

**European Association
of Establishments for Veterinary Education**

**Association Européenne
des Etablissements d'Enseignement Vétérinaire**



**REPORT on the STAGE 1 VISITATION
to the Faculty of Veterinary Medicine of the Latvia University of Agriculture**

07-11/11/2016

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CONTENTS

Introduction

1. Objectives and Strategy
2. Organisation
3. Finances
4. Curriculum
 - 4.1 General Aspects
 - 4.2 Basic Subjects and Basic Sciences
 - 4.3 Animal Production
 - 4.4 Clinical Sciences
 - 4.5 Food Hygiene & Technology and Veterinary Public Health
 - 4.6 Electives, optional disciplines & other subjects
5. Teaching Quality and Evaluation
 - 5.1 Teaching Methodology
 - 5.2 Examinations
 - 5.3 Student Welfare
6. Physical Facilities and Equipment
 - 6.1 General
 - 6.2 Clinical Facilities and Organisation
7. Animals and Teaching Materials of Animal Origin
8. Library and Educational Resources
9. Admission and Enrolment
10. Academic Teaching and Support Staff
11. Continuing Education
12. Postgraduate Education
13. Research

Executive summary

Annex 1: Indicators

Annex 2: Students Report

Annex 3: Decision of ECOVE

INTRODUCTION

The Faculty of Veterinary Medicine (FVM) within the Latvia University of Agriculture (LLU) is the only establishment for higher veterinary education in Latvia. Soon after Latvia became independent in 1918 veterinary education was established in the country in 1919. In 1944 the FVM was included into the Latvian Academy of Agriculture which is now renamed as the Latvia University of Agriculture. The FVM was initially established at the capital Riga, but in 1964 was relocated to the present site at Jelgava.

The FVM was visited by EAEVE in 2003 and the Evaluation Report approved by the EAEVE and FVE Joint Education Committee in November 2003. There were five Major Deficiencies in this report:

- 1. Increase the amount of practical/clinical training, based upon “hands on” training by decreasing the number of lectures*
- 2. Develop the provision of full-scale 24hour emergency service on the FVML site, on a regular basis, incorporating duty veterinarians for small and large animals and duty schemes for students, so that both an increased availability of cases can be obtained for the students’ clinical training. In addition, it would enable the school to provide adequate professional surveillance during hospitalization of cases at the premises.*
- 3. Create isolation facilities for infected small and large animals.*
- 4. Increase by all possible means the availability of large animal caseloads for teaching students, including pasturing them in the grounds of the FVM.*
- 5. The University and the Faculty must rectify the problem of insufficient numbers of teaching staff in some key areas, notably in animal production and veterinary public health subjects, and in practical/clinical teaching generally*

In 2009 the FVM was revisited to investigate the changes implemented in order to rectify these five Major Deficiencies. Although the FVM had made some progress since the visitation in 2003 the team found that Deficiency 1 and 5 were insufficiently improved and Deficiency 4 was only partly improved. As a result the decision by ECOVE was for NON-APPROVAL.

In order to help the FVM move forward, the visitors in 2009 made a series of “suggestions”:

- The Faculty needs more human resources (number of staff; and personal with high scientific quality)*
- The University has to change the funding of the Faculty*
- The Faculty should be itself responsible for the distribution of funds between the departments and clinics, because the Faculty knows the specific needs of the veterinary education where clinical teaching is the core business*
- A tool to increase the number of personal could be that the income of the clinics remains in the Faculty so that it can hire personal and incorporate teaching with this money*

Summary of the major changes since the last visitation in 2009

During the last 7 years there has been a considerable effort to both build and modernise the buildings at the FVM. A new veterinary hospital (VH) comprising a Small Animal Clinic, an Equine Clinic and a Productive Animal Clinic was opened in 2013, including hospitalization and isolation facilities. In addition the clinics are now equipped with up-to-date equipment. The project was co-financed by the European Regional Development Fund (ERDF) and by the LLU itself.

In 2015 another building and reconstruction project resulted in a new Laboratory of Comparative Pathology, Laboratory of Molecular Biology and Microbiology. Again, the project was co-financed by the ERDF and the LLU.

As far as the study programme itself is concerned there have been a number of significant changes since 2009. For example, the number of non-EU study courses have been significantly reduced, such as philosophy and history, as well as a marked reduction in other courses such as inorganic and organic chemistry.

In 2014 other major changes were introduced in the new curriculum increasing the amount of intramural training in the VH and changing the system of State Exams to emphasize the development of First Day skills.

Another potentially major change was in 2015 when the FVM initiated a veterinary course in English to run aside the existing course in Latvian.

The current Stage 1 Visitation was completed under the Budapest SOP.

1. OBJECTIVES & STRATEGY

1.1 Findings

Not surprisingly, FVM aims to provide an adequate research-based veterinary training which enables the new graduates to “enter all commonly recognised branches of the veterinary profession immediately on graduation”. This is a universal goal from similar teaching establishments within the EU and is based on the regulations outlined in the EU Directive "On the recognition of professional qualifications" (Directive 2005/36/EC as amended by Directive 2013/55/EU).

Within the wider university context, the LLU has produced a Strategic Development Plan covering the years 2015-2020. This plan has the ambitious goal of establishing LLU as one of the leading universities of science and technologies in the Baltic region. LLU regards itself as a multi-directional university consisting of eight faculties, with four core faculties including the FVM.

The overall vision of the LLU is ambitious, by aiming to be one of the leading universities of science and technology within the Baltic region, especially in the sustainable use of natural resources and the enhancement of quality of life for Latvian society. In order to deliver these goals the LLU have established an Advisory Board consisting of national and international experts to both plan and then review such strategy documents.

As far as FVM is concerned, their vision is to provide modern, science based and an ethical veterinary education; and in addition, to carry out scientific and consultative work on a variety of professional topics. To deliver this goal, they have developed a number of ambitious roles for improving their curriculum. For example they are introducing a systematic and effective approach to herd health management and developing strategies against antimicrobial resistance.

The organisation of the FVM at a senior level involves firstly the Dean and the key Directors who are all elected by staff in secret ballots. The vice deans and heads of the main committees are then appointed by the Dean. The Dean reports to the Rector of LLU through the Vice-rector of Studies.

Within the FVM itself the council is the main decision making body and has certainly got a good level of student representation. As far as the newly built and renovated Veterinary Hospital is concerned, there is a director who is appointed by the Rector after advice from the Dean. The veterinary hospital has its own strategic plan

The Study Methodological Commission which is the equivalent of a regular curriculum review committee meets on a monthly basis and has adequate student representation.

1.2 Comment

The FVM has indeed achieved a quite remarkable success in achieving their main objectives as well as actively planning future developments. In 2016 the FVM produced a well thought out SWOT analysis which is within their SER. A number of the key strengths would include:

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- A relatively large number of young and enthusiastic staff
- For a small school, a modern teaching hospital with excellent equipment
- A useful facility termed “Vecauce” for practical training with food animals

A number of the key weaknesses would include:

- A need for more highly qualified and experienced staff in the clinical areas
- The remuneration for both teaching and support staff is rather low
- Potential reduction in the amount of state funding for veterinary undergraduates
- Need to gain full EAEVE approval for attracting sufficient numbers of international students

A number of the key opportunities would include:

- A chance to produce an effective and ambitious course in English which will bring a level of financial security to the FVM
- To develop an enhanced programme for further postgraduate education including a residency programme
- To further their links with external stakeholders

Finally, there are a number of threats for the FVM:

- Lack of competitive salaries could mean the loss of key staff, especially in the clinical area
- Decreasing number of food animals within Latvia
- Danger of emerging disease threats such as African Swine Fever

1.3 Suggestions

The new course in English needs investment in teaching staff, facilities and especially effective publicity, as the increasing number of veterinary courses taught in English within the EU is causing an increased level of competition for the best international students.

2. ORGANISATION

2.1 Findings

The FVM is one of a group of eight faculties within the LLU. The LLU is an educational and scientific research establishment and a university of national significance in the field of rural development, food technology, forestry and veterinary medicine. The LLU is financed and overseen by the Ministry of Agriculture although the policy involving education is under the control of the Ministry of Education and Science.

The FVM and its structural units are formed and recognised by the LLU Senate following proposals from the Faculty Council. As the “supreme” decision making body, the activities of the FVM are controlled by the Faculty Council comprising the Dean (acting as the Chair), the Directors of the Institutes and the Veterinary Hospital, elected professors and associated professors, 2-3 members of

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academic/supportive staff nominated for a period of 3 years and students who number not less than 20% of the total number of the Council members.

The Council has several functions including:

- Election of the Dean by secret ballot
- Decisions on major issues involving both teaching and research
- Decisions on the distribution of resources between the units comprising the FVM

The three Institutes within the FVM and the VH are:

1. Preclinical Institute
2. Clinical Institute
3. Institute of Food and Environmental Hygiene
4. Veterinary Hospital

Each institute is headed by a Director, elected by the Council of the FVM. The institutes have their own meetings of academic and support staff.

Vice-Deans can also be appointed by the Dean for specific tasks such as responsibility for teaching methodology or research.

The Veterinary Hospital has its own Strategic plan for the years 2013-2020. The Director of the VH is appointed by the order of the Rector of the LLU following a suggestion from the Dean.

As far as the organisation of teaching is concerned there exists the **Study Methodological Commission** which has the overall responsibility for reviewing, planning and developing the curriculum. The Commission normally meets once a month and comprises the Dean, Vice-Deans, , 1-2 academic staff members nominated from each institute, representing different study courses of the FVM and three student representatives (nominated by the student self-government).

There is also a **student self-government** operating at the FVM, which is a part of the student self-government organisation of the LLU. The task of the student self-government is to represent and defend the interests of the students in the field of education and to help with social problems and needs of the students. They appoint representatives to the Council of the Faculty, the Study Methodological Commission, the Council of Studies of the LLU, and the Senate of the LLU.

2.2 Comments

It appeared to the visitors that the structure of the FVM was both compact and efficient. In addition the management structure of the FVM proved to be very democratic.

Somewhat separately, the VH has its own supervising body – The Council of the VH, which represents the clinically related interests of the Faculty.

2.3 Suggestions

None

3. FINANCES

3.1 Findings

The budget of the FVM is an integral part of the overall budget of the LLU itself which is adopted by the Senate of the LLU each year. The expenditure of the FVM is clearly outlined within the SER.

There are several sources of financing for the FVM:

1. Public funding. The LLU receives the government funding through the Ministry of Agriculture. Currently, the government finances a total of 209 Veterinary Medicine undergraduate study places and 10 Veterinary Medicine Doctoral study places.

At the present time the cost of one place in the undergraduate Veterinary Medicine programme is calculated as 5496 EUR per year and 18037 EUR per year for the Doctoral study place.

This public funding is used for the salaries of staff, maintenance of the buildings, scholarships for students and expenses of the central administration of the LLU.

Unfortunately, due to consequences of the financial crisis, the state funding was reduced and during the years 2013 and 2014 constituted only 85% of the calculated amount and in the year 2015. Subsequently however, there has been a return to 86% funding, with an anticipation of a return to the 100% level of state funding in 2017.

