Health data recording in Finland

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History of health data recording in Finland

The need to have bulls tested for health traits was recognised in the 1970's

Health data recording started in 1982, after Norway, before Sweden and Denmark

- **Voluntary system**
  - 89 % of herds sent in data during 2011
  - Total treatments equal to 55 % of cow number
- **Farmer owned**
  - Faba, NAV & Viking Genetics authorised to use it for breeding purposes

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Health data in the advisory database

- **Cow ID**
- **Treatment date**
- **Treatment code**
  - 195 different codes for diagnoses and/or treatments
- **Vet ID**

- **Preventive measures**
- **Hoof treatment**
- **Self-medication**

Health data in the Naseva database

Naseva is a voluntary food safety register operated by the Finnish Association for Animal Disease Prevention

Established 2006

Nationally agreed food safety conditions

- **Cow ID**
- **Treatment date**
- **Diagnosis**
- **Medication**
- **Withdrawal period**
- **Vet ID**

How is the data collected?

1.

The farmer summons the vet when he/she sees fit.

The farmer has the cow health cards ready for the vet.

The farmer may send the data to the advisory & Naseva databases.

2.

The vet treats the animal.

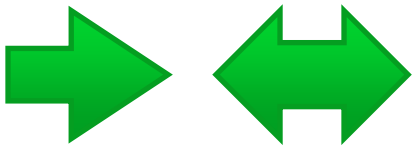
The vet writes down treatment data on the cow health card.

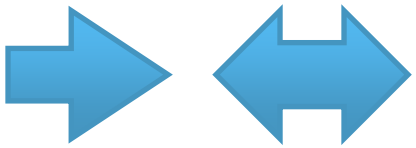
The vet may send the data to the Naseva database.

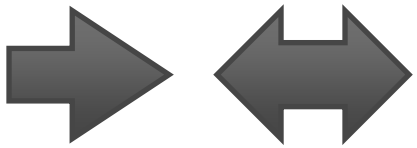
3.

