How ASTLQ Has Influenced Our Practice. . .

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The evolution of veterinary services that we offer to our food animal clients in the various aspects of herd health is not only influenced by our acquired knowledge and competence but is also driven by the socio-economic aspects of each region. Radostits (1989) has clearly described this pattern of evolution of veterinary services in food animal practice. Industrialization and expansion of the cities, for example, has been delayed for Quebec in comparison with some other areas of the continent meaning that the growth of the demand for dairy products was also retarded.

Quebec's dairy industry may be characterized, from the point of view of veterinary services, in different ways. The average dairy herd in our province was still in the range of 43 cows in 1996 (Agriculture Canada) and many of our dairy operations rely on income from crop or other animal productions. Nevertheless, Quebec accounts for nearly 40% of the country's dairy cow population. Quebec's dairy producers have had restricted access over the years, especially through published information in English, to the common trends that have influenced the dairy industry elsewhere in North America.

Furthermore, veterinary farm services have been subsidized by the Quebec government since 1971 by means of the ASAQ program. At its inception, the program had two main objectives. The first was to make veterinary services available to the food animal industry at a uniform cost irrespective of the geographic location within the province. It was also intended to provide producers with veterinary drugs at a standardized markup and to promote their "rational and adequate usage". One of the most significant consequences of this program has been the emergence of many multi-veterinary practices across the province.

The combined effect of these different aspects is that Quebec still has smaller dairy operations that are serviced by some of the largest veterinary practices in Canada. Group practices allow diversification of the professional services available to the clientele and it has been the clear trend in Quebec over the last twenty years. I believe the ASTLQ project has been one of the crowning accomplishments of the evolution of veterinary practice to date in the province. The group is a culmination of the efforts of more than 120 practitioners from 39 different practices that funded the original research project. The objective was to develop specific tools adapted to the needs of Quebec's dairy practitioners. This was achieved through the adaptation of a software program (DSA) with, at its core an individual animal health file compiled in a herd file, a structured continuing education program as well as the development and testing of new performance indicators for dairy herds.

Since 1994, ASTLQ has become a service, supported by its users, designed to make the practitioner a valuable and competent member of the management team of a dairy herd by being proactive both at the level of the routine on-farm clinical activities as well as by playing a role in management decisions.

Clinique Vétérinaire St-Louis (CVSL)

Our practice is located in St-Louis de Gonzague in the southwest portion of the province and is composed of 9 veterinarians. The practice's clientele is 100% bovine based, with less than 5% non-dairy. The clinic offers a full range of services to dairy farms in southwestern Quebec and eastern portion of Ontario. The services include usual medical and emergency services, herd health management and advanced embryo transfer technologies. We also operate a complete in-house *in-vitro* fertilization (IVF) laboratory located in central Ontario, north of Toronto. Six veterinarians provide veterinary services to more than 300 dairy herds surrounding the clinic along with three veterinarians who share the embryo collection and IVF work on a full time basis. Our mission statement could be summarized as *providing and developing new veterinary and ancillary services that are required by our bovine clientele while keeping in mind that our actions must represent a positive contribution to the financial health of our clients' enterprises as well as of our own business.*

We have been strong promoters of all aspects of monitoring services within the context of a herd health program in dairy herds. The availability and adapta-

tion of supporting instruments for this aspect of our services had been a frustrating exercise with disappointing results, in the years preceding the ASTLQ project. During its inception, we were enthusiastic early supporters of the research project whose most interesting aspect for us was the development of a computer program and of a support tool designed for our daily clinical work here in Quebec. The project also provided significant education opportunities that have helped us to get "up to speed" with other developments in the industry from other sectors and regions in North America.

Herd Health Program

We have also put considerable efforts over the years to offer our clients the chance to use our services on a scheduled basis instead of on a "call basis". This form of services allows the veterinarian to establish a closer relationship with his or her clients, based on a mutual respect of availability, and provides opportunities to develop the various aspects of a health management program. Producer training sessions are developed which allow dairy farmers to manage many of the routine clinical situations (like milk fevers, retained placentas, clinical mastitis, etc.) and are implemented on individual farm basis. This client education program allows the veterinarian to become gradually more oriented towards the management of the total herd's health and profitability.

Implementing monitoring systems also allows us to interpret daily events in establishing management and intervention priorities that should be addressed first, and this becomes a real challenge to veterinarians engaged in this type of veterinary services. Organizing data collection, using it for management actions and analyzing the performances in order to develop new action plans and orientations becomes our responsibility and mandate. This is what the ASTLQ service has helped us to organize and improve in our daily routines. It is important to note that, as much as possible, we strive to organize this form of services as the routine way of servicing our entire clientele, and not as a specialty provided outside our "regular" workload of the practice.

