Editorial

Angus Cameron was the first to suggest the creation of an international conference on epidemiological surveillance in animal health. This was at the last ISVEE meeting that took place in Durban, South Africa, in the summer of 2009.

Since epidemiological surveillance is a particularly useful area and since it is so close to collective fight against animal diseases, AEEMA had to become interested. So, AEEMA organized several scientific meetings on the subject, in 1985, 1992 and 1995, and became involved, since the very start, in the project of an international Conference. Indeed, it participated in its organization with an international group of scientists and with the ANSES.

In recognition of the enthusiasm of the French group, the organizing committee eventually elected Lyon as the site for this first ICAHS meeting.

Organizing an international congress is not an easy venture, even though several members of the bureau had had a chance to gather some experience in organizing the 7th ISVEE meeting in Paris, in 1997. The creation and organization of this meeting was indeed quite a challenge that called for a great deal of enthusiasm and energy on the part of the AEEMA bureau.

I wish to thank all the AEEMA members who have invested time and effort in the organizing committee, the scientific committee and the review committee of this first ICAHS meeting. I wish to thank particularly Pascal Hendrikx (in charge of epidemiological surveillance at the ANSES and a member of the AEEMA bureau) for his exceptional investment in this venture, and Professor Bernard Toma (chief editor of the *Epidemiologie et Santé Animale* journal), as well as Christiane Mary de Bock (AEEMA secretary), thanks to whom you may become acquainted with most of the oral and electronic communications to be presented or posted at this scientific meeting.

Let me wish you a gratifying reading.

Barbara DUFOUR
AEEMA President

L'idée d'organiser une Conférence internationale sur la surveillance épidémiologique en santé animale a été avancée par Angus Cameron au cours du dernier ISVEE qui s'est tenu à Durban (Afrique du Sud) en été 2009.

La surveillance épidémiologique étant un domaine particulièrement utile et proche de la lutte collective contre les maladies animales, il est logique que l'AEEMA se soit depuis longtemps intéressé à cette discipline en organisant plusieurs fois des journées scientifiques (1985, 1992 et 1995) sur ce thème. C'est donc très logiquement que l'AEEMA s'est associée dès le début à cette initiative de conférence internationale et a participé à son organisation avec un groupe international de scientifiques et l'Anses.

La reconnaissance de l'enthousiasme français par le Comité d'organisation a finalement permis de retenir la ville de Lyon pour lieu de ce premier « ICAHS ».

Participer à l'organisation d'un Congrès international n'est pas chose aisée et bien qu'un certain nombre de membres du Bureau aient déjà eu l'occasion d'exercer leurs talents au cours de l'organisation du 7ème ISVEE à Paris en 1997, inventer puis organiser ce nouvel évènement a constitué un défi auquel le Bureau de l'AEEMA s'est attelé avec enthousiasme et énergie !

Je tiens à remercier tous les membres de l'AEEMA s'étant investis dans le Comité d'organisation, le Comité scientifique ou le Comité de lecture de ce premier ICAHS ; mais j'adresse plus particulièrement ces remerciements à Pascal Hendrikx (chargé de mission en surveillance épidémiologique à l'Anses et membre du Bureau de l'AEEMA) pour son investissement exceptionnel dans cette aventure ainsi qu'à Bernard Toma (rédacteur en chef d'*Epidémiologie et santé animale*) et Christiane Mary de Bock (secrétaire de l'AEEMA) grâce à qui vous pourrez prendre connaissance dans ce numéro de la plupart des communications orales, électroniques er affichées présentées au cours de ces journées scientifiques.

Je vous souhaite une excellente lecture.

Barbara DUFOUR
Présidente de l'AEEMA

1st International Conference on Animal Health Surveillance

Lyon

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From the Chair of the Steering Committee

As an epidemiologist, I find the area of animal health surveillance both challenging and exciting. The science of surveillance is developing rapidly, with new approaches and improvements on existing techniques appearing regularly. Unfortunately, despite this innovation and creativity, surveillance researchers and designers sometimes run into apparently insurmountable and frustrating hurdles – policy and regulations that cannot accommodate new approaches.

The frustration comes from both sides, however. Policy makers and regulators, aiming to harmonise procedures and provide equivalence for disease control or trade face the challenge of drafting standards that can be applied today and in the future, and are easily understood by those charged with their implementation. While scientists may complain "Why can't I use these newer, better (but more complex) tools?" regulators respond "Why can't you just tell me what sample size everybody should use?"

