

**European Association of Establishments for Veterinary Education  
and the Federation of Veterinarians of Europe  
European System of Evaluation of Veterinary Training**

**REPORT ON THE VISIT TO THE FACULTY OF  
VETERINARY MEDICINE, AFYON KOCATEPE UNIVERSITY-TURKEY**

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## **INTRODUCTION**

Afyon Kokatepe University, located in the city of Afyonkarahisar, western Turkey, was founded as a Turkish state university in 1992. The Faculty of Veterinary Medicine (FVM) was founded on July 4<sup>th</sup> 1995 by the Turkish Ministerial Council.

The university continues to grow and is subject to continuous structural changes. FVM itself, was consolidated in a campus of its own in 2006 with new buildings being provided. Further additions have been made or will be made. In parallel the number of students has increased from 30 to 60/65 per year.

FVM has revised its curriculum several times which has resulted in the situation that the faculty presently has to run three different curricula.

In 2010 the population of Afyonkarahisar was around 180000, the city is located in an agricultural area with a large animal population.

The FVM has been a member of EA EVE since May 2009 and immediately applied for a Stage 1 evaluation “considering an external evaluation as an integral part of its quality improvement efforts”.

## **1. OBJECTIVES and STRATEGY**

### **1.1 Findings**

As outlined in the SER and on the homepage of the faculty’ the main objectives of the FVM are to ensure a continuous high-quality training in veterinary medicine, covering all fields of veterinary undergraduate education as well as continuous and post-graduate education, meeting the needs of society, encompassing animal and human health (one health concept). The faculty also wants to become an internationally recognized centre of excellence. The core values and the strategic objectives are clearly outlined in the SER, chpt. 1. 1.

Responsibility in meeting these objectives and the strategy outlined lies with the Dean and the Faculty Council. The mechanisms established are negotiations of the Dean with the Rector and the generation of a long-term plan which is forwarded to the Rector and Senate of the university every second year.

### **1.2 Comments and suggestions**

In general the objectives and strategy a faculty is trying to achieve are convincingly and clearly outlined. This also prevails for the FVM.

The formulation of these objectives and the underlying strategy, however, does not necessarily indicate if and to what extent these high goals are met.

Concerning the objectives developed by FVM the education of the undergraduate and graduate students should be in the foreground with research being an important second. Students should be involved in the outline of the objectives and strategy.

## **2. ORGANIZATION**

### **2.1 Findings**

The FVM is one of 8 faculties of the Afyon Kocatepe University. The organization is outlined in detail in the SER, chpt. 2.

Briefly, university management and organization is regulated by the Turkish Council for Higher Education (TCEH) through the rectorate. The term of a Rector is 4 years. Full and Associate Professors of the University develop by an elective process a list of 6 candidates which is forwarded to the TCEH. TCEH reduces this list to 3 candidates and forwards it to the President of the Turkish Republic who selects and appoints 1 person as rector. The Rector chairs the University Council.

The candidate for the position of a Dean must have the status of full professor, either in the home or another faculty. The Rector in his own responsibility forwards a list with 3 candidates to the TCEH which appoints one of them as Dean. The Dean is responsible for all financial and administrative matters, education and research coordination. He appoints the Vice-Dean (3-year term) and chairs the Faculty Council and Faculty Administrative Council, the latter one being responsible for administrative matters. Members of both committees are Assistant-, Associate- and (Full) Professors.

The Faculty Council is responsible for all curricular matters, it adopts the developmental plan of the FVM and approves the annual report of the Dean. Depending on a given situation it may establish subcommittees (presently there are 13 subcommittees at the FVM; p 31 SER).

The FVM is structured into 5 Departments which encompass a total of 20 Divisions. Denomination of the 5 Departments (Basic Sciences, Zootechnology & Animal Nutrition, Pre-Clinical Sciences, Clinical Sciences; Food Hygiene & Technology) indicate that clinical education is discipline- and not species orientated; there are no separate divisions for Animal Production and Preventive Medicine.

Division and department heads are appointed by the Dean for a period of 3 years following consultation with the respective unit.

In addition the FVM has access to 7 university run centres and units (5 production animal units, 2 processing units; p 30, SER).

### **2.2 Comments and suggestions**

Organization of the FVM within the University follows Turkish regulations. Unfortunately the regulations do not foresee assistant, student and staff participation in the Faculty Council and the subcommittees formed. The FVM is encouraged to work towards changing this situation; a first approach could be to allow elected members of this group to act as observers with the right to speak in these committees.

Visibility of the subjects Animal Production and Preventive Medicine should be increased.

The number of the academic and non academic staff presently assigned to the 4 clinical divisions is not sufficient to allow the implementation of a “species orientated education”. There is of course no “must” to adhere to such a principal but the FVM is urged to establish the relevant clinical specializations within the frame given (see also 10.2).

### **3. FINANCES**

#### **3.1 Findings**

Afyon Kocatepe University is a state university and solely supported by the Ministry of Finances of the Turkish government. The total annual budget established by the University and submitted to the Ministry is based on the individual budgets submitted by the different faculties and other units of the University. Within the University funds are allocated by the Rector and there is no specific factor with respect to the various institutions.

In 2009 FVM received the 4<sup>th</sup> biggest budget among the 8 faculties. It was deemed to cover all the costs for personnel, teaching and maintenance and amounted up to about 1 452 500 € in 2009. Within the FVM, the Faculty Administrative Council and the Dean decide on the allocation of funds. 35% of the extra income created by clinical/diagnostic services is retained for equipment and consumables and 20% are used to top the salary of the related staff: this amounted up to about 19 000 € in 2009. The remaining 45% goes to the government.

Fund available for research (about 90 000 € in 2009) are provided by the university on a competitive basis. Additional funds may be obtained from industry, governmental organizations or Tübitak.

Capital expenditure, e.g. for major building work or special equipment may be provided on request by the rectorate according to given priorities.

FVM has no influence on the tuition fees and does not benefit.

#### **3.2 Comments and suggestions**

Assessment of the financial situation of the faculty must be taken on the context of the given situation in Turkey. Not the absolute amounts of expenditure provided must be taken into account but any shortcomings observed during the visit. There is certainly no lack of teaching staff but a distinct lack of technical staff was noted. This affects the provision of services for the clinics, other laboratory based functions such as necroscopy, anatomical practicals and other practical based subjects. In order that the faculty can provide adequate undergraduate and postgraduate education and further develop the clinical services, which are the essential part of clinical training, the University is strongly urged to solve these problem as soon as possible (see also chpt.10).

In some divisions, but particularly in the clinical area, there is a shortage of some modern equipment, both of a major and minor type. FVM is aware of this situation

and again additional expenditure should be made available to solve these and other problems (e.g. lack of isolation facilities, safety measures) as they are also inherently related to the quality of veterinary education (see also chpt.6).