AI technicians collect data from cow health cards

AI technicians send the data to the advisory database after the day's work





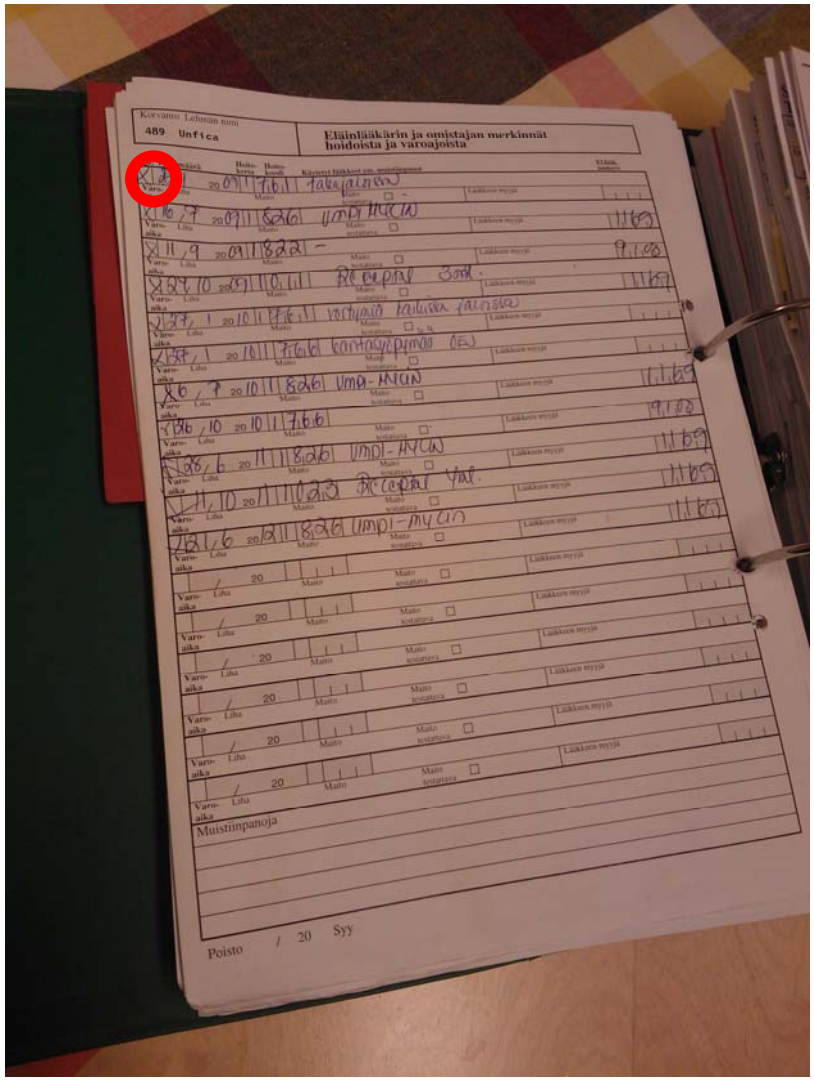


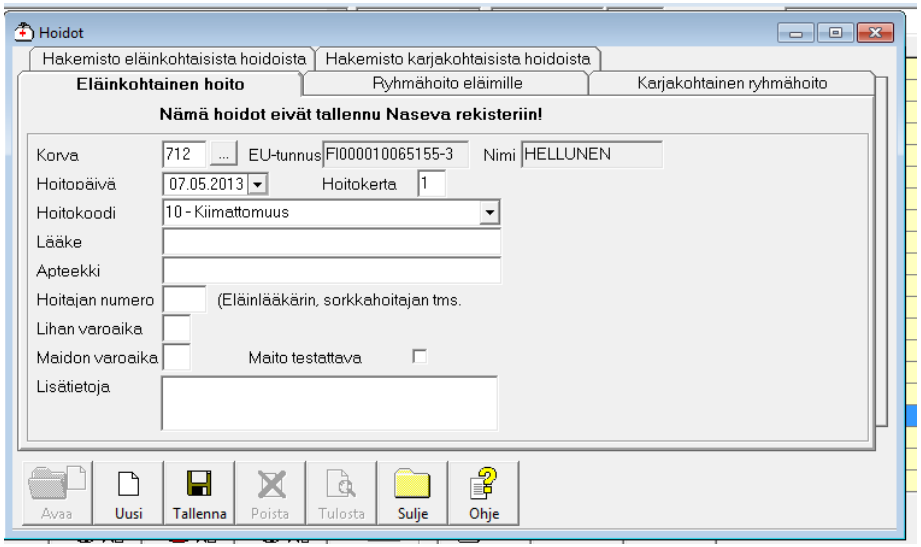
Data flow between the databases

All treatment data from Naseva is also transferred and converted to the advisory database

- **Good points:**
  - Once entered the data can be used anywhere
  - Medication bookkeeping and breeding & management purposes combined
- **Problems:**
  - Vets reluctant to enter data to Naseva
  - Farmers reluctant to enter data to Naseva
  - Naseva is almost solely used for cows right before slaughter
  - Some slaughteries accept data on paper

Data recording options





The farmer can have treatments reported:

- **By AI technician from the cow card**
- **By himself through Ammu programme**

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Data recording from hoof trimming

- ”Hoof Mobile”
- Software of Danish origin
- Hoof trimmers enter data on the spot
- Reports available after trimming session

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Efficiency of data capture

In a voluntary system, efficiency of data capture is never perfect

Still, 83 % of all treatments are captured (Virtala 2012)

- **Failure by veterinarian**
  - Some farmers do not show cow cards to the vet
  - Some veterinarians reluctant to mark the cow cards (more in the past)
- **Failure by AI technician**
  - Culled cows
  - Cows that are not being inseminated
  - Some technicians reluctant to record data
- **Delay**
  - Median 26 days, 95 % fractile 163 days (Virtala 2012)

Data collection methods vs. delay

Method	Treatments	%	Avg delay days
Veterinarian	37,724	12.6	38
Farmer /Naseva	54,075	18.1	64
Farmer/ Ammu	16,682	5.6	55
Advisor/ Ammu	13,839	4.6	98
Hoof trimmer/ sheet	2,391	0.8	232
Hoof trimmer	50,023	16.7	2
AI technician	124,066	41.5	84

Recognised problems

- **Complexity**
- **Many parties involved**
- **Leads to:**
  - Data loss
  - Errors
  - Delays
- **Development of veterinary software to comply with the registers**

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Data use for breeding purposes

VR Asmo Ullimulli Urut ET A 46365 C

Born: 18.10.2011, Sulkava
Breeder: Tolvanen Asko
Color:
Animal ID: 10683391
Int.ID: FIN000000046365
VG

