



THE FUTURE OF VETERINARIANS IN BOVINE HERD HEALTH MANAGEMENT THE BOVINE PRACTITIONER IN EUROPE: PERSPECTIVES AND CONSTRAINTS

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1. INTRODUCTION

Over the last decades a further intensification of dairy production has taken place, not only in Western Europe, but also in southern European countries. This intensification, which was induced by decreasing economic margins between farm income and production costs, demands new approaches from practitioners, who - up to now - often have been involved in individual sick animal diagnosis and treatment. The latter refers to obstetric, reproductive, surgical and other clinical activities. The new approach should be farm-oriented (Brand *et al.* 1996; Baumgartner, 2002). This will put further demands on the practitioners, and - in many cases - additional training in knowledge and skills should take place. Only then, the future of our profession as dairy practitioners, or rather veterinary dairy advisors, can be a solid and promising one. In order to fulfil the new requirements which go along the new forenamed approach, the practitioner should make a SWOT analysis (strengths, weaknesses, opportunities, threats) to get more insight into his/her potentials and deficiencies. As veterinarians we believe to have already “lost” several disciplines supportive to the dairy farmer. Examples are nutrition, engineering, breeding, pharmacists (Heuwieser *et al.* 1993). On the other hand, there have been reports on the poor understanding by veterinarians about their clients’ needs and activities. For example, it turned out that in The Netherlands practitioners thought their clients had hired many other professionals than veterinarians for work on their farms, although the dairy farmers stated in vast majority that this was not the case (Lievaart *et al.* 1999). Obviously, there can be a high level of misunderstanding and misinterpretation of information when the veterinary practice has never conducted any marketing investigation into clients’ needs and wishes. If practitioners do want to represent (more) added value to the dairy farmers, they have to invest in knowledge and skills from new disciplines. Among such disciplines are management of enterprises, management of farms, marketing sciences, business administration principles, communication skills, farm economics, quantitative epidemiology, herd health & production management. This

would mean that the veterinary profession will change dramatically but it would represent the only justified way to retain the profession instead of becoming hired veterinary labour (Noordhuizen, 2004). In this paper, several of the forenamed issues are addressed and discussed, against the background of implementing veterinary herd health and production management services. The expansions of herd health and production management services are addressed as well. Finally, conclusions are drawn.

2. THE DAIRY FARMS IN THE 21ST CENTURY

Important features of modern dairy farms are:

- their size has increased over the past years,
- the milk production per cow has increased,
- there is a high level of mechanization,
- often hired labour can be found on the farms,
- farm organization has become more difficult,
- observation of animals has become a critical issue by which disorders are often detected (too) late,
- control of production costs has become a major issue,
- there is more attention for subclinical disease,
- animal health problems are considered a major constraint for profitability,
- farm economics is important for formulating least costs rations without losing the animal health status and because feed costs are the highest variable costs in production,
- next to farming skills the management of animals, equipment and farming conditions has become a highly relevant matter.

In addition to the forenamed, the entrepreneur-like dairy farmers show again more features in their farming.

- these entrepreneurs are characterized by the fact that they invest in knowledge either from their own practitioner if available or, if not, from outsiders,
- they are considered by the outside world as risk-takers but this is only based on their way of assessment and their positive evaluations,
- they make their decisions on the basis of broad information from various sources, they are commercially market-oriented,
- they are innovative and not hindered by traditional structures, they are planners instead of bookkeepers, they turn threats into opportunities,
- they have a good understanding of complex matters,
- they detect new ways of making profit, and are able to enhance changes, they are highly skilled in communication, they like their work (Noordhuizen, 2004; Bergevoet, 2005).

This basically means that there can already be two clusters of clients defined: the more traditional dairy farmers, often family run farms, and the enterprise-like dairy farms, often large in size and with a large quota. It is clear that these two clusters demand a totally different approach, also by the practitioner. Each of these clusters can be subdivided into other sub-clusters. If the practitioner wants to serve both types of clients he/she has to adopt certain principles and increase his/her skills and knowledge to play an important role on each farm. But let us first look into some features applicable to veterinarians.