## **4. CURRICULUM**

### **4.1 General aspects**

#### **4.1.1 Findings**

The curriculum comprises a total of 5 years and has been changed several times in the past, due to the introduction of the ECTS –System. Decisions on the curriculum are made by the Teaching and Training Coordination Committee and the Faculty Council in cooperation with the academic staff.

The present curriculum comprises a total of 5280 hrs plus 240 hrs of compulsory extramural training. There is a total of 2752 hrs of lectures, with no seminars or self learning, there are 1848 hrs of laboratory and desk based work, 328 hrs non-clinical animal work and 320 hrs of clinical work. 32 hrs are assigned to other work.

The denominator of the ratio Clinical work/Laboratory and desk based work + non-clinical animal work is 6.80, the present denominator established by ECOVE is 2.12 (UL).

Extramural training may be taken in 4 different areas and hence must be considered an elective. FVM offers a considerable number of electives; each student has to enroll in an elective with 1hr per week per semester.

The core subjects of the curriculum cover all subjects listed in Directive 2005/36/EC with, however, different depths and intensities.

During the first 3 years a semester of around 60 students is treated as one cohort. In practical training they are divided into groups of around 15 up to 30. In the 4<sup>th</sup> year groups of 15 students are assigned to 4hrs per week (autumn term) and 8hrs per week (spring term) clinical training. In year 5 a rotation system is applied by forming 4 “Inturn Groups” (*for explanation see SER, Table 4.1, year 5, p 53*) of about 15 students rotating between 19 of the 20 Divisions. In the Clinical Group (Group 1) group size is broken down to 4-6 and rotation is between surgery, obstetrics and gynecology, internal diseases and artificial insemination.

#### **4.1.2 Comments and suggestions**

The Team is of the opinion that that the present curriculum is not in accordance with the requirements of science and problem based teaching and consequently learning. There are virtually no seminars which would require the active participation and interaction of students with the instructor, e.g. by presenting seminars dealing with national and international literature. There are no requirements for the presentation of clinical cases and the preparation of case reports based on a scientific background.

This shortcoming is not compensated by the introduction of self learning which would require students to not only deal with textbooks but also with other scientific information sources

The time allotted to hands on clinical training is way below average (see ratio R7) and raises justified doubts that students will meet the respective day 1 competences on graduation (see also 4.4.2).

**As long as these deficiencies in the curriculum, also in respect to hands on clinical training, are not rectified there remains a category 1 deficiency.**

## **4.2 Basic subjects and sciences**

### **4.2.1 Findings**

Most basic subjects and basic sciences mentioned in Directive 2005/36/EU are taught as independent subjects; if not they are part of other subjects. Except for Biomathematics/Biostatistics and one member from the department of Veterinary Biology and Genetics, all teaching staff involved has a veterinary background.

Basic subject and science teachers consider that incoming students have an adequate basic knowledge, based on the strict selection before admitted to veterinary education.

Basic subjects: 160 hours are allotted to basic subjects (SER Table 4.2, p 55). Teaching is restricted to class based (frontal) lectures; no seminars, self directed learning or practical training are offered, except for biomathematics which offers 16 hrs of “other” training.

Basic Sciences: For the sake of this report parasitology was added to the basic science subjects and not treated as a clinical science subject as is in Directive 2005/36/EU. 2264 hrs are allotted to Basic Sciences as defined above with 944 hrs of class based (frontal) teaching and 1320 hrs of laboratory and desk based work. No seminars or self learning are offered.

Epidemiology is taught as an independent obligatory subject in the department of Microbiology.

In general group size in laboratory or desk based work is 20 to 30 students except for training in microbiology where about 15 students are assigned to each group.

Basic science subjects participate in the rotational “Inturn Training” in year 5 (9<sup>th</sup> and 10<sup>th</sup> semester, SER p 53/54) with about 15 students per group assigned to the various divisions.

### **4.2.2 Comments and suggestions**

There are no short comings in respect of teaching staff availability but practical courses lack the assistance of technical staff. The total number of hrs allotted to teaching in Basic science, particularly when considering the additional “Inturn Training” in year 5, must be considered very high. The introduction of teaching via semi-

nars with compulsory active student participation and controlled self learning to replace some of the class based (frontal) teaching is suggested. There is certainly a reserve of hours which could be used, for example by moving or reducing the teaching load.

### 4.3 Animal production

#### 4.3.1 Findings

Teaching in Animal Production is mainly covered by the department of Zootechnology and Animal Nutrition and primarily taught in years 2 and 3. All subjects listed in Directive 2005/36/EU are covered except Veterinary Hygiene which is, however, included in the teaching of Animal Husbandry.

Though not explicitly addressed in Directive 2005/36/EU Herd Health Management has become an important subject in undergraduate veterinary teaching. The curriculum of the FVM does not cover this topic but it appears that Herd Health Management is by a multidisciplinary approach, involving several departments or units. As the team was informed, at least some of the subjects contributing to Herd Health Management are covered by the Department of Zootechnics and Animal Nutrition.

As is indicated in SER, Table 4.2., the number of hours allotted to Animal Production split up into 192 hrs of class based (frontal) lectures and 198 hrs of supervised practical training which further breaks into 16 hrs of laboratory and desk based work and 182 hrs of non clinical animal work.

There is no self directed or problem based learning, no 'peer' teaching and no interactive computer assisted learning. As was learned during the visit supervised practical training does often mean lectures with demonstrations in groups up to 30 students with no hands on animal or equipment experience.

Part of the practical teaching in animal production is performed in the Animal Application and Research Centre (FAARC). This centre was only recently given to the university. Management is carried out by a managing board composed of academic staff from the Department of Clinical Sciences (4) and the Department of Zootechnics and Nutrition (3) of the FVM. The distance from the Faculty Campus to FAARC is around 30 km (about 20 minutes) and there are university owned mini buses taking the students to the farm. The first visit of the students to this farm is in the 3<sup>d</sup> year.

FAARC consists of a closed area of 3100 m<sup>2</sup>, there are 185 ha of arable land.

At the time of the visit the animal stock at FAARC was as follows:

Water buffalo cows	77
Water buffalo bulls	10
Water buffalo calves	50
Swiss Brown cattle	18
Pirlak sheep	500
Merino sheep	28
Pigs	3



The farm has no poultry and no poultry houses.

The buildings for cattle and water buffaloes are poorly maintained and not well designed or equipped. Building hygiene needs more attention. The transverse bars of the feeding trough are arranged in a way that hampers access of the animals to the fodder; animals show “chronic type” injuries (sclerodermia) on their knees (carpal joint) and neck.