On Farm Activities

Reproduction management remains the workhorse of most of the herd health programs offered within our practice. Udder health programs have often been the starting point of a scheduled herd health program in our practice and general health recommendations like vaccination and parasite control strategies. The DSA software, offered as part of the ASTLQ service, is designed specifically to support the practitioner's work at managing the various aspects of a health management program in a dairy herd.

The use of portable computers within the barn makes possible the full utilization of the program's different features. The list of animals to be examined is made according to specific parameters defined for each herd and the clinical observations are filled in for each individual animal examined. The complete history of each animal including its production and health parameters is readily available to facilitate management decisions. The availability of a computer also facilitates in-depth discussions during herd health visits. The herd's performances in many different health aspects can be analyzed as needed on site. In our quota production management environment, maintaining the daily production of the herd is a real concern for our clients. By combining production data from PATLQ (milk recording service) and additional herd information gathered at the farm (through veterinary interventions and daily farm's events), a herd's daily production can be estimated accurately and future actions decided effectively as often as necessary.

Cost of veterinary services is also a major concern for our clients. Changes in service format has raised the question and has often been an obstacle to implementation of a herd health program. Table 1 below presents farm costs for veterinary services depending on the utilization or not of the ASTLQ support. The 23 ASTLQ herds reported are the ones I service and represents about 50% of the herds on this type of service at CVSL. For the ASTLQ herds, the production figures are the DSA calculated annual production from the Milk Control monthly reports. For the herds on regular service, annual production has been estimated using data provided by PATLQ in its 1996 annual summary. It is of interest to note that drug purchase represents 39% of health costs for regular herds and 31% for the herds on a herd health program and that cost per hL for our services compares favorably with the herds on the regular service.

Table 1. 1996 Health costs (CVSL)

	Number	Fees *	Drugs	Other	Total	Health $/ hL***
Herds on ASTLQ service	23	$2 511,15	$1 809,48	$139,94	$5 770,19	$1,39
Herds on regular service	185**	$1 516,28	$1 664,48	$71,37	$4 242,52	$1.37

* Do not include the ASAQ portion
**At 43 cows / herd (Agricuture Canada 1996) and 7200 Kg/cow (PATLQ 1996)
*** 1 hL = 220 lbs

One U.S. dollar = 1.35 Canadian dollars.

Data Bank Comparative Report

Another way for the practitioner to become involved in the herd's management decisions is through the periodical comparative report issued by the ASTLQ

service for each enrolled herd. The impact of the herd's overall health management is translated into opportunity milk production calculated from the herd's actual production data. The analysis is broken down into four different management areas: culling, reproduction, milk production, and udder health.

This report ranks the losses or "opportunity milk production" for each herd in each area compared with the group of 1500 enrolled herds analyzed under the same criteria. Properly used, the report analysis is a powerful tool for the practitioner to periodically define areas of farm management causing the greatest losses to the operation or better said "of better opportunities". **The veterinarian is ideally positioned, because of his involvement with many of the farm operations, to influence the management of the herd. In our opinion, this is a very important aspect for the justification of the veterinarian's role in dairy production.**

The analysis of the periodical reports of a group of 27 of our dairy herds in 1996 (see Table 2 below) reveals two interesting observations in regard to their health performances. First, the potential gain, if we compare these herds to the 90th percentile of the ASTLQ herds, would be in the order of 700 hL per farm per year. In other words, this "opportunity milk" would become available if the management of these herds were to adapt and compare with the management of the herds composing the 90th percentile. It is fair to say that the net benefit of the changes made to achieve these gains would be after consideration of their cost for each operation.

The second point of interest in Table 2 is the portion of the "opportunity milk" that is related to reproduction management that accounts for 36% of the total losses of which it is the most important cause. Culling before 305 DIM is the second next production loss in importance at 15% of the losses. This information is crucial to determine the objectives of our health program. The cost of implementation for corrective measures must be estimated and the potential benefits outlined accurately.

The availability of this information is at no significant extra cost for the farms using this service. The potential benefits in dollars, for our average herd, would be of $22,656. Some of the necessary management improvements to realize this potential gain would necessitate investments but our figures of 1996 for health costs (see Table 1) show that there were no extra veterinary costs involved to capture the information.

Benefits from the ASTLQ Service

A significant proportion of the dairy producers have acquired knowledge through a formal college or university education program. The combination of this situation with the practical experience they acquire makes the successful management of many of the clinical situations they encounter routinely something they can deal with by themselves. Henderson believed, as his observation on the avian industry was suggesting in 1959, that these changes were likely to occur in the bovine industry with or without the veterinarian. Only 10% of the birds submitted to Ontario laboratories, at this time, were through veterinarians.

