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**In this issue (page numbers)**

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Editorial: Developments and Mysteries of BSE and vCJD (27)  
 56th EAAP Annual Meeting, Uppsala, 2005 (34)  
 EAAP Annual Meeting in 2006 (34)  
 Future EAAP Annual Meetings (35)  
 EAAP Awards, 2005 (36)  
 Scholars at the Uppsala Annual Meeting (39)  
 Awards for Best Papers and Posters, Uppsala, 2005 (40)  
 Forthcoming Conferences of Interest to EAAP (41)  
 Personal News (43)  
 49th EAAP General Assembly (44)  
 Report of the President of EAAP, 2005 (44)  
 News from EAAP (45)  
 News from Europe (48)  
 International News (49)  
 Reports of Meetings, Working Groups and Task Forces (51)  
 Reports of EAAP Study Commissions (56)  
 Training Courses (77)  
 Calendar of Scientific Conferences (78)

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**EDITORIAL: DEVELOPMENTS  
AND MYSTERIES OF BSE  
(MAD COW DISEASE) AND vCJD**

This Editorial reviews the recent developments in BSE (Bovine spongiform encephalopathy) also known as Mad Cow Disease and its human form known as variant Creutzfeldt Jacob Disease (vCJD). The new events discussed here have taken place since the last Editorial on BSE in these pages in April 2004 (Livest. Prod. Sc. 87 (1) 46–52). But scientific knowledge remains incomplete including the unsolved mystery of where BSE came from in the UK. Also we still lack a diagnostic test before death and methods for prevention, treatment or cure for BSE and vCJD. Here the new developments are examined followed by a review of the remaining mysteries and the lessons to be learned for the future.

**New developments**

1. Humans infect cows—a new speculation on the origin of BSE;
2. Continuing decline in new cases of BSE;
3. End of Over Thirty Month (OTM) ban on UK cattle;
4. BSE may be linked to different vCJD types;
5. vCJD spread by blood transfusion;
6. CJD from brain surgery and vCJD from tonsil surgery.

**Lessons from BSE for protecting the food chain**

7. Origin, nature, transmission, diagnosis, prevention, treatment and cure of BSE and vCJD
8. Weakness of scientific reductionism
9. Species barriers

## 1. HUMANS INFECT COWS—A NEW SPECULATION ON THE ORIGIN OF BSE

BSE, one of the family of Transmissible Spongiform Encephalopathies (TSEs), was first diagnosed in cattle in the UK in 1986. Today, nearly 20 years later, the origin of BSE remains unknown. There are several theories, the most popular of which is that the sheep prion disease, scrapie, jumped the species barrier as a result of sheep offal being included in meat and bone meal (MBM) fed to cows. This theory of origin is built upon the facts that bovine MBM is the vector for spreading the disease from cow to cow and also that BSE jumps the species barrier into humans when a person eats specific risk tissues from a beef animal with BSE.

A new theory of origin is also built upon the concept of cross-species transfer through ingestion—but this time in reverse—namely that cows ate human remains from people suffering from some form of CJD. The naturally occurring form of human CJD, known as sporadic CJD, occurs in older people at the rate of about 1 per million per year in many human populations—whereas, the current view is that vCJD presents in young people in their 20s who have ingested specific risk material from cattle.

The new theory is proposed by Professor Alan Colchester of the University of Kent and Nancy Colchester of the University of Edinburgh, UK in the *Lancet* in September 2005. They point out that in the 1960s and 1970s the UK imported from South Asia hundreds of thousands of tonnes of whole bones, crushed bones and carcass parts which also included some human bones and were used both as fertilizer and animal feed. Nearly 50% came from Bangladesh, India and Pakistan where there is a local trade in large bones and carcasses which are collected from rural areas and from rivers. In Hindu practice, the River Ganges is a common destination for human ashes following cremation, and it is also common, says Professor Colchester, for those unable to afford or arrange a complete cremation to place the body in the river—from where the bones may enter the local trade. During the 1960s human remains were identified in material sent to processing mills and was also confirmed in shipments of bones entering French and Belgian docks from Asia.

There is, Professor Colchester says, a rare but possible and significant risk that a corpse from some-one who died from a version of CJD could have been included in those consignments and thus entered the human food chain through cattle feed. The UK was the largest importer of these materials in the 1960s which may explain why the UK was hit so hard by BSE and also why there was a 20 year lag time between possible first infection in the 1960s and the widespread incidence of the epidemic by the time it was diagnosed in 1986. The possibility that several cycles of BSE had probably occurred in the UK in the earlier decades was noted by the UK Government Scientific Review Body (Horn et al., 2002).

Alan and Nancy Colchester estimate that about 120 Hindu people die from CJD each year. On the other hand, in the same issue of the *Lancet*, two scientists from India's National Institute of Mental Health and Neurosciences (Shankar and Satishchandra, 2005) say that only 85 cases of CJD have been recorded in India over the past 37 years and that patients dying from this condition are usually cremated or buried.

Only a tiny amount of contaminated brain tissue is needed to transmit human CJD to nonhuman primates in the laboratory. Nothing is known experimentally about the transmission of the human prion diseases to cattle. However, it is known that prions can survive the entire chain of processes used to prepare meat and bone meal for animals. It is also known that human prions are extremely resistant to breakdown, as mentioned below in the discussion on sterilization of surgical instruments.

The origin of BSE remains a mystery with several feasible theories—and it may prove very difficult to confirm any of them. Alan and Nancy Colchester suggest an experiment to attempt to infect cattle with human prions.

Monitoring and maintaining health controls for resources in the food chain is extremely difficult when materials are being shipped around the world. The old warning "Caveat Emptor" indicates that countries which import food and raw materials for food must take a pro-active stance by setting their standards for the protection of their citizens. This policy may sometimes result in rejection of the cheapest possible imported materials—an issue which the West currently finds very difficult to handle due to the dominance of economic values.

## **2. CONTINUING DECLINE IN NEW CASES OF BSE**

The number of new cases of BSE in cattle each year in the UK is declining as predicted by the epidemiological computer models. This is a huge relief. The diminishing trend confirms that the parameters included in the equation describing the epidemic are reasonably accurate including: how BSE spreads from cow to cow (via bovine meat and bone meal); changed practices to prevent such spread; and disposal of both infected and suspect animals.

Since the peak in 1992, case numbers have continued slowly to decline and the rate is now about 60% a year which means there is the possibility of a long tail. In 2002, there were 877 new cases of BSE in the UK followed by 457 cases in 2003. In 2004, the number was 343 which translates into a rate of one case in every 10,000 cattle. 90 of these were clinical cases and 253 cases were detected by laboratory testing after slaughter. The majority of those affected were born before August 1996.

## **3. END OF OVER THIRTY MONTH (OTM) BAN ON CATTLE**

Following the peak of the BSE epidemic a ban was introduced in the UK which excluded cattle over 30 months of age from the food chain. This age was selected as it was half the suspected BSE incubation time. It was thought there is a rapid build-up of infective prions in the latter stages of the condition and also that animals over 30 months were more likely to have ingested meat and bone meal before its use was banned. Later the Food Safety Authority (FSA) recommended that, from 2004, cattle born after August 1996 could be taken into the beef food chain. However, for any animals older than 30 months there was a very expensive proviso that required all special risk material from the carcass to be removed. Further, the edible carcass had to be held completely separate from all other beef until a BSE test result was completed on a brain sample.

Since 2004 the FSA have collected large-scale data which now indicates that the OTM can be lifted from 7 November 2005 and cattle over 30 months of age may then enter the food chain. This will be subject to a new BSE testing protocol by which every beef animal slaughtered will be tested at the abattoir for

BSE. Other details of the protocol include: regular visits to abattoirs by specially trained veterinarians from the Meat Hygiene Service; farmers may not send any animals born before August 1996 for food; and an independent audit of the new BSE testing system six months after the end of the OTM rule. Additionally the FSA plans to create a new Review Group to oversee implementation of the protocol and which will include wide representation from consumers and all other sections of the beef food chain.

Since the OTM rule started, the main supply of home-produced beef in the UK has been from younger animals only. The OTM rule placed higher costs upon beef production as many dairy cattle would normally enter the beef chain at the end of their lives—approximately one million older animals in the UK were destroyed for this reason in 2003. The OTM ban also placed a further cost upon farmers' management and budgeting analyses as they have to decide whether to keep a heifer for breeding or send her under the age of 30 months for beef.

With the lifting of the OTM rule and the new testing protocol it is estimated that there will be a 27% increase in UK beef production—an additional 185,000 tonnes of domestic beef in 2006. Consequent upon BSE in the UK, exports of beef have been severely limited by the European Union and are subject to strict traceability rules. The UK is now seeking for this export ban to be lifted—which will not be earlier than 2006 and will also depend upon the EU being satisfied with the UK identification and tracing system for cattle.

## **4. BSE MAY BE LINKED TO DIFFERENT vCJD TYPES**

Research now suggests that different types of vCJD may result from eating contaminated beef. Scientists at the UK Medical Research Council (MRC) report in *Science* (Wadsworth et al., 2004) that BSE may also manifest itself in humans as sporadic BSE—or even a new form of the disease not yet seen in humans.

The research focuses upon a gene which makes the normal form of the abnormal prion protein that causes vCJD. The gene encodes for two different types of amino acids—methionine (M) or valine (V) leading to three types of individuals: those with MM, MV or VV. So far, all cases of vCJD except one have developed in people who have the genotype MM which is carried

by 38% of the UK population. The exception is an MV patient who developed the disease from a blood transfusion.

Professor John Collinge of the MRC Prion Unit says that research which infected mice with BSE shows that the type of prion disease was dependent upon the mouse genotype. MM genotype mice show the disease in similar form to human vCJD or sporadic CJD. However, VV mice showed a form of the disease where prions looked significantly different from those seen in normal vCJD (called Type 4)—this type of the disease has been called Type 5 which appears to have a different molecular architecture.

The researchers point out that the sporadic form of CJD has been increasing in recent years and although this may be due to better monitoring it could also result from BSE infections. It also seems that the possibility of infection from blood transfer of prions between people depends upon the infected person's genotype. A VV person would not develop vCJD even though the contaminated blood came from a person with vCJD.

An apparently new feature is that prions appear to modify and adapt depending upon the genetic make-up of the individual they are infecting. It is important, Professor Collinge says, to take steps to draw up a more sophisticated system of categorizing the disease so that we do not mistake BSE related infection for a version of sporadic CJD.

This last comment from research on mice means that the statistics on cases of vCJD must be reviewed in a new light. New cases of vCJD have thankfully declined in the last few years. The peak year was 2000 with 28 while 2004 showed 20. In 2005 there were only 2 new cases of vCJD by 9 September. However, as indicated above, the number of sporadic CJD cases has tended to increase in the UK during the period when vCJD was climbing. From 1990 to 1996 the annual average of sporadic CJD was 35 and it increased to 61 from 1997 to 2004.

### **5. vCJD SPREAD BY BLOOD TRANSFUSIONS**

Two cases of likely transmission of vCJD via a blood transfusion have been announced by the UK Department of Health. The first case involved a patient who died from vCJD after receiving blood from an infected donor. The blood transfusion was carried out in 1997 during surgery and the patient died in 2003. The UK

government then banned anyone who had received blood since 1980 from donating blood even though they do not show symptoms of vCJD. Nine blood donors in the UK were subsequently found to have vCJD. Their donations would have gone into plasma pools and thus diluted with thousands of other donations. A complex investigation followed in which 17 other individuals who had earlier received blood from those sources were told that they also may be incubating vCJD. There are about 4000 haemophiliacs in the UK and they are the group most at risk having received blood products such as clotting agents.

The second death involved a patient who received blood in 1999 from another donor who subsequently developed vCJD. However the patient died from other causes but was found to have vCJD prions in the spleen.

From the summer of 2005 the UK instituted a highly precautionary approach. Stocks of blood from anyone who subsequently shows vCJD infection are destroyed. White blood cells which carry the greatest risk of transmitting vCJD are removed from all blood used for transfusion. There is no test for vCJD. Therefore everyone who received a warning is urged to inform their dentist and doctor.

### **6. CJD FROM BRAIN SURGERY AND vCJD FROM TONSIL SURGERY**

CJD and vCJD have presented problems in managing health care, mainly because prions are indestructible by normal medical hygiene practices. A UK man who underwent brain surgery to remove a tumour in 1987 died in 2003 from CJD having received an infected patch on his brain. Such patches, called Lyodura patches, are used by surgeons to repair the membranes covering the brain after surgery. The patches are taken from a human corpse and have been widely used for many years.

A consultant neurologist working with CJD in the UK said that he was aware of 168 cases worldwide where patients had contracted CJD after having some kind of graft onto the membranes surrounding their brain. He added that seven cases had been in the UK and in six of them the Lyodura patch was involved. He added that the hospitals, surgeons and manufacturers were unaware of the contamination at the time. The manufacturers in West Germany said that 900,000

patches had been produced world-wide during the last 28 years and that certain batches had become contaminated with CJD during manufacture.

Tonsils proved to be a particularly potent location for vCJD aberrant prions. Sterilization of surgical tools used in removing tonsils in children failed to destroy them. The prions could then be transferred in surgery to other children with risks that they will suffer from vCJD.

The UK National Health Service has established a service to work with hospitals and surgeons to help minimize the risks of contracting CJD or vCJD through surgery. The sensitive areas are spinal cord, the eye, inside the nose and lymph glands such as tonsils.

Researchers at University College London say they have developed a detergent wash that reduces the possibility of CJD being transmitted during operations. More than 400 combinations of chemicals have been examined and one type seems to provide protection when surgical instruments are soaked for an hour.

Further positive news is that a research team in the USA published a report in *Nature Medicine* (Castilla et al., 2005) saying they have developed a test able to detect vCJD in live hamsters and they hope to progress towards a test for humans.

### **Lessons from BSE for protecting the food chain**

#### **7. ORIGIN, NATURE, TRANSMISSION, DIAGNOSIS, PREVENTION, TREATMENT AND CURE OF BSE AND vCJD**

The saga of BSE continues. The current control systems in cattle seem to be working and the annual decline in new cases is following predictions. Vigilance is nevertheless essential as shown by the UK government's slow and measured lifting of bans on farm, abattoir and meat trade practices. However, the cost and disruption to beef producers, to the meat trade and to the government has been enormous. An estimate was made by the EAAP "After BSE" Working Group which amounted to a discounted present value of Euros 92 billion (Cunningham, 2003).

Recent developments in the study of vCJD, while welcome, cannot be regarded as a scientific breakthrough. In fact, the small advances in knowledge appear to open new vistas of uncertainty about the nature of vCJD, its relationship to CJD, its transmis-

sion by nutrition and through body tissues and the emerging links with the genotypes of the recipient of prions. 20 years ago we knew nothing of BSE or vCJD. Today much still remains obscure.

The common research targets for any new disease complex include: origin, nature of action, transmission, diagnosis, prevention, treatment and cure. Our present knowledge of most of these factors in the case of BSE and vCJD is very limited. We now know with certainty only the vector of transmission between cattle and the way BSE can spread to humans. We remain ignorant of the origin, biochemical action of prions, relationship to genotypes, and we have no techniques or products to diagnose, prevent, treat or cure the condition in either live cattle or humans.

The principal mystery is the unknown origin of BSE and the length of time it was silently spreading in the UK cattle population before diagnosis in 1986. Unravelling this secret is essential not only for complete understanding of this terrible event in livestock production and in human health but also to enlighten the future. Scientists and society need to know how BSE managed to slip undetected into the farming and food chain. Clarity on the origin of BSE is essential to upgrade the current methodology of risk assessment when new scientific practices are introduced.

At the very least, the consultation process for risk assessment of new technologies in the food chain must be broadened before introduction in the future. Basing risk assessment solely upon statistical probability tests is clearly inadequate. In the case of BSE, the commonly held scientific view that Transmissible Spongiform Encephalopathies (TSEs) are "species-specific" proved to be wrong. The view was not based upon experimental evidence but was an untested assumption built upon the observation that scrapie in sheep had not been known to pass to humans who ate mutton from affected animals. The extrapolated conclusion that BSE could not jump from cattle to humans led some high profile UK scientists to tell the public for nearly a decade that eating beef remained safe in the presence of a BSE epidemic.

#### **8. WEAKNESS OF SCIENTIFIC REDUCTIONISM**

The last decade has seen vast increases in the creation of new knowledge on almost any aspect of the human

experience. An equally important and parallel fact is that access to any knowledge—both old and new—is now almost unlimited and swift. But the explosion of knowledge actually creates more barriers by forcing scientists and other specialists into professional reductionism.

Scientists are not accustomed to lateral consultation with other vocations. But in view of the universal interest and dependence upon food, a strong argument can be made for requiring scientists who work in the food chain to be more open to search, discuss, listen and ask for inputs from other professionals and from society in general on their research and innovations.

Let us think about the background to BSE and vCJD in relation to the enormous upheaval, still unfinished, caused to the livestock industry and to society. Food is a vital component of human life. Introducing changes into the food chain are therefore issues of public concern and very different from the introduction of a new technology in a manufacturing industry concerned with a product that is optional for life. People who could have raised concerns about feeding bovine MBM to cattle have been around for a long time but they were not consulted because the current risk assessment protocols are too narrowly focused. The isolation of scientific professionalism needs to be broken down. New technologies need public examination before they are applied in the food chain and its associated environmental resources. There is need for Due Process.

BSE demonstrates the point. Was Due Process undertaken when the idea was first mooted of feeding bovine meat and bone meal to cattle? The evidence is hard to find. Who were the decision-makers? Where did they live? When did they make the decision to include MBM in animal feed? It seems almost certain that the decision involved animal nutritionists working with leaders in the animal feed and abattoir businesses. It would be interesting to know whether any trials or nutritional research was carried out before the idea was implemented. If so, who paid for it and where are the published results? Doubtless the idea carried the applause of business leaders at the time because it removed the costs of disposing of abattoir waste offal and at the same time provided the animal feed industry with a new source of cheaper animal protein. If, as seems likely, the decision to use MBM

was based solely upon those economic benefits while the broader issues of quality of life were not investigated, then the decision had too narrow a base.

How would wider discussions have helped? When the idea first arose of feeding bovine meat and bone meal to cattle—thereby making them cannibals—a wider consultation among medical specialists, anthropologists, and sociologists would have raised warning signals. Kuru, a human form of TSE, has been known for many years by some specialists working in anthropology and medicine. It is documented that this TSE was spread from one human to another by a form of cannibalism practised by some tribal people in New Guinea. These people specifically ate the brains of their revered relatives after death in the belief that they would then gain the wisdom of their elders. In fact Kuru was spread among the population by this practice. Anthropologists and medical people recorded that Kuru disappeared when that practice was stopped in 1959 on the advice of Western professionals. Thus it was known in the scientific literature and by specialists working in areas other than livestock production that a TSE is spread by eating brain tissue within a species. If those responsible for initiating the practice of feeding cattle with bovine offal, which include the brain, had been prepared to go through Due Process then danger signals would have sounded and BSE could have been avoided.

Regarding vCJD, wider consultation among the public about turning cattle into cannibals would have also sounded danger signals. Humans in general abhor cannibalism. The practice of the people in New Guinea is a very minor abnormal exception. This common human rejection of cannibalism is probably a deeply sensed value that derives from two sources: first from our instinctive rejection comparable to that of most other mammalian species who, during the long processes of natural selection, have learned not to eat the dead of their own species because of disease risk. The second rejection derives from the higher value evident in Western and other civilizations enabling us to identify with another person as a victim: human rights.

When it later became known in the UK that BSE had resulted from feeding to cattle the offal of their own species, there was a common public revulsion against the practice and against the beef so produced. This is a different reaction from feeding fish meal to

bovines which is not cannibalism. Thus, if a wider consultation had taken place when MBM was contemplated, there are two sources of wisdom which would have advised strongly against it.

## 9. SPECIES BARRIERS

The Human Genome Project has revealed how close the genomes of some higher mammals are to the human genome—with large common segments of bases, DNA and therefore biochemical function. Although this close similarity had been assumed earlier, the recent confirmation emphasizes the paramount need to examine new pathways of risk with fresh perspectives. BSE and the family of TSEs to which it belongs have powerfully demonstrated the community of genetic life. When the apparently simple and economically beneficial change of feeding bovine meat and bone meal to cattle was introduced, no-one considered the possibility that a new human disease with a genetic linkage to cattle would result. We are now learning that the likelihood of a disease in one species being passed to individuals of another (human) species is influenced by specific genotypes. Not everyone who has eaten beef from cattle with BSE has suffered from vCJD. There are effects which are apparently due to unknown interactions between the genotypes of cows and humans. Many other questions immediately arise. We may ask, for example, about an individual who ate BSE infected meat but whose phenotype never shows vCJD. Could that individual pass on vCJD by blood transfusion? Or again, what are the implications for human health care of the emerging hints that BSE can cause sporadic CJD as well as vCJD.

We need to learn a major new lesson from the BSE–vCJD scenario concerning the barriers between species. In general, caution is evidently needed in transferring genetic material between any species. In the case of closely related species, now illustrated in our experience with cattle and humans, unexpected signals are appearing that indicate the need for great vigilance—especially when the human population is part of the equation. There is much that we do not understand about genomic interactions between species. The process of unravelling these complex molecular relationships calls for careful, systematic—but isolated research. The public food chain should not be

the research bench—as has happened with BSE and vCJD. The price in quality of life is too high.

We must beware of the dangers of viewing these new findings from BSE and vCJD simply as a unique incident. We must draw the general lessons both from the biological data and from the human experience. The discovery merits much deeper and more mature reflection by scientists and by society at large on the practice of gene-transfer technology by which we can—and already do—move genes and other tissues from one species to another.

It is a huge temptation to view the possibilities of breaching the species barriers solely as a means of harvesting some immediate advantages which are otherwise unavailable. Such a scientific worldview then begins to see the species barriers as a limit to human progress. We must not forget that the stability and adaptation of species, shaped over millions of years, have been extremely valuable and important factors in the development of agriculture, the human food chain and therefore of civilization. Creative technology to cross the existing species barriers must not be evaluated solely in terms of a business plan. Common sense and rationality proclaim the necessity of viewing these new options in the larger context of their impact upon the whole quality and stability of life. Progress is essential. But progress must be wise, well thought-out, subject to public due process, tested and proven as capable of enriching the quality of life of all peoples now and for generations to come.

*John Hodges, Editor*

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### 56TH EAAP ANNUAL MEETING UPPSALA, SWEDEN. 5–8 JUNE 2005

The 2005 EAAP Annual Meeting was held in Uppsala, Sweden where it had previously been held in 1978. The hosts were the Swedish University of Agricultural Sciences and the Swedish Dairy Association. The date of the Annual Meeting this year in June 2005 was earlier than the normal date in late August or early September. The attendance was a record for recent years with 875 registered participants and a total of 1100 people. The scientific theme “Impact and Challenges for Animal Production and Research of Widening Europe” brought 793 papers including 460 posters which provided a wealth of new knowledge, excellent sessions and stimulating discussions.