Translation of breeding values to phenotypic values

Sire: A.Ullimulli AAA 44033 C
PGS: Lindero AAA 43518 C
PGD: Orakkel_ET 50-1204864AAA
Dam: K.Elena 1300091AAA
MGS: V.Record AAA 42724 C
MGD: Volga 1290849AAA
MGGS: N.Ooppium AAA 41638 D

Trait	Daughters Reliability
Production	
Functional	
Health	
Conformation	

Breed proportion

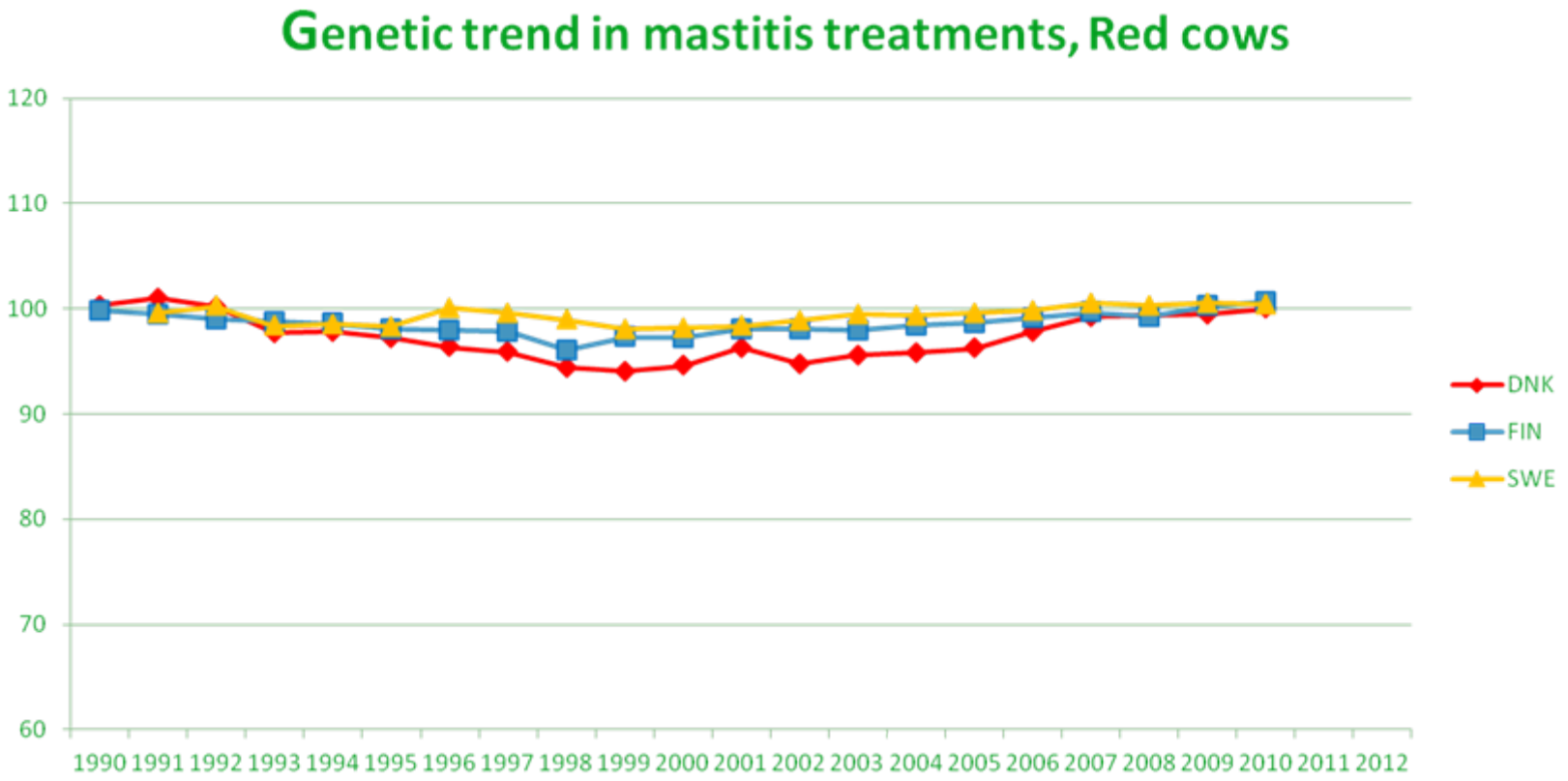
FAY	SRB	NRF	CAN
(65,6%)	(14,8%)	(12,5%)	(7,0%)

