

Quality Assurance for milking installations and recording devices

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Quality Assurance and Recording Systems

- Introduction
- QA on Recording Systems in some countries
- QA system in The Netherlands
- Take Home message

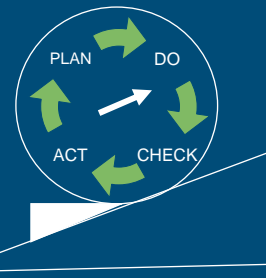


Electronic Recording Devices

- Start with national guide lines,
- ICAR Guide Lines since 1992
 - Procedures for approval, routine testing
 - List of approved milk meters www.icar.org
- Quality Assurance & Management becoming more important

Quality Assurance

- Fit the purpose
- Do it right the first time
 - Cost and time saving
- PCDA approach (Deming Circle)
 - Plan – Do – Check – Act
- Quality Management
 - Control, assurance and improvement



"As long as the circle is rolling.. the quality is providing.
Once the circle is interrupted. The quality fails." (Deming)

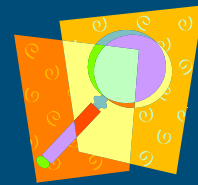
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Enquiry on request of CRV by ASG

■ Enquiry

- Utilization of ICAR guide lines
- Quality assurance for milk meters in these countries
- Netherlands, Germany, Denmark, France, Canada



MPR and utilization of milk recording

	CAN West	DK	FR	DE	NL
Farms	6418	4750	98000	103500	21173
% MR	71.2	92.6	61.2	66.5	80.6
% EMM	11.3	17.9	1.8	6.5	24.7
% Cows in MR	81.6	95.7	70.3	83.8	85.1

Working methods Installation Tests

Country	Method
CAN, NL	Installation by dealer, official test by authority
DE	Installation test by dealer, water test by authority after 1 month, no national database
DK	Installation test by dealer, date of test send to MRO
FR	Installation test by MRO or dealers (limited) under MRO authority, no national database

Working methods Routine Tests

Country	Method
CAN	Annual test by MPRO technicians (meters used for breeding data)
DE	Annual test according to ADR protocol (ICAR) by MPRO or LWK technicians (85%)
DK	Routine test by dealer, ad-hoc check by MPRO
FR	Annual test by MPRO technicians, no central database
NL	Annual test by certified technicians, 2% check at random by KOM

Combining routine test with maintenance

Country	Yes/No	Method
CAN	No	Fully separated
DE	No	Fully separated
DK	Yes	Integrated
FR	No	Plans to integrate
NL	Yes	Integrated

Utilization of non-approved devices/combinations

Country	Yes/No	Remarks
CAN	Yes	Devices are not used for DHIA
DE	No	All ICAR approved
DK	No	All ICAR approved
FR	Yes	All ICAR approved, robots ?
NL	Yes	All ICAR approved, robots ?

Costs of Quality Assurance Milk recording devices

Country	Costs	Paid by	Remarks
CAN	Unknown	Farmers	Within service costs MRO
DE	Unknown	Farmers/ governm	Within service costs MRO
DK	Unknown	Farmers	Costs are part of mainten. (€40- €70 per milk meter)
FR	I: €200/farm R: €150/farm	Farmers	MRO (future also dealers)
NL	I: €15-20/m R: €10-15/m	Farmers	directly to dealer or KOM

Concluding remarks

- Milk recording
 - High participation rate
 - Electronic milk recording growing
- Installation and routine tests
 - In general according to ICAR procedures
 - By MRO in CAN, FR and Germany
 - By dealers in NL and DK
- Quality Assurance
 - Within MRO: CAN, FR and DE
 - NL : KOM (quality management system)
 - DK : MRO administrative system, no checks in field

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QA Management system in NL

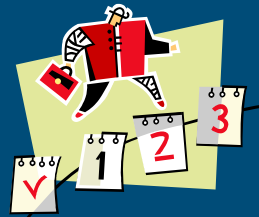
- Start in seventies with milk machine testing
- Testing by advisors, separate maintenance
- Uniform way of testing (ISO)
- Integration of testing and maintenance by technicians (cheaper) in eighties
- Integration with milk meter test (nineties)
- Independent organisation KOM
- Service oriented



Mission of KOM:

A service oriented independent organisation aimed on monitoring and improving quality of the regular maintenance of

- milking machines,
- milk storage systems and
- milk recording devices



System fits in Quality Management Systems of the Dutch Dairy Industries and DHIA

KOM - Quality system

- Milking machine maintenance
- Milk storage maintenance (bulk tank and milk cooler)
- Milk recording by milk meters en jars

Clients:

- Milking machine industry
- Dairy industry
- Breeding organisations
- Farmers

How?

