



Future of NEAT



The Erasmus support for **NEAT** ended in September 2015 and we are very grateful for allowing us to explore the gaps and needs of animal health professionals with regards to economics. During the project's final meeting in Cesenatico the future was discussed and there was a unanimous decision that a society should be created based around the principles of NEAT. George Gunn and Tim Carpenter proposed that we have a one day meeting prior to the SVEPM conference in Inverness, Scotland, so that will be the first official meeting of the society. They also proposed the creation of a committee with myself as President, Henk Hogeveen as treasurer, Carola Sauter as secretary and Tim, George and Keith Howe as members. Since this initial start, Tim has registered a website (ISEAH.com), George has got agreement for the meeting with SVEPM and I have agreement from ISVEE to make an announcement of the new society at the ISVEE 14 in Merida. We have since co-opted Dannele Peck from the University of Wyoming as a representative from North America and Tabitha Kimani as a representative from Africa to the committee in order that we begin to work with colleagues across the world. We will also search for a person from Asia in the coming weeks. An initial proposal at this stage is to call the society the International Society for Economics and Social Science of Animal Health.

Jonathan Rushton
Project Coordinator



The NEAT story will continue in Inverness 2017, we hope to see as many of you there as possible!

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1 New French network *Economic Reasoning for Improved Animal Health*

A new network entitled "Economic Reasoning for Improved Animal Health" will be started soon in France. The goal of this network is to gather scientists of various fields with actors concerned about solving economic issues related to animal diseases and drug use in animal health.

It includes (i) an analysis of the current situation of research around Economics of Animal Health, starting with the state of the art performed within the NEAT network, (ii) the constitution of an interdisciplinary working group that may be able to jointly build scientific projects and (iii) the creation of shared experiences and contacts to build lasting partnerships between scientists, health managers and decision makers. For further information please contact Didier Raboisson (d.raboisson@envt.fr) or Arnaud Rault (arnaud.rault@nantes.inra.fr).

2 Reflections from Work Package leaders and co-leaders

Work package 1: Network management and coordination

The main tasks of this WP were to coordinate the scheduled work by establishing and communicating tasks and deliverables to all partners; organising regular management board meetings; distributing information on network



activities through different channels (website, newsletter, emails, blog) and guidelines (e.g. handbook, templates); establishing the network website; promoting dissemination and networking; managing administrative tasks and finances; and overviewing progress and reporting.

The internal assessment showed that the project has been well managed and that work package leaders and co-leaders worked towards achieving their tasks on time and involving relevant network partners. It was perceived that NETWORKING was one of the key achievements.

Work package 2: Exploring the status quo of Economics of Animal Health

The two main activities of WP2 were an extensive literature review and a stakeholder survey together with WP3. The goal of literature review was to get an overview of literature that is available in the field of economics applied to animal health. This task was a real team effort because almost 40 members of the network participated in reviewing the publications. Altogether about 850 peer-reviewed publications were reviewed. Although reviewed studies were often simulation studies (20% publications), reviews and discussion papers (16%) in recent years statistical analysis of empirical data has gained attention. There was quite strong emphasis on notifiable diseases. More attention on endemic diseases, poultry and pigs, Eastern Europe and Asia would be warranted.

The results suggest that there is also a need to harmonise representation of results, description of data, keywords and methods. Lack of consistency of approach hampers the ability to compare studies and suggests potential inconsistency in education in EAH. Due to varying approaches, systematic quantitative analysis of publications' results is infeasible.

Three web-based questionnaires were administered with WP3. Persons who had received

training in EAH found the training very useful, but were somewhat dissatisfied with the coverage of topics. Usually training focused on basic concepts applied in EAH. Overall, the results showed that education in EAH is inconsistently offered and information on training opportunities is scarce.

In conclusion, there is a need to harmonise training and publishing standards in the field of EAH. There is a need to educate the trainers because their competence is central to advance the profession.