This International Conference on Animal Health Surveillance aims to address this and many other issues related to surveillance. Discussions relating to a conference started more than two years ago, and crystallised during a meeting at ISVEE in Durban in 2009. The conference theme, *Science and Policy*, aims to bring together all the key players and facilitate open and frank dialogue. The Steering Committee consists of a completely independent group of selfless, dedicated scientists. We are most grateful for the kind support that this meeting has received from a range of institutions and organisations, but it is important to note that the meeting remains independent and therefore serves no external agenda.

In addition to a full program of high quality peer-reviewed oral presentations and posters, the meeting incorporates a number of special features, including panel discussions designed to come to grips with the tough questions facing surveillance today, and advanced use of IT with many e-poster presentations and a dedicated conference local website for upload and sharing of presentations and the joint formulation of conference resolutions.

On behalf of the Steering Committee, I welcome you to the conference and look forward to your active and thought provoking participation.

Angus CAMERON
Steering Committee Chair

From the General Director of Anses

It is with great pleasure and enthusiasm that ANSES has accepted its involvement in the organisation of this first international conference on animal health surveillance. I would like to thank Dr. Angus Cameron and the entire Steering Committee of the conference for having chosen the city of Lyon and for having put its trust in ANSES. I would also like to thank Pr. Barbara Dufour, Chairperson of the AEEMA (Association for the epidemiological study of animal diseases), for her cooperation and contribution to the success of this event.
The conference's main theme is central to the Agency's missions. Epidemiological surveillance is a major topic both for the countries and the professionals working in animal health management and for the institutions that provide scientific and technical support, such as ANSES, which performs reference missions and provides methodological advances in the area of surveillance. It is vital for both scientists and managers to work hand in hand through an organisational model that preserves both independence in expertise and responsible management. In France, a National consultation on the health sector was held in 2010, bringing together all the stakeholders from the animal health sector in order to discuss priorities for action and organisation, especially in the area of epidemiological surveillance. This brought about the creation of a National platform for epidemiological surveillance, a major body for the implementation and coordination of epidemiological surveillance in the animal health sector. I am convinced that this type of organisation can be part of a solution that guarantees cooperation between science and public risk management, which is a major theme of the conference.
These discussions in France are only one example of the kinds of issues managers, scientists and professionals are being asked to handle in most countries. This is why I am certain that a conference like this one, with the examples it presents and the debates it will surely generate, shall provide practical answers to all those involved in animal health surveillance.

Marc MORTUREUX
Director General of ANSES

C'est avec un plaisir et une motivation tout particuliers que l'Anses a accepté de s'investir dans l'organisation de cette première conférence internationale sur la surveillance épidémiologique en santé animale. Je tiens à remercier le Dr. Angus Cameron avec l'ensemble du Comité de pilotage de cette conférence pour avoir choisi la ville de Lyon et avoir fait confiance à l'Anses. Je remercie également le Pr. Barbara Dufour, Présidente de l'association pour l'étude de l'épidémiologie des maladies animales (AEEMA), pour s'être associée à nous et contribuer à la réussite de cet événement.
Le sujet de cette conférence est au cœur des préoccupations de notre agence. La surveillance épidémiologique est un sujet central aussi bien pour les États et les professionnels en charge de la gestion de la santé animale que pour les organismes d'appui scientifique et technique comme l'Anses, en charge de la référence et des développements méthodologiques pour la surveillance épidémiologique. Une nécessaire complémentarité entre science et gestion doit se mettre en œuvre dans un modèle organisationnel qui préserve à la fois l'indépendance de l'expertise et la responsabilité de la gestion. En France, des « États généraux du sanitaire » ont été organisés en 2010 et ont permis de réunir l'ensemble des acteurs de la santé animale afin de débattre des priorités d'action et d'organisation, notamment dans le domaine de la surveillance épidémiologique. Ceci a conduit à la création d'une Plateforme nationale d'épidémiosurveillance, instance centrale d'animation et de coordination de la surveillance épidémiologique dans le domaine de la santé animale. Je suis convaincu que ce type de structure peut être un élément de réponse pour assurer l'articulation entre la science et la gestion publique des risques, le sujet au cœur de cette conférence.
Ces débats qui se sont déroulés en France ne sont qu'un exemple des questions qui se posent aux gestionnaires, aux scientifiques et aux professionnels dans la plupart des pays. C'est la raison pour laquelle une telle conférence, par les exemples qui seront présentés et les débats qu'elle ne manquera pas de susciter, apportera j'en suis certain des réponses utiles à l'ensemble des acteurs de la surveillance épidémiologique en santé animale.