The Swedish organizers were very hospitable and well organized and managed to adapt the outdoor social activities with new arrangements when the rain came. The social events included a Welcome Reception after the Opening and Award Ceremonies, a Barbecue Party and magnificent Banquet Dinner in Uppsala Castle. Conference Tours were arranged for all participants as part of the Annual Meeting on the last day with options to focus upon different species of livestock production. Daily tours for Accompanying Persons were well organized and there was a Post Conference Tour.

A special event was the Uppsala Round Table, a continuation of the series organized by Dr. J-C. Flamant each year in collaboration with the local organizers of the EAAP Annual Meetings. The Round Table topic in Uppsala was “*Ethical Values and Economic goals: Conflicts or Complementarities in Animal Production.*” A special panel of gifted and

knowledgeable persons representing alternative views on the topic was moderated by a Swedish science journalist.

Satellite Symposia were held on a variety of topics, Ph.D. courses were offered and meetings of Interbull and the Editorial Board of Livestock Production Science were held. The General Assembly of EAAP was also held.

The hospitality of the Swedish organizers was generous and well organized and enjoyed by all despite the inclement weather on some occasions which failed to disperse the general view that this was an excellent Annual Meeting.

### EAAP ANNUAL MEETING IN 2006

The 57th EAAP Annual Meeting will be held from 17 to 20 September in Antalya, Turkey. The hosts are Ankara University and Akdeniz University and the President is Professor Metin Yener who is well known at EAAP Meetings. The theme of the Annual meeting is “Sustaining production systems to improve the livelihoods (health, well-being, wealth) of livestock farmers.” There will be 30 scientific sessions with oral and poster papers, workshops and satellite symposia.

Antalya, often now called the Turkish Riviera, is an ancient site of human civilizations from the 1st century BC and has many archaeological and natural beauty attractions including the sea and the tourist resort of Belek nearby. Registration fees for participants in Euros are 450 before and 550 (after) 31 May 2006. For Students and Accompanying Persons: 250 and (300). There is a very attractive programme for Accompanying Persons and a Conference Tour for all. Other social events will have a Turkish flavour.

#### Important Dates:

**Deadline for receipt of abstracts: 31 March 2006**

**Deadline for reduced registration fee: 31 May 2006**

**Deadline for hotel reservations: 31 May 2006**

There are frequent flights from most major European cities to Antalya with an average of about 3 hours flight time. Information: [www.eaap2006.gen.tr](http://www.eaap2006.gen.tr) or email: [saltur@eaap2006.gen.tr](mailto:saltur@eaap2006.gen.tr).

### FUTURE EAAP ANNUAL MEETINGS

**2007: 58th EAAP Annual Meeting** will be held from 1 to 5 September 2007 in Dublin, Ireland. The Annual Meeting will be held at University College Dublin located on a beautiful campus 4 kilometres south of Dublin city centre. Information: [www.eaap2007.ie](http://www.eaap2007.ie)  
Information on Dublin city: [www.dublin.ie](http://www.dublin.ie)

**2008: 59th EAAP Annual Meeting** will be held in Vilnius, Lithuania.

### 2009 and later EAAP Annual Meetings

Preliminary invitations have been received from **Greece, Spain, Slovakia and France.**

### Antalya, Turkey 2006 Scientific Programme (as at 1st September 2005)

| Sunday 17 Sept<br>09.30–13.00  | Sunday 17 Sept<br>14.00–18.00  | Monday 18 Sept<br>08.30–12.30  | Monday 18 Sept<br>14.00–18.00  | Tuesday 19 Sept<br>08.30–12.30   | Wednesday 20 Sept<br>08.30–12.30  |
|--|--|--|--|--|---|
| <b>Ethics of sustainability (L*, Ethics WG, M)</b>                   | <b>Interaction between management, animal health and farmer health (M*, L, P)</b>      | Genetics of reproduction and maternal traits (G*, P)                                     | Free Communications <i>followed by</i> Commission meetings on future programme and elections | <b>Strategies to cope with feed scarcity in harsh environments (S*, L, N)</b>      | <b>Scale dependent opportunities and efficiency in livestock farm development (L*, C, S, M)</b> |
| Nutrition and reproduction (N*, Ph, C, P, S, H)                      | Impact of reproduction technology on horse breeding programs (H)                       | Effect of management and housing on horse welfare (H*, M)                                |  | Scientific evaluation of behavioural manipulations in pigs and poultry (P*, Ph, M) | Product quality: nutrition and management (N*, P)   |
| Statistical analysis of genetic data (G)                             | Advances in functional genomics (Ph*, G)   | The early life of pigs—physiology and nutrition (Ph, N)                                  |  | Improving cattle performance and economics of dairy farming (C)                    | Wild boar; risks and opportunities (P*, M)  |
| Cattle breeding and genetic resources for product quality (C*, ICAR) | Micronutrient impact on high producing animals (P*, N)                                 | Indoor vs outdoor cattle production systems (M*, C)                                      |  | Free Communications in Genetics (G)  | Cattle—Free Communications  |
|  | New developments in evaluation of carcass and meat quality in cattle and sheep (C*, S) | Awassi sheep (S)   |  | Dietetics, feeds and horse feeding (H)   | Breeding programs and economics (G)   |
|  |  | Advances in decision support concepts and tools for managing towards sustainability (L*) |  |  | Metabolic programming in growth and development (Ph)  |
|  |  | Impact of nutrition on the environment (N)   |  |  | Equine Industry in Turkey (H) <i>followed by</i> Free Communications (H)                        |

**PLENARY PAPER, Sunday 17th September, 08.30–9.15:—‘Improving meat quality and safety to meet consumer needs’ \***

**ROUND TABLE DISCUSSION, Tuesday 19th September, 14.00–15.30:—‘Whole Food Chain Approach to Meat Quality and Safety’ \***

\* Plenary Paper and Round Table Supported by EU Specific Support Action—‘Young Train’

**Key**—G, Genetics; N, Nutrition; Ph, Physiology; P, Pig production; C, Cattle Production; Ethics WG, EAAP Ethics Working Group; S, Sheep and Goat Production; M, Management and Health; H, Horse production; L, Livestock Farming Systems; ICAR, International Committee on Animal Recording. (\*) Denotes organising commission. **Bold**—Sessions contributing to the theme of the meeting ‘Sustaining production systems to improve the livelihoods (health, well being, wealth) of livestock farmers.’

**Dublin 2007 Provisional programme (as at 4 September 2005)**

| Session 1   | Session 2  | Session 3   | Session 4   | Session 5  | Session 6   |
|---|--|---|---|--|---|
| Breeding for robustness in cattle (C*, G, Interbull)          | <b>Sustainable animal production—Biological aspects related milk quality (Ph*, G, N)</b> | <b>Sustainable animal production—Production aspects related to milk quality (C*, S)</b> | Free communications <i>followed by</i> Commission Future programme and elections meetings | <b>Sustainable animal production—Biological aspects related meat quality (Ph*, G, N)</b> | <b>Sustainable animal production—Production aspects related to meat quality S*, P, C,</b> |
| Changes in land use/CAP reform (L*, S)                        | Pasture management systems (M*, L, S, H)   | Maximizing forage use in ruminants diet (N*, C)   |   | Herd and stable management: health and performance issues (H*, M)                        | Biology and genetics of udder health (G*, Ph)   |
| Regulation of milk synthesis (Ph)                             | Nutrition and management of lactating sows (P*, N)                                       | Stress physiology and behaviour in relation to housing and transport (M*, Ph,)          |   | Crossbreeding (G*, C, S);  | Open session in Nutrition (N)   |
| Risk of disease transmission through animal traffic (M*, OIE) | Genetics Free communications (G)   | Human–horse relationship (H)  |   | Approaches to livestock farm multifunctionality (L)                                      | Horse production in Ireland/tour (H)  |
| Impact of feed processing on nutritive value (N)              | Use of crosses and dairy calves for beef production (C)                                  | Genetics of behaviour in pigs (P)   |   | Open session—Uniformity in pigs (P)  | Open session—Epidemiology (M)   |
| Environmental pollution through pig production (P)            | Artificial Insemination (S)  | Statistical analysis of genomics data (G)   |   |  | Genetics Free communications (G)  |
| Applications of molecular genetics to breeding programmes (H) |  | Understanding and assessing farmers' decision making (L)                                |   |  |   |

**PLENARY PAPER,—‘Meeting the challenges for quality food—Societal and industry aspects (L\*, MH)**

**Key**—G, Genetics; N, Nutrition; Ph, Physiology; P, Pig production; C, Cattle Production; S, Sheep and Goat Production; M, Management and Health; H, Horse production; L, Livestock Farming Systems. (\*) Denotes organising commission. **Bold**—Sessions contributing to the theme of the meeting: **Sustainable animal production—meeting the challenges for quality food**

**EAAP AWARDS 2005****LEROY FELLOWSHIP AWARD 2005**

At the Awards Ceremony in Uppsala, the President of EAAP announced that the 2005 Leroy Fellowship Award is being awarded to Dr. Francois Madec of France. However since Dr. Madec could not be present at the 2005 Annual Meeting in Uppsala due to a prior official engagement the presentation of the Award is postponed until the Annual Meeting of 2006. The response of Dr. Madec is given here.

Mr. President, Mr. Secretary General, dear members of EAAP Council, dear all,

It was a wonderful surprise the other day when I received the message telling that I was given the “Leroy Fellowship Award”. First of all I would like to express my sincere thanks to the EAAP leaders, the council, the scientific advisory committee. Needless to say that I feel extremely honoured, receiving this distinction.

Unfortunately I cannot attend Uppsala due to an already planned official mission in Eastern Asia. Please accept my sincere apologies. On the other

hand I have already mentioned EAAP meeting 2006 in Antalya as first priority.

I served EAAP for many years starting as secretary of the Management and Health study commission and then continuing as president of that commission. During that period of time I could appreciate both the variety of the scientific disciplines covered by EAAP and the high level of scientific expertise being displayed during the annual meetings. Most importantly, whilst the current trend is to have the scientific disciplines running on their own path, too often ignoring one another, EAAP offers the possibility to bring together specialists of adjacent domains. It clearly appears that we will have more and more powerful tools in our hands and that, trying to improve a given situation, synergy might be obtained by joining the forces and competences. Additionally by doing so, unexpected detrimental side effects might be avoided. Therefore I take this opportunity to encourage EAAP leaders to continue their wonderful task of enhancing and accompanying an integrated search for knowledge in animal sciences.

Obviously the annual meetings and diverse working groups offer appropriate opportunities.

On my side I continue my scientific activities taking advantage of the multiple lessons learnt at EAAP. In this respect I cannot end without just saying a word about the warm and trusty climate encountered in the EAAP scientific committee during my mandates. EAAP taught me that enthusiasm and friendship are two main components of success in our scientific ventures.

Mr. President, once more, thank you very much indeed and best wishes to EAAP.

**Dr. F. Madec**

**DISTINGUISHED SERVICE AWARD  
DR. AIMÉ AUMAITRE, France**

Louis Aimé Aumaitre has a very distinguished career as an animal scientist of international reputation. Aimé is a graduate in Agriculture from the Institut National Agronomique Paris-Grignon and followed this with an MS in Biochemistry from the University of Paris—Sorbonne. He is a Fellow of the British Council, University of Edinburgh.

Aimé had a long and distinguished career as a Research Scientist and a Research Administrator at INRA in France; in Jouy en Josas from 1960 to 1980 and thereafter at Saint Gilles. Most of his research related to swine nutrition, animal feeds and feeding, early weaning and nutrition of the baby pig, reproduction of the sow and digestive physiology in the pig. He has over 300 publications in international peer reviewed journals.

Aimé, in addition to an active research programme, held various management positions in INRA including Deputy Director of the Pig Research Station, Director of Research and Head of the Department of Monogastric Animals.

Aimé has been a member of numerous Scientific Committees including, to mention only a few—

- The EU SCAR Committee (Standing Committee on Agriculture Research).
- The EU Scientific Committee on Animal Nutrition.
- The EU Working Group on GMOs of the Scientific Committee on Plants.
- The French Interministerial and Interprofessional Committee for Animal Nutrition.

He has served EAAP with great distinction in many ways but especially as President of the Pig Commission 1988–1992 and as EAAP President 2000–2004.

Aimé continues actively to serve the world animal science community in scientific journal related activity. He is a member of the editorial boards of “Animal Feed Science and Technology,” “Livestock Production Science,” and the “Australasian Journal of Animal Science” and continues to review articles submitted to various journals.

It gives me great pleasure to present the EAAP Distinguished Service Award to Louis Aimé Aumaitre.  
*Jim Flanagan, President EAAP*

**DISTINGUISHED SERVICE AWARD**

**DR. LÁSZLÓ FÉSÜS, Hungary**

László Fésüs was born on the 6 June 1939 in Szeghalom, Hungary. He graduated at the Veterinary School in Budapest, Hungary in 1962. In the Department of Animal Science he received basic

training in immunogenetics and biochemical genetics. His main interest was sheep breeding and the application of immunogenetic and biochemical genetic methods to improve lambing performance and production. In 1970 he spent a year in the USA visiting nearly all important labs doing research on immuno and biochemical genetics. This fundamentally influenced his scientific carrier in later years. He then gradually moved to the field of molecular genetics applied to animal breeding. Besides executing research projects, he established a service typing laboratory to provide marker information for breeders, this laboratory is responsible, for example, for the national scrapie genotyping programme in Hungary.

In 1971 he moved to the Research Institute for Animal Breeding and Nutrition in Herceghalom, Hungary. He was the Director of the Institute for a period of 14 years. He was awarded a Ph.D. in 1973. His Ph.D. work was related to the study of the possible role of sheep haemoglobin and transferrin polymorphisms in the reproductive processes. He received a DSc from the Hungarian Academy of Sciences in 1988.

During the many years of his activity he participated in several Hungarian and international research projects, published a great number of scientific papers and contributed to a great extent to the success of the animal breeding sector in his home country and abroad. The major aim of his research has always been translating basic research to the commercial environment. Beside research work he also participates in University teaching, both at graduate and post-graduate levels. He was appointed an Honorary Professor at the St. Stephens University in Gödöllő, Hungary, and was awarded the doctor *honoris causa* degree by the University of Western Hungary in Veszprém, Hungary.

His professional activities have been recognized both at national and international levels. He is the President of the Sheep Breeders' Association as well as of the Association of Animal Breeders in Hungary, and Vice-president of the World Merino Federation. As mentioned before László Fésüs was among the first active members of the European Association for Animal Blood Group Research (ESABR) in 1964, which was the predecessor of

the International Society of Animal Genetics (ISAG). He attended the EAAP session for the first time in 1975 in Warsaw, and it must have been love at first sight since he participated in nearly all conferences thereafter. At EAAP sessions László presented several papers and posters.

Being the Director of the Research Institute for Animal Breeding and Nutrition, which institution was earlier the national representative in EAAP, he had been the national coordinator to EAAP for 14 years. He was responsible for the organization of the first Eastern European Roundtable meeting in Budapest in 1991, and he participated in the organization work of two EAAP conferences in Hungary, in 1985, as a member of the organizing committee, and in 2001, as the President.

He served EAAP as Secretary in the Commission of Animal Genetics for two terms and was a member of the Steering Committee of the Eastern European Roundtable. László Fésüs was elected as EAAP Council member in 1999, and became one of the Vice-presidents in 2001. He has been chairing the Ways and Means Committee as well. This year László Fésüs is leaving the Council, but his EAAP contacts will continue, being the President of the Hungarian Association of Animal Breeders, which is now the country representative to EAAP, he promised that he will regularly attend meetings and continue to represent Hungary in the future. For the outstanding career and for his commitment to EAAP, on behalf of the EAAP Council, I am extremely honoured to propose to you, dear friends, László Fésüs for the 2005 Distinguished Service Award.

**Andrea Rosati, Secretary General EAAP**

#### **DISTINGUISHED SERVICE AWARD—Agr. dr. h.c. ARNE ROOS**

Arne Roos has strongly influenced the opportunities for efficient animal production in Sweden and in Europe. He was born in 1928 in the province of Dalarna in central Sweden and graduated from the Swedish Agricultural College, Uppsala, in 1955. After work as a teacher, research assistant and in the extension service he joined SHS, the Swedish Association for Livestock Breeding and Production, in 1961. He was appointed managing director of

SHS in 1977 and acted in that position until his retirement in 1990.

During the period at SHS, Arne Roos was leading a complete revision of the Swedish milk-recording scheme, transforming it from the use of handwritten books to a totally computerised system. Simultaneously, milk-recording was rationalised at farm level with a higher degree of farmer's participation. Furthermore, a total integration was made with the data from the artificial insemination service and the health recording scheme. These developments took place in Sweden earlier than in any other country. The philosophy of SHS, under the management of Arne Roos, was clearly to serve the farmers with the type of comprehensive information that enabled an efficient management of their farms. This also included access to the latest technical and scientific developments. For that reason SHS continuously promoted the use of their computerised information for research purposes. A strong relationship was established between SHS and different scientific departments of SLU, the Swedish University of Agricultural Sciences. As a result of this cooperation, many Ph.D. theses have been produced utilising data from SHS. Equally important, most results have been rapidly implemented by SHS for the use at farm level. As a result of the national importance of the work for which Arne Roos was instrumental, he received an honorary doctorate at SLU in 1985. Personally, I benefited from the important mentorship that Arne Roos generously offered younger colleagues. As a matter of fact, my own first scientific paper was co-authored by Arne Roos and presented at the EAAP meeting in Budapest in 1970!

The value of the work that Arne Roos had done in Sweden soon won international reputation. He initiated close cooperation between the organisations of the Nordic cattle producers, he was elected president of ICAR between 1977 and 1986, and he was chosen as president of EAAP for the period 1984–1990. His experience has been of utmost importance for the development of these two organisations, especially in keeping close links between science and practice, always with an aim to serve the needs of

the farmers. During his period as president of ICAR, he was one of the initiators who established Interbull as a joint activity between ICAR, EAAP and IDF for development of international genetic evaluations of dairy cattle.

As recognition of his outstanding international work, Arne Roos received the Ordre du Mérite Agricole in Paris in 1990, and he became an honorary member of Deutsche Gesellschaft für Züchtungskunde in Germany in 1991.

In recognition of the excellent work that Arne Roos has done for European animal production, and for the wise leadership of both ICAR and EAAP, the Council of EAAP has unanimously decided to confer its Distinguished Service Award on this occasion upon Agr. dr. h.c. Arne Roos. Congratulations!

Jan Philipsson

President, Scientific Committee EAAP 2005.

#### **SCHOLARSHIPS AWARDED TO YOUNG SCIENTISTS TO ATTEND UPPSALA 2005**

The Secretary General, Dr. A. Rosati reported that 11 Scholarships were awarded to Young Scholars to attend the 2005 Annual meeting in Uppsala. The scholarships have been provided by four donors: The Jean and Tom Sutherland Scholarship Fund/Schaumann Stiftung/Wageningen Academic Publishing and EAAP. Dr. Rosati thanked these donors for their generosity and support of young scientists. The names of the scholars are given here.

| Name          | Country | Sponsor             |
|---------------|---------|---------------------|
| Pakdel A.     | Iran    | Sutherland          |
| Karamichou E. | UK      | Schaumann Stiftung  |
| Kübarsepp I.  | Estonia | Wageningen Academic |
| Kobeisy M.    | Egypt   | Sutherland          |
| Pichard R.M.  | UK      | EAAP                |
| Faheem M.     | Egypt   | Sutherland          |
| Shaker Y.     | Egypt   | Sutherland          |
| Trevisi P.    | Italy   | EAAP                |
| Quinn N.      | Ireland | EAAP                |
| Gäde S        | Germany | EAAP                |
| Soydan E.     | Turkey  | Sutherland          |

### Best papers by Young Scientists at Uppsala 2005

| Commission                | Name             | Country                | Session | EAAP   |
|---------------------------|------------------|------------------------|---------|--|
| LFSI                      | C. Fiorelli      | France                 | S 4 T9  | Strategies and management practices of part-time livestock farmers: an example of sheep farming in French grassland region                   |
| Pig II                    | C. Cuello        | Spain                  | S 14 T2 | Porcine embryo vitrification and transfer: a way to maintain high health status  |
| Physiology III            | Y. Hedberg       | Sweden                 | S 10 T2 | Studies of stress and reproduction in the mare effect of ACTH on adrenal steroid hormone levels in the mare                                  |
| Genetics IV               | J. Fernandez     | Spain                  | S32 T7  | Benefits from marker assisted selection under an infinitesimal model   |
| Nutrition V               | H. R. Rahmani    | Iran                   | S 15 T9 | Central effects of histamine on food intake, and kind of histamine receptors in sheep brain  |
| Horse VI                  | J.W. Christensen | Sweden/<br>Denmark     | S 28 T7 | Learning performance in relation to fear in young horses   |
| Management and Health VII | M. Tibbo         | Ethiopia/<br>Sweden    | S 7 T9  | Economics of sub-clinical helminthosis control through anthelmintics and supplementation in Menz and Awassi-menz crossbred sheep in Ethiopia |
| Cattle VIII               | W.J. Nauta       | The Netherlands        | S 25 T7 | Genotype environment interaction for milk production traits between conventional and organic dairy farming in The Netherlands                |
| Sheep and Goat IX         | J. Maxa          | Denmark/<br>Czech Rep. | S 21 T4 | Genetic parameters for birth weight, growth and litter size for Danish Texel and Shropshire  |

**ROMMERT POLITIEK AWARD  
FOR BEST POSTER  
EAAP ANNUAL MEETING IN UPPSALA,  
SWEDEN, JUNE 2004**

Name: Marwa S. Faheem (Sutherland Scholar)—  
Cairo University, Egypt  
Commission: Physiology—Session 22 Poster 19

Title: Effect of media and presence of Corpus Luteum on In Vitro maturation of buffalo (*Bubalus Bubalis*) oocytes.

Authors: Marwa S. Faheem, A.H. Barkawi, G. Ashour and Y. Hafer  
Cairo University, Faculty of Agriculture, Dept. of Animal Production, Cairo, Egypt.

### Best Posters by Young Scientists at Uppsala 2005

| Commission                | Name         | Country        | Session   | EAAP  |
|---------------------------|--------------|----------------|-----------|---|
| LFS I                     | D. Ndumu     | Austria/Uganda | S 23 P 19 | Size versus beauty: farmers' choices in a ranking experiment with African Ankole Long-Horned cattle                                 |
| Pig II                    | H. Luther    | Switzerland    | S 18 P 14 | Implementation of a selection and mating strategy to optimize genetic gain and rate of inbreeding in the Swiss pig breeding program |
| Physiology III            | K. Sepponen  | Finland        | S 22 P 14 | Expression of CD147 and monocarboxylate transporters MCT1, MCT2 and MCT4 in porcine small intestine and colon                       |
| Sheep and Goat IV         | R. Ruiz      | Spain          | S 21 P 19 | Effect of winter shearing during late pregnancy in the Latxa dairy sheep  |
| Genetic V                 | E. Carlén    | Sweden         | S 5 P 12  | Genotype by environment interaction for udder health traits in Swedish Holstein cows  |
| Horse VI                  | S. Mihok     | Hungary        | S 3 P 22  | DNS microsatellite test of Hutsul horses in Hungary   |
| Management and Health VII | C. Hagnestam | Sweden         | S 7 P16   | Yield losses associated with clinical mastitis in Swedish cows  |
| Cattle VIII               | D. Bures     | Czech Republic | S 20 P 21 | Physical, compositional and organoleptic properties of beef from Charolais and Limousin heifers fed different diets                 |
| Nutrition IX              | P. Trevisi   | Italy          | S 15 P 40 | Influence of dietary fibre on the gut morphology and pancreatic and intestinal enzyme activities in the weaned piglet               |

**FORTHCOMING CONFERENCES OF  
INTEREST TO EAAP  
(IN DATE ORDER)**

**RARE BREEDS INTERNATIONAL  
6TH GLOBAL CONFERENCE, SOUTH AFRICA  
9 TO 14 OCTOBER 2005**

Rare Breeds International is holding its 6th International Conference on the Conservation of Domestic Animal Genetic Resources in Magaliesburg, South Africa in from 9 to 14 October 2005. Past RBI global conferences have brought scientists and conservationists together with one common goal—the conservation of global farm animal genetic resources—and the proceedings of these meetings have become valuable references on the characterisation and management of Animal Genetic resources. The meetings have also exposed participants and institutions in the host country and region to subject matter specialists in a wide range of disciplines related to the management of Farm Animal Genetic Resources (AnGR)—and all have benefited in the process. In this way, RBI has been able to facilitate communication with owners of animals at grassroots level—and with those concerned with the effective management and sustainable use of these resources.

