European Association of Establishments for Veterinary Education

and the Federation of Veterinarians of Europe

European System of Evaluation of Veterinary Training

REPORT ON THE VISIT TO THE FACULTY OF

VETERINARY MEDICINE AND ANIMAL SCIENCE (SLU) OF UPPSALA

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INTRODUCTION

An EAEVE Evaluation Team visited the Uppsala Campus from 22-26. October 2007 together with an Evaluation Team from the Swedish National Agency for Higher Education. Visits to venues within the Faculty and interviews with various groups of Faculty personnel were carried out together, but discussions between team members and report development were separate.

Since the EAEVE Evaluation Visit in 1998, there have been major changes in Uppsala. The Faculty of Veterinary Medicine joined up in 2004 with parts of the former Faculty of Agriculture, Landscape Planning and Horticulture to form a new Faculty of Veterinary Medicine and Animal Science within the Swedish University of Agricultural Sciences. Since 1998 the number of Departments has been reduced from sixteen to six. As a means of relieving the heavy budgetary burden on the Veterinary Faculty, the responsibility for the clinics was transferred in 2007 to the University Animal Hospital, reporting to the Rector. The modification of the "old" curriculum has followed on along the lines of the "Bologna Process" and a totally new curriculum has been introduced in September 2007, a procedure, which will take five years to complete. Other changes have been listed in the Self Evaluation Report.

1. OBJECTIVES & STRATEGY

1.1. Findings

The Faculty of Veterinary Medicine and Animal Science has Education and Research as its two primary objectives, with a weighting towards research, personnel costs for teaching being € 12 m. compared to research at € 16 m. Education involves first (basic), second (advanced) and third (research) levels in animal science, veterinary medicine, ethology & animal welfare, veterinary nursing, equine studies and research. Research involves research in its non-pedagogic form. Environmental monitoring and assessment, continuing education and informatics are essential adjuncts to the main objectives.

1.2 Comments

- The report emanating from the EAEVE Visitation in March, 1998 was received during the implementation of the old curriculum and it was one of the reasons for the for the conception of the new curriculum, based upon the principles of the *Bologna Process,* which has just been introduced in September, 2007. The intention is to prepare students for their future professional role as newly graduated veterinarians with the realization, that lifelong learning is a necessity for any professional activity within the biomedical field.

2. ORGANISATION

2.1 Findings

The Faculty of Veterinary Medicine and Animal Science is one among 4 faculties (Landscape Planning; Horticulture and Agricultural Science; Natural Resources and Agricultural Science; Forest Sciences) of the Swedish University of Agricultural Science (SLU). SLU employs a total of 2900 people, about 3500 first and second level students and 800 third level students are enrolled. The University Board, which

includes the Rector, has the main responsibilities governing the University. The Rector has a number of advisory bodies including the Education Council, Research Education Council, Student Welfare Council and the Advisory Committee. The University Administration has been reorganized in January 2007 and consists now of six divisions. The present organisation of the Faculty has been established in 2004 as the Faculty of Veterinary Medicine and Animal Science, founded by departments of former faculties of Veterinary Medicine and of Agriculture, Landscape Planning and Horticulture. By this reorganisation the number of Departments has been reduced from 18 to six. Further, the clinics were restructured to form an University Animal Hospital directly under the Rector. The Faculty is led by the Dean, who is the chief executive of the Faculty. He chairs the Faculty Board. The Dean is appointed by the Rector, following a nomination by the Faculty Assembly. One Associate Dean and additional Vice Deans responsible for first, second and third level studies are appointed. Within the Faculty there are a number of boards, committees and subcommittees. The six scientific departments (Anatomy; Physiology and Biochemistry; Animal Breeding and Genetics; Animal Environment and Health; Animal Nutrition and Management, Biomedical Sciences and Veterinary Public Health; Clinical Sciences) vary in their size between 51 and 110 persons and are run by the Heads of Departments which are appointed by the Dean.

2.2 Comments

- There is a rather dramatic and extensive reorganisation taking place at the Faculty. Firstly, a new Faculty has been created, including Departments from Animal Sciences aiming to create a worldwide visible centre of excellence in an integrated Veterinary/Animal Science environment.
- Secondly, the number of Departments has been significantly reduced from 18 to 6, which now have large research units with significant manpower and equipment able to successfully compete in high quality international research consortia as well as to supply high quality teaching.
- Thirdly, a University Animal Hospital has been established, administratively independent from the Faculty. This gives the Clinical Sciences Department now much more possibility to concentrate on clinical teaching and research. On the other hand, the University Animal Hospital is now administered directly by the Rector, enabling it to have a much better eye on economic matters and integrated clinical service.
- Fourthly, complete new buildings have been planed both for the Faculty and the University Animal Hospital as well as for the Faculty Farms.
- This restructuring of the organisation has led to a better decision making process, since separate interests of a large number of institutes are no longer present and general interests of the Faculty are being brought into work much earlier. There seems also to be a straight forward decision tree from the Rector down to the Faculties giving the Faculty adequate flexibility. This has been demonstrated by dramatic innovative changes recently made. The Faculty does have influence on the University policy via the Advisory Committee, however the formal extent of this influence could not be clearly identified.

2.3 Suggestions

2.3.1

Taken all together, the new Faculty of Veterinary Medicine and Animal Science has been stocked with efficient organisation and scientific structures catering

very well for the scientific future as well as for the challenge arising from the application of the new curriculum. Since the structures have only recently been created, the success cannot be measured to a suitable extent at the time of the present review. Although the vast majority of the Faculty members, including the students, are in favour of all these changes, critical voices should not be ignored.

2.3.2

The balance between basic and clinical sciences needs to be carefully observed, as well as the balance between resource allocation between livestock and non livestock science.

2.3.3

Care should be taken, that the assignment to the University of the Animal Hospital does not lead to a total external income dependence, which although lowering the cost for teaching materials and other facilities, might limit the use of the hospital and reduce available cases for students.

3. FINANCES

3.1 Findings

The Swedish Agricultural University in Uppsala is funded by the Ministry of Agriculture, Fisheries and Food. Additional income is received via research grants, animal hospital fees etc.

Funds are also received for research and 3rd level education, which are inevitably inadequate, so extra funding is received from research councils, foundations, local authorities, county councils and commercial companies.

Capital expenditure decisions are made at Departmental, Faculty or University level, depending upon the amount. The distribution of Faculty funds to Departments is determined by the Faculty Board.