2. Research funding depends of several preconditions: the total amount of the state budget allocated to scientific research in the whole country in the year; the number FTE researchers and their effectiveness – participation in the projects, acquired financing, number of scientific publications, patents etc. The FVM gets research science financing according to the measured results from the previous year.

3. Tuition fee. This is paid by students not covered by the public funding. The level of this fee is decided by the Senate of the LLU and is currently 1300 EUR per semester for the undergraduate veterinary course, 1600 EUR per semester for Doctoral study, 1000 EUR per semester for Master study and 2750 EUR per semester for the undergraduate studies in English.

4. Income from the VH is increasing year on year. The LLU and FVM allow 100% of such income to be used for the VH, in areas such as maintenance of the buildings and equipment and the salaries of a number of clinical staff. The ability to keep 100% of clinical income is sanctioned by the central administration within the LLU although the latter provide administrative support in dealing with the financial implications of this income stream.

5. Other income. There is a variety of additional externally generated income from a several sources which are outlined within the SER.

6. Research projects Research grants which have external funding are able to use 90% of the awarded funds for the research whilst on average 10% is given to the central budget of the LLU. In return the LLU provide a major amount of administrative help for the researchers awarded such external grants have their own budget according to the tasks. These research grants emanate from a variety of sources such as the Latvian Council of Sciences, Ministry of Education and Science, Ministry of Agriculture and EU programmes.

During the last five years the FVM has benefited from several large investment projects from the EU, especially related to the modernisation of both the FVM and the VH. The level of this support came to well over 7 million euros.

3.2 Comments

As mentioned above there is a real difficulty to deliver competitive salaries for both teaching and support staff within the FVM. This situation is likely to be exacerbated by the loss of trained (especially clinical) staff to careers both inside and outside of Latvia. Nevertheless, the FVM must continue with their efforts to obtain sufficient funding for both professional as well as support staff. One excellent development in this area is that since 2015 the LLU has developed a system of supplementary payments to staff based on their success in scientific research activities.

As mentioned in the SER, data from Eurostat demonstrates that the average public funding of higher education and science in Europe is 1.26% of GDP, while in Latvia it is only 0.8%. Similarly the public financing of scientific research is correspondingly low.

3.3 Suggestions

None, as already well covered above.

4. CURRICULUM

4.1 GENERAL ASPECTS

4.1.1 Findings

The study programme “Veterinary Medicine” covers six academic years (12 semesters), corresponding to 366 ECTS or 244 Latvian credit points (CP). The programme is a second level professional higher education study programme, is equal to the Masters level with access to Doctoral studies. The qualification awarded upon completion of the study programme is “Veterinarian”.

The Curriculum is based on the requirements of Directive 2005/36/EC (Annex V) of the European Parliament and the European Council and its amendment Directive 2013/55/EU. In addition, the FVM states that consideration has been given to the requirements and suggestions of EAEVE, FVE and OIE.

There is presently no tracking system.

There is a considerable autonomy for the FVM and the LLU to develop the curriculum. The Director of the study programme “Veterinary Medicine” (Dean of the FVM), the MMK (Study Methodical Commission), the principal teachers of the study courses and Institutes, and the Council of the Faculty, are the bodies involved in decisions about substantial changes in the curriculum, including course length and contents. This is also the way decisions are taken on the allocation of hours between the various subjects and on the balance between theoretical and practical teaching. Less substantial

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changes of a study course (such as schedule, list of recommended literature etc.) are done by the principal teacher and announced accordingly.

According to the regulations of the LLU, study course programmes have to be updated with regard to new information or development at least once in two years during self-assessment QA activities.

External examiners are not used in regular examinations, but they are regularly used at the final state examinations. These include an extensive multiple choice part and a problem-solving part (“case”).

There are three state exams:

- Infectious diseases, Hygiene ;
- Internal Medicine, Pathology;
- Surgery, Reproduction.

The responsible organisation for licensing is the LVB (The Association of Veterinarians of Latvia). According to the Latvian legislation it is mandatory for all licensed veterinarians to continue their education and renew their licence every 5 years. To renew a licence the veterinarian has to collect 50 points in five years (1 point – one day semester) or pass an exam.

The instruction provided includes basic clinical training across all common domestic species, e.g., companion animals (dog, cat), equine, the food-producing animals (cattle, small ruminants, pigs, poultry) and fur animals.

The shortage of large animal patients in the VH is compensated by using animals of the University farm “Vecauce”, study visits to private farms, and the mobile clinic activities. The present situation with African swine fever has, however, necessitated temporary solutions (see Section 7).

Extra-mural practical training includes periods of “seeing practice” during 2nd, 4th and 5th years (2+3+6 weeks, respectively). Assigned host practitioners acquire “points” for the renewing of their license. Students are encouraged to do extra-mural practice outside their “comfort zone”. The governmental Food and Veterinary Service (PVD) is responsible for the extramural training of food hygiene and inspection (4 weeks in 6th year).

The studies are organised according to the academic calendar and consists of a spring semester and an autumn semester. Semesters are 20 weeks including a four weeks examination period.

The full-time studies at LLU covers 20 Latvian CP during each semester. Latvian CP is defined as 1CP = 40 academic hours = one-week full-time study workload; 1 academic hour = 45 minutes. The Latvian CP system is compatible with ECTS; 1 Latvian CP = 1.5 ECTS.

The total number of hours per 6 years is 8,898 hrs (excluding elective subjects and extramural practice). Self-directed learning is estimated at 4,119 hrs. Extramural practice and elective subjects are 520 hrs (13 CP or 19.5 ECTS) and 170 hrs (8.5 CP or 12.75 ECTS), respectively.

According to the SER 4.1.1.1 the relative distribution between EU listed subjects is:

- Basic subjects 10 subjects that make 426 hrs (26.5 CP or 39.75 ECTS).
- Basic sciences 11 subjects that make 970 hrs (48.5 CP or 72.75 ECTS).
- Clinical sciences 17 subjects that make 1710 hrs (85.5 CP or 128.25 ECTS).
- Animal production 5 subjects that make 318 hrs (18.5 CP or 27.75 ECTS).

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

- Food hygiene 4 subjects that make 230 hrs (11.5 CP or 17.25 ECTS) with a four week practice in food hygiene and inspection that makes 4 CP or 6 ECTS.

The non-EU subjects and Degree project adds to 628 hrs (SER Table 4.4).

In addition, the Curriculum includes six Practices (39 CP or 58.5 ECTS) and three State examinations (6 CP or 9 ECTS).

The Curriculum hours taken by all students (excl. non-EU subjects and degree project) are given as (SER Table 4.1);

- 17 % Lectures
- 0.6 % Semesters
- 46 % Self-directed learning
- 13 % Lab and desk supervised work
- 7 % Non-clinical animal work
- 15 % Clinical work

The Curriculum has been extensively developed during the past few years with the aim to improve the proportion between theoretical and practical lessons, course planning etc.

The major development during last years was the introduction of the clinical rotation practice and the associated workload. In the future there is a plan to intensify the herd health teaching with the creation of a separate study course; increase the number of professional elective courses. Under discussion is also the plan to introduce an elaboration and defence of a final graduation Thesis as an alternative to State examinations or part of them.

4.1.2 Comments

- The Curriculum fulfils the EU Directive 36/2005 in terms of length and contents, i.e. EU listed subjects.
- All students must have acquired “day-one” competences by the time they graduate (SER Annex IV), including general academic and professional attributes and attitudes towards professional development as well as pertinent practical -generic and clinical- skills
- The Curriculum is aligned with the Bologna process (Master, PhD).
- Students are represented in decision making bodies in LLU and FVM.
- Good contact between students and Vice Dean for studies for improvements and to handle problems during courses.
- The Curriculum balance and coverage as presented in Tables is well within the established limits
- The calculated Ratios (R6-R8) are satisfactory, but R6 and R8 are below minimum values as a result of the extent of self-directed learning.
- Self-directed learning is regularly followed up with written reports and during presentations and discussions.
- Group sizes are good, often small groups resulting in good teacher–student contact and personal feedback.
- The clinical training statistics presented corresponds to supervised hand-on clinical training.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

- Too many clinical cases are not used for teaching the 6th year students as the clinical rotations are restricted to the spring semester for this final year. However, the clinical cases themselves are utilised by both 3rd and 5th year students during the autumn semester and the 3rd and 4th year students during the spring semester. In addition, the 5th year students during the ninth semester have timetabled 24 hour duties within the VH.
- Concern about the attitude among animal owners, and occasionally staff, about students' "hands-on" involvement in cases. At the equine clinic the actual hands-on training is usually limited to clinical examination.
- Some basic subjects and electives (sports) are not relevant for a veterinary programme. However, students think that the non-veterinary subjects, e.g. sport, "lightens up" the curriculum.

4.1.3 Suggestions

- Increase the direct involvement of students in the clinical work, especially during the entire 6th year.
- Increase the case load at the equine clinic.
- Improve and expand hands-on training on patients, especially in the equine clinic, e.g. animal owner contact, injections, bandage.
- Let the students write full medical records, including treatment plans.
- Further develop the facilities for self-directed studies.
- Further provisions should be made for those undergraduate students who want to gain specific experience in research.

4.2 BASIC SUBJECTS & BASIC SCIENCES

4.2.1 Findings

Basic sciences and basic subjects are a part of the curriculum and are preparatory to other studies. Basic subjects are taught in the first and second semesters of the first year. Lectures and practical trainings in basic subjects (chemistry, physics, botany, biomathematics) are taught within the departments of the other faculties of the LLU, most of them in the main building of the LLU, in Jelgava Palace. Facilities in Jelgava Palace include old wooden furniture, but are, nevertheless, well equipped. Individual lecturers have different courses to teach. Laboratory practice is undertaken within small groups of approximately 10 students. As a result the teaching staff are required to repeat the same topic on several occasions. Basic science subjects include a substantial part of hands-on practical sessions.

The visitors ascertained that the general opinion of academic staff was that the knowledge of basic subjects proved to be variable among both the applicants and then the admitted students. Although the selection process for enrolment is based on that the student have passed successfully a secondary education exam in biology and chemistry with a minimum score of 5 (maximum 10).

Both video and aural techniques are used in basic sciences. Laboratories are well equipped with microscopes and other basic instruments for practicals. Several teachers use an e-learning system as a support tool for their basic science courses.

During practical work students must strictly observe safety regulations. At the beginning of each course students are instructed by teachers on safety measures and written instructions are placed in each of the laboratories. Before the start of practical training students are also instructed what to do in terms of biosafety.

For anatomy, students have access to the Osteology Museum within FVM, There are rooms available where students perform self-directed learning utilising the extensive bone collection. Academic staff who are veterinarians are available for support. The staff supply students with notes and Electronic material such as CD or videos particularly for osteology and myology. Laboratories for histology are well maintained and equipped, especially with microscopes that are sufficient for the number of students present in each group.

During systemic anatomy (splanchnology) the students have hands-on training by dissecting cadavers and fresh or previously frozen organs of different animal species. For practical anatomy purposes, cadavers are supplied by the hospital, particularly dogs and cats; but very few horses and cows. Large animal organs are sourced from slaughterhouses close to the FVM.