This conference is being held in co-operation with the Farm Animal Conservation Trust (FACT), the Agricultural Research Council, the National Department of Agriculture, FAO, the SADC Livestock Sector, and the Developing Animal Agriculture Interest Group of the South Africa Society of Animal Science.

The conference will take place in a region that is rich in animal genetic resources—and comes at a time when the first FAO report on the State of the World Animal Genetic Resources (SOW) is nearing completion. FAO has, through the SOW process, facilitated the first comprehensive audit of FAnGr in many countries and has also highlighted the need for regional cooperation on issues such as value adding through product and market development, protection of breeders' and keepers' rights and the critical importance of veterinary protocols to facilitate regional and global trade.

Most exciting, the event will also stage a combination of live exhibits, posters and leaflet information that will be set up at strategic points where delegates can exchange information and experience the farm animal genetic resources of South Africa. We trust

that this interaction will be effective in generating more positive interest in the breeds and will lead to the emergence of satellite groups and conservation units. We look forward to welcoming you to our beautiful country and in particular to the conference where delegates leave as old friends.

The theme—“Conservation: The Future” was chosen with these and other critical issues in mind and we will endeavour to accommodate all contributions, either as short papers or as posters. We therefore look forward to meeting old friends and making new ones in the global FAnGR family and to the future of conservation through sustainable use.

*Dr. Keith Ramsay and Prof. Antoinette Kotze,  
Organizing Committee. Further information:  
[www.rbi.it](http://www.rbi.it).*

**Future RBI International Conference, 2007**

The next RBI International Conference will be held in Vietnam in 2007. For other information on RBI contact the Secretariat of RBI. Information: [www.rbi.it](http://www.rbi.it).

**Tropical Animal Production Conference, Cuba**

A Conference on many aspects of livestock production in the tropics will be held in Havana, Cuba from 7 to 11 November 2005. Information: Email: [congreso2005@acpa.co.cu](mailto:congreso2005@acpa.co.cu) or from the EAAP Website: [eaap.org](http://eaap.org).

**Berlin Green Week Conference  
Perspectives of Beef Production with Suckler Cows  
under Extensive Conditions**

This Conference of the German Beef Cattle Breeders and Producers, Bonn, will be held in Berlin as a part of the Green Week celebration from 13 to 15 January 2006. Information: EAAP Website: [www.eaap.org](http://www.eaap.org).

**International Conference on Livestock Services  
enhancing Rural Development**

The International Conference on Livestock Services Enhancing Rural Development will be held in Beijing, P.R. China from 16 to 22 April 2006. It is organized by the Chinese Academy of Engineering, Chinese

Ministry of Agriculture, Chinese Academy of Agricultural Sciences, and supported by the Canadian International Development Agency (CIDA), International Livestock Research Institute (ILRI), United Nations Food and Agriculture Organization (FAO) and the World Bank (WB)

### **The problems and rationale**

Human population growth, increasing urbanization and rising incomes are predicted to double the demand for, and production of, livestock and livestock products in the developing countries over the next 20 years. Livestock production is thus growing faster than any other agricultural sub-sector (with the exception of aquaculture) and it is predicted that by 2020, livestock will produce more than half of the total global agricultural output in value terms. This process has been referred to as the “livestock revolution.”

### **The objectives of this conference are to:**

- share the lessons learnt from the research and development programs conducted on livestock service delivery over the past decade,
- discuss new ideas and innovative approaches relevant to the delivery of livestock services to smallholders under different environments, and
- discuss livestock service delivery research and development strategies that meet the changing needs of smallholder/poor livestock farmers under a range of livestock sector development scenarios.

### **Approach and activities**

The conference will bring together a large number of development and research practitioners from South Asia, South East Asia, Africa, South America and China to discuss the above identified issues. It is proposed that the conference will be developed through a plenary session at which commissioned speakers from the region will share their experiences and discuss how such lessons could be usefully applied in other regions and systems. Subsequently it is proposed that the meeting will develop itself through several parallel satellite workshops that deal with the specificities of the requirements and needs for livestock services in smallholder livestock systems and under the following three

main livestock sector development pathways based on market demand and production potential:

**Information:** Dr. Gong Xifeng or Dr. Liu Yukun, Department of international Cooperation, Chinese Academy of Agricultural Sciences (CAAS), Fax: 86+10+62174060 Tel: 86+10+62185242 Email: gongxifeng@mail.caas.net.cn gongxifeng@yahoo.com.cn liuyk@caas.net.cn Further details also available at EAAP Website: [www.eaap.org](http://www.eaap.org).

### **35TH CONGRESS OF ICAR AND INTERBULL, FINLAND, 2006**

The 35th Congress of ICAR and the Interbull Annual Meeting will be held from 7 to 10 June 2006 in the city of Kuopio, Finland. Special topics of interest will be: Functional Traits and Farm Management orientation in Milk Recording plus Technical Excursions. The Kuopio region is situated in central Finland about 400 km north of Helsinki. It is a strong milk production area with intensive use of grass and cheese production. Research at the University of Kuopio is important for agriculture and the V.I. Virtanen Institute for Molecular Research focuses upon medical sciences.

The regions north of the Arctic Circle are characterized by polar days when the sun does not set. The north of Finland has 73 such days each year and even in southern Finland the longest day is nearly 19 hours long. The warmest day of the year comes about one month after aphelion i.e. around 20 July.

Information: [www.proagria.fi/icar2006](http://www.proagria.fi/icar2006). Email: juho.kyntaja@proagria.fi.

### **3RD EUROPEAN WORKSHOP OF EQUINE NUTRITION**

This Workshop on “Nutrition and Feeding of the Brood Mare” will be held under the umbrella of the EAAP Horse Commission on 20 to 22 June 2006 at the University del Molise in Campobasso, Italy. Information: Prof. Nicoletta Miraglia Email [miraglia@unimol.it](mailto:miraglia@unimol.it). Website: [www.unimol.it](http://www.unimol.it).

### **6TH CONGRESS OF THE EUROPEAN SOCIETY FOR AGRICULTURE AND FOOD ETHICS**

This Congress will be held from 21 to 24 June 2006 in Oslo, Norway. Information: [www.eursafe.org](http://www.eursafe.org).

### 8TH WORLD CONGRESS ON GENETICS APPLIED TO LIVESTOCK PRODUCTION, 2006 IN BRAZIL

This Congress will be held from 13 to 18 August 2006 at Belo Horizonte, MG, Brazil. The World Congress on Genetics Applied to Livestock Production is the meeting point for scientists involved in genetic improvement of domestic animals. The state of the art in the theory of quantitative and population genetics is presented, and current knowledge on genetics and genetic improvement strategies is updated for each species, in order to discuss future prospects of animal breeding. Highlights in this 8th Congress will involve the use of molecular tools and bioinformatics in selection programmes, as well as strategies for economic animal improvement, including animal breeding in developing countries. A special new activity will be a Meet the breeder programme.

#### **Important Deadline Dates:**

**Paper submission: February 1, 2006**

**Early registration fee: April 15, 2006**

**Anyone may sign up at the website for email updates on the Congress.**

Information—Email: [secretariat@wcalp8.org.br](mailto:secretariat@wcalp8.org.br)  
Fax :+55-31-3494-6025. Website: [www.wcalp8.org.br](http://www.wcalp8.org.br).

### 30TH INTERNATIONAL CONFERENCE ON ANIMAL GENETICS (ISAG) IN BRAZIL

The 30th International Conference on Animal Genetics (ISAG) will be held at Porto Seguro, Bahia State, Brazil from 20 to 25 August 2006. This is the first time the ISAG Conference will take place in a South American country, providing an opportunity to experience different cultures and to make new friends and partners. It will be a unique experience for scientists and students, opening the door to many different ecosystems, such as the Amazon Forest, the Atlantic Forest, the Cerrado (savannah), Pantanal (marshland) and Caatinga (arid lands).

The venue—Porto Seguro in Bahia means “Safe Harbour.” In April, 1500, the Portuguese navigator, Pedro Álvares Cabral, arrived at the coast (Porto Seguro) and claimed formally the region for Portugal. Now, more than its historical importance, the city has also some of the most pleasant beaches, natural

reserves and all the appropriate infrastructures. In August during the Brazilian “tropical winter” the Northeast Coast climate is always comfortable, with temperature ranging from 25 to 28 °C. **Information: Secretariat, Brazilian College of Animal Reproduction, Bel Horizonte-MG Brazil Tel:+55 (31) 491-7122 Fax:+55 (31) 491-7025 Email: [cbra@cbra.org.br](mailto:cbra@cbra.org.br) and [isag2006@cbra.org.br](mailto:isag2006@cbra.org.br) Website: [www.cbra.org.br](http://www.cbra.org.br).**

### AMERICAN SOCIETY OF ANIMAL SCIENCE 100TH ANNIVERSARY CELEBRATION MEETING—2008

The American Society of Animal Science (ASAS) is planning a special celebration meeting in Indianapolis in 2008 in recognition of the formation of the Society a century earlier. Information: [www.asas.org](http://www.asas.org)

### PERSONAL NEWS

#### **Dr. Ian Wilmut, UK**

On 15 March 2005, Dr. Ian Wilmut of the Roslin Institute, UK was awarded the German top medical research award: The Paul Ehrlich and Ludwig Darmstaedter Prize for 2005 which is associated with Frankfurt University and carries a cash award of 100,000 Euros.

#### **Dr. Jerome F. Baker, USA**

The new Chief Executive Officer of the Federation of Animal Science Societies in the USA is Dr. Jerome Baker. He was most recently the Executive Director for the American Society of Animal Science. Formerly over a period of 25 years Dr. Baker was a faculty member at Texas A & M University, the University of Georgia, and the University of Nebraska. As an animal scientist he has authored numerous publications, served on editorial boards, and is a recognized leader of the animal science community. Dr. Baker took up the new position with FASS on September 12, 2005 and his office is in Savoy, Illinois, USA.

#### **Professor Richard Dewhurst, UK**

Richard Dewhurst who, until June 2005, was Principal Research Scientist and Team Leader in Nutri-

tion and Microbiology at the Institute of Grassland and Environmental Research, Plas Gogerddan, Aberystwyth, Wales has been appointed Foundation Professor of Dairy Production at Lincoln University, New Zealand.

#### **Dr. Canagasaby Devendra, Malaysia**

The 2nd award of Lincoln University's recently created International Alumni Medal was made to Dr. Canagasaby Devendra of Malaysia. The award recognizes outstanding contributions by alumni in countries other than New Zealand. Dr. Devendra has worked in livestock production in Malaysia, in other Asian countries, and also with the World Bank, UNDP, FAO, USAID and the Commonwealth Secretariat. His specialty is in the use of natural feed resources for animal production.

#### **49TH EAAP GENERAL ASSEMBLY**

The General Assembly was held in Uppsala on 7 June 2005. The President, Dr. James Flanagan presented his Report on the activities of the Association during the past year.

#### **REPORT OF THE PRESIDENT ON THE ACTIVITIES OF THE ASSOCIATION**

It is with great pleasure that I submit this Report on the activities of the European Association for Animal Production. The nine-month period since the Bled meeting has been characterized by numerous activities related to our business plan. I am delighted to say that we achieved most of the targets set in this plan.

The promotion of its relations with major institutions involved in animal science has been an important activity for EAAP. The Secretariat has been actively involved in reinforcing and co-operation between the EAAP members and international institutions such as FAO, OIE, ILRI and other governmental and non-governmental organizations and associations. In addition, EAAP enhanced its co-operation with ALPA and ASAS by planning joint actions. EAAP is also engaged, in co-operation with WAAP and ILRI, in the establishment of an African Association for Animal Science aimed at the development of animal production and research in the

neighbouring Continent. EAAP has also been developing its relations on a European level. Bearing in mind that over two thirds of its Member Organizations come from EU member countries, and that the majority of the non-EU Member Organizations have a close collaboration with the EU in the field of research activities, EAAP has been strengthening its working relations with relevant bodies of the European Commission.

In the context of its growing co-operation with relevant services of the European Commission, EAAP has been working to ensure that European animal scientists have a voice in the development and formulation of the upcoming Framework Program 7, which will have a major impact on the formulation of the EU support for research for the coming years. Furthermore, there has been a positive development regarding projects funded by the EU and involving EAAP in partnership with other organisations. A very pleasing development was success in getting funding as an SSA under FP6 for our Young-Train proposal. EAAP with partners in member countries will train young animal scientists in 20 Eastern and Mediterranean countries in identification of priority research themes and development of research programmes. EAAP, and its Animal Genetic Resources Working Group, is responsible for coordination of the EFABIS project whose aim is to create a database for the conservation and management of farm animal genetic resources. A new development at European level is EAAP participation in a European inter-disciplinary system for the exchange of experience and information among representative European scientific societies.

EAAP has been actively involved in publishing. The Publication of the EAAP "scientific series" continues its long tradition of scientific quality and relevance, with four new books produced during the last nine months. Increased attention has been paid to quality, with more selection of the subjects and relevance of articles. To fulfil its publications policy, EAAP plans to create a European Journal that will attract top quality research in the field of animal science by the best scientists from the EAAP member countries. Authors from non-member countries are also welcome naturally. This journal will replace "Livestock Production

Science” as the official journal of the Association. EAAP is currently looking for members to cooperate in the development and production of the journal. A new element in the EAAP publications policy is that, starting from 2005, all EAAP members will receive a free copy of each book or publication produced by EAAP (five books since January 2005).

In its efforts to constantly provide more and better information, the “EAAP Home Page” was largely enhanced to offer extended information on various topics such as: job offers, publications for free downloading, links to relevant organisations, expanded abstracts of papers for presentation at Annual Meetings, “EAAP News,” vacancies, upcoming meetings, EAAP documents, information on EAAP meetings and other relevant events, a list of the EAAP publications, links to co-operating organizations and links to the organizing committees for future EAAP Annual Meetings. It is worth mentioning that in recent years the EAAP website has been hosting the papers presented at the EAAP meetings. The percentage of website visitors using this service was 30% last year.

As regards EAAP meetings, there is growing attention on quality issues. The Scientific Committee aims its activities at improving continuously the quality and relevance of the Annual Meetings. Particular attention has been paid to the selection of invited speakers and to the quality of papers for theatre presentation. The number of participants in the Uppsala meeting (the largest ever) clearly demonstrates the increasing interest in the activities of EAAP. The EAAP Secretariat has been very active in assisting in the organization of this year’s Annual Session and of related meetings and workshops. In relation to its meetings, EAAP continues to produce, also with the support of important sponsors, scholarships for attending sessions and workshops.

Interesting and promising developments in EAAP are the launch of two new online activities. First, a specific service for scientists has been developed by EAAP. Scientists who register for the EAAP animal researchers’ database enjoy special services to support their research activities. A restricted site was created with more than 200 sections for each specific field of Animal Science, such as: Genetics, Breeding and Selection, Animal Nutrition, Technol-

ogy and Physiology of Reproduction, Intensive/Extensive livestock systems, Rural development, and many others. Second, a new website has been launched. The newly established “Cattle Network” Working Group created a comprehensive website to serve the purposes of the cattle sector in Europe, with the aim to promote co-operation between national cattle producers in Europe. Another new development in EAAP is its new logo. In an effort to render the identity of EAAP more concrete, there was a slight change and further standardization of the logo and the presentation of EAAP in order to ensure a better identification for the services offered by the Association. The name and the logo of EAAP is present anywhere EAAP is involved.

As far as administrative issues are concerned, tight control of expenditures has during the last year resulted in a nice surplus. This will allow a start to be made in replenishment of the Reserve Fund as requested by the General Assembly last year. With regard to the EAAP By-laws, these have been updated so as to provide a more precise definition of duties and responsibilities of the various EAAP bodies and to further ensure full transparency and accountability of its operations.

In conclusion, I am pleased to note that two new members joined EAAP during the last General Assembly held in Bled 2004: Belarus and Georgia. Two further new members, Armenia and Serbia are expected to join this year. The increasing number of EAAP Members is a clear demonstration of the Association’s growing importance and relevance in European animal science.

*Jim Flanagan, President EAAP*

## NEWS FROM EAAP

### Researchers Data Base

One year after its launch the Researchers’ Data Base is now operative. More than 1500 European scientists have joined the initiative the aim of which is to provide important and customized information accessible to you. Thus, the site will provide up-to-date information about research, studies, book publications, meetings, etc. We believe that this service should be among the objectives of every Scientific Association. However, in order to avoid dissemination

of useless information, the service is customized so as to provide information that is very relevant to the recipients' needs.

A "Restricted site" has been also realized: it is available only to registered participants who submitted their personal data and field of specialization to the on-line database. Until now, about 1200 participants joined the idea and further initiative is ongoing, aimed at informing other possible participants to register into the database. The site is structured in a matrix, in which the breeds and the fields of interest occupy the coordinates of the matrix. The intersection reports a selected presentation of the most significant papers (chosen by six reviewers) published in relevant scientific journals. This service is expected to attract further registrations. It is too early to have statistics since the password was distributed in May 2005.

This service is still at an experimental stage. There will certainly be many improvements and adjustments to this service.

The service is free and available only to those registered in the EAAP Researchers Data Base. To log in, please use the following information:

**Username:** *EAAP\_user*

**Password:** *eaap*

Do not communicate to third parties the password to enter to the restricted site. Advise instead your colleagues and friends to register for the Researchers Data Base from the EAAP web site. All comments are welcome!

**Andrea Rosati, EAAP Secretary General.**

### THE EAAP WEBSITE

The EAAP website has been visited approximately 12,000 times in the 9 months to June 2005 and this result is in line with the visits made in 2004. In particular, the most significant pages visited were the following:

- Papers presented at the Annual Meeting in Bled: 7100 visits. About 30% of the papers available on the Proceedings were also submitted to the on-line publications.
- Researchers' database 4500 visits
- Up-coming meetings 1350 visits
- Strategic plan 580 visits

The page containing the papers presented in Bled during the workshop on "Horse in Slovenia" was visited 600 times and the 11 papers were downloaded 2500 times.

In the last year the secretariat worked on the "Cattle Network Working Group" website. The site was totally rearranged and redesigned in graphic, structure and content. The site offers now a virtual gateway aimed at a complete range of both market- and consumer-oriented information. However, it is too early to report number of visits and interests, since it was made available in mid May.

In the last year the EAAP Scientific Series published 4 books, as follows:

- Animal production and natural resources utilization in the Mediterranean mountain areas
- The growing horse: nutrition and prevention of growth disorders
- Performance recording of animals: state of the art 2004
- Indicators of milk and beef quality

### TRAINING AND MENTORING EARLY CAREER SCIENTISTS FROM EU CANDIDATE, ASSOCIATED AND MEDITERRANEAN COUNTRIES IN A WHOLE FOOD CHAIN APPROACH TO QUALITY AND SAFETY

A new project funded by the EU for 40 Early-Career Scientists in meat quality and safety has been launched by EAAP. The positions are available within an EU Specific Support Action (SSA) coordinated by EAAP with partners of NFC, Teagasc, (Ireland); IRTA (Spain); UNA (Hungary) and ILRT (UK).

#### Project aims and summary

The project aims to provide an opportunity for 40 Early Career Scientists (ECS) from candidate, associated and Mediterranean countries to increase their knowledge and networking through training and mentoring in a whole food chain approach to meat safety and quality. Training events will provide awareness of EU research and the challenges of the whole food chain approach. The ECS will be supported to

develop research proposals relevant to their countries/regions or wider entities that can later be submitted as full RTD proposals to the EU. Training in presentational and eLearning techniques will assist in the further dissemination of project outputs. eLearning materials will be developed to form a key part of the dissemination process, supported by networks and the ECS. Four regional dissemination events targeted at over 300 stakeholders will be organised with the support and participation of the ECS for interaction, dissemination of research, promotion of eLearning packages and the training of other ECS and the staff of meat chain industries.

The project will last 34 months (to end March 2008) and the selected candidates were appointed from September 2005 with first training seminar scheduled for the end of November 2005. Further information: [www.eaap.org](http://www.eaap.org)

### EAAP CATTLE NETWORK

EAAP has an entirely new updated website concerned with Cattle available at [www.cattlenetwork.net](http://www.cattlenetwork.net). This new Cattle Network website offers a complete range of both market- and consumer-oriented information as well as modern communication tools, aiming to be an online meeting point for researchers, professionals, producers and consumers in the cattle sector. All areas of the food supply chain—breeding, production, processing, marketing, services, research, consumption—will come together on this integrated virtual network in order to promote, through interaction and collaboration, every aspect of the cattle sector in Europe and beyond. Continuous information flow, knowledge transfer and dynamic participation are among the key elements that characterize this innovative, all-inclusive approach towards cattle farming as a component of the food supply chain. It is worth mentioning that an initiative of such magnitude and ambition has not been seen yet on a European level. Our ambition is to develop a benchmark online community of the cattle sector that will serve as a focal point for all actors in the food chain.

Visit the new Cattle Network website and send us your comments and suggestions. We will be happy to meet you in our online community.  
*Andrea Rosati, EAAP Secretary General.*

### SUBSCRIBE TO THE NEW EAAP CATTLE NETWORK

We want to establish regular communication with those people interested in the cattle sector. The Cattle Network website is our online meeting place. We invite you to register for the Cattle Network mailing list. You will then receive information and news on the Cattle Network and its website with material added, new activities, etc. To register for the mailing list, send a message to [secretariat@cattlenetwork.net](mailto:secretariat@cattlenetwork.net) writing "Yes" in the body of the message. We will be happy to include you in our mailing list.

*Andie Dimitriadou, Cattle Network Secretariat  
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### LATEST NEWS FROM THE EAAP CATTLE NETWORK

Here is the Cattle Network News issued in July–August 2005. The following items are covered:

- Cattle Network email Conference
- Cattle Network Forum
- New section in the Cattle Encyclopaedia
- Updated sections: Cattle markets—Events—Job postings
- Cattle Network Workshop 2006—First announcement
- Reminder: Cattle Network's AgriDatabase.