On the expenditure side, the four University Faculties through an ”overhead charge” of 15% of the personnel costs cover the costs of administration, infrastructure services and teaching development.

The annual cost of training a veterinary student is € 23.000,00 and for the total training period € 127.000,00

3.2 Comments

- Considering the structure, the Faculty is given a remarkable degree of flexibility and autonomy and government funds can be assigned to Departments as their needs are determined.

3.3 Suggestions

3.3.1

More effort and investment should be made in further development opportunities and programmes for all classes of staff.

4. CURRICULUM

4.1 General Aspects

Within the legal framework of the Swedish University of Agricultural Sciences (SLU), the Government has laid down which degrees may be awarded by the University and the objectives for these degrees. At University level, the University Board approves the study programme, whilst the Faculty is responsible for the detailed course syllabus.

At present, there are two curricula for the veterinary programme running concurrently. The first was approved in 1997 by the Board of the SLU but is now being gradually replaced by a second new curriculum, which was approved in 2007.

The new curriculum (NC) has started in the academic year 2007/2008, shortly before the EAEVE visit took place. The 2007 curriculum was designed in order to prepare the newly graduated veterinarians for their future professional role and to ascertain that she/he realises that life-long learning is essential for any professional activity within the biomedical field.

The chapter 4 - Curriculum of the SER has been written based on the old curriculum.

4.1.1 Findings

The “old” veterinary curriculum (OC) covers eleven terms of full time education (5.5 years) and is the same for all students during the first 5 years, comprising pre- and para-clinical studies (approx. 6 terms), and clinical studies (approx. 4 terms). The last term consists of a period of courses and activities with elective studies together with a scientific degree project, together covering 20 weeks. Elective subjects can be also taken in the fifth year. Projects may be comprised of anything from basic (experimental) to practical (clinical) character. They may also include work outside University. There is a compulsory one week practice in food-animal production during the summer holidays between years 1-2 or 2-3, and two weeks of meat inspection practice in year 5.

The academic year under the OC comprises 40 weeks open for timetable activities, corresponding to 40 credits, distributed amongst the disciplines involved. One credit (“poäng”), approximately corresponds to one week of full-time studies. Courses from the first to the fifth year vary from 3 in the second year to 10 in the fourth year. Recently, the academic year was reduced to 37 weeks, to leave more time free for academic activities.

The overall objective of the one-term long course “Elective Studies with Degree Project” is to give the individual student opportunity to select in-depth studies, through independent search for scientific knowledge and individual development of the ability to critically pursue analysis and synthesis of this knowledge in an area of the student’s choice. In addition, acceptable oral and written presentation of the knowledge gained has to be shown.

Apart from the formal 5.5 years studies on the Faculty premises, in the 1997 curriculum there is a one-week period when the students take part in the work on a dairy or pig breeding farm (“Practice in Animal Husbandry”). Also, during the fifth-year course “Food Hygiene”, groups of three students attend the live animal and meat inspection at two slaughterhouses, in Uppsala and Skara, one week at each site.

The ratio Theoretical Training versus Practical and Clinical Training is 1/1.87, which is

more than acceptable. This high ratio is valid for all subjects, with a minimum of 1/1 in some cases. The ratio Clinical Training versus Theoretical and Practical Training is 1/2.50, which again is more than acceptable.

The contents of the proposal for the new curriculum (NC) were accepted by the Faculty Board in October 2006. The objectives and contents of the new veterinary programme were approved in May 2007. The first year of implementation is the current academic year 2007/2008. The NC is adapted to the “Bologna process”.

The first degree of BSc with a major in Veterinary Medicine is obtained after six terms, including a degree project of 7 weeks and corresponding to 180 ECTS.

The Master of Science in Veterinary Medicine can be obtained after eleven terms, i.e. the same total length as the OC, nine terms of a common core and a tenth term that offers elective courses and three elective species-oriented clinical course “packages”. A degree project of approximately 20 weeks, corresponding to 30 ECTS, also has to be completed for the Master degree to be concluded in the 11th term, sixth year.

Thus the NC introduces the concept of “differentiation” in the development of the MSc students. In the 10th term students will follow one of the following sets of courses: Small Animals, Horse including Food Safety or Production Animals including Food Safety. Forty student places are assigned to small animal, 40 to production animal, and 20 to the horse “differentiation”. Allocation of places will be based on first and second choices but, if necessary, there will be a “lottery”. Students are aware of this..

The NC abolishes the one week practice in food-animal production during the summer holidays, but introduces the Extramural Practice, with credits, which did not exist in the OC.

As the study programme is still under development, a complete version of the curriculum is not yet available.

4.1.2 Comments

- The Faculty of Veterinary Medicine and Animal Science has made a concerted effort to maintain an updated curriculum adjusted to the present needs of the veterinary profession and to the “Bologna process”.
- As far as theoretical and scientific preparation is concerned there are no critical points which need to be highlighted at the Faculty. On the contrary, the high level of scientific preparation of teachers and research staff is generally acknowledged and could be confirmed by the EAEVE team.
- The integration of subjects into large courses seems to be well accepted by students and teachers, this having decreased the number of examinations. The fusion and reorganization of the departments has also been helpful in the process.
- One negative aspect of the integration of subjects was pointed out by the students as leading to excessive amount of reading and studying for certain examinations, putting a high pressure on some students for whom failure in an examination can seriously affect their progress. Although all members of the Faculty are aware and accept that stressed students are a common problem, suggestions on how to address it were rarely offered.
- There are high expectations concerning the NC implementation. Concerns were expressed by the students with regard to the selection of those who will fill the available places in each specialization.

- Contrarily, significant satisfaction was expressed by the “employers” for which this solution could help solve the problem of the lack of professionals in some fields of activity, especially farm animals clinics, epidemiology, public health, etc.
- The NC is generally accepted as a great improvement, its formulation and implementation having had full participation by teachers, researchers, students and support staff.
- The opportunity of developing a curriculum with a high input of clinical cases is a challenge to be fully realised in order to integrate as much as possible academic training and clinical work.

4.1.3 Suggestions

4.1.3.1

A solution for the relief or at least partial relief of the stressed students’ problem should be sought. The possibility of reducing the curriculum overload should be discussed amongst teachers, without diminishing the high level of the course. It is possible that the new curriculum, with the specialization tracks will help prevent some situations of stress.