The cattle herd consists of both pure and cross breeds to demonstrate breeding differences and the opportunities of crossbreeding.

Apart from the regularly scheduled visits students are always welcome to visit the farm individually during daily working hours, to observe the animals and join the farm activities. However, only a few students use this opportunity.

There is also the possibility that students may stay overnight on the farm to attend parturitions and special disease cases. Almost none of the students use this opportunity

In addition to the visits to FAARC, practical classes concerning poultry and horses are also held on private farms in the vicinity of the Faculty.

Based on a “gentleman’s agreements” students can visit a big dairy farm named Korrel and a feed mill on a regular basis. On the dairy farm students can learn a lot about housing systems, milking techniques, feeding, harvesting plus storage and the application of manure management. The farm is managed by an agricultural engineer. 4 full time veterinarians are employed. Instructions about zootechnics are given by the farm-manager. Students are allowed to practice artificial insemination, rectum exploration and medical treatments under the supervision of a veterinarian.

At the feed mill students have the opportunity to follow the feed production process from the basic feed ingredients to the end products. Students get a clear explanation of the computerized in-process control. The feed mill has its own laboratory where analytical methods are demonstrated to the students.

The feed-mill has its own poultry and a cattle farm. After visiting the feed-mill in the morning (3 hours) students continue in the afternoon with visits to the farms to get explanations about the housing and feeding systems and regimes.

Additional teaching on Animal Husbandry but particularly on Herd Health Management could be carried out using the Mobile Clinic (see chpt. 7) when visiting other private farms.

#### **4.3.2 Comments and suggestions**

The Faculty farm (FAARC) could be a good facility for students being used in practical training in Animal Production. However, the value of the farm for teaching/demonstration purposes is hampered by the poor design and maintenance of the buildings and the absence of poultry. FVM is advised to develop a long term plan to optimize the FAARC facilities; immediate actions, however, should be taken to improve the feeding system.

**As long as the feeding system is not improved there remains a category 2 deficiency.**

Farm visits of students should be more efficiently organized with more hands-on an-

imal teaching. Practical instructions on the handling of the important animal species involving each individual student should be part of the course and should have been given in the first or second year of the curriculum. Students should be encouraged to be trained on the farm on an individual basis and the respective arrangements should be made and announced by the FVM.

Teaching on the importance of indoor climate and climate regulation for animal health and welfare and on the equipment to measure and analyze the environmental conditions is very poor. Students should learn to deal with these matters and it is strongly recommended to adapt teaching accordingly.

The visibility of the subject, Herd Health Management, must be increased. There should be a multidisciplinary approach involving different clinical sciences, animal nutrition, animal production including poultry, epidemiology, economics and food hygiene. Students must be made familiar with herd health monitoring systems and preventive veterinary care.

**As long as Herd Health management is not taught as a subject of its own there remains a category 2 deficiency.**

#### **4.4 Clinical sciences**

##### **4.4.1 Findings**

The total number of hrs allotted to clinical sciences is 1240 which includes 720 hrs of class based (frontal) teaching, 256 hrs of Laboratory and desk based work, 152 hrs of Non-clinical animal work and 112 hrs of clinical training. .

The small animal clinic operates a 24 hour service but this is of recent origin. It is obvious that the case load in companion animals and horses is still too small to meet the needs of student education, this also applies to the number of emergency cases presented to the Animal Hospital, e.g. during off hours, requiring intensive care. The number of cases seen is listed in Table 7.3, p 105, SER.

There are no highly qualified specialist clinicians/teachers, e.g. diplomats of a European college, within the specific disciplines e.g. ophthalmology, cardiology, dermatology etc.. Some of the associated equipment, e.g. Ultrasound, LA X-rays is modern, but insufficiently used to secure adequate student education.

Preventive Medicine is not taught as an independent subject but is included in other basic and clinical science subjects. This apparently also accounts for propaedeutics; as became clear during the visit, there seems to be no clear teaching concept. Practical instructions on this topic are dependant on too few patients and the farm animals seen on the occasion of farm visits. The cause is the fact that FVM does not have a stock of propaedeutical animals.

With 6.80 the denominator for ratio R7 (Clinical work/Laboratory and desk based work + non-clinical animal work) is well above the level of 2.12 (UL) set by ECOVE.

#### 4.4.2 Comments and suggestions

Training in clinical sciences, which includes pathology, is at the core of veterinary education. Basic sciences and the services provided by the various divisions should be strongly linked to clinical education, e.g. by implementing problem based teaching. Otherwise basic sciences could well be taught at another faculty.

The curriculum of the FVM covers all subjects of clinical training. However, there is little time allocated to Preventive medicine and Propaedeutics. In the long run FVM should aim to add veterinary specialists to the staff; this would certainly help to increase the patient load and to improve postgraduate/continuous education.

Particularly in respect to propaedeutics it is suggested that the development of a new teaching stream with instructions on live animals of all the major domestic species is of great importance (see also chpt.7). FVM is strongly advised to acquire and maintain a stock of propaedeutical animals which would support clinical instructions.

**There remains a category 1 deficiency as long as the problems with propaedeutical instructions have not been rectified.**

There is the clear indication that the hours allotted to hands on clinical training are too few. This may be due to several reasons, e.g. the lack of patients (see chpt.7), but it is nevertheless non acceptable. The resulting category 1 deficiency has already been included in the comments and suggestions given in chpt. 4.1.2. Some further comments to solve this problem are given in chpt.7.

#### 4.5 Food hygiene and technology and veterinary public health

##### 4.5.1 Findings

Teaching of this subject is by the Department of Food Hygiene and Technology. There are four core (mandatory) subjects:

- Food Hygiene and Control (3<sup>rd</sup> year, 6<sup>th</sup> semester, totally 4 hour per week: 2 lectures and 2 practical)
- Meat Hygiene, Inspection and Technology (on 4<sup>th</sup> year, 7<sup>th</sup> semester, totally 4 hour per week: 2 lectures and 2 practicals)
- Milk Hygiene, Inspection and Technology (on 4<sup>th</sup> year, 7<sup>th</sup> semester, totally 4 hour per week: 2 lectures and 2 practical)
- Veterinary Public Health (on 4<sup>th</sup> year, 8<sup>th</sup> semester, totally 1 hour per week: 1 lecture)
- During the “Inturn” period of year 5 students are obliged to attend 2 hours of lecture and 10 hours of practical work in a slaughterhouse, meat processing plant, milk processing plant (AMANDA) and laboratory for food control.

This amounts up to a total of 288 hrs with 112 hrs class based (frontal) teaching, 144 hrs Laboratory and desk based work and 32 hrs Non-clinical animal work (SER, Tab. 4.2, p 57).

