
Integration of quality certification programs into management of milk recording providers in the United States

S.J. Sievert

Quality Certification Services, Inc., a subsidiary of National Dairy Herd Information Association, Verona, Wisconsin, USA

Quality certification programs are an essential component of the milk recording industry in the United States, ensuring the accuracy of the data submitted to genetic evaluation programs, management programs and compliance with Uniform Operating Procedures and a Code of Ethics by all participants. Quality certification programs are offered for all segments of the recording industry, with standards of performance for field service providers, meter calibration centers and their technicians, milk analysis laboratories, and data processing centers. These integrated programs are neutral with respect to size, business structure, and/or geography and provide opportunity for all participants to provide input and direction to the program. While the primary focus of these programs are compliance, a review of the top quartile of field service providers demonstrates that these programs serve as a framework for the management of certain day-to-day operations, providing a foundation for success and growth without limiting local business decisions and program applications.

Key words: *Milk recording industry, Quality certification program, Standards, Field Service Providers*

The milk recording industry in the United States has experienced significant changes over the past two decades. Traditionally, milk recording organizations were organized as non-profit entities, often working with land-grant universities as part of the Cooperative Extension Service. These organizations served defined territories (usually state lines) and were supported by resources and staff as needed to serve the dairies in their trade area.

At present, the milk recording industry is markedly different. While certain regions of the country are still served by traditional milk recording organizations, other geographic regions are now served by organizations that no longer resemble the former. The organizations currently providing milk recording services to dairies include sole proprietorships, privately held corporations, cooperatives and federated (either partially or fully) associations. These organizations no longer operate within a defined trade area; but rather compete in an open-market climate.

Summary

Background

In addition, the meter centers and laboratories providing services to the recording industry have seen similar changes in business structure, trade area and competition. All data generated from the various components of the recording entity are processed at one of four dairy records processing centers prior to submission to the Genetic Evaluation Program (GEP). Like the field service, meter center and laboratory entities, these processing centers have diverse business structures and compete in an open-market environment. One of the challenges in this open-market climate is to maintain standards among competing organizations. The dairy industry in the United States has long realized the need for a quality certification program to ensure that the minimum standards of services are maintained and to assure the accuracy of data flowing between milk recording industry entities and flowing to the Animal Improvement Programs Laboratory (AIPL) and Interbull.

Scope of the quality certification program

The quality certification program in the United States' milk recording industry is currently administered by Quality Certification Services, Inc. (QCS) and audits participating entities on a routine basis to assure compliance with all aspects of the current auditing guidelines as approved by the dairy industry. It is important to note that these guidelines are business-structure neutral and do not exist to determine if an entity should be in business – rather to certify that the entity is operating within compliance. In addition, there is a mechanism for all participating entities to contribute to the content of the guidelines on a regular basis. Furthermore, the Purebred Dairy Cattle Association (dairy breed associations) and National Association of Animal Breeders (artificial insemination organizations bull studs) have representation and input as well, ensuring that the guidelines are fluid, current and best serve the needs of the milk recording industry.

Summary data from the audit activity of QCS during 2007 is presented in table 1. During 2007, cows on recording programs in the United States reached their highest level since 1998. It should be noted that though the number of herds on recording programs has declined (following a similar trend in the total number of dairy herds in the United States); the perceived value of participation in a recording program is evident. The range of size and scope of the certified field service providers operating

Table 1. Summary statistics from QCS, 2007 auditing of milk recording entities.

Parameter	Value	Min.	Max.
Herds on recording programs	23 005		
Cows on recording programs	4 414 821		
Field service providers	27		
Meter centers	46		
Meter technicians	91		
Laboratories	49		
Dairy records processing centers	4 (5 Distinct Processing Platforms)		
Cows tested by field service providers	4 414 821	10 412	784 214
Certified field technicians	3 018	6	196
Certified portable meters (ICAR approved)	108 139	164	10 814
Certified electronic meters (ICAR approved)	66 022	0	3 987
Milk samples analyzed monthly (2-year average)	4 700 000		12 000

within the United States is significant. The business structure and scope of each of these providers is a local management decision and is not influenced or audited by QCS. Rather the auditing guidelines are applied to each provider on an equal basis, providing the framework for an independent audit not influenced by the size, business structure or any other external factor related to an individual field service provider. Similar principles are in place for meter center, laboratory and processing center providers.

The Auditing Guidelines administered by QCS provide minimum standards for compliance and subsequent certification by each provider operating within the milk recording industry. These minimum standards have been developed and approved by all participants, and are subject to review on an annual basis. In addition, procedures are in place to allow for new entrants to the system, ensuring that new entrants are held to the same standard of compliance without providing any barrier to entry.

Table 2 summarizes the auditing schedule of all providers for compliance and certification. All certified providers are audited regularly, ensuring accuracy of data flowing within the system and entering the GEP. From the outside, this schedule may appear aggressive, but it should be noted that the frequency of these audits was determined and approved by the participants. Furthermore, the auditing program allows for flexibility in scheduling to meet the needs of both parties and minimizes the intrusion on the day-to-day operations of the each cooperating entity.

The auditing guidelines administered by QCS encompass the minimum standards to attain or retain certification by an entity in the milk recording system. While all certified providers meet these requirements, many of the field service providers operating in the milk recording system in the United States have chosen to exceed the minimum requirements as part of their operations.