#### Cattle Network email Conference

The first e-mail conference of the Cattle Network is up and running. This forum deals with waste management and environmental aspects of livestock production. We encourage you to take active part in this discussion forum. For more information, please see <http://www.cattlenetwork.net/forum.htm>.

#### Cattle Network Forum

The Cattle Network Forum was launched on July 2005 as an additional service to all those working in the cattle sector. The first e-mail conference on waste management, based on a paper by Jean Stoll

(Luxemburg), was inaugurated in August by a contribution on the excessive use of nutrient inputs, followed by contributions on the use of farm by-products in animal feeding, policy and economic-related issues and waste management costs. You can read all contributions on the web-page [http://www.cattlenetwork.net/first\\_forum.htm](http://www.cattlenetwork.net/first_forum.htm). You are welcome to register for the e-mail conference and take active part in the discussion.

### **New section in the Cattle Encyclopaedia**

The Cattle Encyclopaedia section contains a list of European breeds with information and links for each breed. The newly added section “Breeds by country” includes a list of cattle breeds existing in each European country. Check this new item on [http://www.cattlenetwork.net/breeds\\_bycountry.htm](http://www.cattlenetwork.net/breeds_bycountry.htm).

### **Updated sections: Cattle markets—Events—Job postings—Publications**

You can find up-to-date information regarding

- cattle markets (prices, reports) on [http://www.cattlenetwork.net/cattle\\_markets.htm](http://www.cattlenetwork.net/cattle_markets.htm)
- agricultural and cattle-related events (conferences, seminars, exhibitions, etc) worldwide on <http://www.cattlenetwork.net/events.htm>
- open vacancies in the field of animal science/production in various institutions/countries on [http://www.cattlenetwork.net/job\\_postings.htm](http://www.cattlenetwork.net/job_postings.htm)
- recent publications and book reviews on cattle and animal science on [http://www.cattlenetwork.net/cattle\\_library.htm](http://www.cattlenetwork.net/cattle_library.htm).

### **Cattle Network Workshop 2006—First announcement**

The second workshop of the Cattle Network will be held during the 57th Annual Meeting of the EAAP in Antalya, Turkey, on Saturday 16 September 2006 (the date will be confirmed later on). The topic of the Workshop will be “Development Trends in Small Cattle Farms.” More information will be available later on. You can read all about the first Cattle Network Workshop held in Uppsala, Sweden on 3–4 June 2005 on <http://www.cattlenetwork.net/workshop.htm>.

### **Reminder: Cattle Network’s AgriDatabase**

The Cattle Network is in the process of creating a Database to include organizations involved in every area of the food chain. The outcome of this Database will be an online directory containing the contact information of companies, institutes and organizations involved in the cattle sector. To register freely for the AgriDataBase, go to [http://www.cattlenetwork.net/Agri\\_Data\\_base.htm](http://www.cattlenetwork.net/Agri_Data_base.htm).

*Cattle Network News, EAAP—Via G. Tomassetti 3-00161 Rome—Italy*

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e-mail: [secretariat@cattlenetwork.net](mailto:secretariat@cattlenetwork.net) [www.cattlenetwork.net](http://www.cattlenetwork.net)*

### **EAAP Relations with International Organizations**

The Secretary General, Dr. A. Rosati, reported at the Annual Meeting in Uppsala that EAAP continues to engage in collaborative activities with other bodies including FAO, the American Society of Animal Science, OIE, CIHEAM, EU, ILRI, ALPA and the World Association of Animal Science.

Dr. R. Cardellino of FAO emphasized the importance of the continued collaboration between FAO and EAAP. He cited two joint events: the Symposium in Uppsala on the Conservation and Improved Use of Animal Genetic Resources and the Meeting in Fonte Boa, Portugal in September 2005. In 2006 in Antalya, Turkey at the EAAP Annual meeting, FAO is planning to organize a joint side event focused upon the follow-up to the State of the World Programme on Animal genetic Resources.

### **NEWS FROM EUROPE**

#### **Electronic Conference on Climate Change and Biodiversity Conservation**

An electronic Conference on Climate Change and Biodiversity Conservation leading to knowledge needed to support development of integrated adaptation strategies was held from 29 August to 16 September 2005. It was organized by the UK presidency meeting of the European Platform for Biodiversity Research Strategy (EPBRS) and the Centre for Ecology and Hydrology (CEH). The results of the Electronic Conference will be

presented at the EPBRS delegates meeting in Aviemore (Scotland), from 2 to 5 October 2005.

Although the e-conference will be over by the time of this notice, interested parties may obtain the results of the e-conference by going to <http://www.nbu.ac.uk/biota/e-conference.htm>. In case of any difficulty please e-mail Juliette Young [j.young@ceh.ac.uk](mailto:j.young@ceh.ac.uk).

This e-conference was run jointly with the MAR-BENA project (<http://www.vliz.be/marbena/>).

### Theme of the Conference

The main scientific theme of UK EPBRS meeting is how climate change impacts biodiversity and what adaptation strategies might be conceived. The meeting will review the scientific evidence and provide recommendations feeding directly into the EU Nature Directors meeting (to be held in Aviemore from 5th to 7th October 2005). It is anticipated that the recommendations will cover three areas:

- (i) what we already know about impacts of climate change on biodiversity and the policy options available;
- (ii) what are the most important things that we need to find out in order to develop adaptation strategies;
- (iii) how we can ensure the flow of knowledge from research into policy development.

The e-conference preceding the meeting will focus on the knowledge gaps and research priorities regarding:

1. The development of adaptation strategies in terms of sites and ecological networks;
2. The development of adaptation strategies working with other sectors such as agriculture, forestry, water, energy etc;
3. Understanding, predicting and adapting to change in marine and coastal ecosystems.

**Further contacts:** *Terry Parr* ([T.Parr@ceh.ac.uk](mailto:T.Parr@ceh.ac.uk)) and *Carlo Heip* ([C.Heip@nioo.knaw.nl](mailto:C.Heip@nioo.knaw.nl)), *Andrew Stott* ([andrew.stott@defra.gsi.gov.uk](mailto:andrew.stott@defra.gsi.gov.uk)), UK EPBRS Organising Committee, Department for Environment, Food and Rural Affairs (DEFRA) *Horst Korn*, EPBRS Steering Committee *Martin Sharman*

and *Karin Zaunberger*, European Commission *Juliette Young* ([j.young@ceh.ac.uk](mailto:j.young@ceh.ac.uk)), *Malcolm Collie* ([mamc@ceh.ac.uk](mailto:mamc@ceh.ac.uk)) and *Allan Watt* (E-conference management, Centre for Ecology and Hydrology, Banchory, UK)

## INTERNATIONAL NEWS

### FAO Electronic Conferences on Biotechnology and Agriculture

FAO regularly carries out electronic conferences on topics related to the use of biotechnology in agriculture and the food chain. These conferences generally run for about 6 weeks and anyone may subscribe to take part. Participants may contribute and also they see the contributions from all other participants. The Moderator, Dr. John Ruane, prepares a background document ahead of the Conference, a Summary Document at the end and all the messages which were posted during the Conference are available on the website.

In addition, Dr. Ruane together with Dr. Maria Zimmermann produced a book, published by FAO, which presented the conclusions and issues arising from the first six Conferences which have also been translated into Spanish. They are now producing a second book with the output from Conferences 7 to 12. Details of the current conference may also be accessed at the website.

Titles of each of the 12 Conferences so far held are given below together with the appropriate website.

### FAO Electronic Conferences

Conference 1 (20 March to 26 May 2000): How appropriate are currently available biotechnologies in the crop sector for food production and agriculture in developing countries? <http://www.fao.org/biotech/Conf1.htm>

Conference 2 (25 April to 30 June 2000): How appropriate are currently available biotechnologies for the forestry sector in developing countries? <http://www.fao.org/biotech/Conf2.htm>

Conference 3 (12 June to 25 August 2000): The appropriateness, significance and

- application of biotechnology options in the animal agriculture of developing countries. <http://www.fao.org/biotech/Conf3.htm>
- Conference 4 (1 August to 8 October 2000): How appropriate are currently available biotechnologies for the fishery sector in developing countries? <http://www.fao.org/biotech/Conf4.htm>
- Conference 5 (1 November to 17 December 2000): Can agricultural biotechnology help to reduce hunger and increase food security in developing countries? <http://www.fao.org/biotech/Conf5.htm>
- Conference 6 (20 March to 14 May 2001): The impact of intellectual property rights (IPR) on food and agriculture in developing countries. <http://www.fao.org/biotech/Conf6.htm>
- Conference 7 (31 May to 5 July 2002): Gene flow from GM to non-GM populations in the crop, forestry, animal and fishery sectors <http://www.fao.org/biotech/Conf7.htm>
- Conference 8 (13 November to 16 December 2002): What should be the role and focus of biotechnology in the agricultural research agendas of developing countries? <http://www.fao.org/biotech/Conf8.htm>
- Conference 9 (28 April to 1 June 2003): Regulating GMOs in developing and transition countries <http://www.fao.org/biotech/C9doc.htm>
- Conference 10 (17 November to 14 December 2003): Molecular marker assisted selection as a potential tool for genetic improvement of crops, forest trees, livestock and fish in developing countries <http://www.fao.org/biotech/C10doc.htm>
- Conference 11 (14 June to 15 July 2004): “Biotechnology applications in food processing: Can developing countries benefit?” <http://www.fao.org/biotech/C11doc.htm>
- Conference 12 (17 January to 14 February 2005): “Public participation in decision-making regarding GMOs in developing countries: How to effectively involve rural people” <http://www.fao.org/biotech/C12doc.htm>
- Conference 13 (30 May to 26 June 2005): “The role of biotechnology for the characterisation and conservation of crop, forestry, animal and fishery genetic resources in developing countries.” For more information about Conference 13, <http://www.fao.org/biotech/C13doc.htm> See also the following notice.

### **The Role of Biotechnology for the Characterisation and Conservation of Crop, Forestry, Animal and Fishery Genetic Resources**

An International Workshop was held as part of the build up to Conference 13 of the FAO Biotechnology Forum, mentioned above, on 5–7 March 2005 in Turin, Italy entitled “*The role of biotechnology for the characterisation and conservation of crop, forestry, animal and fishery genetic resources*”, organised by the FAO Working Group on Biotechnology, the Fondazione per le Biotechnologie, the ECONOGENE project and the Società Italiana di Genetica Agraria. Proceedings of the workshop have now been made available on the web. The 20 papers, covering applications of molecular markers, cryopreservation and reproductive technologies, are organised in the following way: Session I on the status of the world’s agricultural biodiversity; Session II on the use of biotechnology for conservation of genetic resources; Session IV on genetic characterisation of populations and its use in conservation decision-making. Session III presented results from ECONOGENE, a European Union funded project combining a molecular analysis of biodiversity, socio-economics and geostatistics to address the conservation of sheep and goat genetic resources and rural development in marginal agrosystems in Europe.

Information: <http://www.fao.org/biotech/torino05.htm>.

### **Animal Production and Health Section of the FAO/IAEA Joint Division, Vienna**

The July newsletter of the Animal Production and Health Section (APHS) of the FAO/IAEA Joint Division in Vienna is now available for viewing on

the Internet. <http://www.iaea.org/programmes/nafa/d3/public/ap-nl-42.pdf>

The APHS is currently supporting a number of initiatives in Livestock Breeding and Genetics in Developing Countries and encourages inquiries on potential future projects.

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<http://www.iaea.org/programmes/nafa/d3/index.html>*

### Association for the Advancement of Animal Breeding and Genetics (AAABG)

The 16th Conference of AAABG was held at Sunshine Coast, Queensland, Australia from 25 to 28 September 2005. All the invited papers are published as a special edition of Australian Journal of Experimental Agriculture (AJEA 45, 7–8: 735–1039) and are currently available on-line: <http://www.publish.csiro.au/nid/72/issue/985.htm>.

## REPORTS OF MEETINGS, WORKING GROUPS AND TASK FORCES

### Report from the Elsevier/EAAP Workshop Writing and Presenting Scientific Papers Uppsala, Sweden, 2005

The Elsevier/EAAP Workshop on “Writing and Presenting Scientific Papers” was presented for the eighth time at the 56th EAAP Annual Meeting in Uppsala, Sweden, in 2005. The instructors were the same as in previous workshops: Birgitta Malmfors (Sweden), Phil Garnsworthy (UK), and Michael Grossman (USA).

The full-day workshop attracted 14 students and scientists from 12 countries. The programme started with an introduction on the importance of communicating science, and was followed in the morning by two sessions, “Techniques for Scientific Writing” and “Using Visuals in Scientific Papers,” and in the afternoon by two sessions, “Oral Presentation and Visual Displays” and “Poster Presentation.” A general discussion on ethics in scientific publications and an evaluation ended the program.

The workshop uses the technique of “active learning” with group work. For each session, there was first a short introductory lecture, after which groups of participants performed a task; finally, each group presented results of the task. Tasks in the morning included improving titles and abstracts and improving tables and figures. Tasks in the afternoon included preparing and performing oral presentations and critically evaluating posters.

The workshop was extremely well received by the participants. Their average grading for “overall impression of the workshop” was 4.9 on a scale from 1 to 5 (5 = very useful). Over the years, participants have found the workshop to be interesting and stimulating. Participants have emphasized that the knowledge and skills gained during the workshop will be useful in future writing and presentations by raising their awareness and by providing confidence and motivation. Having the workshop just before the EAAP congress gives participants an opportunity to evaluate their own work and the work of others, by viewing papers and presentations during the congress.

Each participant was given a copy of *Writing and Presenting Scientific Papers* by Malmfors, Garnsworthy and Grossman (2nd edition, Nottingham University Press, 2004). The book is useful for students and young scientists, as well as for senior scientists and university teachers. A review of the book is in EAAP News of Livestock Production Science 87:78–79 (2004). The workshop will be presented again at the EAAP meetings in Antalya, Turkey, in 2006 and in Dublin, Ireland, in 2007.

*Birgitta Malmfors, Sweden,  
Phil Garnsworthy, UK  
Michael Grossman, USA*

### EAAP Working Group on Animal Genetic Resources (EAAP-WG-AGR) Report on activities September 2004 to May 2005

#### 1. THE EFABIS PROGRAMME

We recall that the EAAP research programme—EC funded—“A European Farm Animal Biodiversity Information System—EFABIS” aims to transform the historical database of the European Association for Animal Production (EAAP Animal Genetic Data

Bank (AGDB), operated by the Veterinary University (TiHo) of Hanover) into a Europe-wide information system that supports the management of farm animal genetic resources at all levels with an exchange of information between them, in close collaboration with FAO. Mr. Eildert Groeneveld, member of the WG, is the scientific coordinator. The EAAP-WG-AGR participates to the Steering Committee and to coordination activities, and it acts as scientific advisor. In addition, the EAAP-WG-AGR has been contributing to several technical and scientific aspects, including the definition of the “user interface”, “outputs of the database”, and “database contents”. Three coordination and/or research meetings were held in the period September 2004–May 2005: Zaragoza—October 2004, Paris—March 2005, Rome—April 2005.

## 2. LIAISON WITH ERFP ACTIVITIES

The project “A study on optimising the implementation of databases on AnGR and the utilisation of their content”, promoted and funded by the European Regional Focal Point (ERFP), is headed by Andreas Georgoudis, member of EAAP WG-AGR, and aims to define the countries’ needs and to produce a strategic plan for the National Co-ordinators to implement and administrate the data base for AnGR, in accordance with the EFABIS programme (see above). The project is expected to end in 2005–2006.

## 3. LIAISON WITH FAO ACTIVITIES

The WG-AGR continued to support the ongoing process of implementation of the State of the World’s Animal Genetic Resources (SoW-AnGR) by FAO. In particular a Report, to be published in the SoW-AnGR book, on EAAP activities in the area of AnGR was produced.

***Gustavo Gandini, Chairman of the EAAP Working Group on Animal Genetic Resources  
Milano, Italy.***

## MEETING AND ACTIVITIES OF THE EUROPEAN NATIONAL CO-ORDINATORS ON ANIMAL GENETIC RESOURCES

The eleventh annual workshop of the European National Co-ordinators (NCs) for the management

of farm animal genetic resources was held in Uppsala on June 4, 2005. Dr. Mike Roper, president of the ERFP Steering Committee chaired the meeting with Dr. Dominique Planchenault for the ERFP secretariat. The 56 named participants represented 28 countries (Albania, Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Republic of Macedonia, The Netherlands, Norway, Poland, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom) and different international organizations (EU, FAO, EAAP). The chairman welcomed the NCs and the new invited countries (Georgia, Egypt). He thanked Eva-Maria Stalhammar, National Coordinator from Sweden for hosting this 11th Workshop.

Dr. D. Planchenault gave a brief report on the activities of the European Regional Focal Point (ERFP) in the past year. The third ERFPP Call for Action was launched in November 2004. Now, the ERFPP funds 10 projects. These projects show the countries will to work together. Dr. D. Planchenault reported the ERFPP budget for 2005–2006. At the end of the workshop, after numerous discussions, the annual budget (131,300 Euros) will be voted and approved.

Dr. R. Cardellino from FAO gave an updated presentation on the first report on the State of World’s Animal Genetic Resources. In total, 159 countries have now submitted an official report and a further 11 are expected before the end of 2005. The response is far greater than initially expected and represents a 90% turnout. The first draft of the report on Strategic Priorities for Action is expected to be available in July 2005 and will be based on 141 country reports submitted to FAO, other international reports and specially commissioned studies. There are to be 2 sets of intergovernmental meeting in 2006—the International Technical Working Group on AnGR (17–19 May 2006)—Eleventh Regular Session of the Commission for Food and Agriculture (November 2006).

Dr. H. Schulte-Coerne (Germany) gave an overview of a mandate from the FAO Commission recommending that RFP consultation should take place based on the draft Report on Strategic Priorities for Action. The ERFPP should be interested in the output from this and ensure the report reflects the important issues, scientific situation and the needs of the ERFPP countries. Most National Co-ordinators are develop-

ing action plans and strategies, and are uncovering many common issues such as the need for finding resources and political/industrial support. The report could highlight and reinforce the ERFPs common needs. The regional Consultations can help raise political awareness and improve contacts to Governments and the EU for financial and technical support.

Mr. G. Gandini (Italy) presented the possible links between EAAP Working Group on Animal Genetic Resources and the ERF. An overview of the aims of the Working Group was given and the official links between the EAAP and the ERF were described. The EAAP Working Group has been participating in two ERF research projects, namely ‘Development of guidelines for the cryopreservation of AnGR in Europe’ and ‘A study on optimising the implementation of databases on AnGR.’ In addition, there has been close collaboration on the development of the EFABIS system.

Mr. D. Jimenez Krauze (Germany) gave the new developments of ERF web site ([www.Europe-ERF.org](http://www.Europe-ERF.org)). The National coordinators must use this site. This site was intended only for ERF Workshop material and to raise awareness of ERF.

Dr. E. Groeneveld (Germany) gave a presentation of the new developments of EFABIS program. The aim of the EFABIS is to create an integrated infrastructure of different databases to monitor animal biodiversity in Europe. Andreas Georgoudis gave the possible links with the ERF project—Databases implementation.

Dr. K. Kume (Albania) and Dr. S. Kukovics (Hungary) gave a presentation on the on-going project “Conservation of multipurpose Tsigai sheep and others in Central and Eastern Europe and the Balkan Countries,” with overview, participation, objectives and implementation of strategy.

Mr. A. Svitovus provided further details on the sub regional workshop for central and eastern European in Belarus on 31 March 2005. In addition, a photograph contest was held and was very successful, with many participating countries. Moldova came first, UK second and Italy third. Certificates were handed to the NCs from UK and Italy to present to those who entered the competition.

Mr. Mike Roper (U.K.) presented the new EU regulation 870/04. The aims of the Regulation are to help conserve, characterise, collect and utilise biological and genetic diversity in agriculture and

to help contribute to our obligations to the Convention for Biological Diversity. Delivering these aims will promote sustainable production in agriculture and development in rural areas. A possible Call for proposal will be published at the end of July. Possible proposed programmes in the frame of 870/04 are presented.

Following the rotational system started in 2003, Mrs. Vera Matlova (NC Czech Republic) was elected as a new ERF-SC member, instead of Mr. Sipke Hiemstra. France continues hosting the ERF Secretariat until August 2006. In September 2005, the NCs will choose the new ERF secretariat. The 2005 Call for Action would include the same themes as last year. The next NCs workshop will be held in Antalya (Turkey) in September 2006. Mr. Roper and Dr. Planchenault concluded the 11th workshop by thanking delegates, with special thanks to Sipke for her work in ERF-SC during 5 years.

**Dr. D. Planchenault (France); Mr. Philip Hambling (U.K.) rapporteurs**

### EAAP Ethics Working Group Report

Since the Bled Meeting, the activities of the Ethics Working Group can be summarised as follows:

- The editing of the manuscripts arising from the Session “Ethics in Animal Agriculture” (14 papers) for publication as a Special Issue of Livestock Production Science is in progress, with expected publication soon.
- The Workshop “Animal Bioethics Teaching,” co-organised with the Higher Academic Education Working Group, scheduled on Saturday, June 4th, in Uppsala was cancelled due to low registration.
- The EAAP Ethics Working Group has been associated with the preparation of the bid for the EU Integrated Project “GEMCODE” (GENoMics for the CONsumer, bioDiversity and Environment”), led by EAAP. This project was awarded to another bid.
- The Ethics Working Group helped in setting up of the Round Table to be held in Uppsala on the subject of Human–animal relationship (ethical aspects) and its consequences on future livestock production (propositions for participants and themes).

- The Ethics Working group will be involved in the Session on “Ethics of Sustainability” to be organised in Antalya 2006 by the Livestock Farming Systems Commission with the support of the Management and Health Commission.

Proposals for the Council to improve and/or to enlarge the activities of the WG as follows:

1. A Web page should be included in the EAAP Web site in order to present the WG activities, and deliver information (current events, etc...); a discussion list could be useful to develop interaction inside the community on ethical issues.
2. The Researchers’ Database could be completed by explicit indication of interest in Ethics (and not only Behaviour and Welfare).
3. The WG should co-ordinate the participation of animal experts in the different international relevant committees (European Union, Council of Europe, OIE).
4. The WG is open to any suggestion likely to improve visibility and efficiency of EAAP’s contribution to debates and action in the ethical field.

**Michel Marie Chairman, EAAP Ethics Working Group.** [marie@ensaia.inpl-nancy.fr](mailto:marie@ensaia.inpl-nancy.fr)

### Report by the Director of EAAP Publications

The contract that was established between EAAP and Wageningen Academic Publishers is now in its 4th year. This contract regulates all respects of editing and publishing the Book of Abstracts of the EAAP Annual Meetings, the EAAP scientific series and EAAP Technical Brochures.

In this report I restrict myself to give account of publishing EAAP scientific series. The editorial and other businesses related to publishing the Book of Abstract have been reported by Professor Yntze Van der Honig.

I think Mike Jacobs, the managing director of the Wageningen Academic Publishers, and his staff concluded an excellent year since our last meeting in Bled. In this period the following volumes has been published and circulated in the **EAAP scientific series**: **EAAP III**: Nutrition of the Performance Horse. Which system in Europe for evaluating the nutritional

requirements? Edited by V. Juliand and W. Martin-Rosset. ISBN 907699837X 160 pages, paperback. This volume was available one day before the Bled meeting started. Still I believe it can be regarded as a product of the past year.

