| 1978          | 3456                             | 136                | 3.92 |                        |   | 3674                | 141                | 3.84 |                                      |      | 3314                | 146                | 4.40                                   |                        |      | 3534 | 138 | 3.89 |     |      |
| 1980          | 3526                             | 139                | 3.94 |                        |   | 3791                | 145                | 3.81 |                                      |      | 3394                | 145                | 4.27                                   |                        |      | 3626 | 141 | 3.89 |     |      |
| 1982          | 3357                             | 132                | 3.94 |                        |   | 3613                | 138                | 3.82 |                                      |      | 3308                | 143                | 4.32                                   |                        |      | 3457 | 135 | 3.89 |     |      |
| 1984          | 3779                             | 154                | 4.08 |                        |   | 4208                | 166                | 3.93 |                                      |      | 3436                | 153                | 4.46                                   |                        |      | 3958 | 159 | 4.01 |     |      |
| 1986          | 3850                             | 157                | 4.10 |                        |   | 4425                | 173                | 3.93 |                                      |      | 3475                | 154                | 4.46                                   |                        |      | 4104 | 164 | 4.02 |     |      |
| 1988          | 3877                             | 160                | 4.12 |                        |   | 4537                | 179                | 3.94 |                                      |      | 3633                | 162                | 4.45                                   |                        |      | 4188 | 169 | 4.03 |     |      |
| 1989          | 3919                             | 159                | 4.07 | 136                    | 3.39                                    | 4652                | 181                | 3.91 | 159                                  | 3.24 | 3512                | 153                | 4.38                                   | 120                    | 3.40 | 4276 | 170 | 3.98 | 148 | 3.31 |
| 1990          | 3869                             | 161                | 4.17 | 133                    | 3.30                                    | 4586                | 184                | 4.01 | 153                                  | 3.15 | 3430                | 152                | 4.43                                   | 107                    | 3.32 | 4232 | 173 | 4.09 | 143 | 3.22 |
| 1991          | 3626                             | 151                | 4.17 | 125                    | 3.30                                    | 4317                | 171                | 3.97 | 144                                  | 3.17 | 3432                | 149                | 4.36                                   | 114                    | 3.37 | 3989 | 161 | 4.06 | 135 | 3.25 |
| 1992          | 3159                             | 129                | 4.07 | 105                    | 3.20                                    | 3860                | 151                | 3.91 | 125                                  | 3.10 | 3065                | 132                | 4.30                                   | 102                    | 3.30 | 3545 | 141 | 3.98 | 116 | 3.14 |
| 1993          | 3064                             | 125                | 4.11 | 97                     | 3.17                                    | 3677                | 144                | 3.94 | 114                                  | 3.07 | 3035                | 131                | 4.35                                   | 99                     | 3.26 | 3428 | 137 | 4.00 | 107 | 3.11 |
| 1994          | 3153                             | 129                | 4.12 | 101                    | 3.21                                    | 3780                | 149                | 3.95 | 118                                  | 3.11 | 2937                | 129                | 4.41                                   | 97                     | 3.30 | 3530 | 141 | 4.01 | 111 | 3.15 |
| 1995          | 3272                             | 136                | 4.17 | 106                    | 3.23                                    | 3915                | 157                | 4.03 | 123                                  | 3.14 | 2897                | 130                | 4.51                                   | 98                     | 3.37 | 3666 | 149 | 4.08 | 116 | 3.17 |
| 1996          | 3474                             | 148                | 4.28 | 113                    | 3.27                                    | 4175                | 174                | 4.17 | 132                                  | 3.16 | 3073                | 144                | 4.71                                   | 104                    | 3.38 | 3913 | 164 | 4.21 | 125 | 3.20 |
| 1997          | 3904                             | 167                | 4.30 | 126                    | 3.22                                    | 4665                | 194                | 4.16 | 145                                  | 3.11 | 3530                | 162                | 4.61                                   | 117                    | 3.31 | 4394 | 184 | 4.21 | 138 | 3.15 |
| 1998          | 4242                             | 186                | 4.37 | 138                    | 3.26                                    | 5032                | 212                | 4.21 | 158                                  | 3.14 | 3918                | 186                | 4.76                                   | 133                    | 3.39 | 4766 | 203 | 4.26 | 151 | 3.18 |
| 1999          | 4091                             | 177                | 4.32 | 132                    | 3.22                                    | 4730                | 198                | 4.19 | 148                                  | 3.12 | 3836                | 180                | 4.70                                   | 128                    | 3.34 | 4530 | 191 | 4.23 | 143 | 3.15 |
| 2000          | 4441                             | 195                | 4.39 | 149                    | 3.36                                    | 5182                | 220                | 4.20 | 168                                  | 3.25 | 3936                | 188                | 4.78                                   | 137                    | 3.49 | 4960 | 213 | 4.29 | 163 | 3.28 |
| 2001          | 4939                             | 218                | 4.41 | 167                    | 3.39                                    | 5712                | 244                | 4.28 | 187                                  | 3.28 | 3946                | 188                | 4.77                                   | 138                    | 3.5  | 5490 | 237 | 4.31 | 182 | 3.31 |



## 5. Toodang aastalehma kohta maakondades

## Annual average productivity of Estonian dairy herds in counties

| Jrk. nr | Maakond<br>County | Karjade arv<br>Herds | Aastalehmi<br>Cows | Piima kg<br>Milk | % Rasva<br>Fat | kg  | % Valku<br>Protein | kg  | R+V, kg<br>F+P |
|---------|-------------------|----------------------|--------------------|------------------|----------------|-----|--------------------|-----|----------------|
| 1.      | Põlva             | 112                  | 5655               | 6191             | 4.38           | 271 | 3.35               | 207 | 479            |
| 2.      | Järva             | 215                  | 17067              | 6186             | 4.25           | 263 | 3.30               | 204 | 467            |
| 3.      | Tartu             | 146                  | 5962               | 5881             | 4.28           | 252 | 3.34               | 197 | 448            |
| 4.      | Rapla             | 257                  | 7320               | 5676             | 4.27           | 242 | 3.27               | 186 | 428            |
| 5.      | Jõgeva            | 258                  | 10501              | 5675             | 4.39           | 249 | 3.40               | 193 | 442            |
| 6.      | Lääne-Viru        | 196                  | 11822              | 5674             | 4.21           | 239 | 3.27               | 185 | 425            |
| 7.      | Võru              | 201                  | 3285               | 5285             | 4.33           | 229 | 3.26               | 172 | 401            |
| 8.      | Viljandi          | 256                  | 6863               | 5139             | 4.31           | 222 | 3.33               | 171 | 393            |
| 9.      | Pärnu             | 456                  | 11543              | 5041             | 4.41           | 222 | 3.28               | 165 | 387            |
| 10.     | Harju             | 179                  | 7167               | 4995             | 4.38           | 219 | 3.26               | 163 | 382            |
| 11.     | Hiiu              | 69                   | 845                | 4893             | 4.29           | 210 | 3.30               | 162 | 372            |
| 12.     | Ida-Viru          | 101                  | 2226               | 4893             | 4.29           | 210 | 3.31               | 162 | 372            |
| 13.     | Saare             | 318                  | 5489               | 4700             | 4.36           | 205 | 3.39               | 159 | 364            |
| 14.     | Valga             | 104                  | 2857               | 4621             | 4.30           | 199 | 3.29               | 152 | 351            |
| 15.     | Lääne             | 155                  | 3034               | 4456             | 4.36           | 194 | 3.26               | 145 | 340            |
|         | Eesti Average     | 3023                 | 101636             | 5490             | 4.31           | 237 | 3.31               | 182 | 419            |

## 6. 305 päeva laktatsiooni toodang tõugude viisi

## 305-d. lactation productivity by breeds

| Tõug<br>Breed               | Laktatsioon<br>Lact. | Lehmi<br>Cows | Piima kg<br>Milk | % Rasva<br>Fat | kg  | % Valku<br>Protein | kg  | R+V, kg<br>F+P |
|-----------------------------|----------------------|---------------|------------------|----------------|-----|--------------------|-----|----------------|
| EPK<br>ER                   | 1.                   | 5568          | 4341             | 4.34           | 188 | 3.33               | 144 | 333            |
|                             | 2.                   | 5074          | 4722             | 4.41           | 208 | 3.39               | 160 | 368            |
|                             | 3...                 | 14039         | 4983             | 4.35           | 217 | 3.34               | 166 | 383            |
|                             | Kokku                | 24681         | 4785             | 4.36           | 209 | 3.34               | 160 | 369            |
| EHF<br>EHF                  | 1.                   | 15480         | 5003             | 4.18           | 209 | 3.22               | 161 | 370            |
|                             | 2.                   | 13626         | 5555             | 4.30           | 239 | 3.28               | 182 | 421            |
|                             | 3...                 | 33184         | 5742             | 4.23           | 243 | 3.22               | 185 | 428            |
|                             | Kokku                | 62290         | 5517             | 4.23           | 234 | 3.23               | 178 | 412            |
| EK<br>EN                    | 1.                   | 72            | 3618             | 4.64           | 168 | 3.39               | 123 | 291            |
|                             | 2.                   | 73            | 3854             | 4.78           | 184 | 3.45               | 133 | 317            |
|                             | 3...                 | 236           | 4056             | 4.70           | 191 | 3.46               | 140 | 331            |
|                             | Kokku                | 381           | 3935             | 4.70           | 185 | 3.45               | 136 | 321            |
| Tõud<br>kokku<br>All breeds | 1.                   | 21120         | 4823             | 4.22           | 204 | 3.24               | 156 | 360            |
|                             | 2.                   | 18773         | 5323             | 4.33           | 231 | 3.30               | 176 | 406            |
|                             | 3...                 | 47459         | 5509             | 4.26           | 235 | 3.25               | 179 | 414            |
|                             | Kokku                | 87352         | 5304             | 4.27           | 226 | 3.26               | 173 | 399            |

## 7. 305 päeva laktatsiooni keskmine toodang laktatsiooni algusaasta järgi

Avg. 305-d. lactation productivity by beginning years of lactation

| Tõug/aasta<br><i>Breed/year</i> | 1.laktatsioon <i>1st lact.</i>   |                         |                        |                            | 2.laktatsioon <i>2nd lact.</i>   |                         |                        |                            | 3.laktatsioon <i>3rd lact.</i>   |                         |                        |                            |
|---------------------------------|----------------------------------|-------------------------|------------------------|----------------------------|----------------------------------|-------------------------|------------------------|----------------------------|----------------------------------|-------------------------|------------------------|----------------------------|
|                                 | lakt. arv<br><i>no. of lact.</i> | piima<br><i>kg milk</i> | rasva<br><i>kg fat</i> | valku<br><i>kg protein</i> | lakt. arv<br><i>no. of lact.</i> | piima<br><i>kg milk</i> | rasva<br><i>kg fat</i> | valku<br><i>kg protein</i> | lakt. arv<br><i>no. of lact.</i> | piima<br><i>kg milk</i> | rasva<br><i>kg fat</i> | valku<br><i>kg protein</i> |

Eesti punane *ER*

|      |       |      |     |     |       |      |     |     |       |      |     |     |
|------|-------|------|-----|-----|-------|------|-----|-----|-------|------|-----|-----|
| 1990 | 28333 | 3397 | 142 | 115 | 19306 | 3771 | 158 | 129 | 14541 | 3950 | 166 | 134 |
| 1991 | 22243 | 3131 | 129 | 105 | 19243 | 3565 | 148 | 121 | 11951 | 3761 | 155 | 126 |
| 1992 | 16818 | 2853 | 114 | 92  | 14485 | 3205 | 132 | 105 | 11319 | 3406 | 139 | 111 |
| 1993 | 12525 | 2903 | 118 | 91  | 10882 | 3213 | 133 | 103 | 9118  | 3379 | 140 | 108 |
| 1994 | 8823  | 2976 | 120 | 94  | 9365  | 3271 | 135 | 106 | 7782  | 3475 | 143 | 112 |
| 1995 | 7402  | 3048 | 126 | 96  | 6870  | 3299 | 138 | 107 | 6966  | 3523 | 148 | 113 |
| 1996 | 7083  | 3326 | 141 | 106 | 6158  | 3628 | 154 | 118 | 5481  | 3804 | 163 | 123 |
| 1997 | 7227  | 3680 | 159 | 117 | 5723  | 4024 | 174 | 130 | 4886  | 4242 | 183 | 136 |
| 1998 | 7590  | 3685 | 161 | 117 | 6019  | 4120 | 181 | 134 | 4819  | 4406 | 192 | 142 |
| 1999 | 6260  | 3642 | 158 | 118 | 5731  | 4088 | 178 | 134 | 4295  | 4285 | 186 | 139 |
| 2000 | 5880  | 4165 | 182 | 138 | 5329  | 4559 | 201 | 154 | 4565  | 4869 | 215 | 163 |
| 2001 | 2155  | 4371 | 192 | 147 | 2113  | 4854 | 216 | 165 | 1943  | 5054 | 224 | 171 |

Eesti holstein *EH*

|      |       |      |     |     |       |      |     |     |       |      |     |     |
|------|-------|------|-----|-----|-------|------|-----|-----|-------|------|-----|-----|
| 1990 | 32400 | 3939 | 156 | 130 | 23223 | 4466 | 179 | 149 | 18004 | 4749 | 191 | 158 |
| 1991 | 27707 | 3750 | 146 | 122 | 23741 | 4179 | 165 | 138 | 16448 | 4510 | 178 | 147 |
| 1992 | 23274 | 3420 | 131 | 109 | 20085 | 3814 | 149 | 124 | 16565 | 3994 | 157 | 128 |
| 1993 | 17931 | 3495 | 135 | 106 | 16800 | 3842 | 152 | 120 | 13867 | 4019 | 159 | 125 |
| 1994 | 14484 | 3607 | 140 | 111 | 13614 | 3910 | 155 | 123 | 12343 | 4139 | 163 | 129 |
| 1995 | 13265 | 3675 | 147 | 113 | 11329 | 4077 | 166 | 127 | 10276 | 4182 | 171 | 130 |
| 1996 | 13916 | 4056 | 169 | 125 | 10815 | 4495 | 186 | 141 | 9269  | 4693 | 195 | 146 |
| 1997 | 16495 | 4439 | 184 | 136 | 11655 | 4927 | 207 | 154 | 9045  | 5176 | 214 | 159 |
| 1998 | 18524 | 4437 | 186 | 136 | 14441 | 5011 | 210 | 156 | 10065 | 5235 | 220 | 162 |
| 1999 | 16852 | 4259 | 179 | 133 | 14263 | 4826 | 202 | 152 | 10637 | 5113 | 214 | 160 |
| 2000 | 15730 | 4857 | 204 | 156 | 14231 | 5414 | 232 | 177 | 11587 | 5697 | 242 | 184 |
| 2001 | 5953  | 5128 | 217 | 166 | 5326  | 5626 | 244 | 185 | 4814  | 5871 | 255 | 192 |

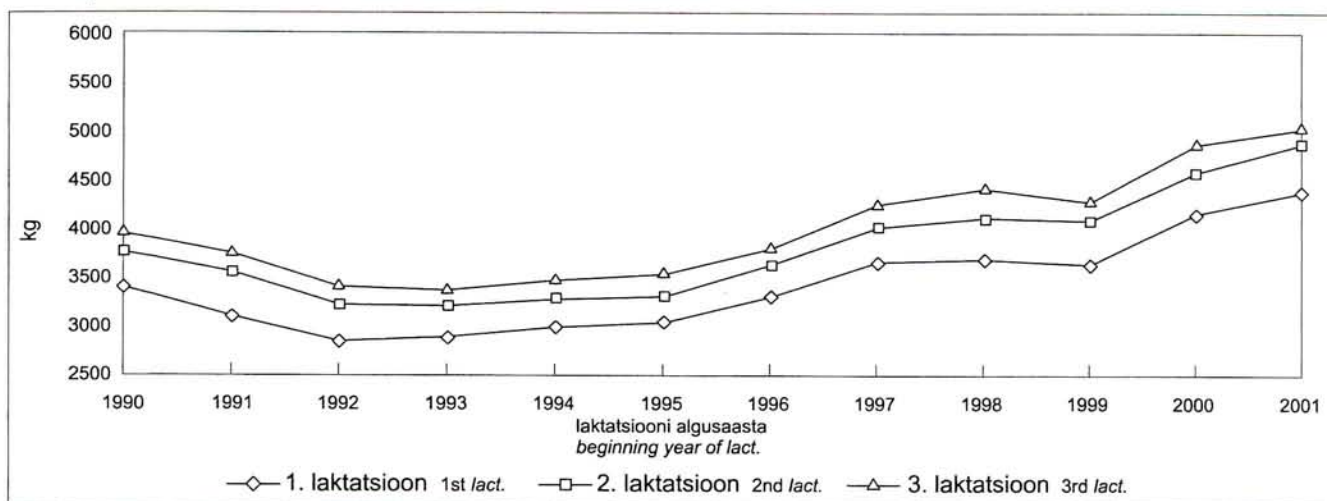
Eesti maakari *EN*

|      |     |      |     |     |     |      |     |     |     |      |     |     |
|------|-----|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|
| 1990 | 137 | 3292 | 141 | 106 | 91  | 3444 | 153 | 111 | 61  | 3675 | 164 | 117 |
| 1991 | 148 | 3127 | 132 | 104 | 95  | 3475 | 152 | 116 | 51  | 3457 | 148 | 115 |
| 1992 | 137 | 2612 | 114 | 84  | 119 | 3188 | 134 | 105 | 76  | 3176 | 135 | 101 |
| 1993 | 129 | 2636 | 114 | 84  | 127 | 2987 | 139 | 100 | 92  | 3414 | 143 | 109 |
| 1994 | 100 | 2581 | 116 | 85  | 97  | 2993 | 135 | 101 | 103 | 3253 | 146 | 109 |
| 1995 | 106 | 2903 | 135 | 95  | 95  | 2796 | 132 | 95  | 84  | 3179 | 148 | 108 |
| 1996 | 80  | 3159 | 145 | 103 | 72  | 3409 | 164 | 115 | 70  | 3162 | 152 | 108 |
| 1997 | 113 | 3489 | 157 | 111 | 98  | 3962 | 186 | 132 | 62  | 3809 | 183 | 128 |
| 1998 | 82  | 3467 | 163 | 113 | 81  | 3674 | 174 | 122 | 77  | 4243 | 203 | 143 |
| 1999 | 93  | 3250 | 147 | 105 | 77  | 3695 | 171 | 122 | 76  | 3862 | 177 | 127 |
| 2000 | 84  | 3615 | 170 | 122 | 87  | 3655 | 173 | 126 | 69  | 4044 | 189 | 139 |
| 2001 | 60  | 3340 | 161 | 116 | 34  | 4122 | 197 | 144 | 40  | 3896 | 195 | 137 |

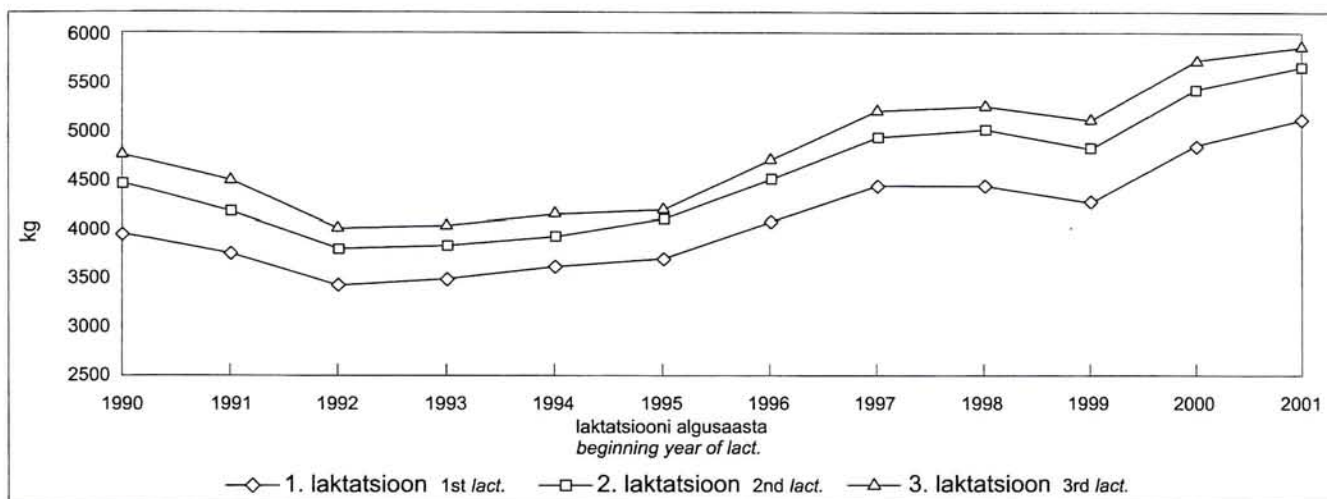
## 8. 305 päeva laktatsiooni piimatoodang laktatsiooni algusaasta järgi

*Avg. 305-d. lactation productivity by beginning year of lactation*

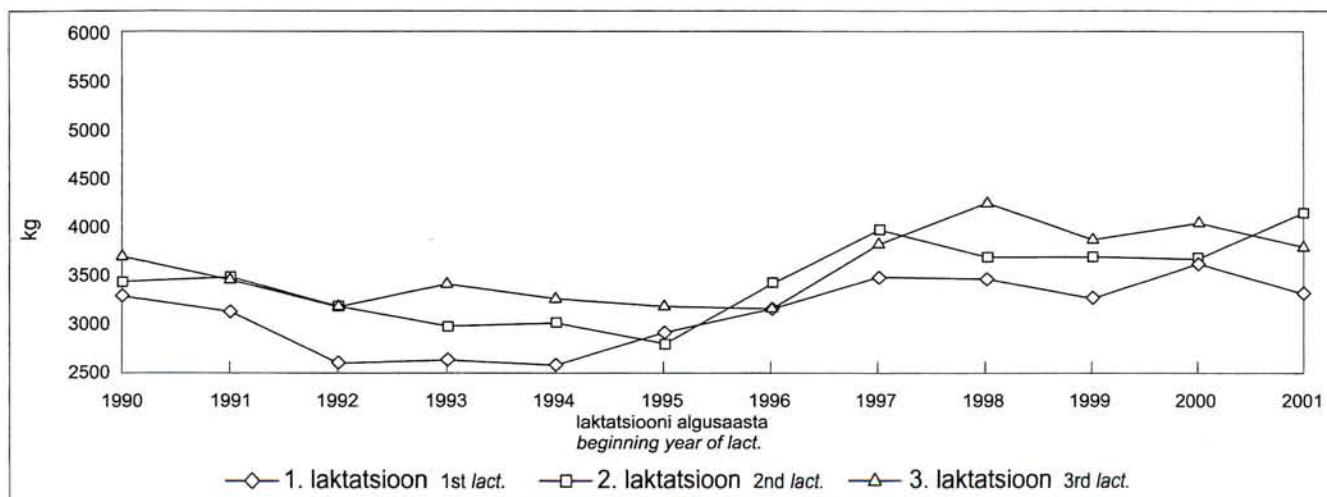
## Eesti punane ER



## Eesti holstein EH



## Eesti maakari EN





## 9. Karjade jagunemine piimatoodangu järgi aastalehma kohta

### Distribution of herds by annual average productivity per cow

| Aastalehmi   | Cows         |       | ...2000 | 2001-3000 | 3001-4000 | 4001-5000 | 5001-6000 | 6001-7000 | 7001-8000 | 8001-9000 | 9001-... |
|--------------|--------------|-------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| 1...7        | karjade arv  | herds | 21      | 53        | 208       | 509       | 476       | 243       | 87        | 22        | 8        |
|              | SRA          | SCC   | 346     | 700       | 590       | 473       | 404       | 395       | 426       | 573       | 265      |
| 8...20       | karjade arv  | herds | 1       | 6         | 48        | 261       | 289       | 143       | 39        | 9         |          |
|              | SRA          | SCC   | 888     | 420       | 587       | 441       | 395       | 355       | 338       | 351       |          |
| 21...50      | karjade arv  | herds |         | 1         | 30        | 76        | 93        | 47        | 16        | 7         | 1        |
|              | SRA          | SCC   |         | 464       | 501       | 437       | 437       | 430       | 466       | 399       | 292      |
| 51...100     | karjade arv  | herds |         | 3         | 9         | 36        | 23        | 9         | 7         |           | 2        |
|              | SRA          | SCC   |         | 516       | 381       | 385       | 374       | 459       | 408       |           | 474      |
| 101...       | karjade arv  | herds |         | 4         | 26        | 72        | 80        | 40        | 13        | 4         | 1        |
|              | SRA          | SCC   |         | 409       | 462       | 437       | 379       | 393       | 409       | 456       | 478      |
| <b>Kokku</b> | karjade arv  | herds | 22      | 67        | 321       | 954       | 961       | 482       | 162       | 42        | 12       |
|              | <i>Total</i> | SCC   | 373     | 646       | 565       | 455       | 402       | 388       | 407       | 485       | 320      |

SRA / SCC - Somaatiliste rakkude arv 1 ml piimas tuh. / Somatic Cell Count, th./ml

## 10. Lehmade jagunemine 305 päeva laktatsiooni piimatoodangu järgi

### Distribution of cows by 305-d. lactation milk productivity

| Tõug         | Breed        |      | ...2000 | 2001-3000 | 3001-4000 | 4001-5000 | 5001-6000 | 6001-7000 | 7001-8000 | 8001-9000 | 9001-10000 | 10000-... |
|--------------|--------------|------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|
| <b>EPK</b>   | lehma        | cows | 64      | 1233      | 5317      | 8381      | 6035      | 2506      | 816       | 210       | 93         | 27        |
|              | ER           | %    | 0.3     | 5.0       | 21.5      | 34.0      | 24.5      | 10.2      | 3.3       | 0.9       | 0.4        | 0.1       |
| <b>EHF</b>   | lehma        | cows | 75      | 1605      | 7221      | 15398     | 17171     | 11270     | 5725      | 2518      | 920        | 388       |
|              | EHF          | %    | 0.1     | 2.6       | 11.6      | 24.7      | 27.6      | 18.1      | 9.2       | 4.0       | 1.5        | 0.6       |
| <b>EK</b>    | lehma        | cows | 5       | 72        | 134       | 115       | 40        | 12        | 3         |           |            |           |
|              | EN           | %    | 1.3     | 18.9      | 35.2      | 30.2      | 10.5      | 3.1       | 0.8       |           |            |           |
| <b>Kokku</b> | lehma        | cows | 144     | 2910      | 12672     | 23894     | 23246     | 13788     | 6544      | 2728      | 1013       | 415       |
|              | <i>Total</i> | %    | 0.2     | 3.3       | 14.5      | 27.4      | 26.6      | 15.8      | 7.5       | 3.1       | 1.2        | 0.5       |

## 11. Lehmade jagunemine 305 päeva laktatsiooni piimavalgu toodangu järgi

*Distribution of cows by 305-d. lactation protein productivity*

| Tõug Breed     |       |      | ...100 | 101-150 | 151-200 | 201-250 | 251-300 | 301-... |
|----------------|-------|------|--------|---------|---------|---------|---------|---------|
| EPK<br>ER      | lehma | cows | 1385   | 9269    | 10210   | 3139    | 549     | 130     |
|                |       | %    | 5.6    | 37.6    | 41.4    | 12.7    | 2.2     | 0.5     |
| EHF<br>EHF     | lehma | cows | 2298   | 16358   | 25106   | 13127   | 4304    | 1099    |
|                |       | %    | 3.7    | 26.3    | 40.3    | 21.1    | 6.9     | 1.8     |
| EK<br>EN       | lehma | cows | 71     | 184     | 105     | 18      | 3       |         |
|                |       | %    | 18.6   | 48.3    | 27.6    | 4.7     | 0.8     |         |
| Kokku<br>Total | lehma | cows | 3754   | 25811   | 35421   | 16284   | 4856    | 1229    |
|                |       | %    | 4.3    | 29.5    | 40.5    | 18.6    | 5.6     | 1.4     |

## 12. 305 päeva laktatsiooni toodang sõltuvalt poegimiskuust

*305-d. lactation productivity by month of calving*

| Poegimise<br>Calving |              | 1.laktatsioon 1st lactation |      |               |              |      |                  |      | 2.laktatsioon 2nd lactation |      |               |              |      |                  |      | 3. ja vanemad lakt. 3rd & older lact. |      |               |              |      |                  |      |
|----------------------|--------------|-----------------------------|------|---------------|--------------|------|------------------|------|-----------------------------|------|---------------|--------------|------|------------------|------|---------------------------------------|------|---------------|--------------|------|------------------|------|
|                      |              | lehmade<br>cows             |      | piima<br>milk | rasva<br>fat |      | valku<br>protein |      | lehmade<br>cows             |      | piima<br>milk | rasva<br>fat |      | valku<br>protein |      | lehmade<br>cows                       |      | piima<br>milk | rasva<br>fat |      | valku<br>protein |      |
| aasta<br>year        | kuu<br>month | arv<br>no.                  | %    | kg            | kg           | %    | kg               | %    | arv<br>no.                  | %    | kg            | kg           | %    | kg               | %    | arv<br>no.                            | %    | kg            | kg           | %    | kg               | %    |
| 2000                 | märts        | 2060                        | 10.0 | 4405          | 189          | 4.29 | 143              | 3.25 | 2307                        | 12.5 | 5019          | 216          | 4.30 | 165              | 3.29 | 6853                                  | 14.8 | 5189          | 222          | 4.28 | 169              | 3.26 |
|                      | aprill       | 1959                        | 9.5  | 4371          | 187          | 4.28 | 142              | 3.25 | 2017                        | 11.0 | 4968          | 215          | 4.33 | 165              | 3.32 | 5815                                  | 12.5 | 5125          | 219          | 4.27 | 168              | 3.28 |
|                      | mai          | 1593                        | 7.7  | 4372          | 187          | 4.28 | 143              | 3.27 | 1655                        | 9.0  | 5031          | 217          | 4.31 | 167              | 3.32 | 5272                                  | 11.4 | 5243          | 223          | 4.25 | 172              | 3.28 |
|                      | juuni        | 1347                        | 6.5  | 4356          | 184          | 4.22 | 141              | 3.24 | 1519                        | 8.3  | 5088          | 221          | 4.34 | 168              | 3.30 | 4291                                  | 9.3  | 5311          | 225          | 4.24 | 172              | 3.24 |
|                      | juuli        | 1281                        | 6.2  | 4547          | 193          | 4.24 | 148              | 3.25 | 1113                        | 6.1  | 5214          | 225          | 4.32 | 173              | 3.32 | 3065                                  | 6.6  | 5362          | 227          | 4.23 | 175              | 3.26 |
|                      | august       | 1590                        | 7.7  | 4865          | 204          | 4.19 | 158              | 3.25 | 1095                        | 6.0  | 5386          | 232          | 4.31 | 179              | 3.32 | 2296                                  | 5.0  | 5615          | 238          | 4.24 | 183              | 3.26 |
|                      | september    | 1776                        | 8.6  | 5057          | 211          | 4.17 | 164              | 3.24 | 1292                        | 7.0  | 5494          | 238          | 4.33 | 182              | 3.31 | 2353                                  | 5.1  | 5841          | 247          | 4.23 | 188              | 3.22 |
|                      | oktoober     | 1818                        | 8.8  | 5127          | 213          | 4.15 | 165              | 3.22 | 1316                        | 7.2  | 5529          | 238          | 4.30 | 181              | 3.27 | 2618                                  | 5.6  | 5852          | 249          | 4.25 | 188              | 3.21 |
|                      | november     | 1811                        | 8.8  | 5172          | 217          | 4.20 | 166              | 3.21 | 1415                        | 7.7  | 5636          | 243          | 4.31 | 185              | 3.28 | 2987                                  | 6.4  | 5925          | 250          | 4.22 | 191              | 3.22 |
|                      | detsember    | 1761                        | 8.5  | 5271          | 219          | 4.15 | 170              | 3.23 | 1441                        | 7.8  | 5648          | 245          | 4.34 | 186              | 3.29 | 3084                                  | 6.7  | 5907          | 251          | 4.25 | 191              | 3.23 |
| 2001                 | jaanuar      | 2208                        | 10.7 | 5204          | 219          | 4.21 | 170              | 3.27 | 1683                        | 9.1  | 5673          | 247          | 4.35 | 188              | 3.31 | 3661                                  | 7.9  | 5900          | 253          | 4.29 | 192              | 3.25 |
|                      | veebruar     | 1442                        | 7.0  | 4966          | 211          | 4.25 | 162              | 3.26 | 1541                        | 8.4  | 5529          | 241          | 4.36 | 183              | 3.31 | 4057                                  | 8.8  | 5786          | 249          | 4.30 | 189              | 3.27 |