Anatomy rooms are large, clean with clear and bilingual biosafety notices and warnings. There is a horizontal freezer to store cadavers of small animals coming from the hospital, especially during summer, and a +4°C room (see chapter 6). Transportation is undertaken in specialized containers. In addition, liquid preservatives such as formaldehyde and alcohol solutions are sometimes used. For topographical anatomy that is taught in the third year, lectures are not planned but the course is scheduled to take the opportunity to link with operative surgery. Therefore, students can train on both cadavers in the anatomical room as well as live animals accommodated in the VH. Training is done with the supervision of both an Anatomy teacher and a surgeon.

For **pathology**, carcasses are supplied by VH and by veterinary practitioners, animal shelters, farms and the Zoo. Transportation is undertaken using specialized containers and the carcasses stored in cold rooms at +4°C, or frozen at -18°C without preservative. Rooms are large and adequately equipped.

For **microbiology**, students have extensive notes provided by the teaching staff. For practicals, students are divided into small groups of about ten. Students also attend microbiology laboratory practicals where they do exclusively both bacteriological and mycological practicals.

4.2.2 Comments

- It appears that some topics taught in basic subjects are not relevant to later courses
- The facilities for basic subjects are outside the main Veterinary Medicine Faculty. It means students have to walk or drive from FVM to other Faculties which in certain cases proves

somewhat difficult. As a result, there appears to be a plan to move animal husbandry from Jelgava Palace to FVM.

- Some courses in basic subjects last 8 weeks. As the students are divided in small groups, the teachers repeat the same topics several times and resulting in a shortage of time available to staff to help students reach a sufficient level of knowledge, especially in chemistry.
- Based on the feedback of students and the results of students' examinations, it appears that the FVM can control and supervise the teaching quality for this basic subjects. This should allow the "Curriculum Committee" to reorganise the teaching staff.
- It is commendable that a junior academic assistant supervises hands-on practice on anatomy at the first year and is responsible for physiotherapy at the VH too.
- It appears that there are no emergency exits in some basement rooms. In addition, there appears to be a lack of facilities (lifts and/or toilets) for disabled students in the preclinical areas, whereas there is a lift in the clinical buildings)

4.2.3 Suggestions

- To increase the number of specimens, especially from horses (hind and fore limbs) obtained from the slaughterhouse in order to have more material for students.
- Improve the storage system.
- To introduce a number of basic practicals in virology and serology for both microbiology and immunology.

4.3 ANIMAL PRODUCTION

4.3.1 Findings

Most of the Animal Production courses (as listed in Directive 2005/36/EC) are communicated during the first three years of study. Five courses with a total study time of 780 hrs (18.5 CP or 27.75 ECTS) comprise 146 hrs lectures, 410 hrs self-directed learning, and 224 hrs supervised practical training.

Three one-week elective courses are also offered, one on equine and two on livestock subjects.

During 1st and 2nd years, students attend the stationary of large animals of the FVM.

During the 2nd year there is a three weeks "Physiology, ethology and welfare" extramural practice taking place in agricultural farms, animal shelters, the Riga Zoo or with veterinary practitioners acquiring animal breeding, rearing, feeding, welfare etc.

Some clinically normal cattle (<7), calves (<2), horses (<3), small ruminants (<7) and pigs (<17) are maintained at the FVM facilities. The students are involved in the animal keeping – feeding, watering, sanitary grooming, motions etc. They are used for student practical training in animal production, animal welfare, feeding.

As part of the last study year Clinical rotation II, a three week large animal medicine block is organised in the farm "Vecauce". In addition to clinical work with individual animals, students are

engaged in herd health activities. They evaluate the herd health situation, propose measures for the further diagnostics, disease prevention and treatment. They are also active in practical handling of the animals, e.g. hoof trimming.

The Mobile clinic works according to the schedule for farm visits.

LLU owns the 2 000 hectares farm “Vecauce” that is located 65 kilometres from the FVM to the south-west (see Section 6.1). Students attend the farm in several study courses; e.g. during the 1st study year one week practice “Practical Agricultural management”, for intramural practice during 4th study year, and during the 6th year Clinical Rotation II.

The LLU owns also a horse breeding farm “Mušķi” that is used for teaching of horse husbandry and medicine. There are around 20 horses on site.

The LLU does not have any pig, poultry or small ruminant farm of its own; therefore the FVM is making agreements with private farms to provide teaching of all animal species. The farms cooperating with the FVM include three dairy farms (300-400 animals each), three sheep or goat farms, one pig farm (8,500 animals), one chicken and one laying hen farm, one mink producer, one fish farm, and one honey bee keeper. Most of these are within one hour’s drive time.

In the SER a special comment is made with regard to African Swine Fever; “... because of African and Classical swine fever registered in the wild boar population in Latvia, there are very strict biosafety rules in place and students are not allowed to visit pig farms. It is partly compensated by pigs housed for training purposes in the stationary of the FVM.”

During the practical work students must strictly observe safety regulations. In the beginning of each course students are instructed by teachers on the safety measures; precaution when handling different animal species, pathological material etc. During practical work students have to be dressed in overalls. Depending on the profile of the activity, additional requirements have to be observed, e.g. – change of shoes, use of gloves, caps, face masks, etc.

All staff members are instructed about the safety measures before they are allowed to start activities. They have also been trained to give first aid in the case of an accident.

4.3.2 Comments

- Animal Production courses comply with the subjects list in Directive 2005/36/EC, Annex V.4.
- The “from field to fork” perspective is achieved from the combination of Animal Production, Clinical and Food Hygiene/Public Health subjects.
- Parts of Animal Production (e.g. agronomy, animal nutrition, breeding and genetics) are taught by the Institute of Animal Husbandry, Faculty of Agriculture.
- The relocation of the Institute of Animal Husbandry to the FVM campus will strengthen the cooperation between subject courses.
- The FVM animal facilities and an early extramural practice is used to introduce 1st and 2nd year students to basic animal husbandry, incl. handling of animals.
- A good balance between practicals and theory.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

- Animal production and applied clinical subjects seem well integrated, especially as a result of the repeated periods students spend at the LLU farm.
- Bio-safety and bio-security issues are respected and taught.
- Animal welfare is respected and taught.
- It is the opinion of the team, that the requirements regarding Curriculum, Animal Production as they are laid down in Annex I of the SOP are met.

4.3.3 Suggestions

None

4.4 CLINICAL SCIENCES

4.4.1 Findings

Veterinary training in LLU is 6 years. Duration of training and subjects are in line with the provisions of the European legislation and national legislation. Most parts of the curriculum are obligatory for all students and one level degree is granted equivalent to Masters level.

The general table of curriculum hours taken by all students indicates in SER1 p. 20 (tab. 4.1) the amount of teaching hours in the 3rd, 4th, 5th and 6th years, altogether 1326 hours are spent in clinical work. Curriculum hours for Clinical sciences are listed in Table 4.2 (SER p. 22), and Table 4.3 (SER p.24 Electives). The 4220 hours are listed in detail for the various disciplines and the type of teaching. Lectures amount of 717 hours, lab and desk based work 444 hours, non-clinical animal work 145 hours, and clinical practical work 1285 hours.

Students receive hands on training. They have the opportunity to familiarise themselves with clinical practice on phantoms already from the first years of their studies. Modern simulacrums are available for assisting the students with taking of blood samples, sutures, obstetrics, tracheal intubation, etc. Practical training covers a variety of animal species - both major and minor species - for the students.

During the 3rd year 193 hours clinical work are planned with practical intramural training within the Veterinary Hospital (VH). There the 3rd year students are introduced to handling of small animals in the clinic and basic management of small animal veterinary practice, e.g. taking history, filling in the hospital software template, preparation of animals for surgery, etc. In subsequent years the students take more responsibility, e.g. conduct clinical examination of animals, calculating protocols for anaesthesia, conducting simple surgical interventions like castrations or spaying of dogs and cats, etc. All actions are done under the supervision of junior or senior academic staff and all students have to fill in their record of specific tasks that have completed. Each task must be signed in the student's logbook by the supervising veterinarian in order to be considered valid.

During year 4 two types of large animal intramural training is undertaken, one week in the farm "Vecauce" and one week practising the farm animal routine.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

During the 11th semester students have to participate in the clinical rotations in the different clinics and pathology for 18 weeks divided into six blocks, each of 3 weeks duration. Students are organized into groups of 4-6 persons.

Additionally, during the 9th semester the students have to perform two sessions of 24 hour shifts for emergency and ambulatory practice in the small animal clinic. No regular training is offered for large animal emergencies, but students on duty in the small animal clinic are called if an equine emergency patient is hospitalised.

Health planning and preventive medicine are also taught in the clinics. However, the students are not allowed to vaccinate in front of the owners of the animals. However, students are trained on the administration of injectable medicines on hospitalised animals.

Students are also taught biosecurity measures, as well as responsible use of medicines and taking samples for diagnostic and sensitivity testing.

Ambulatory clinical practice in a mobile clinic is offered during the clinical rotations in the 11th semester, consisting of three weeks farm animal work.

Obligatory extramural work is listed in SER Tab 4.5 (p. 30), consisting of 4 periods starting with 2 weeks practice in 2nd year on farms, animal shelters, Riga zoo and/or practicing veterinarians, production and companion animal and exotics, continuing with 3 weeks large animal practice during the 8th semester, and 160 hours clinical rotation in the 10th semester. The final 4 week extra-mural period taking place in year 6th concerns Food Hygiene and inspection; 2 weeks at a slaughterhouse and 2 weeks working with an official veterinarian.

The total amount of hours for theoretical and practical training (ca. 4700 hours +170 hours elective courses +520 hours EMS) is considered reasonable. The amount of self-directed learning compared to theoretical and practical training is rather high (50%); however, it includes a number of assignments aimed at supporting students' clinical learning and knowledge. The ration R6 (ratio of practical training) is lower (0.55) than expected.

Due to African swine fever restrictions, there is no practical training of the students in pig farms at the moment. They receive theoretical teaching and some practical training involving faculty animals.

4.4.2 Comments

- In the small animal clinics there is an acceptable case-load. Overall, there is good involvement of students in daily veterinary work and hands on training. However, this is in certain circumstances curtailed when in front of the owners, as some of the latter seem to be over sensitive to leave their animals in students' hands, even under the direct supervision of an experienced academic staff. For example, students are not allowed to vaccinate animals in front of clients until they have learnt the technique. Students administer injection medicines to hospitalised animals.
- Case load in equine patients is increasing with cases also sourced from Lithuania and Estonia. However, the case load remains low.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

- Too many clinical cases are not used for teaching the 6th year students as the clinical rotations are restricted to the spring semester for this final year. However, the clinical cases themselves are utilised by both 3rd and 5th year students during the autumn semester and the 3rd and 4th year students during the spring semester. In addition, the 5th year students during the ninth semester have timetabled 24 hour duties within the VH.
- Many clinical procedures are done by students only involve faculty horses, due to low compliance of the owners.
- The university cattle farm offers excellent possibilities for hands-on teaching. Case load and equipment seems very good during these clinical rotations.
- The number of faculty teachers is low. This might impede the maintaining of sustainable service based on adequate postgraduate training and research.