NTM: 24 (G) 30.04.2013

		80	90	100	110	120	
Production	**111**						
Milk-kg	113						
Fat-%							
Fat-kg	107						
Prot.-%							
Prot.kg	112						
Persistency		non-pers.					persistant
Fertility	**114**						
Birth	**110**						
Calving	**106**						
Still birth sire							
Still birth mgs							
Calving ease (sire)							
Calving ease (mgs)							
NRR (male fertility)							
Growth	107						
Udder health	**108**						
Cell count							
Milkability	**96**						
Leakage							
Other treatments	**112**						
Temperament	**109**						
Hoofhealth	109						
Longevity	**119**	bad					good
Conformation			80	90	100	110	120
Body	103	bad					good

- **Breeding indeces**
  - udder health
  - hoof health
  - other treatments

Data use for breeding purposes, II



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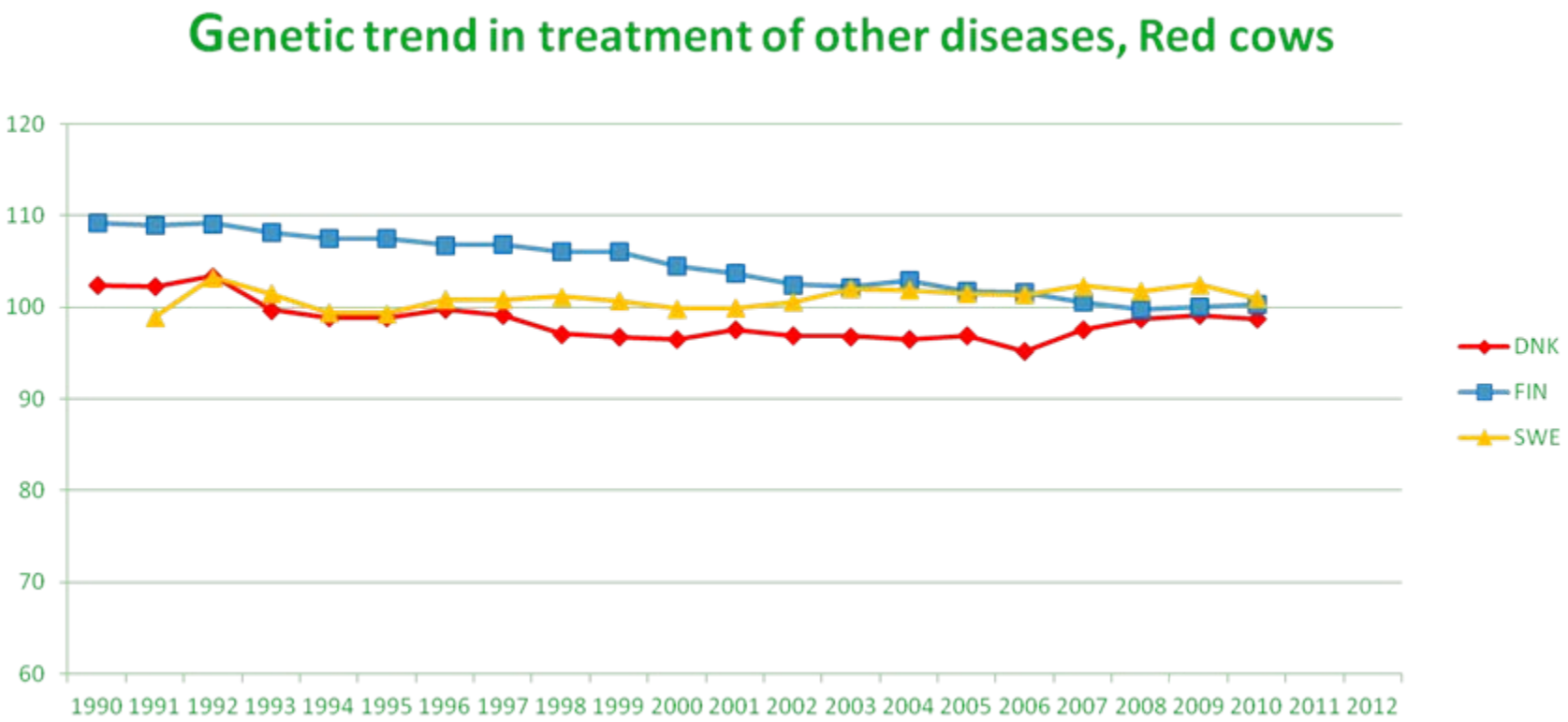
Data use for breeding purposes, III



