Cornell University’s milk quality programme is now claimed to be the most qualified in North America following successful ISO/IEC 17025 accreditation of its testing laboratory serving the milk safety and quality needs of some 8,000 farms in the states of California, Maine, Massachusetts, New Hampshire, New York, Ohio, Pennsylvania and Vermont.

Quality Milk Production Services (QMPS) at Cornell University’s College of Veterinary Medicine, Ithaca, New York State, USA, has become the first milk quality laboratory in North America to achieve accreditation to ISO/IEC 17025:2005, General requirements for the competence of testing and calibration laboratories.

“New York enjoys the best quality milk among all the large dairy states in the nation, and is very proactive in having animal health and animal welfare programmes in place. QMPS and the entire Animal Health Diagnostic Center (AHDC) at Cornell play a crucial role in safeguarding the health and welfare of all dairy cows in New York,” said Patrick Hooker, Commissioner of the New York State Department of Agriculture and Markets, speaking at an event in Ithaca to celebrate the ISO/IEC 17025:2005 accreditation of Cornell’s milk quality programme.

Cornell’s milk quality programme – the largest in the USA – makes sure that milk-based dairy products are safe to consume and that they are of the highest possible quality. The Quality Milk laboratory is operated by QMPS, a science-based organization that uses the most effective methods and technology to help producers improve dairy product quality and safety.

Our work contributes to consumer confidence in the dairy industry and touches everyone’s table – whether it’s the milk on their cereal, yogurt for lunch or the Parmesan cheese sprinkled over their spaghetti.

At QMPS, we educate individuals working in many aspects of the dairy industry, from milking crews, veterinarians...
and milk inspectors to its most important customer, the consumer. The 63-year-old lab employs a staff of 40 veterinarians, microbiologists, technicians and office staff serving the needs of about 8,000 farms.

**Why accredit?**

There were several reasons behind our decision to implement ISO/IEC 17025:2005. First of all, we want to be recognized among the best milk quality laboratories in North America. Secondly, it quickly became clear that implementation of a stringent quality assurance system had many unexpected benefits for managing a complex organization.

**The ultimate benefits outweigh the costs.**

Finally, performing such an involved task turned out to be a great team-builder in our organization.

ISO/IEC 17025:2005 implementation and accreditation was a five-year process. As a starting point, we assembled an implementation and review team headed by the AHDC Quality Assurance Manager who is a qualified assessor for the American Association for Laboratory Accreditation (A2LA), and performs laboratory assessments according to ISO/IEC 17025:2005 and Good Laboratory Practice (CFR21 Part 58) Food and Drug Administration (FDA) requirements. He was supported by the Milk Programme Director, the Associate Director/Quality Manager, the Laboratory Supervisor, QA Assistant, Project Manager, and the Administrative Manager to promote the quality system management philosophy and methodology. We also hired an external quality systems consultant to provide ISO/IEC 17025:2005 internal auditor training for team members.

**Five stages**

Once the team was in place and trained, the implementation and accreditation process followed five key stages:

- Training of laboratory personnel in background information on ISO quality management standards, why and how to promote quality, and familiarity with ISO/IEC 17025:2005 requirements
- Developing the QMPS Quality Manual and quality, operating and work area procedures
- Implementing the quality system through internal audits, management reviews and the use of corrective and preventive actions to drive continual improvement
- Hiring a consultant to perform an objective assessment
- Continuing the process of self-monitoring to achieve continual improvement.
**About ISO/IEC 17025**

As of January 2010, some 34 234 testing and calibration laboratories worldwide had become accredited to ISO/IEC 17025:2005, General requirements for the competence of testing and calibration laboratories. However, its influence is even greater than this figure suggests since many countries make its use a legal requirement.

This standard has become the international benchmark counted on by business and governments worldwide to provide assurance of the technical competence of laboratories that play a vital role in trade, product development and manufacturing, and consumer protection.

In addition, documents derived from it are used by laboratories in specific sectors, such as medicine and microbiology.

ISO/IEC 17025:2005 contains all of the requirements that testing and calibration laboratories need to meet in order to demonstrate to customers and regulators that they operate a sound management system which puts them in full control of their processes, they are technically competent and are able to generate technically valid results.

We made only minimal changes in procedures, equipment or staff qualifications during the implementation period to meet ISO/IEC 17025:2005 requirements. However, innumerable work forms were developed, tried, corrected and adapted to facilitate recording of laboratory procedures. At the same time, corrective action reports and preventative action reports were created to drive and facilitate improvement.

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**Benefits**

We have seen numerous early benefits from ISO/IEC 17025 accreditation, particularly in the recognition of our programme within Cornell University, the State of New York, and the country. Many individuals have provided feedback about obtaining ISO/IEC 17025:2005 accreditation, and all the input has been uniformly positive.

When we started, many scare stories surfaced about quality assurance, including predictions of increased costs and staffing. Even though the process of implementing ISO/IEC 17025:2005 is extensive and time-consuming, the ultimate benefits outweigh the costs.

In our experience, day-to-day operating costs of our facility have not increased discernibly. The extra cost of running a tight quality assurance system is balanced by fewer errors and by the virtual elimination of unexpected events.

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**About the author**

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