4.4.3 Suggestions

- All possible means should be used to further increase the equine case load.
- Utilising all cases during the entire year for student education should be an important aim.
- Introduction of a short tracking period (e.g. one semester) might be a possible way, both for increasing the cases for students and increasing the working power for the hospital.
- The number of personal to be increased to ensure their research and professional development.
- Paid time free of teaching and clinical duties is needed for PhD students in order to allow them to concentrate on their research projects.
- Similarly, adequate research time for post graduate personal is advisable.
- Teaching responsibilities for postgraduate personal to be restricted.
- It would be good to have a clear policy in the veterinary hospital that ensures that students are allowed to take over and complete practical tasks such as vaccinations, e.g. the owner is not allowed to enter the examination room. Alternatively, there should be a clear statement that the owner agrees that his/ her animal is treated by students in the university hospital.
- Consider connecting the six year curriculum with a Master thesis and subsequent delivery of a Masters qualification.

4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH

4.5.1 Findings

The education in Food hygiene /public health (FH/PH) is according to SER table 4.2 and FVM's study plan 2016 organized as:

- 460 hours of intramural theoretical and practical teaching comprising the courses Food Hygiene and Inspection I, II (9th & 12th semester; 7,5 ECTS), Basics of Food Technology (9th semester; 3,75 ECTS), Foodborne Diseases (12th semester, 3 ETCS), Food Marketing (12th semester, 3 ETCS), Food Toxicology (12th semester 3 ECTS), and

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

- 4 weeks extramural practical training in Food Hygiene and Inspection (12th semester, 6 ECTS)

Hence, students have knowledge and skills within animal welfare environmental health, infection biology, pharmacology and toxicology when starting the FH / PH courses.

The teaching of students within FH/PH includes various didactic forms:

- Theoretical lectures within the required FH/PH topics
- Assignments driving active self-directed learning.
- Excursions (day-visits) to pig, cattle and poultry slaughterhouses and food processing plants.
- Practical intra-mural exercises regarding microbial food safety on meat, milk, fish, cheese and honey.
- Practical extra-mural training consisting of:
 - 2 weeks veterinary supervised practice on a pig and/or slaughterhouse including ante- & post mortem meat inspection, hygiene inspection of premises and animal transport vehicles, and food chain assessment training, and
 - 2 weeks practice with an official veterinarian from the Latvian Food and Veterinary Service.

The knowledge and skills including the relevant Day 1 competences obtained by students during the courses are evaluated in several ways:

- Formative assessments of students and students' assignment during the intra-mural courses
- Summative written course exam after each intra-mural course.
- Assessment of students' reports and oral presentation of extra-mural assignment.
- Final state exam in "Infectious disease and Hygiene" comprising a written MSc-test and an oral exam based on presentation student's individual presentations of an exam case.

The practical intra-mural exercises are carried out in adequate small groups, i.e. groups of 15-16 students in adequately equipped laboratories and groups of 10-12 students supervised by a FVM-teacher and an Official Meat Inspector at local slaughterhouses. The extra-mural practices allow students to use their knowledge and skills in FH/PH in real veterinary workplace environments under supervision of Official veterinarians. Course objectives, students' intended learning goals and study assignments during practice are listed in the contract signed by the practice stakeholders prior to the start.

Hence, the teaching and practical training within Food Hygiene and public health is in accordance with the EAEVE Standards.

4.5.2 Comments

- The ratios R9 (13.943) and R10 (0.229) are well within the recommended ranges (8.86-31.77 and 0.074-0.556, respectively).
- Learning outcomes of the self-directed learning activities are effectively evaluated within FH/PH courses, both by formative and summative examinations (see above). Hence the

boundary ratios do not reflect insufficiencies in the FH/PH teaching, but rather the use of self-directed learning as a means to improve deeper learning.

- Students do not wear or are not offered safety gloves during their intra- or extra-mural practical training in meat-inspection.

4.5.3 Suggestions

- FVM should pay more attention to students' personal safety in relation to meat-inspection training by making sure that students use safety gloves when using knives

4.6 ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS

4.6.1 Findings

Electives

During the 6 years (240 CP/360 ECTS) veterinary programme, each student must attend a minimum of 8.5 CP/12.75 ECTS elective courses. Basic subjects offered include "Vertebrate fauna of Latvia" and a choice of four (basic) foreign language courses. Within Basic sciences, an elective course on sensory physiology is given after the regular physiology course. In Clinical sciences, there are four electives – dentistry, ophthalmology, small animal reproduction and game animal diseases. There are three courses listed under Animal production, one equine and two livestock. Finally, there is also a course called "Functional communication".

The scheduled time of the elective courses varies between 16 and 64 hrs. Most of them are 40 – 64 hrs and include mainly half time seminars and half time supervised practical training.

Optional Disciplines & Other Subjects

In addition to State examinations and "Final graduation work", the FVM reports almost 8 CP/12 ECTS of obligatory courses in "non-EU listed" subjects to be taken by all students. These include Professional foreign language, Latin, Sport, Introduction to studies, and Applied psychology.

4.6.2 Comments

- The elective courses are subject to the same examination rules and quality assurance procedures as the obligatory courses
- The FVM are aiming to extend the range of elective courses.

4.6.3 Suggestions

None

5. TEACHING QUALITY & EVALUATION

5.1 TEACHING METHODOLOGY

5.1.1 Findings

The six years curriculum spans over 240 weeks, including 48 weeks of examinations and 15 weeks extramural practice. The general curriculum hours taken by all students (8898 hrs) consist of lectures (17 %), seminars (1 %), self-directed learning (46 %), laboratory and desk based work (13 %), non-clinical animal work (7 %), clinical work (15 %), and “other” (1 %).

As of 2010, an investment in E-learning based on the MOODLE platform has been implemented within the LLU. The main activities in the e-learning system which is provided by FVM are: digital library, assignments, feedback, glossaries, and quizzes.

The LLU Central library and the Information centre of the FVM provide a comprehensive and current selection of textbooks and other literature, including on-line publications and databases.

Self-directed learning includes regular textbook and lecture notes studies, etc., but also a substantial part of preparations for seminar presentations, case analyses, lab and case report writing and VH duties. Reports and other written work is followed up by feed-back from teachers.

Supervised practical training is included at all stages and in most subjects. Group size varies between subjects and type of exercise, sufficiently small groups are the rule, e.g.4-8 students in the clinics.

The E-learning system is used by several teachers as support tools in basic sciences as well as in surgery and other subjects. Video-films and DVD: s are used to support teaching in several subjects.

The FVM has started a clinical skills laboratory (simulation laboratory), e.g. to teach fixation of animals; injection techniques; to put in stiches, bandages, dressings. Models for intubation and artificial respiration, cardiac examination, nerve blocks and intramuscular injections are available.

The most intense hands-on clinical training periods occur during the 5th and 6th years (extramural Clinical rotation I and Clinical Rotation II, respectively). Extramural practice in Food hygiene and inspection during the 6th year is hosted by the Latvian Food and Veterinary Service (PVD). The supervision provided by the extramural hosts is judged to be adequate.

Learning objectives are set for subjects and courses and are communicated to the students. There is a regular two-year scheme for Curriculum review in place.

Starting from 2016 a “Registration logbook of acquired clinical skills” was reintroduced. The note-book is based on the Day 1 skills and includes measures which each student has to be able to perform as well as activities which they have at least observed. The note-books have to be completely filled in at the end of Clinical Rotation II. Students don’t have access to Final State examinations without proving the acquired skills.

Most teachers do participate in the theoretical **and** practical parts of the courses. Some teachers from non-clinical subjects also do clinical service at the VH.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

Didactic and pedagogic development of the teaching staff - At least once during the election period (6 years) all teachers have to attend didactic and pedagogic courses presented by LLU for at least 30CP – 160 hours.

Teachers can be awarded for their teaching excellence, for publications and research (maximum 400 € per month). There are also other types of recognition.

Evaluation of Teaching and Learning

The results of State examinations are analysed both by the Examination commission itself and by the FVM. The external examiners may make suggestions for changes of the veterinary programme. As a result, decisions may be taken for improvements of courses.

Teachers are evaluated as part of the process of elections for the academic positions (six years interval, see Section 10). The students' evaluation results related to individual teachers' performance and teaching are discussed with him/her. Positive evaluation results are a precondition for re-election of a teacher.

Every second year, questionnaires are distributed to newly graduated veterinarians to get a view on the quality of teaching from the perspective of the professionals working in the field. The results from the latest questionnaire to the graduates was presented during the annual (2016) conference of the LVB (see SER Annex X).

At the end of each semester, students are invited to participate in a web-based evaluation of the contents, teaching etc. in previous courses. The process is anonymous. It is possible to include observations, comments and proposals as well as suggestions for improvement of the teaching. However, the activity of students is low.

Students are encouraged to submit their views in writing any time. The Student union of the FVM is rather active in this way. The MMK, where student representatives are present, discuss all student proposals related to organization, quality and content of the study programme.

All web-evaluation results are available to the Director of the Study programme/Dean. Directors of Institutes have access to the study course evaluations related their respective Institute.

5.1.2 Comments

- Well-organized Curriculum committee, including students' representation.
- Regular and formal training of teachers' educational skills.
- Wi-Fi access throughout campus and dormitories.
- Electronic learning platform including on-line literature.
- Bio-safety and bio-security well communicated.
- Shortage of computers and study areas for self-directed learning in the Faculty.
- It is the opinion of the team that the requirements regarding Teaching Methodology and Evaluation as they are laid down in Annex I of the SOP are met.

5.1.3 Suggestions

- Increase the involvement of students in the clinical work, especially during the entire 6th year.
- Further develop the facilities for self-directed studies.
- Continue to develop the use of e-learning and teaching on simulators.
- Improve communication and feedback from students, especially the web-based course evaluation tool.
- Improve English teaching, in the view of a further internationalization.

5.2 EXAMINATIONS

5.2.1 Findings

The LLU Regulation of Studies describes the general rules of the examination system. Control of obtained knowledge and skills has to be regular assessed during the whole study process. The types of control has to be declared for each course (special/laboratory tasks, home tasks, reports, colloquiums, workshops, tests, written/oral exams etc.).

Academic staff are free to perform continuous assessment and choose intermediate control methods. Students' knowledge and skills are evaluated by the teacher who is responsible for a course/subject or by a person authorized by him/her. The lecturer who examines students decides on the examination procedure.

There is a four-week examination period at the end of each semester, which is free from teaching activities. Usually there are about 6-10 tests/examinations during each period. Between two examinations there must be at least three days. The examination for one student may not exceed 4 hours.

Examinations can be theoretical; written, oral, as a test or a mixture of multiple-choice and open-end questions; practical according to 1st day skills test book, practical as a clinical or laboratory examination, etc. Specific procedures are related to the Clinical Rotation periods where students have to submit and present a "final work", which includes case studies, summaries from the scientific literature, conclusions, etc.

At the LLU a 10-point scale for evaluation of knowledge is used in which 4 (fair) is the lowest positive assessment. Examinations and tests not passed during an examination period are considered as "academic debts". If there are more than three academic debts, the student has two options – to pass missing tests/exams during the next semester or repeat the same study semester paying a full study fee.

Students who have successfully passed all requested knowledge and skill controls or have not more than three academic debts may be registered for the next study semester. The student is not allowed to enter courses if he/she has failed to pass courses which are described as compulsory pre-requisites for that specific course.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

One examination may be taken no more than three times. For the third retake a three-academic staff commission is formed by the Institute and special rules apply. If the student fails the final/graduation evaluation he/she is ex-matriculated and can take a repeated attempt of a final evaluation after a year.