4.1.3.2

An increase in Problem Based Learning (PBL) teaching should be stimulated with the proviso that cases are adjusted to the scientific background of the students and that facilitators are prepared for the task. Otherwise the risk exists that students may start disbelieving that the system is interesting and that it is useful in creating a new reasoning process in the acquisition of knowledge.

4.2 Basic Subjects and Sciences

4.2.1 Findings

All subjects listed in the EEC 1978 Directive are covered in the OC except for Pharmacy, which is dealt with during the course in pharmacology. Under Swedish legislation, veterinarians are not, with few exceptions, permitted to mix or sell pharmaceutical preparations. This rather precludes the need for a course in pharmacy.

Chemistry is also not mentioned as it is a prerequisite for entering the veterinary medicine programme.

Some subjects` teaching time is not indicated with an independent value, but included in other closely related subjects. Such is the case in Biology, Biophysics, Physiopathology and Toxicology.

Basis subjects such as Anatomy, Biochemistry, Genetics and Histology are taught in an integrating discipline named Structure and Function of Body Systems.

Practical Anatomy teaching is based on dissection of one slaughtered horse per year, whole body material from horses used for surgical training, organs from slaughterhouse, dogs and cats donated by owners following euthanasia, body material of cadavers from fox and mink fur farms and laboratory rats. Students are organized in small groups for dissection classes and they work in small well equipped

rooms housing two groups at a time. One lecturer accompanies the groups during the practical.

Disposal of these materials is undertaken by services of the University and sent to the incinerator of the National Laboratory Institute, or collected by a company which produces biogas, which makes the cadavers' disposal cheaper for the Faculty.

Practical Anatomy teaching also includes "Live Anatomy", with animals from the various departments or belonging to students.

Practical teaching of Physiology uses the goat herd and dogs from the Department of Clinical Studies or personally owned by teachers and students.

Practicals on histology are taken in a large laboratory facility that can accommodate 84 students. For histology practicals, students are divided into two groups of 50. Each students gets a microscope and shares with one colleague a set of glass slides. A projection system is available for the teacher to do class demonstrations. Teachers are present on the floor and students feel they are offered a good preparation.

Biochemistry lectures and practicals take place in the Biomedical Centre, the latter in groups of eight students which are introduced to five different topics. Subjects such as Genetics and Immunology are also taught in the Biomedical Centre.

Pathology subjects are taught in cooperation with the National Veterinary Institute located in the Faculty campus. The pathology diagnosis performed by the Faculty only involves cases from the veterinary hospital and from the ambulatory clinic. However, the proximity to the necropsy room of the National Veterinary Institute permits students, PhD students and residents to benefit from this proximity and increase the number and variety of cases available. Students are divided into small groups of eight and have practicals every day for three weeks.

Bacteriology, Parasitology and Virology are taught in close connection with the National Veterinary Institute. The laboratory used for practicals is located in the same building, as is the case with the necropsy room. Students are taught the basic techniques of diagnosis for each subject.

Pharmacology practicals are organized for groups of 14 or 15 students. Most of the work is performed with the use of computer programmes and models, as it is not possible to make use of live animals.

Courses on Basic Subjects also organize Problem Based Learning sessions in which groups of five students are given one or more topics, sometimes more than one per week, to develop in various sessions with the help of a facilitator.

4.2.2 Comments

- The fact that subjects like Biochemistry, Immunology and Genetics are taught in the Biomedical Centre, outside the campus premises, may be a risk for good and effective integration.
- The number and species used for anatomical dissection is not enough to fulfil the needs, as fresh material, especially dogs and cats, is significantly missing.
- The number of necropsies performed seems enough, however it could be improved if the students could have more frequent access to cases from the Veterinary Hospital.
- In 2006, a total of 342 necropsies was performed which accounts for a ratio students/post mortem examinations of 1/5.3, which is above the minimum value acceptable.

- The possibility exists that the construction of the new building may affect the good performance of the Department of Biomedical Sciences and Public Health once it will be separated from the National Veterinary Institute.

4.2.3 Suggestions

4.2.3.1

The existence of the Veterinary Hospital and its future development should increase the possibility of using more fresh material for dissection and necropsies, in order to maintain the high ratios even with a higher number of students.

4.2.3.2

The new building should be used as an important opportunity for more active and effective integration of the teachers who currently develop their activities at four different locations in Uppsala.

4.2.3.3

On the relocation to the new buildings of most of the divisions of the Department of Biomedical Sciences and Public Health, care should be taken to preserve the close contact with the National Veterinary Institute.

4.3 Animal Production

4.3.1 Findings

The teaching in animal production is provided, depending on the subject, by the departments Animal Environment and Health, Animal Nutrition and Management, Biomedical Sciences and Veterinary Public Health and Clinical Sciences. Several topics are not given as separate subjects, but are integrated into other courses. Therefore it is quite difficult to identify in the respective courses the identities and the curriculum hours in the EU-listed animal production subjects. Whereas animal behaviour, animal welfare and reproduction is well covered, the topics of animal husbandry (incl. livestock production systems), animal nutrition and feeding, environmental protection, parts of preventive veterinary medicine (incl. health monitoring programmes) and rural economics are integrated into the courses on population medicine, pathology, pharmacology, small animal surgery and medicine, comparative reproduction, obstetrics and udder health, veterinary public health and the ambulatory clinic. There is a one week course of “practice in animal husbandry” held on farms near the Department of Animal Environment and Health in Skara.

4.3.2 Comments

- Formal teaching on animal production courses concerns only a limited number of disciplines. Most teaching is incorporated into other subjects. Whether teaching in aspects like pasture management, forage production and ^ production system economics is being done could not be clearly identified. There seems an almost unacceptably low teaching load in animal nutrition for all of the species concerned.

- Animal husbandry (including livestock production systems) is not considered sufficient in the first years.

- Sufficient prior exposure of students to practical conditions of farm animal production is not available. The same concerns apply to the early exposure or instruction of students on how to handle farm animals. An early course in hands-on handling and basic management is necessary and a compulsory extramural period of several weeks on farms to acquire the basic skills for various species (cattle, swine, sheep, horse) should be introduced.

- Teaching in animal production disciplines in the early part of the course establishes a good foundation of principles of general husbandry and animal management. The teaching should cover the impact of production aspects on factors influencing product quality, an issue of veterinary herd health management. This teaching of applied animal production needs to be linked to the training in food safety disciplines, since production factors will have a strong influence on the quality and safety of products of animal origin.