2.1 Some results of SWOT analyses of veterinarians

In different studies and workshops some strong and some weak points have been stipulated for veterinary practitioners; examples are given in Table I.

Table I. Example of some results of the SWOT assessments on veterinary bovine practitioners

Strong points	Weak points
Always available for dairy farmers	Has a too dominant attitude
Relationship based on confidence	Talks too much; listen too little
Relationship is hard to break down	Does not follow structured approach
Knows about animal health/disease	Advices are not given structured
Knows about dairy cow fertility	Has little planning in activities
Reduces disease losses in cattle	Has limited skills in nutrition
Veterinary training is well esteemed	Knows little about farm management
Protected profession	Knows little about farm economics
Often follows continuing education	Knows little about farm as an enterprise
	Image is that he is "too costly"
	Forenamed is related to uncertainty about what he can deliver as service or product
	Too little pro-active; waits too long

The issues addressed in Table I are largely general in nature. But still they can be classified in clusters:

- attitude and communication,
- marketing & business administration,
- certain veterinary-zootechnical skills.

Too often, bovine practitioners appear to deliver solely technical services. They do not understand, why -in case of mastitis in the herd- a farmer calls him for advice and treatment, but -when he proposes an udder health control scheme- the farmer is far more reluctant to accept and adopt it. This phenomenon is part of behavioural economics (Rabin, 1998; McFadden, 1999). Decisions are being made not only on rational issues, but certainly also on non-rational arguments. Choice-behaviour of people is influenced by factors such as: perception, impressions, emotions, attitudes, motives, and preferences. If a practitioner wants to market his product, e.g. herd health programme, to a dairy farmer, he has to take these 6 influencing factors into account. This is especially the case in situations where the practitioner does not sell a bottle of penicillin, but a herd health advice. He has to ask simple questions like: are the farmers using, for example, software for monitoring the herd? What are the strategies for culling and which criteria prevail ? (Esslemont, 1993; Monti *et al.* 1999; Gröhn, 2000).

2.2 Changes to be made by contemporary bovine practitioners

Given the forenamed strong and weak points as well as the issues of behavioural economics, there are some priorities for these practitioners to address. Among these are:

- investment in new knowledge and skills (e.g. herd health programmes, nutrition, zootechnics),
- investment in principles and methods of marketing and business administration,
- investment in communication skills, relation management and conflict control,

- investment in skills regarding operational farm economic evaluations and economic parameters as well as commercial affairs,
- investment in time, empathy, organizational matters and showing interests in the farm and the people who work there,
- investment in analytical skills (e.g. regarding herd problems).

Before, or at the same time as doing so, it would be highly worthwhile if also at the veterinary practice level a business plan for the next 3 years would be made. In such a plan can be indicated which products or services are being dealt with, by whom as responsible, when and how. At the same time it opens ways to discuss about products or services to be abandoned because these yield too little income for the practice. Moreover, if the preceding step has been made, the next step can be to define the courses to be invested in (e.g. communication [how to listen to a farmer; which type of questions to ask and how; conflict control]; marketing [e.g. product definition; client demands search; estimated profit per product]; business administration). In many instances it appears that the herd health practitioner pays relatively too much time to veterinary handlings like claw trimming or dehorning young calves. It should be clear from the start that veterinary herd health and production management programs are advisory programs where no time should be allotted to such handlings because they disturb the advisory process. These handlings can be taken care of during another separate visit. Herd health practitioners must be able to function as a full and equal discussion partner for the farmer; must sufficiently understand the farmer and his farm; has a certain authority to put people to action; and be commercially focused. There are many courses of short duration available on the market to acquire the skills and knowledge mentioned above. With regard to bovine nutrition it would already be highly beneficial, when the practitioner creates a working relationship with the local animal nutritionists; but even then, he must have the proper nutritional knowledge. Overall, the behavioural economic issues addressed earlier play a paramount role. And only when the forenamed aspects have sufficiently be taken into consideration and adopted, only then the basis for developing and implementing a veterinary herd health program has been laid.