If a student wishes to improve a positive mark in any study course he/she may repeat the test or exam for an additional fee after competition for state financed places.

A student can be expelled from an examination if he/she does not follow the ethics of taking examinations; cheating, use of unauthorised support material, other persons' help, or behaviour offensive to the lecturer or others in the examination room. Repeated dishonest behaviour can serve as a reason for ex-matriculation.

In addition to the regular FVM examinations, students must undergo three "State examinations" (Infectious diseases, Hygiene; Internal medicine, Pathology; Surgery, Reproduction) in order to obtain the licence to practice after graduation. There is a "State examination commission" with seven members who are responsible for these examinations. The chairman of the Commission and at least half of the members are appointed by professional organisations and employers, while FVM is represented by the director of the veterinary programme and leading teaching staff.

Each state examination consists of two parts. The first part consists mainly of 100 multiple choice questions regarding the whole range of clinical, food safety and veterinary public health related disciplines for all species. In the second part students are confronted with a problem or scenario and he/she must suggest and discuss a potential solution.

5.2.2 Comments

- It is the opinion of the team that the requirements regarding Examinations as they are laid down in Annex I of the SOP are met.

5.2.3 Suggestions

None

5.3 STUDENT WELFARE

5.3.1 Findings

The information about and the general awareness of risks, safety rules and emergency procedures among staff and students was at a satisfactory level.

Bio-hazard instructions (in Latvian and English) were posted in laboratories and clinics which were also equipped with appropriate protective and safety equipment. At bio-security "zone borders", a system of coloured floor markings made clear where clothing/shoe changes must be made.

Even if Latvia is currently free from rabies, during the second semester students are vaccinated against rabies.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

It is planned from the year 2016/2017 study year to insure all student against accidents during their studies at LLU.

As regards the financing of studies, there are 209 state funded and an additional number of fee financed places. Government and “foundation funded” scholarships and stipends are available to support well performing students, but also to cover costs for participation in conferences and courses outside LLU.

The LLU supplies students with accommodation at three student hostels. There is a canteen at the FVM, and dining hall and cafeterias in the main building of the LLU. In addition there are also vending machines both in the FVM and in the main building.

The LLU provides opportunities to participate in sports to its students and employees. The LLU has two sport halls, a swimming pool, space for aerobics, martial arts, fitness equipment, as well as a sports ground and horse-riding sports centre.

The Students’ Self-government represents the interests of the students at the LLU and also in other institutions, enterprises and organisations. It also organises leisure time activities. Two years in a row it has received the Annual Award from the Latvian Students' Union as the best Students' Union in Latvia.

The Students Career Service of the LLU organises seminars for students on the topics related to the development of a professional career; informs about the extramural practice, and the labour market, etc.

At the FVM, each Institute takes care of a certain study year students – councillors speak with the students, explain the rules, help them to adapt to study conditions, give advice on possible solutions in case of study or financial problems, etc.

Students can participate in the educational seminars organised by the FVM or VIC for veterinarians at a reduced price or free of charge in case of voluntary work.

5.3.2 Comments

- It is the opinion of the team that the requirements regarding Student welfare as they are laid down in Annex I of the SOP are met.

5.3.3 Suggestions

- Provide every student and teachers working together with students with a health insurance and third part insurance.
- Improve the living conditions for students; organise more facilities in the FVM for individual studies.
- Provide facilities for physically disabled students especially in the Preclinical Institute building.

6. PHYSICAL FACILITIES & EQUIPMENT

6.1 GENERAL ASPECTS

6.1.1 Findings

The campus of the FVM in Jelgava has a total area of 7.3 hectares. There are 14 buildings many of them connected by a corridor. In the last 4 years, 40% of the total floor area has been renovated or newly built.

Additionally, lectures and practical training in basic subjects such as chemistry, physics, botany etc. are taught in the facilities of other faculties of the university at the main building of the LLU, the Jelgava Palace.

At the faculty are 6 lecture halls (48 – 113 places, total capacity 496 places) and 7 rooms for group work. Additionally, 14 rooms for practical work are available. Laboratories are well equipped with microscopes and basic equipment for practical training. All facilities are in an appropriate state and it is planned that some of the auditoriums will be renovated in next years. Additionally, in addition to the LLU Central library, students have access to the FVM information centre, where text books, journals and various teaching aids are available. Further space with computers and tables are available for student “self-study”.

Wi-Fi access throughout campus and dormitories as well as an electronic learning platform including on-line literature is available. However, students’ seats within lecture halls and small group teaching rooms do not always have access to electric plugs for laptop computers

For the accommodation requirements the faculty has access to both student hostels and a dining facility.

Furthermore, for extra mural training, the university farm “Vecauce” (situated 65 kilometres from the FVM to the south-west) is available for the faculty. There, besides the well organised animal accommodation, a newly build veterinary block is available for clinical examinations and therapies; including equipment such as fixation facilities for foot treatment, surgery facilities, stalls for diseased animals, clinical laboratory, changing and office rooms, as well as a seminar room.

The cost of transferring students to and from the Faculty’s farms as well as the course requirements for equipment and consumables, are met by the Faculty. The Faculty has a VW combo (9 places), a Pick up and a van for 16 people for transport of students.

The LLU also owns a horse stable (20 horses) which is used both for riding and for teaching purposes.

Health and safety measures are ensured at the FVM. Biosafety measures are explained to students at the start of each course and appropriate protective equipment (laboratory gowns, overalls, masks, gloves, head guard, etc.) is used in courses. Adequate information and warnings are presented (in Latvian and English language) in all rooms used for laboratory or practical work at FVM. However, safety information signs in English and eye washers were not present in the student laboratories at

the Department of Chemistry of the Faculty of Food Technology, although there were eye washers in a neighbouring laboratory.

There were excellent facilities for training in food hygiene, carcass handling and access to slaughterhouses for hands-on training of students. No safety gloves were available for students at the slaughterhouses when being trained in meat inspection.

6.1.2 Comments

- The Campus of FVM and its buildings are suitable for the teaching purposes of the Faculty. The campus is easily accessible for students and there is adequate transport available for students to the farms. The student laboratories at FVM are suitably equipped for teaching, and health and safety equipment and associated routines are available and implemented for students.
- Student laboratories at the Department of Chemistry in the faculty of Food Technology do not have safety signs and information in English, and eye washers were not present in the main laboratory itself.
- No safety gloves were available for students doing hands-on training in meat-inspection at the slaughterhouses.
- There seems to be a shortage of computers and study areas for self-directed learning in the Faculty.
- Jelgava Palace and Preclinical Institute facilities at FVM lack equipment for disabled persons, e.g. elevator and toilets. The Faculty claim that improvements will be made in the next years.

6.1.3 Suggestions

- Further develop the facilities for self-directed studies including establishment of adequate number of power plugs at student seating in lecture halls and rooms.
- Ensure accessibility for disabled persons in the Jelgava Palace and Preclinical Institute at FVM.
- University must supply safety gloves for students doing hands-on training in meat-inspection.
- Student laboratories at Department of Chemistry in the faculty of Food Technology must be equipped with appropriate safety information and warnings for international students as well as eye washers in all laboratories.

6.2 CLINICAL FACILITIES & ORGANISATION

6.2.1 Findings

The clinical activities are performed at three buildings: Small animal clinic, equine clinic and production animal clinic.

The small animal clinic includes: 5 hospitalization rooms (12 places each for dog and cat, 7 isolation places), the clinical laboratory, a surgery unit with three surgery halls and one for dentistry. Equipment includes x-ray equipment, ultrasound, CT, fluoroscopy, endoscopy, arthroscopy,

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

equipment for osteosynthesis and neurosurgery and a number of items of additional equipment. Additionally, a surgical instrument sterilisation and a small animal physiotherapy unit are included.

The equine clinic has four hospitalization premises (16 places for horses. 2 isolation places for horses and farm animals), a surgery unit with 2 surgery halls with equipment for arthroscopy, standard x-ray, one ultrasound machine and endoscopy.

Equipment for general anaesthesia are located at the small and equine clinic used mainly by the surgeons themselves, internists or nurses.

The production animal clinic has three premises (10 cattle, 10 small ruminants and 3 pigs), a surgery and therapy unit with a stationary and one mobile hoof care crush

A laboratory for artificial insemination, reproduction and head health utilises premises in three buildings including clinical examination areas and areas for artificial insemination.

There are additionally two Faculty owned farms: the “Vecauce” with about 1100 cattle, and the “Muski” a horse stable with around 20 horses. No pig, small ruminant or poultry farm is owned.

An Emergency service is provided with one duty vet at a time on site for small animals. All other species are served by an ambulatory service. Intensive care units are available for small animals and horses.

Academic staff in the Small animal veterinary hospital include veterinarians within different areas of speciality e.g. anaesthesiology, surgery, oncology, ophthalmology, CT, all of whom are responsible and supervise their respective departments and cases in the veterinary hospital. The same structure does not apply for the equine and large animal veterinary clinic.

An ambulatory (mobile) clinic (SER p. 54) provides service to faculty farms and associated farms and stables at working days. Three cars are available as transportation vehicles for staff and students. One off road vehicle with trailer offers transportation of large animals.

There is no MRI or scintigraphy available at the hospital.

6.2.2 Comments

- The hospital is quite new and offers splendid facilities and equipment.
- There is little specialisation possible at the equine clinic at the moment due to the low number of cases and low postgraduate specialisation of veterinary staff.

6.2.3 Suggestions

- The facilities offer possibilities for more cases and people to work with.
- The equipment is very good and might be used more to enable its maintenance.

7. ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

7.1 Findings

The teaching of systemic anatomy is based on conserved specimens and a supply of organs from the VH and neighbouring slaughter houses. For topographical anatomy, live animals are mostly used.

During the physiology course, animals kept by FVM are used. For legislative reasons these animals are used for non-invasive procedures.

For necropsies, the Pathology department receives cases from the VH and from veterinary practitioners, farms and governmental bodies.

Faculty owned animals (in 2015 – 2 horses, 6 large ruminants, 6 sheep/goats, 14 pigs and 5 dogs) are kept at the FVM facilities. Furthermore, several farms offer animals for teaching purposes: “Vecauce” with 1100 cattle, “Muski” with around 20 horses, as well as cooperation with several private farms (ANNEX I). No small ruminants, pigs or poultry are available on Faculty owned farms.

The patient flow is listed in Tab 7.3 (SER p. 53). There is only a small number of hospitalized cases in farm animals and equines.

The mobile clinic has a high number of cattle cases.

The case load of small animals seems sufficient with regard to the number of graduating students.

7.2 Comments

- The situation with clinical cases of farm animals and equines at the Faculty is “difficult”.
- Too many clinical cases are not used for teaching the 6th year students as the clinical rotations are restricted to the spring semester for this final year. However, the clinical cases themselves are utilised by both 3rd and 5th year students during the autumn semester and the 3rd and 4th year students during the spring semester. In addition, the 5th year students during the ninth semester have timetabled 24 hour duties within the VH.
- The effects of the African swine fever situation is obvious as students for biosecurity reasons are not allowed onto pig farms. For the time being, this has to be accepted as education efforts to counter the deficiencies have been initiated.