- Most regrettably, the new curriculum does not change this hardly acceptable situation, at least in the core curriculum. The team hopes that some aspects of these shortcomings are being taken care of in the “differentiation” production animals. Generally, the new curriculum has not used the chance, to utilize the new Faculty structure with respect to higher integration of the animal science departments in the curriculum.

4.3.3 Suggestions

4.3.3.1

Animal production disciplines should be thought of as basis foundation early in the course, covering all aspects of general husbandry and management.

4.3.3.2

Training or exposure to the handling and basic day-to-day management of farm animals should be provided at an early stage in the course through a combination of on-site teaching and extramural work.

4.3.3.3

The relationship between production factors and quality of food of animal origin needs to be clearly demonstrated by closer coordination or combination of the teaching in the two areas.

4.3.3.4

Much greater use should be made of the experimental farms for education in farm animal handling and basic management and also of the farms to which the Faculty has contact.

4.3.3.5

Students must have sufficient exposure in up-to-date farm animal production technologies (milk, beef and pigs) to be able to analyse factors influencing animal health and product quality.

4.4 Clinical Sciences

4.4.1 Findings

A most important area for the veterinary students is the clinical training. In Uppsala, the complete training is offered at the University. There is a well-functioning University Animal Hospital and field services in the form of an ambulatory clinic located in the Clinical Centre together with the Department of Clinical Sciences.

The courses in clinical subjects are given during the spring of the third year of studies and during the fourth and fifth years. The practical clinical training is predominantly through 23 weeks of introductory courses and 45 weeks of rotations in the different clinics. Most practical and supervised work is obligatory. All clinical work is obligatory.

The small animal clinic is open around the clock, all year round. The horse clinic also runs an emergency service. The University Animal Hospital has an active mobile clinic, which provides emergency and night services all year round. Students participate in the emergency and night duties at the clinics as part of their coursework.

During the fourth year of studies the students are divided into two groups. One of these first attends the small animal clinics, the other attends the horse clinic rotation. At “halftime” they do their examinations and then change clinics.

The layout of the fifth year 30 weeks of rotation is more complicated. Students are divided into a large number of small groups which is necessary for the period at the mobile clinic.

In summary, each student spends

- 6 weeks in Ruminant Medicine,
- 6 weeks in Comparative Reproduction and Udder Health,
- 3 weeks in Swine Medicine,
- 1 week Epizootiology and Degree Project,
- 7 weeks in the Mobile Clinic,
- 2 weeks at slaughterhouse practice,
- 3 weeks Degree Projects and Electives,
- 2 weeks for own studies.

4.4.2 Comments

- The Faculty should try to find a solution to provide students with more animal material for anatomy and pathology, other than just skinned foxes and minks for anatomy and some occasional clinical cases for pathology.
- There seems to be a problem in providing students with animals for learning basic clinical skills before the students are allowed to enter the hospital. Students, before entering the animal hospital, have to be acquainted with several basic techniques. There is logic in the fact that students must have some basic skills before applying them on owners’ animals. It is strange however that students need to practice even on their own animals because the department cannot afford the animals.
- The students work in a remarkably independent way. Nevertheless, attention has to be drawn to the fact that the case load of the animal hospital is properly used

for educational purposes. Even simple cases can be of pedagogic repetitive importance.

- With the increasing number of students and the new curriculum, students are rather concerned about their elective courses. Some fear that they will not be able to attend the electives they choose.
- There is a real concern with the decreasing amount of cattle farms in the Uppsala region, together with an infiltration of the area with private practitioners.
- There is a concern amongst the clinical teachers that teacher-student-contacts are diminishing. Instead of talking problems over with a teacher, students more and more talk it over amongst themselves. This can lead to a waste of scientific expertise.
- The disciplines appear to be integrated and well coordinated.
- It is questionable whether each student gets enough hands-on clinical teaching. As is so often the case, case-loads are often far from optimal.
- It would appear that adequate opportunities are offered to students to handle the common bovine and small animal surgical and medicinal procedures.

4.4.3 Suggestions

4.4.3.1

It is imperative that the new curriculum offers all students adequate hands-on clinical training.

4.4.3.2

The team considers the fact that the weeks of extra-mural farm studies have been reduced in the new curriculum and that they are unlikely to be made up in the "differentiations". This can be perceived as a retrograde step and the Faculty is urged to consider re-introducing such studies at the same level at least as in the old curriculum.

4.5 Food Hygiene & Technology and Veterinary Public Health

4.5.1 Findings

General teaching

The objectives are clearly identified: "acquire the knowledge required to uphold community demands concerning food of animal origin"

Courses identified as "Food Hygiene" take place in year 3 (188 hours) and year 5 (79 hours) totalling 267 hours. These are courses (lectures or practicals) specifically oriented to the subject.

In addition, within the Biomedical Sciences and Veterinary Public Health Department, several other subjects are presented with a "food oriented" or "veterinary public health oriented" strategy in year 2 (e.g. bacteriology, parasitology), year 3 (pharmacology, toxicology) or year 4 (pathology and necropsy).

The staff of this Department has been developing an integrated training with lectures and practicals, partly using problem based learning with small groups of students assisted by a teacher, or computer based cases for laboratory work.

Contrarily, animal nutrition and the associated risks are not covered.

Practical teaching

All students have two weeks in slaughterhouses, one of 3 actual days in Uppsala covers cattle, pig, sheep + minced meat and the other in Skara, where they also have visits covering meat products and poultry. These periods are under the organisation of the Meat Inspection Service of the National Food Administration, in coordination with the Faculty. Other than these two weeks, there are no external visits scheduled.

On a voluntary basis, students may work and earn money as slaughter inspection assistants during summer (one month usually) after their 3rd year (about 15-20 positions a year). That could be a very interesting complement for those destined for the "animal production and veterinary health differentiation", and should perhaps be made compulsory for these students.