2.3 Veterinary herd health and production management services

Veterinary herd health and production management services, HHPM, build on from the clinical training and experiences in the individual sick animal practice. A thorough training in diagnostics, reproductive disorders, infectious diseases, and metabolic disorders is a prerequisite for applying HHPM (Baumgartner, 2005). Furthermore, we have to consider that individual sick animals can be an indicator for problems at herd level. Examples are the acetonaemic and the acidotic cow as indicator for nutritional/metabolic problems around calving in the fresh group. Another example is the clinical mastitis cow that may be an indicator of (subclinical) udder health problems at herd level. A second type of approach at herd level is based on a continuous and regular monitoring of the herd or group performance to detect (impending) problems of disease and/or productivity at an early stage and -regarding farm conditions- detect possible risk factors in the cows' environment contributing to disease occurrence. The latter refers to zootechnical issues like nutrition, barn climate, housing, equipment, milking and milking machine, hygiene and disinfection. The third area for monitoring regards the available information: milk recording, milk quality data, laboratory results, on-farm disease and reproduction recording. There are several techniques published to support this rapid and easy monitoring like body condition scoring, rumen fill, faeces consistency, undigested fraction in faeces scoring; teat end callosity scoring, locomotion scoring using illustrations on charts (Gelfert & Staufenbiel, 2004; Zaaijer & Noordhuizen, 2005; Neijenhuijs *et al.* 2000; Staufenbiel *et al.* 2003). By such continuous monitoring also trends in parameters can be detected. Although, the diagnostic sensitivity is usually estimated low, the combination of scoring methods as well as its rapidity and easiness allow sufficiently the early diagnoses of pending

problems at herd level. HHPM must be applied following a fixed structure (a protocol). The different steps in this protocol are below presented in *italic* characters.

First, a *SWOT assessment* has to be made on the dairy farm. Both the farmer and the practitioner can fill such a list by scoring from 1 (weak) to 5 (strong) points in the different farming disciplines. Then a discussion between farmer and practitioner takes place about priorities to deal with, most often related to the *goals* of the farmer. These two determine the contents of the HHPM program, starting with the *monitoring* items. Broad on-farm monitoring of animals, farm conditions and information is conducted during frequently scheduled *farm visits*, for example once every 2 or 4 weeks. A farm visit comprises 3 components:

- preparation,
- execution,
- follow-up.

