




## Milk production, animal recording, dairy advisory services and cattle breeding in Finland



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## Finland




- 5,250,000 inhabitants
- 1 million in Helsinki metropolitan area; Lapland + Kainuu 114,000 km<sup>2</sup> with only 271,000 inhabitants
- Languages: Finnish 91.6%, Swedish 5.5%, Russian 0.75%, Lappish 0.03%, others 2.1%
- Religion: Lutheran 83%, Orthodox 1.1%, others 1.1%, not registered 15%
- Independent since 1917, earlier under Swedish and Russian rule
- EU member since 1995
- Average temperature 6.0°C in the south (Helsinki), -0.5 °C in the north
- Great variation in day length – “nightless night & dayless day”

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## Agriculture in Finland



- The northernmost agricultural country in the world
- Short growing season: 180 days in the South, 110 days in the North
- 2,219,000 ha of arable land (6.5% of the territory)
- 70,000 farms (30 ha per farm)
- Main cultures: grass, barley, oats, rye, wheat, rapeseed, potato, sugar beet
- Family owned agriculture
- Agriculture 1.2% of GDP, 4% of labour force
- 40% of agricultural gross return from milk revenues



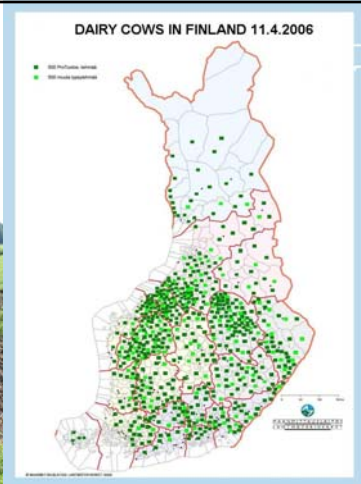

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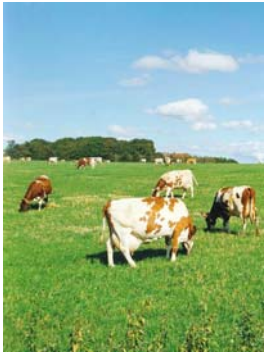
## Milk production in Finland

- Milk is the most important agricultural product in Finland
- 2005: 15,840 dairy farms; 316,800 cows; dairy deliveries 2,293 millions of litres
- Average yield of all cows 7835 kg per cow; average herd size 20 cows
- Breeds: 71% Ayrshire, 28% Holstein, 1% Finnish Cattle
- Feeding based on grass silage, oats, barley and rapeseed meal
- 25% of production exported, main markets Russia, USA and EU
- Functional dairy products & their production licenses

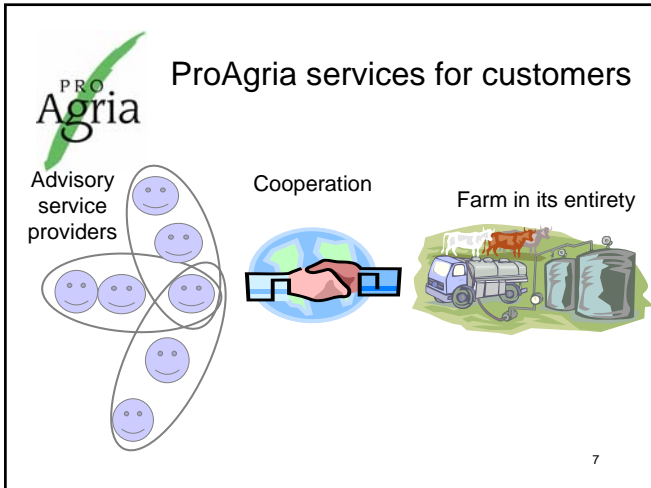
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## Milk recording and advisory services



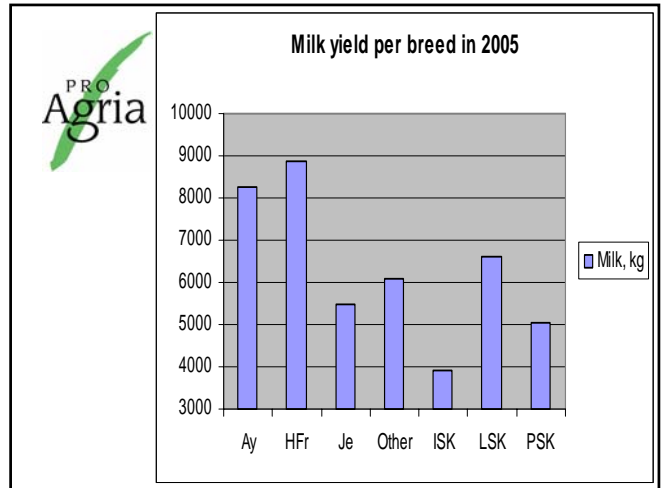
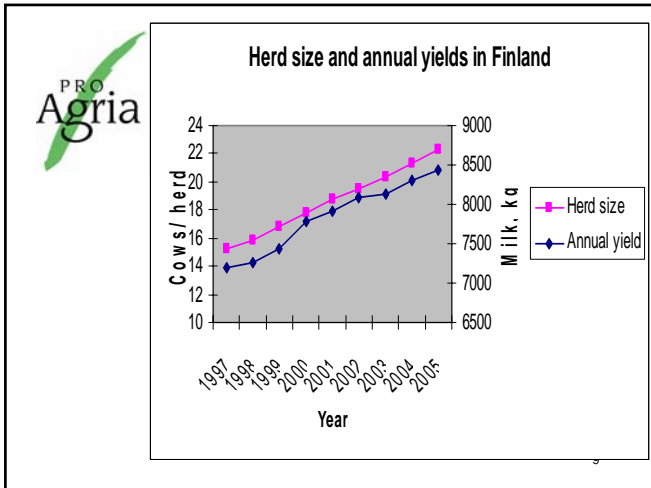
- ProAgria provides a large range of advisory services to the farmers, including milk recording
- Production, feeding, economy planned, production processes and costs analysed
- Milk recording 2006: 10,300 customers, 78% of all cows, 81% of milk
- 2005: 22.3 cows, 8427 kg milk, 288 kg protein (3.41%), 354 kg fat (4.20%)