Work package 3: Horizon scanning and identification of teaching needs

Work package 3 comprised a survey to enquire about present and future needs and expectations of stakeholders in terms of economics applied to animal health (EAH) education and professional skills. Results along with those of WP2 were



made publicly available in the **Journal of Veterinary Medical Education** (doi: 10.3138/jvme.0414-039R1) and in **Eurochoices** (doi: 10.1111/1746-692X.12098) and disseminated as posters in different scientific conferences.

Outcomes of the survey were also further discussed during the first annual meeting and working groups underlined the importance of working towards institutionalisation of EAH in the veterinary curriculum and raising awareness of its usefulness. It was decided to co-construct a structured learning portal and/or text book including an important part of case studies as a support for students but also for teachers. A vision for the network was also formulated: "Improving education in the Economics of Animal Health", along



with a mission: “Our mission is to ensure that organisations and businesses working with animal health professionals in Europe and beyond have access to professionals educated in economics of animal health by enhancing general understanding and awareness for competency needs and by creating a sustainable, interdisciplinary network for sharing and developing open access delivery, methods, educational material, ideas, and other teaching resources”.

Work package 4: Development and testing of teaching material and innovative teaching tools

During the NEAT project, WP4 was responsible for the development and testing of innovative materials and tools to teach economics in animal health (EAH).

The development of teaching materials and tools started with retrieving insight in the inclusion of EAH in curricula of veterinary universities across Europe. Based on responses collected from 29 European veterinary universities, it was concluded that courses and outcomes specifically tailored towards economics and EAH were lacking. Twelve European veterinary universities that were identified to have economics and EAH in their curriculum were approached to assess detailed information about what topics were taught to students. This information was used to identify gaps between skills and required knowledge in EAH that veterinary students should have and what is currently being offered.

These gaps were identified during a 2-day workshop amongst a selected group of NEAT members in Wageningen in March 2014. During this workshop, four levels of teaching EAH were defined, of which one (Economics for ‘day-one’ veterinarians) was worked out in more detail. The workshop participants defined the objective of this teaching level as ‘to develop a (basic) appreciation of the use of economics in diagnosis, treatment, and prevention of animal diseases’. To

achieve this objective, five topics were identified:

1. The role of the veterinarian from an economics perspective,
2. The value of animals and the benefits of veterinary activity,
3. Resources for veterinary work,
4. Costs of veterinary activity, and
5. Decision-making context.

For each of these five topics, a lecture and practical sessions were developed for workshop participants. The teaching materials developed by NEAT are available on the [project website](#).

The second NEAT annual meeting, held in Wageningen in October 2014, offered a platform to test the developed teaching materials amongst the participants of this meeting. Although it was somewhat hard for them to judge whether the topics and offered material fitted across all topics (since they could attend a maximum of two out of the five sessions), the majority of participants strongly agreed that the topics of those sessions that they did attend were relevant. There was an overall positive attitude towards disseminating the presented material. Developed materials will be used to write a book on teaching EAH for day-one veterinarians. Further, the materials developed by WP4 for the first level of teaching EAH will be used by Utrecht University as of November 2015.

The second NEAT annual meeting was also used to define topics for two other levels of teaching EAH (both for veterinarians specialised on farm animal health) and this information will be used to develop teaching material for these two levels of teaching EAH.

Work package 5: Dissemination and exploitation: State of play and future engagement

WP5 aimed at disseminating the information and deliverables of the project to a wide range of stakeholders as well as the promotion of their use



to create self-sustainability. Specific objectives laid out included the promotion of communication within the network and beyond, the development of tools to support information exchange, and the dissemination of the teaching material and curriculum developed and the exploitation of the materials developed along the project.

Multiple dissemination activities have been conducted in the three years of the project, from the website development and maintenance, presence of the project banners and presentation of the outputs of different work packages in several conferences and workshops, to publications including peer-reviewed papers, factsheets and newsletters.

While these activities were conducted consistently throughout the duration of the project, there was, to some extent, more activity in terms of dissemination in the months immediately after the annual meetings. The dissemination activities targeted a wide range of audiences: students and teachers of animal health economics, government departments and policy makers, project stakeholders and those interested in the topic of animal health economics, agricultural economists, epidemiologists and veterinary scientists/surgeons and farmers.