Regarding the monitoring activities, one should consider time management: which activities should be taken care of when? For example, body condition scoring every two weeks has no true meaning; body condition changes over several weeks, so once a month is sufficient. Teat end callosity scoring (Neijenhuijs *et al.* 2000) can be done once every three months during milking; measuring growth in young stock once every 6 months. On the basis of the monitoring results, further actions are taken, for example milk sampling from freshly calved cows for checking udder health status. Laboratory examination is complementary to clinical monitoring; it never replaces it (Baumgartner & Gattinger, 1982). Milk recording data, together with results from clinical monitoring (body condition, rumen fill, faeces consistency, reproductive results) can be used to detect subclinical metabolic disorders like acidosis or ketosis (Brand *et al.* 1996; Gelfert & Staufenbiel, 2004; Kinsel & Etherington, 1998). Following actions will focus on ration composition and feeding management in the dry period and in fresh cows. Nutrition (feed storage and feed quality, ration composition and formulation, feeding management) is to be checked routinely, proper feeding is the basis of optimal health and good reproductive performance (Gaines, 1989; Meyer, 1991; Brand *et al.* 1996). The predominant example is the severe negative energy balance in postpartum cows and its consequences for yield, health and reproduction. Practitioners should be able to analyse and interpret milk recording data properly. The latter provides a good source for detecting performance failures, and indirectly, (subclinical) health/reproduction problems (Brand *et al.* 1996). A sound cooperation between nutritionist and veterinarian provides the dairy farmer with the best opportunity to balance cows' nutrition. Reproduction is often considered the entrance to the farm and its cows. In our philosophy a broad monitoring as described above is much more of interest to the farmer; moreover, addressing reproduction implies the danger that other farm areas are too much neglected because reproduction is time-consuming. Reproductive examinations are just one more element in monitoring herd performance; it can also be used to detect negative energy balance cows. It is obvious that during reproductive examinations, also other cow monitoring techniques as named above can be applied, meaning that in 2 min time a whole cow can be screened. Monitoring also addresses farm conditions: housing (floor, cubicles, hygiene, bedding) and climate (temperature, humidity, ventilation); other issues of cow comfort (welfare related, heat stress, cleaning, watering) and management (Noordhuizen, 2005). Potential risk factors contributing to the occurrence of disorders in the herd can hence be detected. At the end of monitoring, possible *treatments* are given. Treatments will be part of a *herd treatment advisory plan*, for example for mastitis, respiratory disease, and diarrhoea. An *economic assessment* of treatment alternatives is another part of HHPM; it addresses the least costs - best treatment effect options. All findings are then *discussed* with the farmer and an *advisory plan for the shorter and the longer term* designed. This will be reflected in a short, *written farm visit report*. This report is not longer than 1 sheet Din A4. It serves to remind the farmer of issues discussed, findings obtained, and advice given. It also serves to evaluate the effect of advice given during the next farm visits. In total, a farm visit should

not take more than 2 hours for a herd of, say, 80-100 cows. The *follow-up* after the farm visit may comprise consulting the nutritionist or the laboratory. It also comprises the analysis of a suspect problem of the herd, e.g. mastitis problem, young stock diarrhoea problem. The outcome should also be reported in writing to the farmer, including an advice; if needed, the report is thoroughly discussed with the farmer. General working instructions are issued during the execution of a HHPM program; they form part of *Good Dairy Farming guidelines*. The herd treatment advisory plans are an example of such working instructions. These working instructions can also be designed for milking hygiene, deworming cattle, vaccination programs, young stock rearing, medicine application, drying off treatment, foot bathing. In Table II the forenamed components of HHPM have been summarized.

Table II. Listing of the various components being addressed in HHPM

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| <ul style="list-style-type: none"> • Discussion with farmer about willingness to participate and his goals • SWOT assessment of the various farming areas by farmer and vet • Setting of priorities for a possible HHPM, as decided upon by the farmer • Definition of the HHPM service product and its content by the vet • Explication of the product to the farmer and acceptance by the latter • Negotiation about the direct and indirect fees • Scheduling the first 6 farm visits (dates and timing) in the calendar • Broad clinical monitoring of cows, farm conditions, and farm-information • Interpretation of the various findings from monitoring • Sampling animals for laboratory examinations; possible treatment • Drawing an advisory plan for shorter and longer term • Deliver written farm visit report (1 sheet Din A4) • Follow-up activities (consult specialists; sample transport; problem analysis) • Written report to farmer with findings and advice from problem analysis • Design of Working Instructions (e.g. udder health treatment plan) • Design of Good Farming Practice guidelines |
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2.4 Further expanding herd health and production management

HHPM as addressed above can be expanded by integrating Biosecurity Plans. These are management instruments based on risk assessment and risk management, to prevent infectious diseases from entering the farm and spreading on the farm (BAMN, 2001). It helps creating more awareness among farm workers about infectious diseases and comprises several working instructions focused on prevention of disease introduction. Examples are instructions for professional visitors entering the farm, instructions for hygiene maintenance and disinfection. Literature provides examples of Biosecurity measures (BAMN, 2000).