7.3 Suggestions

- Allow 6th year students to see more clinical cases throughout the year in the Veterinary Hospital.
- Increase the number of equine fore and hind limbs for anatomy teaching.

8. LIBRARY & EDUCATIONAL RESOURCES

8.1 Findings

The Establishment benefits from access to the Fundamental Library (FL) of LLU that while not specific for veterinary training covers agricultural sciences subjects including veterinary science. The FL is part of the AGRIS and AGLINET libraries network. The FL also receives a deposit copy of each printed publication and each electronic publication on almost all aspects of agriculture, including veterinary medicine.

Although the FL is outside the Faculty being located in Jelgava Palace, it can supply students' full access to almost 100 electronic journals, e-books, e-journals databases, up to date books and a sufficient number of study places. Ten full-time employees and 9 full time equivalents of part time employees are present in the FL. In addition, there is a large study area with approximately twenty stationary computers for students to use.

An Information Centre (IC) which is specific for veterinary study is located in the Veterinary Medicine Faculty. Only a few journals are supplied as hard copies, whereas there is wide availability of modern textbooks and access to electronic journals. The Information Centre is not open in the evenings. There are four stationary computers that the students can use. There is room for approximately 20 students within the reading room area. Photocopying and scanner facilities are available.

Although the FL has a lot to offer, nevertheless the specific veterinary textbooks are more widely available in the Information Centre, the Institutes and the VH. The Information Centre of the FVM has the biggest resource of Veterinary textbooks in the country and it has veterinary books issued in Latvian.

The students are informed during the first year course about the possibilities offered by the two Libraries. Students also have 24 hour access to e-books and journals in FL, IC and within their dormitory facilities the e-learning website. Specific textbooks are available in the different Institutes of the Faculty. There is only one full time equivalent of part time employers in the Information Centre. IT-facilities and Wi-Fi are available throughout the LLU and Veterinary Medicine Faculty as well as in the hostels.

8.2 Comments

- The library certainly provides a sufficient number of up to date books, and the students have opportunity to copy articles. There is also a sufficient number of study places and computers in the two Libraries.
- There is an increasing number of students using the IC as a study room, but only 10 of the 20 sitting places are suitable for studies (with chairs and working table and/or computer). The other ten are arm chairs with or without coffee tables.
- Electronic journals are equally important as textbooks for students.

- The number of modern veterinary books is adequate, although there is a section of old and dated veterinary textbooks. The staff are sufficient for the requests from students; although an increase in staff could increase the opening hours, the wide availability of excellent Wi-Fi coupled to the e-journals make this unnecessary.

8.3 Suggestions

- Enlarge the stock of up to date veterinary textbooks available to students.
- Increase the number of stationary computers and study rooms.

9. ADMISSION & ENROLMENT

9.1 Findings

The nominal study period in Veterinary Medicine Faculty of Jelgava is 6 years.

On 1st October 2015 there were 290 students from the Latvian group and 7 from the English group at the FVM.

Every year, depending on the decision and agreement between the Ministry of Agriculture, Ministry of Education and LLU, the total number of state financed study places is decided on. Usually, there are 50 state budget financed places and about 30 fee-paying students.

There is a selection process for the admission. Applicants are accepted on the basis of the results of National Centralized exams. Applicants must have passed successfully a secondary education exam in Latvian and in one foreign language (English, German, French or Russian), in biology and chemistry. There is a formula to calculate competition points and compile a student ranking.

The knowledge of chemistry in applicants is variable and occasionally very weak. As a result, the LLU supports the applicants by occasionally offering introductory and preparatory courses before final admittance to the Veterinary medicine programme. In addition, students who “struggle” with Chemistry are offered special evening courses to improve their knowledge level.

Orientation information is given to pupils from the secondary schools about the veterinary course, requirements and work opportunities after graduation.

There is a decrease in the number of applications for Higher Education in the last few years, due mainly to a reduction in the general population, although the number of applicants to study Veterinary Medicine has remained stable.

There is a high drop out of students between the first and the second study year. To overcome this high drop out, the Faculty is planning to introduce motivation tests for applicants. The high drop out rate is thought to reflect the variable and often weak knowledge of enrolled students in basic subjects

such as chemistry and physics and the resulting difficulty for some students to pass these exams in the first year of studies. Furthermore, the decrease in the number of applicants as well as a number of the admitted students themselves who have not indicated veterinary medicine as their first option but have achieved higher grades, can also enhance the drop out level, as such students are probably not so highly motivated for veterinary science.

During the last three years the average of students graduating each year was 36.33. Seventy-three percent of students graduating in 2015 (32) finished the course in time, 21% took one year more and the other two years more. The average duration of studies for the students graduating in 2015 was 6.34 years.

There is an excellent level of internationalization in the last three years, leading to almost 100 students benefiting in student mobility (Erasmus+) or in the BOVA-NOVA framework; at the same time about 50 foreign students have benefited from studying in the Faculty. Indeed, in 2014 a Veterinary Medicine course in English for foreign students was initiated. If the overseas students wish to study in English, they are requested to prove the English knowledge skill at the B2 level.

At the present time there are 4 foreign students in the second year (two from Finland, one from Germany and one from the UK) attending the English Veterinary Medicine Course. There are also 8 students in the first year (7 from Germany and 1 from Sweden). The Faculty has set a limit of up to 15 students per year for the English Course.

9.2 Comments

- The drop out rate of more than 50% (58.6%) of undergraduate students is problematic as it is both a waste of student time and university resources, although it should be recognised that a major reason for this figure are students taking “academic leave” before returning to their studies.
- Few Basic Science staff members are fluent in English.

9.3 Suggestions

- Increase vertical integration between basic science subjects and veterinary applied and clinical subjects, in order to enhance engagement and motivation in students.
- Reassess the syllabus of the basic science subjects in order to adjust and align the intended learning goals with the needs of the subsequent veterinary related courses and the EAEVE day one competences.
- Stimulate students to use the course evaluation programme in order to improve the teaching course quality.
- Improve the English teaching in the view of the admission of an increasing number of foreign students.

10. ACADEMIC TEACHING & SUPPORT STAFF

10.1 Findings

The academic staff of the FVM consists of: professors (2.5 FTE), associate professors (8.9 FTE), assistant professors/docents (8.1 FTE), and lecturers/assistants (18 FTE). The positions of the research staff members (3.78 FTE) are: leading researchers and researchers. All researchers of the FVM are involved in the teaching process as well.

The average age of the teachers at the FVM is 42.6 years. The teachers of the FVM teach basic animal science also at other faculties of the LLU. In turn, teachers from the other faculties (3.78 FTE) of the LLU participate in the study programme “Veterinary Medicine”.

Veterinarians in the VH (8.37 FTE) are employed by the LLU; they also participate in the teaching and research at the FVM. This group also includes veterinarians, who work in the VH additionally to the main work as a teacher in the FVM. Several veterinarians working in the VH are part time workers also in the other private clinics.

In 2016, including staff from other faculties and the VH veterinarians, the academic staff involved in veterinary training corresponds to 60.12 FTE, of which 54.36 FTE (90.4 %) hold a veterinary degree.

The support staff (45.49 FTE) are engaged in care and treatment of animals (4.45 FTE), preparation of practical and clinical teaching (11.25 FTE), administration, general services, maintenance, etc. (13.08 FTE), research work (2.08 FTE) and work as office cleaners, yard-keepers, drivers, electricians, carpenters (14.63 FTE).

The staff of the FVM are financed both centrally via the LLU from the state budget and from fees paid by students (budgeted posts, 78.54 FTE); additionally, also from income of the VH and from research projects (non-budgeted posts, 9.78 FTE). Most of the veterinarians and support staff working in the VH are paid from the income of the VH.

The number of staff financed by the central budget of the LLU is determined by the LLU. The Senate of the LLU decides on the number of positions for the professors and associate professors depending on the necessity and availability of finances according to the proposal of the Rector.

The number of academic staff (and funding for it) is determined for each year; it depends on several factors; number of credit points, number of students, character of the different courses, student group sizes, etc. The head of an Institute, knowing the number of FTE of the academic staff assigned to the Institute for a certain year, after consultation with the Dean, decides on the distribution of full and part time existing academic posts among the academic personal. In case a staff member has a higher qualification and experience than the academic position available there is a way to offer promotion. Furthermore, if there is a permanent need for the certain additional academic position, it is possible for the FVM/Department to apply for the founding of such a position.

An open competition is announced for the vacant positions of the academic staff. For the posts as professor, associate professor and assistant professor/docent, leading researchers are eligible who have a Doctor degree in the corresponding field of science and have appropriate results of scientific, pedagogical work, have taken part in certain organisational activities.

Academic personnel are elected for 6 years; Professors and Associate Professors are elected by the Council of Professors; docents, lecturers, leading researchers and researchers are elected by the Council of the Faculty. At least once during the election period (6 years) every elected person has to attend a pedagogical qualification course for at least 30 CP – 160 hours.

Academic staff and veterinarians working in the VH have possibilities to receive (limited) financing to take part in scientific conferences and CPD events.

10.2 Comments

- High team spirit, cooperation and motivation between staff, students and stakeholders.
- The Ratios (R1 - R5) are all within the recommended ranges.
- Because of the low level of salaries it is not easy to recruit and retain new high quality staff members. The salary of assistant professors (docents), lecturers and assistants is not competitive to the salaries in the governmental services and private sector.
- The Dean of the FVM and Directors of the Institutes have almost no possibilities to increase the FTE of academic staff of the FVM, because it depends on the teaching and research assignments given by the LLU.
- In 2013 in the FVM there were 35.35 FTE academic staff positions. Since then, the number of staff FTE positions has increased to 60.12 FTE; this is mainly due to the increased number of students and income from the VH (see Figure 10.1).
- The programme for regular training of teachers' educational skills is to be commended.
- As a result of the budget allocation process, teaching is given priority at the expense of research.
- PhD students in key teaching positions as part time lecturers etc.
- Lack of residency programmes, especially in clinical disciplines.
- At the moment sabbatical leave is not awarded to the academic staff due to limited financial resources.

10.3 Suggestions

- Strengthen the opportunities for the Dean and the Directors of the Institutes to create and distribute academic positions.
- Increase the part of the study fees (collected from students of the FVM) to be allocated under the responsibility of the Dean and the management of the FVM for the needs of the study programme and the salaries.
- Increase the support for the development of the junior academic personnel ensuring more funds for research (PhD positions) and professional development.
- Develop a long-term staff recruitment and development plan, including
 - Provision of sufficiently funded PhD programmes
 - Residency programmes
 - Sufficient time allocated for research

11. CONTINUING EDUCATION

11.1 Findings

CPE is mandatory for all licensed veterinary practitioners in order to keep their licence. For this purpose the veterinarian has to collect 50 points in five years (1 point – one day seminar) or pass an exam.

Veterinarians working in industry or the state are not obliged to collect CPD points. However, the FVM organises a 2-day conference “Animals. Health. Food Hygiene” every two years for veterinary practitioners or hygienists.

FVM is a member of VIC, CPE provider of veterinary training for practicing veterinarians, who have to fund their CPD on their own. Seminars in the FVM are also organized in corporation with other organisations such as industry and Latvian Rural Advisory and Teaching Centre and Beef Cattle Breeders Association.