4.5.2 Comments

- The theoretical part of the core "Veterinary Public Health" subject appears to be correctly covered, with the exception of pre-harvest quality management involving good farming practices, animal feed inspection and control etc.
- Practical applications are limited by the absence of outside visits and some subjects are poorly covered e.g. fish inspection, auditing and assessment of food safety management systems.
- As a whole, the minimum knowledge that is necessary in veterinary public health for a veterinary practitioner is well covered, but the Faculty has to be conscious that the quantity of practical or even hands-on activities is very small compared to many other veterinary schools and that does not provide enough skills for people wanting to work in this field.
- The National Food Administration which is the main employer in the field of food safety is concerned by insufficient compliance of the actual curriculum with the requirements recently introduced in Swedish regulation (EU based) for official veterinarians
- The new departmental structure (Biomedical Sciences and Veterinary Public Health Department) has facilitated the development of integrated teaching, to the satisfaction of both teachers and, despite supplementary work, of students. Modern e-learning tools are available or in progress through the SLU website e.g. bacteriology data base). Due to this, the students seem to have an increased interest in these subjects than in many other Faculties. The laboratory of immunology is not on site at present (but in the Biomedical Centre) and the department would benefit if it was closer situated.
- The cooperation with the nearby NVI is essential for several points for teaching and research.

4.5.3. Suggestions

4.5.3.1

In the new curriculum, the basic (= for all students) learning for Food Safety is a minimum that does not match the newly established regulation for Official Veterinarians' competence, but the two "differentiation electives" including food safety may offer enough competence. Further continuous education will be essential to reach more specialised skills as needed by a specific employer (NVA) for its veterinary inspectors.

4.5.3.2

A specific "Food Safety and Veterinary Public Health" complementary course should be made compulsory, in a continuous education framework, to allow veterinarians having chosen the "small animals differentiation" during studies to re-orientate if necessary.

4.6 Electives, Optional Disciplines and Other Subjects

4.6.1 Findings: Elective/Optional Subjects

The overall objective of the one-term long course “Elective Studies with Degree Project” is to give the individual student the opportunity to choose in-depth studies, through independent search of scientific knowledge and individual development of the ability to pursue critical analysis and synthesis of this knowledge in an area of the students` choice. In addition, acceptable oral and written deliverance of the knowledge gained should be shown.

A total of 20 credit points include elective in-depth studies (courses, departmental activities etc) within and outside SLU, and a degree project of at least 10 credit points. The individual student is responsible for the planning and implementation of the course activities whilst involving academic staff (tutors and supervisors), who act as facilitators and organisers rather than as a direct source of facts. Each student selects an area of in-depth studies and contacts a suitable supervisor or if needed several co-supervisors. The individual student is responsible for the implementation of the work. A specific teacher is elected as examiner of the degree project. Planning and implementation of the in-depth studies and the degree project is performed during the 5th (3 p) and the 6th (17 p) year of study. Administrative responsibility lies within the Department where the project is performed. In addition to the elective courses offered by the University, courses and other activities can also be found through NOVA (other Nordic faculties), Erasmus/SOKRATES (other European universities) or through other international contacts, pharmaceutical companies, animal hospitals, other Swedish universities, etc.

All electives offered are tabulated on page 37 of the SER.

Electives in the New Curriculum

The new curriculum conceives electives in three different sections:

- Elective Courses and Extramural Practice
- Sets of 3 alternative Elective Courses termed “Differentiation”
  1. Small Animals
  2. Horse including Food Safety
  3. Production Animals including Food Safety
- Degree Project

4.6.2 Comments

There is clearly a very broad base of optional elective subjects, details of which can be found in the SER, which offers the student an almost bewildering choice.

It is regretted by the team, that the number of weeks of extra-mural studies has been reduced in the new curriculum.

4.6.3 Suggestions

The reduction in extra-mural studies in the new curriculum has been already addressed earlier in the chapter.

5. TEACHING QUALITY & EVALUATION

5.1 Teaching Methodology

5.1.1/2 Findings/Comments

Several methods of teaching are used. Classical lectures are combined with PBL and clinical hands-on training. Problem based learning is introduced in an early stage of the education. The classic problem confirmed by the students is that not all education is fit to be taught in a PBL environment. When students lack the bare basics of what they are intended to learn, PBL is not going to work. There is still a need to first build a solid base of knowledge before one can apply useful PBL. Another aspect of good PBL-teaching is that it requires good tutoring. Students stated that PBL was indeed implemented too early and sometimes even without a tutor. The time they spent on it would have been better used reading some scientific work about the subject.

One of the concerns of the team is the possibility that, as a result of the recent split of the Animal Hospital from the Department, the “commercial” aspects of generating ever-increasing levels of external income might take precedence over the maintenance of the already high level of quality of teaching.

Students seem well prepared before entering a course. The learning objectives are put forward in a very clear way so they know what to expect and how to prepare.

The information students can rely on during a course are multiple. Teachers recommend English textbooks. These textbooks are available in several copies at the different libraries. Sometimes lecture notes are provided on paper or are available through an electronic learning platform. The extent to which the platform is used differs strongly from course to course. It is much dependant on whether the teacher is ‘computer-minded’ or not.

Although animal exposure is too low in the preparatory courses (anatomy!), exposure to real-life clinical cases is adequate. This can be related to the fact that the most animals are insured. The students work in a remarkably independent way. Attention has to be drawn to ensuring that the case load of the animal hospital is properly used for educational purposes. Even simple cases can be of repetitive importance.

5.2 Examinations

5.2.1/2 Findings/Comments

- The examination system appears to be effective and requires that students have to pass the relevant examination before going on to the next year.
- Examinations in the NC cover a lot of the curriculum, especially with regard to the integrated courses. This is a student concern.
- Students only pass a written examination if they obtain more than 66% of correct answers.
- The percentage of approval is generally high, above 90% in some cases.
- Following 3 fails, the student guidance officer is asked to help to find the problem.
- External examiners are used infrequently.

5.2.3 Suggestions

None.

6. PHYSICAL FACILITIES & EQUIPMENT

The Royal Veterinary College (now part of the Faculty of Veterinary Medicine and Animal Science, SLU) moved from Stockholm to Uppsala during 1973-76. In Uppsala, the College moved then into newly built premises. In addition to the Uppsala location, the Department of Animal Environment and Health is situated in Skara about 350 km southwest of Uppsala.

6.1 Premise in General

6.1.1 Findings

In Uppsala, the Departments are spread to four different centres:

1. Animal Science Centre -HVC,
2. Clinical Centre - KC,
3. Biomedical Centre - BMC,
4. Kungsängen Research Farm.

Furthermore, one Department is located in the same building as the National Veterinary Institute (SVA).
The Departments all have access to the University's jointly operated teaching facilities (libraries, assembly hall, lecture halls, seminar rooms, computer laboratories, etc.).
As a result of changing demands from education and research, continuous smaller alterations and renovations have been made, but most buildings stand as they were 30-35 years ago. There are new demands on housing of animals for teaching and research purposes separated from incoming patients. In short, many buildings that were new 30-35 years ago are now outdated, especially laboratories and parts of the clinics. The Faculty is spread over too many centres, which hinders cooperation and interdisciplinary teaching and research. In addition, the buildings cost too much relative to their condition.