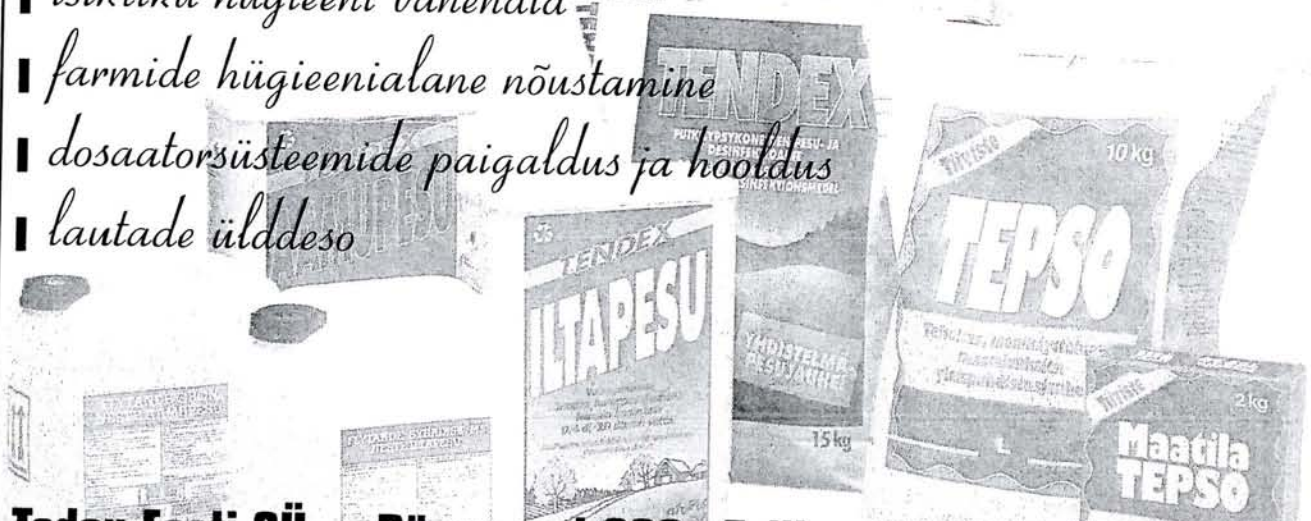
## 13. Karja suurus ja toodangu näitajad

Milk recording results by herd size

| Karja suurus<br>31.12<br><i>Herd size</i> | Karjade arv<br><i>Herds</i> |              | Aastalehmi<br><i>Cows</i> |              | Keskmine<br>karja suurus,<br>aastalehma<br><i>Average herd size</i> | Piima<br>aastalehma kohta<br><i>Milk per cow<br/>kg</i> | Piima kogutoodang<br><i>Total milk production</i> |              | Sündis vasikaid<br><i>Calves born</i> |              |
|---|-----------------------------|--------------|---------------------------|--------------|---|---|---|--------------|---------------------------------------|--------------|
|   | Arv no                      | %            | Arv no                    | %            |   |   | T   | %            | Arv no                                | %            |
| 1.....10                                  | 1958                        | 64.8         | 8837                      | 8.7          | 4.5   | 5217  | 46102   | 8.3          | 7829                                  | 8.0          |
| 11...50                                   | 716                         | 23.7         | 13925                     | 13.7         | 19.4  | 5381  | 74930   | 13.4         | 12982                                 | 13.2         |
| 51...100                                  | 103                         | 3.4          | 7072                      | 7.0          | 68.7  | 4965  | 35110   | 6.3          | 6712                                  | 6.8          |
| 101...300                                 | 173                         | 5.7          | 30628                     | 30.1         | 177.0   | 5083  | 155682  | 27.9         | 29391                                 | 30.0         |
| 301...600                                 | 52                          | 1.7          | 21426                     | 21.1         | 412.0   | 5550  | 118917  | 21.3         | 21448                                 | 21.9         |
| 601...900                                 | 15                          | 0.5          | 10553                     | 10.4         | 703.6   | 6033  | 63674   | 11.4         | 10940                                 | 11.2         |
| 901...1200                                | 2                           | 0.1          | 2144                      | 2.1          | 1071.8  | 6907  | 14805   | 2.7          | 1867                                  | 1.9          |
| 1201...                                   | 4                           | 0.1          | 7050                      | 6.9          | 1762.6  | 6923  | 48810   | 8.7          | 6946                                  | 7.1          |
| <b>Kokku Total</b>                        | <b>3023</b>                 | <b>100.0</b> | <b>101636</b>             | <b>100.0</b> | <b>33.6</b>   | <b>5490</b>   | <b>558030</b>                                     | <b>100.0</b> | <b>98115</b>                          | <b>100.0</b> |

## PROFESSIONAALSED PESU- JA DESOAINED TEDEX EESTI OÜ-ST!

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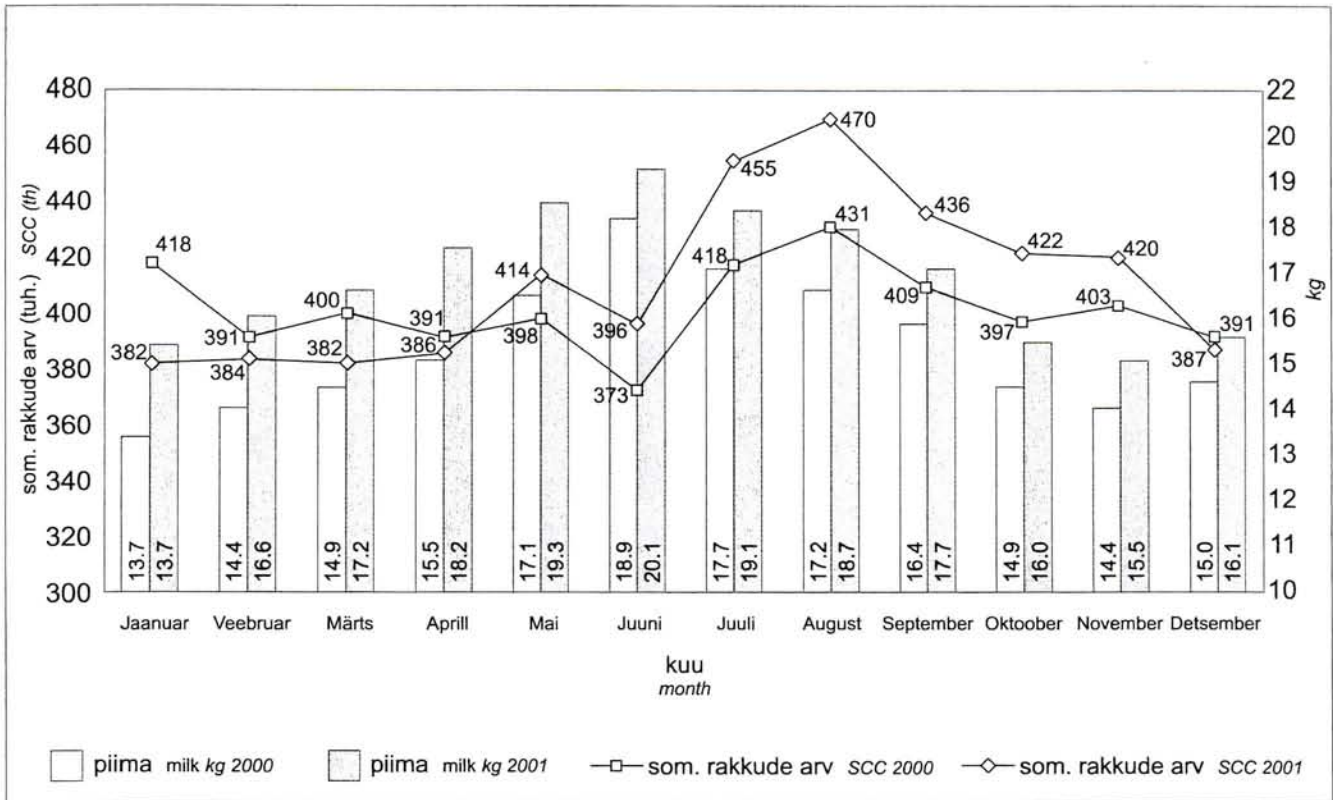


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 056 462 431 Marje Priimägi (farmitarbed) 056 562 531 Stanislav Mihkels (toiduainetööstus)



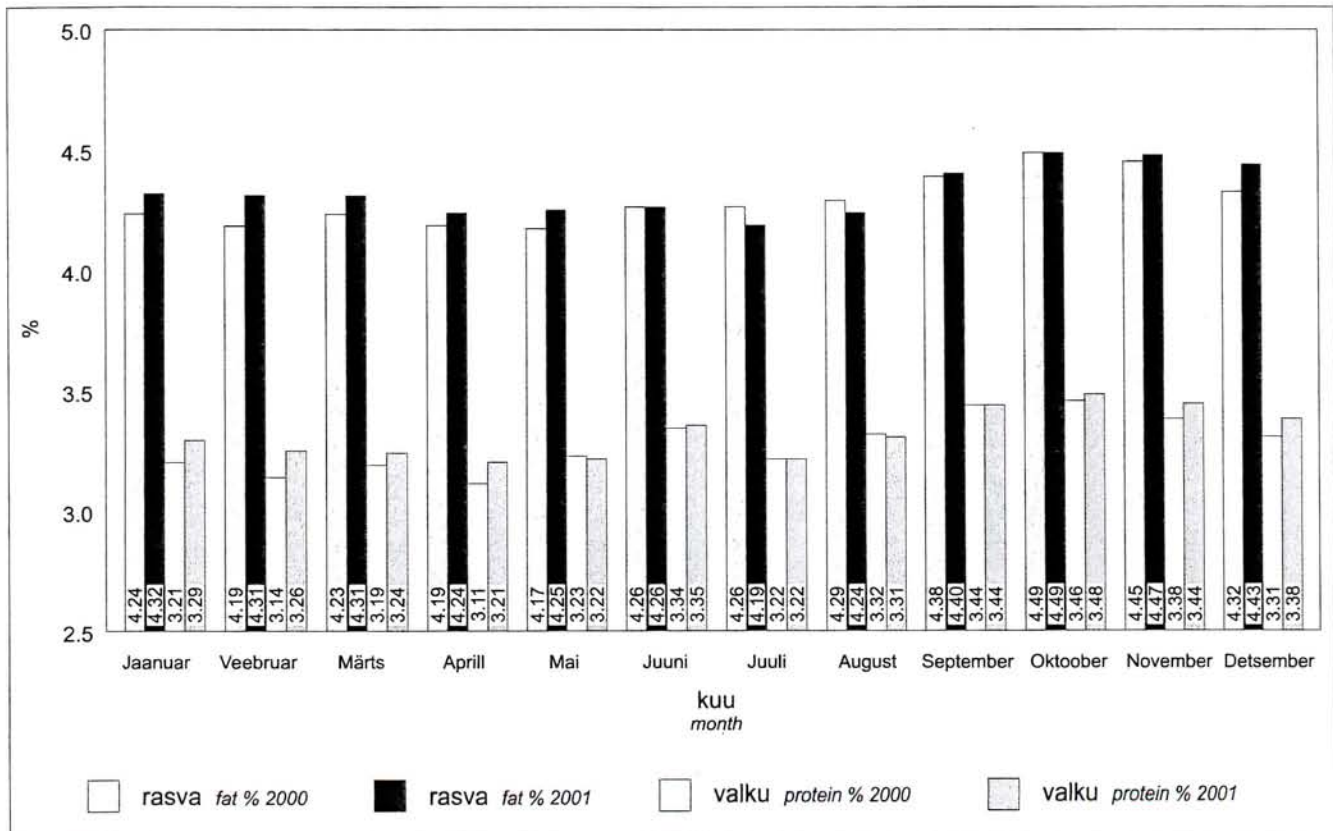
### 14. Kontrollpäeva piimatoodang ja soomaatiliste rakkude arv tuh/ml

*Milk per cow and SCC/ml on test day*



### 15. Kontrollpäeva piima rasva- ja valgusisaldus

*Fat and protein content of milk on test day*



## 16. Veiste kunstlik seemendus ning tiinestumine

## Artificial insemination and non-return rate

|   | EPK <i>ER</i>         |                            |                       | EHF <i>EHF</i>        |                            |                       | EK <i>EN</i>          |                            |                       | Muud <i>Others</i>    |                            |                       | Tõud kokku <i>All breeds</i> |                            |                       |
|---|-----------------------|----------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|----------------------------|-----------------------|------------------------------|----------------------------|-----------------------|
|   | Lehmad<br><i>Cows</i> | Mullikad<br><i>Heifers</i> | Kokku<br><i>Total</i> | Lehmad<br><i>Cows</i> | Mullikad<br><i>Heifers</i> | Kokku<br><i>Total</i> | Lehmad<br><i>Cows</i> | Mullikad<br><i>Heifers</i> | Kokku<br><i>Total</i> | Lehmad<br><i>Cows</i> | Mullikad<br><i>Heifers</i> | Kokku<br><i>Total</i> | Lehmad<br><i>Cows</i>        | Mullikad<br><i>Heifers</i> | Kokku<br><i>Total</i> |
| Seemendatud veiseid kokku<br><i>Inseminated artificially (no.)</i>                              | 21709                 | 6527                       | 28236                 | 69027                 | 20217                      | 89244                 | 351                   | 133                        | 484                   | 6170                  | 1115                       | 7285                  | 97257                        | 27992                      | 125249                |
| s.h<br>jõudluskontrolli<br>alustes karjades<br><i>in milk recording herds</i>                   | 20141                 | 6299                       | 26440                 | 66508                 | 20013                      | 86521                 | 274                   | 123                        | 397                   | 4711                  | 1139                       | 5850                  | 91634                        | 27574                      | 119208                |
| Tiinestus<br>1. seemenduse järel %<br><i>NRR 90 d. %</i>  | 55.3                  | 68.1                       | 58.4                  | 51.6                  | 67.7                       | 55.4                  | 72.5                  | 72.6                       | 72.5                  | 65.6                  | 77.6                       | 68.5                  | 53                           | 68.2                       | 56.6                  |
| Seemendusi jõudluskontrolli<br>alustes karjades<br><i>Inseminations in milk recording herds</i> | 34489                 | 9149                       | 43638                 | 122840                | 29050                      | 151890                | 357                   | 155                        | 512                   | 6297                  | 1334                       | 7631                  | 163983                       | 39688                      | 203671                |
| Seemenduste arv<br>tiinestumise kohta<br><i>No. of inseminations per cow</i>                    | 1.8                   | 1.5                        | 1.8                   | 1.9                   | 1.5                        | 1.8                   | 1.4                   | 1.3                        | 1.4                   | 1.6                   | 1.3                        | 1.5                   | 1.9                          | 1.5                        | 1.8                   |



## 17. Poegimiste ja vasikate arv

Calves born

|  |                         | EPK<br>ER     | EHF<br>EHF    | EK<br>EN    | Kokku<br>Total |
|--|-------------------------|---------------|---------------|-------------|----------------|
| <b>Pullvasikaid kokku</b><br><i>Males total</i>        | arv no.<br>%            | 14109<br>51.9 | 36457<br>51.7 | 237<br>49.8 | 50803<br>51.8  |
| <b>Lehmvasikaid kokku</b><br><i>Females total</i>      | arv no.<br>%            | 13060<br>48.1 | 34013<br>48.3 | 239<br>50.2 | 47312<br>48.2  |
| <b>Vasikaid kokku</b> <i>Calves total</i>              | arv no.                 | 27169         | 70470         | 476         | 98115          |
| <b>Kaksikuid pullvasikaid</b><br><i>Male twins</i>     | poegimisi calvings<br>% | 138<br>0.5    | 349<br>0.5    | 1<br>0.2    | 488<br>0.5     |
| <b>Kaksikuid lehmvasikaid</b><br><i>Female twins</i>   | poegimisi calvings<br>% | 142<br>0.5    | 294<br>0.4    | 2<br>0.4    | 438<br>0.4     |
| <b>Erisoolisi kaksikuid</b><br><i>Heterosex. twins</i> | poegimisi calvings<br>% | 265<br>0.9    | 493<br>0.7    | 5<br>1.0    | 763<br>0.7     |
| <b>Mitmikuid</b><br><i>Multiple calves</i>             | poegimisi calvings<br>% | 2<br>0.0      | 3<br>0.0      | 0<br>0.0    | 5<br>0.0       |
| <b>Aborte</b><br><i>Abortions</i>                      | arv no.<br>%            | 121<br>0.4    | 349<br>0.5    | 7<br>1.4    | 477<br>0.5     |
| <b>s.h esmaspoeginutel</b><br><i>1st lact</i>          | arv no.<br>%            | 12<br>0.2     | 58<br>0.3     | 0<br>0.0    | 70<br>0.3      |
| <b>Surnultsünde</b><br><i>Stillbirths</i>              | arv no.<br>%            | 1569<br>5.5   | 5089<br>6.8   | 21<br>4.2   | 6679<br>6.4    |
| <b>s.h esmaspoeginutel</b><br><i>1st lact</i>          | arv no.<br>%            | 530<br>7.9    | 2021<br>9.9   | 3<br>2.2    | 2554<br>9.4    |
| <b>Poegimisi kokku</b> <i>Calvings total</i>           | arv no.                 | 28311         | 74767         | 496         | 103574         |
| <b>s.h esmaspoeginutel</b> <i>1st lact</i>             | arv no.<br>%            | 6742<br>23.8  | 20317<br>27.2 | 132<br>26.6 | 27191<br>26.3  |

## 18. Kinnisperioodi pikkus päevades

Days dry on cows in milk recording

| Tõug<br><i>Breed</i>             |                 | 0          | 1-30        | 31-60         | 61-90         | 91...         | Keskmine<br>Avg. |
|----------------------------------|-----------------|------------|-------------|---------------|---------------|---------------|------------------|
| <b>Eesti punane</b> <i>ER</i>    | lehmi cows<br>% | 107<br>0.5 | 429<br>2.0  | 5726<br>27.0  | 10990<br>51.8 | 3981<br>18.7  | 75               |
| <b>Eesti holstein</b> <i>EHF</i> | lehmi cows<br>% | 269<br>0.5 | 1375<br>2.6 | 13876<br>25.9 | 29933<br>55.8 | 8159<br>15.2  | 72               |
| <b>Eesti maakari</b> <i>EN</i>   | lehmi cows<br>% | 6<br>1.8   | 11<br>3.2   | 90<br>26.5    | 156<br>46.0   | 76<br>22.4    | 74               |
| <b>Kokku</b> <i>Total</i>        | lehmi cows<br>% | 382<br>0.5 | 1815<br>2.4 | 19692<br>26.2 | 41079<br>54.6 | 12216<br>16.2 | 73               |

## 19. Uuslõpsiperioodi pikkus päevades

Service period

| Tõug<br>Breed  |              |                 | ...30      | 31-60        | 61-90         | 91-120        | 121-150      | 151...        | Keskmine<br>Average |
|----------------|--------------|-----------------|------------|--------------|---------------|---------------|--------------|---------------|---------------------|
| Eesti punane   | ER           | lehma cows<br>% | 43<br>0.2  | 2732<br>14.7 | 5398<br>29.1  | 3672<br>19.8  | 2360<br>12.7 | 4329<br>23.4  | 119                 |
| Eesti holstein | EHF          | lehma cows<br>% | 120<br>0.3 | 6016<br>13.0 | 11782<br>25.5 | 8934<br>19.3  | 6159<br>13.3 | 13206<br>28.6 | 129                 |
| Eesti maakari  | EN           | lehma cows<br>% | 4<br>1.9   | 32<br>15.4   | 59<br>28.4    | 35<br>16.8    | 22<br>10.6   | 56<br>26.9    | 137                 |
| <b>Kokku</b>   | <i>Total</i> | lehma cows<br>% | 167<br>0.3 | 8780<br>13.5 | 17239<br>26.5 | 12641<br>19.5 | 8541<br>13.1 | 17591<br>27.1 | 126                 |

## 20. Lehmade karjast väljamineku põhjused

Culling reasons

| Põhjus<br>Reason                                | EPK          |       | EHF           |       | EK           |       | Kokku           |       | Keskmine<br>vanus a,k<br>Age |
|---|--------------|-------|---------------|-------|--------------|-------|-----------------|-------|------------------------------|
|   | arv nr<br>ER | %     | arv nr<br>EHF | %     | arv nr<br>EN | %     | arv nr<br>Total | %     |                              |
| <b>Vanus</b><br>Age                             | 417          | 5.5   | 938           | 5.0   | 2            | 1.8   | 1357            | 5.1   | 10a 8k                       |
| <b>Madal toodang</b><br>Low productivity        | 796          | 10.4  | 1031          | 5.5   | 2            | 1.8   | 1829            | 6.9   | 5a 6k                        |
| <b>Ahtrus</b><br>Sterile                        | 2017         | 26.4  | 4591          | 24.3  | 32           | 29.4  | 6640            | 24.9  | 7a 1k                        |
| <b>Nakkushaigused</b><br>Infect. disease        | 15           | 0.2   | 13            | 0.1   | 0            | 0.0   | 28              | 0.1   | 6a 10k                       |
| <b>Udarahaigus</b><br>Udder disease             | 2040         | 26.7  | 4826          | 25.6  | 39           | 35.8  | 6905            | 25.9  | 6a 12k                       |
| <b>Jäsemete haigused</b><br>Feet disease        | 673          | 8.8   | 2568          | 13.6  | 2            | 1.8   | 3243            | 12.2  | 7a 5k                        |
| <b>Traumad</b><br>Accident                      | 360          | 4.7   | 1079          | 5.7   | 3            | 2.8   | 1442            | 5.4   | 5a 2k                        |
| <b>Ainevahetushaigused</b><br>Metabolic disease | 501          | 6.5   | 1526          | 8.1   | 5            | 4.6   | 2032            | 7.6   | 7a 1k                        |
| <b>Muud</b><br>Others                           | 832          | 10.9  | 2308          | 12.2  | 24           | 22.0  | 3164            | 11.9  | 6a 3k                        |
| <b>Kokku</b><br>Total                           | 7651         | 100.0 | 18880         | 100.0 | 109          | 100.0 | 26640           | 100.0 | 6a 10k                       |



## 21. Lehmade jagunemine poegimisvahemiku pikkuse järgi

*Distribution of cows by calving interval*

| Tõug<br><i>Breed</i> |                 | Poegimisvahemik päevades <i>Calving interval, days</i> |             |               |               |               |              |             |             |              | Keskmine<br><i>Average</i> |
|----------------------|-----------------|--|-------------|---------------|---------------|---------------|--------------|-------------|-------------|--------------|----------------------------|
|                      |                 | ...300   | 301-330     | 331-360       | 361-390       | 391-420       | 421-450      | 451-480     | 481-510     | 511-...      |                            |
| EPK <i>ER</i>        | lehmi cows<br>% | 63<br>0.3  | 1294<br>6.1 | 5624<br>26.5  | 5139<br>24.2  | 3195<br>15.0  | 2033<br>9.6  | 1379<br>6.5 | 877<br>4.1  | 1637<br>7.7  | 402                        |
| EHF <i>EHF</i>       | lehmi cows<br>% | 194<br>0.4   | 3367<br>6.3 | 12828<br>23.9 | 11856<br>22.1 | 7993<br>14.9  | 5541<br>10.3 | 3720<br>6.9 | 2630<br>4.9 | 5502<br>10.3 | 410                        |
| EK <i>EN</i>         | lehmi cows<br>% | 2<br>0.6   | 40<br>11.7  | 85<br>24.9    | 84<br>24.6    | 40<br>11.7    | 22<br>6.4    | 19<br>5.6   | 18<br>5.3   | 32<br>9.4    | 418                        |
| Kokku <i>Total</i>   | lehmi cows<br>% | 259<br>0.3   | 4701<br>6.3 | 18537<br>24.6 | 17079<br>22.7 | 11228<br>14.9 | 7596<br>10.1 | 5118<br>6.8 | 3525<br>4.7 | 7171<br>9.5  | 407                        |

## 22. Lehmade jagunemine vanuse järgi

*No. of cows by breed and age groups*

| Vanus (a.)<br><i>Age (y)</i> | EPK <i>ER</i>  |       | EHF <i>EHF</i> |       | EK <i>EN</i>   |       | Kokku <i>Total</i> |       |
|------------------------------|----------------|-------|----------------|-------|----------------|-------|--------------------|-------|
|                              | arv <i>no.</i> | %     | arv <i>no.</i> | %     | arv <i>no.</i> | %     | arv <i>no.</i>     | %     |
| <= 3                         | 5302           | 19.0  | 15965          | 21.5  | 103            | 21.0  | 21370              | 20.8  |
| 4                            | 5168           | 18.6  | 14937          | 20.1  | 79             | 16.1  | 20184              | 19.7  |
| 5                            | 4473           | 16.1  | 12289          | 16.5  | 82             | 16.7  | 16844              | 16.4  |
| 6                            | 3932           | 14.1  | 9842           | 13.2  | 53             | 10.8  | 13827              | 13.5  |
| 7                            | 2795           | 10.0  | 7537           | 10.1  | 58             | 11.8  | 10390              | 10.1  |
| 8                            | 1947           | 7.0   | 4783           | 6.4   | 25             | 5.1   | 6755               | 6.6   |
| 9                            | 1435           | 5.2   | 3285           | 4.4   | 37             | 7.5   | 4757               | 4.6   |
| 10                           | 1045           | 3.8   | 2377           | 3.2   | 24             | 4.9   | 3446               | 3.4   |
| 11                           | 873            | 3.1   | 1712           | 2.3   | 13             | 2.6   | 2598               | 2.5   |
| >= 12                        | 871            | 3.1   | 1562           | 2.1   | 17             | 3.5   | 2450               | 2.4   |
| Kokku<br><i>Total</i>        | 27841          | 100.0 | 74289          | 100.0 | 491            | 100.0 | 102621             | 100.0 |
| Keskmine<br><i>Average</i>   | 5 a.8 k.       |       | 5 a.5 k.       |       | 5 a.9 k.       |       | 5 a.6 k.           |       |

**23. Tõukarjade toodang aastalehma kohta tõugude viisi***Productivity of herdbook herds*

| Tõug, lehmi<br>karjas<br><i>Breed, herd size</i> | Karjade<br>arv<br><i>Herds</i> | Aasta-<br>lehmi*<br><i>Cows</i> | Piima<br>kg<br><i>Milk</i> | Rasva |     | Valku |     | R+V<br>kg<br><i>F+P</i> |
|--|--------------------------------|---------------------------------|----------------------------|-------|-----|-------|-----|-------------------------|
|  |                                |                                 |                            | %     | kg  | %     | kg  |                         |
| <b>Eesti punane</b> <i>ER</i>                    |                                |                                 |                            |       |     |       |     |                         |
| 3...7  | 8                              | 50                              | 5787                       | 4.33  | 250 | 3.43  | 198 | 449                     |
| 8...20   | 78                             | 1025                            | 5441                       | 4.36  | 237 | 3.43  | 187 | 424                     |
| 21...50  | 24                             | 778                             | 5457                       | 4.45  | 243 | 3.44  | 188 | 430                     |
| 51...100   | 27                             | 2037                            | 5102                       | 4.36  | 223 | 3.35  | 171 | 394                     |
| 101...   | 45                             | 11470                           | 5264                       | 4.42  | 233 | 3.40  | 179 | 412                     |
| <b>Eesti holstein</b> <i>EH</i>                  |                                |                                 |                            |       |     |       |     |                         |
| 3...7  | 1                              | 4                               | 4537                       | 3.97  | 180 | 2.95  | 134 | 314                     |
| 8...20   | 81                             | 1161                            | 6511                       | 4.28  | 279 | 3.30  | 215 | 493                     |
| 21...50  | 45                             | 1340                            | 6503                       | 4.27  | 278 | 3.30  | 215 | 493                     |
| 51...100   | 18                             | 1420                            | 6240                       | 4.21  | 263 | 3.29  | 205 | 468                     |
| 101...   | 77                             | 30585                           | 6494                       | 4.26  | 277 | 3.30  | 214 | 491                     |
| <b>Eesti maakari</b> <i>EN</i>                   |                                |                                 |                            |       |     |       |     |                         |
| 3...7  | 5                              | 23                              | 3974                       | 4.90  | 195 | 3.58  | 142 | 337                     |
| 8...20   | 4                              | 41                              | 4257                       | 4.66  | 198 | 3.57  | 152 | 350                     |
| 21...50  | 3                              | 109                             | 3996                       | 4.93  | 197 | 3.51  | 140 | 337                     |

\* Vastavat tõugu aastalehmade arv

**24. 305 päeva laktatsiooni toodang tõukarjades***305-d. lactation productivity in herdbook herds*

| Tõug<br><i>Breed</i> | Laktatsioon<br><i>Lact.</i> | Lehmi<br><i>Cows</i> | Piima kg<br><i>Milk</i> | %    | Rasva<br><i>Fat</i> | kg   | %   | Valku<br><i>Protein</i> | kg | R+V, kg<br><i>F+P</i> |
|----------------------|-----------------------------|----------------------|-------------------------|------|---------------------|------|-----|-------------------------|----|-----------------------|
| EPK<br><i>ER</i>     | 1.                          | 3501                 | 4615                    | 4.35 | 201                 | 3.34 | 154 | 355                     |    |                       |
|                      | 2.                          | 2920                 | 5004                    | 4.42 | 221                 | 3.40 | 170 | 391                     |    |                       |
|                      | 3...                        | 7191                 | 5256                    | 4.36 | 229                 | 3.33 | 175 | 404                     |    |                       |
|                      | Kokku                       | 13612                | 5037                    | 4.37 | 220                 | 3.35 | 169 | 389                     |    |                       |
| EHF<br><i>EHF</i>    | 1.                          | 7975                 | 5558                    | 4.16 | 231                 | 3.25 | 181 | 412                     |    |                       |
|                      | 2.                          | 7255                 | 6163                    | 4.29 | 264                 | 3.29 | 203 | 467                     |    |                       |
|                      | 3...                        | 14760                | 6497                    | 4.21 | 274                 | 3.23 | 210 | 484                     |    |                       |
|                      | Kokku                       | 29990                | 6167                    | 4.22 | 260                 | 3.25 | 201 | 461                     |    |                       |
| EK<br><i>EN</i>      | 1.                          | 30                   | 3951                    | 4.74 | 187                 | 3.48 | 137 | 325                     |    |                       |
|                      | 2.                          | 34                   | 3693                    | 4.94 | 182                 | 3.46 | 128 | 310                     |    |                       |
|                      | 3...                        | 84                   | 4131                    | 4.80 | 198                 | 3.50 | 145 | 343                     |    |                       |
|                      | Kokku                       | 148                  | 3994                    | 4.82 | 192                 | 3.49 | 139 | 332                     |    |                       |



## 25. Lehmade arv tõugude viisi maakondades

*No. of cows of different breeds in counties*

| Maakond<br><i>County</i>     | Eesti punane <i>ER</i> |      | Eesti holstein <i>EHF</i> |      | Eesti maakari <i>EN</i> |     | Kokku<br><i>Total</i> |
|------------------------------|------------------------|------|---------------------------|------|-------------------------|-----|-----------------------|
|                              | arv <i>no.</i>         | %    | arv <i>no.</i>            | %    | arv <i>no.</i>          | %   |                       |
| Harju                        | 74                     | 1.0  | 7236                      | 98.8 | 17                      | 0.2 | 7327                  |
| Hiiu                         | 395                    | 51.6 | 370                       | 48.3 | 1                       | 0.1 | 766                   |
| Ida-Viru                     | 626                    | 26.5 | 1731                      | 73.3 | 3                       | 0.1 | 2360                  |
| Järva                        | 822                    | 4.9  | 16071                     | 95.1 | 8                       | 0.0 | 16901                 |
| Jõgeva                       | 5224                   | 50.0 | 5212                      | 49.9 | 4                       | 0.0 | 10440                 |
| Lääne                        | 346                    | 11.4 | 2694                      | 88.4 | 7                       | 0.2 | 3047                  |
| Lääne-Viru                   | 1023                   | 8.8  | 10584                     | 91.0 | 26                      | 0.2 | 11633                 |
| Pärnu                        | 1525                   | 13.1 | 9864                      | 84.8 | 247                     | 2.1 | 11636                 |
| Põlva                        | 2109                   | 37.2 | 3566                      | 62.8 | 0                       | 0.0 | 5675                  |
| Rapla                        | 70                     | 0.9  | 7587                      | 98.4 | 50                      | 0.6 | 7707                  |
| Saare                        | 4699                   | 84.5 | 775                       | 13.9 | 89                      | 1.6 | 5563                  |
| Tartu                        | 3193                   | 53.1 | 2808                      | 46.7 | 12                      | 0.2 | 6013                  |
| Valga                        | 1928                   | 65.5 | 1009                      | 34.3 | 7                       | 0.2 | 2944                  |
| Viljandi                     | 4428                   | 62.4 | 2658                      | 37.5 | 11                      | 0.2 | 7097                  |
| Võru                         | 1379                   | 39.3 | 2124                      | 60.5 | 9                       | 0.3 | 3512                  |
| <b>Kokku</b><br><i>Total</i> | 27841                  | 27.1 | 74289                     | 72.4 | 491                     | 0.5 | 102621                |