Extramural training in a slaughterhouse is not obligatory but must be considered an elective; in general students prefer to spend the compulsory 240 hrs of extramural training in clinics rather than in establishments connected to food hygiene.

The department organizes a Veterinary Food Hygienist Student Club and every student interested in this field can join. The Food Hygienist Student Club gives students the chance to get more detailed knowledge about food processing and to visit different food processing plants.

The training in food hygiene is mostly in the faculty, based on lectures and laboratory classes. However, in the 4<sup>th</sup> year all students have some training in a cattle slaughterhouse, which is sited close to the University in the Afyon area. It was established in 1988 as a private company. There is no official agreement between the Faculty and company and access for students and teaching staff is by an unofficial arrangement between the Department of Food Hygiene and the owners of the slaughterhouse. The slaughterhouse has an ISO 9000 and HACCP system certification by the Turkish certification agency<sup>⊗</sup>. There are 3 veterinarians who oversee this enterprise and 1 technician who is involved in meat inspection and a surveillance process. In total there are 50 employees with an additional 25 on the days of slaughter.

There are about 100 cattle slaughtered twice a week (Wednesday and Sunday); 30% of the cattle slaughtered are buffalos. Slaughtering is according to religious Halal requirements.

The cows are mainly delivered from the company farm, only occasionally cows are bought from elsewhere. They sell meat and meat products all across Turkey and also to Iran and Syria. Also some animal by-products like blood, intestine, liver, forestomach, heart, etc are sold for local consumption.

Transport of students from the Faculty campus to the slaughterhouse is by minibuses of the university and organized by FVM. On a day of slaughter a group of 30 students is taken to the slaughterhouse, accompanied by 1 teacher and 1 assistant. The time spent there is 90 minutes; divided into subgroups of 4-5 students are taught about ante and post mortem examination. Students only observe carcass examination but can themselves do head and internal organ inspection. Each student visits a slaughterhouse 8 times during the whole study period.

Students also have access to the meat processing plant "Ikbal", which is modern and well equipped. "Ikbal" produces 600 tons of meat products per month. This meat processing plant has a very well implemented and documented HACCP system. It is also certificated according to ISO 22000 and ISO 9000. It is preparing to BRC certification because it sells products to big retailers such as Tesco. The "Ikbal" meat processing plant produces lots of different kinds of traditional Turkish sausages as "sucuk". 19 students visit this plant once a week together with one teacher supervising the class. They are divided into groups of 3-4 students who observe different technological processes.

<sup>⊗</sup> However, as was observed during the visit, the slaughterhouse apparently doesn't fully comply with EU regulations and general GMP/GHP rules for such premises. Thus for examples the lines of product (meat) and waste material (feces) and live animal delivery cross, the meat is chilled to a temperature of 8 °C, isolation facilities and the methods of carcass and meat identification are not adequate, internal organs are packed into plastic containers and placed directly on the floor, there was no HACCP plan in place and there is no examination for BSE.

Students also have classes in the AMANDA Milk Processing Plant in which typical Turkish dairy products (e.g. kaymak, ayran, yoghurt) are produced.

The milk processing plant is situated in the building of the Food Hygiene Department and is properly equipped with all devices suitable for production of fermented milk products. However this plant does not fully meet all EU and general GMP/GHP requirements, e.g. there is a possibility of cross-contamination because there is only one entry/exit for the delivery of raw milk and dispatching ready to eat products. Some items in storage room were placed directly on the floor, some hosepipes in the production area were also lying on the floor, hand washing facilities are located inside the production hall and not in a special room. According to the Turkish law (and EU as well) every food processing establishment should implement the HACCP system but in this Milk Processing Unit this system is not fully implemented even though products are sold directly on the market.

During practical classes in the AMANDA Milk Processing Plants students participate in the whole technological production process.

#### **4.5.2 Comments and suggestions**

- The Veterinary Food Hygienist Student Club is a very good opportunity for students to get more detailed knowledge about food hygiene and technology and this activity should be more supported by the FVM. Also the idea of the department organizing seminars and symposiums on brucellosis for both consumers and farmers should be supported by the FVM, due to the apparently serious problem with brucellosis in this area. An elective on HACCP is taught parallel to Food Hygiene during which a student is acquainted with basic knowledge of this system. It would be better to teach this elective after the classes on Food Hygiene because by then the student would have the knowledge necessary for working with the HACCP system.
- Students get a basic theoretical knowledge about pork meat inspection and *Trichinella* inspection, based on pictures and video presentations. However, some practical classes connected with pork meat inspection and *Trichinella* examination would be very useful, bearing in mind the increasing number of pigs slaughtered in Turkey for tourists and the requirements by the EU.
- Visits to poultry slaughterhouse are infrequent and not obligatory. Students acquire knowledge about poultry slaughtering, inspection and technology only in theory (lectures, pictures, etc). It is strongly recommended that practical classes are held at a poultry slaughterhouse to familiarize every student with the poultry slaughtering process and inspection.
- Student training in the slaughterhouse and food processing unit is of high importance for undergraduate training. Though there seems to be no problem at present, this access should be secured by an official arrangement between the University/FVM and the two enterprises to replace the unofficial agreements between the Food Hygiene Department and the owners.
- During classes in the slaughterhouse students are divided into small groups and are not well supervised. Students do not perform veterinary inspections them-

selves, they rather observe inspection of the carcasses. However, observation only is not good enough to obtain practical skills. Consequently more teachers are required for this training. In addition each student should have the possibility to do post-mortem inspections manually in a safe and comfortable way meeting hygienic rules. It is also recommended that a practical exam on meat inspection (especially post mortem) is introduced for each student at the end of the class. It is suggested that the Faculty enters into agreements with some slaughterhouses and food processing plants to facilitate the organization of practical classes on Meat and Food Hygiene.

- Places in which students have practical classes should be exemplary, fulfilling all general GMP/GHP rules. Thus the Milk Processing Unit located in the Faculty and used for teaching should be brought up to a model establishment fulfilling national law and GMP/GHP requirements. The HACCP concept should be implemented and be used for practical instructions of students. Students should be informed that the cattle slaughterhouse in which they have classes does not fully meet EU regulations and general GMP/GHP rules (see above).
- It is not very useful for students to be taught practically only about the packaging of the products. Unless the concept is changed it is therefore suggested that classes in the meat processing plant are shortened. Thus it would be more useful for students to become acquainted with the documentation of the HACCP system, also some employees of the plant (e.g food technologist) should/could be involved in teaching process.
- There is no obligation for every student to have extramural summer practice in a slaughterhouse or food processing plant and only few students go for this 240 hrs extramural training. It is therefore strongly recommended that obligatory extramural summer practice on meat and food hygiene is introduced into the curriculum especially thinking ahead to the increasing role of veterinary inspection in Turkey related to future access to EU.