Practicing veterinarians can also gain CPD points by accepting students for conducting their EMS study in their practice.

Some free-courses and seminars are provided to the both senior and junior FVM academic staff. There is an opportunity for all academic staff to have some courses provided by the university, including also pedagogical classes, scientific writing, participation in national and international conferences, etc. for free or at a reduced fee. However not all CPD for academic staff is covered by the university and academic staff members have to occasionally cover those expenses on their own.

CPD for academic staff is considered along with other parameters, such as publications and involvement in research projects, in the overall evaluation and decision on their career advancement. All positions for academic staff are 6-year fixed term contracts and are renewed or not each time based on overall assessment of each CV.

External veterinary practitioners with contract relationship with the faculty, have no particular CPD benefits and have to fund their CPD completely on their own.

Currently there are no residency programmes for veterinarians organised in FVM to allow further specialisation also at a Diplomate level, e.g. residency programmes of the EBVS Colleges.

CPD is also available for the support staff, e.g. courses or attendance to national conferences.

11.2 Comments

- Practicing veterinarians can gain CPD points by accepting students for conducting their EMS in their practice. This is a very interesting concept as it motivates veterinary practitioners to accept students in their practice and at the same time facilitates exchange of knowledge between students and practicing veterinarians in both directions.
- Although some grants are provided by the state for the PhD students, those are not enough to cover all expenses. As a result, there is a particular situation in Jelgava faculty, where

academic staff are at the same moment PhD Students. PhD students have to work as lecturers to ensure their living as well as their professional development.

- Overall the university has a strong attitude towards ensuring development of their staff, however limitations exist mainly due to work overload as well as due to financial restrictions.

11.3 Suggestions

- More financial support for CPD of academic staff should be foreseen, also for facilitating international involvement and gaining of experience.
- Specialisation of academic staff, e.g. by undertaking residencies in EBVS Colleges, should be also encouraged and supported financially.

12. POSTGRADUATE EDUCATION

12.1 Findings

Postgraduate training at FVM is offered as a 3 year fulltime (4 year part-time) PhD programme corresponding to the International Standard Classification of Education (present enrolment: 27 students fulltime students) and a 1,5 year Master programme in Food Hygiene (75 ECTS; present enrolment: 13 students).

PhD students must pass theoretical courses (20 ECTS) in foreign language and research methodology. Furthermore, students must present their results at the international LLU conference on “Research for Rural Development. It is expected the research leads to a minimum of 1 peer-review publication indexed in SCOPUS.

The Master Study in Food Hygiene is open to graduates with a bachelor degree in veterinary medicine, medicine, food technology, agriculture, biology or chemistry. The course comprises a theoretical part (36 ECTS), a practice part (9 ECTS), and a research part (30 ECTS).

No national or European College specialist training programmes are running at FVM at present, but FVM mentions “*Plans to develop further postgraduate education programmes for veterinarians*”, as a future opportunity for improvement (SER, Chapter 1.2 p. 8).

12.2 Comments

- FVM has 27 fulltime registered PhD. However, the majority of these appears also to be employed as fulltime lecturers or have other fulltime paid work. According to the junior Staff this is due to very low PhD salaries that do not cover minimum cost of living. As a consequence, very few if any PhD students have been able to finish the postgraduate study within nominated time in the resent years. The Pro-rector for Science states that the university is aware of this problem, and that LLU is planning to raise as university finances increases in

the future. For the moment the university offers that PhD students working as fulltime lecturers can get a few months paid “study leave” to finish their PhD thesis writing.

12.3 Suggestions

- Encourage LLU to introduce acceptable PhD salaries as soon as possible. Both in order to continue to attract the best students for PhD education so the future recruitment of best possible academic staff, and to allow present students to perform valuable and needed research for the faculty within nominated time. This does not exclude that PhD students also must participate in teaching of undergraduate students.
- Encourage FVM to develop a plan for the initiation of specialist training programmes in order to ensure highest quality of veterinary education and to attract highly qualified graduates to the Veterinary Hospital.

13. RESEARCH

13.1 Findings

The curriculum does not include compulsory research activities equivalent to BSc- or Master thesis activities.

However, 10-11% of students do involve themselves in voluntary scientific work by:

- Involvement in existing research projects, and
- Subsequent participation and publishing conference abstracts at the annual international scientific student conference “Students on their way to the Science organized by FVM, and/or
- Writing a ”scientific report”, replacing the final case report concluding clinical rotations at the 6th year.

Furthermore, all students read and consult scientific publications as part of various course assignments, including reviewing clinical science literature in relation to their final case report. Students’ research involvements are concentrated around Small and Large animal clinical topics.

FVM encourages students to take part in research by arranging the annual international scientific conference together with the Association of Veterinarians of Latvia (LVB), and the best scientific student presentations are awarded.

The PhD programme at FVM fulfils the International Standard Classification of Education (ISCED).

The number of PhD students has increased from 16 in 2012 to 27 in 2015, but PhD-funding is very limited, thus PhD students need other fulltime paid employment e.g. as lecturer in order to cover cost of living when studying. A positive effect of having PhD students teaching on a large part of the clinical courses is according to undergraduate students that the PhD student lecturers are very enthusiastic about involving students in research work.

LLU has developed a strategic research plan for 2015-2020, which includes 3 main veterinary research areas: Morpho-functional research of the digestive apparatus of animals in the aspect of ontogenesis and disease pathogenesis; new diagnostics, treatment methods, medication and food additives and Control and prevention of infection and infestation diseases.

Apart for existing share collaborative supervision of specific clinical PhD project between FVM and Veterinary faculty at University of Liege, no information has been provided about international research collaborations. Nor has information about the availability of national funding of the research strategy been specified. However, since the visitation, the FVM has provided a list of several examples of international and national funded research projects that were not highlighted during the visitation itself.

The research at FVM has in 2013, 2014 and 2015 resulted in 10, 14 and 14 full research papers, respectively, in peer-reviewed scientific journals indexed in Scopus or Web of Science databases. Furthermore, 36 other scientific publications in national journals or at scientific conference proceedings and abstracts were published in 2014 and 2015.

In order to increase research output at LLU in general, the university has recently introduced a financial reward system where by scientific staff will get a pay rise for each research article they publish in international peer-reviewed journals.

13.2 Comments

- The research output of FVM is relatively low and represents a serious challenge in relation to providing research based teaching of veterinary students.
- High teaching load, particularly noticeable among PhD students, restricted availability of research funding as well as relative low numbers of experienced faculty may explain this current situation.
- However, with the recent introduction of a financial programme for rewarding research activity resulting in international publications, LLU has demonstrated that the university is trying to improve the situation. It is too early to tell if the incentives will work.

13.3 Suggestions

- Introduction of compulsory scientific degree project (master thesis). The 6 year curriculum offers room for this without compromising the general quality of the education. Furthermore, it will enhance students' scientific and general academic skills. In addition, degree project students are a resource assisting in PhD-students and faculty in research projects.
- Continued development of strategies to increase research output.

EXECUTIVE SUMMARY

The visit to the Faculty of Veterinary Medicine (FVM) in Latvia from 7-11 November 2016 was carried out in a cordial and very friendly and professional atmosphere. The team was supplied with all further information that was regularly requested, both prior and during the visit. The self-evaluation report proved a helpful tool, reflecting the true status of the veterinary school.

The visit itself and this subsequent report was prepared under the auspices of the Budapest SOP.

The FVM is an integral part of the Latvia University of Agriculture (LLU) and is the only establishment for higher veterinary education in Latvia. Soon after Latvia became independent in 1918 veterinary education was established in the country in 1919. The FVM was initially established at the capital Riga, but in 1964 was relocated to the present site at Jelgava.

The FVM was visited by ESEVT in 2003 resulting in five Major Deficiencies which are outlined above in the Introduction.

In 2009 the FVM was revisited to investigate changes linked to these five Major Deficiencies. Although some progress had been made, the team at that time found that Deficiency 1 and 5 were insufficiently improved and Deficiency 4 was only partly improved. As a result, the decision by ECOVE was for **NON-APPROVAL**.

Additionally and in order to help the FVM move forward, the visitors in 2009 made a series of “suggestions”:

- *The Faculty needs more human resources (number of staff; and personal with high scientific quality)*
- *The University has to change the funding of the Faculty*
- *The Faculty should be itself responsible for the distribution of funds between the departments and clinics, because the Faculty knows the specific needs of the veterinary education where clinical teaching is the core business*
- *A tool to increase the number of personal could be that the income of the clinics remains in the Faculty so that it can hire personal and incorporate teaching with this money*

Summary of the major changes since the last visitation in 2009

The visitors found that during the last 7 years there had been major developments in order to rectify the Deficiencies. These developments included a new veterinary hospital and new Para-clinical laboratories. It should be noted that much of the funding to build and equip these new facilities came from the European Regional Development Fund.

There have also been major changes in how the FVM is financed. For example, 100% of all the income from the veterinary hospital remains with the FVM despite the finance office in the LLU providing considerable support.

While there have been efforts to recruit more staff, there remains gaps within a number of specialities, especially in the clinical area. The FVM and the LLU proved to be well aware of this situation and are determined to try and improve the situation, often with some innovative funding initiatives.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

As far as the study programme itself, there have been a number of significant changes since 2009. For example, the number of non-EU study courses have been significantly reduced, such as philosophy and history, as well as a marked reduction in other courses such as inorganic and organic chemistry.

Another potentially major change was in 2015 when the FVM initiated a veterinary course in English to run aside the existing course in Latvian. As this was still a very new course and with a limited number of students, it will be necessary for another ESEVT visitation to take place once a sufficient number of students have qualified from this new course.

The team saw many examples of excellent teaching including an environment conducive of such teaching, where it is obvious that there is mutual respect for each other at all levels from first year students to senior professors.

The FVM has its strengths and weaknesses, opportunities and threats. The team identified several strong points including:

1. An improved financial situation
2. Excellent clinical facilities within the new veterinary hospital
3. The university has dedicated, enthusiastic and open-minded staff, from professors to support staff. The same proved true for students, who are well appreciated within the university as excellent students.
4. A very good and university owned teaching facility for production animals (Vecauce).
5. Pedagogical training for new staff and regular assessment protocols for staff

The Major Deficiencies pointed out in the 2003 and 2009 visitations have been correctly addressed and the team is of the opinion that these deficiencies have been satisfactorily rectified.

As it often occurs, strengths are accompanied with some weaknesses. Their identification by the team should provide the faculty with incentives for further improvements:

1. Lack of competitive salaries could mean the loss of key staff, especially in the clinical area.
2. There is a need to increase the direct involvement of 6th year students in the clinical work during the entire 6th year, although it is noted that other years are also involved with clinical cases.
3. A lack of a sufficiently developed residency programme.
4. Paid time free of teaching and clinical duties is needed for PhD students in order to allow them to concentrate on their research projects.
5. Improve communication and feedback from students, especially the web-based course evaluation tool.
6. Improve the English teaching in the view of the admission of an increasing number of foreign students.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

Altogether, it is the opinion of the team's evaluators that the Faculty of Veterinary Medicine within the Latvia University of Agriculture fulfils all the standards provided for Stage I under the Budapest SOP.