## 26. Karjade arv ning keskmine karja suurus maakondades

*No. of herds and average herd size in counties*

| Maakond<br><i>County</i>     | Karjade arv 31.12 <i>No. of herds</i> |      |      |      | Keskmine karja suurus 31.12 <i>Avg. herd size</i> |      |      |      |
|------------------------------|---------------------------------------|------|------|------|---|------|------|------|
|                              | 1998                                  | 1999 | 2000 | 2001 | 1998  | 1999 | 2000 | 2001 |
| Harju                        | 205                                   | 191  | 191  | 179  | 40.2  | 40.2 | 38.8 | 40.9 |
| Hiiu                         | 40                                    | 41   | 67   | 69   | 22.4  | 18.0 | 12.5 | 11.1 |
| Ida-Viru                     | 87                                    | 103  | 111  | 101  | 25.5  | 22.9 | 20.2 | 23.4 |
| Jõgeva                       | 234                                   | 253  | 275  | 258  | 52.8  | 43.5 | 38.5 | 40.5 |
| Järva                        | 238                                   | 235  | 241  | 215  | 76.0  | 72.7 | 70.8 | 78.6 |
| Lääne                        | 127                                   | 146  | 168  | 155  | 30.7  | 21.8 | 17.5 | 19.7 |
| Lääne-Viru                   | 202                                   | 204  | 208  | 196  | 66.4  | 60.3 | 57.4 | 59.4 |
| Põlva                        | 92                                    | 117  | 123  | 112  | 65.2  | 48.3 | 45.5 | 50.7 |
| Pärnu                        | 353                                   | 395  | 511  | 456  | 38.3  | 30.3 | 22.5 | 25.5 |
| Rapla                        | 248                                   | 261  | 275  | 257  | 32.7  | 29.2 | 27.5 | 30.0 |
| Saare                        | 230                                   | 264  | 311  | 318  | 26.1  | 21.5 | 17.6 | 17.5 |
| Tartu                        | 135                                   | 132  | 147  | 146  | 50.7  | 46.6 | 41.0 | 41.2 |
| Valga                        | 104                                   | 102  | 107  | 104  | 38.7  | 30.4 | 27.3 | 28.3 |
| Viljandi                     | 256                                   | 256  | 269  | 256  | 35.4  | 29.7 | 25.6 | 27.7 |
| Võru                         | 181                                   | 197  | 207  | 201  | 24.8  | 19.4 | 17.0 | 17.5 |
| <b>Kokku</b><br><i>Total</i> | 2732                                  | 2897 | 3211 | 3023 | 42.9  | 36.6 | 31.9 | 33.9 |

## 27. 305 päeva laktatsiooni toodang maakondades

## 305-d. lactation productivity in counties by breeds

| Maakond<br><i>County</i> | Tõug<br><i>Breed</i> | 1. laktatsioon <i>1st lact.</i> |                            |                                |                                    |                         |                      |                            | 2. laktatsioon <i>2nd lact.</i> |                                    |                         |                      |                            |                                |                                    | 3. ja vanemad laktatsioonid <i>3rd and older lact.</i> |      |      |     |      |     |     |
|--------------------------|----------------------|---------------------------------|----------------------------|--------------------------------|------------------------------------|-------------------------|----------------------|----------------------------|---------------------------------|------------------------------------|-------------------------|----------------------|----------------------------|--------------------------------|------------------------------------|--|------|------|-----|------|-----|-----|
|                          |                      | lehma<br><i>cows</i>            | piima<br>kg<br><i>milk</i> | rasva<br>%<br>kg<br><i>fat</i> | valku<br>%<br>kg<br><i>protein</i> | r+v<br>kg<br><i>f+p</i> | lehma<br><i>cows</i> | piima<br>kg<br><i>milk</i> | rasva<br>%<br>kg<br><i>fat</i>  | valku<br>%<br>kg<br><i>protein</i> | r+v<br>kg<br><i>f+p</i> | lehma<br><i>cows</i> | piima<br>kg<br><i>milk</i> | rasva<br>%<br>kg<br><i>fat</i> | valku<br>%<br>kg<br><i>protein</i> | r+v<br>kg<br><i>f+p</i>                                |      |      |     |      |     |     |
| Harju                    | EPK                  | 5                               | 4326                       | 4.73                           | 205                                | 3.24                    | 140                  | 345                        | 4                               | 3927                               | 4.64                    | 182                  | 3.42                       | 134                            | 317                                | 20   | 4177 | 4.48 | 187 | 3.38 | 141 | 328 |
|                          | EHF                  | 1353                            | 4393                       | 4.28                           | 188                                | 3.19                    | 140                  | 328                        | 1329                            | 4881                               | 4.45                    | 217                  | 3.28                       | 160                            | 377                                | 3345   | 5149 | 4.34 | 224 | 3.22 | 166 | 389 |
|                          | EK                   | 7                               | 4318                       | 4.47                           | 193                                | 3.54                    | 153                  | 346                        | 2                               | 4013                               | 4.47                    | 179                  | 3.50                       | 141                            | 320                                | 7  | 6120 | 4.46 | 273 | 3.62 | 222 | 495 |
|                          | Kokku                | 1365                            | 4393                       | 4.29                           | 188                                | 3.20                    | 140                  | 329                        | 1335                            | 4876                               | 4.45                    | 217                  | 3.28                       | 160                            | 377                                | 3372   | 5145 | 4.34 | 223 | 3.22 | 166 | 389 |
| Hiiu                     | EPK                  | 93                              | 3874                       | 4.09                           | 158                                | 3.26                    | 126                  | 285                        | 75                              | 4086                               | 4.15                    | 170                  | 3.34                       | 136                            | 306                                | 237  | 4564 | 4.22 | 192 | 3.34 | 153 | 345 |
|                          | EHF                  | 95                              | 4916                       | 4.30                           | 211                                | 3.19                    | 157                  | 368                        | 84                              | 5726                               | 4.34                    | 249                  | 3.22                       | 184                            | 433                                | 179  | 5905 | 4.27 | 252 | 3.21 | 190 | 442 |
|                          | Kokku                | 188                             | 4401                       | 4.21                           | 185                                | 3.22                    | 142                  | 327                        | 159                             | 4953                               | 4.27                    | 211                  | 3.26                       | 162                            | 373                                | 416  | 5141 | 4.24 | 218 | 3.28 | 169 | 387 |
| Ida-Viru                 | EPK                  | 83                              | 4394                       | 4.38                           | 193                                | 3.37                    | 148                  | 340                        | 109                             | 4912                               | 4.26                    | 209                  | 3.49                       | 171                            | 381                                | 305  | 5231 | 4.27 | 223 | 3.40 | 178 | 401 |
|                          | EHF                  | 326                             | 4249                       | 4.16                           | 177                                | 3.13                    | 133                  | 309                        | 284                             | 5075                               | 4.25                    | 216                  | 3.22                       | 163                            | 379                                | 786  | 4839 | 4.27 | 207 | 3.20 | 155 | 362 |
|                          | EK                   | 1                               | 3826                       | 4.85                           | 185                                | 3.77                    | 144                  | 330                        |                                 |                                    |                         |                      |                            |                                |                                    |  |      |      |     |      |     |     |
|                          | Kokku                | 409                             | 4278                       | 4.20                           | 180                                | 3.18                    | 136                  | 316                        | 394                             | 5027                               | 4.25                    | 214                  | 3.29                       | 166                            | 379                                | 1091   | 4948 | 4.27 | 211 | 3.26 | 161 | 373 |
| Jõgeva                   | EPK                  | 1083                            | 4151                       | 4.45                           | 185                                | 3.35                    | 139                  | 324                        | 933                             | 4565                               | 4.56                    | 208                  | 3.42                       | 156                            | 364                                | 2925   | 4997 | 4.35 | 217 | 3.36 | 168 | 385 |
|                          | EHF                  | 1219                            | 5730                       | 4.32                           | 247                                | 3.35                    | 192                  | 439                        | 959                             | 6419                               | 4.31                    | 277                  | 3.38                       | 217                            | 494                                | 1989   | 6510 | 4.23 | 275 | 3.31 | 216 | 491 |
|                          | EK                   | 1                               | 4261                       | 4.53                           | 193                                | 3.44                    | 147                  | 340                        | 1                               | 4876                               | 4.75                    | 232                  | 3.44                       | 168                            | 399                                | 1  | 5018 | 4.24 | 213 | 3.43 | 172 | 385 |
|                          | Kokku                | 2303                            | 4987                       | 4.37                           | 218                                | 3.35                    | 167                  | 385                        | 1893                            | 5505                               | 4.41                    | 243                  | 3.40                       | 187                            | 430                                | 4915   | 5609 | 4.29 | 241 | 3.34 | 187 | 428 |
| Järva                    | EPK                  | 144                             | 4162                       | 4.38                           | 183                                | 3.35                    | 139                  | 322                        | 154                             | 4368                               | 4.51                    | 197                  | 3.44                       | 150                            | 347                                | 611  | 4831 | 4.46 | 216 | 3.38 | 163 | 379 |
|                          | EHF                  | 3485                            | 5397                       | 4.12                           | 222                                | 3.22                    | 174                  | 396                        | 3319                            | 5998                               | 4.29                    | 257                  | 3.28                       | 197                            | 454                                | 7193   | 6330 | 4.20 | 266 | 3.23 | 204 | 470 |
|                          | EK                   | 1                               | 4189                       | 4.90                           | 205                                | 3.57                    | 150                  | 355                        | 3                               | 4272                               | 5.10                    | 218                  | 3.56                       | 152                            | 370                                | 2  | 4269 | 4.23 | 181 | 3.52 | 150 | 331 |
|                          | Kokku                | 3630                            | 5347                       | 4.12                           | 221                                | 3.23                    | 173                  | 393                        | 3476                            | 5924                               | 4.30                    | 255                  | 3.29                       | 195                            | 449                                | 7806   | 6212 | 4.21 | 262 | 3.24 | 201 | 463 |
| Lääne                    | EPK                  | 54                              | 3720                       | 4.28                           | 159                                | 3.28                    | 122                  | 281                        | 47                              | 4270                               | 4.28                    | 183                  | 3.36                       | 144                            | 326                                | 198  | 4267 | 4.36 | 186 | 3.35 | 143 | 329 |
|                          | EHF                  | 481                             | 3997                       | 4.22                           | 169                                | 3.15                    | 126                  | 294                        | 401                             | 4246                               | 4.35                    | 185                  | 3.23                       | 137                            | 322                                | 1359   | 4529 | 4.27 | 193 | 3.19 | 144 | 338 |
|                          | EK                   | 3                               | 3479                       | 4.29                           | 149                                | 3.17                    | 110                  | 259                        | 3                               | 5003                               | 4.87                    | 244                  | 3.46                       | 173                            | 417                                | 3  | 4700 | 5.04 | 237 | 3.30 | 155 | 392 |
|                          | Kokku                | 538                             | 3967                       | 4.22                           | 168                                | 3.16                    | 125                  | 293                        | 451                             | 4253                               | 4.35                    | 185                  | 3.24                       | 138                            | 323                                | 1560   | 4496 | 4.28 | 192 | 3.21 | 144 | 337 |
| Lääne-Viru               | EPK                  | 218                             | 4882                       | 4.21                           | 206                                | 3.36                    | 164                  | 370                        | 228                             | 5206                               | 4.30                    | 224                  | 3.36                       | 175                            | 399                                | 564  | 5074 | 4.31 | 219 | 3.32 | 169 | 387 |
|                          | EHF                  | 2312                            | 4952                       | 4.14                           | 205                                | 3.19                    | 158                  | 363                        | 2103                            | 5503                               | 4.22                    | 232                  | 3.25                       | 179                            | 411                                | 4897   | 5780 | 4.15 | 240 | 3.20 | 185 | 425 |
|                          | EK                   | 3                               | 3277                       | 4.23                           | 139                                | 3.21                    | 105                  | 244                        | 2                               | 4494                               | 4.78                    | 215                  | 3.33                       | 150                            | 364                                | 10   | 4702 | 4.45 | 209 | 3.32 | 156 | 365 |
|                          | Kokku                | 2533                            | 4944                       | 4.14                           | 205                                | 3.20                    | 158                  | 363                        | 2333                            | 5473                               | 4.22                    | 231                  | 3.26                       | 178                            | 410                                | 5471   | 5705 | 4.17 | 238 | 3.21 | 183 | 421 |



|          |       |      |      |      |     |      |     |     |      |      |      |     |      |     |     |      |      |      |     |      |     |     |
|----------|-------|------|------|------|-----|------|-----|-----|------|------|------|-----|------|-----|-----|------|------|------|-----|------|-----|-----|
| Põlva    | EPK   | 485  | 4896 | 4.35 | 213 | 3.33 | 163 | 376 | 424  | 5168 | 4.50 | 232 | 3.39 | 175 | 408 | 993  | 5495 | 4.42 | 243 | 3.32 | 183 | 426 |
|          | EHF   | 815  | 5832 | 4.17 | 243 | 3.29 | 192 | 435 | 747  | 6355 | 4.37 | 278 | 3.34 | 212 | 490 | 1481 | 6451 | 4.29 | 277 | 3.25 | 209 | 486 |
|          | Kokku | 1300 | 5483 | 4.23 | 232 | 3.31 | 181 | 413 | 1171 | 5925 | 4.41 | 261 | 3.36 | 199 | 460 | 2474 | 6067 | 4.34 | 263 | 3.27 | 199 | 462 |
| Pärnu    | EPK   | 226  | 4326 | 4.54 | 196 | 3.38 | 146 | 343 | 263  | 4773 | 4.72 | 225 | 3.43 | 164 | 389 | 782  | 5208 | 4.62 | 241 | 3.34 | 174 | 415 |
|          | EHF   | 1944 | 4478 | 4.28 | 192 | 3.20 | 143 | 335 | 1557 | 4966 | 4.34 | 216 | 3.24 | 161 | 377 | 4680 | 5242 | 4.31 | 226 | 3.21 | 168 | 394 |
|          | EK    | 27   | 3251 | 4.54 | 148 | 3.29 | 107 | 255 | 35   | 3334 | 4.77 | 159 | 3.40 | 113 | 273 | 144  | 3815 | 4.63 | 177 | 3.40 | 130 | 306 |
|          | Kokku | 2197 | 4448 | 4.31 | 192 | 3.22 | 143 | 335 | 1855 | 4908 | 4.40 | 216 | 3.27 | 161 | 377 | 5606 | 5200 | 4.36 | 227 | 3.23 | 168 | 394 |
| Rapla    | EPK   | 10   | 4262 | 4.16 | 177 | 3.36 | 143 | 321 | 9    | 5152 | 4.34 | 224 | 3.31 | 171 | 394 | 34   | 5138 | 4.41 | 226 | 3.25 | 167 | 393 |
|          | EHF   | 1473 | 4858 | 4.14 | 201 | 3.19 | 155 | 356 | 1354 | 5400 | 4.30 | 232 | 3.27 | 177 | 409 | 3215 | 5712 | 4.18 | 239 | 3.23 | 185 | 423 |
|          | EK    | 8    | 3918 | 4.74 | 186 | 3.42 | 134 | 320 | 10   | 4181 | 4.74 | 198 | 3.48 | 145 | 344 | 22   | 4087 | 4.92 | 201 | 3.61 | 148 | 349 |
|          | Kokku | 1491 | 4849 | 4.14 | 201 | 3.19 | 155 | 356 | 1373 | 5390 | 4.30 | 232 | 3.27 | 176 | 408 | 3271 | 5695 | 4.18 | 238 | 3.23 | 184 | 422 |
| Saare    | EPK   | 1005 | 3965 | 4.34 | 172 | 3.33 | 132 | 304 | 887  | 4422 | 4.41 | 195 | 3.38 | 150 | 344 | 2276 | 4701 | 4.33 | 204 | 3.34 | 157 | 361 |
|          | EHF   | 144  | 4543 | 4.17 | 189 | 3.18 | 144 | 334 | 111  | 4830 | 4.28 | 207 | 3.30 | 159 | 366 | 389  | 5392 | 4.18 | 225 | 3.24 | 175 | 400 |
|          | EK    | 18   | 3774 | 4.86 | 184 | 3.47 | 131 | 314 | 13   | 4085 | 4.79 | 196 | 3.47 | 142 | 338 | 31   | 4195 | 4.93 | 207 | 3.62 | 152 | 359 |
|          | Kokku | 1167 | 4033 | 4.32 | 174 | 3.31 | 134 | 308 | 1011 | 4463 | 4.40 | 196 | 3.37 | 150 | 347 | 2696 | 4795 | 4.31 | 207 | 3.33 | 160 | 366 |
| Tartu    | EPK   | 680  | 5013 | 4.28 | 215 | 3.34 | 167 | 382 | 610  | 5448 | 4.26 | 232 | 3.38 | 184 | 416 | 1537 | 5516 | 4.32 | 238 | 3.32 | 183 | 422 |
|          | EHF   | 647  | 5522 | 4.11 | 227 | 3.25 | 179 | 406 | 445  | 5974 | 4.16 | 248 | 3.27 | 196 | 444 | 1120 | 6237 | 4.15 | 259 | 3.23 | 202 | 460 |
|          | EK    | 2    | 4824 | 4.99 | 241 | 3.59 | 173 | 414 | 6    | 3894 | 4.75 | 185 | 3.40 | 132 | 317 |      |      |      |     |      |     |     |
|          | Kokku | 1327 | 5261 | 4.19 | 221 | 3.29 | 173 | 394 | 1057 | 5668 | 4.22 | 239 | 3.33 | 189 | 428 | 2663 | 5816 | 4.24 | 247 | 3.28 | 191 | 438 |
| Valga    | EPK   | 373  | 3834 | 4.18 | 160 | 3.20 | 123 | 283 | 344  | 4026 | 4.32 | 174 | 3.30 | 133 | 307 | 856  | 4198 | 4.33 | 182 | 3.25 | 137 | 318 |
|          | EHF   | 171  | 4690 | 4.16 | 195 | 3.17 | 148 | 343 | 141  | 4942 | 4.23 | 209 | 3.25 | 161 | 370 | 473  | 5285 | 4.11 | 217 | 3.18 | 168 | 386 |
|          | EK    | 2    | 3189 | 4.56 | 145 | 3.34 | 106 | 252 | 1    | 6566 | 4.08 | 268 | 3.51 | 231 | 499 | 4    | 4891 | 4.83 | 236 | 3.41 | 167 | 403 |
|          | Kokku | 546  | 4100 | 4.17 | 171 | 3.19 | 131 | 302 | 486  | 4297 | 4.29 | 184 | 3.29 | 141 | 326 | 1333 | 4586 | 4.24 | 194 | 3.22 | 148 | 342 |
| Viljandi | EPK   | 859  | 4393 | 4.31 | 189 | 3.31 | 146 | 335 | 803  | 4733 | 4.37 | 207 | 3.37 | 159 | 366 | 2100 | 5008 | 4.27 | 214 | 3.32 | 166 | 380 |
|          | EHF   | 540  | 4811 | 4.14 | 199 | 3.16 | 152 | 351 | 451  | 5331 | 4.28 | 228 | 3.26 | 174 | 402 | 1152 | 5454 | 4.23 | 231 | 3.21 | 175 | 406 |
|          | EK    | 2    | 4058 | 5.02 | 204 | 3.48 | 141 | 345 | 3    | 6042 | 4.67 | 282 | 3.48 | 210 | 493 |      |      |      |     |      |     |     |
|          | Kokku | 1401 | 4553 | 4.24 | 193 | 3.25 | 148 | 341 | 1254 | 4948 | 4.34 | 215 | 3.32 | 165 | 379 | 3255 | 5167 | 4.26 | 220 | 3.28 | 169 | 389 |
| Võru     | EPK   | 250  | 4289 | 4.30 | 185 | 3.30 | 141 | 326 | 185  | 4680 | 4.35 | 203 | 3.34 | 156 | 360 | 601  | 4883 | 4.32 | 211 | 3.29 | 160 | 372 |
|          | EHF   | 475  | 4709 | 4.22 | 199 | 3.16 | 149 | 347 | 342  | 5443 | 4.37 | 238 | 3.20 | 174 | 412 | 927  | 5635 | 4.29 | 242 | 3.16 | 178 | 420 |
|          | EK    | 3    | 3150 | 5.29 | 167 | 3.37 | 106 | 273 |      |      |      |     |      |     |     |      |      |      |     |      |     |     |
|          | Kokku | 725  | 4564 | 4.25 | 194 | 3.20 | 146 | 340 | 527  | 5175 | 4.36 | 226 | 3.25 | 168 | 394 | 1531 | 5335 | 4.30 | 229 | 3.20 | 171 | 400 |

## 28. Lehmade vanus esimesel poegimisel

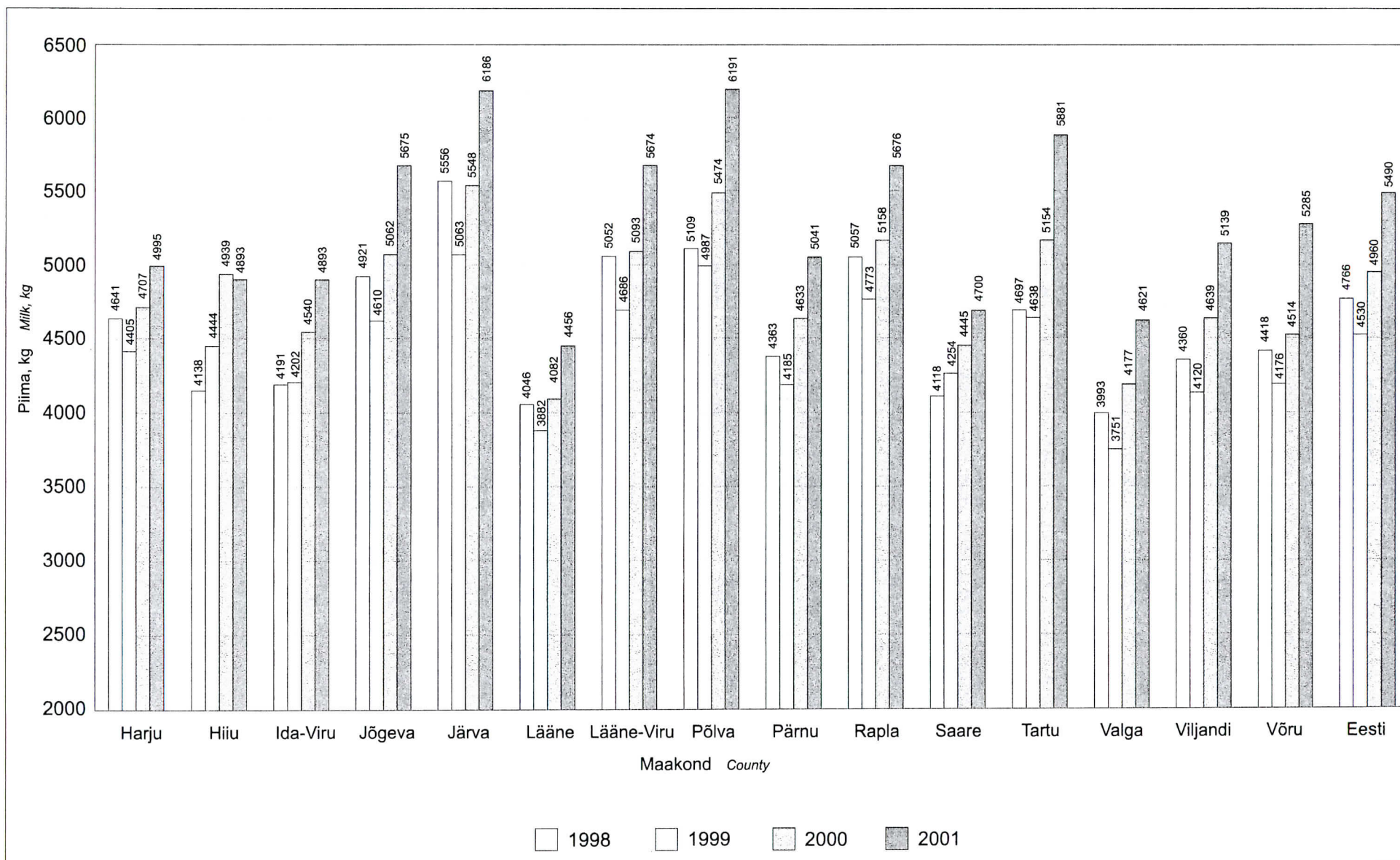
Age at 1st calving

| Maakond<br>County                      | Vanus kuudes <i>Age, months</i> |      |               |      |               |      |               |      |               |      |               |      |               |      | Keskmine<br>Average |
|--|---------------------------------|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------------|
|  | ...25                           |      | 26-27         |      | 28-29         |      | 30-31         |      | 32-33         |      | 34-35         |      | 36 ...        |      |                     |
|  | lehma<br>cows                   | %    | lehma<br>cows | %    | lehma<br>cows | %    | lehma<br>cows | %    | lehma<br>cows | %    | lehma<br>cows | %    | lehma<br>cows | %    |                     |
| Harju                                  | 178                             | 9.4  | 185           | 9.7  | 267           | 14.0 | 361           | 19.0 | 310           | 16.3 | 247           | 13.0 | 353           | 18.6 | 31.6                |
| Hiiu                                   | 65                              | 34.6 | 34            | 18.1 | 31            | 16.5 | 19            | 10.1 | 10            | 5.3  | 6             | 3.2  | 23            | 12.2 | 28.6                |
| Ida-Viru                               | 62                              | 11.8 | 70            | 13.3 | 75            | 14.3 | 77            | 14.6 | 67            | 12.7 | 49            | 9.3  | 126           | 24.0 | 31.7                |
| Jõgeva                                 | 531                             | 17.7 | 598           | 19.9 | 653           | 21.8 | 446           | 14.9 | 334           | 11.1 | 200           | 6.7  | 238           | 7.9  | 29.3                |
| Järva                                  | 664                             | 14.2 | 867           | 18.5 | 981           | 21.0 | 746           | 15.9 | 514           | 11.0 | 355           | 7.6  | 555           | 11.9 | 29.9                |
| Lääne                                  | 104                             | 14.5 | 48            | 6.7  | 46            | 6.4  | 64            | 9.0  | 53            | 7.4  | 64            | 9.0  | 336           | 47.0 | 34.5                |
| Lääne-Viru                             | 349                             | 11.3 | 434           | 14.1 | 600           | 19.5 | 576           | 18.7 | 402           | 13.0 | 260           | 8.4  | 463           | 15.0 | 30.7                |
| Põlva                                  | 317                             | 20.0 | 345           | 21.8 | 284           | 17.9 | 195           | 12.3 | 173           | 10.9 | 139           | 8.8  | 130           | 8.2  | 29.1                |
| Pärnu                                  | 306                             | 10.8 | 315           | 11.2 | 346           | 12.3 | 396           | 14.0 | 373           | 13.2 | 401           | 14.2 | 687           | 24.3 | 32.0                |
| Rapla                                  | 356                             | 17.8 | 285           | 14.3 | 315           | 15.8 | 299           | 15.0 | 263           | 13.2 | 214           | 10.7 | 264           | 13.2 | 30.1                |
| Saare                                  | 243                             | 17.4 | 169           | 12.1 | 174           | 12.4 | 195           | 13.9 | 191           | 13.7 | 203           | 14.5 | 224           | 16.0 | 30.7                |
| Tartu                                  | 394                             | 22.6 | 368           | 21.1 | 307           | 17.6 | 269           | 15.5 | 156           | 9.0  | 100           | 5.7  | 147           | 8.4  | 28.9                |
| Valga                                  | 72                              | 9.4  | 69            | 9.0  | 105           | 13.7 | 134           | 17.5 | 141           | 18.5 | 119           | 15.6 | 124           | 16.2 | 31.5                |
| Viljandi                               | 234                             | 12.4 | 281           | 14.9 | 319           | 16.9 | 276           | 14.6 | 241           | 12.8 | 222           | 11.8 | 312           | 16.6 | 30.9                |
| Võru                                   | 161                             | 17.8 | 133           | 14.7 | 125           | 13.9 | 124           | 13.7 | 100           | 11.1 | 76            | 8.4  | 183           | 20.3 | 30.7                |
| <b>Tõud</b><br><i>Breeds</i>           |                                 |      |               |      |               |      |               |      |               |      |               |      |               |      |                     |
| EPK <i>ER</i>                          | 971                             | 14.4 | 972           | 14.4 | 1000          | 14.8 | 1032          | 15.3 | 962           | 14.3 | 824           | 12.2 | 980           | 14.5 | 30.7                |
| EHF <i>EHF</i>                         | 3031                            | 14.9 | 3208          | 15.8 | 3611          | 17.8 | 3131          | 15.4 | 2355          | 11.6 | 1817          | 8.9  | 3164          | 15.6 | 30.5                |
| EK <i>EN</i>                           | 34                              | 25.8 | 21            | 15.9 | 17            | 12.9 | 14            | 10.6 | 11            | 8.3  | 14            | 10.6 | 21            | 15.9 | 29.8                |
| <b>Tõud kokku</b><br><i>All breeds</i> | 4036                            | 14.8 | 4201          | 15.5 | 4628          | 17.0 | 4177          | 15.4 | 3328          | 12.2 | 2655          | 9.8  | 4165          | 15.3 | 30.5                |



## 29. Piimatoodang aastalehma kohta maakondades

Annual milk productivity per cow in counties



## 30. Toodang aastalehma kohta maakondades tõugude viisi

## Annual average productivity of Estonian dairy breeds in counties

| Maakond<br>County | Tõug<br>Breed | Aastalehmi<br>Cows | Piima kg<br>Milk | Rasva       |            | Valku        |            | R+V<br>kg<br>F+P | Som.<br>rakkude<br>arv<br>SCC |
|-------------------|---------------|--------------------|------------------|-------------|------------|--------------|------------|------------------|-------------------------------|
|                   |               |                    |                  | %<br>Fat    | kg         | %<br>Protein | kg         |                  |                               |
| Harju             | EPK           | 64                 | 3680             | 4.71        | 173        | 3.26         | 120        | 293              | 512                           |
|                   | EHF           | 7087               | 5008             | 4.38        | 219        | 3.26         | 163        | 383              | 407                           |
|                   | EK            | 16                 | 4595             | 4.65        | 214        | 3.63         | 167        | 381              | 1032                          |
|                   | <b>Kokku</b>  | <b>7167</b>        | <b>4995</b>      | <b>4.38</b> | <b>219</b> | <b>3.26</b>  | <b>163</b> | <b>382</b>       | <b>409</b>                    |
| Hiiu              | EPK           | 454                | 4308             | 4.19        | 180        | 3.33         | 143        | 324              | 312                           |
|                   | EHF           | 390                | 5575             | 4.39        | 245        | 3.28         | 183        | 428              | 416                           |
|                   | EK            | 1                  | 4669             | 3.52        | 164        | 3.17         | 148        | 312              | 37                            |
|                   | <b>Kokku</b>  | <b>845</b>         | <b>4893</b>      | <b>4.29</b> | <b>210</b> | <b>3.30</b>  | <b>162</b> | <b>372</b>       | <b>366</b>                    |
| Ida-Viru          | EPK           | 583                | 5068             | 4.34        | 220        | 3.46         | 175        | 395              | 418                           |
|                   | EHF           | 1640               | 4835             | 4.27        | 207        | 3.25         | 157        | 364              | 389                           |
|                   | EK            | 2                  | 2170             | 4.81        | 104        | 3.65         | 79         | 184              | 549                           |
|                   | <b>Kokku</b>  | <b>2226</b>        | <b>4893</b>      | <b>4.29</b> | <b>210</b> | <b>3.31</b>  | <b>162</b> | <b>372</b>       | <b>397</b>                    |
| Jõgeva            | EPK           | 5495               | 4927             | 4.47        | 220        | 3.42         | 168        | 389              | 422                           |
|                   | EHF           | 5003               | 6497             | 4.33        | 281        | 3.39         | 220        | 502              | 449                           |
|                   | EK            | 3                  | 5315             | 4.50        | 239        | 3.42         | 182        | 421              | 994                           |
|                   | <b>Kokku</b>  | <b>10501</b>       | <b>5675</b>      | <b>4.39</b> | <b>249</b> | <b>3.40</b>  | <b>193</b> | <b>442</b>       | <b>437</b>                    |
| Järva             | EPK           | 944                | 4747             | 4.47        | 212        | 3.42         | 162        | 375              | 449                           |
|                   | EHF           | 16114              | 6272             | 4.24        | 266        | 3.29         | 207        | 472              | 423                           |
|                   | EK            | 9                  | 3508             | 5.15        | 181        | 3.54         | 124        | 305              | 491                           |
|                   | <b>Kokku</b>  | <b>17067</b>       | <b>6186</b>      | <b>4.25</b> | <b>263</b> | <b>3.30</b>  | <b>204</b> | <b>467</b>       | <b>424</b>                    |
| Lääne             | EPK           | 354                | 4258             | 4.41        | 188        | 3.40         | 145        | 333              | 404                           |
|                   | EHF           | 2670               | 4482             | 4.35        | 195        | 3.24         | 145        | 340              | 437                           |
|                   | EK            | 10                 | 4420             | 4.82        | 213        | 3.36         | 149        | 362              | 199                           |
|                   | <b>Kokku</b>  | <b>3034</b>        | <b>4456</b>      | <b>4.36</b> | <b>194</b> | <b>3.26</b>  | <b>145</b> | <b>340</b>       | <b>433</b>                    |
| Lääne-Viru        | EPK           | 1108               | 5221             | 4.36        | 228        | 3.39         | 177        | 405              | 384                           |
|                   | EHF           | 10696              | 5723             | 4.20        | 240        | 3.26         | 186        | 427              | 406                           |
|                   | EK            | 18                 | 4581             | 4.47        | 205        | 3.40         | 156        | 360              | 229                           |
|                   | <b>Kokku</b>  | <b>11822</b>       | <b>5674</b>      | <b>4.21</b> | <b>239</b> | <b>3.27</b>  | <b>185</b> | <b>425</b>       | <b>404</b>                    |
| Põlva             | EPK           | 2149               | 5425             | 4.49        | 244        | 3.38         | 183        | 427              | 407                           |
|                   | EHF           | 3506               | 6661             | 4.33        | 288        | 3.33         | 222        | 510              | 415                           |
|                   | <b>Kokku</b>  | <b>5655</b>        | <b>6191</b>      | <b>4.38</b> | <b>271</b> | <b>3.35</b>  | <b>207</b> | <b>479</b>       | <b>412</b>                    |
| Pärnu             | EPK           | 1452               | 5031             | 4.60        | 231        | 3.41         | 171        | 403              | 376                           |
|                   | EHF           | 9841               | 5077             | 4.38        | 222        | 3.26         | 165        | 388              | 397                           |
|                   | EK            | 250                | 3646             | 4.69        | 171        | 3.44         | 125        | 296              | 611                           |
|                   | <b>Kokku</b>  | <b>11543</b>       | <b>5041</b>      | <b>4.41</b> | <b>222</b> | <b>3.28</b>  | <b>165</b> | <b>387</b>       | <b>398</b>                    |
| Rapla             | EPK           | 68                 | 4849             | 4.34        | 210        | 3.37         | 163        | 374              | 519                           |
|                   | EHF           | 7199               | 5695             | 4.26        | 243        | 3.27         | 186        | 429              | 420                           |
|                   | EK            | 53                 | 4270             | 4.96        | 212        | 3.59         | 153        | 365              | 366                           |
|                   | <b>Kokku</b>  | <b>7320</b>        | <b>5676</b>      | <b>4.27</b> | <b>242</b> | <b>3.27</b>  | <b>186</b> | <b>428</b>       | <b>420</b>                    |
| Saare             | EPK           | 4648               | 4634             | 4.36        | 202        | 3.40         | 158        | 360              | 350                           |
|                   | EHF           | 757                | 5151             | 4.26        | 220        | 3.30         | 170        | 390              | 334                           |
|                   | EK            | 84                 | 4274             | 4.89        | 209        | 3.57         | 152        | 361              | 544                           |
|                   | <b>Kokku</b>  | <b>5489</b>        | <b>4700</b>      | <b>4.36</b> | <b>205</b> | <b>3.39</b>  | <b>159</b> | <b>364</b>       | <b>350</b>                    |
| Tartu             | EPK           | 3247               | 5548             | 4.35        | 241        | 3.39         | 188        | 429              | 415                           |
|                   | EHF           | 2705               | 6286             | 4.20        | 264        | 3.29         | 207        | 471              | 399                           |
|                   | EK            | 11                 | 4411             | 4.77        | 210        | 3.53         | 156        | 366              | 453                           |
|                   | <b>Kokku</b>  | <b>5962</b>        | <b>5881</b>      | <b>4.28</b> | <b>252</b> | <b>3.34</b>  | <b>197</b> | <b>448</b>       | <b>408</b>                    |
| Valga             | EPK           | 1876               | 4333             | 4.36        | 189        | 3.33         | 144        | 333              | 435                           |
|                   | EHF           | 974                | 5177             | 4.22        | 218        | 3.23         | 167        | 386              | 360                           |
|                   | EK            | 8                  | 4531             | 4.87        | 221        | 3.61         | 164        | 384              | 415                           |
|                   | <b>Kokku</b>  | <b>2857</b>        | <b>4621</b>      | <b>4.30</b> | <b>199</b> | <b>3.29</b>  | <b>152</b> | <b>351</b>       | <b>406</b>                    |



|                  |              |               |             |             |            |             |            |            |            |
|------------------|--------------|---------------|-------------|-------------|------------|-------------|------------|------------|------------|
| Viljandi         | EPK          | 4303          | 4947        | 4.35        | 215        | 3.38        | 167        | 383        | 465        |
|                  | EHF          | 2552          | 5466        | 4.25        | 232        | 3.25        | 178        | 410        | 433        |
|                  | EK           | 9             | 4259        | 4.98        | 212        | 3.58        | 152        | 364        | 507        |
|                  | <b>Kokku</b> | <b>6863</b>   | <b>5139</b> | <b>4.31</b> | <b>222</b> | <b>3.33</b> | <b>171</b> | <b>393</b> | <b>452</b> |
| Võru             | EPK          | 1236          | 4799        | 4.39        | 211        | 3.36        | 161        | 372        | 360        |
|                  | EHF          | 2040          | 5588        | 4.29        | 240        | 3.21        | 180        | 419        | 360        |
|                  | EK           | 9             | 3324        | 5.20        | 173        | 3.65        | 121        | 294        | 870        |
|                  | <b>Kokku</b> | <b>3285</b>   | <b>5285</b> | <b>4.33</b> | <b>229</b> | <b>3.26</b> | <b>172</b> | <b>401</b> | <b>361</b> |
| Eesti<br>Estonia | EPK          | 27981         | 4939        | 4.41        | 218        | 3.39        | 167        | 385        | 409        |
|                  | EHF          | 73173         | 5712        | 4.28        | 244        | 3.28        | 187        | 432        | 413        |
|                  | EK           | 481           | 3946        | 4.77        | 188        | 3.50        | 138        | 326        | 553        |
|                  | <b>Kokku</b> | <b>101636</b> | <b>5490</b> | <b>4.31</b> | <b>237</b> | <b>3.31</b> | <b>182</b> | <b>419</b> | <b>412</b> |