**EAAP 112**: Indicators of dairy products and beef quality. Edited by J.F. Hocquette and S. Gigli. ISBN 9076998485. 464 pages, hardbound.

**EAAP 113**: Performance recording of animals: state of the art 2004. Edited by M. Guellouz, A. Dimitriadou and C. Mosconi. ISBN 907699854X. 432 pages, hardbound.

**EAAP 114**: The growing horse: nutrition and prevention of growth disorders. Edited by V. Juliand and W. Martin-Rosset. ISBN 9076998620. 320 pages, hardbound.

**EAAP 116**: Conservation genetics of endangered horse breeds. Edited by I. Bodo, L. Alderson and B. Langlois. ISBN 9076998795. 188 pages, paperback.

**EAAP 117**: Knowledge transfer in cattle husbandry. New management practices, attitudes and adaptation. Edited by Abele Kuipers, Marija Klopčič, and Cled Thomas. ISBN 9076998809246 pages, paperback.

**EAAP 115**: Animal Production and Natural Resources Utilization in the Mediterranean Mountain Areas. ISBN 9076998566 about 500 pages, hardbound. This volume is still in preparation but after having the still missing few details the manuscript will be sent for printing within 2 weeks from this date below.

### Expected volumes in the near future

For the time being we have only one volume in preparation concerning the Livestock Farming Systems symposium of 2003 (Benvenuto, connected to the Rome meeting of EAAP in 2003.)

### Technical Series

This year no books were published in the Technical Series. I think the 6 volumes that appeared in the past year have duly served the interest of EAAP. As director of EAAP publications my pleasant duty is to express my sincere thanks for those all, who actively participated in the successful publication activity of EAAP in the past year.

**Professor Pal Rafai, Director of EAAP Publications**  
**Budapest Email: [prafai@ns.univet.hu](mailto:prafai@ns.univet.hu)**

### **Report of the EAAP Higher Academic Education Working Group**

During the EAAP Annual Meeting the Working Group of Higher Academic Education met in Uppsala with 14 colleagues from 11 countries. We regret the cancellation of the Workshop on Teaching Animal Ethics Objective and Methods because only 5 registrations were received. With Michel Marie, Chairman of the Ethics Working Group, we hope that we shall be able to organise the workshop in the future for it is a very important topic.

Phil Garnsworthy reported on the Elsevier/EAAP Workshop on “Writing and presenting scientific papers.” This workshop is always very effective for young colleagues and the Group wishes continuation in the future.

For the Annual Meeting in Antalya in 2006 we agreed the title of the Workshop to be organized with the Mediterranean Contact Group: “Development Teaching Animal Science among European and Mediterranean Countries” to be chaired by Prof. Fouad Guessous. After a long discussion, the group decided to maintain Saturday for this workshop. For the EAAP Meeting in Dublin in 2007, our colleague A-F. Groew proposes to organize a workshop: “Intercultural teaching of animal science”.

The group decide to prepare a list of universities and high schools in EAAP countries who teach animal science with a page for each giving the main topics of teaching and research.

**Jean-Louis Tisserand, Chairman**

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### **73rd General session of the OIE<sup>1</sup> International Committee Paris 22–27 May 2005**

OIE is the intergovernmental organization dealing with animal health in the world. In some ways it looks like the WHO. However, over a few years OIE broadened its scope to embrace not only the diseases but also animal welfare and safety of animal-derived food, the latter point remaining at the pre-harvest stage of the food chain, (e.g. the slaughter-

house for animals raised for meat production). 167 member-countries are currently affiliated to OIE.

In addition to reporting notifiable diseases through the national veterinary services of the member countries, OIE is due to prepare standards and guidelines to facilitate international trade of animals and animal-derived products, whilst disease spread is minimized. These standards and guidelines are prepared by experts gathered in specific scientific groups whereas the “code commission” leads the job and a book with updated norms is issued on a regular base. Both terrestrial and aquatic animals are included in OIE missions. In this respect, OIE plays a major role in WTO (World Trade Organization) by the provision of reference norms and standards.

About 600 delegates from 140 countries attended the meeting. The lectures and the debates were simultaneously translated into several languages. It is out of the question exhaustively to report here on the whole general conference. I would only like to mention some items that could be of special interest to EAAP.

In his annual report the General Director of OIE (Dr. B. Vallat) spoke about the main activities of his organization. He mentioned that the 3rd strategic plan arrives at its end in 2005 and that therefore the 4th one due to take place on the period 2006–2010 is in preparation. The new plan will be on the same line as the previous. However more emphasis will be put on regional activities and also the role of OIE in the international scientific fields related to veterinary sciences in animal production. The OIE has continued to put every effort into convincing governments, international organizations and the general public of the importance for the whole of the international community of supporting its actions and those of the national veterinary services for the benefit of all. To achieve its objectives the OIE relies on various mechanisms: above all on its worldwide network of delegates, nominated by their respective governments, and on its networks of 170 collaborating centres and reference laboratories which provide scientific and training services free of charge.

During the conference specific technical lectures were given. One was on “*implementation of OIE standards in the framework of the SPS agreement*”. Responses to a questionnaire indicated that there is a need not so much for change, but for taking note of new needs that have been developed over time. One of

<sup>1</sup> OIE: Office International des Epizooties; English version: World Animal Health Organization.

these is the need to more clearly assess the safety of products for trade. Another technical paper was on “*applications of genetic engineering for livestock and biotechnology products*”. The main technologies were displayed: embryo transfer, nuclear transfer cloning, transgenesis, xenotransplantation, vaccines. These technologies might raise potentially new concerns about food safety, human health, animal health/welfare and the environment. Therefore risk assessment considerations are most welcome.

Animal health status worldwide in 2004 and early 2005 was given in detailed tables and reports. A special attention was paid to highly pathogenic avian influenza (HPAI: the “bird flu”). The most important event in OIE’s field was the occurrence of HPAI due to H5N1 serotype in several countries in Asia. In 2004, in Canada, a H<sub>7</sub>N<sub>3</sub> influenza strain causing HPAI was declared whereas in the USA an outbreak of HPAI due to a virus of H<sub>5</sub>N<sub>2</sub> type occurred. In Europe, no outbreak of HPAI was declared. Another major disease spoken about was FMD (Foot and Mouth Disease). Outbreaks were reported in Africa, in South America, in Asia, in Europe (Russia, Israel, and Turkey) and in Middle-East countries where the disease is endemic. Cases of Swine Vesicular Disease (hardly clinically distinguishable from FMD) were declared in Portugal and Italy. Blue Tongue disease occurred in Asia (China), in Europe (Croatia, Italy, Spain, France, Portugal) and in Africa. Classical Swine Fever occurred in domestic pigs in Africa, Central and South America, Europe (Russia, Bulgaria, Romania, former Yugoslavia) and Asia (Japan, Rep. of Korea and several other countries). The reported cases of BSE were shown as well as the annual BSE incidence per million bovines aged over 24 months. A very broad range appears in the incidence per million, from 0.1 (for Canada, one case in 2004) to 93 (Portugal, 91 cases). The UK has still the highest number of case ( $n=338$  cases, incidence per million=67) followed by Spain ( $n=137$  cases, incidence=38.9) and Ireland ( $n=126$  cases, incidence=43.3).

Part of the general session was focused on the work of the different OIE commissions. The biological standards commission deals with the different laboratory tests used in disease or in pathogen detection. The commission for “animal diseases” mainly worked on animal health surveillance (survey design, sampling).

The important issue of “international recognition of freedom from infection” was addressed as well as other points like the use of vaccination in the control and eradication plans ... The Code Commission should have its up-dated book ready by the end of this year ... During the last year but also during Paris meeting, working groups and “ad hoc” groups had further discussions on specific topics and their conclusions were reported to the international committee. It clearly appeared that the OIE relies on these commissions, working groups and “ad hoc” groups to fulfil two the essential missions assigned by its organic statutes, namely scientific cooperation and the harmonization of animal health requirements applicable to international trade in animals and animal products. There are currently 3 working groups (wild life, animal welfare, animal production food safety) and nearly 20 “ad hoc” groups (biotechnology, epidemiology, emerging diseases, animal traceability ... etc. ...).

A number of international organizations in a broad range of areas and with different statutes have signed a “cooperation agreement” with OIE (e.g.: World Vet. Assoc., the World Bank, the EU, FAO, Intern. Dairy Federation, Int. Fed. for Anim. Health, WTO, WHO ... etc. ...). Other organizations are invited to take part to the general session as observers. It is the case for EAAP, ICAR ...

I cannot end this report without mention of the wonderful technical organization of the conference.

*Dr. Francois Madec, on behalf of EAAP*

## REPORTS OF EAAP STUDY COMMISSIONS

### Report of Commission on Animal Genetics

The Commission on Animal Genetics had an exiting annual meeting, with 8 well attended sessions and more than 200 contributions. Our two joint sessions were very successful. The first one was organised jointly with the Commission on Animal Physiology and dealt with advances in “**Functional genomics of reproduction and disease resistance**”. It was chaired by Dr. K. Wimmers (Germany). The two invited papers presented recent developments in the knowledge of genes expression of the Major Histocompatibility Complex (MHC) in swine (C. Rogel-Gaillard, France) and of genes involved in the pre-implemen-

tion embryo development in cattle (K. Schellander, Germany). Clearly, new tools, in particular microarrays, are becoming available to study differences in gene expressions in different tissues, physiological status or genotypes. They are paving the way to very stimulating discoveries in the near future. The following contributed papers illustrated the fast progress in the detection of QTLs and even causal mutations affecting reproduction and disease traits.

The second joint session was organised by J. Crettenand (Switzerland) of the Cattle Commission, with the participation of Interbull. It was centred on **“functional traits in cattle”**. The relevance of the session was already underlined by the large number of communications presented on this topic during the Interbull annual meeting, which was held just before the EAAP meeting. The connection between the two meetings was demonstrated by the first invited speaker (T. Mark, from the Interbull Centre in Uppsala) who insisted on the unfavourable consequences that intense selection on production traits had on functional traits and the efforts made to develop national and international evaluations on these traits to counterbalance undesirable trends. The second invited speaker (J. Sölkner, Austria) confirmed the beneficial impact that the inclusion of functional traits in a total merit index has for the animal breeding sustainability.

Finally, G. Rogers (USA) presented a rather alarming North-American perspective on the subject, where the increase of disease incidence, of involuntary culling and even on death rate in Holstein herds has led to the development of alternative practices such as crossbreeding. The contributed papers of this session highlighted the quality of the research on functional traits conducted in Nordic countries, related of a long-time awareness of their importance.

A session on **“Genetics of variability”** chaired by M. San Cristobal (France) was held in parallel with this joint session. The invited presentation of D. Sorensen (Denmark) introduced a model that describes how genetic effects may influence residual variances. He also presented different Bayesian statistical tools to validate such a model and reported several experimental cases supporting it. Other aspects such as genotype by environment interactions using for example reaction norms were also considered during this session.

As in previous meetings, the session on **“Developments in quantitative genetics”** included a large variety of very interesting contributed presentations. Chaired by Z. Liu (Germany), it started with an enlightening invited presentation by T. Meuwissen (Norway) on the use of genomic information for genetic improvement in livestock: the use of genome wide high density marker maps to identify chromosome segments could strongly increase accuracy of selection while decreasing generation interval. The other invited contribution, by H. Simianer (Germany), also dealt with chromosome segments, describing how to compute the matrix of identity by descent probabilities for segments, as well as its inverse.

**The next thematic session chaired by B. Wickham (Ireland) was centred on “breeding programmes for a wide range of systems”**, with three invited papers (D. Garrick (USA), V.E. Olori (Ireland) and E. Knol (The Netherlands)). The last session of the meeting was devoted to the **“understanding of the genetics of quantitative traits, from theory to applications”**. The chairman, A. Maki-Tanila (Finland), invited L. Andersson (Sweden) who insisted on the importance of regulatory mutations to explain genetic variation of multifactorial traits, despite the fact that so far, most identified mutations are structural mutations. He illustrated this with three recent concrete examples. L. Janss (The Netherlands) discussed the advantages but also the pitfalls of the bioinformatics tools that are available for analysing molecular genetic data. The session was completed with several illustrative talks on recent statistical and molecular advances in the knowledge of quantitative traits.

Many participants sending abstracts to our commission asked for an oral presentation. This led us to eventually organise an extra parallel session, leading to a total of two and a half free communications sessions. It is difficult to summarise here all the remarkable presentations during these sessions as well as the posters presented. Interested persons are advised to look at the book of abstracts or the EAAP website.

During the business session, the current president (V. Ducrocq) and vice-president (H. Simianer) were re-elected for a second term and Gustavo Gandini, chairman of the working group on Animal Genetic Resources, gave a brief report on the activities of this EAAP working group. A presentation of the EAAP

initiative in terms of publications was followed by a short discussion.

This year, the Commission awarded J. Fernandez (Spain) with the best oral presentation (entitled “**Benefits from marker assisted selection under an infinitesimal model**”) and E. Carlén (Sweden) with the best poster prize (“**Genotype by environment interaction for udder health traits in Swedish Holstein cows**”). The winners will receive a free registration for the Antalya meeting next year. However, it is important to note that our ability to associate such free registrations with the awards in the future will depend on our success in getting sponsors to contribute to the “EAAP foundation.” All regular members of the Commission are encouraged to help us in that respect. *Vincent Ducrocq, President of the Commission on Animal Genetics ducrocq@dga.jouy.inra.fr*

### Report of Commission on Animal Nutrition

In 2005 more than a hundred contributions (oral presentations and posters) were sent to the Animal Nutrition commission, confirming the interest of many scientists in this interdisciplinary and broad field of research. In Uppsala, Animal Nutrition sessions, with the exception of the Free Communications, were all “joint” sessions: this underlines the importance of an holistic approach to the different aspects of Animal Science, comparing several animal species and speculating on the mechanisms which regulate animal nutrition and physiology coping them with a given level of performance.

An example is represented by the session entitled “**Quality assurance systems to ensure compliance**” where some papers stressed the necessity of combining the application of the HACCP concept in the feed industry with the “codes of good practices” to ensure feed safety at farm level. Feed safety strategies must therefore cover the whole feed supply from the farm to the industrially manufactured feeds.

On Saturday 4th June the workshop was held on “**Harmonization of Feed Evaluation Systems**” organized by our commission, in collaboration with Pig, Horse, Cattle and Sheep and Goat commissions. About thirty people attended the seminar, chaired by Prof. Daniel Sauvant, I.N.R.A., France. He gave first a paper on the main issues and problems related to this crucial point which has a so great impact on the

technical and economical efficiency of animal production. Why harmonize feed evaluation systems (f.e.s.)? F.e.s.: a long story. Classic ways to improve the f.e.s.. Consequences of new challenges in animal production and nutrition. Later on three experts presented a report on the state of the art of f.e.s. for ruminants (Sauvant himself), pigs (Prof. Caspar Wenk, ETHZ, Switzerland) and horses (Dr. William Martin-Rosset, I.N.R.A., France).

After these main papers the participants divided into three working groups focused on ruminants, pigs and horses and coordinated by Sauvant, Wenk and Martin-Rosset, respectively. Several excellent papers were presented and discussed within each group by experts of the field and, at the end of the workshop, the results and the proposals of each group were shared with all the participants. The following day the main topics discussed and proposals made were presented in a special session during the Annual Meeting. The commission, with the help of the EAAP secretariat, is now preparing a CD which will include all the contributions presented in the workshop.

Another interesting subject was “**Alternatives to antibiotic growth promoters and castration**”, a joint session with Pig and Physiology commissions. Some nutritional possibilities do exist and seem promising, yet not as efficient as the traditional antibiotics or castration, in reducing pig diseases and boar taint. For instance, Dr. M. Bonneau (I.N.R.A., France) said that skatole (a breakdown product from tryptophane, originating from the hind-gut and responsible, with the testicular steroid androstenone, of the boar taint) levels can be limited by using wet instead of dry feeding and that feeding pigs a mixture of inulin and bicarbonate during a few days before slaughter results in a sharp reduction in fat skatole levels. Similarly, the addition of zeolite to the diet is effective in reducing fat skatole levels, as well as the inclusion in the diet of feedstuffs with high amounts of fermentable carbohydrates.

“**Nutrition and management strategies to improve resource use in livestock systems**” was another session chaired by Dr. John Milne (Aberdeen, UK). The chairman discussed several aspects dealing with ruminant dairy and meat systems: the former require increased precision in the nutritive value of feeds and their combinations and efficiency with which nutrients are utilized; the latter often seek to

use feed by-products more effectively and utilize alternative feeds. A paper presented by some French researchers of I.N.R.A. discussed the nutritional and management tools to reduce the environmental impact of pig production: N, P, Zn, Cu pollutions can be limited by feeding strategies; moreover, modeling at a higher integration level can also be useful for optimizing the use of animal manure for crop fertilization between farms, within a geographical area. Integrated approaches, such as Life Cycle Assessment (LCA) can be used to compare scenarios proposed to reduce pollution load, identify their environmental hot spots and propose options for improvement. LCA can be particularly useful to identify cases of “problem shifting,” e.g. reducing a local impact (NO<sub>3</sub> emission) at the cost of an increased global impact (N<sub>2</sub>O emission).

Also the Free Communication session, as always, was rich with interesting papers dealing with the different species. Among the others, ruminant nutrition included works on the influence of the roughage type on milk urea, the effect of rumen escape starch in dairy diets, the feeding ways to increase CLA and vaccenic acid content in milk fat.

During the Business Meeting there was an agreement, for the 2007 Annual Meeting, to make proposal for two sessions entitled “**Impact of feed processing on nutritive value**” and “**Maximizing forage use in ruminants diet**”.

*Prof. Matteo Crovetto, President*

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### **Report of Commission on Animal Physiology**

Again in 2005 we had several successful sessions with other commissions. The main theme of our sessions related to reproduction spanning from the relationship between stress and reproduction to a session dealing with different methods to castrate male pigs with reference both to removal of boar taint and minimizing castration stress. I found that both sessions gave good overviews of the state of the art on these topics. This was also the case in a session dealing with the physiology of pregnancy as a follow up to an earlier session on the physiology of puberty. Next time when reproduction is the main theme of our meeting, which will be in 2008, we plan to have a session on the physiology of parturition. Our tradition of joint ses-

sions with the genetics commission also focussed on new developments in molecular genetics and physiology related to reproduction.

Bas Kemp from the Netherlands was in charge of organising the Physiology Commission sessions this year. He did a very good job. Unfortunately, this was his last term as a secretary of the commission. I would like to express my gratitude for his valuable contributions to the development of our commission. As mentioned last year he has been replaced by Melissa Royal, UK as the commission member with special expertise on reproduction.

One of the main tasks for the commission team each year is to prepare the future programmes. Unfortunately we have to work on a very long term schedule. Therefore some of you may feel that it is difficult to exert real influence on the programme. This is unfortunate, but I encourage all of you to contact me or the other members of the commission with your suggestions and please, participate in our business meetings. If you have a good idea for a topic we will consider it seriously and there is always a good chance that it can be on the future agenda. In spite of these drawbacks, I think we have a very nice programme scheduled for next year in Antalya, Turkey, and the preliminary programme for Dublin in 2007 also looks promising. Please check the details on the EAAP web-page: [www.EAAP.org](http://www.EAAP.org).

Outside the normal programme, we are involved in the organisation of two very valuable workshops. One is organised jointly with a COST-action on “Prenatal muscle development”. This workshop is closely linked to two of our regular sessions: “The early life of pigs—physiology and nutrition” and “Metabolic programming in growth and development.” Hopefully these three sessions together will create a good comprehensive treatise of pre- and postnatal biological events. It is our intention to produce a special issue in a scientific journal of the presentations in the sessions. The other workshop will deal all the issues of GMO. We expect to get the key people from EFSA—European Food Safety Authority—to speak.

Finally, I will remind you that the next joint EAAP/ASAS Biology of Lactation Workshop—the 8th—will be held next year in Brazil. The proceedings from the 7th will be out this autumn.

*Kris Sejrsen, President, Animal Physiology Commission Email: [kr.sejrsen@agrsci.dk](mailto:kr.sejrsen@agrsci.dk)*

## Report of the Commission on Animal Management and Health

The 56th Annual Meeting in Uppsala was a great success for the Management and Health Commission. Our commission organised four sessions with a total attendance of more than 350 people and participated in three other sessions that were also well attended. Jos Noordhuizen from Utrecht, NL organised and chaired the first session under the main theme on **“Implications of EU restructuring and free trade on feed quality and safety, disease and food quality and safety+Quality assurance systems to ensure compliance”** with input from 5 other commissions and the OIE. Three introductory papers gave an overview on the new food safety policy of the EU, on how the consumer is protected by the Codex Alimentarius and on how feed and feed safety is realised by systematic hazard analysis and risk minimization. Examples for the implementation of these concepts were given on animal disease control, food safety, and animal welfare and on the balancing of public and private interests in EU food production. John McGlone from the United States (invited ASAS speaker) gave an overview on quality assurance programmes in the USA which are mainly driven by producer organisations and retailers.

Session 2 of our commission was devoted to **“Animal health and welfare: costs and benefits”** and chaired by Alistair Stott from Aberdeen in Scotland. The session was introduced by presentations that emphasized the economic impact of EU policies for animal science and animal welfare and reflected on competing goals for the profitability of livestock production, animal welfare, the environment and human health. Most of the presentations were intended to illustrate the costs of diseases and the economic value of disease control programmes in several regions within and outside of Europe. Two contributions to this session (both from Uppsala) were awarded as the best presentation (M. Tibbo et al.: **“Economics of sub-clinical helminthosis control through anthelmintics and supplementation in Menz and Awassi-Menz crossbred sheep in Ethiopia”**) and best poster (C. Hagnestam et al.: **“Yield losses associated with clinical mastitis in Swedish dairy cows”**).

Jos Metz from Wageningen in The Netherlands chaired our Free Communication Session that was

mainly devoted to the **“Management and health of ruminants”**. The number of contributions and the big audience reflect the continuous interest in this subject. In addition, the local organisers from Uppsala are and have been very active in research on dairy cattle management and health. Papers ranged from management of automatic milking systems to mastitis control as well as on lameness, stress and welfare assessment in dairy cows, goats and bulls.

The session on the **“Utilization of records to manage health”** was intended to emphasise common interest of our commission with the experts from the Precision Livestock Farming Group that had their conference immediately after the EAAP meeting. Rony Geers from Leuven in Belgium chaired a session with ECPLF input that mainly dealt with the utilization of health and welfare records. New insights were given on electronic support systems for automatic monitoring of behavioural indicators with relevance for the health and welfare status of farm animals.

The commission business assembly voted for Rony Geers (Catholic University Leuven, Belgium) to become our new Vice-President starting his term in 2006. Christine Fourichon (University of Nantes, France) has been re-elected for a second term as a secretary of the commission. Sandra Edwards (University of Newcastle, UK) has started now her first term as a secretary. Our commission is also proud and honoured for the prestigious Leroy award given to our former commission president Francois Madec for his outstanding work in animal management and health, his liaisons with the World Animal Health Organisation (OIE), the International Society of Animal Hygiene (ISAH) and his EAAP input that had a major influence on the successful development of our commission.