Farm economics can be expanded beyond the operational animal health economics as meant above. We have to make clear to the dairy farmer that the costs he is paying for veterinary-zootechnical advice is an investment, and hence should be part of fixed costs, and not to be considered as variable costs. In order to be able to convince the farmer, we should be able to prove our added value, and to prove that we deliver the product exactly as he desires. Behavioural economic aspects as addressed before play a paramount role here. If practitioners neglect this area, we will be of less value to the farmer (Lothhammer, 1992; Baumgartner *et al.* 2002). When we invest in acquiring knowledge and skills in economics, we can support the farmer in his decision-making process to control costs, the most important component causing large variation between farms in their results (Cook *et al.* 2004). There are many papers published over the last 10 years concerning animal health economics and farm economics, as well as decision support models (Marsh *et al.* 1987; Ruegg & Carpenter, 1989). Consumer demands currently play a great role in dairy farming. These demands regard both the quality of products delivered, but equally the dairy production process. Animal health and welfare, as well as public health and food safety are exponents of the production

process on the farm. The EU has issued the last years the White Book, the General Food Law, GFL (EC regulation 178-2002) and new Hygiene directives. Core elements of these are the increased attention for food safety and public health, and for animal health and welfare. Feed mills have to comply with Good Manufacturing Practice codes. It is advised in the GFL that primary producers, including dairy farmers, apply on their farm a risk management programme based on HACCP principles and concept. Core elements in HACCP are the identification of main hazards and their associated risk factors, the definition of critical control points and points of particular attention, the design of an on-farm monitoring system including the forenamed points, and measures of prevention and correction to restore control when needed. HACCP-like approaches can deal with optimising animal health and welfare, as well as food safety and public health to a great extent. The great advantage is that this approach is highly farm-specific, so the farmer receives a tailor-made plan to support him in his quality risk management on the farm (Noordhuizen & Welpelo, 1996; Lievaart *et al.* 2005). Part of this plan refers to the keeping of particular records: every treatment of cows is listed in a log, including product name, batch, expiration date, volume applied, and withdrawal time. The basis for HACCP-like applications is the implementation of good dairy farming practice codes because the success rate largely depends on the attitude, mentality and acceptance of the farm workers. It is obvious that such guidelines already have been addressed in the paragraph on HHPM above. The same applies for monitoring activities and risk assessment activities on the farm under a HHPM service. Cow comfort issues are highly important for good animal health and (re)productivity; these issues are equally relevant for cattle welfare. It is therefore logical that both HHPM and HACCP-like applications can be integrated into one veterinary service, partly at operational level (HHPM) and partly at a more strategic level (HACCP-like plans). In a specific WBC-2006 workshop on HACCP-like applications, several presentations are given on the way that such applications are installed and made workable for both dairy farmer and veterinarian. In this workshop both disease-management and welfare are addressed.

3. CONCLUSIONS

Although HHPM may seem unwieldy, it is rather a matter of structuring and formalizing our bovine knowledge and skills to make HHPM operational. On the other hand, it must be clear that -especially for the larger entrepreneur-like farms- in general the bovine practitioner needs to invest in acquiring additional knowledge and skills to be able to serve these dairy farmers adequately. They represent a different client group in the practice. HHPM does not always need computers and software to be implemented. However, a proper problem analysis can only properly be conducted if we have all farm and cattle data in digital format. Analyses can then be done much more efficient, rapid, and cost-effective. Data collection needs special attention; often farmers are not used to it, but veterinarians can also be quite reluctant in this area. Training and coaching can assist in overcoming this problem. The integration between HHPM and HACCP-like plans is a very logical one. We could say that the one is an expansion of the other. Too many different programmes at the same time applied on the farm, will turn the farmer into demotivation. Therefore, we have to design a developmental process with time-table. As a bovine HHPM practitioner we can support the dairy farmer in passing the different developmental stages (Figure 1), and coaching him to achieve the various steps in development. The advantage of integration is the cost-effectiveness of veterinary activities, the identification of quality risk management as an on-farm activity coupled to operational management support.