### 31. Suurima 305 päeva laktatsiooni piima rasva- ja valgutoodanguga lehmad

*Top cows ranked by 305-d. lactation fat and protein productivity*

Eesti punane ER

| Jrk.<br>nr | Reg.nr<br>Reg. No. | Omanik<br>Owner | Maakond<br>County | Lakt. nr<br>Lact.no. | 305 päeva lakt. tood. 305-d. lact. yield |                   |     |                       |     |                    |
|------------|--------------------|-----------------|-------------------|----------------------|--|-------------------|-----|-----------------------|-----|--------------------|
|            |                    |                 |                   |                      | piima<br>kg<br>milk                      | rasva<br>%<br>fat | kg  | valku<br>%<br>protein | kg  | r + v<br>kg<br>f+p |
| 1.         | 542787             | Põlva POÜ       | Põlva             | 5                    | 11310                                    | 4.31              | 487 | 3.50                  | 396 | 883                |
| 2.         | 736597             | Tartu Agro AS   | Tartu             | 5                    | 9322                                     | 5.18              | 483 | 3.58                  | 334 | 817                |
| 3.         | 234097             | Tartu Agro AS   | Tartu             | 3                    | 10648                                    | 4.00              | 426 | 3.67                  | 390 | 816                |
| 4.         | 514830             | Tartu Agro AS   | Tartu             | 2                    | 8892                                     | 5.59              | 497 | 3.57                  | 318 | 815                |
| 5.         | 234006             | Tartu Agro AS   | Tartu             | 3                    | 9222                                     | 5.47              | 505 | 3.32                  | 306 | 811                |
| 6.         | 736584             | Tartu Agro AS   | Tartu             | 5                    | 10944                                    | 4.21              | 461 | 3.19                  | 349 | 809                |
| 7.         | 344330             | Tartu Agro AS   | Tartu             | 2                    | 11750                                    | 3.56              | 419 | 3.28                  | 386 | 804                |
| 8.         | 736535             | Tartu Agro AS   | Tartu             | 6                    | 9760                                     | 4.83              | 472 | 3.34                  | 326 | 798                |
| 9.         | 736640             | Tartu Agro AS   | Tartu             | 4                    | 9738                                     | 5.03              | 490 | 3.16                  | 308 | 797                |
| 10.        | 656267             | Tartu Agro AS   | Tartu             | 6                    | 10734                                    | 4.19              | 449 | 3.23                  | 346 | 796                |
| 11.        | 246357             | Reet Lilleorg   | Jõgeva            | 3                    | 10608                                    | 4.27              | 453 | 3.21                  | 341 | 794                |
| 12.        | 234020             | Tartu Agro AS   | Tartu             | 4                    | 9345                                     | 5.18              | 484 | 3.29                  | 308 | 792                |
| 13.        | 233878             | Tartu Agro AS   | Tartu             | 4                    | 9990                                     | 4.58              | 457 | 3.35                  | 334 | 791                |
| 14.        | 234059             | Tartu Agro AS   | Tartu             | 3                    | 9278                                     | 5.08              | 471 | 3.41                  | 317 | 788                |
| 15.        | 233885             | Tartu Agro AS   | Tartu             | 3                    | 9171                                     | 5.11              | 469 | 3.46                  | 317 | 786                |
| 16.        | 233873             | Tartu Agro AS   | Tartu             | 3                    | 9689                                     | 4.46              | 432 | 3.62                  | 351 | 783                |
| 17.        | 656306             | Tartu Agro AS   | Tartu             | 4                    | 10687                                    | 4.05              | 433 | 3.27                  | 350 | 782                |
| 18.        | 542781             | Põlva POÜ       | Põlva             | 5                    | 10546                                    | 4.14              | 436 | 3.26                  | 344 | 780                |
| 19.        | 736555             | Tartu Agro AS   | Tartu             | 5                    | 8936                                     | 5.17              | 462 | 3.56                  | 318 | 780                |
| 20.        | 387550             | Ilmar Laugis    | Jõgeva            | 9                    | 9442                                     | 4.98              | 470 | 3.28                  | 310 | 780                |
| 21.        | 514873             | Tartu Agro AS   | Tartu             | 2                    | 9563                                     | 4.75              | 454 | 3.40                  | 325 | 779                |
| 22.        | 542764             | Põlva POÜ       | Põlva             | 6                    | 10256                                    | 4.27              | 438 | 3.28                  | 337 | 774                |
| 23.        | 344301             | Tartu Agro AS   | Tartu             | 2                    | 9267                                     | 4.83              | 448 | 3.51                  | 325 | 773                |
| 24.        | 545311             | Viive Lõugas    | Saare             | 6                    | 8047                                     | 6.36              | 512 | 3.23                  | 260 | 772                |
| 25.        | 234058             | Tartu Agro AS   | Tartu             | 3                    | 9238                                     | 4.82              | 445 | 3.49                  | 322 | 768                |



**Eesti holstein** EH

|     |           |                         |            |   |       |      |     |      |     |      |
|-----|-----------|-------------------------|------------|---|-------|------|-----|------|-----|------|
| 1.  | 122320479 | Maasikamäe Piimakari OÜ | L-Viru     | 4 | 13420 | 4.33 | 581 | 3.63 | 487 | 1068 |
| 2.  | 116468198 | Andres Tamme Soone Talu | Tartu      | 3 | 11267 | 4.98 | 561 | 3.45 | 389 | 950  |
| 3.  | 716335    | Müüriku Farmer OÜ       | Lääne-Viru | 3 | 11205 | 4.84 | 543 | 3.57 | 400 | 943  |
| 4.  | 217456    | Andres Tamme Soone Talu | Tartu      | 3 | 11211 | 4.86 | 545 | 3.26 | 366 | 911  |
| 5.  | 346294    | Väätsa Agro OÜ          | Järva      | 3 | 10726 | 5.18 | 555 | 3.19 | 342 | 897  |
| 6.  | 218574    | Põlva POÜ               | Põlva      | 4 | 11733 | 4.31 | 505 | 3.32 | 390 | 895  |
| 7.  | 210357    | Maasikamäe Piimakari OÜ | Lääne-Viru | 4 | 12096 | 4.05 | 489 | 3.34 | 404 | 893  |
| 8.  | 218095    | Lea Puur                | Viljandi   | 5 | 11619 | 4.62 | 537 | 3.06 | 356 | 893  |
| 9.  | 724452    | Piistaoja Katsetalu     | Pärnu      | 5 | 12014 | 4.17 | 501 | 3.21 | 386 | 887  |
| 10. | 257540    | Andres Tamme Soone Talu | Tartu      | 3 | 10769 | 4.81 | 518 | 3.42 | 368 | 886  |
| 11. | 217466    | Andres Tamme Soone Talu | Tartu      | 3 | 11649 | 4.14 | 482 | 3.44 | 401 | 883  |
| 12. | 234253    | Tartu Agro AS           | Tartu      | 3 | 11768 | 4.11 | 483 | 3.35 | 394 | 878  |
| 13. | 210319    | Maasikamäe Piimakari OÜ | Lääne-Viru | 4 | 10425 | 4.56 | 476 | 3.84 | 400 | 876  |
| 14. | 613198    | Liivi Akker             | Pärnu      | 5 | 9098  | 6.15 | 560 | 3.46 | 315 | 875  |
| 15. | 218328    | Põlva POÜ               | Põlva      | 4 | 11809 | 4.15 | 491 | 3.25 | 384 | 874  |
| 16. | 234298    | Tartu Agro AS           | Tartu      | 4 | 12403 | 3.48 | 431 | 3.55 | 441 | 872  |
| 17. | 217441    | Andres Tamme Soone Talu | Tartu      | 4 | 11173 | 4.55 | 508 | 3.25 | 364 | 872  |
| 18. | 310947    | Piistaoja Katsetalu     | Pärnu      | 3 | 13887 | 2.96 | 410 | 3.32 | 462 | 872  |
| 19. | 390021    | Estonia OÜ              | Järva      | 3 | 9489  | 5.37 | 510 | 3.74 | 355 | 865  |
| 20. | 310892    | Tõnu Patrael            | Põlva      | 3 | 12831 | 3.60 | 462 | 3.11 | 399 | 861  |
| 21. | 257560    | Andres Tamme Soone Talu | Tartu      | 2 | 10352 | 4.69 | 486 | 3.61 | 374 | 860  |
| 22. | 415672    | Väätsa Agro OÜ          | Järva      | 3 | 10255 | 5.28 | 541 | 3.09 | 316 | 858  |
| 23. | 344635    | Tartu Agro AS           | Tartu      | 2 | 11445 | 4.04 | 462 | 3.45 | 395 | 857  |
| 24. | 389074    | Estonia OÜ              | Järva      | 3 | 11116 | 4.40 | 489 | 3.31 | 368 | 857  |
| 25. | 415762    | Väätsa Agro OÜ          | Järva      | 3 | 11422 | 4.45 | 508 | 3.05 | 349 | 857  |

**Eesti maakari** EN

|     |        |                  |            |   |      |      |     |      |     |     |
|-----|--------|------------------|------------|---|------|------|-----|------|-----|-----|
| 1.  | 282441 | Jüri Simovart    | Harju      | 5 | 7609 | 4.46 | 339 | 3.70 | 282 | 621 |
| 2.  | 420725 | Leili Lüüs       | Valga      | 4 | 6792 | 5.31 | 361 | 3.43 | 233 | 593 |
| 3.  | 343289 | TÜ Mereranna PÜ  | Saare      | 2 | 6675 | 5.07 | 338 | 3.14 | 210 | 548 |
| 4.  | 580823 | Aare Heinmets    | Pärnu      | 7 | 5547 | 5.97 | 331 | 3.89 | 216 | 547 |
| 5.  | 523983 | Jaano Nuut       | Pärnu      | 3 | 6557 | 4.56 | 299 | 3.63 | 238 | 537 |
| 6.  | 342586 | Jaano Pitk       | Harju      | 3 | 7380 | 3.81 | 281 | 3.45 | 255 | 536 |
| 7.  | 342584 | Jaano Pitk       | Harju      | 5 | 7308 | 3.83 | 280 | 3.49 | 255 | 535 |
| 8.  | 200150 | Sulev Trahv      | Valga      | 4 | 6921 | 4.27 | 296 | 3.39 | 235 | 531 |
| 9.  | 343099 | TÜ Mereranna PÜ  | Saare      | 4 | 5380 | 5.99 | 322 | 3.83 | 206 | 528 |
| 10. | 335800 | Ants Loit        | Viljandi   | 6 | 5872 | 5.09 | 299 | 3.80 | 223 | 522 |
| 11. | 635486 | Lanksaare Talu   | Pärnu      | 5 | 6156 | 4.87 | 300 | 3.46 | 213 | 513 |
| 12. | 229356 | Jaano Kesküla    | Saare      | 3 | 4624 | 7.05 | 326 | 3.92 | 181 | 508 |
| 13. | 229917 | Ellen Randver    | Pärnu      | 7 | 5960 | 4.90 | 292 | 3.48 | 208 | 500 |
| 14. | 260698 | Sulev Trahv      | Valga      | 2 | 6566 | 4.08 | 268 | 3.51 | 231 | 499 |
| 15. | 736042 | Sirje Täht       | Pärnu      | 6 | 6129 | 4.75 | 291 | 3.26 | 200 | 491 |
| 16. | 635485 | Lanksaare Talu   | Pärnu      | 6 | 5739 | 4.98 | 286 | 3.50 | 201 | 486 |
| 17. | 487986 | Malle Lohu       | Pärnu      | 5 | 6151 | 4.50 | 277 | 3.33 | 205 | 482 |
| 18. | 330935 | Valentin Sooberg | Pärnu      | 4 | 5724 | 4.85 | 278 | 3.56 | 204 | 481 |
| 19. | 413583 | Linda Kookmaa    | Viljandi   | 4 | 6203 | 4.28 | 266 | 3.44 | 214 | 479 |
| 20. | 369704 | Helmi Oole       | Viljandi   | 3 | 6051 | 4.66 | 282 | 3.22 | 195 | 477 |
| 21. | 322784 | Helvi Einsok     | Rapla      | 2 | 6612 | 3.92 | 260 | 3.26 | 216 | 475 |
| 22. | 232446 | Lemmi Maasik     | Harju      | 7 | 5343 | 5.33 | 285 | 3.56 | 190 | 475 |
| 23. | 525775 | Malle Reimann    | Lääne-Viru | 6 | 5450 | 5.23 | 285 | 3.48 | 190 | 475 |
| 24. | 739692 | Toivo Ekbaum     | Pärnu      | 3 | 5779 | 4.66 | 269 | 3.38 | 196 | 465 |
| 25. | 232447 | Lemmi Maasik     | Harju      | 7 | 5110 | 5.18 | 265 | 3.91 | 200 | 464 |

**32. Suurima eluea piimatoodanguga lehmad 2001. a.***Best lifetime production cows*

| Jrk. nr. | Reg.nr<br>Reg. No. | Nimi<br>Name | Omanik<br>Owner | Maa-<br>kond<br>County | Sünniaeg<br>Date of birth | Piima kg<br>Milk | Rasva<br>%<br>Fat | Valku<br>%<br>Protein | R+V<br>kg<br>F+V |
|----------|--------------------|--------------|-----------------|------------------------|---------------------------|------------------|-------------------|-----------------------|------------------|
|----------|--------------------|--------------|-----------------|------------------------|---------------------------|------------------|-------------------|-----------------------|------------------|

**Eesti punane ER**

|     |        |       |               |          |          |       |      |      |      |
|-----|--------|-------|---------------|----------|----------|-------|------|------|------|
| 1.  | 542740 |       | Põlva POÜ     | Põlva    | 15.02.90 | 76483 | 4.08 | 3.45 | 5756 |
| 2.  | 369161 | Vari  | Peeter Loit   | Viljandi | 14.01.88 | 75675 | 4.26 | 3.29 | 5711 |
| 3.  | 656311 |       | Tartu Agro AS | Tartu    | 09.11.87 | 74997 | 4.49 | 3.37 | 5895 |
| 4.  | 710288 |       | Põlva POÜ     | Põlva    | 01.01.89 | 74215 | 3.90 | 3.24 | 5297 |
| 5.  | 729039 | Muia  | Melmilk OÜ    | Tartu    | 20.10.89 | 72497 | 3.99 | 3.33 | 5310 |
| 6.  | 387521 | Puna  | Rein Themas   | Jõgeva   | 29.03.88 | 71593 | 4.56 | 3.38 | 5679 |
| 7.  | 542746 |       | Põlva POÜ     | Põlva    | 25.05.90 | 69426 | 3.79 | 3.26 | 4894 |
| 8.  | 621160 | Plika | Vändra OÜ     | Pärnu    | 24.11.87 | 67714 | 3.69 | 3.18 | 4649 |
| 9.  | 418419 | Ulvi  | Sallasto OÜ   | Viljandi | 21.10.87 | 67393 | 4.67 | 3.36 | 5413 |
| 10. | 643265 |       | Rannu Mõis OÜ | Tartu    | 01.01.87 | 66946 | 4.51 | 3.17 | 5143 |

**Eesti holstein EH**

|     |        |        |                     |          |          |        |      |      |      |
|-----|--------|--------|---------------------|----------|----------|--------|------|------|------|
| 1.  | 732945 | Emi    | Estonia OÜ          | Järva    | 18.10.85 | 112013 | 3.88 | 3.18 | 7910 |
| 2.  | 647793 | Anneke | Edda Külasalu       | Järva    | 11.01.89 | 95716  | 4.74 | 3.18 | 7580 |
| 3.  | 734250 | Riksi  | Estonia OÜ          | Järva    | 21.07.86 | 90561  | 3.71 | 3.22 | 6272 |
| 4.  | 734208 | Egri   | Estonia OÜ          | Järva    | 05.06.88 | 87804  | 4.31 | 3.17 | 6565 |
| 5.  | 275706 | Neti   | Arvo Veidenberg     | Viljandi | 19.04.89 | 83601  | 4.28 | 3.26 | 6302 |
| 6.  | 647559 | Hera   | Väätsa Agro OÜ      | Järva    | 28.04.86 | 81777  | 4.85 | 3.24 | 6617 |
| 7.  | 647129 | Purje  | Väätsa Agro OÜ      | Järva    | 13.02.86 | 81752  | 3.76 | 3.10 | 5609 |
| 8.  | 680708 | Perli  | Anton Peek          | Viljandi | 28.04.90 | 79209  | 4.02 | 3.10 | 5641 |
| 9.  | 732960 | Frelle | Estonia OÜ          | Järva    | 10.03.91 | 78630  | 3.60 | 3.23 | 5376 |
| 10. | 724408 |        | Piistaoja Katsetalu | Pärnu    | 01.03.90 | 77668  | 3.66 | 3.04 | 5206 |

**Eesti maakari EN**

|     |        |       |                  |            |          |       |      |      |      |
|-----|--------|-------|------------------|------------|----------|-------|------|------|------|
| 1.  | 635481 | Õõda  | Lanksaare talu   | Pärnu      | 10.05.82 | 57675 | 4.38 | 3.08 | 4299 |
| 2.  | 330937 | Maasi | Valentin Sooberg | Pärnu      | 11.04.87 | 50283 | 4.85 | 2.49 | 3690 |
| 3.  | 738003 |       | Sarapiku Piim OÜ | Lääne-Viru | 01.02.91 | 45772 | 4.05 | 3.14 | 3290 |
| 4.  | 208171 | Ebe   | Milvi Reinem     | Rapla      | 27.03.90 | 43688 | 4.88 | 3.46 | 3644 |
| 5.  | 739777 |       | Kristo Vahenurm  | Pärnu      | 27.07.87 | 41321 | 3.60 | 3.00 | 2725 |
| 6.  | 588701 | Tuti  | Liia Sooäär      | Saare      | 15.01.89 | 40995 | 4.49 | 3.26 | 3180 |
| 7.  | 739779 |       | Kristo Vahenurm  | Pärnu      | 18.04.88 | 40836 | 3.86 | 3.17 | 2872 |
| 8.  | 739778 |       | Kristo Vahenurm  | Pärnu      | 15.03.88 | 39354 | 4.57 | 3.51 | 3178 |
| 9.  | 739784 |       | Kristo Vahenurm  | Pärnu      | 10.02.89 | 38875 | 4.07 | 3.37 | 2890 |
| 10. | 573748 | Tiksi | Ervin Kuusk      | Saare      | 17.04.90 | 38086 | 4.46 | 3.19 | 2913 |



## 33. Parimad jõudluskontrollikarjad rasva- ja valgutoodangu järgi

Best dairy herds by fat and protein productivity

Karja suurus 3...7 lehma *Herd size 3...7 cows*

| Jrk.<br>nr | Omanik<br>Owner  | Maakond<br>County | Tõug<br>Breed | Aasta-<br>lehmi<br>Cows | Toodang aastalehma kohta <i>Prod. per cow</i> |                   |     |                       |     |                  |
|------------|------------------|-------------------|---------------|-------------------------|---|-------------------|-----|-----------------------|-----|------------------|
|            |                  |                   |               |                         | piima<br>kg<br>milk                           | %<br>rasva<br>fat | kg  | %<br>valku<br>protein | kg  | r+v<br>kg<br>f+p |
| 1.         | Liivi Akker      | Pärnu             | EHF           | 3                       | 8525  | 5.32              | 454 | 3.31                  | 282 | 736              |
| 2.         | Edda Külasalu    | Järva             | EHF           | 4                       | 7539  | 4.66              | 352 | 3.56                  | 268 | 620              |
| 3.         | Elar Lehtmets    | Lääne-Viru        | EHF           | 4                       | 7480  | 5.14              | 385 | 3.13                  | 234 | 619              |
| 4.         | Sergei Alits     | Jõgeva            | EHF           | 5                       | 7242  | 5.00              | 362 | 3.52                  | 255 | 617              |
| 5.         | Eino Härm        | Tartu             | Kokku         | 3                       | 8142  | 4.09              | 333 | 3.46                  | 281 | 614              |
|            |                  |                   | EPK           | 1                       | 8763  | 4.12              | 361 | 3.54                  | 310 | 671              |
|            |                  |                   | EHF           | 2                       | 7731  | 4.07              | 314 | 3.40                  | 263 | 577              |
| 6.         | Rein Puust       | Pärnu             | EHF           | 6                       | 7444  | 4.80              | 357 | 3.42                  | 255 | 612              |
| 7.         | Eldur Pärli      | Tartu             | Kokku         | 5                       | 8178  | 3.96              | 324 | 3.44                  | 282 | 605              |
|            |                  |                   | EPK           | 1                       | 8098  | 3.37              | 273 | 3.57                  | 289 | 562              |
|            |                  |                   | EHF           | 4                       | 8198  | 4.11              | 337 | 3.41                  | 280 | 617              |
| 8.         | Heiti Altosaar   | Lääne-Viru        | EHF           | 5                       | 7329  | 4.51              | 330 | 3.70                  | 271 | 602              |
| 9.         | Pilvi Tõlp       | Järva             | EHF           | 6                       | 7542  | 4.71              | 356 | 3.23                  | 244 | 599              |
| 10.        | Andres Saar      | Jõgeva            | Kokku         | 5                       | 7029  | 4.98              | 350 | 3.53                  | 248 | 598              |
|            |                  |                   | EPK           | 5                       | 7020  | 5.00              | 351 | 3.54                  | 248 | 599              |
|            |                  |                   | EHF           | 0                       | 7196  | 4.64              | 334 | 3.40                  | 245 | 579              |
| 11.        | Arvi Salu        | Saare             | Kokku         | 3                       | 7159  | 4.91              | 351 | 3.45                  | 247 | 598              |
|            |                  |                   | EPK           | 2                       | 6497  | 5.24              | 340 | 3.59                  | 233 | 574              |
|            |                  |                   | EHF           | 1                       | 8618  | 4.35              | 375 | 3.21                  | 277 | 652              |
| 12.        | Ants Laadung     | Lääne             | EHF           | 6                       | 8082  | 4.23              | 342 | 3.16                  | 255 | 597              |
| 13.        | Viive Lõugas     | Saare             | EPK           | 4                       | 7145  | 4.94              | 353 | 3.37                  | 241 | 594              |
| 14.        | Kalle Eier       | Pärnu             | Kokku         | 3                       | 7598  | 4.52              | 343 | 3.29                  | 250 | 593              |
|            |                  |                   | EPK           | 1                       | 6737  | 4.30              | 290 | 3.46                  | 233 | 523              |
|            |                  |                   | EHF           | 2                       | 7994  | 4.60              | 368 | 3.23                  | 258 | 625              |
| 15.        | Ilmar Korbun     | Valga             | EHF           | 3                       | 7460  | 4.53              | 338 | 3.34                  | 249 | 587              |
| 16.        | Sulev Annuk      | Tartu             | EHF           | 3                       | 7338  | 4.62              | 339 | 3.26                  | 239 | 578              |
| 17.        | Rein Kaljula     | Rapla             | EHF           | 5                       | 7398  | 4.40              | 325 | 3.41                  | 252 | 578              |
| 18.        | Alfred Prass     | Saare             | EHF           | 3                       | 7594  | 4.35              | 330 | 3.21                  | 244 | 574              |
| 19.        | Ain Piir         | Põlva             | EHF           | 3                       | 7613  | 4.20              | 320 | 3.31                  | 252 | 572              |
| 20.        | Andrus Ainsaar   | Rapla             | EHF           | 5                       | 6747  | 4.93              | 333 | 3.51                  | 237 | 569              |
| 21.        | Mare Veski       | Pärnu             | EHF           | 3                       | 6693  | 4.93              | 330 | 3.57                  | 239 | 569              |
| 22.        | Jaanus Jürgenson | Harju             | EHF           | 7                       | 6696  | 5.03              | 337 | 3.45                  | 231 | 568              |
| 23.        | Aksel Karu       | Harju             | EHF           | 5                       | 8200  | 3.74              | 307 | 3.17                  | 260 | 567              |
| 24.        | Vello Tori       | Rapla             | EHF           | 6                       | 7382  | 4.38              | 323 | 3.30                  | 244 | 567              |
| 25.        | Eha Alamets      | Pärnu             | EHF           | 7                       | 6843  | 4.75              | 325 | 3.52                  | 241 | 565              |
| 26.        | Anton Kuldkepp   | Pärnu             | Kokku         | 3                       | 7272  | 4.35              | 316 | 3.40                  | 247 | 564              |
|            |                  |                   | EPK           | 1                       | 6758  | 4.50              | 304 | 3.50                  | 237 | 541              |
|            |                  |                   | EHF           | 2                       | 7482  | 4.29              | 321 | 3.36                  | 252 | 573              |
| 27.        | Efimia Hunt      | Pärnu             | EHF           | 3                       | 6104  | 5.87              | 359 | 3.29                  | 201 | 560              |
| 28.        | Pirret Sarv      | Pärnu             | Kokku         | 3                       | 6354  | 4.95              | 315 | 3.82                  | 243 | 557              |
|            |                  |                   | EPK           | 1                       | 9136  | 4.99              | 456 | 3.67                  | 336 | 792              |
|            |                  |                   | EHF           | 1                       | 5996  | 4.83              | 290 | 3.72                  | 223 | 513              |
|            |                  |                   | EK            | 1                       | 5004  | 5.05              | 253 | 4.10                  | 205 | 458              |
| 29.        | Tuudo Hommik     | Võru              | EPK           | 6                       | 6835  | 4.75              | 324 | 3.40                  | 232 | 556              |
| 30.        | Olev Tool        | Rapla             | EHF           | 6                       | 7504  | 4.06              | 305 | 3.36                  | 252 | 556              |