The veterinarian has an ideal background and position to educate producers and to monitor changes at the herd level. His herd file is his most important instrument to competently monitor the effects of the implemented changes and there is no evidence, in our opinion, that the management of this instrument can be left confidently and reliably with other service providers on the farm.

The whole industry will have to face the challenge of disease surveillance within the context of opening world trade markets. Knowledgeable persons on market issues (Evans B.), believe that disease monitoring will become the next trade barrier to animal movement between countries. The continued reduction of the government's role in national disease monitoring puts the veterinary practitioner in an ideal position for disease recognition and an instrument like the ASTLQ service becomes an essential support for such a role.

The consumer's concerns for food quality and safety are also increasing in the market place and there is no reason to believe that this trend will change in the near future. Accurate case records and database summaries of the ASTLQ program can also help in determining and

Table 2. Estimated Production Losses (lbs) From 27 herds in 1996 at CVSL

	CVSL	
AVERAGE HERD PRODUCTION	774447	100%
ESTIMATED HERD LOSSES BY CULLING**	116310	15%
ALL CAUSES	82952	11%
DISEASES < 30 DIM	33358	4%
ESTIMATED HERD LOSSES FROM :		
REPRODUCTION	141731	18%
COWS	114284	15%
VIRGIN HEIFERS	26040	3%
UDDER HEALTH	23057	3%
LACTATION PERSISTENCE	97837	13%
ESTIMATED TOTAL LOSSES	351490	45%
RECOVERABLE LOSSES*	156061	20%

* Losses not incurred by the top group (>90%) of the data bank for the same management areas whose total losses are estimated to be 25% of their annual production
** Milk losses by culling before 305 DIM

evaluating existing treatment regimes on each farm. Proper use of pharmaceuticals through better knowledge of their properties and their rational utilization bears much more future than their complete abandon, as some critics charge. Again, veterinarians can play a key role in educating their producers, and help prevent abuses by leaving clear, written directions for medications prescribed on the farm. The concerns about animal welfare by different segments of the population enhance the importance of developing and implementing methods of monitoring animal performances including health aspects.

Conclusion

The ASTLQ research and development project will be considered as a landmark for Quebec's dairy practitioners. They have developed and promoted a new standard for veterinary services for Quebec's dairy industry. The philosophy which drives this project is similar to the general trend in other parts of North America for professional veterinary services oriented towards management decision support on individual basis for our clients.

We all agree that the future of the veterinary profession in dairy production is through the involvement of the practitioner at all management levels that influence animal performance. Henderson, in the 1950s, said that the veterinarian had successfully moved from a role of "horse repair man" to the status of a full member of the animal industry. Our challenge in the dairy industry at the end of this century could be worded as a transition from a "cow repair man" to a status of animal health consultant. The ASTLQ service provides Quebec practitioners with a valuable instrument to effectively support their involvement in the day to day activities of the dairy as well as their involvement in management decisions regarding goals or management strategies definition.

Field experience, based on seven years to date, has demonstrated that the program can effectively position the practitioner's role at that level and that it is well adapted to our smaller dairy unit operations. One of its important strengths is the network approach of its development. **The knowledge, skills and experience shared by its users, approximately 30% of all Quebec's large animal practitioners, has facilitated the development of better tools for offering better quality services and will continue to do so into the future.**

References

1. Baillargeon P., Bigras-Poulin M., Bouchard E., Du Tremblay D., Projet ASTLQ- Amelioration de la sante des troupeaux laitiers du Quebec. Recueil des conferences du Congres conjoint de l'OMV et de la *CVMA*, 1994, 480-498. 2. Baillargeon P., Du Tremblay D., Bouchard E., La Médecine Vétérinaire à la fin du vingtième siècle-L'application des développements récents en pratique bovine, Recueil des conférences du 48e *Congres annuel de la CVMA*, 1996. 3. Henderson and al. The prospect before us, *Can. Vet. Journal,* Vol.30, 186-188. 4. Evans, B. Animal Health as the Gateway to Canada's International Market Access. Is the door closing? *Holstein Journal*, p.42-43 Nov. 1996. 5. Labrosse P., The Veticare System. *Proceedings of the XXI annual convention of the American Association of Bovine Practitioners*, 1989, 174-180. 6. Rapport de Production, PATLQ, 1996. 7. Dairy animal improvement statistics, Agriculture and Agri-Food Canada, Market and Industry services Branch, 1996.