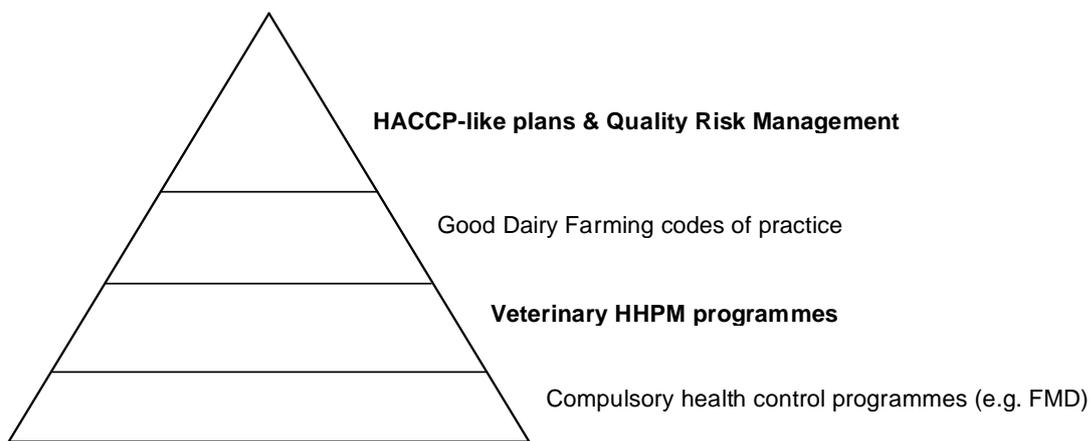


Figure 1. **Example of a developmental process towards quality assurance on dairy farms.** The veterinarian has to coach the dairy farmer all the way through

In The Netherlands, as also in other European countries, from January 2006 onwards about 10.000 dairy farmers have to comply with quality assurance programmes where participation in HHPM is a compulsory and integrated part of the quality assurance system of the dairy sector (Royal Friesland Foods, Leeuwarden, NL). Finally, it can be stated that veterinary curricula in Europe largely lack training in the forenamed areas, while programmes of continuing education address these issues neither. If, bovine practitioners sincerely want to play a substantial role in the dairy production sector, they have to take up the challenge at least themselves.

4. SUMMARY

The veterinary work in dairy health management in Europe has changed over the past years and will change even more dramatically in the near future. The consumers and the media show increasing concern about animal welfare, safety of products of animal origin and traceability of animal products. Farmers in Europe have to produce under strict, often expensive and laborious regulations, while still commercially competing with farmers outside the EU and not subject to the same rules.

Veterinarians should adapt their knowledge and skills to the new challenges and developments of the dairy sector. Dairy farmers nowadays ask for support in areas that go beyond clinical activities: environmental protection, welfare, nutrition, grassland management, economics and business management. Bovine practitioners should be able to advise in many different areas and subjects - that is the challenge to our profession. Veterinary education with regard to cattle health management should start with individual animal clinical work, which constitutes the basis of herd health advisory programmes. The bovine practitioner should then look beyond that and regard the herd as the unit. Each diseased cow or group of cows should be detected early enough to avoid financial losses or such losses should be prevented altogether by detecting and managing risk factors contributing to disease occurrence. Herd health and production management programmes represent the first level to optimise dairy farm performance. Expansions to that should further be considered, comprising both, animal health and welfare issues, as well as food safety and public health issues. The latter could be addressed by quality risk management programmes following the HACCP - principles.

Cattle veterinarians should follow recent developments and invest in new skills and knowledge in order to maintain their usefulness to the modern dairy farmer. Finally we are convinced that the cattle practitioner should evolve into this direction, otherwise the Veterinarian as we know him will “miss the train” in the next years.

5. KEY WORDS

Dairy farm, clinics, herd health management, prophylaxis, HACCP.