*Eberhard von Borell, President, Commission on Animal Management and Health.*

*Email: borell@landw.uni-halle.de*

## Report of Commission on Cattle Production

The Commission on Cattle Production had a very successful programme at the 56th Annual Meeting in Uppsala. Our commission organised four sessions to which 38 papers and 50 posters were submitted, confirming the interest of many researchers in this

field. Most of these contributions were addressed to the free communication sessions. All the sessions were well attended and the projection and acoustic facilities were problem-free throughout.

As previous years we had successful joint sessions with the other commissions. The joint Session 1 (MNLPS1) on **Implications of EU restructuring and free trade on feed quality and safety, disease and food quality and safety followed by Quality assurance systems to ensure compliance** was chaired by Jos P.T.M. Noordhuizen (NL). The session started with an oral contribution by P. Vanthemsche (Belgium), describing the EU policy on food and feed safety. This was followed with seven other oral communications. Finally, Abele Kuipers (The Netherlands) described the utilisation of sustainable data in an effective way.

Session 5 (CG2) on **Functional traits in cattle** was chaired by Joseph Crettenand (CH) and Ulf Emanuelson (SE). The session was organised together with the commission on Animal Genetics and Interbull. During the session were presented 11 theatre presentations and 15 posters (1 poster was withdrawn and 1 poster was no show). Authors were from 15 European countries and from USA, New Zealand, Iran, Egypt and Brazil. The papers and posters presented during the session 5 were made by 88 different authors. 5 papers and posters were from Sweden and 6 from Germany, which was the most represented country in this session. 9 papers and 10 posters from this session are available on EAAP website, [org/uppsala/AApages](http://org/uppsala/AApages).

Thomas Mark (Sweden) presented an overview on international trends in genetic evaluation of functional traits in dairy cattle. Then Johann Sölkner from Austria talked about implementation issues of functional traits in cattle breeding programs. The invited speaker G. Rogers from America presented the US perspective on the importance of functional traits and crossbreeding in dairy cattle. Other oral contributions and posters dealt with the importance of functional traits with emphasis on udder health, somatic cell count, udder conformation, milk fever, retained placenta, predictors of body weight, genetic effects on stillbirth and calving difficulty, female fertility, milkability, persistency of lactation and longevity. 11 contributed papers completed the session. A large audience was present.

Session 11 (SCNL 3) was on **“Specialised ruminant products to sustain systems and genetic**

**resources”**. It was organised by the chairman of commission on Sheep and Goat Production, Markus Schneeberger (Switzerland). During this session 6 papers were presented. Francois Casabianca (France) talked about local products for genetic resources sustainability in Southern Europe: a solution or a problem? Peter Polak (Slovakia) presented relationships between tissue thicknesses measured on live Pinzgau bulls by ultrasound and weight of hot carcass.

Session 20 (C4) was the **Free Communications Session** and was chaired by Jean-François Hocquette (France). As usual, this session attracted a large number of papers and posters: 9 theatre presentations and 26 posters (the paper “Methodology of breeding value estimation for functional longevity in Czech Republic” was not presented and 3 posters were no show). Authors were from 17 European countries and one additional poster was from Brazil. Six posters were from Hungary and 5 communications from Czech Republic, which were the most represented countries. Communications concerned dairy cattle and their products ( $n=18$ ) or carcass and meat quality ( $n=16$ ). The communications about dairy production dealt with genetics or molecular genetics ( $n=5$ ), rearing factors ( $n=4$ ), or physiology and metabolism ( $n=9$ ). For meat, some communications dealt with rearing factors and carcass composition ( $n=8$ ), whereas others were about meat quality ( $n=8$ ). Among the latter, 4 dealt with fat content and composition which are important issues for human healthiness taken into account the increasing development of obesity in our society. The major results presented orally have shown in dairy cattle that milk production and animal health depends at least in part on the interaction between the genetic potential of animals and rearing factors. Great individual variability in energy mobilisation of dairy cows was also demonstrated. For beef production, the determination of body and carcass composition according to genetic and rearing factors remains a key issue. The control of intramuscular fat content by glucose supply and the control of muscular fatty acid composition by extruded linseed were also discussed. About 20 to 30 people attended the oral presentations. 4 papers and 11 posters from this session are available on EAAP website.

**Session 25 (CSLMP5)** on Alternative Low Input/Organic Production Methods was chaired by Dr. Michael Gerry Keane (IRL). During the session 10

theatre presentations and 7 posters (1 poster was no show) were presented. The highlights of the session were two invited papers by Dr. John Hermansen, Department of Agroecology, Danish Institute of Agricultural Sciences and Dr. Leon Sebek, Animal Sciences Group, University of Wageningen. Both provided excellent and balanced reviews of their respective topics. John Hermansen traced the development of organic livestock farming in Europe from approximately 8000 farms in 1985 to over 142,000 in 2001 with growth still continuing but at a slower rate than heretofore. Italy has the highest number of farms and greatest land area in organic production but Austria and Switzerland have a higher proportion of their land area organically managed. Germany has the largest organic market but Switzerland, Denmark and Austria have the highest per capita consumption of organic products. At present, about 3% of European agricultural land is managed organically and the market share of organic products is about 2%, comparable to that in the USA and Canada. While continued growth of the organic market is expected, growth has stopped in some markets for some products. This is the case in Denmark where the market share for liquid milk and table eggs has reached 25%.

In milk production, organic farming leads to reduced milk production per cow with no effect on mastitis. Overall cow health is improved but endoparasites in young stock are a greater problem. In pig production the number of piglets per litter is not affected but piglets per sow per year are reduced due to the longer weaning period. Lung lesion incidence is lower in organic pigs.

On a per hectare basis, environment impact is lower in organic production but on a product basis which takes into account differences in production and the environmental impact of feed production outside the farm, the picture is more diverse. In Danish dairy farms there was little difference in the efficiency of transformation of N between conventional and organic systems. However, in terms of crop production and N fixation, organic farms were more efficient. Overall N efficiency was better for organic farms and as a result surplus N was less (108 vs. 172 kg/ha for organic and conventional systems, respectively).

Following the Hermansen review paper there were 4 offered papers dealing with various aspects of organic production. Dr. Karstin Jensen of the Danish

Centre for Bioethics and Risk Assessment challenged the view that organic farming was morally superior to conventional farming in terms of environmental ethics. He claimed that the view of environmental ethicists now was that only wild nature (i.e. undisturbed by humans) should be valued for its own sake. Dr. Kirstin Jorgensen analysed data from the Danish Cattle Data Base and found that organic cows had significantly higher frequencies of liver abscess than conventional cows. It was suggested that this was due to higher frequencies of rumen acidosis arising from higher dietary starch levels and unbalanced feeding strategies particularly during grazing. Dr. Marc Benoit compared 20 organic and 36 conventional sheep farms in both lowland and upland areas of central France. Organic farms were smaller. Direct comparisons were difficult because of different sheep breeds and production systems between organic and conventional farms. Gross margins were lower with organic production and without the agri-environmental premiums, particularly for conversion to organic production, they would be very much lower.

Dr. Sandor Kukovics of Hungary compared intensive and extensive systems of sheep milk production. Despite lower output in the extensive system, profitability was similar to that in the intensive system because of lower inputs. The second invited paper by Dr. Leon Sebek described the experience in the De Marke non-organic low input dairy farm. The farm carries 78 cows plus young stock on 55 ha. Stocking rate is 1.7 livestock units per hectare. Milk yield per cow is 8720 kg and milk output per hectare is 12,363 kg. The farm has 32 ha grass, 16 ha maize and 7 ha whole crop silage. The objective is to reduce the surpluses losses of ammonia, nitrate and phosphorus.

Nitrogen inputs per 1000 kg milk (from fertiliser, feeds, fixation and deposition) are highest for UK, France and Germany and lowest for Denmark (probably because of the higher proportion of organic milk). Italy and Ireland have similar N levels per 1000 kg milk but in Ireland 94% comes from fertiliser whereas in Italy 65% comes from concentrate feeds. Across a range of countries there is a linear relationship between N input and milk production per hectare. The objective of De Marke is to break this relationship and continue to achieve a high milk output with a greatly reduced N input. This was to be achieved by less use of chemical fertilisers, improved use of

organic fertilisers, crop rotation and use of catch crops, using grass/clover mixtures, reducing grazing and keeping less young stock. The consequences of these changes were reduced crude protein in grass and crops, reduced ration crude protein content and reduced grass digestibility. The value of each change was estimated per 100 kg of milk production. The more important were then further evaluated and categorised as profitable, not profitable but cheap to implement, expensive but effective (in terms of environmental impact) and expensive but not effective.

The Sebek paper was followed by our contributed papers on various aspects of low input systems. Dr. Wietze Nauta investigated if there were genotype  $\times$  environment interactions for bull breeding values between conventional and organic production. There are no Dutch bulls especially selected for organic production. The results showed that phenotypic variances for milk production decreased strongly under organic farming and heritability of milk production increased from 0.47 for conventional, to 0.70 for organic, production. Genetic correlations between conventional and organic environments for milk, fat and protein production averaged 0.82. This indicates that the use of conventional bulls in organic farming may result in a re-ranking of bulls and less genetic gain for production traits.

The N self-sufficiency of suckler cattle farms in the Charolais region of France was described by Dr. Patrick Veysset. Models were developed to optimise N self-sufficiency. In grassland farming N self-sufficiency will only be reached if 13.5% of the total area is cultivated with cereal and protein rich crops (for cattle feeding). The economic impact of achieving N self-sufficiency is low or negative which is not attractive unless a better price can be obtained for more environment-friendly food products. Dr. Mogens Vestergaard described the effects of chicory roots on performance, carcass quality and fatty acid composition of beef. Steers were fed grass/clover silage ad libitum and supplemented with either 1.7 or 3.4 kg/day dry matter of barley or chicory roots. As the finishing period was only of 10 weeks duration many of the production differences were not significant. Feeding chicory increased meat unsaturated fat content but did not affect conjugated linoleic acid content. The final paper was contributed by Dr. Magdalena Hook Presto from Uppsala. She examined the

performance of pigs reared indoors or outdoors and the effects of feeding below the recommended level of amino acids. Amino acid level did not affect any performance or carcass parameter but pigs on lower amino acids did more rooting. Outdoor pigs grew faster but there was no difference in feed conversion efficiency. Lean meat content was higher for indoor pigs and social behaviour activity occurred more often indoors. 7 papers and 3 posters from this session are available on EAAP website.

Session 35 (CPh6) collected eight offered papers dealing with several aspects of cattle reproduction and was chaired by Dr. Carla Lazzaroni (Italy), with a good audience (about 30 people) very active during discussion. During the session were presented 8 theatre presentations. All 8 papers are available on EAAP website. The first two papers, offered by Maria J. Carabaño et al. (E) and Birgit Gredler et al. (A), were focused on the evaluation and prediction of some male reproduction characters as ejaculate volume and sperm quality (concentration, viability, motility), taking in account both genetic and environmental effects.

In the next ones, by Endre Szücs et al. (H), the relationships between body condition score and productive (milk yield, butterfat, protein, peak yield, persistency) and reproductive (conception rate, day open) performance of dairy cows were studied. Also in the following paper, by Nicolas Lopez-Villalobos et al. (NZ), the relationship between productive aspects (lactation persistency) and reproductive performance (fertility traits) were analysed in dairy cows.

The following two papers, by Karl-Johan Petersson et al. (S) and Joachim Krieter et al. (D), were focused on the oestrus detection in dairy cows: the first one studying the progesterone profiles in dairy cows of different breeds, parity, calving season, housing, healthy, the second one by using control chart (activity and period since last oestrus) and neural networks. The other factor influencing reproduction traits in cows was the nutritional effect, studied by Joseph Patton et al. (IRL), relating energy balance in early lactation, milk production, net energy intake and conception rate to first service. The last paper, by Mehmet Kuran et al. (TR), was studying the effect of honeybee royal jelly on the *in vitro* nuclear maturation of bovine oocytes.

During the Business Meeting, chaired by the newly elected Commission President Abele Kuipers (The Netherlands), chairpersons for the cattle sessions of the meeting 2006 in Antalya, Turkey have been appointed and some topics discussed for the meeting 2007 in Dublin, Ireland. For the EAAP Meeting in Ireland our Commission proposes the next topics:

1. Use of crosses and dairy calves for beef (C\*)
2. Breeding for robustness and fertility (C\*, G, Inter-bull)
3. Maximizing forages use in ruminant diets (animals and nutritional aspects) (C, N or N, C)
4. Large scale farms: nutrition, cow aspects, grassland management, labour, partnerships (C\*, N, M)
5. EU cattle production following EU enlargement and CAP reforms (C\*)
6. Mastitis: genetics, biology and environment (G, Ph, C)
7. The problem of stillborn of calves (C\*).

Wytze Nauta, from the Louis Bolk Institute (The Netherlands), with the paper “Genotype environment interaction for milk production between conventional and organic dairy farming in The Netherlands” presented in session 25 (CSLMP5), was selected for the award for the best presentation, while the award for the best poster was assigned to the poster C4.21 (session 20) “Physical, compositional and organoleptic properties of beef from Charolais and Limousin heifers fed different diets” by Daniel Bures from the Research Institute of Animal Production from Prague (Czech Republic).

The Cattle Commission was/is also active in preparing publications. All the review papers and the short communications, which were presented on the session C6 on “Indicators of milk and beef quality” last year in Bled were published in EAAP scientific series (EAAP Publ. 112) entitled “**Indicators of milk and beef quality**” (editors: Jean-François Hocquette and Sergio Gigli). All the review papers and the short communications, which were presented in the session 5 on “Changes in cattle husbandry—knowledge transfer and farmer attitudes” in year 2003 in Roma (Italy) and in the session 3 on “Implementation of new management practices” last year in Bled (Slovenia) were published in EAAP scientific series (EAAP Publ. 117) entitled “**Knowledge transfer in cattle**

**husbandry**” (editors: Abele Kuipers, Marija Klopčič and Cled Thomas). Additional papers from invited authors were added to complete both publications.

The papers and country reports which were presented on the CEEC-FAO-EAAP Workshop “Dairy Farm Management and Extension Needs in CEE under the Restrictions of the EU Milk Quota” in Bled last year will be published still this year in EAAP Technical series, entitled “**Farm management and extension needs in CEEC countries under the EU milk quota**” (editors: Abele Kuipers, Marija Klopčič and Arunas Svitojus).

The Cattle Commission has good cooperation with Cattle Network and CEEC Working Group. Together, the workshop “Beef production in Europe” was organised in Uppsala. We would like to organise in Antalya together with FAO and CEEC Working Group a workshop on “Opportunities for commercialisation of small cattle farms” and in Dublin probably again on the topic of “Beef production.”

The term of the Commission’s President, Sergio Gigli (Italy), is coming to an end. Sincere thanks were addressed to him for years of hard work. He will be succeeded by Abele Kuipers (The Netherlands). At the Business Meeting, we elected also as new vice president Joseph Crettenand (Switzerland), who will replace Ernst Kalm (Germany) and a new secretary (Marija Klopčič, Slovenia), who will replace Abele Kuipers. Gerry Keane (Ireland) and Jean-François Hocquette (France) were renewed for another period. Ernst Kalm will be member of EAAP Council. His support of the Commission is very much appreciated.

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### **Report of Commission on Sheep and Goat Production**

**Session 3** was entitled “**Specialised ruminant products to sustain systems and genetic resources**” and was chaired by M. Schneeberger (CH). This session was jointly organised with the Cattle, Nutrition and the Livestock Farming System Commissions. There were three guest papers on “Local products for genetic resources sustainability in Southern Europe: A solu-

tion or a problem?” presented by F. Casabianca from France, “Examples of successful commercialisation of sheep and goat products in Alpine regions” by F. Ringdorfer from Austria and “Specialised small ruminant products and genetic resources in the Middle and Eastern European countries” by S. Kukovics from Hungary, followed by three free contributions “Genetic relationships between growth and pelt quality traits in the Gotland sheep breed” by A. Näsholm from Sweden, “Fatty acid composition of lamb’s meat from two different genotypes” by G.M Vacca from Italy and “Relationship between tissue thicknesses measured on live Pinzgau bulls by ultrasound and weight of hot carcass” by P. Polák from Slovakia. The conclusions derived from this session are: Special products originating from a specific region can contribute to the development of this region. Special products originating from a specific, especially from rare and threatened by distinction, breeds of livestock can help to sustain these breeds and, thus, to maintain the genetic diversity. The discussion revealed, however, that restricting the production level of the animals, meant to maintain the original character of the breed, reduces profitability and can, therefore, have negative effects on the population size.

**In Session 4** (free communications, programme and elections), there were 11 theatre presentations and 22 posters. The programme for EAAP 2006 in Antalya (Turkey) was presented and topics for the EAAP meeting in Dublin were proposed.

**Session 6** was on “**Progress towards reduction of disease in sheep and goats**” and was chaired by D. Gavier-Widen (SE). There were three guest papers: “Scrapie: an overview; policy issues and potential eradication measures” presented by D. Matthews from the U.K., “Blue tongue in sheep: brief overview of the disease, impact on production and current epidemiological situation in Europe, control and prevention” by J. Casal from Spain and “The problem of anthelmintic resistance in nematode parasites of sheep and goats, and the prospects for non-chemotherapeutic methods of control” by P.J. Waller from Sweden, followed by five theatre presentations: Breeding for scrapie resistance in the Netherlands, PrP allele frequencies in Italian flocks, Sustainable internal parasite control in Australian Merino and Analyses of udder health in Italian dairy sheep. The main conclusions from this session are that breeding programmes for

resistance to scrapie had proved useful in reducing classical scrapie, but that newly recognized forms of prion disease (atypical scrapie) occurred in resistant genotypes. Three papers discussed the results, effects and risks of conducting such programmes, and presented various strategies. There is a need for measures to reduce inbreeding rates and loss of diversity. The breeding strategy needs to be adapted to population structure, ARR allele frequency and other factors. Blue tongue poses a threat as an emerging disease in the Mediterranean basin. Its effects on production and trade, its epidemiology, preventive and control methods for the European situation were discussed. The problems of widespread development of anthelmintic resistance in nematode parasites in small ruminants were highlighted. While a number of approaches and strategies, such as worm vaccines, biological control, breeding for worm resistance, and others have proven beneficial, no single method on its own is likely to result in sustainable parasitic control.

**Best “young” presentation.** *J. Maxa, E. Norberg, P. Berg and J. Pedersen from Denmark* for the paper “Genetic parameters for birth weight, growth and litter size for Danish Texel and Shropshire” in Session 4 of Free Communications.

**Best poster.** *R. Ruiz, J. Arranz and I. Beltrán de Heredia from Spain* for the poster “Effect of winter shearing during late pregnancy in the Latxa dairy sheep” presented in Session 4 of Free Communications.  
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### **Report of the Commission on Pig Production**

Earlier at the 5th Annual Meeting of EAAP in Bled, the Commission on Pig Production contributed at nine sessions and the round table of which most were in collaboration with other commissions. The general theme of the Uppsala-meeting “**Quality assurance systems to ensure compliance**” was covered in several sessions in which the pig commission took a leading role. The main topics in this respect were genetics, robust and high health pig systems, improved resource use as well as ecological aspects, feed evaluation systems and feed additives.

At the business meeting we noticed with satisfaction the improved scientific value with the concept of joint sessions. The availability of the manuscripts on

the web page of EAAP was highly appreciated. As usual, we discussed also the preparations of the future EAAP annual meetings in Antalya (2006) and Dublin (2007). This year's poster exhibition in Uppsala was exemplary. Finally, the existence of the database on scientists in the different fields of animal production was noticed with great satisfaction.

In a one day workshop on “**Harmonization of Feed Evaluation Systems**” experts of the cattle, horse and pig commissions could present the actual situation mainly in energy evaluation systems in Europe. Caspar Wenk gave a general overview on the existing energy evaluation systems for pigs and discussed in detail the steps from feed energy to net energy in the form of retained or secreted nutrients. Then in a mini workshop for pigs five speakers reported on critical issues in relation to energy evaluation:

- J.E. Lindberg: Nordic Europe Harmonization Initiative
- A. Chudy: Rostock Feed Evaluation System
- A. Susenbeth: Energy evaluation systems for pig feeds
- J. Noblet: Protein and energy value for pigs
- S. Boisen: New PPE–Danish system for pigs

**The following main conclusions were drawn from an intensive discussion:**

- In pigs the concern about feed evaluation is more important for energy than that for protein:
- In many different countries (Nordic Europe, NL, USA, and Australia), researchers from official bodies and industry are looking for an improvement of existing feed evaluation systems:
- Should we use digestible nutrients or digestible energy for moving to ME and NE? Both approaches are more or less equivalent and, in any case, they should be coherent (i.e. the sum of energy contributions of digestible nutrients should be equivalent to digestible energy). The standardized feed analysis and measurement or estimation of energy digestibility are essential accurate systems:
- We need incentives for the introduction of a new database for energetic feed evaluation in pigs:
- From in vitro to in vivo methods with a clear objective of minimizing the use of in vivo measure-

- ments (cost, welfare); in vivo should be more and more considered as a reference (not a routine):
- How should dietary fibres be respected and specified in diet formulation (soluble or insoluble dietary fibres, lignin)?
- Quick versus accurate analyses for practical application:
- Efficient use of the existing data base: A lot of information is available and should be combined!
- In principle, a system based on net energy should be preferred:
- What factors should be respected in the nutritive value of the feed and what should be introduced into requirements of animals (technological treatment, feed additives, physical activity etc.)?
- Big variation in feed evaluation is based on feed analysis and digestibility with many factors that affect markedly energy digestibility. One major factor is (bio)technology: particle size, pelleting and other mechanical and heat treatments, enzymes addition etc.:
- On the other hand, transformation of ME into NE is well known and little variable (at least relatively for the different nutrients) between pigs of different performance and age; in addition, the impact on relative energy value if different ME to NE ratios are considered is negligible in comparison with effects on energy digestibility:
- CVB (Machiel Blok) is re-evaluating the data of INRA (Jean Noblet) on pigs and according to additional lab analyses. They will communicate with the EAAP working group on energy evaluation harmonization:
- All presentations of the entire workshop will be available on a CD (contact person Matteo Crovetto).

**Sessions that were chaired by the pig commission at the annual EAAP meeting 2005:**

**Session I: Pieter Knap and Nils Lundeheim: Robust pigs**

A session with two invited presentations, one on the biological aspects of “robustness” in farm animals (key issues: lack of robustness often arises from frustration as a result of fruitless attempts to adapt, so clearly there is a need to facilitate the pig in its

attempts to adapt to challenges; this requires different strategies in different situations) and the other on the statistical approach of environmental sensitivity through reaction norms (key issues: robust animals are environmentally insensitive for the traits of importance; reaction norms of the breeding goal can be predicted from those of its component traits; when the breeding goal is defined to include fitness traits, then a low sensitivity of the breeding goal is desirable).

The contributed focused on sow longevity (genetic aspects, farm and season effects, effects on piglet growth rate), on osteochondrosis (its relation to sow longevity, an update on its genetic parameters and connections to growth traits, and candidate QTL responsible for it), and on oedema disease and stress susceptibility (interactions of the FUT1 and RYR1 genes in three pig breeds).