**Until this has been achieved there remains a category 2 deficiency.**

## **4.6 Electives, optional disciplines and other subjects**

### **4.6.1 Findings**

The new curriculum encompasses many elective subjects. Students have to choose one elective per semester, amounting up to one ECTS point, out of 3 to 12 electives offered. The title of many of the electives (i.e. poultry anatomy, rumen-physiology, pathophysiology, mycology, viral zoonoses, parasitic zoonoses) suggests that this topic should rather be taught as part of an obligatory subject than as an elective. A final opinion on this could not be determined during the visit, however, the academic staff explained that these elective subjects are more advanced than the basic knowledge presented in the core curriculum.

### **4.6.2 Comments and suggestions**

The team considers the number of elective subjects as excessive. It is therefore suggested to lower the number of elective subjects to avoid an overload of information and content duplication.

Elective subjects should contribute to the profile of Afyon Veterinary School (e.g. poultry, ruminants). Most of the listed elective subjects should be considered as being more suitably taught in postgraduate professional or continuing education.

## **5. Teaching quality and evaluation**

### **5.1 General aspects**

There are enough modern lecture halls equipped with beamers to seat a whole semester. Also class rooms used for supervised practical training comfortably house the number of students assigned to a given class.

FVM has implemented the policy that students bring their own laptop, hot spots are distributed throughout the FVM.

Students have free access to almost any relevant data base, library facilities (see chpt. 8) are close by.

Teachers have a compulsory teaching load of 10 hrs per week. They may teach up to another 20 hrs and get special payment for these extra hours taught.

### **5.2 Teaching methodology**

#### **5.2.1 Findings**

Teaching is based on the understanding that the participation of students in lectures and practical classes is compulsory. The required and controlled attendance rate is 70% in case of lectures and 80% in case of practical instructions.

Teaching is mainly by class based (frontal) lectures and student instruction in practical classes. There seems to be no policy to account for the constantly increasing knowledge in the field of veterinary sciences and to adapt the curriculum accordingly, e.g. by streamlining the material presented and introducing science/problem based learning which would require the students to actively participate in seminars and other activities and to direct a certain number of hours to self-learning.

There is no common policy on the learning material that students have access to. Students are informed about books and scripts associated with each topic (class) and most of them are in Turkish. Students are very much inclined to use these and not the few available English textbooks as most students don't have enough language skills to deal with an English text as was experienced during the visit.

In addition to textbooks, some teachers refer to material available on the internet, only a few teachers provide students with their own power point presentations.

For laboratory based examinations students have generous access to histological

slides and other material (e.g. bones) and the required instruments, e.g. microscopes. For clinical instructions there is a distinct lack of patients and propaedeutical animals (see 4.4.2).

FVM is well aware of the present trend to establish E-learning programs, however, no steps in this direction have yet been taken.

FVM does not have a program to evaluate the teachers and their teaching by the students or to provide pedagogical training/help for ongoing teachers or those having problems.

## **5.2.2 Comments and suggestions**

In the view of the team the ability to provide an extra 20 hrs teaching for extra payment must be seen as a temptation to provide more teaching than necessary. This trend is clearly obvious from the distribution of classes within the curriculum. It is strongly recommended to take this into account when revising the curriculum as suggested above (see 4.1.2).

In general the teaching methods applied are conservative but still acceptable for the time being. Nevertheless FVM should attempt to gradually provide other means of study like E-learning.

Concerning clinical hands on training, students should be given every opportunity to use equipment and techniques which are in normal use in good clinics. There should be specialist anaesthetists within the faculty to both treat the patients and give instruction to the students. Gaseous anaesthesia should be considered as the “norm” in 21<sup>st</sup> century veterinary medicine

Creating an intranet platform on which teachers could place handouts, notes and other useful information such as presentations for students would be a very useful tool for improving the teaching process.

Most important, however, the curriculum must be changed to accommodate science/problem based learning (see 4.1.2).

The incentive for teaching should be to present teaching at a high quality level as confirmed by a validated evaluation system rather than to receive an extra income in case more than 10 hrs are taught. Accomplishments in teaching should carry greater weight in the evaluation of an academic career. Such a system for the evaluation of teaching and teachers could be implemented quite simply

**There remains a category 1 deficiency until such a system has been established.**



## **5.3 Examinations**

### **5.3.1 Findings**

According to the SER and the additional information provided during the visit, within each semester and for each course taught there is a “Quiz” exam, followed by a “Midterm” exam and a “Final” exam at the end of the semester. A student may gain 100 points per exam. In order to pass the semester the student has to gain 100 points in the “Final” exam. These points may be obtained in an accumulative way by transferring 10 point from the “Quiz”- and 30 points from the “Midterm” exam in case 100 points had been obtained in each of them. Each “Final” exam can be repeated once, a second repeat is possible if – in case of several repeats – only one had failed; otherwise the semester has to be repeated.

The progress from one academic year to the next depends on the number of ECTS credit points obtained. If the goal of 60 credit points is missed by not more than 15 points, a carry over of the missing points into the next year is possible.

Starting the 3<sup>rd</sup> year requires that all 60 credit points for the first year have been obtained.

The type of examinations (multiple-choice questions, short answers, oral and clinical examinations) is regulated by the department with, however, more emphasis on oral and clinical examinations in year 4 and 5.

Examination is without the participation of external examiners.

### **5.3.2 Comments and suggestions**

The examination system per se can not be criticized. It follows the present curriculum and would need substantial changes when the curriculum is adapted to modern teaching criteria.

## **6. PHYSICAL FACILITIES AND EQUIPMENT**

### **6.1 General aspects**

#### **6.1.1 Findings**

The faculty is located at the north-east end of the main campus (Ahmed Necdet Sezer Campus) of Kocapete University and forms a well designed ensemble (sub-campus) of its own with short distances between locations (Main building, Animal clinic, Food hygiene, Anatomy, Necropsy, Experimental animals). Also the main library of the university is within walking distance.

All buildings, except the necropsy building (see below), are well designed and offer enough space, as is the veterinary hospital when considering the present patient load. All lecture halls are well equipped with beamers and other up to date equipment.

However, general safety standards are not or only partly met. Thus safety features like biohazard warnings, eye washers, appropriate disinfectant solutions and detergents at the relevant washing basins should be provided. It is essential that hoods are installed for all work with volatile toxic solvents like xylol, together with standard safety storage cabinets. In addition more laminar flow cabins should be made available to minimize detrimental effects on students and teachers. This is mainly seen in the teaching and research laboratories of the basic sciences departments, it applies to a lesser extent in the other units.