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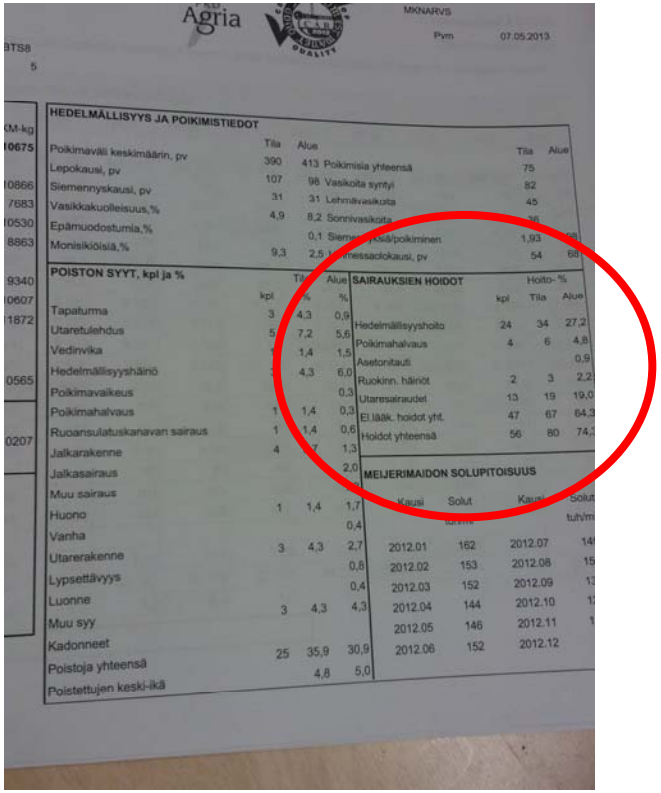
Reporting back to farmers


Agria

MKNARVS

Pvm 07.05.2013

HEDELMÄLLISYYS JA POIKIMISTIEDOT

	Tila	Alue
Poikimaväli keskimäärin, pv	390	413
Lepokausi, pv	107	98
Siemennyskausi, pv	31	31
Vasikkakuolleisuus,%	4,9	8,2
Epämuodostumia,%		0,1
Monisikiöisiä,%	9,3	2,5

	Tila	Alue
Poikimisia yhteensä	75	
Vasikoita syntyi	82	
Lehmävasikoita	45	
Sonnivasikoita	36	
Siem...yksiä/poikiminen	1,93	
...inissaolokausi, pv	54	68

POISTON SYYT, kpl ja %

	kpl	Tila %	Alue %
Tapaturma	3	4,3	0,9
Utaretulehdus	5	7,2	5,6
Vedinvika	1	1,4	1,5
Hedelmällisyyshäiriö	3	4,3	6,0
Poikimavaikeus			0,3
Poikimahalvaus	1	1,4	0,3
Ruoansulatuskanavan sairaus	1	1,4	0,6
Jalkarakenne	4	5,7	1,3
Jalkasairaus			2,0
Muu sairaus			
Huono	1	1,4	1,7
Vanha			0,4
Utarerakenne	3	4,3	2,7
Lypsettävyys			0,8
Luonne			0,4
Muu syy	3	4,3	4,3
Kadonneet			
Poistoja yhteensä	25	35,9	30,9
Poistettujen keski-ikä		4,8	5,0

SAIRAUKSIEN HOIDOT

	kpl	Hoito- % Tila	Alue
Hedelmällisyyshoito	24	34	27,2
Poikimahalvaus	4	6	4,8
Asetonitauti			0,9
Ruokinn. häiriöt	2	3	2,2
Utaresairaudet	13	19	19,0
El.lääk. hoidot yht.	47	67	64,3
Hoidot yhteensä	56	80	74,2

MEIJERIMAIDON SOLUPITOISUUS

Kausi	Solut	Kausi	Solut tuh/ml
2012.01	162	2012.07	14
2012.02	153	2012.08	15
2012.03	152	2012.09	13
2012.04	144	2012.10	13
2012.05	146	2012.11	1
2012.06	152	2012.12	

- **Paper report once per year**
- **Treatments grouped into:**
  - Fertility issues
  - Milk fever
  - Ketosis
  - Nutritional disorders
  - Udder diseases

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Health data in advisory internet services

ProYield Cow Data

7.5.2013

Ear nr and name	390 Urakka	Born	14.10.2005
EU-identification	FI000008363139-9	Herdbook nr	1331947 A

Return to the animal 390 Urakka.