**PRO Agria** Farm Competitiveness Analysis

- Economic key figures + thorough interview of farmer and workers
- Strategy, leadership, customer relations, knowledge management, competency, processes

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**PRO Agria** Easier milk recording

- Long distances, small farms & high labour cost
- Non-sampled tests every two months; farmer sampling (97%)
- One-milking sampling (52%), milk-sum recording
- Collection of data by farmers
- Reliability check through dairy delivery data
- Advisor visits farmers 2-6 times per year to analyse results, plan and improve

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**PRO Agria** Herd Management Monitor (Maitoisa)

Verkkopalvelu

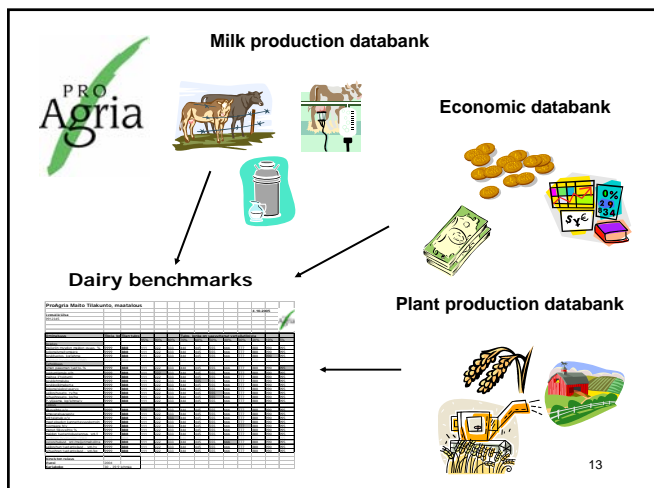
ProAgria Milk Herd Management Monitor

Herd id: [ ] Feature: milk deviation From: 2001 To: 2006  First-calvers  Real  Other cows  Modelled

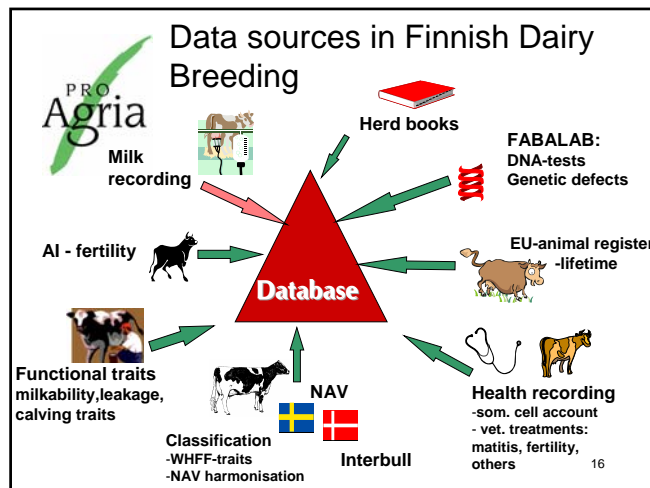
Area compared:  ProAgria area  Subsidy area Level compared: lowest: 1% 5% 10% 25% 50% highest: 25% 10% 5% 1% 0.10%

Graphics Figures History

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The screenshot shows the ProAgria Dairy Benchmarks web application. It includes a header with the ProAgria logo and navigation links. The main content area is titled 'Dairy Benchmarks' and features a table of benchmark data for the year 2005. The table has multiple columns for different metrics and rows for various farm categories. The data is presented in a clear, structured format.




### Dairy breeding

- Breeding values for over 60 different traits
- Total Merit Index TMI has been used for many years
- Fertility and health traits has been evaluated over 20 years
- Efficient use of test bulls:
  - 40 % of inseminations are done with test bull semen



### Artificial insemination in Finland

- 180 AI-bulls are tested in Finland every year
  - 120 Ayrshire
  - 50 Holstein
  - 8 Finncattle
- Big daughter groups: average 200 daughters / bull





### Total merit index = economical efficiency

#### Bulls:

- 1,0 \* protein kg
- 0,3 \* fat kg
- 0,3 \* protein content
- 0,4 \* fertility
- 0,5 \* udder conformation
- 0,3 \* udder health

#### Cows:

- 1,0 \* protein kg
- 0,3 \* fat kg
- 0,3 \* protein content
- 0,5 \* udder conformation
- 0,3 \* udder health

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