In addition the team got the impression that students do not change lab coats when moving from one unit to the other. They were even seen with lab coats in the cafeteria.

Buses are provided to transport students to the University Animal Research and Application Centre (30 km) which may be considered as a normal farm needing some renovation work (see also 4.3.2).

The private farm available for student teaching is a modern and commercially run dairy farm housing more than 800 cattle. A bus transport for students is provided (75 km).

### **6.1.2 Comments and suggestions**

The faculty is encouraged to further develop its campus. Clearly visible signs should be posted outside and inside the university campus directing to the Animal Hospital.

Within the facilities of the FVM safety standards should be increased. This also includes the wearing of lab coats. The resulting suggestions are indicated under 6.2.2.

## **6.2 Physical facilities, basic sciences and necropsy**

### **6.2.1 Findings**

Main building: Laboratories are suitable in terms of size and encompass most of the basic infrastructure for teaching and research. However, a multi-head microscope to teach histopathology to students in small groups was missing. An automatic embedding apparatus to prepare blocks for histological sections is available at the pathology department. A cryostat to obtain histological sections from frozen tissues is available in the Food Hygiene Department; both apparatus are shared with other units.

Each department has its own laboratory which is mainly used for research and the training of students within the “inturn rotation program” in the 5<sup>th</sup> year of the curriculum. As observed, only one laboratory seems to have a Laminar Flow Cabin to carry out research work in microbiology. Additional safety measures, e.g. hoods, are urgently required in some laboratories and especially in those areas where histological slides are prepared (exposure to xylol, formalin and other vapors; see 6.1)

Most of the basic sciences carry out their practical work in two general laboratories containing around 30 individual microscopes.

Anatomy: The Anatomy department has new and adequate building facilities with one room for bone examination in preparation (virtually finished) and another one for dissection. Specimens can be stored in a cold room or freezer or are stored fixed in formalin in two relatively big new steel containers.

The dissection room was not equipped with an active ventilation system, however, the team could not estimate exposure to formalin vapors as students did not work on the respective specimens. Due to the ongoing construction it was also difficult to assess other safety measures.

Food Hygiene: The building of the Food Hygiene Department is new and has enough classrooms suitable for teaching students. There is a laboratory for microbiological and chemical examination of food samples. Every student has the possibility to examine such samples during the inturn period Food Hygiene at the 5<sup>th</sup> year of study. The laboratory is approved by National Ministry of Agriculture and is equipped with all devices which are needed for basic examinations of food.

Necropsy: The necropsy room is relatively new and is designed to perform necropsies of small and large animals. A modern automatic necropsy table for large animals is located in the middle of the necropsy hall but more necropsy tables for small animal work would be needed. A cold room and freezer are available to store small and midsize animals. The necropsy room possesses a good transportation system for large animals from outside into the room. However, the separation between “clean” and “dirty” for students and staff participating in necropsy training is inadequate. During the visit it was further observed that only few students were dressed with proper protective clothing.

Experimental Animal Building: This unit houses only mice and rats and is not available for animal production or large animal and companion animal teaching. Animals are housed in conventional cages.

## **6.2.2 Comments and suggestions**

It is obvious that the VFM has been successful in the recent years to establish adequate facilities in the basic sciences and pathology for student teaching. In the future the experimental animal facilities might be used for a special training on laboratory animals as requested by recent EU legislation (Directive 2010/63/EU on the Protection of Animals used for Scientific Purposes).

However, there are still some faults which need urgent correction. The safety measures in many laboratories are inadequate, due to the lack of equipment, e.g. hoods in laboratories where work with toxic and volatile solvents is performed or laminar flow cabins for microbiological work. Students must be better informed on the maintenance of protective and hygienic measures, also in the need to wear lab coats.

**As long as these deficiencies are not met there remains a category 2 deficiency.**

Though fairly new the necropsy building lacks some space for parallel autopsies which would allow fewer students to work on one carcass. There is a suggestion to improve this situation.

However, more important, access to the necropsy room does not meet the necessary hygienic standard.

**As long as this situation has not been rectified there remains a category 1 deficiency.**

## **6.3 Clinical facilities and organization**

### **6.3.1 Findings**

The current facilities are identified on pages p 92 -99 of the SER. They are of modern construction and as such are well maintained. There is adequate space to meet the needs of the students involved in small group teaching.

Small animal facilities: There are two small animal consulting rooms (one room divided into two) with the basic minimum equipment to carry out an initial examination. There is a central pharmaceutical store but there was a consistent finding that some of the pharmaceuticals on the consulting room shelves and mobile clinic were outdated. Anesthetics and other narcotics were stored in a locked cabinet in the operation theatre.

The hospitalization facilities in the small animal clinic are new but there is no recognized isolation unit and the recovery and hospitalization facilities are lacking in bedding material and post operative welfare requirements.

There is only one gaseous anesthetic machine within the small animal facility. Most surgery and investigative procedures appear to be performed with parenteral anesthesia or sedative techniques.

Apparatus for diagnostic imaging consist of a portable US and a modern Doppler US machine and a rather outdated portable X-ray apparatus. X-ray pictures are scanned and stored using a computerized system. The protection equipment was incomplete as there were no gloves and personnel did not wear radiation detection badges during the visit although they were apparently available as indicated by the staff.

Large animal facilities: They consist of an adjacent bovine and equine area. There is ample space, however, in the bovine section animals have to be cast (lain on the floor) if special types of surgery (e.g. teat or joint surgery) became necessary.

The equine section would appear to have been little used with the large animal anesthetic machine apparently never having been used since purchase.

There are no areas where a horse could be lunged.

There is a modern X-ray apparatus for large animals, the safety measurements, however, resemble the situation for small animals.

The 4 boxes intended for accommodation of horses, while suitable for cattle, are unsuitable for horses. There are some additional boxes for ruminants.

Isolation facilities for large animals are missing.

Common facilities: The hospital has basic but adequate laboratory facilities to cover urine testing, biochemistry and hematology.

An electronic patient recording system will be available in the near future. Presently the recording of patient details including clinical histories, treatment, diagnosis and outcome, on paper appears to be vague. The results of any laboratory tests or other diagnostic aids do not seem to be linked to the rest of the patient history. There appears to be no record of which students have been involved in the case.

Mobile clinic: Other than reported in the SER the FVM does not run an Ambulatory Clinic to serve farms in the vicinity on a 24 hrs basis throughout the year but a Mobile Clinic with scheduled visits once a week to villages within a radius of approximately of 100 km around Afyon. These visits are made known to the in general small farms in the respective village and in case of problems farmers meet the mobile clinic on arrival.