Karja suurus 8...20 lehma *Herd size 8...20 cows*

| Jrk.<br>nr | Omanik<br>Owner | Maakond<br>County | Tõug<br>Breed | Aasta-<br>lehmi<br>Cows | Toodang aastalehma kohta <i>Prod. per cow</i> |                   |     |                       |     |                  |
|------------|-----------------|-------------------|---------------|-------------------------|---|-------------------|-----|-----------------------|-----|------------------|
|            |                 |                   |               |                         | piima<br>kg<br>milk                           | %<br>rasva<br>fat | kg  | %<br>valku<br>protein | kg  | r+v<br>kg<br>f+p |
| 1.         | Reet Lilleorg   | Jõgeva            | EPK           | 13                      | 8336  | 4.43              | 369 | 3.41                  | 284 | 653              |
| 2.         | Silvia Pallon   | Viljandi          | EHF           | 16                      | 8377  | 4.30              | 360 | 3.38                  | 283 | 643              |
| 3.         | Luule Tamp      | Lääne-Viru        | Kokku         | 9                       | 8123  | 4.53              | 368 | 3.35                  | 272 | 640              |
|            |                 |                   | EPK           | 3                       | 7572  | 4.97              | 377 | 3.54                  | 268 | 644              |
|            |                 |                   | EHF           | 6                       | 8443  | 4.30              | 363 | 3.26                  | 275 | 638              |
| 4.         | Jaan Sildoja    | Rapla             | EHF           | 15                      | 8058  | 4.42              | 356 | 3.39                  | 273 | 629              |
| 5.         | Ants Kuldma     | Rapla             | EHF           | 12                      | 8500  | 4.09              | 348 | 3.23                  | 275 | 623              |
| 6.         | Uno Raudsepp    | Saare             | Kokku         | 11                      | 7438  | 4.74              | 353 | 3.63                  | 270 | 622              |
|            |                 |                   | EPK           | 10                      | 7340  | 4.81              | 353 | 3.63                  | 267 | 620              |
|            |                 |                   | EHF           | 1                       | 8413  | 4.12              | 347 | 3.58                  | 301 | 648              |
| 7.         | Helgi Kõomägi   | Tartu             | Kokku         | 12                      | 8650  | 3.77              | 326 | 3.31                  | 287 | 612              |
|            |                 |                   | EPK           | 4                       | 8149  | 3.83              | 312 | 3.40                  | 277 | 589              |
|            |                 |                   | EHF           | 8                       | 8884  | 3.74              | 332 | 3.28                  | 291 | 623              |
| 8.         | Hele Lillemäe   | Põlva             | Kokku         | 10                      | 7750  | 4.43              | 343 | 3.42                  | 265 | 608              |
|            |                 |                   | EPK           | 1                       | 8171  | 3.77              | 308 | 3.47                  | 283 | 591              |
|            |                 |                   | EHF           | 9                       | 7703  | 4.51              | 347 | 3.41                  | 263 | 610              |
| 9.         | Jaan Põldre     | Rapla             | EHF           | 17                      | 7652  | 4.38              | 335 | 3.44                  | 263 | 598              |
| 10.        | Iia Vilibert    | Rapla             | Kokku         | 9                       | 7653  | 4.43              | 339 | 3.37                  | 258 | 597              |
|            |                 |                   | EPK           | 2                       | 7408  | 4.39              | 325 | 3.58                  | 265 | 590              |
|            |                 |                   | EHF           | 8                       | 7704  | 4.44              | 342 | 3.33                  | 256 | 599              |
| 11.        | Ilme Kindsiko   | Põlva             | EHF           | 13                      | 7770  | 4.30              | 334 | 3.33                  | 259 | 593              |
| 12.        | Ants Väljaots   | Rapla             | EHF           | 12                      | 7099  | 4.91              | 348 | 3.39                  | 241 | 589              |
| 13.        | Jaan Allingu    | Jõgeva            | EHF           | 17                      | 8165  | 3.93              | 321 | 3.27                  | 267 | 588              |
| 14.        | Sõbessoo OÜ     | Rapla             | EHF           | 20                      | 7976  | 3.97              | 317 | 3.37                  | 269 | 585              |
| 15.        | Erna Parbo      | Harju             | EHF           | 9                       | 7190  | 4.62              | 332 | 3.44                  | 247 | 579              |
| 16.        | Udo Miller      | Pärnu             | EHF           | 13                      | 6822  | 5.03              | 343 | 3.45                  | 235 | 578              |
| 17.        | Vahur Liibert   | Võru              | Kokku         | 9                       | 7259  | 4.56              | 331 | 3.39                  | 246 | 577              |
|            |                 |                   | EPK           | 1                       | 6243  | 4.07              | 254 | 3.30                  | 206 | 460              |
|            |                 |                   | EHF           | 8                       | 7385  | 4.61              | 341 | 3.40                  | 251 | 592              |
| 18.        | Malle Kukke     | Jõgeva            | Kokku         | 11                      | 7179  | 4.50              | 323 | 3.52                  | 253 | 576              |
|            |                 |                   | EPK           | 5                       | 7107  | 4.54              | 322 | 3.60                  | 256 | 578              |
|            |                 |                   | EHF           | 6                       | 7229  | 4.48              | 324 | 3.47                  | 251 | 574              |
| 19.        | Kalle Rohtla    | Pärnu             | EHF           | 12                      | 7413  | 4.32              | 320 | 3.46                  | 256 | 576              |
| 20.        | Rein Möll       | Jõgeva            | EHF           | 9                       | 7448  | 4.40              | 327 | 3.23                  | 241 | 568              |
| 21.        | Olav Taada      | Järva             | EHF           | 19                      | 7129  | 4.58              | 327 | 3.37                  | 240 | 567              |
| 22.        | Saide Hiio      | Harju             | EHF           | 9                       | 7781  | 3.96              | 308 | 3.30                  | 257 | 565              |
| 23.        | Ene Kikkas      | Jõgeva            | EHF           | 19                      | 7589  | 4.14              | 314 | 3.29                  | 250 | 564              |
| 24.        | Helve Tohver    | Järva             | Kokku         | 11                      | 7164  | 4.40              | 315 | 3.47                  | 248 | 564              |
|            |                 |                   | EPK           | 5                       | 7232  | 4.30              | 311 | 3.44                  | 249 | 560              |
|            |                 |                   | EHF           | 6                       | 7104  | 4.49              | 319 | 3.49                  | 248 | 567              |
| 25.        | Anne Mägisoo    | Jõgeva            | EHF           | 13                      | 7324  | 4.18              | 306 | 3.49                  | 255 | 562              |
| 26.        | Anti Pällo      | Lääne-Viru        | Kokku         | 13                      | 7370  | 4.35              | 321 | 3.28                  | 242 | 562              |
|            |                 |                   | EPK           | 5                       | 7128  | 4.55              | 325 | 3.39                  | 242 | 566              |
|            |                 |                   | EHF           | 8                       | 7519  | 4.23              | 318 | 3.21                  | 241 | 560              |
| 27.        | Aivar Kasemets  | Rapla             | EHF           | 16                      | 7324  | 4.36              | 319 | 3.31                  | 242 | 561              |
| 28.        | Igor Leontjev   | Jõgeva            | Kokku         | 8                       | 7406  | 4.10              | 304 | 3.45                  | 256 | 560              |
|            |                 |                   | EPK           | 4                       | 6855  | 4.31              | 295 | 3.56                  | 244 | 539              |
|            |                 |                   | EHF           | 4                       | 7911  | 3.94              | 312 | 3.37                  | 267 | 579              |
| 29.        | Mare Jersov     | Lääne-Viru        | Kokku         | 13                      | 7372  | 4.17              | 307 | 3.42                  | 252 | 559              |
|            |                 |                   | EPK           | 5                       | 7192  | 4.21              | 303 | 3.53                  | 254 | 557              |
|            |                 |                   | EHF           | 8                       | 7491  | 4.14              | 310 | 3.35                  | 251 | 561              |
| 30.        | Imbi Olli       | Võru              | Kokku         | 9                       | 6605  | 5.11              | 338 | 3.34                  | 221 | 559              |
|            |                 |                   | EPK           | 2                       | 7159  | 5.36              | 384 | 3.49                  | 250 | 634              |
|            |                 |                   | EHF           | 7                       | 6456  | 5.04              | 325 | 3.30                  | 213 | 538              |

## Karja suurus 21...50 lehma Herd size 21...50 cows

| Jrk.<br>nr             | Omanik<br>Owner | Maakond<br>County | Tõug<br>Breed | Aasta-<br>lehmi<br>Cows | Toodang aastalehma kohta <i>Prod. per cow</i> |                   |     |                       |     |                  |
|------------------------|-----------------|-------------------|---------------|-------------------------|---|-------------------|-----|-----------------------|-----|------------------|
|                        |                 |                   |               |                         | piima<br>kg<br>milk                           | %<br>rasva<br>fat | kg  | %<br>valku<br>protein | kg  | r+v<br>kg<br>f+p |
| 1. Lea Puur            |                 | Viljandi          | Kokku         | 26                      | 9082  | 4.00              | 364 | 3.31                  | 300 | 664              |
|                        |                 |                   | EPK           | 14                      | 8534  | 3.98              | 340 | 3.36                  | 287 | 627              |
|                        |                 |                   | EHF           | 12                      | 9698  | 4.03              | 391 | 3.25                  | 315 | 706              |
| 2. Eldur Lind          |                 | Pärnu             | EHF           | 22                      | 8166  | 4.63              | 378 | 3.46                  | 282 | 661              |
| 3. Kalju Miklas        |                 | Rapla             | EHF           | 25                      | 8187  | 4.61              | 377 | 3.34                  | 273 | 651              |
| 4. Elle Kivistik       |                 | Harju             | EHF           | 21                      | 8050  | 4.56              | 367 | 3.40                  | 273 | 641              |
| 5. Tõnu Patrael        |                 | Põlva             | Kokku         | 42                      | 8173  | 4.07              | 333 | 3.31                  | 271 | 603              |
|                        |                 |                   | EPK           | 10                      | 6892  | 4.28              | 295 | 3.44                  | 237 | 532              |
|                        |                 |                   | EHF           | 32                      | 8585  | 4.02              | 345 | 3.28                  | 281 | 626              |
| 6. Jaan Ploompuu       |                 | Jõgeva            | EHF           | 50                      | 8184  | 4.04              | 331 | 3.21                  | 263 | 594              |
| 7. Anne Viirmaa        |                 | Lääne-Viru        | Kokku         | 21                      | 7707  | 4.42              | 341 | 3.27                  | 252 | 593              |
|                        |                 |                   | EPK           | 1                       | 7187  | 3.60              | 259 | 3.18                  | 229 | 487              |
|                        |                 |                   | EHF           | 20                      | 7723  | 4.44              | 343 | 3.27                  | 253 | 596              |
| 8. Allar Arusalu       |                 | Järva             | EHF           | 23                      | 7454  | 4.23              | 316 | 3.58                  | 267 | 583              |
| 9. Arvo Veidenberg     |                 | Viljandi          | Kokku         | 46                      | 8042  | 3.96              | 318 | 3.27                  | 263 | 581              |
|                        |                 |                   | EPK           | 2                       | 8330  | 3.89              | 324 | 3.28                  | 273 | 597              |
|                        |                 |                   | EHF           | 44                      | 8026  | 3.96              | 318 | 3.27                  | 262 | 580              |
| 10. Priit Soosalu      |                 | Järva             | EHF           | 27                      | 8055  | 3.89              | 314 | 3.28                  | 265 | 578              |
| 11. Hans Vingisaar     |                 | Viljandi          | Kokku         | 28                      | 7533  | 4.28              | 323 | 3.24                  | 244 | 567              |
|                        |                 |                   | EPK           | 2                       | 8069  | 4.60              | 371 | 3.40                  | 274 | 645              |
|                        |                 |                   | EHF           | 26                      | 7489  | 4.26              | 319 | 3.22                  | 241 | 560              |
| 12. Teet Kivinukk      |                 | Rapla             | Kokku         | 34                      | 7373  | 4.35              | 321 | 3.33                  | 246 | 566              |
|                        |                 |                   | EPK           | 2                       | 5811  | 4.17              | 242 | 3.52                  | 204 | 446              |
|                        |                 |                   | EHF           | 32                      | 7448  | 4.36              | 324 | 3.32                  | 248 | 572              |
| 13. Rein Pöder         |                 | Võru              | Kokku         | 31                      | 7640  | 3.96              | 303 | 3.36                  | 256 | 559              |
|                        |                 |                   | EPK           | 5                       | 7134  | 4.14              | 295 | 3.60                  | 257 | 552              |
|                        |                 |                   | EHF           | 26                      | 7737  | 3.93              | 304 | 3.31                  | 256 | 560              |
| 14. Nurme MJM OÜ       |                 | Lääne-Viru        | EHF           | 35                      | 7589  | 4.13              | 313 | 3.22                  | 244 | 558              |
| 15. Allan Illisson     |                 | Valga             | Kokku         | 25                      | 6963  | 4.46              | 310 | 3.54                  | 247 | 557              |
|                        |                 |                   | EPK           | 15                      | 6887  | 4.52              | 311 | 3.63                  | 250 | 561              |
|                        |                 |                   | EHF           | 11                      | 7069  | 4.38              | 309 | 3.43                  | 242 | 552              |
| 16. Ennu Nurk          |                 | Järva             | Kokku         | 25                      | 7137  | 4.52              | 323 | 3.25                  | 232 | 555              |
|                        |                 |                   | EPK           | 0                       | 5377  | 4.90              | 264 | 2.99                  | 161 | 424              |
|                        |                 |                   | EHF           | 25                      | 7163  | 4.52              | 324 | 3.25                  | 233 | 556              |
| 17. Tõnu Dorch         |                 | Valga             | EHF           | 27                      | 7441  | 4.18              | 311 | 3.25                  | 242 | 553              |
| 18. Ilmar-Priit Kaasik |                 | Järva             | EHF           | 39                      | 7194  | 4.22              | 303 | 3.41                  | 245 | 549              |
| 19. Heinar Villems     |                 | Viljandi          | Kokku         | 33                      | 7545  | 3.88              | 293 | 3.36                  | 254 | 547              |
|                        |                 |                   | EPK           | 1                       | 7271  | 4.87              | 354 | 3.71                  | 270 | 624              |
|                        |                 |                   | EHF           | 32                      | 7553  | 3.85              | 291 | 3.35                  | 253 | 544              |
| 20. Uno Rääbus         |                 | Viljandi          | EHF           | 34                      | 7348  | 4.15              | 305 | 3.25                  | 239 | 544              |
| 21. Sirje Kornel       |                 | Lääne-Viru        | Kokku         | 31                      | 7240  | 4.17              | 302 | 3.33                  | 241 | 543              |
|                        |                 |                   | EPK           | 5                       | 7876  | 4.28              | 337 | 3.44                  | 271 | 608              |
|                        |                 |                   | EHF           | 26                      | 7109  | 4.14              | 295 | 3.30                  | 235 | 529              |
| 22. Lepiku Farm OÜ     |                 | Rapla             | EHF           | 27                      | 6990  | 4.33              | 303 | 3.42                  | 239 | 542              |
| 23. Aivi Kuutok        |                 | Järva             | EHF           | 50                      | 7035  | 4.32              | 304 | 3.36                  | 237 | 541              |
| 24. Heiki Pöld         |                 | Rapla             | EHF           | 27                      | 6826  | 4.44              | 303 | 3.23                  | 220 | 524              |
| 25. Vello Eensalu      |                 | Harju             | EHF           | 31                      | 7011  | 4.09              | 287 | 3.37                  | 236 | 523              |
| 26. Sulev Trahv        |                 | Valga             | Kokku         | 41                      | 6905  | 4.11              | 284 | 3.47                  | 240 | 523              |
|                        |                 |                   | EPK           | 18                      | 6647  | 4.02              | 267 | 3.53                  | 235 | 502              |
|                        |                 |                   | EHF           | 21                      | 7147  | 4.18              | 298 | 3.41                  | 244 | 542              |
|                        |                 |                   | EK            | 2                       | 6646  | 4.23              | 281 | 3.60                  | 239 | 520              |
| 27. Aivar Alviste      |                 | Tartu             | Kokku         | 46                      | 6737  | 4.33              | 292 | 3.42                  | 230 | 522              |
|                        |                 |                   | EPK           | 11                      | 6359  | 4.59              | 292 | 3.63                  | 231 | 523              |
|                        |                 |                   | EHF           | 35                      | 6851  | 4.26              | 292 | 3.36                  | 230 | 522              |
| 28. Marju Part         |                 | Järva             | EHF           | 31                      | 6264  | 4.96              | 311 | 3.37                  | 211 | 522              |
| 29. Arnold Prints      |                 | Pärnu             | Kokku         | 21                      | 6659  | 4.50              | 300 | 3.33                  | 222 | 522              |
|                        |                 |                   | EHF           | 20                      | 6735  | 4.47              | 301 | 3.33                  | 224 | 525              |
|                        |                 |                   | EK            | 1                       | 5493  | 5.04              | 277 | 3.40                  | 187 | 464              |
| 30. Hendrik Allsaar    |                 | Järva             | Kokku         | 27                      | 6593  | 4.55              | 300 | 3.34                  | 220 | 521              |
|                        |                 |                   | EPK           | 13                      | 6445  | 4.67              | 301 | 3.43                  | 221 | 522              |
|                        |                 |                   | EHF           | 13                      | 6741  | 4.44              | 299 | 3.26                  | 220 | 519              |



Karja suurus 51...100 lehma *Herd size 51...100 cows*

| Jrk.<br>nr | Omanik<br><i>Owner</i> | Maakond<br><i>County</i> | Tõug<br><i>Breed</i> | Aasta-<br>lehmi<br><i>Cows</i> | Toodang aastalehma kohta <i>Prod. per cow</i> |                          |     |                              |     |                         |
|------------|------------------------|--------------------------|----------------------|--------------------------------|---|--------------------------|-----|------------------------------|-----|-------------------------|
|            |                        |                          |                      |                                | piima<br>kg<br><i>milk</i>                    | %<br>rasva<br><i>fat</i> | kg  | %<br>valku<br><i>protein</i> | kg  | r+v<br>kg<br><i>f+p</i> |
| 1.         | Andres Tamme Soone     | Talu Tartu               | EHF                  | 99                             | 9425  | 4.29                     | 404 | 3.47                         | 327 | 731                     |
| 2.         | OÜ Põlula Katsefarm    | Lääne-Viru               | Kokku                | 76                             | 9726  | 3.71                     | 361 | 3.45                         | 336 | 697                     |
|            |                        |                          | EPK                  | 21                             | 8728  | 3.88                     | 339 | 3.61                         | 315 | 654                     |
|            |                        |                          | EHF                  | 52                             | 10230   | 3.63                     | 371 | 3.39                         | 347 | 719                     |
|            |                        |                          | EK                   | 3                              | 7897  | 4.29                     | 339 | 3.59                         | 283 | 622                     |
| 3.         | Kivi Talu              | Põlva                    | Kokku                | 58                             | 7171  | 4.79                     | 343 | 3.42                         | 245 | 589                     |
|            |                        |                          | EPK                  | 41                             | 7008  | 4.80                     | 337 | 3.47                         | 243 | 580                     |
|            |                        |                          | EHF                  | 17                             | 7572  | 4.75                     | 359 | 3.30                         | 250 | 610                     |
| 4.         | Eerika Farm OÜ         | Tartu                    | EHF                  | 54                             | 7497  | 4.27                     | 320 | 3.25                         | 244 | 564                     |
| 5.         | Merike Tigavas         | Järva                    | EHF                  | 81                             | 7735  | 3.95                     | 305 | 3.32                         | 257 | 562                     |
| 6.         | Endel Härm             | Põlva                    | Kokku                | 53                             | 7176  | 4.18                     | 300 | 3.44                         | 247 | 547                     |
|            |                        |                          | EPK                  | 29                             | 6576  | 4.19                     | 276 | 3.47                         | 228 | 504                     |
|            |                        |                          | EHF                  | 23                             | 7922  | 4.17                     | 330 | 3.40                         | 270 | 599                     |
| 7.         | Pihlaka Farm OÜ        | Harju                    | EHF                  | 54                             | 7072  | 4.17                     | 295 | 3.33                         | 235 | 531                     |
| 8.         | Raivo Musting          | Põlva                    | EHF                  | 91                             | 7079  | 4.04                     | 286 | 3.39                         | 240 | 526                     |
| 9.         | Ppf Nurme OÜ           | Järva                    | Kokku                | 100                            | 7031  | 4.08                     | 287 | 3.39                         | 238 | 526                     |
|            |                        |                          | EPK                  | 14                             | 5527  | 4.41                     | 244 | 3.55                         | 196 | 440                     |
|            |                        |                          | EHF                  | 86                             | 7277  | 4.04                     | 294 | 3.37                         | 245 | 540                     |
| 10.        | Ants Raadik            | Viljandi                 | Kokku                | 69                             | 6971  | 4.17                     | 291 | 3.32                         | 231 | 522                     |
|            |                        |                          | EPK                  | 11                             | 7038  | 4.24                     | 298 | 3.42                         | 240 | 539                     |
|            |                        |                          | EHF                  | 57                             | 6957  | 4.16                     | 289 | 3.30                         | 229 | 519                     |
| 11.        | Anton Peek             | Viljandi                 | Kokku                | 70                             | 6197  | 4.53                     | 281 | 3.32                         | 206 | 486                     |
|            |                        |                          | EPK                  | 34                             | 5985  | 4.58                     | 274 | 3.37                         | 202 | 476                     |
|            |                        |                          | EHF                  | 37                             | 6393  | 4.48                     | 286 | 3.27                         | 209 | 495                     |
| 12.        | Loo Farmid OÜ          | Rapla                    | EHF                  | 52                             | 6457  | 4.32                     | 279 | 3.20                         | 206 | 485                     |
| 13.        | Parduse Talu           | Viljandi                 | EPK                  | 54                             | 6100  | 4.44                     | 271 | 3.46                         | 211 | 482                     |
| 14.        | Kalev Pagar            | Lääne-Viru               | EHF                  | 52                             | 6406  | 4.10                     | 263 | 3.24                         | 208 | 470                     |
| 15.        | Sikkani-Pendri Talu    | Lääne-Viru               | EHF                  | 92                             | 6322  | 4.12                     | 260 | 3.25                         | 205 | 466                     |
| 16.        | Sallasto OÜ            | Viljandi                 | EPK                  | 75                             | 6113  | 4.15                     | 254 | 3.41                         | 208 | 462                     |
| 17.        | Roigumõisa OÜ          | Pärnu                    | EHF                  | 95                             | 6099  | 4.29                     | 262 | 3.26                         | 199 | 461                     |
| 18.        | Liivasaare Talu        | Põlva                    | Kokku                | 69                             | 5844  | 4.26                     | 249 | 3.47                         | 203 | 452                     |
|            |                        |                          | EPK                  | 61                             | 5792  | 4.27                     | 247 | 3.50                         | 202 | 450                     |
|            |                        |                          | EHF                  | 8                              | 6252  | 4.22                     | 264 | 3.32                         | 207 | 471                     |
| 19.        | Erki Martinson         | Järva                    | EHF                  | 81                             | 5932  | 4.28                     | 254 | 3.25                         | 193 | 447                     |
| 20.        | Gunnar Ots             | Tartu                    | Kokku                | 91                             | 5874  | 4.21                     | 248 | 3.31                         | 195 | 442                     |
|            |                        |                          | EPK                  | 12                             | 5954  | 4.14                     | 247 | 3.43                         | 204 | 451                     |
|            |                        |                          | EHF                  | 79                             | 5862  | 4.23                     | 248 | 3.30                         | 193 | 441                     |
| 21.        | Salme POÜ              | Saare                    | Kokku                | 91                             | 5975  | 4.04                     | 242 | 3.34                         | 200 | 442                     |
|            |                        |                          | EPK                  | 87                             | 5958  | 4.05                     | 241 | 3.36                         | 200 | 441                     |
|            |                        |                          | EHF                  | 4                              | 6334  | 4.02                     | 255 | 3.11                         | 197 | 452                     |
| 22.        | Margus Saare           | Pärnu                    | EHF                  | 72                             | 6162  | 3.94                     | 243 | 3.19                         | 197 | 439                     |
| 23.        | Jaan Jeeseer           | Rapla                    | EHF                  | 77                             | 5667  | 4.38                     | 248 | 3.31                         | 187 | 435                     |
| 24.        | Termeco OÜ             | Tartu                    | Kokku                | 96                             | 5658  | 4.33                     | 245 | 3.33                         | 188 | 434                     |
|            |                        |                          | EPK                  | 35                             | 5421  | 4.41                     | 239 | 3.39                         | 184 | 423                     |
|            |                        |                          | EHF                  | 61                             | 5797  | 4.29                     | 249 | 3.30                         | 191 | 440                     |
| 25.        | Linnamäe Talu          | Viljandi                 | Kokku                | 65                             | 5634  | 4.31                     | 243 | 3.33                         | 187 | 430                     |
|            |                        |                          | EPK                  | 62                             | 5631  | 4.33                     | 244 | 3.34                         | 188 | 432                     |
|            |                        |                          | EHF                  | 3                              | 5694  | 3.87                     | 220 | 3.06                         | 174 | 395                     |
| 26.        | Aare Hindremäe         | Rapla                    | EHF                  | 60                             | 5627  | 4.22                     | 238 | 3.33                         | 187 | 425                     |
| 27.        | Linavästri ATK OÜ      | Tartu                    | Kokku                | 71                             | 5553  | 4.27                     | 237 | 3.38                         | 188 | 425                     |
|            |                        |                          | EPK                  | 54                             | 5508  | 4.31                     | 237 | 3.44                         | 189 | 427                     |
|            |                        |                          | EHF                  | 16                             | 5705  | 4.16                     | 237 | 3.21                         | 183 | 420                     |
| 28.        | Helme Viirsalu         | Rapla                    | Kokku                | 60                             | 5695  | 4.20                     | 239 | 3.26                         | 186 | 425                     |
|            |                        |                          | EPK                  | 8                              | 5430  | 4.09                     | 222 | 3.36                         | 182 | 405                     |
|            |                        |                          | EHF                  | 52                             | 5737  | 4.21                     | 242 | 3.25                         | 186 | 428                     |
| 29.        | Karitsu Rantsho OÜ     | Rapla                    | EHF                  | 76                             | 5789  | 4.03                     | 233 | 3.23                         | 187 | 420                     |
| 30.        | Elbu Farmer OÜ         | Pärnu                    | EHF                  | 52                             | 5211  | 4.66                     | 243 | 3.26                         | 170 | 413                     |



Karja suurus üle 100 lehma *Herd size over 100 cows*

| Jrk.<br>nr | Omanik<br>Owner         | Maakond<br>County | Tõug<br>Breed | Aasta-<br>lehmi<br>Cows | Toodang aastalehma kohta <i>Prod. per cow</i> |                   |     |                       |     |                  |
|------------|-------------------------|-------------------|---------------|-------------------------|---|-------------------|-----|-----------------------|-----|------------------|
|            |                         |                   |               |                         | piima<br>kg<br>milk                           | %<br>rasva<br>fat | kg  | %<br>valku<br>protein | kg  | r+v<br>kg<br>f+p |
| 1.         | Maasikamäe Piimakari OÜ | Lääne-Viru        | EHF           | 128                     | 10440   | 3.55              | 370 | 3.45                  | 360 | 730              |
| 2.         | Põlva POÜ               | Põlva             | Kokku         | 894                     | 8350  | 4.19              | 349 | 3.49                  | 292 | 641              |
|            |                         |                   | EPK           | 39                      | 8109  | 4.19              | 340 | 3.58                  | 290 | 630              |
|            |                         |                   | EHF           | 855                     | 8361  | 4.19              | 350 | 3.49                  | 292 | 642              |
| 3.         | Piistaoja Katsetalu     | Pärnu             | EHF           | 248                     | 8665  | 4.01              | 348 | 3.34                  | 289 | 637              |
| 4.         | Estonia OÜ              | Järva             | Kokku         | 1942                    | 8247  | 3.87              | 319 | 3.35                  | 276 | 595              |
|            |                         |                   | EPK           | 1                       | 7931  | 4.24              | 336 | 3.54                  | 281 | 617              |
|            |                         |                   | EHF           | 1941                    | 8247  | 3.87              | 319 | 3.35                  | 276 | 595              |
| 5.         | Vainu OÜ                | Tartu             | Kokku         | 113                     | 7560  | 4.32              | 327 | 3.52                  | 266 | 593              |
|            |                         |                   | EPK           | 39                      | 6576  | 4.49              | 295 | 3.60                  | 236 | 532              |
|            |                         |                   | EHF           | 73                      | 8088  | 4.24              | 343 | 3.49                  | 282 | 626              |
| 6.         | Tartu Agro AS           | Tartu             | Kokku         | 1075                    | 7688  | 4.27              | 329 | 3.38                  | 260 | 589              |
|            |                         |                   | EPK           | 621                     | 7399  | 4.35              | 322 | 3.44                  | 254 | 576              |
|            |                         |                   | EHF           | 454                     | 8083  | 4.18              | 338 | 3.32                  | 268 | 606              |
| 7.         | Adavere Agro AS         | Jõgeva            | Kokku         | 681                     | 7636  | 4.24              | 324 | 3.40                  | 260 | 583              |
|            |                         |                   | EPK           | 52                      | 6584  | 4.04              | 266 | 3.41                  | 224 | 490              |
|            |                         |                   | EHF           | 629                     | 7722  | 4.25              | 329 | 3.40                  | 263 | 591              |
| 8.         | Kehtna Mõisa OÜ         | Rapla             | EHF           | 316                     | 7540  | 4.29              | 323 | 3.41                  | 257 | 580              |
| 9.         | Avo Kruusla             | Põlva             | Kokku         | 251                     | 8053  | 3.86              | 311 | 3.33                  | 268 | 579              |
|            |                         |                   | EPK           | 119                     | 7567  | 3.87              | 293 | 3.40                  | 257 | 550              |
|            |                         |                   | EHF           | 132                     | 8492  | 3.85              | 327 | 3.28                  | 279 | 606              |
| 10.        | Selja OÜ                | Pärnu             | EHF           | 630                     | 7640  | 4.22              | 323 | 3.29                  | 252 | 574              |
| 11.        | Sarapiku Piim OÜ        | Lääne-Viru        | Kokku         | 178                     | 7837  | 3.97              | 311 | 3.27                  | 256 | 567              |
|            |                         |                   | EPK           | 72                      | 7736  | 4.02              | 311 | 3.37                  | 260 | 572              |
|            |                         |                   | EHF           | 105                     | 7919  | 3.93              | 311 | 3.20                  | 253 | 565              |
|            |                         |                   | EK            | 1                       | 6821  | 4.20              | 287 | 3.19                  | 218 | 504              |
| 12.        | Õnne Piimakarjatalu OÜ  | Jõgeva            | Kokku         | 714                     | 6973  | 4.52              | 315 | 3.52                  | 245 | 561              |
|            |                         |                   | EPK           | 1                       | 6841  | 4.21              | 288 | 3.53                  | 241 | 529              |
|            |                         |                   | EHF           | 713                     | 6973  | 4.52              | 315 | 3.52                  | 245 | 561              |
| 13.        | Müüriku Farmer OÜ       | Lääne-Viru        | EHF           | 431                     | 7259  | 4.26              | 309 | 3.39                  | 246 | 556              |
| 14.        | Risti Agro AS           | Järva             | EHF           | 401                     | 7228  | 4.19              | 303 | 3.48                  | 251 | 554              |
| 15.        | Pakar AS                | Harju             | EHF           | 385                     | 6492  | 5.02              | 326 | 3.41                  | 221 | 547              |
| 16.        | Väätsa Agro OÜ          | Järva             | EHF           | 2004                    | 7233  | 4.20              | 304 | 3.25                  | 235 | 539              |
| 17.        | Karilatsi PÜ            | Põlva             | EHF           | 157                     | 6807  | 4.51              | 307 | 3.37                  | 229 | 536              |
| 18.        | Hiumaa Agro OÜ          | Hiiu              | EHF           | 130                     | 6864  | 4.51              | 310 | 3.20                  | 219 | 529              |
| 19.        | Kelko OÜ                | Rapla             | EHF           | 301                     | 7245  | 3.94              | 286 | 3.34                  | 242 | 528              |
| 20.        | Krootuse Agro AS        | Põlva             | Kokku         | 415                     | 6407  | 5.02              | 322 | 3.20                  | 205 | 527              |
|            |                         |                   | EPK           | 93                      | 5871  | 5.20              | 305 | 3.35                  | 196 | 502              |
|            |                         |                   | EHF           | 322                     | 6561  | 4.98              | 327 | 3.16                  | 207 | 534              |
| 21.        | Kavari Suurtalu OÜ      | Pärnu             | EHF           | 186                     | 7110  | 4.05              | 288 | 3.34                  | 237 | 526              |
| 22.        | Tavex OÜ                | Rapla             | EHF           | 246                     | 7091  | 4.07              | 289 | 3.31                  | 235 | 524              |
| 23.        | Torma POÜ               | Jõgeva            | Kokku         | 499                     | 6793  | 4.25              | 289 | 3.47                  | 236 | 524              |
|            |                         |                   | EPK           | 113                     | 5773  | 4.58              | 264 | 3.69                  | 213 | 477              |
|            |                         |                   | EHF           | 386                     | 7093  | 4.17              | 296 | 3.41                  | 242 | 538              |
| 24.        | Vetiku S.T. OÜ          | Lääne-Viru        | EHF           | 191                     | 7096  | 4.04              | 287 | 3.34                  | 237 | 524              |
| 25.        | Aico Agro AS            | Lääne-Viru        | EHF           | 418                     | 6747  | 4.47              | 301 | 3.27                  | 220 | 522              |
| 26.        | Diner AS                | Lääne-Viru        | EHF           | 135                     | 6879  | 4.21              | 289 | 3.32                  | 228 | 517              |
| 27.        | Härjanurme Mõis OÜ      | Jõgeva            | Kokku         | 353                     | 6617  | 4.38              | 290 | 3.43                  | 227 | 517              |
|            |                         |                   | EPK           | 144                     | 5943  | 4.51              | 268 | 3.50                  | 208 | 476              |
|            |                         |                   | EHF           | 209                     | 7080  | 4.30              | 305 | 3.39                  | 240 | 545              |
| 28.        | Männiku Piim OÜ         | Tartu             | Kokku         | 166                     | 6614  | 4.25              | 281 | 3.40                  | 225 | 506              |
|            |                         |                   | EPK           | 101                     | 6254  | 4.32              | 270 | 3.46                  | 216 | 486              |
|            |                         |                   | EHF           | 66                      | 7168  | 4.15              | 297 | 3.33                  | 239 | 536              |
| 29.        | Viraito OÜ              | Jõgeva            | Kokku         | 140                     | 6541  | 4.38              | 286 | 3.36                  | 220 | 506              |
|            |                         |                   | EPK           | 105                     | 6354  | 4.46              | 283 | 3.37                  | 214 | 497              |
|            |                         |                   | EHF           | 35                      | 7101  | 4.16              | 296 | 3.32                  | 236 | 531              |
| 30.        | Aravete Agro OÜ         | Järva             | EHF           | 1926                    | 6301  | 4.69              | 296 | 3.29                  | 207 | 503              |

## Lüpsikarja geneetiline hindamine

Jõudluskontrolli Keskus (JKK) teostab lüpsikarja jõudlus-, välimiku- ja udara tervise tunnuste geneetilise hindamise kord kvartalis, katstes jõudlus- ja udara tervise tunnuste hindamisel BLUP kontrollpäeva loomamudelit (KPM) ja välimikutunnuste hindamiseks BLUP loomamudelit (LM). 1998.a. veebruarist alates osaleb JKK rahvusvahelises pullide hindamises (Interbull) eesti holsteini tõu baasil hinnatud pullide jõudlustunnuste ja 2001. aasta maist ka udara tervise tunnuste hindamisandmetega. Tulemused avaldatakse koos Interbulli hindamistulemustega reeglina veebruari, mai, augusti ja novembri täisnädala teisel teisipäeval.

Pulli hindamistulemused avalikustatakse, kui hindamises osales pullil vähemalt 20 tütar vähemalt kolmes karjas (välimikutunnuste korral vähemalt viis tütar). Jõudlustunnuste Interbulli hindamise tulemused on ametlikud rahvusliku hindamise tulemuste puudumisel või tingimisel, et hindamistulemuste usaldusväärsus on väiksem kui 70%. Udara tervise tunnuste Interbulli hindamise tulemused on ametlikud siis, kui jõudlustunnuste Interbulli hindamise tulemused on ametlikud.