Marc MORTUREUX
Directeur général de l'Anses

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Human nature – The arch-rival of animal health surveillance

J.A. Kellar[1*]

Abstract

National veterinary services monitor endemic, emerging and exotic disease situations for epidemic tendencies validating intervention. They unravel conflicted disease situations within politically charged, monopolistic environments of fiscal restraint. When human or animal health or trade dictates, they design responsive import or domestic disease control programs comprising <80% surveillance. Their initiatives are scrutinized by treasuries beseeched for funding, industries lobbied for collaboration and trading partners petitioned for recognition.

Each existing surveillance and control initiative is the culmination of that protracted process, wherein resourced dissatisfaction with a current animal health situation has propelled individuals of common interest into collective action. The generation that designed risk-averse national surveillance and control programs has bequeathed them to more epidemiologically informed successors. They steward campaigns bearing varying degrees of enlightenment but change has not been overwhelmingly welcomed. Challenges facing them are ubiquitously perennial.

Expenditures on surveillance are tolerated offshoots of fear during incursions of foreign or recrudescence of indigenous disease. Between epidemics, sponsorship yields to a trans-generational constancy of producers' reticence and fiscal inertia. From the animal unit of observation upwards, naïveté through conspiracy define the human response to the high cost of surveillance. While legislative enforcement cannot subdue human nature, a trilogy of other opportunities exists.

Education creates a conscientious environment, reducing compromising actions from inadvertently frequent to willfully few. Technology diminishes the high unit cost of observation underlying the untoward human response. International standards foster from without the collective progression which self-interests may deny from within.

Keywords: animal health, surveillance methodology, education, technology, international standards.

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[1] Canadian Food Inspection Agency, Ottawa, Canada - * john.kellar@inspection.gc.ca

Science needs for a smarter animal health surveillance

D.U. Pfeiffer [1*]

Abstract

Animal health surveillance has undergone significant changes in the last 50 years, as a consequence of changes in hazards and associated risks, different hazard prioritisation and associated resource allocation and due to advances in technological development. During that time, perceptions and expectations in relation to the effectiveness as well as the cost-effectiveness of surveillance also changed. Stakeholders in many countries now explicitly demand that surveillance policies are informed by the best available scientific evidence, while at the same time there is increasing scepticism amongst the public with respect to the ability of scientific research to deliver effective solutions. Scientific advances in relation to surveillance have been mainly associated with the development of technologies such as diagnostic tools. More recently, the need for applying quantitative epidemiological concepts has been recognised, whether these relate to using statistical sampling protocols, disease modelling or other quantitative techniques. Furthermore, risk analysis within which surveillance is embedded as a risk management tool is now firmly established as a structured framework for integrating scientific evidence into international trade negotiations. It also includes risk communication in recognition of the importance of involving all stakeholders in the development and implementation of animal health and surveillance policies.

Development and implementation of science-based policies is often driven by the widespread belief that scientific research leads to the technologies which then 'only' need to be implemented. This perception ignores the influence of human behaviour on the effectiveness of policies. The use of participatory methods in surveillance is an attempt to deal with human behaviour aspects, and it so far has primarily been used in developing countries. The use of such qualitative methods is still being met with some scepticism by most animal health professionals. While having to deal with recent animal and human epidemics of new and old infectious diseases, the need to implement interdisciplinary approaches has led to the 'one health' and ecohealth paradigms which recognise in particular the need to involve the sociological and economic sciences in addition to the biological ones. This means that the sciences are undergoing a minor revolution in that it is now widely recognised that the classical reductionist single discipline approach needs to be complemented by inter- and transdisciplinary approaches. This in turn has generated a significant challenge for the sciences in that different epistemologies and ontologies need to be linked in order to generate knowledge that can lead to development of more effective policies.

For future surveillance policies to be more effective, they will need to be informed by a better understanding of aspects of human behaviour and associated sociological, economic and ethnological drivers that are relevant to animal husbandry, trade and food consumption. Simultaneously, the communication between scientists and policy makers has to be improved. There is often a misconception amongst policy makers with respect to what science can deliver and amongst scientists in terms of what the needs of policy makers are. A particular challenge is associated with the communication of knowledge requirements and knowledge interpretation, specifically the uncertainty of the latter.

Keywords: animal health, ecohealth, economics.

The full text of this paper will be published in a special edition of Preventive Veterinary Medicine.

[1] Royal Veterinary College, London, United Kingdom - * pfeiffer@rvc.ac.uk