In the evaluation of the project, the partners have indicated a high engagement in disseminating NEAT, contribution to the production of NEAT, and transfer of NEAT to others through events, website content production and papers. The extended network survey showed that, from



NEAT partners at Wageningen University

the dissemination materials, the NEAT newsletter and the website were the most recognised.

The future of dissemination activities will include the maintenance of the website, which continues to function as a key tool to disseminate the outputs of the project, including the teaching materials. In addition, peer-reviewed papers and other publications in the pipeline as well as planned presentations, posters, and workshops, including NEAT at ISVEE 14 in November 2015 in Mexico, will contribute to the sustainability of the project.

Work package 6: Evaluation of NEAT and its outputs

In WP6, the NEAT network activities and materials were assessed. We also analysed and interpreted the data collected on the existing levels of knowledge on the economics of animal health. In the training and education of veterinarians and animal health professionals, some but not all veterinary faculties have courses on economics applied to animal health. The structure of the delivery of the material on economics applied to animal health is not standardised or validated for its quality of content or delivery. Furthermore, in schools which have the economics applied to animal health course in their undergraduate curriculum, the course may not be well integrated into the curriculum, may not be appreciated by the staff responsible for clinical teaching and appear to the students as “standing alone”.

NEAT developed educational and training materials and compiled an inventory of the capacity to deliver training materials at undergraduate, post-graduate and continuing professional educational levels in the animal health profession.

From the evaluation performed, it became clear that the material developed in *Session 5: The decision making context* was the most popular. Furthermore, it turned out that research and conference organisation and -participation were



the preferred future activities, potentially within a society, if funding is available (for both partners and extended network). Training sessions so far are mainly provided in classroom sessions by NEAT partners, however on-line courses and developing specialised workshops are most wanted by members of the extended network.

3 NEAT Final Meeting

The third annual meeting of NEAT was a big success. It was organised with great care and dedication by our Italian partner, the University of Bologna. It took place on 7-8 September in Cesenatico, Italy. In total, 72 participants from all over the world attended in order to reflect on the work that was conducted during the lifetime of the project and to discuss the future of NEAT.



In the morning of the first day, after a warm welcome by Professors Maurizio Aragrande and Gualtiero Gandini from the University of Bologna, leaders of the different work packages presented the work completed in their WPs and the lessons learnt from these. The following sessions then shifted the focus towards the future and the sustainability and further development of the network. These topics were then discussed in more detail in the afternoon. Participants split into four groups to discuss the vision of the network and how they see their organisation contributing to keep NEAT activities ongoing:

- Group 1: Sustainability & bridging activities
- Group 2: Funding opportunities
- Group 3: Valorisation of NEAT outcomes
- Group 4: Network development.

Each group provided feedback in the plenary about proposed and agreed next activities, which was followed by a general discussion. At the end of the day participants gathered for a social event in a nearby restaurant at the seaside, where everybody was treated to a wonderful and generous Italian dinner in the true spirit of Italian hospitality.

On the second day of the meeting, the focus was on opportunities to support NEAT in 2016 and beyond and on the next steps to be taken to achieve the overall objectives. More time was spent in small groups to refine and agree on the proposed activities. At the end of the morning, Jonathan Rushton summarised the planned next activities including responsibilities and thanked everybody for their outstanding efforts and contributions in the past years.

Italian vets meet NEAT workshop

A workshop was held on September 9th in Bologna at the Department of Agricultural and Food Sciences with some of those NEAT partners who attended the 3rd NEAT meeting in the previous two days and external participants representing the Italian veterinary world. Those in attendance included representatives from the most relevant national associations of the veterinary profession (FNOVI and AMVI) and from the Italian Health Ministry, from the industry, as well as participants from the Department of Veterinary Medicine of the University of Bologna, such as economists teaching economics at the Veterinary Faculty and delegates of the veterinary student associations. The objective of the workshop was to inform the local and national veterinary world about NEAT's mission, objectives and achievements in order to start a discussion about the role of economics in Vets formation with special focus on the Italian situation. Bologna is among the most important veterinary schools in Italy and the 3rd NEAT Meeting was a unique opportunity to exchange views in this field at an international level.