### BLUP-kontrollpäeva loomamudeli kasutamise tingimused veiste jõudlustunnuste aretusväärtuste hindamisel

#### I 2002 hindamine

|  |   |                       |                 |
|--|---|-----------------------|-----------------|
| <b>Tõud</b>                                    | eesti holstein (EHF), eesti punane (EPK)  |                       |                 |
| <b>Hinnatavad tunnused</b>                     | piim(kg), rasv(kg), valk(kg)<br>Rasva - ja valgusisalduse aretusväärtused arvutatakse järgmiselt:<br>EHF $AVrasva\% = (AVrasv * 100 - AVpiim * 4.19) / (AVpiim + 5122)$<br>$AVvalgu\% = (AVvalk * 100 - AVpiim * 3.09) / (AVpiim + 5122)$<br>EPK $AVrasva\% = (AVrasv * 100 - AVpiim * 4.38) / (AVpiim + 4185)$<br>$AVvalgu\% = (AVvalk * 100 - AVpiim * 3.23) / (AVpiim + 4185)$                         |                       |                 |
|  | Valemities olevad konstandid väljendavad hinnatavate baasaasta lehmade 2. laktatsiooni toodangu keskmisi näitajaid.   |                       |                 |
| <b>Geneetilised parameetrid: h<sup>2</sup></b> | <u>tunnus</u>   | <u>1.lakt.</u>        | <u>2. lakt.</u> |
|  | piim(kg)  | 0.30                  | 0.24            |
|  | rasv(kg)  | 0.25                  | 0.20            |
|  | valk(kg)  | 0.25                  | 0.23            |
| <b>Andmed</b>                                  | 1., 2. ja 3. laktatsiooni kuni 15 esimese kontrolllülpsi andmed   |                       |                 |
| <b>Andmete sobivuse tingimused</b>             | poegimise vanus :   | 1.laktatsioonil       | 20 -42 kuud     |
|  |   | 2.laktatsioonil       | 30 -56 kuud     |
|  |   | 3.laktatsioonil       | 44 -75 kuud     |
|  | kontrolllülpsi aeg:   | 5 < lüpsipäevi <= 365 |                 |
|  | 1. kontrolllülpsi aeg:  | lüpsipäevi < 100      |                 |
| <b>Lehmad</b>                                  | kõik lehmad, kelle 1.poegimise aeg >= 01.oktoober 1994.a<br>ja kellel on vähemalt 1. laktatsiooni 3 esimese kontrolllülpsi andmed ja isa andmed teada.  |                       |                 |
| <b>Pullid</b>                                  | kõik pullid, kelle tütreid on hindamises.   |                       |                 |
| <b>Mudel</b>                                   | $y = KKLP + f(LP) + pe + a + e$<br>y - lehma kontrollpäeva toodang;<br>KKLP - laktatsiooni kontrollpäeva fikseeritud efekt karjas/farmis;<br>f(LP) - lüpsipäevade arvu fikseeritud efekt<br>konkreetse POEGIMISVANUS * POEGIMISSESSIOON * POEGIMISVAHEMIK * LAKTATSIOON GRUPIS;<br>pe - looma laktatsioonisisene alaline keskkonnaefekt;<br>a - looma geneetiline efekt;<br>e - mitteseletatav jääkefekt. |                       |                 |
| <b>Hindamise meetod</b>                        | Mitme tunnusega BLUP kontrollpäeva loomamudel järgmiste tunnustega:<br>1. laktatsiooni toodang;<br>2. laktatsiooni toodang;<br>3. laktatsiooni toodang.   |                       |                 |
| <b>Aretusväärtuste esitamine</b>               | Iga tunnuse aretusväärtus on 1., 2. ja 3. laktatsiooni aretusväärtuste keskmine.<br>Suhteline piimajõudluse aretusväärtus SPAV väljendatakse punktides, kehtestades keskmiseks 100 punkti ja standardhälbeks 12 punkti ning arvutatakse:<br><br>$EHF SPAV = 94.9 + 0.16 * AVrasv + 0.64 * AVvalk$<br>$EPK SPAV = -1.7 - 0.015 * SAVpiim + 0.15 * SAVrasv + 0.88 * SAVvalk$                                |                       |                 |
| <b>Geneetiline alus</b>                        | Lehmade ja pullide aretusväärtused korrigeeritakse 1995. a sündinud lehmade aretusväärtuste keskmise võrra, mille tulemusel 1995.a sündinud lehmade keskmine aretusväärtus = 0.<br><br>SPAV-i arvutamise aluseks on nn. libisev baas - 2002. a hindamistes on selleks 1992-1994.a sündinud pullide (kellel vähemalt 20 hinnatud tütar) aretusväärtuste keskmine ja standardhälve.                         |                       |                 |
| <b>Avaldamine</b>                              | Avaldatakse pullid, kellel >= 20 tütar >= 3 karjas ja kelle noorim hinnatud tütar on sündinud viimase 84 kuu jooksul.   |                       |                 |



## Genetic Evaluation for Dairy Cattle in Estonia

Breeding values for production, conformation and udder health traits for bulls and cows in Estonia are estimated by Estonian Animal Recording Centre (ARC) four times per year. Breeding value estimation takes place for Estonian Holstein Cattle and Estonian Red Cattle separately, using for production and udder health traits the BLUP test day animal model (TDM) and for conformation traits the BLUP animal model (AM).

Our data for Estonian Holstein Cattle have been included in Interbull (International Bull Evaluation Service) evaluation for production traits since February 1998 and for udder health traits since May 2001.

The publication dates of national results together with Interbull results co-ordinated with Interbull Centre are usually on the second Tuesday of February, May, August and November.

National proofs of bull will be published, when bull has at least 20 daughters in at least three herds (for conformation traits: at least five daughters) in the evaluation. Interbull proofs for production traits are official unless national proofs with min reliability 70% are available. Interbull proofs for udder health traits are official together with Interbull proofs for production traits.

### Genetic Evaluation for Yield Traits Facts on Estimation of Breeding Values

I 2002

|  |  |                                |                       |                       |
|--|--|--------------------------------|-----------------------|-----------------------|
| <b>Breed</b>   | Estonian Holstein (EHF), Estonian Red (ER)   |                                |                       |                       |
| <b>Traits evaluated</b>                                    | Milk, fat and protein yield (kg);<br>fat and protein concentration (%) proofs are calculated from respective yield trait proofs<br>EHF: $BV_{fat\_content} = (BV_{fat} * 100 - BV_{milk} * 4.19) / (BV_{milk} + 5122)$<br>$BV_{protein\_content} = (BV_{protein} * 100 - BV_{milk} * 3.09) / (BV_{milk} + 5122)$<br>ER: $BV_{fat\_content} = (BV_{fat} * 100 - BV_{milk} * 4.38) / (BV_{milk} + 4185)$<br>$BV_{protein\_content} = (BV_{protein} * 100 - BV_{milk} * 3.23) / (BV_{milk} + 4185)$ |                                |                       |                       |
| <b>Number of lactations included in the evaluation</b>     | Up to 15 test day records of 1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> lactation   |                                |                       |                       |
| <b>Genetic parameters applied</b>                          | <b>Lactation:</b>  | <b>1<sup>st</sup></b>          | <b>2<sup>nd</sup></b> | <b>3<sup>rd</sup></b> |
|  | Heritabilities:  |                                |                       |                       |
|  | milk yield   | 0.30                           | 0.24                  | 0.23                  |
|  | fat yield  | 0.25                           | 0.20                  | 0.18                  |
|  | protein yield  | 0.25                           | 0.23                  | 0.20                  |
| <b>Inclusion and extension of records</b>                  | Age at calving:  | 1st lactation:                 | 20 - 42 months        |                       |
|  |  | 2nd lactation:                 | 30 - 56 months        |                       |
|  |  | 3rd lactation:                 | 44 - 75 months        |                       |
|  | Test day date:   | between 5 and 365 days in milk |                       |                       |
|  | 1 <sup>st</sup> test day date:   | between 5 and 100 days in milk |                       |                       |
| <b>Cows</b>  | All cows with 1st calving >= 01-oct-1994 and at least first three test day records and identified sire.  |                                |                       |                       |
| <b>Sire categories</b>                                     | All identified sires.  |                                |                       |                       |
| <b>Method of evaluation</b>                                | Single Trait Multi-Lactation Test Day BLUP Animal Model.   |                                |                       |                       |
| <b>Environmental effects in the model</b>                  | Fixed: Herd test day effect within lactation, fixed lactation curves defined evaluation model by LACTATION * CALVING AGE * CALVING SEASON * CALVING INTERVAL (total 210 different curves).<br>Random: Permanent environmental effects within each lactation.   |                                |                       |                       |
| <b>Use of genetic groups</b>                               | Fixed genetic groups for unknown parents of animals based on sex and year of birth.  |                                |                       |                       |
| <b>Expression of genetic</b>                               | Estimated breeding values (EBV) for milk, fat and protein (kg), fat and protein merit (%) as average EBV from lactations 1 to 3.<br>Relative breeding values (RBV) for production index SPAV with mean of 100 and SD of 12 points, combining breeding values of milk, fat and protein quantity by relative economic weights of 0:1:4 for EHF and combining relative breeding values of milk, fat and protein quantity by relative economic weights of -0.1:1:6 for ER                            |                                |                       |                       |
| <b>Genetic base</b>  | EBV: All cows born in 1995<br>RBV: Defined by actually proven AI bulls (in 2001 by bulls born in 1992- 1994), having 20 or more daughters in estimation.   |                                |                       |                       |
| <b>Minimum requirements for publication of sire proofs</b> | 20 daughters in 3 herds, the youngest daughter was born in last 84 months.   |                                |                       |                       |



### 34. Pullide aretusväärtuste keskmised sünniaastate järgi (hinnatud I kvartal 2002.a., kontrollpäeva mudel)

#### Estimated breeding values (EBV) of sires by year of birth

| Sünni<br>aasta<br>Year of<br>birth | Eesti punane <i>Estonian Red</i>  |                                   |                    |       |                        |       |                  | Eesti holstein <i>Estonian Holstein</i> |                                   |                    |       |                        |       |                  |
|------------------------------------|-----------------------------------|-----------------------------------|--------------------|-------|------------------------|-------|------------------|---|-----------------------------------|--------------------|-------|------------------------|-------|------------------|
|                                    | pullide<br>arv<br>no. of<br>sires | keskmine aretusväärtus <i>EBV</i> |                    |       |                        |       |                  | pullide<br>arv<br>no. of<br>sires       | keskmine aretusväärtus <i>EBV</i> |                    |       |                        |       |                  |
|                                    |                                   | piima<br>kg<br>milk               | rasva<br>kg<br>fat | %     | valgu<br>kg<br>protein | %     | SPAV<br>RBV Milk |   | piima<br>kg<br>milk               | rasva<br>kg<br>fat | %     | valgu<br>kg<br>protein | %     | SPAV<br>RBV Milk |
| 1983                               | 23                                | +110                              | +3.4               | -0.03 | +1.6                   | -0.04 | 103              | 24                                      | +241                              | +8.3               | -0.03 | +3.8                   | -0.06 | 99               |
| 1984                               | 9                                 | -5                                | +6.0               | +0.16 | -0.1                   | +0.01 | 102              | 17                                      | -85                               | -3.4               | +0.02 | -3.0                   | +0.01 | 92               |
| 1985                               | 17                                | +229                              | +10.2              | +0.02 | +5.5                   | -0.04 | 107              | 8                                       | -141                              | -3.6               | +0.05 | -3.6                   | +0.02 | 92               |
| 1986                               | 14                                | +205                              | +12.1              | +0.10 | +6.1                   | +0.01 | 108              | 16                                      | +213                              | +5.1               | -0.06 | +3.5                   | -0.05 | 98               |
| 1987                               | 11                                | +420                              | +8.3               | -0.18 | +12.0                  | +0.01 | 112              | 18                                      | +21                               | +2.8               | +0.07 | +1.2                   | +0.02 | 96               |
| 1988                               | 6                                 | +712                              | +17.5              | -0.22 | +16.6                  | -0.11 | 117              | 18                                      | +135                              | +7.8               | +0.06 | +4.1                   | +0.01 | 99               |
| 1989                               | 32                                | +507                              | +18.5              | -0.08 | +11.3                  | -0.10 | 112              | 34                                      | +335                              | +7.3               | -0.11 | +5.2                   | -0.09 | 99               |
| 1990                               | 19                                | +529                              | +18.2              | -0.10 | +9.2                   | -0.12 | 111              | 37                                      | +148                              | +5.8               | +0.01 | +4.3                   | 0.00  | 99               |
| 1991                               | 21                                | +459                              | +13.1              | -0.15 | +10.6                  | -0.07 | 112              | 32                                      | +123                              | +4.8               | +0.01 | +4.7                   | +0.03 | 99               |
| 1992                               | 23                                | -64                               | -6.6               | -0.06 | -2.8                   | +0.00 | 99               | 39                                      | +215                              | +2.7               | -0.08 | +3.9                   | -0.03 | 98               |
| 1993                               | 8                                 | +319                              | +2.5               | -0.25 | +2.4                   | -0.16 | 104              | 36                                      | +674                              | +14.7              | -0.21 | +11.7                  | -0.15 | 105              |
| 1994                               | 10                                | +172                              | -2.8               | -0.22 | +4.9                   | +0.02 | 105              | 20                                      | +168                              | +4.3               | -0.04 | +0.2                   | -0.09 | 96               |
| 1995                               | 12                                | +348                              | +7.5               | -0.16 | +6.3                   | -0.09 | 108              | 19                                      | +943                              | +27.3              | -0.18 | +22.5                  | -0.10 | 114              |
| 1996                               | 5                                 | +636                              | +20.5              | -0.16 | +18.6                  | -0.04 | 118              | 5                                       | +956                              | +24.0              | -0.24 | +19.2                  | -0.16 | 111              |

### 35. Lehmade aretusväärtuste keskmised sünniaastate järgi (hinnatud I kvartal 2001.a., kontrollpäeva mudel)

#### Estimated breeding values (EBV) of cows by year of birth

| Sünni<br>aasta<br>Year of<br>birth | Eesti punane <i>Estonian Red</i> |                                   |                    |       |                        |       |                  | Eesti holstein <i>Estonian Holstein</i> |                                   |                    |       |                        |       |                  |
|------------------------------------|----------------------------------|-----------------------------------|--------------------|-------|------------------------|-------|------------------|---|-----------------------------------|--------------------|-------|------------------------|-------|------------------|
|                                    | lehmade<br>arv<br>no. of<br>cows | keskmine aretusväärtus <i>EBV</i> |                    |       |                        |       |                  | lehmade<br>arv<br>no. of<br>cows        | keskmine aretusväärtus <i>EBV</i> |                    |       |                        |       |                  |
|                                    |                                  | piima<br>kg<br>milk               | rasva<br>kg<br>fat | %     | valgu<br>kg<br>protein | %     | SPAV<br>RBV Milk |   | piima<br>kg<br>milk               | rasva<br>kg<br>fat | %     | valgu<br>kg<br>protein | %     | SPAV<br>RBV Milk |
| 1991                               | 1080                             | +194                              | +6.4               | -0.04 | +3.5                   | -0.06 | 105              | 1849                                    | +156                              | +3.8               | -0.05 | +1.5                   | -0.06 | 96               |
| 1992                               | 5633                             | +146                              | +5.3               | -0.02 | +2.9                   | -0.04 | 104              | 9930                                    | +79                               | +0.5               | -0.05 | +0.8                   | -0.03 | 95               |
| 1993                               | 6605                             | +39                               | 0.0                | -0.03 | +0.5                   | -0.01 | 102              | 13022                                   | -20                               | -1.4               | -0.01 | -0.1                   | +0.01 | 95               |
| 1994                               | 6804                             | -1                                | 0.0                | +0.01 | -0.2                   | 0.00  | 101              | 14037                                   | -33                               | +1.1               | +0.05 | 0.0                    | +0.02 | 95               |
| 1995                               | 6975                             | 0                                 | 0.0                | +0.01 | 0.0                    | 0.00  | 102              | 15542                                   | 0                                 | 0.0                | +0.01 | 0.0                    | 0.00  | 95               |
| 1996                               | 6970                             | +17                               | +1.2               | +0.02 | +0.5                   | 0.00  | 102              | 16081                                   | +22                               | +3.4               | +0.06 | +0.8                   | +0.01 | 96               |
| 1997                               | 5556                             | +93                               | +2.8               | -0.02 | +1.8                   | -0.02 | 103              | 15565                                   | +58                               | +5.5               | +0.07 | +1.8                   | +0.01 | 97               |
| 1998                               | 4750                             | +311                              | +9.2               | -0.09 | +7.3                   | -0.05 | 108              | 14773                                   | +301                              | +10.1              | -0.03 | +7.9                   | -0.02 | 102              |
| 1999                               | 2014                             | +605                              | +24.4              | -0.04 | +16.2                  | -0.06 | 117              | 6692                                    | +570                              | +17.4              | -0.10 | +14.5                  | -0.05 | 107              |

# Sigade jõudluskontrolli näitajad

## Results of performance recording of pigs

### 36. Emiste seemendamise / paaritamise tulemused

#### Results of insemination

| Farmi tüüp<br>Type of farm            | Aasta<br>Year | Farmide arv<br>No. of farms | Emiste keskmine arv<br>Avg. no. of sows | Esmassemen-<br>duste %<br>% sows at 1st ins. | Seemenduste arv<br>No. of ins. | Ümberindluste<br>Return to heat |      | Väljaminek pärast seemendust<br>Culled after ins. % | Vanus esmasseemendusel, p.<br>Age at 1st ins., days |
|---------------------------------------|---------------|-----------------------------|---|--|--------------------------------|---------------------------------|------|---|---|
|                                       |               |                             |   |  |                                | arv<br>No.                      | %    |   |   |
| <b>Tipparetusfarm</b><br>Nucleus herd | 2001          | 5                           | 159                                     | 29.5   | 2328                           | 381                             | 19.2 | 13.5  | 237   |
| <b>Aretusfarm</b><br>Breeding herd    | 1999          | 33                          | 234                                     | 23.9   | 20165                          | 3191                            | 17.6 | 9.9   | 243   |
|                                       | 2000          | 31                          | 263                                     | 24.2   | 23449                          | 4219                            | 18.2 | 9.3   | 236   |
|                                       | 2001          | 32                          | 277                                     | 24.9   | 26200                          | 4746                            | 18.6 | 8.2   | 230   |
| <b>Tootmisfarm</b><br>Production herd | 1999          | 17                          | 266                                     | 17.9   | 10935                          | 1862                            | 18.6 | 7.7   | 284   |
|                                       | 2000          | 22                          | 187                                     | 19.2   | 11341                          | 2256                            | 18.3 | 6.2   | 264   |
|                                       | 2001          | 21                          | 195                                     | 22.4   | 11758                          | 2196                            | 17.9 | 6.2   | 259   |

### 37. Emiste poegimistulemused

#### Results of farrowing

| Farmi tüüp<br>Type of farm            | Aasta<br>Year | Farmide arv<br>No. of farms | Poegimiste %<br>Rate of farrowings | Sündinud põrsaid kokku /pesak.<br>Piglets total per litter | Elusalt sündinud põrsaid /pesak.<br>Piglets born alive per litter |                        | Aastaemise kohta<br>Per sow per year |  | Esmaspoegimise vanus, p<br>Age at 1st farrowing |
|---------------------------------------|---------------|-----------------------------|------------------------------------|--|---|------------------------|--------------------------------------|--|---|
|                                       |               |                             |                                    |  | nooremised<br>gilts   | vanaemised<br>old sows | põrsaid kokku<br>piglets born total  | elusalt sündinud põrsaid<br>piglets born alive |   |
| <b>Tipparetusfarm</b><br>Nucleus herd | 2001          | 5                           | 63.1                               | 11.2   | 9.6   | 11.0                   | 21.8                                 | 20.3   | 364   |
| <b>Aretusfarm</b><br>Breeding herd    | 1999          | 33                          | 71.8                               | 10.8   | 9.5   | 10.4                   | 20.8                                 | 19.4   | 368   |
|                                       | 2000          | 31                          | 70.9                               | 10.9   | 9.4   | 10.5                   | 21.5                                 | 20.1   | 361   |
|                                       | 2001          | 32                          | 70.2                               | 11.1   | 9.6   | 10.3                   | 21.9                                 | 20.5   | 353   |
| <b>Tootmisfarm</b><br>Production herd | 1999          | 17                          | 71.9                               | 10.6   | 9.2   | 10.1                   | 19.6                                 | 18.2   | 400   |
|                                       | 2000          | 22                          | 70.8                               | 10.5   | 9.1   | 9.7                    | 20.2                                 | 18.4   | 386   |
|                                       | 2001          | 21                          | 73.9                               | 10.9   | 9.4   | 10.4                   | 21.2                                 | 19.6   | 385   |

### 38. Emiste imetamisperioodi näitajad

#### Reproduction traits of sows

| Farmi tüüp<br>Type of farm            | Aasta<br>Year | Farmide arv<br>No. of farms | Elusalt sündinud põrsaid aastaemise kohta<br>Piglets born alive per sow per year | Pesakondi aastaemise kohta<br>Litters per sow per year | Keskmine võrutatud põrsaste arv<br>Avg. no. of weaned piglets |                                   | Imikpõrsaste kaod<br>Losses of suckling piglets % | Imetamisperioodi pikkus, p<br>Lactation days | Vabaperioodi pikkus, p<br>Dry period, days |
|---------------------------------------|---------------|-----------------------------|--|--|---|-----------------------------------|---|--|--|
|                                       |               |                             |  |  | pesakon-nas<br>per litter                                     | aastaemise k.<br>per sow per year |   |  |  |
| <b>Tipparetusfarm</b><br>Nucleus herd | 2001          | 5                           | 159  | 1.94   | 9.6   | 18.8                              | 7.9   | 35.0   | 6.5  |
| <b>Aretusfarm</b><br>Breeding herd    | 1999          | 33                          | 234  | 1.91   | 9.0   | 17.3                              | 11.3  | 37.0   | 10.3                                       |
|                                       | 2000          | 31                          | 263  | 1.98   | 8.9   | 17.6                              | 11.9  | 36.7   | 8.1  |
|                                       | 2001          | 32                          | 277  | 1.98   | 9.0   | 17.8                              | 13.4  | 35.2   | 8.4  |
| <b>Tootmisfarm</b><br>Production herd | 1999          | 17                          | 266  | 1.84   | 8.3   | 15.2                              | 15.9  | 41.0   | 15.0                                       |
|                                       | 2000          | 22                          | 187  | 1.85   | 8.1   | 15.7                              | 13.5  | 40.3   | 9.0  |
|                                       | 2001          | 21                          | 195  | 1.94   | 8.6   | 16.7                              | 14.6  | 40.3   | 9.9  |



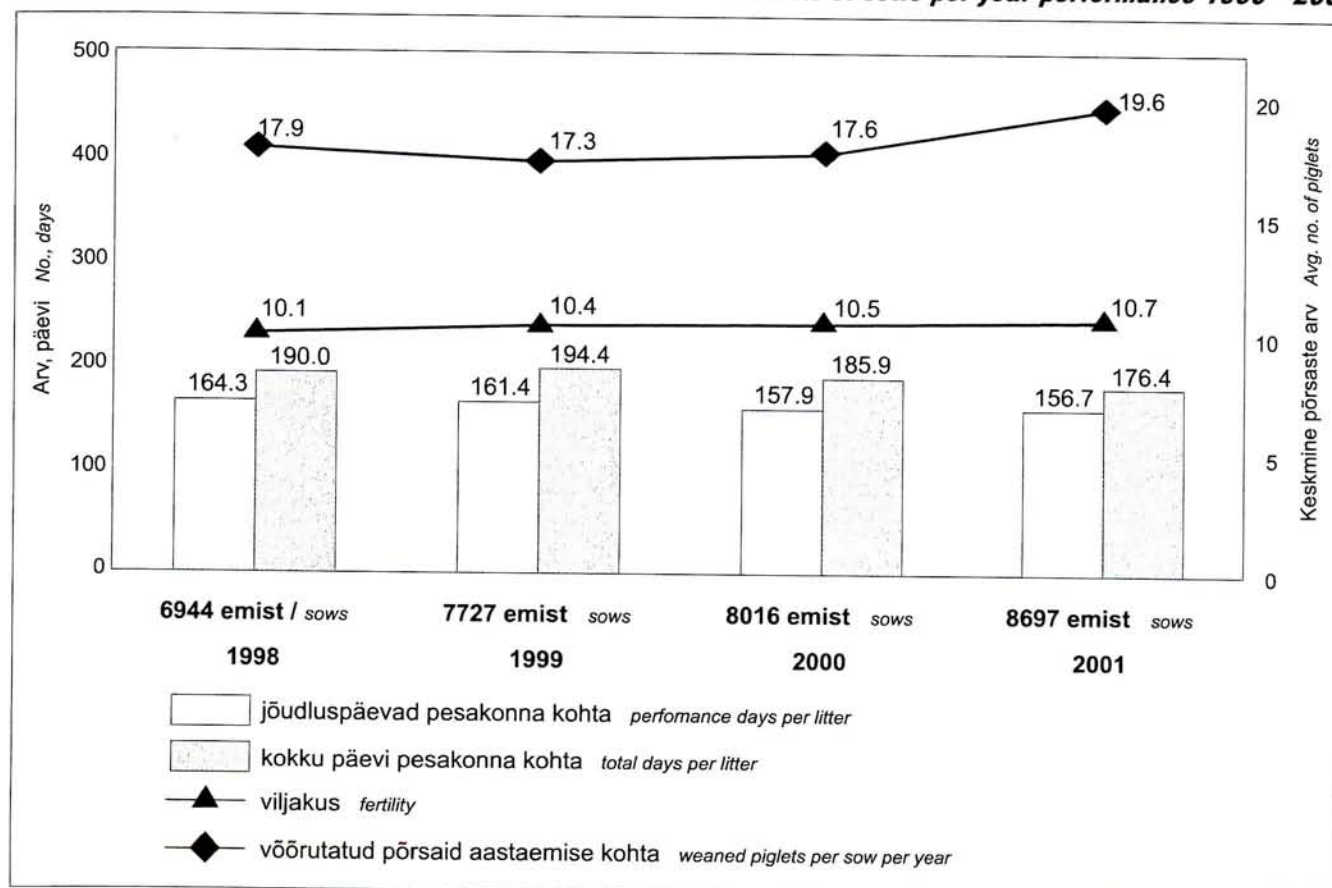
## 39. Emiste kasutamise efektiivsus

## Sow using effectiveness

| Farmi tüüp<br>Type of farm            | Aasta<br>Year | Farmide arv<br>No. of farms | Kasutamine väljaminekuni<br>Using until culling |                        |   |  | Päevad pesakonna kohta<br>Days per litter |                            |                             |   |   |  |
|---------------------------------------|---------------|-----------------------------|---|------------------------|---|--|---|----------------------------|-----------------------------|---|---|--|
|                                       |               |                             | pesakondade arv<br>no. of litters               | kasutusaastat<br>years | võrutusest väljaminekuni, päeva<br>days from weaning to culling | seemendusest väljaminekuni, päeva<br>days from ins. to culling | päevad kokku<br>days total                | jõudluspäevi<br>perf. days | ebaprod. p<br>nonprod. days | ümberindlusp.<br>days from ins. to return | võrutusest väljaminekuni, p<br>days from weaning to culling | seemendusest väljaminekuni, p<br>days from ins. to culling |
| <b>Tipparetusfarm</b><br>Nucleus herd | 2001          | 5                           | 2.2   | 1.1                    | 7.4   | 66.4   | 188.6                                     | 157.9                      | 30.8                        | 11.3                                      | 1.7   | 17.4   |
| <b>Aretusfarm</b><br>Breeding herd    | 1999          | 33                          | 2.9   | 1.6                    | 26.8  | 84.0   | 194.4                                     | 163.0                      | 31.4                        | 11.0                                      | 5.7   | 14.1   |
|                                       | 2000          | 31                          | 3.1   | 1.6                    | 13.5  | 75.6   | 185.9                                     | 160.6                      | 25.3                        | 10.9                                      | 1.8   | 12.0   |
|                                       | 2001          | 32                          | 3.1   | 1.6                    | 10.9  | 75.6   | 185.9                                     | 159.4                      | 26.5                        | 13.0                                      | 1.6   | 11.2   |
| <b>Tootmisfarm</b><br>Production herd | 1999          | 17                          | 2.9   | 1.6                    | 44.1  | 96.3   | 206.3                                     | 171.6                      | 34.7                        | 13.6                                      | 9.5   | 10.7   |
|                                       | 2000          | 22                          | 3.3   | 1.8                    | 22.6  | 84.1   | 181.8                                     | 159.8                      | 21.9                        | 11.6                                      | 2.0   | 7.9  |
|                                       | 2001          | 21                          | 3.5   | 1.8                    | 14.9  | 75.9   | 189.9                                     | 166.0                      | 23.9                        | 12.3                                      | 2.5   | 8.3  |

## 40. Aastaemiste jõudlusnäitajad aastatel 1998 - 2001

## Results of sows per year performance 1998 - 2001



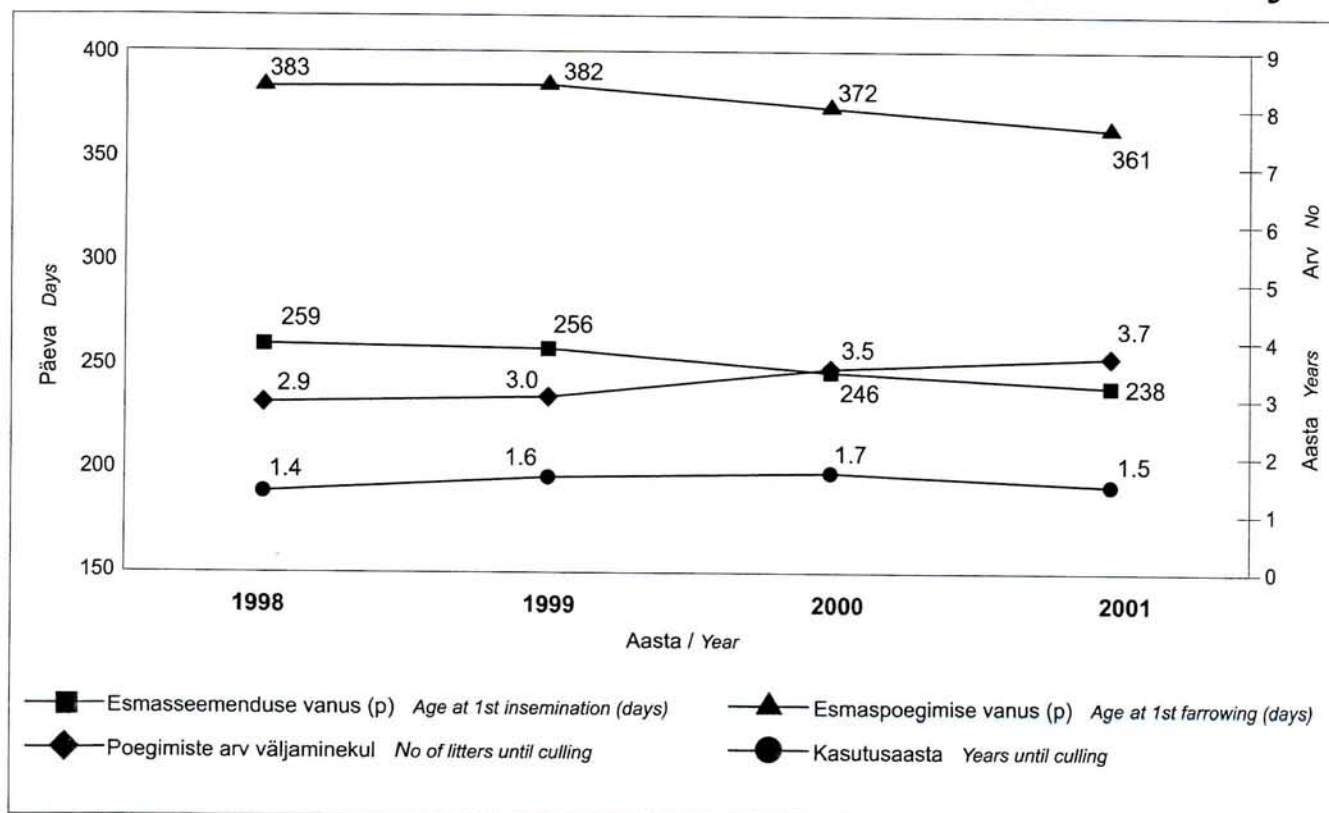
## 41. Emiste reproduktsioonijõudluse näitajad tõugude viisi