As previously mentioned, the changes in the last decades within the United States milk recording industry have placed participants in direct competition with each other and have reduced the level of government/university support and expertise available to the industry. As the management of each of these organizations looks to

Application of minimum standards

Going beyond the minimum standards

Table 2. Current auditing frequency of milk recording entities.

Parameter	Frequency	Comments
Field Service Providers	Annually	Alternating on and off-site
Meter Centers - Facilities	Biennially	All audits on-site
Meter Technicians - Procedures	Biennially	All audits on-site
Meter Technicians - Training School	Once every 5 years	
Laboratories - Facilities/Procedures	Biennially	All audits on-site
Laboratories - Samples Unknown	Monthly	
Dairy Records Processing Centers	Annually	All audits off-site
DRPC - File Transfer Accuracy	Monthly	

position their organization within the recording industry, many have realized the value of an independent certification program to aid in establishing the basis for many of the fundamental aspects of their business.

Table 3 summarizes some of the key minimum standards attained by all field service providers (n=27), along with the activities of the top quartile (n=7) of these providers with respect to each of these standards. The top quartile was identified as those providers who regularly exceed the minimum standards in all areas. It should be noted that many of the certified providers exceed the minimum requirements in one or more areas of service and their commitment to the quality certification program is recognized as well, though not summarized in this paper.

As table 3 demonstrates, the top quartile of field service providers range in the size and scope of their operations. Though not specifically listed in the table, these providers operate in diverse areas of the country with respect to geography, herd size, business structure and trends of growth or decline in cow numbers in their trade area. Similar comparisons can be made when comparing the operations of laboratories with respect to going beyond the minimum standards of compliance, though they are not summarized in this paper. When evaluating these organizations, three main characteristics of each of these providers surface. These characteristics are: commitment of management at the local level; commitment to the quality certification process and use of the auditor(s) as a resource.

Commitment of management team at the local level

Strength of the management team at the field service level is paramount in an open-market milk recording industry. While there is a broad range of experiences and education levels within the management teams of our field service providers, the most successful have a focus on serving their customers or members. This focus is often demonstrated by investment in employees with training and support, responsiveness to needs of the customers by service and attention to detail, and a vision of business growth through marketing of value-added services to their dairies.

Table 3. Minimum standards and application by top quartile of field service providers.

Standard	Total	Minimum	Top Quartile (n=7)
Number of herds serviced	23 005		145 to 4 425
Number of cows serviced	4 414 821		110 000 to 559 685
Growth (no. cows, 2007 to 2008)	4.04%		8.92%
Initial training of field technicians		3 herds	7 herds to 20 herds
Active field technicians	3 018		15 to 196 Technicians
Field technician training meetings		1x/year	2x to 12x/year
Number of portable meters	108 139		930 to 10 814
Frequency of portable meter calibration		Annually	1 to 4 times/year
Number of electronic meters	66 022		72 to 3 987 meters
Frequency of electronic meter calibration		Annually	1 to 12 times/year
Evaluation of bulk tank/test day deviations		Report values	In-depth investigation and follow-up

A common trait among the managers in the top quartile of field service providers, along with many others operating in the system, is a commitment to the quality certification process. These managers not only realize the process is needed for their organization as an audit of their performance relative to the minimum standards, but also realize that it is an important investment in the totality of the milk recording system. The importance of a nationwide system builds value in the programs marketed locally by the affiliate and allows for the benchmarking of an individual's performance relative to standards.

Another key understanding by these management teams is that the quality certification process provides the framework for certain aspects of the management of the operation. Each of the standards in the guidelines has been identified as an important contributing factor to the accuracy of the data and/or operations of the milk recording entity. Activities at the local provider level that include or address these standards as part of the day to day business operations not only meet compliance needs but build value into the cooperating milk recording entity's service. Furthermore, while the standards identified in the guidelines are the minimum of performance, there is intrinsic value for performance and accuracy in going beyond the minimum. For example, the auditing guidelines require an annual calibration of milk meters. Yet, realizing many of the portable meters in service today are being used 300-400 hours monthly, an annual calibration may not be frequent enough. These providers have moved to calibrating meters two to four times yearly, finding that 5%-6% of the meters brought in for the interim calibration are in need of repair or routine maintenance. The net result from exceeding the minimum standards is a gain for all parties – the dairy potentially receiving more accurate data, the field service provider with a valuable marketing tool, and the industry as a whole with improved accuracy and reliability.

One of the key characteristics of successful managers, regardless of the industry served, is surrounding themselves with good people. The milk recording industry is no different, and the managers of many of the field service providers view the interaction with the quality certification auditor as a resource – not just a compliance effort or paperwork audit. Whether it is ideas for program or database management, instrument or equipment operation, or training and marketing, the auditor(s) has become an invaluable resource for many entities. While the main focus of each audit is compliance with the auditing guidelines, the coupling of a review of past actions with a forward view of operational compliance and needs builds value at both the local provider and at the national level.

An active Quality Certification program not only serves the United States dairy industry by assuring the accuracy of data flowing to the GEP and to the dairy, but can also serve as an essential component for the management of a local milk recording provider. The Quality Certification program in the United States is neutral on many fronts – business structure, size, geography or other external factors – and provides a basis for compliance by all entities with the recording industry. When coupling this certification program with managers of local providers who realize the value of the program and the resources that can be harvested locally, the entire dairy information industry is stronger at the local, national and global levels.

Commitment to the quality certification process

Use of the quality certification auditor(s) as a resource

Conclusion