6.1.2 Comments

- There is now an ongoing process to establish a Centre for Veterinary Medicine and Animal Science at the Ultuna Campus, to which the Uppsala Departments will move in 2012. The Centre will also house the University Animal Hospital.

- In Skara, the Department of Animal Environment and Health have a new office building and access to lecture halls, seminar rooms, library and laboratories in a close-by renovated former training-college for teachers. The Department also runs a research facility for beef production at Götala just outside Skara.

6.1.3 Suggestions

6.1.3.1

The team was impressed by the new building plans and suggest, that the Faculty should consider requesting the EAEVE to offer an expert to assess that all aspects of modern science, veterinary medicine and surgery have been foreseen.

6.2 Clinical Facilities and Organisation

6.2.1 Findings

The University Animal Hospital is housed in the main building, which will be superseded by the new building in 2012. It includes a small animal clinic, a large animal clinic primarily horses and an ambulatory clinic.

The Swedish Animal Welfare Act aims at keeping the number of animals used for teaching purposes to a minimum. Cattle, pigs and poultry at the University research farms (in Uppsala: Kungsängen, Jälla and Lövsta, in Skara: Götala) are used for teaching and training purposes.
At the Biomedical Centre, there is a central laboratory facility for small laboratory animals. In the Animal Science Centre, the Department of Anatomy, Physiology and Biochemistry have stables for goats, poultry and rodents.
In the Clinical Centre, the Department of Clinical Sciences maintains a group of eighteen healthy experimental dogs, twelve cows and a group of eleven horses (esp. mares) for teaching purposes. During term, healthy cattle, sheep and pigs are brought in for teaching and training.
The research stables at Kungsängen and Lövsta were built in the early 1970`s and were already considered fifteen years ago too costly to renovate. The herds at Kungsängen (90 dairy cows, 90 heifers, and 10-30 calves), Jälla (100 dairy cows and 40 heifers) and Lövsta (110 sows and 350 fattening pigs, up to 4,000 laying hens and up to 5,000 broilers) are used for teaching.
A new research station with stables for 520 dairy cows, 160 sows in integrated pig production, and for laying hens and broilers will be built at Lövsta eight km east of the Ultuna campus.

6.2.2 Comments

- Modern scientific and clinical work is heavily dependent on the establishment of new methods, which require investment in expensive equipment. In some areas, there is a strong need for renewal.

- The present buildings at Ultuna are not very well suited to their purpose, which has negative effects on staff and students and for education and research. The Faculty is now looking forward to the new Centre for Veterinary Medicine and Animal Science, planned to be ready by 2012, which will enable it to develop further a modern approach to theoretical and practical/clinical education and will solve the “sick building syndrome”.

- One of the issues in the planning of the Faculty’s facilities is diagnostic and training equipment. The Dean pointed out a big advantage in the fact that these investments are shared between academia and the commercially exploited University Animal Hospital. There is a concern within the Departments (especially in the Department of Clinical Science) about the ability to get their students into the Animal Hospital and how much they will have to pay for this. Although the Departments were very much involved in the decision of the splitting of the Animal Hospital from the Faculty, it is strange to learn that such financial matters have not been resolved beforehand. It seems that the Department at the moment finds itself in a rather uncomfortable position not knowing the price for the clinical training of their students.

- The department does not profit from the University Animal Hospital since they still have to provide students with animals for learning basic skills before the students are allowed to enter the hospital. Then they have to pay overhead to the hospital for training the students. In several other meetings it was made clear that students, before entering the animal hospital, have to be acquainted with several techniques. From a pedagogical point of view, this is not so bad. There is logic in the fact that students must have some basic skills before applying them on owners’ animals. It is strange however that students need to practice even on their own animals because the department cannot afford the animals.

- New farm animal facilities are planned. One reason is that less and less students have farm animal experience. The question is whether the facilities in Skara should be more exploited since it appears that there are many farms in the region. Naturally it is difficult for the EAEVE team to assess, since no visit to the Skara facilities was made. Students told us that in one of the electives, there is a possibility to go to Skara and actually work on the farms.

6.2.3 Suggestions

6.2.1

In terms of creating excellence at the new facilities, the Faculty should review the needs of equipment for the future in order to obtain adequate internal or external financing.

6.2.2

Further careful thought should be given to whether the Skara facilities and neighbouring farms should play a greater or lesser role in the clinical curriculum, the distance and the thereby resulting logistics problems being significant considerations.

6.2.3

In all of our discussions it was made clear that the Veterinary nursing students at no time meet or interact with the veterinary students. It is remarkable that there is no use made of the students of veterinary nursing in the University Animal Hospital and that the Department of Clinical Sciences has to employ their own veterinary nurses. An effort should be made to integrate the two courses.

7. ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

7.1 Findings

Sources of materials:

For anatomy: (as on SER p 63) organs from slaughterhouses (cattle, pigs, horses), cadavers from fur farms (mink, fox), laboratory rats. One small (4/5) group of students perform at least one dissection on each species of rat, mink and fox. Other sources include “surgical exercises” at the Department of Clinical Sciences (horses) and, to a minor extent, dogs and cats from clinics, donated by owners.

For necropsy: depending on clinical services activity and eventually supplies with the help of the National Veterinary Institute.

For animal production: few animals, except horses on site. Use of distant sites of research herds (cattle, pigs and some poultry) and limited use of Skara site (year 2)

The SER refers to the number of case animals that students can see at the mobile clinic, but this is somewhat declining and is only during the last year of teaching.

Ratios: (from SER) clinical case load pets: 1/252; livestock 1/278; necropsies 1/5.3

For food hygiene: low or no access to fish or fish products, poultry slaughter house or poultry meat processing unit.

7.2 Comments

- There was an over-representation of horses for the materials available during the visit to the anatomy department and there were very few pigs or pets.
- A one week extramural period on a production farm early in the course is required of students for what is often a first contact with farm animals. This should be continued or even made a requirement prior to the start of the studies.
- It is unusual that students' dogs are relied upon for live anatomy or physiology.
- Visits to an experimental poultry farm with Animal Production staff have been eliminated.
- Declared ratios are satisfactory, but there is an evident lack quality of small animals (dogs, cats) cadavers for necropsy or anatomy.