6. RÉSUMÉ

La pratique vétérinaire dans la gestion de la santé des troupeaux laitiers en Europe a changé ces dernières années et son avenir changera encore beaucoup selon notre point de vue. La pression des consommateurs et le poids des médias se focalisent de plus en plus sur le bien-être animal, la traçabilité et la sécurité sanitaire des produits animaux. D'un autre côté, les éleveurs en Europe doivent produire avec des règlements très stricts (pour être compétitifs face aux pays non européens) qui sont coûteux et difficiles à appliquer en pratique ; pendant ce temps, les vétérinaires doivent adapter leurs connaissances et leurs capacités aux nouveaux défis renforcés par le développement du secteur laitier.

Dans cette logique, "l'ancienne" pratique vétérinaire doit se développer par d'autres stratégies, sans quoi les vétérinaires vont perdre leurs clients. Les éleveurs laitiers ont une demande importante dans les domaines autres que la clinique ; par exemple, la gestion, le bien-être, la nutrition, l'approche économique des fermes, le profit, l'efficacité, la protection de l'environnement, la gestion des pâturages.

Les praticiens bovins doivent être capables de donner des conseils sur différents domaines et sujets et ceci représente les défis de notre profession. La formation vétérinaire dans la gestion de santé du bétail doit être de haut niveau concernant l'animal à titre individuel car c'est la base des programmes de conseils de santé des troupeaux. Toutefois, le praticien bovin doit regarder au-delà du niveau individuel : le troupeau en bonne santé est l'unité qui génère le revenu de l'éleveur.

Chaque vache ou chaque groupe qui dévie doit être détecté suffisamment tôt pour éviter de grosses pertes. Il serait préférable de prévenir de telles pertes par une détection précoce de signaux de problèmes en suspens et en détectant et en gérant les facteurs de risque contribuant à la survenue de maladies.

La santé des troupeaux et les programmes de gestion de la production représentent le premier niveau à traiter. Des développements pourraient être considérés, comprenant en même temps la santé et les problèmes de bien-être. Le dernier niveau peut être représenté par les programmes de gestion des facteurs de risques de la qualité en suivant les principes HACCP. Les vétérinaires bovins actuels doivent suivre ces récents développements et investir dans de nouvelles compétences et connaissances afin de ne pas "rater le train" dans un futur proche.

7. MOTS CLÉS

Elevage des vaches laitières, clinique, gestion de santé animale, gestion du troupeau, gestion des risques de qualité, HACCP.

8. ZUSAMMENFASSUNG

Der Aufgabenbereich des in der Bestandsbetreuung von Rinderbetrieben tätigen Tierarztes hat sich gewandelt und wird sich in den nächsten Jahren noch dramatischer ändern. Der Verbraucher und die Medien sorgen sich mehr und mehr um den Tierschutz und die Rückverfolgbarkeit und Unbedenklichkeit tierischer Produkte.

Europäische Bauern müssen unter strengen und oftmals teuren und arbeitsaufwendigen Regeln produzieren und gleichzeitig mit außereuropäischen Bauern konkurrieren, die diesen Regeln nicht unterworfen sind. Die Tierärzte sollten daher ihr Wissen und ihre Fähigkeiten den neuen Herausforderungen auf dem Gebiet der Milchviehhaltung anpassen. Der Milchviehbauer benötigt die Unterstützung des Tierarztes auf vielen anderen Gebieten neben der eigentlichen klinischen Tätigkeit benötigen: Umweltschutz, Tierschutz, Ernährung, Weidemanagement, Wirtschaftlichkeit und Rentabilität. Der Rinderpraktiker muss in der Lage sein, auf diesen Gebieten kompetent zu beraten, und dies ist die Herausforderung an unseren Berufsstand. - Die tierärztliche Ausbildung bezüglich des Rinderherdenmanagements muss mit dem Einzeltier beginnen, welches dies ist die Grundlage für ein funktionierendes Herdengesundheits- und Produktionsmanagementprogramm. Der Rinderpraktiker muss dann über das Einzeltier hinaus sehen und die Herde als eine Einheit betrachten. Jede erkrankte Kuh oder Kuhgruppe sollte früh genug erkannt werden, um finanzielle Einbußen zu vermeiden bzw. solch Einbußen soll vorgebeugt werden durch das Aufspüren und Beseitigen von Risikofaktoren von Erkrankungen.