Herd menu | Basic data | Annual yields | Testmilkings | 305-day yields | Calvings | Insemination | Treatment

Treatment date	Treatment code	Treatment
10.10.2007	822	Preventive hoof treatment
20.09.2008	768	Hoof torsion
20.09.2008	822	Preventive hoof treatment
29.01.2009	761	Sole haemorrhages
29.01.2009	822	Preventive hoof treatment
08.06.2009	822	Preventive hoof treatment
16.09.2009	763	White line rupture
16.09.2009	768	Hoof torsion
16.09.2009	822	Preventive hoof treatment
19.06.2010	821	Dry-off treatment
21.12.2010	12	Silent heat
22.12.2011	450	Other disease
23.12.2011	101	Milk fever
10.02.2012	23	Cystic ovaries
22.02.2012	42	Involution failure

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Health data in advisory internet services

Dairy Benchmarks, health

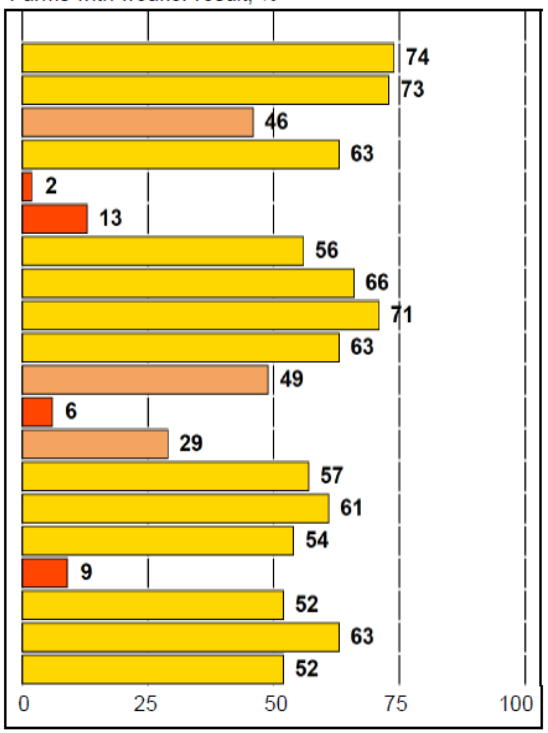
Herd Id:

Printing date 7.5.2013

Data for year 2012

If there are less than 40 herds, the results are not shown. Figures marked with an asterisk (*) have had their calculation principles altered since 2008 and figures marked with two asterisks (**) since 2010. For a more detailed description please see Help -> Features.

	Farm result	Herds
Welfare		
Culling rate, %	25,5	6843
Heifers culled, %	8,2	6835
Deaths/ departures, % cowmean	5	6880
Calf mortality	4,9	6913
Cows/kennel	1,18	2363
Eating space, cm/cow	41	1197
Mastitis treatments in heifers, %	3	6832
Mastitis treatment, 2+rd calving, %	8	6838
Dry-off treatment, %	0	6622
Milk fever treatment 1st & 2nd calv., %	0	6838
Milk fever treatment 3+rd calving, %	2	6829
Metritis treatment, %	13	6622
Non-infectional fertility treatments, %	15	6622
Abomasal treatments %	0	6622
Ketosis treatment, %	0	6622
Disorders in rumen and bowels, %	0	6622
Grass tetany treatment, %	0	6622
Contageous hoof diseases, %	0	6622
Respiratory infections in calves, %	0	6912
Calf scours treatments, %	0	6912



Results

Breed	Fertility treat-ment	Milk Fever	Ketosis	Nutr. Disorder	Udder diseases	Hoof diseases	All treat-ments
Ayrshire	17.8	3.2	0.9	1.7	16.2	1.2	50.8
Holstein	20.4	4.6	1.7	2.3	20.9	1.7	63.0
Finncattle	13.7	4.1	2.3	1.7	16.3	1.1	47.8
Total	18.7	3.7	1.2	2.0	17.9	1.4	

- Results from 2011
- Percent of cows treated for each disease group

Conclusion

- Voluntary registration of treatments
- Since 1982
- Vet -> AI technician -> Database
- Breeding values
- Farm reports
- Management services
- Cooperation with the production chain information system
- Registration by hoof trimmers
- Future: registration by vets?