The mobile clinic is organized by the 3 clinical divisions on a rotating system, responsibility at present is with the head of the division of Obstetrics and Gynecology. The bus provided seats 10 students and 2 veterinarians. Students participating are recruited from the "inturn-students" and apparently each student will participate at least once in the mobile clinic. The bus is equipped with a cupboard for storage of instruments and medication. At the time of the visit the only stock were some and in part outdated medications. The team was informed that stocking up occurs just prior to departure and that the respective equipment is stored in "ready to go" boxes. When demonstrated the box for gynecological/obstetrical treatment lacked essential instruments.

Animal transportation: FVM provides the transportation of single farm animals and horses to the veterinary hospital by a "Double Space" Trailer. Stray dogs are brought in a transporter managed by the city of Afyon.

### **6.3.3 Comments and Suggestions**

- Electronic recording of patient data should be implemented as soon as possible.
- Consideration should be given to improving the laboratory facility and making it a reference point to which local practitioners can send material. Once again this could be a revenue earner and further cement the relationship of the Faculty with the local practitioners.
- Greater attention needs to be paid to the welfare of post operative small animal patients with facilities in the recovery room which will keep the patient warm at the most basic. Similarly it is necessary to provide bedding for inpatients, being housed in a cage with a wire floor is not acceptable.
- Appropriate safety instructions in the X-ray areas must be provided and posted. The FVM is advised to replace the outdated small animal X-ray machine with a modern one and to utilize the large animal machine also for small animals and integrate the radiography service into one unit.

- Adequate facilities to cast a cow must be provided.
- The boxes intended to hospitalize horses must be brought up European standards.
- Outdated pharmaceutical drugs must be discarded; for hygienic reasons it is suggested to place the cupboard with the anesthetics and narcotics in the surgery preparation room.
- Isolation facilities for large animals must be provided, the isolation facility for small animals must be brought into a functional state.

**As long as the above requirements are not met, in particular in respect to the isolation facilities, there remains a category 1 deficiency.**

- With the establishment of the mobile clinic a major step forward had been done to increase the number of food animals seen by the students and to possibly increase the number of patients referred to the clinic. However, management of the Mobile Clinic must be considered insufficient. There should be a fixed staff assigned to the mobile clinic who can take care of all cases seen. It is further suggested to at least double the number of outgoing visits. A single participation of a student is simply not enough, especially in view of the low number of incoming patients and the fact that extramural training in a veterinary practice is not compulsory.

**There remains a category 2 deficit until management of the mobile clinic has been organized as recommended.**

## **7. ANIMALS And TEACHING MATERIALS OF ANIMAL ORIGIN**

### **7.1 Findings**

#### **7.1.1 Basic sciences**

There is a sufficient number of carcasses and other specimens used for anatomical training. If needed also other subjects taught like physiology would have adequate access to live animals for demonstrations.

#### **7.1.2 Animal production**

As laid down in chpt. 4.3 the experimental farm (FAARC) and the private farms visited provide good and enough animal material to teach food animal production with ruminants and poultry being in the foreground. Students are not informed about pig production but pigs are available for demonstration. However, there is an elective subjected called swine breeding (see SER p 50 and 67).

### **7.1.3 Clinical sciences**

#### **7.1.3.1 Pathology/Necropsy**

When visited about 20 students attended the necropsy of a dog. Only two students were involved in “hands on” participation, the others were passively attending.

According to the information provided by the instructor about 3 to 4 necropsies are performed per week. According to the SER, table 7.2, p 102, no companion animals were submitted to a necropsy between 2007 and 2009, there were so far 10 necropsies in 2010. The average number of farm animals and poultry submitted to a necropsy is 26.6 resp. 63.6, there were no members of the equine family necropsied but laboratory animals with an average of 229.3 necropsies per year.

With 0.07 the denominator for the ratio “no. of students graduating annually/no. necropsies companion animals” (R20) is way below the denominator of 1.73 (LL) established by ECOVE. Similarly with 0.57 the denominator for R18 (no. of students graduating annually/no. necropsies food producing animals + equines) is below the denominator established by ECOVE which is 0.96 (LL).

#### **7.1.3.2 Propaedeutical instructions**

There is a distinct lack of animals (dogs, cattle, sheep, horses) for propaedeutical instructions.

#### **7.1.3.3 Clinical instructions**

The average number of animals received for consultation and hospitalization is listed in Tab. 7.3, p 105, SER. A revised table dated 19. 10. 2010 with the specified case load for 2009 was handed out during the visit. As the team was informed FVM has an arrangement with the local municipality which verbally is stated to neuter about 500 canines per year.

There was no hospitalization as the respective facilities were only finished just prior to the visit (SER, p 105). Also the mobile clinic could not yet make a significant contribution to the patient load as it only commenced in June 2010.

There is a low level of equine consultations and the majority of small animal cases would appear to be municipality animals presented for neutering. Concerning the ratios, R14 (no. of students graduating annually/ no. equine cases) is distinctly below the present denominator developed by ECOVE (0.33 vs. 2.29 LL). Similarly with 6.83 the denominator for R16 (no. students graduating annually/no. companion animals seen at faculty) is way below the denominator of 51.34 (LL) established by ECOVE. There are also only few rabbit/poultry cases (denominators: FVM, 0.17; ECOVE 0.41 LL)

Thus only in the food animal sector the patient load is acceptable and probably better than indicated in the SER as student do hand on clinical work when visiting the Korel Dairy Farm (see also 4.3.1).

## 7.2 Comments and suggestions

### 7.2.1 Basic sciences and animal production

There is a good supply of teaching material of animal origin. Particularly for teaching of animal production some excellent facilities are available (e.g. the Korel farm).

### 7.2.2 Clinical sciences

Pathology/Necropsy: In view of the insufficient number of carcasses available for necropsies and student education FVM is advised to establish a transportation system to carry dead animals from outside to the FVM Post-mortem Room to supplement the number and types (species) of animals necropsied. The pathological diagnostic service for farmers and practitioners should be better established and advertised.

**As long as there is this lack of carcasses for student training in necropsy there remains a category 1 deficiency.**

Propaedeutical instructions: As is already indicated in chpt. 4.4.2, the team concluded that there were severe problems with the teaching of propaedeutics, largely due to the lack of propaedeutical animals. The category 1 deficiency delineated from this situation is already pointed out in chpt. 4.4.2.

Clinical instructions: As indicated above clinical education is the core of the veterinary curriculum. Any defaults observed there can not be compensated by excellence in other areas of teaching. The lack of companion animal and equine patients must therefore be considered a severe problem.

**As long as there is no distinct improvement in the availability of these type patients there remains a category 1 deficiency.**

However, the team is of the opinion that FVM has already started to solve these problems. Thus the faculty is to be applauded for instituting the 24 hour emergency clinic and the mobile clinic. These are a valuable source of teaching material for the students and staff. Both these services need to be better advertised and developed and the general public should be made aware of the 24 hour clinical emergency service.