7.3 Suggestions

7.3.1

Maintain at least a one week period on farm at an early stage of the curriculum.

7.3.2

Increase the number of dead animals coming from the hospital for the training of students. This will add a motivation factor for teachers from the hospital to request clients to give permission for their animals to be used for teaching purposes.

7.3.3

Following the building of the new Faculty building, collaboration with the NVI has to be assured in order to provide sufficient materials.

7.3.4

Increased collaboration with National Food Administration should be enacted to provide easier access for visits to various food industries.

8. LIBRARY & EDUCATIONAL RESOURCES

8.1 Findings

The library is very spacious with a large selection of specialized books and journals, anything else being available on the considerable number of computer terminals. There is excellent access to documents. The facility is very comfortable and used a lot by students.

In order to study in groups, there are several small rooms with terminals, which are available for such group study. Students are trained to use the library facilities. Opening hours seem to suit the students. There is 24 hour code access to one computer room.

There is one complementary "clinical library" within the hospital, which is much used by staff and students alike.

8.2 Comments

- The library is a first class facility, which has recognised the importance of both physical and electronic information for both study and teaching. An example of the strategic use of electronic information is the example of anatomy materials being obtained via the SLU internet site.

8.3 Suggestions

None

9. ADMISSION & ENROLMENT

9.1 Findings

There is one legal selection procedure regulated by the Swedish Higher Education Ordinance based on grades in general and some specific subjects or results at a general aptitude test at the end of secondary school. As there are too many applicants offering the best grades, the final choice is made by lottery.

This admission process by itself does not result in access inequalities, but actually ends in a 80/20 sex ratio and mostly pets-&-horse-oriented candidates.

There is no real *numerus clausus* set by the government and no evidence of a responsible structure to fix the number needed by the country (in 2006, 30% of the licensed vets are diplomates from abroad). However, the increase in number from 80 to 100 entrants has been set, on the Faculty Board's initiative, by transfer from less attractive courses. 100 students per year is said to be a maximum capacity for the installations. Funding of the Faculty is based on the number of students.

Incoming students have top ratings and the teaching staff confirms that they do in general show the necessary aptitudes, knowledge bases and motivation required.

The drop-out rate is very low and are mostly due to reorientation into another choice e.g. medicine.

9.2 Comments

- An alternative e-based aptitude test is to be tested soon for admission in order to avoid the use of a lottery.
- "Positive" discrimination for male students was rejected by students representatives.
- Low drop-out rate is also related to special care for students with temporary difficulties. The average duration of studies is 5.7 years, very close to the theoretical minimum of 5.5 years.

9.3 Suggestions

9.3.1

The start of the new curriculum, with the 3 differential courses (Small Animals; Horse including Food Safety; Production Animals including Food Safety) should be used as a chance to introduce an interview procedure to test motivation of the candidates on these options as well as judging whether the candidate has a suitable personality and attitude for a veterinary professional vocation.

10. ACADEMIC & SUPPORT STAFF

10.1/2 Findings/Comments

Teaching Staff

The future of the Departments is made rather unstable by the high number of retiring professors and the number of PhD students which the Faculty has no capacity to retain. PhD students are frequently absorbed by the market.

Evaluation of teaching is based on course evaluations by the students and self evaluations by the teachers. Students are able to evaluate every course each year. There is a problem of low participation in the course evaluations. Students told us that the reason therefore is that when no major problems appear, a lot of students do not care to evaluate the course. Acute problems can be solved through other channels as the teacher student barrier is very low. Another reason for low participation is that students see little or no immediate feedback of the evaluations. Overall it seems that no major problems are present.

Lay Staff

The number of lay staff is inadequate to support the requirements of the enlarged Faculty. This can take its toll on both teaching and research staff. This is likely to become worse as older lay staff retire and are not replaced.

It has been drawn to the team`s attention, that although it is not specifically required for the SER, there is a clear succession planning programme for both teaching and lay staff. There is also a career development plan in process for the lay staff.

10.3 Suggestions

10.3.1

New ways of stimulating the students to fill out the course evaluation questionnaires should be considered, as this is an important way of controlling teaching quality.

10.3.2

Means should be earnestly sought to resolve the chronic shortage of lay staff in most areas.

Further information can be obtained in detail by reviewing pages 79-83 of the SER.

11. CONTINUING EDUCATION

11.1 Findings

Continuing Education is one of the objectives of the Faculty, in fact, in the University in general. Several Departments offer both short and prolonged courses, which are held at the Faculty. Some courses are conceived in cooperation with the National Veterinary Institute (SVA).

Continuing Education Courses held by the Faculty are tabulated on page 85 of the SER.

11.2 Comments

The Faculty aim to increase Continuing Education activities for veterinarians was lauded by the team, which found the current participation of practitioners in the elective course “Abomasal Surgery in the Cow” exemplary, and hope that the “Differentiations” in the new curriculum, when established, will increase the participation rate of external colleagues.

11.3 Suggestions

11.3.1

Ensure that the “Differentiations” are offered to external participants at an early stage, as this would enrich the practical aspects and add experience to the mix.

Further detailed information can be found in pages 85-86 of the SER.

12. POSTGRADUATE EDUCATION

12.1 Findings

Postgraduate third level Education is very well developed in the Uppsala Faculty.

Third level (research) education is regulated by the Ordinance for Higher Education and bylaws. These set the framework within which the university has developed rules and policies concerning third level education. The regulations stress that, in addition to helping students to develop knowledge and skills, the education should encourage independent and critical thinking among students and enhance their ability to solve problems in a scientific way.

At SLU, the University Board has appointed an 'Advisory Committee for third level (research) education' with representatives from all faculties as well as third level students. Even if each Faculty has the final responsibility for the education, this board formulates general university policies. At Faculty level, there is a "Committee for third level (research) education".

Licentiate degree

The licentiate degree requires two years of full-time studies. involving course work and the completion of a dissertation.

. Doctoral degree

The doctoral degree requires four years of full-time studies. It is intended to guarantee, by means of course work, own supervised research and the completion of a dissertation, that the recipient has attained a sufficient command of the subject matter to be able to place his or her research within a wider scientific context.

12.2 Comments

The Faculty has recently made a thorough revision of its "Guidelines for Third Level Education".