## Reproduction performance data of sows of different breeds

| Tõug<br>Breed          | Aastamiste arv<br>(lõpetatud pesakonnaga)<br>Sows per year<br>(closed litter) | Põrsaid pesakonnas<br>Pigllets per litter | Elusalt sündinud põrsaid<br>Pigllets born alive |  |   |                                      | Esmaspoegimise<br>vanus päeva<br>Age at 1st farrowing days | Võõrutatud<br>põrsaid<br>No. of weaned piglets |                                      | Imikpõrsaste kaod %<br>Losses of suckling piglets |
|------------------------|---|---|---|--|---|--------------------------------------|--|--|--------------------------------------|---|
|                        |   |   | pesakonnas<br>per litter                        | nooremise<br>pesakonnas<br>gilt per litter | vanaemise<br>pesakonnas<br>old sow per litter | aastaemise kohta<br>per sow per year |  | pesakonnas<br>per litter                       | aastaemise kohta<br>per sow per year |   |
| Ha                     | 16  | 10.7                                      | 10.3  | 9.0  | 10.3  | 19.1                                 | 385.1  | 8.6  | 15.9                                 | 16.7  |
| Y                      | 3747  | 11.2                                      | 10.5  | 9.5  | 10.7  | 20.0                                 | 379.4  | 9.4  | 17.8                                 | 11.3  |
| L                      | 2754  | 11.3                                      | 10.7  | 9.5  | 10.8  | 20.3                                 | 356.5  | 9.5  | 18.1                                 | 11.0  |
| Pi                     | 16  | 9.7                                       | 8.8   | 7.0  | 9.0   | 15.5                                 | 398.4  | 7.4  | 13.0                                 | 16.1  |
| H*L                    | 1   | 12.0                                      | 11.5  | x  | 12.0  | 23.1                                 | 314.0  | 11.0   | 22.1                                 | 4.3   |
| H*Y                    | 20  | 12.4                                      | 11.6  | 10.0                                       | 11.6  | 21.1                                 | 381.7  | 9.7  | 17.6                                 | 16.5  |
| L*LY                   | 3   | 10.4                                      | 10.2  | 10.0                                       | 10.3  | 17.7                                 | 351.3  | 9.4  | 16.3                                 | 7.8   |
| L*Y                    | 1178  | 11.4                                      | 10.9  | 10.1                                       | 11.1  | 20.9                                 | 358.5  | 9.6  | 18.4                                 | 12.2  |
| Pi*Y                   | 5   | 9.9                                       | 9.4   | 9.0  | 9.8   | 17.4                                 | 345.8  | 8.9  | 16.5                                 | 5.3   |
| Y*L                    | 795   | 11.8                                      | 11.2  | 9.9  | 11.4  | 22.1                                 | 353.9  | 9.7  | 19.3                                 | 13.0  |
| Y*LY                   | 48  | 11.8                                      | 11.4  | 11.1                                       | 11.3  | 22.4                                 | 364.5  | 9.9  | 19.5                                 | 13.0  |
| Muu                    | 17  | 12.2                                      | 11.6  | 10.4                                       | 12.0  | 21.6                                 | 357.9  | 9.9  | 18.5                                 | 14.2  |
| <b>Kokku<br/>total</b> | <b>8600</b>   | <b>11.3</b>                               | <b>10.7</b>                                     | <b>9.7</b>                                 | <b>10.9</b>                                   | <b>20.4</b>                          | <b>366.7</b>   | <b>9.5</b>                                     | <b>18.1</b>                          | <b>11.5</b>                                       |

## 42. Majanduslikud näitajad emiste kasutamisel

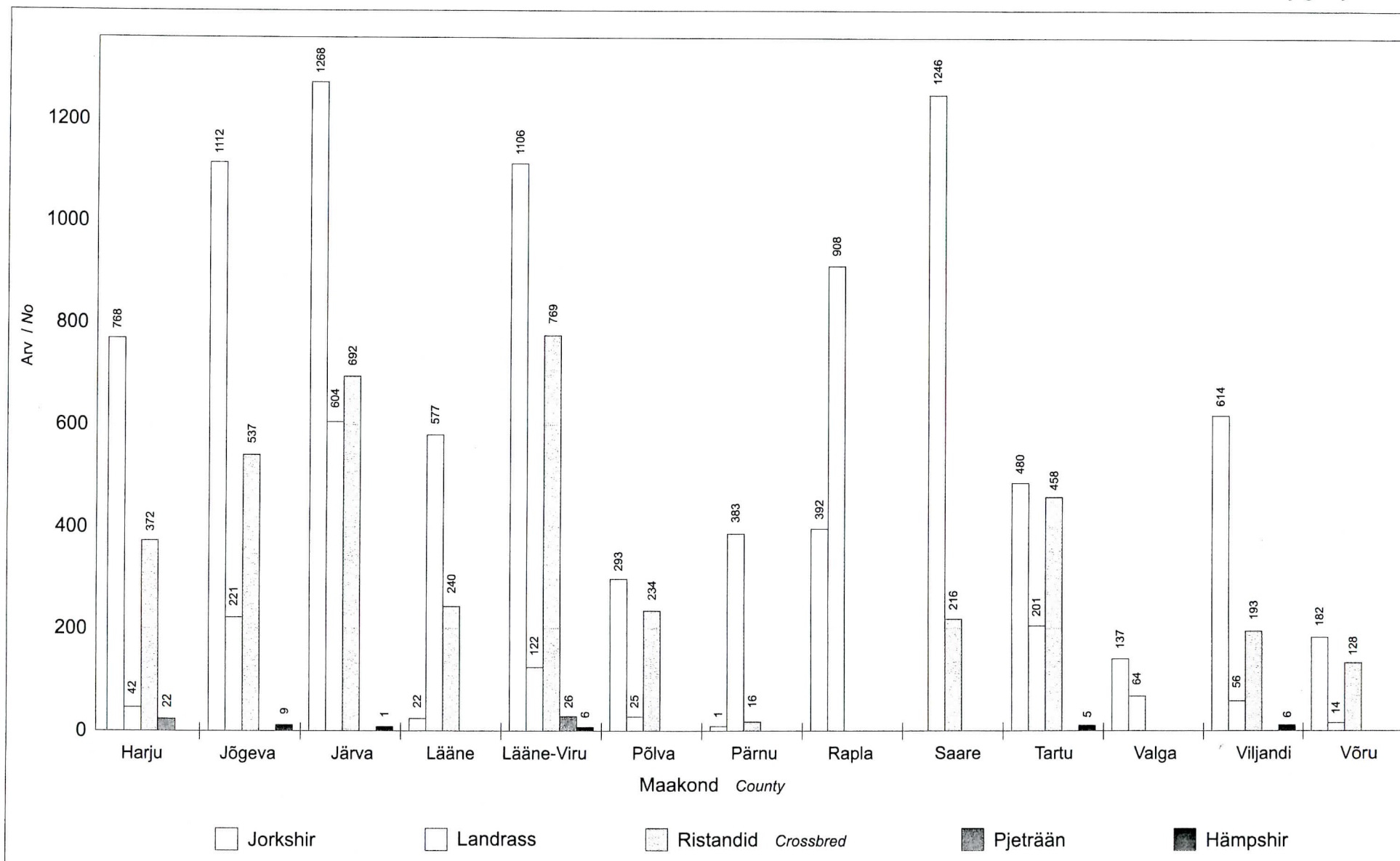
## Economic values in using sows





### 43. Põhikarja sigade arv maakondades

No of pigs by county



## 44. Farmid elusalt sündinud põrsaste arvu järgi pesakonnas

Farms by alive born piglets per litter

| Jrk nr<br>No. | Omanik<br>Owner               | Põrsaid pesakonnas<br>Piglets per litter |                              |                                     | Elusalt sündinud põrsaid<br>Piglets born alive |                                     |      | Esmaspoeg vanus, päeva<br>Age at 1st farrowing, days | Võõrutatud<br>põrsaid<br>No. of weaned<br>piglets |      | Imetamisperiood, päeva<br>Lactation days | Imikpõrsaste kaod, %<br>Losses of suckling piglets, % | Põrgimiste %<br>Farrowing rate, % |
|---------------|-------------------------------|--|------------------------------|-------------------------------------|--|-------------------------------------|------|--|---|------|--|---|-----------------------------------|
|               |                               | nooremise<br>gilts' litter               | vanamise<br>old sows' litter | aastamise kohta<br>per sow per year | pesakonnas<br>per litter                       | aastamise kohta<br>per sow per year |      |  |   |      |  |   |                                   |
| 1.            | Ermo Sepa Talu                | 12.3                                     | 10.1                         | 12.4                                | 26.1   | 348                                 | 8.7  | 19.3   | 27.5  | 26.1 | 72.5                                     |   |                                   |
| 2.            | Kehtna ESA OÜ                 | 11.9                                     | 9.8                          | 12.4                                | 21.7   | 358                                 | 8.9  | 17.3   | 33.2  | 18.8 | 63.8                                     |   |                                   |
| 3.            | Sukahärma Märdi Talu          | 13.4                                     | 12.1                         | 12.1                                | 22.8   | 424                                 | 9.3  | 17.5   | 45.8  | 23.1 | 61.1                                     |   |                                   |
| 4.            | Väljaotsa (OÜ Estonia)        | 11.8                                     | 11.2                         | 11.6                                | 20.7   | 345                                 | 9.9  | 17.8   | 38.6  | 12.4 | 69.1                                     |   |                                   |
| 5.            | Haameri Talu                  | 12.3                                     | 10.0                         | 11.6                                | 21.1   | 372                                 | 8.1  | 15.5   | 39.3  | 27.0 | 63.9                                     |   |                                   |
| 6.            | Laiuse Põllumajanduse Osühing | 11.7                                     | 9.7                          | 11.5                                | 19.5   | 411                                 | 8.3  | 14.9   | 31.6  | 24.1 | 63.3                                     |   |                                   |
| 7.            | OÜ Hinnu Seafarm              | 11.4                                     | 9.6                          | 11.5                                | 22.7   | 360                                 | 9.5  | 19.5   | 32.3  | 14.1 | 64.3                                     |   |                                   |
| 8.            | Tännassilma Farm (OÜ Estonia) | 10.9                                     | 8.5                          | 11.5                                | 18.4   | 336                                 | 9.2  | 16.4   | 36.4  | 13.1 | 47.7                                     |   |                                   |
| 9.            | Osaühing Oss                  | 11.3                                     | 9.8                          | 11.4                                | 22.0   | 349                                 | 9.5  | 19.2   | 44.9  | 12.5 | 76.0                                     |   |                                   |
| 10.           | OÜ Pihlaka Farm               | 11.0                                     | 9.5                          | 11.4                                | 22.1   | 375                                 | 10.4 | 21.6   | 31.9  | 2.4  | 68.3                                     |   |                                   |
| 11.           | AS Saare Peekon               | 11.3                                     | 9.3                          | 11.4                                | 22.3   | 349                                 | 9.3  | 18.9   | 46.8  | 15.1 | 85.8                                     |   |                                   |
| 12.           | Osaühing Estonia              | 11.6                                     | 9.9                          | 11.3                                | 21.3   | 369                                 | 9.9  | 19.3   | 32.9  | 9.5  | 65.8                                     |   |                                   |
| 13.           | AS Peetri Põld Ja Piim        | 11.7                                     | 9.7                          | 11.3                                | 21.3   | 363                                 | 9.2  | 17.9   | 45.8  | 15.3 | 77.1                                     |   |                                   |
| 14.           | Osaühing Vajjala Seakasvatus  | 11.3                                     | 9.1                          | 11.3                                | 21.6   | 335                                 | 9.1  | 18.4   | 33.1  | 15.1 | 70.9                                     |   |                                   |
| 15.           | AS Tartu Agro                 | 11.8                                     | 9.7                          | 11.2                                | 22.6   | 334                                 | 9.0  | 18.9   | 28.1  | 16.8 | 67.8                                     |   |                                   |
| 16.           | Jampo Seakasvatuse OÜ         | 11.7                                     | 9.2                          | 11.2                                | 23.3   | 369                                 | 8.6  | 18.8   | 28.2  | 18.8 | 71.5                                     |   |                                   |
| 17.           | OÜ Vinimex                    | 11.7                                     | 10.4                         | 11.1                                | 23.2   | 339                                 | 9.8  | 20.7   | 32.1  | 10.3 | 84.5                                     |   |                                   |
| 18.           | AS Rey                        | 11.2                                     | 9.7                          | 11.1                                | 22.8   | 343                                 | 9.3  | 19.7   | 28.0  | 13.7 | 80.9                                     |   |                                   |
| 19.           | AS Krootuse Agro              | 11.1                                     | 9.6                          | 11.1                                | 21.7   | 373                                 | 8.6  | 17.3   | 45.1  | 16.0 | 81.0                                     |   |                                   |
| 20.           | Osaühing Kūti Mõis            | 11.5                                     | 9.6                          | 11.0                                | 20.3   | 368                                 | 9.2  | 17.8   | 30.7  | 12.1 | 70.7                                     |   |                                   |
| 21.           | Saimre Talu                   | 11.4                                     | 10.7                         | 10.9                                | 22.2   | 378                                 | 10.3 | 21.1   | 28.2  | 4.4  | 68.1                                     |   |                                   |
| 22.           | AS Ruixi Mõis Inju Farm       | 11.0                                     | 10.2                         | 10.9                                | 20.1   | 342                                 | 9.4  | 17.8   | 30.4  | 12.2 | 71.2                                     |   |                                   |
| 23.           | Kehtna Mõisa Osühing          | 11.4                                     | 10.4                         | 10.8                                | 20.5   | 370                                 | 9.5  | 18.2   | 31.8  | 11.2 | 65.2                                     |   |                                   |
| 24.           | Aravete Agro Osühing          | 10.9                                     | 10.0                         | 10.7                                | 17.5   | 355                                 | 9.8  | 16.4   | 43.8  | 6.6  | 69.7                                     |   |                                   |
| 25.           | AS Sf Pandivere               | 10.9                                     | 9.9                          | 10.7                                | 22.4   | 344                                 | 9.5  | 20.3   | 31.1  | 9.0  | 75.2                                     |   |                                   |
| 26.           | Päidla Osühing                | 10.8                                     | 9.9                          | 10.7                                | 20.7   | 345                                 | 8.6  | 17.0   | 38.0  | 18.7 | 70.3                                     |   |                                   |
| 27.           | Osaühing Voore Farm           | 10.6                                     | 8.5                          | 10.7                                | 21.2   | 318                                 | 9.2  | 19.6   | 30.8  | 8.0  | 79.0                                     |   |                                   |
| 28.           | AS Tamsalu Veskid             | 10.5                                     | 10.2                         | 10.6                                | 23.4   | 337                                 | 10.0 | 22.2   | 35.8  | 5.5  | 86.3                                     |   |                                   |
| 29.           | OÜ Põlva Seakasvatus          | 10.8                                     | 10.0                         | 10.6                                | 22.3   | 355                                 | 9.0  | 19.4   | 30.5  | 13.3 | 82.2                                     |   |                                   |
| 30.           | AS Vahenurme Agro             | 12.0                                     | 10.7                         | 10.5                                | 19.8   | 408                                 | 8.2  | 15.4   | 44.2  | 22.6 | 63.8                                     |   |                                   |
| 31.           | OÜ Carmex Invest              | 10.8                                     | 10.1                         | 10.5                                | 20.1   | 395                                 | 8.6  | 16.8   | 34.0  | 16.9 | 63.0                                     |   |                                   |



## 45. Farmid võõrutatud põrsaste arvu järgi pesakonnas aastaemise kohta

Farms by weaned piglets per sow per year

| Jrk nr No. | Omanik Owner                 | Põrsaid pesakonnas Piglets per litter | Elusalt sündinud põrsaid Piglets born alive |                                       |                                   | Esmaspoeg. vanus, päeva Age at 1st farrowing, days | Võõrutatud põrsaid No. of weaned piglets |                                   | Imetamisperiood, päeva Lactation days | Imikpõrsaste kaod, % Losses of suckling piglets, % | Poejmiste % Farrowing rate, % |
|------------|------------------------------|---------------------------------------|---|---------------------------------------|-----------------------------------|--|--|-----------------------------------|---------------------------------------|--|-------------------------------|
|            |                              |                                       | nooremise pesakonnas gilts' litter          | vanaemise pesakonnas old sows' litter | aastaemise kohta per sow per year |  | pesakonnas per litter                    | aastaemise kohta per sow per year |                                       |  |                               |
| 1.         | AS Tamsalu Veskid            | 10.5                                  | 10.2  | 10.6                                  | 23.4                              | 337  | 10                                       | <b>22,2</b>                       | 35.8                                  | 5.5  | 86.3                          |
| 2.         | OÜ Pihlaka Farm              | 11.0                                  | 9.5   | 11.4                                  | 22.1                              | 375  | 10.4                                     | <b>21.6</b>                       | 31.9                                  | 2.4  | 68.3                          |
| 3.         | Saimre Talu                  | 11.4                                  | 10.7  | 10.9                                  | 22.2                              | 378  | 10.3                                     | <b>21.1</b>                       | 28.2                                  | 4.4  | 68.1                          |
| 4.         | OÜ Vinimex                   | 11.7                                  | 10.4  | 11.1                                  | 23.2                              | 339  | 9.8                                      | <b>20.7</b>                       | 32.1                                  | 10.3   | 84.5                          |
| 5.         | AS Sf Pandivere              | 10.9                                  | 9.9   | 10.7                                  | 22.4                              | 344  | 9.5                                      | <b>20.3</b>                       | 31.1                                  | 9.0  | 75.2                          |
| 6.         | OÜ Linnamäe Peekon           | 11.5                                  | 9.3   | 10.4                                  | 22.5                              | 343  | 9.2                                      | <b>20.3</b>                       | 27.1                                  | 9.7  | 76.6                          |
| 7.         | AS Rey                       | 11.2                                  | 9.7   | 11.1                                  | 22.8                              | 343  | 9.3                                      | <b>19.7</b>                       | 28.0                                  | 13.7   | 80.9                          |
| 8.         | Osaühing Voore Farm          | 10.6                                  | 8.5   | 10.7                                  | 21.2                              | 318  | 9.2                                      | <b>19.6</b>                       | 30.8                                  | 8.0  | 79.0                          |
| 9.         | OÜ Hinnu Seafarm             | 11.4                                  | 9.6   | 11.5                                  | 22.7                              | 360  | 9.5                                      | <b>19.5</b>                       | 32.3                                  | 14.1   | 64.3                          |
| 10.        | Rõstla Sigala Osaühing       | 10.8                                  | 9.2   | 10.3                                  | 21.8                              | 350  | 9.0                                      | <b>19.5</b>                       | 31.9                                  | 11.3   | 83.9                          |
| 11.        | OÜ Põlva Seakasvatus         | 10.8                                  | 10.0  | 10.6                                  | 22.3                              | 355  | 9.0                                      | <b>19.4</b>                       | 30.5                                  | 13.3   | 82.2                          |
| 12.        | Osaühing Estonia             | 11.6                                  | 9.9   | 11.3                                  | 21.3                              | 369  | 9.9                                      | <b>19.3</b>                       | 32.9                                  | 9.5  | 65.8                          |
| 13.        | Ermo Sepa Talu               | 12.3                                  | 10.1  | 12.4                                  | 26.1                              | 348  | 8.7                                      | <b>19.3</b>                       | 27.5                                  | 26.1   | 72.5                          |
| 14.        | Osaühing Oss                 | 11.3                                  | 9.8   | 11.4                                  | 22.0                              | 349  | 9.5                                      | <b>19.2</b>                       | 44.9                                  | 12.5   | 76.0                          |
| 15.        | OÜ Linnamäe Peekon (aretus)  | 10.9                                  | 9.2   | 10.3                                  | 21.5                              | 343  | 8.9                                      | <b>19.2</b>                       | 27.7                                  | 10.7   | 78.6                          |
| 16.        | Sillaotsa Talu               | 12.0                                  | 13.5  | 9.5                                   | 19.8                              | 345  | 11.0                                     | <b>18.9</b>                       | 37.2                                  | 3.5  | 44.4                          |
| 17.        | AS Saare Peekon              | 11.3                                  | 9.3   | 11.4                                  | 22.3                              | 349  | 9.3                                      | <b>18.9</b>                       | 46.8                                  | 15.1   | 85.8                          |
| 18.        | AS Tartu Agro                | 11.8                                  | 9.7   | 11.2                                  | 22.6                              | 334  | 9.0                                      | <b>18.9</b>                       | 28.1                                  | 16.8   | 67.8                          |
| 19.        | Jampo Seakasvatuse OÜ        | 11.7                                  | 9.2   | 11.2                                  | 23.3                              | 369  | 8.6                                      | <b>18.8</b>                       | 28.2                                  | 18.8   | 71.5                          |
| 20.        | OÜ Rannu Mõis                | 10.9                                  | 9.7   | 10.3                                  | 22.0                              | 391  | 8.6                                      | <b>18.6</b>                       | 32.4                                  | 17.7   | 75.9                          |
| 21.        | Tulundusühistu Ristiku Pm    | 10.2                                  | 9.2   | 10.2                                  | 21.1                              | 351  | 8.6                                      | <b>18.5</b>                       | 43.4                                  | 13.4   | 92.1                          |
| 22.        | Osaühing Valjala Seakasvatus | 11.3                                  | 9.1   | 11.3                                  | 21.6                              | 335  | 9.1                                      | <b>18.4</b>                       | 33.1                                  | 15.1   | 70.9                          |
| 23.        | Kehtna Mõisa Osaühing        | 11.4                                  | 10.4  | 10.8                                  | 20.5                              | 370  | 9.5                                      | <b>18.2</b>                       | 31.8                                  | 11.2   | 65.2                          |
| 24.        | AS Sõmeru-S                  | 9.9                                   | 9.2   | 9.6                                   | 19.5                              | 383  | 8.8                                      | <b>18.2</b>                       | 40.3                                  | 7.3  | 80.6                          |
| 25.        | AS Ruixi Mõis                | 11.0                                  | 9.5   | 10.1                                  | 20.8                              | 380  | 8.7                                      | <b>18.2</b>                       | 25.8                                  | 13.3   | 60.6                          |
| 26.        | AS Peetri Põld Ja Piim       | 11.7                                  | 9.7   | 11.3                                  | 21.3                              | 363  | 9.2                                      | <b>17.9</b>                       | 45.8                                  | 15.3   | 77.1                          |
| 27.        | Väljaotsa (OÜ Estonia)       | 11.8                                  | 11.2  | 11.6                                  | 20.7                              | 345  | 9.9                                      | <b>17.8</b>                       | 38.6                                  | 12.4   | 69.1                          |
| 28.        | AS Ruixi Mõis Inju Farm      | 11.0                                  | 10.2  | 10.9                                  | 20.1                              | 342  | 9.4                                      | <b>17.8</b>                       | 30.4                                  | 12.2   | 71,2                          |
| 29.        | Osaühing Kūti Mõis           | 11.5                                  | 9.6   | 11.0                                  | 20.3                              | 368  | 9.2                                      | <b>17.8</b>                       | 30.7                                  | 12.1   | 70.7                          |
| 30.        | Ääre Seakasvatus OÜ          | 9.6                                   | 8.3   | 10.0                                  | 19.5                              | 329  | 8.7                                      | <b>17.7</b>                       | 33.4                                  | 9.3  | 75.2                          |
| 31.        | AS Todas                     | 10.6                                  | 9.4   | 10.4                                  | 20.6                              | 349  | 8.7                                      | <b>17.7</b>                       | 42.4                                  | 13.2   | 82.3                          |

## 46. Karja suurus ja emiste kasutamine

## Herd size and sow using

| Karja suurus, emist<br><i>Herd size, sows</i> | Karjad<br><i>Herds</i> |      | Emised<br><i>Sows</i> |      | Võrutatud põrsaid pesakonnas<br><i>Piglets per litter</i> | Kasutamine väljaminekuni, aasta<br><i>Using until culling, years</i> | Kunstliku seemenduse %<br><i>AI rate, %</i> | Poegimiste %<br><i>Farrowing rate, %</i> | Pesakondade arv väljaminekul<br><i>No of litters to culling</i> |
|---|------------------------|------|-----------------------|------|---|--|---|--|---|
|   | Arv<br><i>No</i>       | %    | Arv<br><i>No</i>      | %    |   |  |   |  |   |
| 1 ... 100                                     | 23                     | 39.6 | 1258                  | 11.1 | 8.6   | 1.5  | 26.0  | 79.9                                     | 2.7   |
| 101 ... 200                                   | 13                     | 22.4 | 1861                  | 16.4 | 8.9   | 1.5  | 20.8  | 84.4                                     | 2.9   |
| 201 ... 300                                   | 11                     | 19.0 | 2711                  | 23.9 | 8.9   | 1.6  | 25.2  | 83.6                                     | 3.1   |
| 301 ... 400                                   | 5                      | 8.6  | 1703                  | 15.0 | 9.0   | 1.9  | 29.3  | 83.1                                     | 4.0   |
| 401 ... 500                                   | 3                      | 5.2  | 1398                  | 12.3 | 9.3   | 1.4  | 32.2  | 79.5                                     | 2.8   |
| 501 ja rohkem<br><i>501 and more</i>          | 3                      | 5.2  | 2396                  | 21.2 | 9.2   | 1.4  | 39.4  | 80.4                                     | 2.8   |

## 47. Tiinestuvus aastate lõikes

## Conception rate of sows by year

| Näitajad<br><i>Traits</i>                                   | Seemenduste arv (tuh)<br><i>No of insemin.-s(th)</i> |      |      |      | Tiinestuvus (%)<br><i>Conception rate(%)</i> |      |      |      |
|---|--|------|------|------|--|------|------|------|
|   | 1998   | 1999 | 2000 | 2001 | 1998   | 1999 | 2000 | 2001 |
| Kokku / <i>Total</i>  | 32.1   | 34.7 | 35.8 | 39.9 | 89.1   | 84.0 | 81.3 | 82.0 |
| Loomulik paaritus (LP) / <i>Natural service (NS)</i>        | 27.7   | 28.4 | 25.5 | 27.2 | 90.6   | 85.4 | 84.4 | 84.6 |
| Kunstlik seemendus (KS) / <i>Artificial insemin. (AI) *</i> | 2.9  | 4.9  | 9.5  | 11.7 | 78.8   | 77.0 | 72.3 | 76.0 |
| Esmasseemendus LP / <i>1st service by NS</i>                | 8.8  | 6.7  | 6.8  | 7.6  | 94.4   | 89.2 | 86.1 | 85.6 |
| Esmasseemendus KS / <i>1st service by AI</i>                | 0.4  | 0.8  | 1.3  | 1.4  | 77.3   | 67.5 | 64.9 | 70.5 |
| 2 ja rohkem pesakonda, LP / <i>2 and more litters, NS</i>   | 17.0   | 19.0 | 15.7 | 15.2 | 92.6   | 88.4 | 88.1 | 87.4 |
| 2 ja rohkem pesakonda, KS / <i>2 and more litters, AI</i>   | 2.2  | 3.6  | 6.9  | 8.1  | 86.0   | 84.6 | 81.8 | 83.5 |

\* Arvestatud seemendusjaamast ostetud ja/või imporditud spermat

## Sigade geneetiline hindamine

Aretusväärtuse hindamisel kasutatakse faktilisi andmeid (saadakse algdokumentidest) ja korrigeeritud andmeid (jõudlusnäitajad, aastaaeg, kari, sugu, grupp, tõug). Loomade valik karja peaks toimuma geneetiliste aretusväärtuste alusel, et muuta karja populatsiooni geneetilist struktuuri soovitud suunas. Omajõudluse hindamine toimub neis tingimustes, mis on loodud söötmise ja pidamisega.

Aretusväärtuste hindamisel võrreldakse looma tema eakaaslastega samas farmis. See tähendab, et farmist, kust iga üksik loom pärineb, võetakse võrdluseks tema eakaaslase andmed, et selgitada välja looma geneetiline paremus samades söötmise ja pidamise tingimustes. Mida rohkem eakaaslast, seda täpsem on hinnang.

Hindamisel kasutatakse BLUP (parim lineaarne moonutuseta prognoos) loomamudelit, mis looma aretusväärtuse hindamisel võtab arvesse eellaste, külgsugulaste, omajõudluse ning järglaste informatsiooni. Hindamisel on aretusväärtuste täpsuse põhieeldusteks:

1. võimalikult suur testitud järglaste arv,
2. hindamismaterjali juhuslik jaotus tõu piires,
3. võimalikult suur eakaaslaste arv,

Aretusväärtusi hinnatakse ja avalikustatakse üldjuhul iganädalaselt.



## BLUP-loomamudeli kasutamise tingimused sigade aretusväertuse hindamisel

2001

|  |   |             |     |                     |      |                      |      |                         |      |                          |      |
|--|---|-------------|-----|---------------------|------|----------------------|------|-------------------------|------|--------------------------|------|
| <b>Tõud</b>                                    | landrass, jorkšir ning nende omavahelised ristandid   |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Hinnatavad tunnused</b>                     | peki paksus (mm), lihassilm (mm), ööpäevane massi-iive(g), viljakus (elusalt sündinud põrsaste arv pesakonnas)  |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Geneetilised parameetrid: h<sup>2</sup></b> | <table border="0"> <tr> <td colspan="2">tunnus</td> </tr> <tr> <td>peki paksus(mm)</td> <td>0.30</td> </tr> <tr> <td>lihassilm(mm)</td> <td>0.25</td> </tr> <tr> <td>ööpäevane massi-iive(g)</td> <td>0.20</td> </tr> <tr> <td>viljakus (el.s.põrs.arv)</td> <td>0.10</td> </tr> </table> | tunnus      |     | peki paksus(mm)     | 0.30 | lihassilm(mm)        | 0.25 | ööpäevane massi-iive(g) | 0.20 | viljakus (el.s.põrs.arv) | 0.10 |
| tunnus   |   |             |     |                     |      |                      |      |                         |      |                          |      |
| peki paksus(mm)                                | 0.30  |             |     |                     |      |                      |      |                         |      |                          |      |
| lihassilm(mm)                                  | 0.25  |             |     |                     |      |                      |      |                         |      |                          |      |
| ööpäevane massi-iive(g)                        | 0.20  |             |     |                     |      |                      |      |                         |      |                          |      |
| viljakus (el.s.põrs.arv)                       | 0.10  |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Andmete sobivuse tingimused</b>             | sea sünnikuupäeva ja vanemate sünnikuupäeva vahe peab olema >300 päeva, ema ja isa on teada, testitud loomad alates 1998. sünniaastast ja kõik registreeritud poegimised  |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Noorsiga</b>                                | aretusväertuste prognoos eellaste andmete alusel, omajõudlusandmete olemasolu   |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Kuldid, emised</b>                          | eellaste andmed, omajõudlusandmed, järglaste jõudlus- ja viljakusandmed   |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Efektid J_SAV hindamisel:</b>               | sugu, tõug, hindamisgrupp, pesakond, testimismass, hinnatav loom  |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Efektid V_SAV hindamisel:</b>               | tõug, hindamisgrupp, emise ja kuldi tõu tüüp, seemendustüüp, pesakondade arv emisel, kult, emist mõjutav keskkond, hinnatav loom  |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Hindamise meetod</b>                        | BLUP - loomamudel   |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Aretusväertuste esitamine</b>               | Suhteline jõudluse aretusväertus (J_SAV) väljendatakse punktides, kehtestades baasloomade keskmiseks 100 punkti ja standardhälbeks 6 punkti. Viljakuse suhtelist aretusväertust (V_SAV) hinnatakse eraldi.  |             |     |                     |      |                      |      |                         |      |                          |      |
|  | $J\_SAV = [(K_{pekk} * AV_{pekk} + K_{lihas} * AV_{lihas} + K_{massi-iive} * AV_{massi-iive} - AV_{baasloom}) / S_{baasloom} * S] + 100$ $V\_SAV = [(AV_{viljakus} - AV_{baasloom}) / S_{baasloom} * S] + 100$  |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Majanduslikud kaalud J_SAV-s</b>            | <table border="0"> <tr> <td>Peki paksus</td> <td>84%</td> </tr> <tr> <td>Lihassilma läbimõõt</td> <td>2%</td> </tr> <tr> <td>Ööpäevane massi-iive</td> <td>14%</td> </tr> </table>  | Peki paksus | 84% | Lihassilma läbimõõt | 2%   | Ööpäevane massi-iive | 14%  |                         |      |                          |      |
| Peki paksus                                    | 84%   |             |     |                     |      |                      |      |                         |      |                          |      |
| Lihassilma läbimõõt                            | 2%  |             |     |                     |      |                      |      |                         |      |                          |      |
| Ööpäevane massi-iive                           | 14%   |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Geneetiline alus</b>                        | Emiste ja kultide aretusväertused korrigeeritakse baasloomade aretusväertuste keskmisele  |             |     |                     |      |                      |      |                         |      |                          |      |
| <b>Baasloomad</b>                              | Loomad, kel pole teada rohkem vanemaid.   |             |     |                     |      |                      |      |                         |      |                          |      |