The team found no Major Deficiencies for STAGE 1.

ANNEX 1. INDICATORS (RATIOS)

GUIDELINES

R1:	$\frac{\text{n}^\circ \text{ of undergraduate veterinary students}}{\text{n}^\circ \text{ of total FTE academic staff in veterinary training}} = \frac{292.33}{52.84} = 5.532$	<8.381
R2:	$\frac{\text{n}^\circ \text{ of undergraduate students}}{\text{n}^\circ \text{ of total FTE VMF academic staff}} = \frac{292.33}{49.06} = 5.959$	<9.377
R3:	$\frac{\text{n}^\circ \text{ undergraduate veterinary students}}{\text{n}^\circ \text{ of FTE veterinarians in veterinary training}} = \frac{292.33}{47.38} = 6.170$	<11.057
R4:	$\frac{\text{n}^\circ \text{ of students graduating annually}}{\text{n}^\circ \text{ of FTE veterinarians in veterinary training}} = \frac{36.33}{47.38} = 0.767$	<2.070
R5:	$\frac{\text{n}^\circ \text{ of total FTE support staff in veterinary training}}{\text{n}^\circ \text{ of total FTE academic staff in veterinary training}} = \frac{45.49}{52.84} = 0.861$	0.505-1.907
R6:	$\frac{\text{supervised practical training}}{\text{theoretical training}} = \frac{3143.33}{5698.67} = 0.552$	>0.602
R7:	$\frac{\text{laboratory \& non clinical animal work}}{\text{clinical work}} = \frac{1817.33}{1326} = 1.371$	<1.809
R8:	$\frac{\text{teaching load}}{\text{self directed learning}} = \frac{8898}{4099} = 2.171$	2.59-46.60
R9:	$\frac{\text{Total n}^\circ \text{ hours in the vet curriculum}}{} = \frac{9760}{13.943} = 13.943$	8.86-31.77

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

	$\frac{\text{n}^\circ \text{ hours in FH/VPH}}{700}$			
R10:	$\frac{\text{n}^\circ \text{ of hours obligatory extramural work in veterinary inspection}}{\text{n}^\circ \text{ hours in FH/VPH}}$	=	$\frac{160}{700}$	= 0.229 0.074-0.556
R11:	$\frac{\text{n}^\circ \text{ of food-producing animals seen at the Establishment}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{917.0}{36.33}$	= 25.241 >0.758
R12:	$\frac{\text{n}^\circ \text{ of individual food-animals consultations outside the Faculty}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{943.3}{36.33}$	= 25.965 >8.325
R13:	$\frac{\text{n}^\circ \text{ of herd health visits}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{9.0}{36.33}$	= 0.248 >0.326
R14:	$\frac{\text{n}^\circ \text{ of equine cases}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{185.7}{36.33}$	= 5.111 >2.700
R15:	$\frac{\text{n}^\circ \text{ of poultry/rabbit cases}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{43.3}{36.33}$	= 1.192 >0.407
R16:	$\frac{\text{n}^\circ \text{ of companion animals seen at the Establishment}}{\text{n}^\circ \text{ of students graduating annually}}$	=	$\frac{5042.7}{36.33}$	= 138.803 >48.06

R17:	$\frac{\text{n}^\circ \text{ of poultry flocks/rabbits} \\ \text{production units visits}}{\text{n}^\circ \text{ of students} \\ \text{graduating annually}} = \frac{1.0}{36.33} = 0.028 > 0.035$
<hr/>	
R18:	$\frac{\text{n}^\circ \text{ of necropsies of food} \\ \text{producing} \\ \text{animals + equines}}{\text{n}^\circ \text{ of students} \\ \text{graduating annually}} = \frac{89.3}{36.33} = 2.458 > 1.036$
<hr/>	
R19:	$\frac{\text{n}^\circ \text{ of necropsies of} \\ \text{poultry/rabbits}}{\text{n}^\circ \text{ of students} \\ \text{graduating annually}} = \frac{59.0}{36.33} = 1.624 > 0.601$
<hr/>	
R20:	$\frac{\text{n}^\circ \text{ of necropsies of companion} \\ \text{animals}}{\text{n}^\circ \text{ of students} \\ \text{graduating annually}} = \frac{131.0}{36.33} = 3.606 > 1.589$
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ANNEX 2. STUDENT REPORT

Objectives

Students at the veterinary faculty of LLU, Jelgava, are very friendly and proud of their faculty. They feel like they work together with the teachers in a team, and seem to have a good communication with teachers and deanery. Overall they are happy with the curriculum and education, even though they would like more hands-on training and more specimen-specific courses.

Organisation and student influence

Students have the opportunity to evaluate and make an impact on curriculum as well as specific courses in the veterinary programme. This is possible through representation in councils at the university and faculty, where representatives from the student self-government is present and have the right to vote.

Students can also express their opinions through electronic evaluation at the end of each semester. Unfortunately, students are not using these electronic evaluations to a great extent. It seems as students are not well aware of the fact that the evaluations exist, and they prefer going directly to the dean or the vice dean when having any issues regarding their education. It is positive that students feel comfortable to speak directly to the personnel in charge, though this is only manageable for smaller, easily fixed problems. Evaluations usually contains a lot of questions, which might be one of several reasons for students not using it. Student council is working together with the deanery to find a way to get more students to use the electronic evaluations.

Students are represented in meetings, but are rarely given documents and papers beforehand. This makes it hard for students to prepare and gather more information before expressing what the majority of students think in specific questions.

Suggestions:

- Make electronic evaluations more attractive for students to take part in, e.g. more course specific questions and feedback what has been changed due to student opinions. Make sure student representatives get documents and papers to meetings beforehand, to ensure they have a fair chance to prepare themselves.

Curriculum

The curriculum provides students with experience of different species, sufficient opportunities to gain practical knowledge, by containing animal handling of horses, dogs, cats and cattle throughout the first year. Having students at the clinic already from third year makes students well prepared for the clinical rotation.

There is a lot of drop out during the first year of studies. This is probably due to the first year having a heavy work load, and the fact that there is a variable knowledge of basic sciences upon entrance to the first year. In chemistry, teachers find that the level of English knowledge among the Latvian students is varying. Since the majority of literature and scientific articles are in English, there is a risk

that non-English speaking students have a reduced opportunity to gather and use information during studies and after graduation.

Students from both the Latvian and the English course wish to integrate the programme more, with common lectures or laboratory work. This would require more English being used during the whole curriculum. A mentor programme with first year students and later year students has recently been introduced.

Suggestions:

- It should be clear to the applicants that veterinary studies require a lot of work, and it is of outmost importance that potential students realize the benefits of studying summer courses before entering the programme, in order to achieve a lower dropout rate.
- Encourage teachers to use English more through the whole curriculum, e.g. by using English terms, providing the students with scientific articles written in English etcetera. Students wish that the faculty pushed more, for students to understand the importance of English in order to provide further education and assimilate research results during and after studies.
- Make sure that the students in the English programme receive all information and learning material in English.

Teaching and exams

The teaching is to a rather big extent performed in groups. This provides the students with possibilities to receive a lot of help from teachers, reducing the risks of students to get behind in studies. The students can get extra help during consultation hour, which is a great opportunity to get a better understanding and clear out unanswered questions. Many examinations are performed utilising group tasks, presentations and oral exams. Many courses have written exams, on which students write their name. This is a potential trouble for legal certainty for two main reasons; firstly, students who perform well at the exams have the chance to receive a scholarship. There is a risk that the teacher is biased by working close to the students, when correcting exams knowing which student wrote the exam. Secondly, there might be a problem for student representatives in student council, expressing criticism on the behalf of students, towards the professor who later will correct their exam.

The students are already introduced to clinical work in third year, which is positive and appreciated by the students. They get to be meet patients and auscultate, and practice some hands-on training. It is desirable though, to let students be more involved at the clinics, especially regarding the horse clinic.

The logbook is a good tool to make sure every student gets to practice first day skills. It is questionable though, that rectal exam of horse is not listed as a basic clinical skill and thereby something students do not have to do before graduation. Students get to examine patients and fill in a table with findings. During the visit, several students expressed a wish to be more involved in animal owner contact and treatment planning. This would prepare them better for the clinical rotation and their work post-graduation.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

Regarding anatomy and topography education, the amount of fresh (not frozen or in alcohol) material is a matter of question. Not every student gets to see a whole animal dissection until at the end of anatomy course. Topography is taught in a separate course later in the curriculum, which may aggravate the understanding of anatomy. Some students get to cut into their first heart during pathology.

During the visitation, some material from the English courses were studied, and surprisingly some of the material were in Latvian and German, giving students different conditions to learn. It is of outmost importance that the material and teaching is performed entirely in English.

Suggestions:

- Get students more involved and provided with more hands-on training in the clinic. Let the students meet the patient and animal owner on their own before the veterinarian enters the room, in order to get students to practice communication.
- In the horse clinic, let students do injections, rectal examination etcetera under supervision, to really use the patients for teaching. It is a university hospital and students should be as involved as possible. Trust the students!
- Also, involve students in the treatment plans, for instance by during rounds letting students suggest treatments and discussing different options. Make sure students get to write medical records in the software, including treatment plans, and not limiting them to write findings in a prepared tablet.
- Increase the amount of fresh material and let students learn topography along with anatomy. This would require more carcasses and organs for dissection, something that could be found at the slaughterhouses. One could also see if there is a possibility to get carcasses from fur farms, for the students to use in anatomy and topography.
- Make sure that every teacher in the English courses are providing students with English material, teaching in English.

Physical facilities and library

The animal hospital, simulatory lab, histology lab, information centre etcetera is well suited for teaching. Students have availability to Wi-Fi throughout the faculty and dorms, and e-books from anywhere using the e-learning system login. Something that seems to be lacking is study places; since almost 50 % of the curriculum is supposed to be directed self-study, one would expect more facilities for students to study outside of class. In the information centre there is a total of nineteen places for students to sit, of which ten are sufficient study places (others being armchairs with coffee table, and four seats at computers). There are some places for students to sit in the student room as well, with a total of ten seats (six of them at a table, no computers). This makes a total of sixteen sufficient study places and only four computers. As an illustration, on Fridays 12.30 to 16.15 o'clock students in year two, three and five in the Latvian programme, as well as year one and two in the English programmes, have self-studies scheduled. Students are being expected to study in dorms. It is worth considering that some dorms only have one desk per two students, not making enough seats for all. In the palace, there are enough study places and computers, along with up to date books in the library, making it a very well suited place for self-studies during first year.

FINAL REPORT AS ISSUED BY ECOVE ON 17 MAY 2017

Sport facilities are well and appreciated by students. Room for students to stay at the animal hospital overnight is good.

Suggestions:

- Make sure the students are provided with enough well-designed study places in the faculty. Also, make sure students have access to these study places. Increase the number of computers for students to work at the faculty.

ANNEX 3. Decision of ECOVE

The Committee concluded that the following Major Deficiency had been identified:

-) Insufficient hands-on clinical training, especially in horses

The 'Faculty of Veterinary Medicine of the Latvia University of Agriculture' is classified after Stage 1 Evaluation as holding the status of: **CONDITIONAL APPROVAL**.