- Registration of all test reports
- Annual training programs
 - Actualize information/new developments
 - Evaluation of test reports per technician
 - Testing of equipment used by technicians
- Random check on farms
 - Milking machines, tanks, recording devices
- Dissemination
 - Reports, articles, web site

How? (continued)

- Training programs for technicians (Certification)
- Acceptance tests for milk meters
- Develop new standards and reports
- Quality check on milk recording (on farm re-check)

Certificate course

- Obligatory within dairy quality management systems
- 2 courses (complete or short)
- Course contains:
 - Construction, machine milking
 - Milk meters and testing
 - Milk Quality and Quality Control
 - Communicational aspects
- Examination

To maintain certificate

- Obligatory annual instruction
- Annual check test equipment
- At least 10 reports per year
- Random quality check
 - on farm test
 - 5 test reports

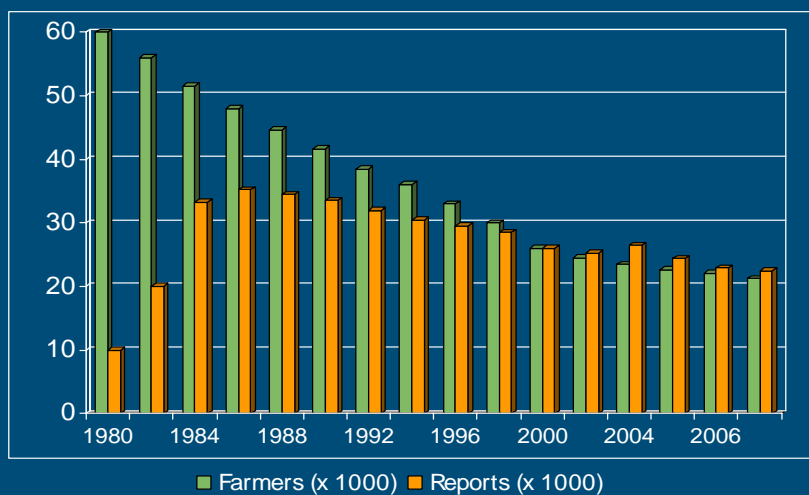
A. Milking machine maintenance

- Registration of reports and quality check
- Uniform test report with ID (KOM number)
- Integrated planning (quarterly)
- Random checks in the field(2%)
- Monthly survey reports for dealers
- Annual report of results

Some figures (2007)

- 10 Brands (Suppliers)
- 130 Milking machine dealers
- 380 Certified technicians
- 21.000 Checked reports (total 23.000)
- 20.790 Farmers

Test reports



Share of milking systems in NL (%)

Milking System	1993	2003	2007
Bucket	5.3	0.7	0.2
Pipe line	21.1	14.0	10.6
Herringbone	62.7	68.7	65.8
Side by Side/Tandem	10.1	12.5	13.6
Rotary	0.6	1.3	2.5
AMS	0.04	2.8	5.3
Nr of farms	35540	23595	20790



B. Milk storage and maintenance

- No technical check by KOM
- Registration of reports
- Focus on hygiene and temperature
- Random checks (2%)
- Survey reports
 - Test ID overview
- Annual report of results

4 Brands, 130 certified technicians

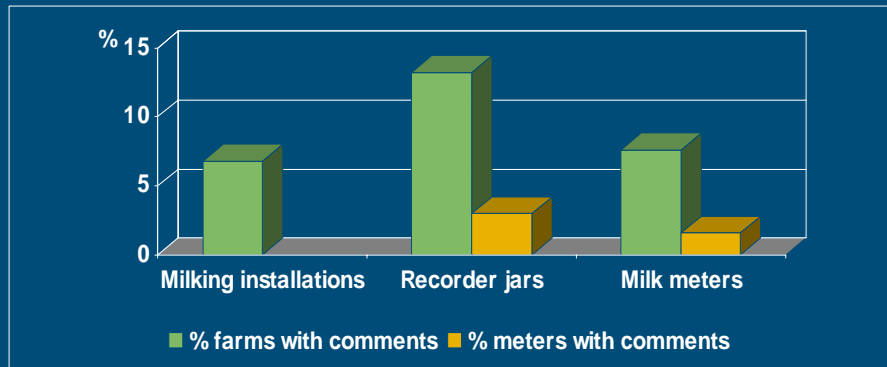
C. Milk meters

- Registration and check of reports
- Fixed and portable meters
- Random checks (5%)
- Integrated planning (quarterly)
 - Annual checking report
- Monthly survey reports
- Annual report of results

Some figures (2007)

- 1 Dutch breeders organisation (NVO)
 - CR-V (largest)
 - 10 others
- 17.000 farms
 - With jars: 8.500
 - With meters: 5.500
 - With Tru-Test: 3.500

Results random checks by KOM in 2007



Ongoing activities

- Co-operation with neighbour countries
 - Mutual agreement with Belgium/Germany
 - Recognition quality programs/certificates
- Service for dealers and breeding organisations, planning, quality progress reports,
- Data analysis – test data and milk quality figures
- Alternative routine test procedures by using smart statistical approaches
- Electronic test report, data exchange via Internet
 - Automatic linkage with dairy industry quality programs

Take Home Message

- Milk recording systems
 - Pedigree values
 - Management information farmer
- Quality Assurance and Management becoming more important
- Lowering costs for farmers and recording organizations
- Integration of quality systems