Some key elements in the policy are:

- Emphasis on the Individual Study Plan
- The training is focused on five subjects in order to create critical mass of both students and supervisors
- The financial situation for the student, with special attention to foreign students
- The format of supervision and the qualifications of the supervisors
- The requirement regarding courses, participation in seminars etc.
- The requirement regarding papers included in the thesis
- Half time seminar and revision of the individual study plan in order to monitor progress
- The format of the dissertation including the required qualifications for the examination committee and external examiner

12.3 Suggestions

12.3.1

In order to retain the personnel for the ambitious research programme, the number of doctorate degrees should be at least maintained if not somewhat increased.

Further detailed information can be seen on pages 87-90 in the SER.

13. RESEARCH

13.1 Findings

Research is of the utmost importance, because students benefit from teachers who teach from their own research experience in developing a critical mind and a critical way of thinking. This was confirmed by the colleagues from the different national agencies. They were of the opinion that graduates have a lot more scientifically developed way of thinking than at the time they graduated.

13.2 Comments

The research commitment at this Faculty is remarkable and the minor risk is that it might take preference over teaching. It is both targeted and rational. A research programme strategy (14 pages) document was supplied in Swedish and appears to be very thorough.

Basic subjects have difficulty in attracting PhD students from the Veterinary Medicine course. It is easier to find students from other areas, such as Biology or Biomedical subjects.

Clinical research is very costly. Over the years, the department of Clinical Science has had to deal with financial cutbacks. They are of the opinion that the policy makers do not understand that clinical research is much more cost intensive than para-clinical research. They feel that the Clinical Departments are underfinanced.

It is almost impossible to bear the cost of a PhD student. It appears that PhD students can get grants for 3 years which is too short. They strongly recommend that the minimum period to be funded is 4 years. It is recognised, that this is a general Swedish Universities problem and that the SLU cannot handle this alone.

There is a definite need for adapted PhD courses. Joining Continuing Education Courses is no option for PhD students because there are no credits assigned to those courses. These courses are too expensive and are not set at the level one should expect for PhD-students. Nevertheless, there is an abundance of PhD courses run both at University and Faculty levels.

There is a serious need to develop new laboratory methods which have to be validated for each species. This service is not provided by the clinical chemistry unit which only deals with analyses for infectious diseases.

To give their PhD-students the surgical training they need, there is a definite need for technicians and veterinary nurses, which, strangely enough, cannot be recruited from the Veterinary Nursing course in Skara.

13.3 Suggestions

13.3.1

The short projects which students have to do for their MSc Degree should be promoted as a way to attract more candidates to do research.

13.3.2

The SLU should consider playing a leading role amongst and in cooperation with Swedish Universities in trying to raise PhD student grant funding from 3 to 4 years.

13.3.3

The possibility of recruiting and utilising the Skara Veterinary Nursing graduates to support research should be investigated.

EXECUTIVE SUMMARY

The Faculty of Veterinary Medicine and Animal Science in Uppsala was visited by an EAEVE team from 22-26. October 2007. All requirements of EU Directive 2005/36 were found to be exceeded and there were no apparent category 1 deficiencies.

The first general observation is that the team was most impressed by the fact that teaching and research staff, support staff and students all pull in the same direction, exhibiting an amazing level of unity in terms of willpower and driving enthusiasm towards the goal of jointly creating and maintaining a good Faculty. The team found that the Faculty offers a high standard of teaching and research and was delighted by the open and highly participative discussions with all levels of staff.

The University and Faculty have taken some momentous decisions, initially in terms of the formation of the merged Faculty, followed up by the reduction of the number of Departments from 16 to 6 over a 9-year period, the reorganisation and out-placing of the Animal Hospital from the Faculty to the University in order to resolve a difficult financial situation and the introduction of the new curriculum, which should go a long way to resolving the teaching overload problem.

The total Faculty has, with support from the University, taken the long-term strategic decision to improve their facilities even further by planning to build a new complete Faculty Building, which will resolve many of the not-insignificant problems occurring in the present premises and offer real opportunities for greater integration. In addition, there are plans to build a new larger Faculty Farm, which will improve the case numbers for students significantly and may well compensate to a great degree for the significant separation of the Department of Animal Environment and Health in Skara, some 350km away. It was perhaps a pity, that no member of the team visited this off-site venue during this week, but it is the team`s impression that, despite the fact that Skara is in a region, which is a centre of farm animal production, this situation is far from ideal and the EAEVE Team suggested looking for a satisfactory resolution for this problem. Contact with livestock and real “hands-on” learning are primary needs for the undergraduate students and perhaps need additional consideration.

There is a multitude of other positive aspects, such the world-class library, the excellent collaboration with the National Laboratory, whose Director indicated his concern about any change in the cooperation level, when the Faculty moves into the new building some 500m away, the research-oriented way of thinking, the integrated biomedical sciences approach, to name but a few, which have been commented upon in the full length final report.

As has been said many times, there is no such thing as a perfect Faculty, so near-perfection can always be set as an aim.

Some of the problem areas the team perceived can be listed as follows:

1. The fact that there will be a wave of age-related retirements in the near future has made the subject of short, medium and long-term succession planning of primary importance. At the end of the visit, the team received details of the detailed succession planning process, which is currently in place, which removed the criticism, which had been aired by the team.
2. There is some shortage of support staff at all levels, which evidently adversely affects the smooth functioning of the Faculty and its Departments and there is no succession planning in spite of retirements. (See brackets to 1).
3. Within the basic sciences, there seems to be an in-balanced supply of animal materials for anatomy and post-mortems. Skinned-off mink and foxes should be significantly complemented by more conventional animal species.

4. Within the clinical sciences, in spite of the high case load, there is a shortage of animals for basic procedures by students in preclinical practical sessions. Resolution of this would improve the clinical procedures deficiency in newly qualified graduates as mentioned by the President of the Swedish Veterinary Association.
5. Animal Production teaching seems to be insufficient with regard to training of the students in up-to-date farm animal husbandry procedures.
6. Local practitioners appear to be infiltrating into the territory of the ambulatory clinic, a fact, which could limit much needed cases.
7. There appears to us to be no training and career development plan for lay staff, a situation which cannot be considered acceptable.

In summary, the team discovered no category 1 deficiencies and recommends to the Joint Education Committee that the Faculty of Veterinary Medicine and Animal Science in Uppsala be registered as approved.

This report was presented to the EAEVE/FVE Joint Education Committee on 29. November 2007. Following consideration, the decision was made to register the Faculty of Veterinary Medicine and Animal Science (SLU) of Uppsala as "Approved".