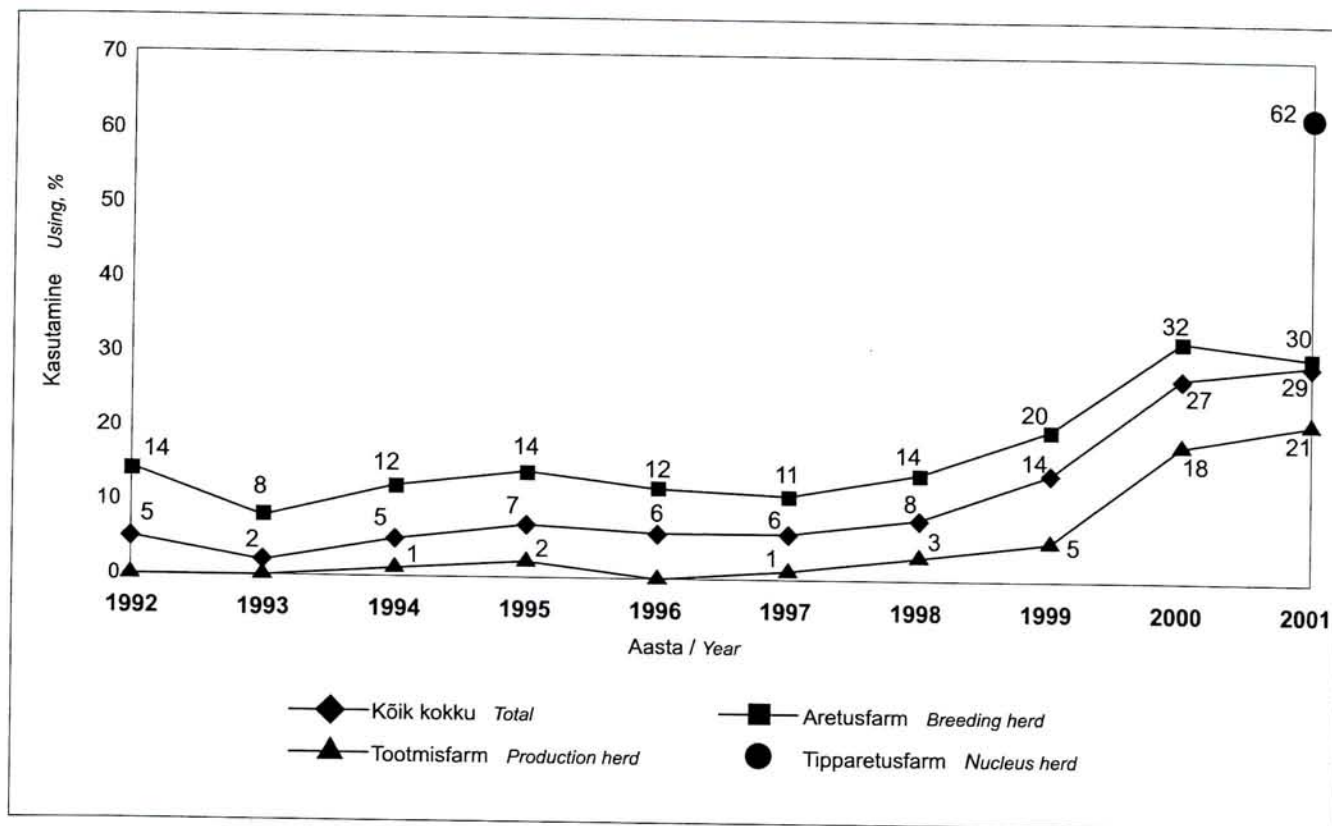
## Genetic Evaluation for Pigs

## Facts on Estimation of Breeding Values in Estonia 2001

|  |  |                 |         |              |    |              |      |  |            |      |  |           |      |
|--|--|-----------------|---------|--------------|----|--------------|------|--|------------|------|--|-----------|------|
| <b>Breeds included</b>                                 | Landrace (L), Yorkshire (Y) crossbred LY   |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Traits evaluated</b>                                | backfat (mm), muscle depth (mm), daily gain (g), fertility (alive born piglets per litter)   |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Genetic parameters applied</b>                      | <table border="0"> <tr> <td>Heritabilities:</td> <td>backfat</td> <td>0.30</td> </tr> <tr> <td></td> <td>muscle depth</td> <td>0.25</td> </tr> <tr> <td></td> <td>daily gain</td> <td>0.20</td> </tr> <tr> <td></td> <td>fertility</td> <td>0.10</td> </tr> </table> | Heritabilities: | backfat | 0.30         |    | muscle depth | 0.25 |  | daily gain | 0.20 |  | fertility | 0.10 |
| Heritabilities:  | backfat  | 0.30            |         |              |    |              |      |  |            |      |  |           |      |
|  | muscle depth   | 0.25            |         |              |    |              |      |  |            |      |  |           |      |
|  | daily gain   | 0.20            |         |              |    |              |      |  |            |      |  |           |      |
|  | fertility  | 0.10            |         |              |    |              |      |  |            |      |  |           |      |
| <b>Period of time for the data included</b>            | July 1998 (for performance gen. eval.), May 1990 (for fertility gen. eval.)  |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Period of time for pedigree info included</b>       | May 1987 (for performance gen. eval.), May 1987 (for fertility gen. eval.)   |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Software used</b>                                   | PEST, SAS  |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Inclusion and extension of records</b>              | Days between pigs birthday and dam/sire birthday must be at least 300, pigs dam and sire must be registered, all tested animals from 01.01.1998 and all registered farrowings  |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Effects in the model for fertility gen. eval.</b>   | sex, breed, herd-year-season groups, litter, weight on the test, animal  |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Effects in the model for performance gen. eval.</b> | breed, herd-year-season groups, breed type of sow and boar, insemination type, no. of litters of sow, boar, permanent environment of sow, animal   |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Method of evaluation</b>                            | Multiple-trait BLUP Animal model   |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Expression of genetic</b>                           | Relative breeding values (RBV) for production index P_RBV with mean of 100 and std. dev of 6 points, combining breeding values of backfat, muscle depth and daily gain. Breeding values for fertility (F_RBV) are estimated separately.                              |                 |         |              |    |              |      |  |            |      |  |           |      |
|  | $P\_RBV = [(C_{backfat} * BV_{backfat} + C_{muscle\ depth} * BV_{muscle\ depth} + C_{daily\ gain} * BV_{daily\ gain}) / S_{base} * S] + 100$ $F\_RBV = [(BV_{fertility} - BV_{base}) / S_{base} * S] + 100$  |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Quantity of relative economic weights</b>           | <table border="0"> <tr> <td>backfat</td> <td>84%</td> </tr> <tr> <td>muscle depth</td> <td>2%</td> </tr> <tr> <td>daily gain</td> <td>14%</td> </tr> </table>  | backfat         | 84%     | muscle depth | 2% | daily gain   | 14%  |  |            |      |  |           |      |
| backfat  | 84%  |                 |         |              |    |              |      |  |            |      |  |           |      |
| muscle depth   | 2%   |                 |         |              |    |              |      |  |            |      |  |           |      |
| daily gain   | 14%  |                 |         |              |    |              |      |  |            |      |  |           |      |
| <b>Genetic base</b>                                    | animals without pedigree   |                 |         |              |    |              |      |  |            |      |  |           |      |

## 48. Seemendusjaama kultide kasutamine

Using of IS boars



## 49. Keskmised näitajad karjatestil (90 kg juures)

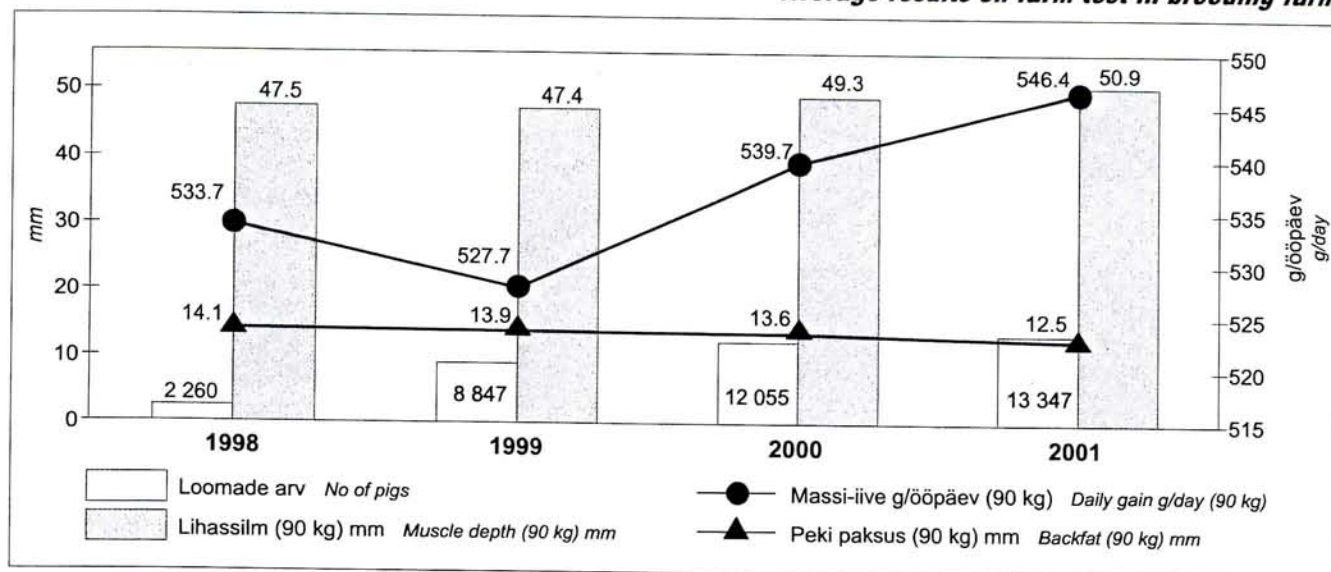
Average results on farm test

| Tõug<br>Breed   | Seemendusjaama kultide järglased<br>IS boars offspring |   |                              |   |                              |                                | Omakarja kultide järglased<br>Own Herd boars offspring |   |                              |   |                              |                                |
|-----------------|--|---|------------------------------|---|------------------------------|--------------------------------|--|---|------------------------------|---|------------------------------|--------------------------------|
|                 | arv<br>no.   | ööpäevane massi-ivine<br>avg. daily gain<br>g | peki paksus<br>backfat<br>mm | lihassilma läbimõõt<br>muscle depth<br>mm | jõudluse SAV<br>perform. EBV | viljakuse SAV<br>fertility EBV | arv<br>no.   | ööpäevane massi-ivine<br>avg. daily gain<br>g | peki paksus<br>backfat<br>mm | lihassilma läbimõõt<br>muscle depth<br>mm | jõudluse SAV<br>perform. EBV | viljakuse SAV<br>fertility EBV |
| Ha              | 12   | 498.9   | 9.9                          | 50.3                                      | x                            | x                              | 9  | 535.2   | 13.2                         | 51.3                                      | x                            | x                              |
| L               | 2274   | 570.3   | 11.9                         | 50.9                                      | 112                          | 100                            | 2015   | 539.3   | 12.9                         | 49.7                                      | 107                          | 98                             |
| Pi              | 26   | 568.1   | 9.5                          | 59.5                                      | x                            | x                              | 183  | 513.6   | 11.4                         | 56.9                                      | x                            | x                              |
| Y               | 1871   | 542.4   | 12.4                         | 50.8                                      | 113                          | 97                             | 3309   | 535.2   | 12.9                         | 50.7                                      | 107                          | 100                            |
| L*Y             | 884  | 559.0   | 12.2                         | 51.8                                      | 110                          | 101                            | 1303   | 548.4   | 13.4                         | 51.6                                      | 103                          | 101                            |
| Pi*Ha           | 20   | 522.0   | 10.2                         | 53.7                                      | x                            | x                              | 32   | 544.1   | 10.0                         | 53.9                                      | x                            | x                              |
| Y*L             | 810  | 534.9   | 11.6                         | 49.1                                      | 109                          | 98                             | 182  | 562.8   | 12.2                         | 52.5                                      | 113                          | 95                             |
| Kokku/<br>total | 5897   | 554.5   | 12.0                         | 50.8                                      | 112                          | 99                             | 7033   | 539   | 12.9                         | 50.8                                      | 107                          | 99                             |



## 50. Keskmised näitajad karjatestil aretuskarjades

Average results on farm test in breeding farms



## 51. Keskmised näitajad karjatestil tõuti

Avg. results of different breeds on farm test

| Puhtatõulised<br>Purebreed | Landrass (L) |      |      | Jorkshir (Y) |      |      | Hämpshir (Ha) |      |      | Pjeträän (Pi) |      |
|----------------------------|--------------|------|------|--------------|------|------|---------------|------|------|---------------|------|
|                            | kuni<br>1999 | 2000 | 2001 | kuni<br>1999 | 2000 | 2001 | kuni<br>1999  | 2000 | 2001 | 2000          | 2001 |

Emikud Gilts:

|                                       |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Testitute arv<br>No. of animals       | 3046 | 3192 | 3674 | 5612 | 4812 | 4545 | 68   | 37   | 11   | 42   | 110  |
| Peki paksus (mm)<br>Backfat (mm)      | 14.7 | 14.5 | 13.6 | 15.4 | 14.7 | 13.7 | 13.2 | 13.4 | 13.1 | 12.7 | 12.5 |
| Lihassilm (mm)<br>Muscle depth (mm)   | 47.7 | 50.0 | 51.4 | 48.2 | 49.8 | 51.6 | 53.3 | 54.4 | 51.6 | 54.6 | 58.7 |
| Massi-iive (g/ööp)<br>Daily gain(g/d) | 548  | 564  | 568  | 537  | 548  | 553  | 568  | 552  | 534  | 510  | 540  |
| Vanus testimisel (p.)<br>Test age(d.) | 181  | 177  | 178  | 186  | 180  | 180  | 172  | 183  | 184  | 190  | 180  |

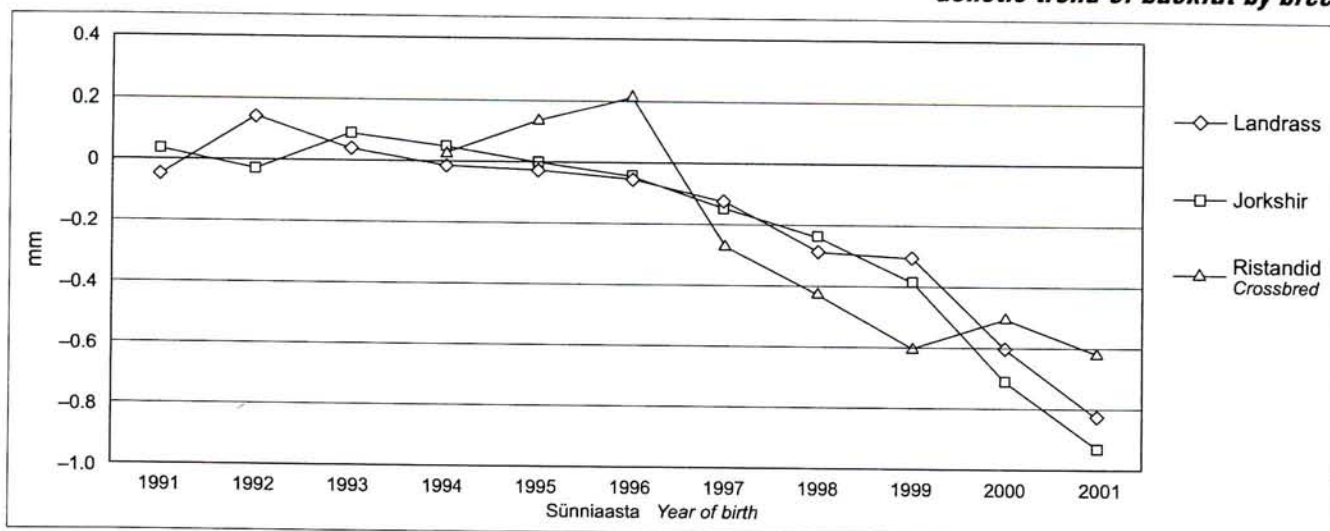
Kuldikud Boars:

|                                       |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Testitute arv<br>No. of animals       | 530  | 542  | 723  | 807  | 1035 | 790  | 46   | 13   | 10   | 49   | 99   |
| Peki paksus (mm)<br>Backfat (mm)      | 13.8 | 13.5 | 12.7 | 13.8 | 13.6 | 12.5 | 12.6 | 14.0 | 10.7 | 11.8 | 10.7 |
| Lihassilm (mm)<br>Muscle depth (mm)   | 47.6 | 50.4 | 52.0 | 49.2 | 49.1 | 51.8 | 50.8 | 52.3 | 51.0 | 52.9 | 56.6 |
| Massi-iive (g/ööp)<br>Daily gain(g/d) | 591  | 602  | 606  | 568  | 561  | 576  | 603  | 578  | 533  | 533  | 539  |
| Vanus testimisel (p.)<br>Test age(d.) | 168  | 164  | 166  | 177  | 175  | 173  | 164  | 177  | 182  | 183  | 180  |

| Ristandid<br>Crossbreds               | L*Y<br>Emikud / gilts |      |      | Y*L<br>Emikud / gilts |      |      | Ha*Pi ja Pi*Ha<br>Kuldikud / boars |      |      |
|---------------------------------------|-----------------------|------|------|-----------------------|------|------|------------------------------------|------|------|
|                                       | kuni 1999             | 2000 | 2001 | kuni 1999             | 2000 | 2001 | kuni 1999                          | 2000 | 2001 |
| Testitute arv<br>No. of animals       | 682                   | 1568 | 2318 | 330                   | 740  | 994  | 1                                  | 24   | 57   |
| Peki paksus (mm)<br>Backfat (mm)      | 14.5                  | 14.8 | 14.2 | 13.8                  | 13.5 | 13.3 | 10.0                               | 11.8 | 10.9 |
| Lihassilm (mm)<br>Muscle depth (mm)   | 51.8                  | 52.3 | 53.1 | 47.3                  | 49.6 | 51.1 | 57.0                               | 52.1 | 54.4 |
| Massi-iive (g/ööp)<br>Daily gain(g/d) | 560                   | 559  | 571  | 548                   | 533  | 557  | 641                                | 559  | 556  |
| Vanus testimisel (p.)<br>Test age(d.) | 179                   | 180  | 179  | 185                   | 199  | 185  | 145                                | 179  | 177  |

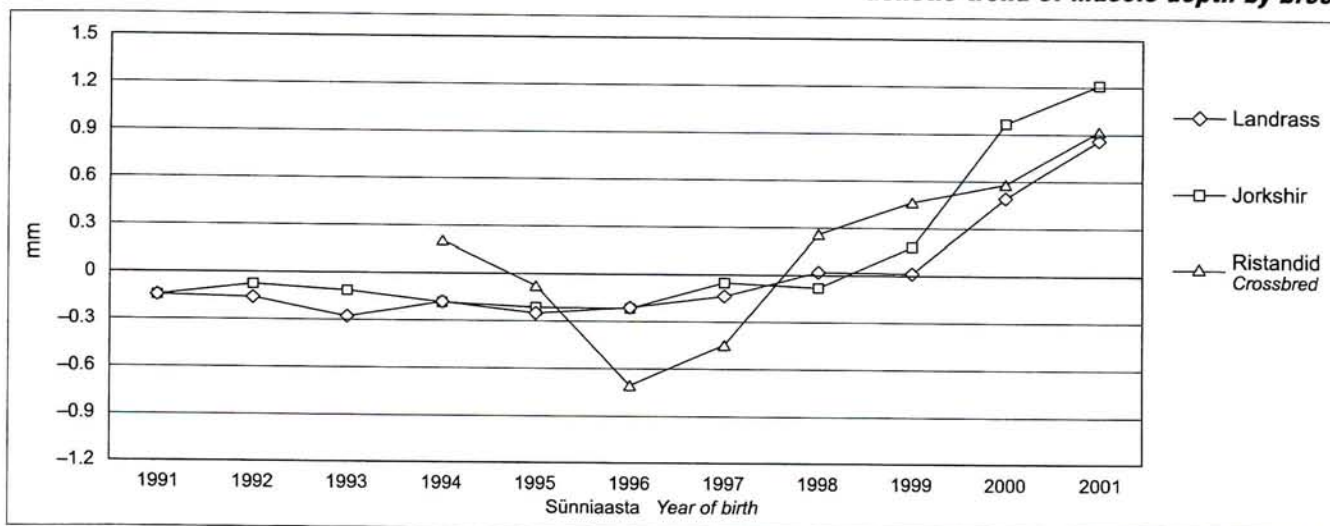
### 52. Peki paksuse geneetiline trend tõugude viisi

*Genetic trend of backfat by breed*



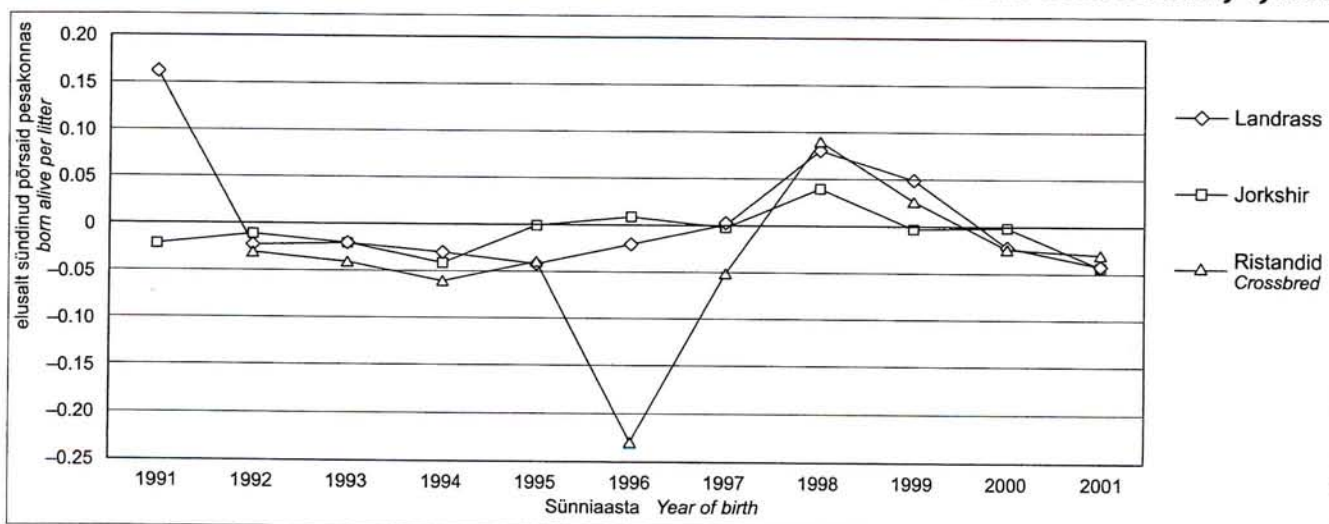
### 53. Lihassilma läbimõõdu geneetiline trend tõugude viisi

*Genetic trend of muscle depth by breed*



### 54. Viljakuse geneetiline trend tõugude viisi

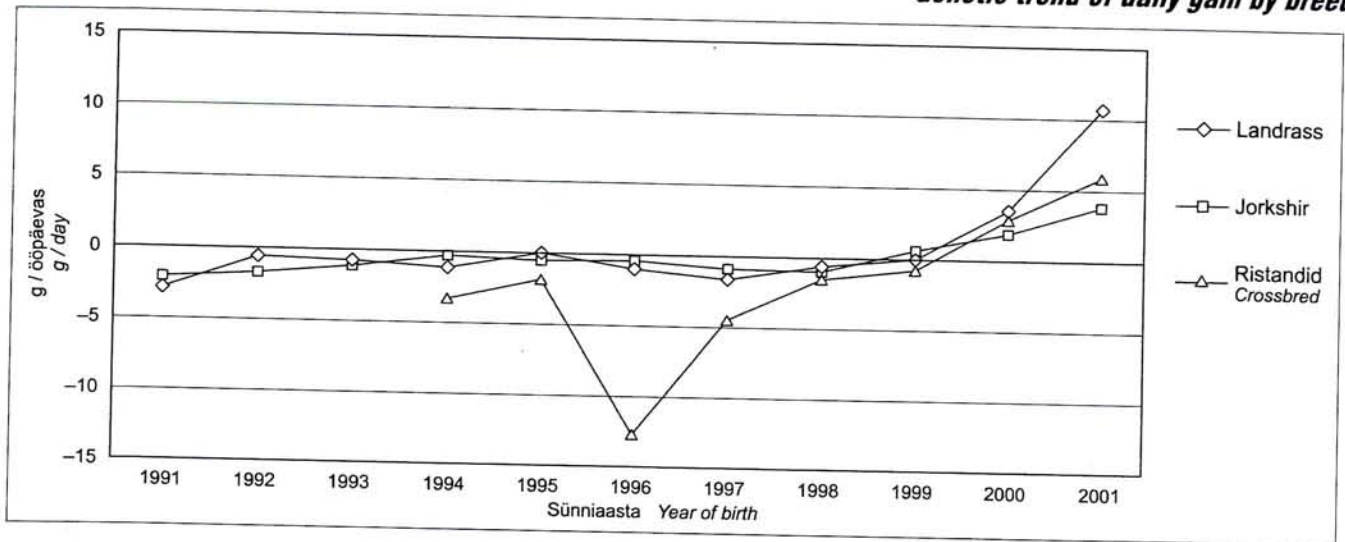
*Genetic trend of fertility by breed*





## 55. Massi-iibe geneetiline trend tõugude viisi

Genetic trend of daily gain by breed



## 56. Hinnatud kultide ja emiste keskmised aretusväärtused

Estimated Breeding Values (EBV) boars and sows

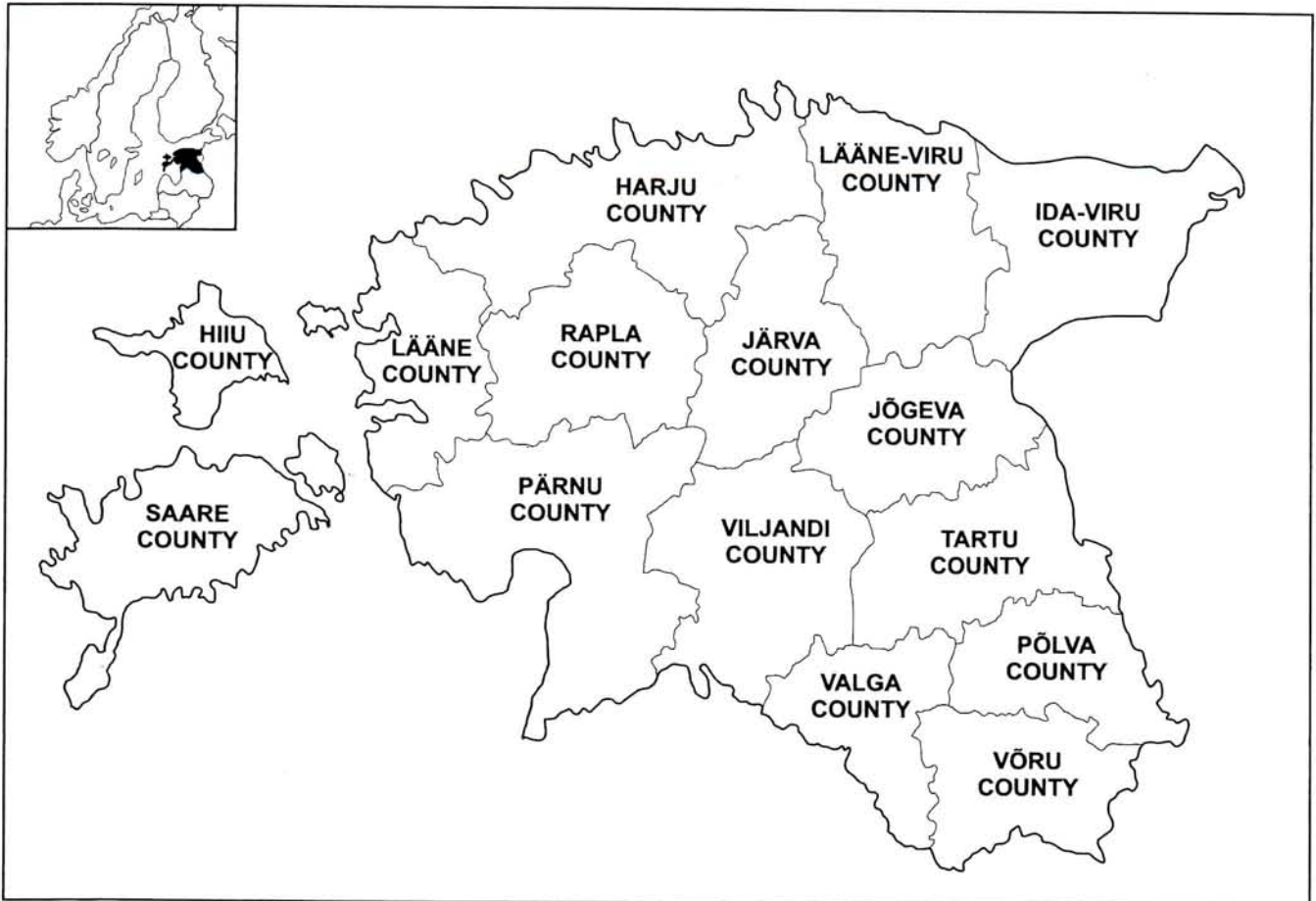
| Sünniaasta<br>Year of birth | Kuldid Boars |                                       |   |                                      |                              |                                | Emised Sows |                                       |  |                                       |                              |                                |
|-----------------------------|--------------|---------------------------------------|---|--------------------------------------|------------------------------|--------------------------------|-------------|---------------------------------------|--|---------------------------------------|------------------------------|--------------------------------|
|                             | arv<br>no.   | peki paksuse SAV<br>backfat EBV<br>mm | lihassilma SAV<br>muscle depth BV<br>mm | massi-iibe SAV<br>daily gain BV<br>g | jõudluse SAV<br>perform. EBV | viljakuse SAV<br>fertility EBV | arv<br>no.  | peki paksuse SAV<br>backfat EBV<br>mm | lihassilma SAV<br>muscle depth EBV<br>mm | massi-iibe SAV<br>daily gain EBV<br>g | jõudluse SAV<br>perform. EBV | viljakuse SAV<br>fertility EBV |
| 1995                        | 231          | -0.03                                 | -0.28                                   | -1.53                                | 98.9                         | 99.9                           | 665         | -0.02                                 | -0.21                                    | +0.15                                 | 99.6                         | 100.5                          |
| 1996                        | 300          | -0.15                                 | -0.10                                   | -1.06                                | 100.3                        | 100.4                          | 1763        | -0.03                                 | -0.25                                    | -0.61                                 | 99.3                         | 100.9                          |
| 1997                        | 563          | -0.46                                 | +0.10                                   | -0.89                                | 103.2                        | 99.7                           | 3256        | -0.11                                 | -0.12                                    | -1.13                                 | 99.9                         | 100.6                          |
| 1998                        | 908          | -0.54                                 | +0.44                                   | +1.43                                | 105.2                        | 100.3                          | 6447        | -0.24                                 | -0.10                                    | -1.17                                 | 101                          | 101.4                          |
| 1999                        | 1524         | -0.58                                 | +0.57                                   | +1.94                                | 105.9                        | 99.2                           | 10484       | -0.36                                 | +0.10                                    | -0.04                                 | 102.7                        | 100.5                          |
| 2000                        | 1844         | -0.90                                 | +1.14                                   | +3.70                                | 109.9                        | 99.5                           | 11571       | -0.59                                 | +0.63                                    | +2.50                                 | 106.3                        | 99.7                           |
| 2001*                       | 902          | -1.01                                 | +1.32                                   | +11.61                               | 114.6                        | 99.8                           | 7253        | -0.79                                 | +0.97                                    | +5.88                                 | 109.8                        | 99.2                           |

\* Kõik aastal 2001 sündinud loomad pole veel hinnatud

## 57. Tartu seemendusjaama kultide järglaste keskmised aretusväärtused

Average Estimated Breeding Values (EBV) of Tartu AIS boars

| Kuldi sünniaasta<br>Boars' year of birth | Testitud järglaste arv<br>No. of tested progeny | Peki paksuse SAV<br>mm<br>Backfat EBV | Lihassilma SAV<br>mm<br>Muscle depth EBV | Massi-iibe SAV<br>g<br>Daily gain EBV | Jõudluse SAV<br>Perform. EBV | Viljakuse SAV<br>Fertility EBV |
|--|---|---------------------------------------|--|---------------------------------------|------------------------------|--------------------------------|
| 1996                                     | 1548  | -0.82                                 | + 1,09                                   | + 2,72                                | 109                          | 102                            |
| 1997                                     | 17  | -0.47                                 | - 0,42                                   | - 8,35                                | 99                           | 102                            |
| 1998                                     | 1538  | -0.78                                 | + 1,22                                   | - 0,64                                | 107                          | 98                             |
| 1999                                     | 2286  | -0.62                                 | + 1,43                                   | + 7,67                                | 110                          | 98                             |
| 2000                                     | 1232  | -1.16                                 | + 1,01                                   | +20,36                                | 120                          | 98                             |



The Republic of Estonia lies on the eastern shores of the Baltic Sea. Estonia is located between 57°30' and 59°49' latitude, and 21°46' and 28°13' longitude. The distance from north to south is about 240 km and the distance from east to west is about 350 km.

The population of Estonia is 1,4 million people (Statistical Office of Estonia).

With a total land area of 45,215 km<sup>2</sup> it is the smallest of the three Baltic States. Estonia shares borders with Russia to the east and with Latvia to the south. In the north it has a coastline on the Gulf of Finland and in the west it is bounded by the Gulf of Riga and yields the Baltic Sea. Two of its largest islands, Saaremaa and Hiiumaa lie off the western coast of Estonia in the Baltic Sea.

Estonia is mainly a lowland country. On average, the land reaches only 50 meters above sea level. The highest point is *Suur Munamägi* (Great Egg Hill) (318 m above sea level) in the southeast. 420 rivers and more than 1000 lakes cover the landscape. The largest lake, Lake Peipsi, on the eastern border, is the fifth largest lake in Europe. It covers an area of 3555 km<sup>2</sup>.

Agricultural lands (grasslands, meadows, and natural pastures) cover twenty five percent of the country. Forests account for 44% of the landmass. Mires (fens, bogs and swamps) cover an additional 20% of the territory and 6% is occupied by inner natural reservoirs. Principal soil types: sandy soil, clay, peaty soil.

The climate is determined by Estonia's location in the north-western part of the Eurasian continent, in the vicinity of the North Atlantic. The closeness of the Baltic Sea has a strong influence on local climatic differences, especially in coastal regions.

Permanent snow cover becomes established in the south-eastern uplands at the beginning of December, at the earliest, and by the end of March, the snow can be half a meter in depth. In January there is snow throughout the land and it usually melts at the end of March. In mild winters, there is often no lasting snow cover. In Estonia south-western and western winds prevail. Whirlwinds and heavy storms are rare.

The vegetation period (mean air t° over 5°C) lasts in most of Estonia 170-185 days, active growing period (mean air t° over 10°C) lasts in most of Estonia for 120-130 days, the aggregate mean temperature at that period is about 1700°.