Herdengesundheits- und Produktionsmanagementprogramme sind die Grundlage zur Optimierung der Herdenleistung. Erweiterungen dieser Programme sollten Aspekte sowohl der Tiergesundheit und des Tierschutzes als auch der Lebensmittelsicherheit und der öffentlichen Gesundheit beinhalten. Hierfür sind Qualitäts-Risikomanagementprogramme entsprechend der HACCP-Prinzipien sehr gut geeignet.

Die Rinderpraktiker müssen die aktuellen Entwicklungen aufnehmen und in neue Fähigkeiten und neues Wissen investieren, um weiterhin ihren Wert für den Bauern zu erhalten. Wir sind der Überzeugung, dass der Rinderpraktiker sich in diese Richtung entwickeln muss, oder der Tierarzt, wie wir ihn bisher kennen, wird den Zug der Zeit versäumen.

9. SCHLÜSSELWÖRTER

Milchviehhaltung, Klinik, Herdengesundheit, Management, Prophylaxe, HACCP.

10. RESÚMEN

El futuro e los objetivos de la práctica veterinaria en la gerencia de la salud de la explotación de bovinos lecheros en Europa ha cambiado y cambiará más de acuerdo con nuestro punto de vista en los años próximos. La presión del consumidor bien como los Media están muy preocupados con el bienestar animal, así como la rastreabilidad de los productos animales y seguridad de productos del origen animal. En a la otra mano los granjeros en Europa tienen que producir segundo reglas muy restrictas (en competición con otros países fuera de Europa), el qué normalmente muy costoso para poner en la práctica, y así los veterinarios deben adaptar sus conocimientos a los nuevos desafíos, porque sin su trabajo y cooperación, la producción lechera bovina no tendrá futuro. Así, la vieja práctica veterinaria tiene que cambiar, si no los veterinarios perderán sus clientes y se tendrá una reducirán de la producción en Europa. Los granjeros pedirán ayuda adentro a otras áreas además de la clínica: eficacia, manejo, bienestar, rentabilidad, profilaxis, economía, cualidad e análisis de riesgo, protección del medio ambiente, pastoreo, manejo, etc. Los veterinarios prácticos de bovinos deben tener las respuestas a estés temas o que es un enorme desafío para nuestra profesión - la preparación e educación veterinaria tendrá que ser muy fuerte en esta especie animal, quiere en vacas de leche o vacas de carne pelo presupuesto que este es la base para que exista un programa correcto de manejo e gestión de la salud de la explotación.

El veterinario tendrá que ver mas adelante que solo lo animal solo. La explotación es más que únicamente el soma de los animales de la granja pela interacción que existe entre todas eles. El primero paso será la implementación de programas de manejo e de control de la salud de los

animales. Esto tendrá que ser seguido por la implementación de programas de Bioseguridad e códigos de buenas Prácticas de la Explotación Lechera e de Ganadería. Finalmente éstos serán las bases de la implantación de programas de control de calidad e riesgo englobando la salud bien como el bienestar, seguridad alimentaria bien como protección del consumidor e de la salud pública. Estamos convencidos que el veterinario práctico de bovinos tendrá que caminar en esta dirección, porque de otro modo el veterinario como lo conocemos era perderlo en los próximos años.

11. PALABRAS CLAVES

Granja de vacas, Clínicas, Salud De La Manada, Gerencia, Profilaxis, HACCP.

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