Many of these presentations produced a surprisingly coherent picture of the area. A clear message is that the (genetic) relationship between fitness traits and production traits may change considerably (even from positive to negative) between different management and housing conditions, and that this can be quantified through the reaction norm approach.

This session was very well attended and produced a lively discussion; the fact that most people in the audience were geneticists, at a time when the Genetics Commission was running a very popular session, illustrates that robustness is currently a hot item in animal breeding.

### **Session II: Stephen Chadd: High health pig stems**

This was a session run jointly with the Management and Health Commission. In total, in addition to the two invited papers, there were five other short theatre communications and the contributors represented six different European countries. The papers were of an excellent standard and prompted an informed and lively question and answer discussion session, particularly the two main talks.

The first of these set the scene for the overall session theme—that of how to achieve and maintain a high health status in modern pig herds. The speaker, a veterinarian, informed the considerable audience of the Danish experience and approach to securing Specific Pathogen free (SPF) herds, the value of depopu-

lation—repopulation and adopting high bio-security status in commercial practice. This was followed by the research experience of a speaker based the University of Murcia, Spain who was engaged in establishing new non-surgical embryo transfer methodologies together with improved preservation of porcine embryos with the development of vitrification technologies.

The third and fourth papers in the sequence dealt with management improvements required surrounding the sow and new born piglets at parturition time. Factors included the challenge of achieving maximum birth weights and the influence that a sow's breeding value ( $EBV_{ma}$ ) for mothering ability trait might have on the chances for piglet survival at weaning. The fifth communication pursued the genetic and inheritance issues associated with increased welfare awareness and successful selection of the so-called 'functional traits.' Examples given were leg weakness and teat functionality. A study had been designed in order to establish an appropriate monitoring and recording protocol for these at nucleus and commercial levels.

The final two theatre presentations focused more on rearing system comparisons and potential impact on welfare and meat quality issues. In the penultimate study, pigs given free outdoor access demonstrated behaviour more conducive to enhanced welfare although, when compared to conventionally kept pigs (slatted floor, less space) physiological measurements such as urine and plasma cortisol, did not show any significant difference. Improved loin juiciness was observed in the meat of more extensively kept pigs. The final study reported on comparative research into the meat quality traits and fatty acid composition of back fats in Large White pigs kept under intensive vs. extensive situations. Carcass measurements revealed high values for monounsaturated fatty acids in the extensive group. The potential benefit of this for human nutrition was noted.

### **Session III: C. Wenk: Pig and poultry nutrition Session "Free communications in pig and poultry nutrition"**

Due to no shows no poultry topic was presented. The papers in pig nutrition covered nutrition subjects in sows, piglet and growing pigs. In an elegant but

laborious experiment, it could be shown that feed restriction after weaning influences the excretion of pancreatic juice, an important factor for nutrient digestion. Two papers dealt with the form of feed. It could be shown that particle size of washed faeces, measured by image analysis allows direct conclusions on the feed fineness and composition. In another experiment was found that pelleting of the diet does improve the feeding value mainly of barley but not of oats. The other papers dealt with individual nutrients and their effect on pig performance. Fast growing piglets have a higher tryptophan requirements compared to the current recommendations. The application of the concept of ideal protein allows improving the dietary protein utilization markedly. The use of organic selenium as seleno methionine instead of inorganic selenium almost doubled the efficiency. Whereas the form of selenium had no effect on liver Se content increasing dietary Se supplements lead to higher a linear increase of Se in the muscles. The supplementation of fat to a standard diet for sows (pregnancy and lactation) increased the litter size significantly. This effect was more pronounced with fat rich in unsaturated fatty acids. Finally in a compressive study the influence of dietary fat on growth performance, tissue lipid composition and sensory characteristics was evaluated.

#### **Session IV: M. Kovac: Pig production, management and health**

##### **Session “Pig production: Management and Health”**

The session comprised eleven short papers and 24 posters covering production systems, genetics, animal welfare, and health. The Irish presentation confirmed expected differences among sexes for growth rate, feed conversion and lean meat content at 80, 100, and 120 kg body weight. In Finland, they found considerable and undesirable correlation between lean meat content and meat quality. The quality was intended to be included into breeding goal to prevent undesirable correlated effect of selection on lean meat content only. The need for new traits considering fatness was reflected in a French study where they proved the back fat mass was a sufficient measure to estimate body lipid under practical conditions. On the basis of genetic parameters, Hungarian authors concluded that selection on measured traits or derived ratios could give the same genetic response. Two

studies were devoted to various gene effects on meat quality. The paternally imprinted IGF-II gene seems to affect only electrical volume and L\* value. The effect of twelve markers including RYR1 gene was evaluated for drip loss and some other meat quality traits. Among them, seven genes showed significant effects, thus, marker assisted selection was recommended for meat quality traits.

The welfare section started with the question—how does animal welfare legislation affect labour load, housing design and management routines in pig production units in Sweden? It was evident that farmers spend more time working in the barn; however, the regulations had a positive effect on pig welfare and comfort. Another group from Sweden observed nursing patterns in first parity sows kept outside. Sows with large litters stayed outside the hut longer and they laid down less than sows with average and small litters. It means that they are less available for nursing. An inappropriate environment in the next study was simulated in chambers where pigs were exposed to a high concentration of atmospheric ammonia for 20 days. The effect of NH<sub>3</sub> was observed in blood and behaviour pattern, indicating stress. A Danish group presented Bayesian analysis of data obtained in experiments testing animal preference of more than two choices when pair-wise analysis is not possible. The session finished with a simulation study of emergency vaccination on the spread of classical swine fever. In a high density area, vaccination may reduce the number of infected animals but not the duration of epidemic.

#### **Session V: D. Torrallardona: Coping with new regulations: Alternatives to antibiotic growth promoters and castration.**

This was a joint session with the Nutrition and Physiology Commissions. The first half of the session dealt with the issue of alternatives to castration. It started with an invited presentation on the subject reviewing the welfare implications of castration, the advantages and problems of the different alternatives like castration with anaesthesia, non-surgical methods of anaesthesia and the production of entire male pigs. This was followed by seven oral communications on the topic, that dealt with the initial experiences on the use of local anaesthesia in Norway, the possibilities

for genetic evaluation of animals with predisposition to boar taint, the rearing of entire males and the dietary modulation of boar taint with raw potato starch or chicory roots. The second half of the session started with the second invited paper that introduced the problem of using antimicrobial growth promoters, and reviewed the results available with the use of minerals, organic acids, enzymes, pro- and pre-biotics and botanical extracts as alternatives. This was followed by the corresponding oral communications. In a first communication an example of the evaluation of the effectiveness of mannanoligosaccharides as an alternative using statistical holo-analysis was described. This was followed by a communication on the possible interactions between the probiotic *B. toyoi* and the therapeutic antibiotic colistin, and a communication on the potential of benzoic acid as an alternative to antimicrobial growth promoters. The session enjoyed a high level of attendance and all presentations were followed with very lively discussions, indicating both the high interest on the topics that the session dealt with and the need for further research for new alternatives to both castration and antimicrobial growth promoters.

### Forthcoming International Meetings:

The 10th Symposium on Digestive Physiology in Pigs (which is held every three years under the auspices of the European Association of Animal Production (Commission on Pig Production)) will be held in Denmark in May 2006. J.A. Fernández will be the chairman of the organizing committee. Additional information will be found in the web site [www.dpp2006.dk](http://www.dpp2006.dk).

**Members of the Pig-Commission** In autumn 2006 (October 8–13) C. Wenk and O. Simon are planning a workshop on “**Eubiosis in the digestive tract for healthy animals—Relevance for man**” in Switzerland.

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### Report of the Horse Commission

The scientific activities of the commission were carried out during 6 sessions (including a business meeting) and a workshop conducted with other commissions in Uppsala whereas the different working groups of the commission have held meetings in different places in Europe along the year and in UPPSALA too. The activities have been focused around 3 key words: **pluridisciplinary approach, harmonisation and education.**

The equine industry wishes to get new figures to breed and grow healthy **young horses** as 30% of them are affected by osteoarticular lesions. Osteoarticular status of young horses is now well assessed in different European breeds. Frequency of lesions is higher in sport breeds than in race breeds. The osteoarticular lesions and their regional distribution differ between breeds independently of their use and training regimens. The heritability of different lesions averages 0.30 but with a wide range according to the site (0.10 to 0.50). Different genetic models are developed to reduce the frequency of lesions such as osteochondrosis. But osteoarticular lesions are related to environmental factors to a large extent. High growth related to high nutrients intake would be responsible to the occurrence of osteoarticular lesions. As a result, large survey and experimental **pluridisciplinary research programmes** are in progress in Germany and in France, mainly to assess the effect of the environmental factors and to elucidate the physiological mechanism involved. A similar programme was conducted in Sweden some years ago. The long-term goal of all these programmes is to determine threshold risk and strategy of prevention of the risk of osteoarticular lesion. Such programmes should increase European collaboration in the very next future.

Horses are travelling more and more for breeding or competition (and to some extent for meat exportation). But the **identity of horses** crossing borders is increasingly questionable as horses can change name and numbers. As a result, information included in the database of the different studbooks and FEI for sport horses can be not consistent. A recent study carried

out by the group Interstallion has pointed out that the genetics connectedness between 2 countries could be limited: the Genetic Similarity (GS) value among the horse population could reach 0.15, twice as high as has been previously reported for major dairy cattle breeds. Hence, the lack of unique ID number of horses across countries is a major obstacle to international genetic evaluation of sport horses. Such a situation limits the exchanges between the countries.

In addition, in accordance with Community animal health and zootechnical legislation laid down in Directives 90/426/EEC and 90/427/EEC, respectively, equidae must be identified during their movements and it is a prerequisite to apply specific medicinal treatments without compromising public health. In order to improve and to reinforce the requirements set down in Commission Decisions 93/623/EEC and 2000/68/EC for registered equidae for breeding and production, the Commission proposed a regulation establishing the method of identification of equidae. This proposal should be formalised in late 2005.

For all these reasons international organisations have been working together since the 1990s to promote international identification number and tools. The session Identification carried out in Uppsala contributed by summarizing the state of progress in **the process of harmonisation**. There is a consensus for a Universal Equine Life Number (UELN). A worldwide computerised identification system of horses is operational. The presentation of UELN and the database numbers are available on [www.UELN.net](http://www.UELN.net). A project of data exchanges using XML format is in progress too. It is co-financed by WBFSH and HARAS NATIONAUX in France. Discussion is still in progress about the identification tools: blood types, DNA types, microchips, natural and artificial permanent marking, electronic transponders now linked with European passports. Discussion is planned to continue in the scope of a workshop located in Warendorf (Germany) in early September 2005. The papers given during the session (and others provide from other meetings) could be published as a special technical issue of EAAP.

The commission has been involved in the workshop and a session focused on “**Harmonisation of feed evaluation systems** in farm animals”. For horses a consensus has been designed by 9 countries, which had representatives (or/and have provided their posi-

tion before the meeting): Finland, France, Germany, Italy, Island, Norway, Poland, Sweden and UK.

### **The key process to enable a European rationing system to be implemented as standard across the EU might be**

- To share nutritional concepts using the same frameworks for energy and for protein, each country being free to implement through these common step-wise approaches the system they want to use, up to the step they wish to reach according to local conditions;
- To determine the most appropriate criteria, laboratory methods and finally tools (tables, equations = models, and software) for evaluating, then predicting feeds nutritive value at each step of the energy and protein frameworks;
- To compare husbandry systems, breeds and existing rationing models.

There is an agreement to focus the effort and collaborate between the countries in the very next future on the evaluation and prediction of the digestibility of energy and protein as it is a key gate for all the systems proposed (points 1 and 2). Collaboration is scheduled in the scope of the Working Group Nutrition (see business meeting).

The equine industry is strongly growing in all European countries due to the diversification of animal production and great changes in socio-cultural way of life. As a result there is an increasing demand of information and of **education in Equine science**. 11 countries have presented their systems of education. The situations are very different, but more or less the different levels of education are offered: vocational education and higher education. The systems are very centralised at university and connected with equine centres in some countries. Or the systems are spread in different institutions where courses are more or less part of vocational education, bachelor or master programmes in other countries. The trend in several countries is to reorganise their system. Programmes are more and more individualised, formalised to deliver diploma of Equine science, or vocational education in Equine which incorporates combined equestrian or race training. Masters have been created and entitled: “Equine science, Sport sciences (associated with

human) or behaviour and welfare". A working group has been designed to conduct a discussion about the **organisation of education in Equine science across the EU**. A workshop could be organised in 2006 under the umbrella of Horse commission.

### Horse industry in Sweden

Sweden is probably the European country which has most evaluated and formalised the socio-economic interest of equine industry in the scope of the evolution of animal production and society needs. As a result, Sweden has anticipated the reorganisation of different components of the equine industry: education (higher or/and vocational education strongly linked with Swedish University), production (rearing systems of young horses) and utilisation (modernisation of training centres and race tracks and betting systems) of horses for leisure, sport and races (trot). In addition an original foundation so called: "Nationella Stiftelsen för Hästhallningens Främjande" (NS) has been started for supporting education and research for the development of the Equine Swedish industry. This foundation coordinates the demand of equine industry and the offer of education and research of university or/and vocational structures and the funding supplied by Swedish state and private companies (included insurance company) or Swedish Horserace Totalisator Board (ATG). The Horse tour fairly well highlighted this evolution.

### Business meeting

The **Young Scientist Award** has been given to **Jane-Winther Christensen** (DIAS Foulum) from Denmark who gave an oral presentation entitled: "**Learning performance in relation to fear in young horses**". A study carried out in collaboration with Swedish University of Agricultural Sciences (SLU).

### Programmes scheduled for the next EAAP Meetings.

#### *Antalya, Turkey, 2006 (definitive)*

The following sessions and chairperson have been agreed:

Session 1 Interaction nutrition and reproduction jointly with other commissions (N, Ph, C, P, S and G, H) led by Commission Nutrition;

Session 2 Impact of reproduction technology on horse breeding programmes chaired by E. Bruns (Germany);

Session 3 Effect of management and housing on horse welfare chaired by Eva Sondergaard (Denmark);

Session 4 Free communications (4a) chaired by Jane Winther Christensen (Denmark to be confirmed); and Business meeting (4b) chaired by W. Martin-Rosset;

Session 5 Dietetics feeds and feeding chaired by M. Coonan (Germany);

Session 6 Free communications (6a) chair: to be designed in connexion with session 4a; Horse industry in Turkey (6b) chaired by representative of Turkey (to be designed).

### Dublin, Ireland, 2007 (to be discussed with the Scientific Council of EAAP)

Session 1 Applications of molecular genetics to breeding programmes

Session 2 Pasture management systems in relation to performance. . .

Session 3 Herd and stable management health and performance issues (chair D. Burger?)

Session 4 Human-horse relationships (chair Martine Hansberger?)

Session 5 Free communications

Session 6 Horse industry in Ireland

This proposal takes care of one of the two proposals of Irish host (gene markers) but Update in reproduction was discarded as it is redundant with session 2 scheduled in Turkey 2006.

### Inter-stallion working group

The overall objectives of the Interstallion activities are to "**Improve accessibility, understanding and comparability of foreign breeding information across countries**".

The committee has been set up by WBFSH, the EAAP Horse Commission and by ICAR. Members of the committee are Ludwig Christmann (GER), Egon Fræhr (DK), Hans van Tartwijk (NLD) and late Lynn Aldridge (IRE) appointed by WBFSH, Erich Bruns (GER), Anne Ricard (FRA) and Erwin Koenen (NLD)

appointed by EAAP and Jan Philipsson (SWE) appointed by ICAR. Jan Philipsson has acted as chairman and Erwin Koenen as secretary of the committee.

**Estimation of genetic connectedness across populations and genetic correlations among performance data** are studied in the scope of 2 pilot projects carried out in Sweden or in France in collaboration with WBFSH. Emma Thorén (SWE) is working on an Interstallion pilot project No1 aiming to study the interpretation and the international comparability of genetic proofs based on young horse's tests in different countries. Five breeding organisations with similar types of young horse tests (Danish Warmblood, Hanover, Holstein, KWPN and Swedish Warmblood) have provided data. The first step deals with an analysis of genetic connectedness, i.e. to what extent the same stallions are represented as sires or grandsires in multiple countries. Large problems have been encountered with the identification of stallions which have been used in multiple countries, as they appear under different identification numbers and/or names. Nevertheless, a significant progress was made in linking breeding stallions across organisations. Although final results are not yet available, the current degree of genetic connectedness across the studied populations already looks promising. We expect to finalise the connectedness study in 2005 and then to continue exploring the comparability of the genetic proofs. This study is primarily financed by Swedish research funds (SLU) but also by WBFSH. Catherine Ruhlmann and Anne Ricard (France) started in January 2005 a comparable pilot project No2 focussing on competition results in. The project starts with an analysis of the genetic connectedness of populations that run a genetic evaluation of competition data. Countries that have been invited to participate include Belgium, Denmark, France, Germany, Ireland, The Netherlands and Sweden. The project is performed at INRA Toulouse and is financially supported by ANSF, INRA and Haras Nationaux. Close co-operation with the previous project will be practised to benefit from the work already done to clarify multiple identities of individual stallions.

**Promotion of international data exchange**, namely between FEI (sport results) and WBFSH studbooks (pedigree) is in progress. The results of international FEI-registered competitions are generally not yet included in current national genetic evaluations as

complete information on internationally performing horses, which often change names when traded, is not easily available. One of the main reasons is that these data are recorded by various organisations that do not always adequately exchange data. This is one of the most serious draw-backs in international sport horse breeding. Many of the best sport horses are not properly identified in the computer systems, and thus lost from the national genetic evaluations. To get a better understanding of current practices, Hans van Tartwijk has drafted a flow chart describing steps from the first start in competition of a horse up to his start at the highest international level. This flow chart identifies the points of risk for loss of information and the points with lack of information exchange. Options to optimise the current data exchange procedures are currently discussed and a draft data flow chart has been outlined.

In sport horse breeding, genetic proofs for performance and conformation traits are published on a relative scale. Although many organisations use the same publication scale, a variety of methods to transform breeding values from the underlying scale to the publication scale is currently applied. A detailed review of methods practised shows that definitions of the used reference population vary largely across organisations. This is one of the reasons why the same stallion may have different breeding values when estimated in different countries. A working document on guidelines for the publication of breeding values have been produced by the Interstallion committee and is available from our website. Final recommendations are worked out in 2005 after investigating various alternatives.

The review on breeding objectives of 19 WBFSH studbooks has been finalised by Erwin Koenen and co-workers and has now been published in *Livestock Production Science*. It shows how different studbooks describe the breeding goals of their horse breeds (populations) and the weighting of major traits in selection. The second scientific study has been conducted by Emma Thorén (Ph.D. student in Sweden) and co-workers from Germany, France and the Netherlands, and deals with testing procedures of stallions and young horses. It is based on 17 genetic studies in Europe and inquiries to WBFSH member organisations on testing procedures. A number of conclusions on the efficiency of various testing procedures have been drawn and recommendations have been worked

out for the consideration by the studbooks. The article is now under review by *Livestock Production Science*.

**Inter-stallion** has published breeding information on the Internet since 2003. Our website [www.interstallion.org](http://www.interstallion.org) currently includes standardised details on testing and genetic evaluations methods of 17 studbooks. In addition, several scientific and popular publications have been made available. Breeders can easily download all information free of charge.

**Nutrition working group. The activities of this group are focused on harmonisation of rationing systems across the EU and on the settlement of a research network**

The committee is composed by the time of the representatives of 10 countries (Finland, France, Germany, Island, Italy Norway, Poland, Sweden, The Netherlands and UK). Group leaders are: D. Austbo (N), Andrea Ellis (UK, Secretary) Nicoletta Miraglia (I) and W. Martin-Rosset (F, Chairman).

Referring to the workshop and session carried out in Uppsala on **Harmonisation of feed evaluation systems** it has been decided to collaborate on 2 items:

- In the short term: to check the robustness of the different models for predicting the digestibility of energy and protein of feedstuffs proposed in different countries using the same file of data obtained in different countries too using the reference method (in vivo total faeces collection) and according a common calculation process;
- In the longer term: to determine the digestibility coefficient of forages: silages, hays harvested in Nordic and Mediterranean zones to complete tables of the nutritive value of feedstuffs and to perform new models of prediction (silages), and in vitro methods.

*The 3rd European workshop of equine nutrition entitled "Nutrition and feeding of the brood mare"* will be organised under the umbrella of the commission on June 20 to 22, 2006, in Italy by the University del Molise in Campobasso, Italy. The contact person is Professor Nicoletta Miraglia, who is the president of the local committee: Email [miraglia@unimol.it](mailto:miraglia@unimol.it). And the complete programme and details for organisation are provided on the following website: [www.unimol.it](http://www.unimol.it)

The overall scientific strategy of these kind of biannual meeting initiated in 2002, is to study the physiology and nutrition of the different types of horses: Growing horses in 2004 (see the proceeding published in 2005 as a special scientific issue of EAAP No 114), Broodmares in 2006. Indeed, we need to compare husbandry systems, breeds to determine the feeding standards for these different kinds of horses (see conclusions of workshop "Harmonisation of systems": point 3). There are few books in the field which have been published recently to focus on three keys points: 1. The evaluation and prediction of nutrients requirements; 2. The means to overcome the limiting factors met in the application of the different nutritional systems for rationing horses, comparing the feeding practice throughout Europe; 3. The increasing interactions between health and nutrition which limit the performance and welfare of horses.

### Publications

The scientific activities of the group are found in different publications:

Proceeding of the second European workshop of Equine Nutrition held in 2004, entitled "**The growing horse: Nutrition and prevention of growth disorders**" and published as a special issue of EAAP (EAAP publication No 114, 2005 Ed Veronique Julliand and W. Martin-Rosset). The session entitled "**Nutritive value of concentrates and utilisation in horse feeding**" carried out in Rome 2003 as a special issue of *Livestock Production Science* in scheduled in 2005 (Eds Nicoletta Miraglia and W. Martin-Rosset).

### Meetings

There are Equine meetings which are coming up and in which members of the group are involved: BSAS Equine conference 2005, September 20–21, Cirencester, UK; Equine Nutrition conference (ENUCO) 2005, October 1–2, Hanover, Germany; 3rd European Equine Health and Nutrition congress, March 17–18, 2006, Ghent, Belgium.

### Welfare and behaviour working group

This group is led by Eva Sondergaard (DK, Chairperson), M. Kennedy (UK) and Martine Hans-

berger (F). The activities of the group have been focused in 2 items: The organisation of a European summer school Ethology of horse in Rennes, in Brittany, France, 18–23 July 2005 by Martine Hausberger (Email: [martine.hausberger@univ-rennes1.fr](mailto:martine.hausberger@univ-rennes1.fr)) of Rennes I University. The programme is focused on: observational methods and behaviour repertoires; horses under natural or confined conditions; individual behavioural characteristics (temperaments-development and learning); welfare, management and recommendations. The courses are intended for undergraduate and graduate biology students from different European countries, veterinary students, professional biologists, and further people professionally involved with horses (e.g. riding instructors) that have an equivalent background in biology to other students. The website is: [www.horsebehaviour.univ-rennes1.fr](http://www.horsebehaviour.univ-rennes1.fr); the summer school is placed under the umbrella of the commission as a result is financially supported by EAAP organisation. The publication of the session on “welfare and behaviour of the horse” carried out in Rome 2003 as a special issue of scientific EAAP series in 2005 (Ed Martine Hausberger).

### Education in Equine Science Working Group

This new group has been initiated in conclusion of the session “Education in Equine science” in Uppsala. Ana-Lena Holgersson from Sweden is chairing the group. Members are at present: Andrea Ellis (UK), Nicoletta Miraglia (Italy), Mari Ztterqvist-Blokhuis (Horse connexion website). Other members are expected to join. The aims of this group are to exchange experience, perform a European network (as for Equestrian teaching: so called Euroride) to supply the demand of the European Equine industry. Three projects are scheduled:

1. Organisation of a workshop in 2006 as a satellite of the next EAAP annual meeting in Turkey.
2. Publication of the papers presented in Uppsala and expected in the workshop 2006.
3. Development of a web-site entitled “Horse connexion” devoted to end-users. It is an international web-site about the practical applications of scientific equine research: [www.horseconnexion.org](http://www.horseconnexion.org). The web-site is an initiative of Mari Ztterqvist-Blokhuis from Sweden with the contribution

of Andrea Ellis from UK, linked to Horse commission as the connection aims to be a platform for horse scientists to disseminate their results. This web-site has been presented in Uppsala in the scope of the session entitled “Equine Science education.” A scientific committee should be designed with a strong participation of scientists of the commission to validate the information scheduled to be disseminated before that the web-site might be recommended by the commission to other organisations to be linked with.

### Election

Nicoletta Miraglia (Italy) has been elected as a vice president to replace A Verini-Supplizi who will end his second mandate in 2006.

*W Martin-Rosset. President of Horse Commission  
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### Report of Livestock Farming Systems Commission

#### Report of the Livestock Farming Systems Commission of the EAAP

The scientific scope of the Livestock Farming Systems (LFS) Commission is the development of integrated approaches, models and tools addressing both the socio-economics and the biotechnical aspects of livestock systems, in order to support the sustainable development of livestock production. In the programme of the 2005 Annual Meeting in Uppsala, our Commission organised 2 single sessions in line with this general focus and participated into 4 joint-sessions organised under the responsibility of other Commissions, in which advances gained with these approaches were presented.

In the single session S4 “**Adaptation of livestock farming systems to EU reform and restructuring**”, chaired by Dr. Annick Gibon (F), the past changes and the current prospects for the development of the livestock farms in the enlarged Europe were well documented by speakers from both the animal research area and advisory and development services, and were actively discussed by the 80 participants in the session. In the main paper, André Pfmilin (Institut de l’Elevage, F) drew a remarkable address of the issues

raised by the 2003 CAP according to the variety in local environments within the EU 15, based on a careful zoning of the LFS characteristics, and the national modalities for the reform application. He stressed the resulting risks for the future of livestock farms in the Less Favoured Areas and a large part of the grassland areas of the enlarged Europe. The detrimental socio-economic and environmental impacts following from the application of Pillar I of the CAP expected in these areas, especially strong in the case of full decoupling, appear to be reinforced by the current uncertainty with respect to the application of the Pillar II of the CAP. In conclusion, he emphasised the need for further evaluation of the consistence of the CAP reform measures with their claimed objective, i.e. the development of multifunctional livestock farming, from a thorough assessment of the changes under progress at the various areas in Europe.

Three short invited papers and 4 offered contributions provided the participants with sound data and reflection on the current and prospected change in livestock production and farm development at European livestock production areas of contrasted orientation and environmental conditions: dairy production in Denmark; the various livestock productions in Ireland, Germany (Bavaria) and Hungary; beef production in Hungary. Some detailed aspects of the evolution of LFS were also addressed: the genetic changes under progress in the UK sheep systems since the 1980s, the variation in expected animal performance according to socio-economic strategies of part-time sheep farmers in France. The session ended with a lively discussion, during which Prof. Kurt Peters reported the discussions and conclusions of the Satellite Workshop of the Cattle Network of the EAAP, "**Perspectives of beef production in Europe**", to the organization of which he contributed in the name of our Commission. The discussion emphasised the need to assess prospected impacts of policy changes according not only to EU regions but also farm types in the regions and stressed the general difficulty the recent CAP reform raises for combining social economical and ecological dimensions of sustainable development of livestock farming, especially in difficult environments. It resulted into a recommendation for the Livestock Farming Commission to think into the

development of a project that would allow the elaboration of a concerted zoning proposal for livestock regions in EU25–27 and the development of common tools and indicators for a comparative assessment of the changes under progress at the real-life livestock farming systems in the various regions, in order to enhance the understanding of the changes under progress and to support decision making in public livestock development policy.

Session 23, chaired by John E. Hermansen (DK), was devoted to the LFS Commission free-communications. The 7 oral contributions and 8 posters given by authors from 12 different countries (Germany, Spain, Austria, Greece, Sweden, Belgium, Switzerland, Italy, Vietnam, Uganda, Kenya, Morocco) offered a coherent programme on on-farm approaches to livestock farming systems, addressing both methods for describing and assessing systems (characterization methods) and indicators for decision support in order to understand such systems (constraints and opportunities). All theatre presenters gave clear presentations and the 35 participants were very active in discussing the contributions.

The joint sessions in which the LFS Commission cooperated are presented in the reports of the Commissions responsible for their respective organisation. Some of the main papers and contributions offered in these sessions illustrated well the value of integrated approaches to real-life systems developed in LFS research for supporting the adaptation of animal research orientations to the societal requirements. A special mention is made in that respect to the position paper on the approach to the future of local animal genetic resources in Session 11 "**Specialised ruminant products to sustain systems and genetic resources**" by F. Casabianca (F), the clear and well-documented overview of the current challenges for the further development of organic farming presented by J.E. Hermansen (DK) in Session 25 "**Alternative low input/organic production methods**", and the outstanding address of nutrition and animal management as part of a global strategy of reducing the environmental impact of pig production by M. Bonneau (F) in Session 30 "**Nutrition and management strategies to improve resource use in livestock systems**", based on the results of a wide cooperative research French project associating closely researchers in

LFS and various specialities in animal production sciences.

In addition of good interactions with the other Commissions on the occasion of these sessions, a point of interest in the activity of the LFS Commission within the 2005 Annual Meeting is the successful cooperation established with the new-born Cattle Network of the EAAP for the preparation and venue of its satellite Workshop “**Perspectives for beef production in Europe**” (June 3–4).

As testified among others by the audience to the Commission business meeting, attended by more than 40 participants, the LFS research area appears to consolidate and to meet a growing interest in animal research over Europe. Framework approaches and methods integrating the bio-technical, socio-economic and environmental dimensions being increasingly requested for sustaining the future of the livestock production sector, the Commission decided during the Business meeting to establish a Working Group devoted to the consolidation of the European space of LFS research and the enhancement of cooperation between research and livestock development partners. Annick Gibon has been given the charge of coordinating the WG and preparing an application to EU calls (SSA) in support to its activities. The WG will prepare a European reference book on LFS research and study the possibilities for preparing an international project about the variety of European livestock farming systems and the topical issues for their development in relation to public policies.

The Commission also decided to invest resolutely in developing North–South cooperation and joint-activities with the Ethics Working Group of the EAAP, in relation to the recognised need to consider globally the current challenges for livestock farming development and to develop further theoretical and methodological frameworks of a generic character for supporting it.

These general orientations are reflected into the themes of the Commission sessions at the next Annual Meetings (cf. the Antalya 2006 and Dublin 2007 programmes). Three single sessions will be devoted next year to LFS research advances (“**Ethics of Sustainability**” organised with the Ethics WG of the EAAP; “**Advances in decision support concepts and tools for managing sustainability**”; and “**Free Communications**”).

The cooperation established with the Cattle Network will be followed up with the organisation of a satellite workshop on “**Development trends in small farms**” in Antalya, Turkey, on September 15th 2006, in relation with the session “**Scale-dependant opportunities and efficiency in livestock farm development**”, a joint-session organised by our Commission with the Sheep and Goat, Management and Health and Cattle Commissions.

During the Commission business meeting Prof. George Zervas (University of Athens, GR) was elected President of the Commission, Dr. John E. Hermansen (DIAS, DK) and Dr. Vera Matlova (National Institute for Animal Production, CZ) Vice-Presidents, and Dr. Stéphane Ingrand (INRA, F) Secretary of the Commission. The new-elected board members will begin their mandate at the end of the 2006 Annual Meeting, and Prof. Kurt Peters (Vice-President, Humboldt University of Berlin, D) and Dr. Alberto Bernues Jal (Secretary, Centro de Investigación y Tecnología Agroalimentaria de Aragón, S) their second mandate.

The paper by Cécile Fiorelli and co-authors (F), “**Strategies and management practices of part-time livestock farmers: an example of sheep farming in French grassland region**” [S2.9] was selected as the best presentation of a young scientist by our commission, and the poster by D. Ndumu and co-authors (Austria and Kenya) “**Size versus beauty: farmers’ choices in a ranking experiment with African Ankole Long-Horned cattle**” [S23.19] as the best poster. We warmly congratulate these colleagues.

Finally some comments about the publications in preparation. The book in the EAAP Scientific Series “**Livestock Farming Systems: Product quality based on local resources and its potential contribution to improved sustainability**” (Roberto Rubino et al., Eds), prepared by from the material of the 6th International Livestock Farming Systems Symposium, should be published shortly now. The LPS special issue on “**Livestock farming systems and the environment**” (John E. Hermansen and Georges Zervas, Eds), prepared from related sessions in the programme of the 2004 Annual Meeting, is currently under press.

*Dr. Annick Gibon. President, Livestock Farming Systems Commission  
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## TRAINING COURSES

### CIHEAM/IAMZ Courses, Mediterranean

The following courses are offered by CIHEAM and IAMZ. Information: Instituto Agronómico Mediterraneo de Zaragoza, Apartado 202-50080 Zaragoza, Spain. Tel:+34-976-716000. Fax:+34-976-716001. E-mail: iamz@iamz.ciheam.org Web: <http://www.iamz.ciheam.org> Email: iamz@iamz.ciheam.org.

### Masters Courses

**Animal Production. Postgraduate Specialization Masters Course** will be held from 3 October 2005 to 9 June 2006 in Zaragoza, Spain.

**Agro-Food Marketing (10th Edition) International Masters Course** will be held from 3 October 2005 to 9 June 2006 and from October 2006 to July 2007 in Zaragoza, Spain.

### Seminars

**Sustainable Irrigated Agriculture in the Mediterranean Region: Input Management and Pollution Control** will be held from 14 to 25 November 2005 in Zaragoza, Spain.

**Environmental Indicators as a Tool for Sustainable Rural Management** will be held from 8 to 12 May 2006 at Zaragoza, Spain.

Mediterranean Aquaculture and Environmental Management will be held from 24 to 28 April 2006 in Murcia, Spain.

### Wageningen Agricultural University

The international postgraduate course ‘**New Developments in Feed Evaluation**’ will be held at Wageningen University and Research Centre in the Netherlands from 26 September to 1 October 2005. Course Leaders are: Prof. W.H. Hendriks, Prof. M.W.A. Verstegen (Wageningen University and Research Centre) and Prof. P.J. Moughan (Massey University, New Zealand). Information: Tini Ipema, Wageningen Business School, P.O. Box 226, 6700 AE Wageningen, tel. 0317 484094, Email: <tini.ipema@wur.nl>Internet: <http://www.wau.nl/phlo>.

### Danish Institute of Agricultural Sciences, Department of Genetics and Biotechnology

A post-graduate Online Course will be offered on Estimation of Genetic Parameters using Likelihood and Bayesian Methods. The course is planned to start in September 2005 and will be taught by Daniel Sorensen. Course fee Euros 1000 for Ph.D. students and Euro 1500 for other participants. Information: Karin Smedegaard, Secretary Dept. of Genetics and Biotechnology, Fax: +45-8999-1300. Email: Karin.smedegaard@agrsci.dk or Daniel.sorensen@agrsci.dk. <http://www.mcmc-de.dk>.

### Erasmus MC—Faculty, Rotterdam, The Netherlands

A three week course on “Genetic-epidemiologic research methods (GE02)” will run from 24 October to 18 November, 2005 on Monday, Tuesday, Thursday and Friday from 10.00–17.00 hrs. The fourth week is a study week. It is organized by the Department of Epidemiology and Biostatistics, Erasmus MC Rotterdam, PO Box 1738, 3000 DR Rotterdam, The Netherlands.

This course may be interesting to those who may want to extend their expertise towards the field of human genetics and genetic epidemiology. A statistical geneticist with classical animal breeder’s background may make a good career in genetic epidemiology. Faculty: Yurii Aulchenko, Cornelia van Duijn and Simon Heath.

The aim of this course is to introduce participants to the basic principles of genetic epidemiological research. The first part of the course is dedicated to binary traits. The basics of probability theory and hypothesis testing are covered, using examples from genetics. Population genetics of disease and different measures of disease risk are considered. The first part ends with probability- and risk calculation in families and principles of complex segregation analysis. Many examples and exercises illustrate the principles of Bayesian risk calculation for simple and complex genetic disorders. The second part of the course focuses on the genetics of quantitative traits. The concept of heritability is introduced. Estimation of heritability and

basic quantitative trait linkage analysis using Hase-man–Elston and Variance Component methods is discussed. The use of modern genetic analysis software such as SOLAR and MERLIN will be introduced using practical examples. In the third part of the course design of genetic epidemiological studies will be discussed. This will be illustrated by practical examples.

Cost: 1250 Euro. Discounts are available, for example, for CMSB and GeNeYou members. Information: Dr. Y. Aoultchenko. Tel: +31 10 408 7362. Fax: +31 10 408 9406 e-mail: [i.aoultchenko@erasmusmc.nl](mailto:i.aoultchenko@erasmusmc.nl) Further information also from Dr. Fakhredin Sayed-Tabatabaei Email: [f.sayed@erasmusmc.nl](mailto:f.sayed@erasmusmc.nl) Website: <http://www.epib.nl/geneticepi/courses.html> Registration: <http://www.nihes.nl/>.

#### University of Natural Resources and Applied Life Sciences Vienna

The Department of Sustainable Agricultural Systems, Livestock Sciences, offers an International Ph.D. course in the Conservation Genetics of Animals from 20 November to 2 December 2005 in Grub, Germany. The main instructors will be: Roswitha Baumung (University of Vienna) and Ino Curik (University of Zagreb) and guest teacher Henner Simianer (University of Göttingen) who will teach on “Criteria for choosing units for conservation priority.” The Course fee is Euro 215 and due to the financial support of H. Wilhelm Schaumann Stiftung it will be possible to refund part of the fee for Ph.D. students. Information: Dr. Roswitha Baumung. Email: [roswitha.baumung@boku.ac.at](mailto:roswitha.baumung@boku.ac.at) Tel:+43-1-47-654-3272. Fax:+43-1-47-654-3254.

#### Barneveld College, The Netherlands

All courses include theory and practical aspects of management and technical operations, with study visits and are suited to beginners and mid-career specialists in production, extension and management. Information: Dept. International Studies, PO Box 64, 3770 AB Barneveld, The Netherlands. Tel: +31-342-414881. Fax: +31-342-492813. E-mail: [io@ipcder.hacom.nl](mailto:io@ipcder.hacom.nl).

#### Short Courses at Barneveld College

Courses will be held at various dates through 2005–2006 in the following topics:

- Modern Broiler Management
- Modern Hatchery Management
- Modern Breeder Management
- Modern Pig Farm Management
- Feed Formulation
- Practical Feed Production
- Combination Feed Formulation and Practical Feed Production

#### CALENDAR OF SCIENTIFIC CONFERENCES

##### OCTOBER 2005

**2005 Animal Waste Management Symposium** will be held from 5 to 7 October 2005 in Rayleigh, North Carolina, USA. Information: Dr. Gerald B. Havenstein, North Carolina State University, Raleigh, NC USA. Tel: +1-919-515-5555. Fax: +1-919-513-1762. E-mail: [Gerald.Havenstein@ncsu.edu](mailto:Gerald.Havenstein@ncsu.edu). Website: [www.cals.ncsu.edu/waste\\_mgt/](http://www.cals.ncsu.edu/waste_mgt/)

**6th International Conference of Rare Breeds International** will be held from 9 to 14 October 2005 on the Conservation of Domestic Animal Genetic Resources in Magaliesburg, South Africa. Information: [www.rbi.it](http://www.rbi.it).

**5th International Mouflon Symposium** will be held in The Netherlands from 19 to 22 October 2005. Information: Dr. J.T. Lumeij, Faculty of Veterinary Medicine, Universiteit Utrecht, The Netherlands. Email: [j.t.lumeij@vet.uu.nl](mailto:j.t.lumeij@vet.uu.nl) Website <http://www.mouflonsymposium.info/>.

##### NOVEMBER 2005

**Tropical Animal Production Conference, Cuba.** A conference will be held on many aspects of livestock production in the tropics in Havana, Cuba from 7 to 11 November 2005. Information: Email: [congreso2005@acpa.co.cu](mailto:congreso2005@acpa.co.cu) or from the EAAP Website: [eaap.org](http://eaap.org).

**Meeting the challenge of Globalization.** A Conference will be held from 15 to 18 November 2005 in Thailand jointly between the British Society of Animal Science and the University of Khon Kaen, Thai-

land and the Animal Husbandry Association of Thailand. Venue: Khon Kaen, Thailand. Information: mike.steele@sac.ac.uk or [www.bsasahat.kku.ac.th](http://www.bsasahat.kku.ac.th).

## JANUARY 2006

**Berlin Green Week Conference on Perspectives of Beef Production with Suckler Cows under Extensive Conditions.** This Conference of the German Beef Cattle Breeders and Producers, Bonn, will be held in Berlin as a part of the Green Week celebration from 13 to 15 January 2006. Information: EAAP Website: [www.eaap.org](http://www.eaap.org)

## APRIL 2006

**International Conference on Livestock Services Enhancing Rural Development.** This International Conference on Livestock Services Enhancing Rural Development will be held in Beijing, P.R. China from 16 to 22 April 2006. Information: Dr. Gong Xifeng or Dr. Liu Yukun, Department of international Cooperation, Chinese Academy of Agricultural Sciences (CAAS), Fax: 86+10+62174060 Tel: 86+10+621852 42 Email: [gongxifeng@mail.caas.net.cn](mailto:gongxifeng@mail.caas.net.cn) [liuyk@caas.net.cn](mailto:liuyk@caas.net.cn) Further details also available at EAAP Website: [www.eaap.org](http://www.eaap.org)

## MAY 2006

**Beef 2006 Australia's National Beef Exposition** will be held from 1 to 6 May 2006 at Rockhampton, Queensland, Australia. [www.beefaustralia.org](http://www.beefaustralia.org).

**10th Symposium on Digestive Physiology in Pigs** (which is held every three years under the auspices of the European Association of Animal Production Commission on Pig Production) will be held in Denmark in May 2006. Information: J.A. Fernández: [josea.fernandez@agrsci.dk](mailto:josea.fernandez@agrsci.dk). Web: [www.dpp2006.dk](http://www.dpp2006.dk).

**Joint Organic Congress** will hold a Workshop from 30 to 31 May 2006 in Odense, Denmark. Information: EU-AgriNet from: [http://europa.eu.int/comm/research/agriculture/index\\_en.html](http://europa.eu.int/comm/research/agriculture/index_en.html).

## JUNE 2006

**35th Congress of ICAR and INTERBULL** will be held from 7 to 10 June 2006 in the city of Kuopio,

Finland. Information: [www.proagria.fi/icar2006](http://www.proagria.fi/icar2006). Email: [juho.kyntaja@proagria.fi](mailto:juho.kyntaja@proagria.fi).

**The 3rd European Workshop of Equine Nutrition** entitled “**Nutrition and Feeding of the Brood Mare**” will be held under the umbrella of the EAAP Horse Commission on 20 to 22 June 2006 at the University del Molise in Campobasso, Italy. Information: Prof. Nicoletta Miraglia Email [miraglia@unimol.it](mailto:miraglia@unimol.it). Website: [www.unimol.it](http://www.unimol.it).

**6th Congress of the European Society for Agriculture and Food Ethics** will be held from 21 to 24 June 2006 in Oslo, Norway. Information: [www.eursafe.org](http://www.eursafe.org).

**Paradigms in Pig Science. A Nottingham University Conference** will be held in June 2006. Information: [julian.wiseman@nottingham.ac.uk](mailto:julian.wiseman@nottingham.ac.uk).

## AUGUST 2006

**8th World Conference of Genetics applied to Animal Production (8WCGALP)** will be held from 13 to 19 August 2006 at Belo Horizonte, MG, Brazil. Information Email: [secretariat@wcalp8.org.br](mailto:secretariat@wcalp8.org.br) Fax: +55-31-3494-6025. Website: [www.wcalp8.org.br](http://www.wcalp8.org.br).

## SEPTEMBER 2006

**XII European Poultry Conference** will be held in Verona, Italy from 10 to 14 September 2006. Information: Email: [epc2006@wpsa.it](mailto:epc2006@wpsa.it) [www.epc2006.it](http://www.epc2006.it).

**57th EAAP Annual Meeting** will be held from 17 to 20 September in Antalya, Turkey. President: Professor S. Metin Yener. Information: Saltur Tourism and Travel Agency, Tel: +90-312-418-83-00. Fax: +90-312-425-71-37. Email: [saltur@eaap2006.gen.tr](mailto:saltur@eaap2006.gen.tr).

## OCTOBER 2006

**Eubiosis in the digestive tract for healthy animals—Relevance for man.** A Workshop will be held in Switzerland from 8 to 13 October 2006. Information: Caspar Wenk, Animal Sciences, ETH Zentrum/LFW B 57, 8092 Zürich, Switzerland Email: [caspar.wenk@inw.agrl.ethz.ch](mailto:caspar.wenk@inw.agrl.ethz.ch).

**27th IDF World Dairy Congress** will be held from 20 to 23 October 2006 in Shanghai China. Information: [www.idf2006shcn.com](http://www.idf2006shcn.com) Email: [Info@fil-idf.org](mailto:Info@fil-idf.org).

**SEPTEMBER 2007**

**58th EAAP Annual Meeting** will be held from 1 to 5 September 2007 in Dublin, Ireland. Information: [www.eaap2007.ie](http://www.eaap2007.ie) Information on Dublin city: [www.dublin.ie](http://www.dublin.ie).

**2007**

**7th International Conference** of Rare Breeds International will be held in Vietnam in 2007. Information: [www.rbi.it](http://www.rbi.it).

**AUGUST 2008**

**XXIII World Poultry Conference** will be held from 10 to 15 August 2008 in Brisbane, Australia. Email: [wpc2008@im.com.au](mailto:wpc2008@im.com.au) <http://www.wpsa.info>.

**2008: 59th EAAP Annual Meeting** will be held in Vilnius, Lithuania.

**2009 and later EAAP Annual Meetings** will be held in Greece, Spain, Slovakia and France for future EAAP Annual Meetings.