The Faculty should also institute a program to advertise their facilities to the local large animal-, equine- and small animal practitioners to encourage them to use the services of the faculty. Additionally a relationship with local practices should be established to enable students to see first opinion practice on rotation, to assist in meeting the shortage of companion animal and equine patients at the Animal Hospital.

Also in order to develop a second opinion referral service and to increase the case load, the faculty should work more closely with the local practitioners. These could provide valuable material to assist and support specialist development within the Animal Hospital (e.g. to assist teachers to achieve the status of a diplomate) and to es-



establish hospitalization of patients. This would allow students to follow a case on in patients and enable the FVM to establish a functional problem orientated teaching in the clinical area.

As already stated in chpt. 5.1.1, students should be given every opportunity to use equipment and techniques which are in normal use in good clinics. There should be a specialist anesthetists within the faculty to both treat the patients and give instruction to the students. Gaseous anesthesia should be considered as the “norm” in 21<sup>st</sup> century veterinary medicine

## **8. LIBRARY AND EDUCATIONAL RESOURCES**

### **8.1 Findings**

The main university library is within walking distance (500m) from the FVM campus. It is open from 8:30 till 20:00 during weekdays and from 10:00 to 16:00 on Saturdays. According to the director of the library, students are regularly informed on how to make use of the library facilities, however, FVM students do not seem to know about that.

Student can check availability of books and journals on the 4 computers located in the library and via the internet; however, they can only check on the status of a book, reservation requires attendance in the library. Academic staff can make reservations on line.

The library uses an international index system (according to the US Senate) and several computers in the library are provided for search (the respective “Index” to be used is posted on the wall).

The library provides about 89652 books and 53158 e-books about 26000 e-journals. Students have free access to virtually all international data banks, both in the library and at home. To download an article, however, requires interaction with the library.

The library provides adequate seating capacity for self studies, the adjacent computer equipped room, however, was crowded at the time of the visit. Copy machines are available.

In addition there is a small Faculty library with a limited number of veterinary specific books and journals. There are 2 computers with internet access and a few seated places.

### **8.2 Comments and suggestions**

The University library seems to be well used though there seems to be an apparent lack of computer work stations. Introductory courses and tuition in library use should be better announced. The university/library administration should find ways to allow students to reserve book online from at home.

The usefulness of the faculty library in its present status may be questioned as it is stocked with only a limited number of books and journals. On the other hand this library seems little used as its existence seems to be known to only a few students and possibly also because the opening hours are not posted. In order to make this secondary library a useful facility, its use should be better advertised by the FVM and the stock of books must be kept up to date.

However, the team also noticed that students did not complain about library facilities.

## **9. ADMISSION AND ENROLMENT**

### **9.1 Findings**

Students who have successfully passed high school may register for the National Student Selection and Placement Examination. This examination encompasses 3 tracks, one of them being mathematics and sciences which also covers medicine. After successful passing this examination students may apply for one of the subjects encompassed by this track, e.g. veterinary medicine. In Turkey veterinary schools are ranked and students may apply for a distinct Faculty. However, students are assigned “top down” according to the grades obtained in the University Examinations to the various schools depending on the number of students accepted by each faculty.

The number of students accepted by the FVM depends on the capacity, e.g. seating in lecture rooms and practicals and amounts to 62 at present. Eight of these students are admitted from other veterinary faculties from the 2<sup>nd</sup> semester onward. Students must graduate to become a veterinary surgeon within a maximum period of 8 years, if not they are dismissed from the faculty.

The average number of students graduating annually is about 46 which is considered satisfactory by the faculty.

### **9.2 Comments and suggestions**

As a result of the Turkish admission system FVM has no control on the students assigned to it. FVM is not the top ranking veterinary faculty and it is subject to a sort of negative selection of the students assigned to it. This will not improve the further development of the FVM but at present there seems to be no realistic alternative solution.

As FVM does apparently not refill vacancies by students going out, for whatever reasons, the success rate of 75% students graduating seems acceptable.

## **10. ACADEMIC AND SUPPORT STAFF**

### **10.1 Findings**

The academic and research staff, which form one unit, comprise 53 FTE on university budgeted posts. There are no non-budgeted posts and only 3 FTE are taken by academic staff lacking a veterinary background.

With 6.98 the denominator established for R1 (no. total academic FTE in veterinary training/no. undergraduate veterinary students) is very good and distinctly below the denominator of 9.11 (UL) established by ECOVE.

There is a total of 29 non academic technical staff positions with three of them responsible for the care and treatment of animals or practical work in other divisions. The denominator for ratio R5 (no. total FTE academic staff in veterinary training/no. total FTE support staff in veterinary training) is 0.54 and thus below the range of 0.58 – 2.11 established so far by ECOVE.

### **10.2 Comments and suggestions**

FVM encompasses a highly satisfactory number of academic staff in relation to the number of students taught. However, in respect of the disciplines to be covered by teaching and research the number of academic staff is just adequate and does not take into account the future need to employ highly qualified clinical specialists.

There seems to be no lack of secretarial and other administrative technical staff but there is a distinct lack in technical staff serving the clinics and the laboratories.

The team could not envision how FVM is going to increase the patient load without significantly increasing the numbers of technical staff. If the University is interested in a qualified veterinary faculty meeting today's standards in the training of veterinary surgeons this situation must be changed.

Similarly in the teaching and research laboratories a greater number of technical staff is needed. Thus for example only one member of support staff (actually on maternity leave) in the Department of Food Hygiene and Technology is certainly not sufficient for a Department, which has to cope with many laboratory classes and research matters.

The FVM in cooperation with the rectorate should develop a long term plan to change this situation. Early steps are necessary.

**Until this process has been initiated there remains a category 1 deficiency.**

## **11. CONTINUING EDUCATION**

### **11.1 Findings**

In Turkey continuing postgraduate education (CPE) is not compulsory and hence not officially established. However, FVM provides CPE courses as indicated in the SER, Tab. 11.1, p 137/138. Emphasis is on food animals and the HACCP concept. There are no small animal meetings.

### **11.2 Comments and suggestions**

FVM is aware of the need for CPE and is encouraged to further develop this program. The faculty should consider organizing regular CPE courses for veterinary surgeons from the surrounding area, also on companion animals. These could be a valuable financial resource and a means of establishing good relations with local practitioners

## **12. POSTGRADUATE EDUCATION**

### **12.1 Findings**

The FVM does not offer postgraduate education on the professional track but restricts itself to the academic track.

As graduation to a veterinary surgeon is the equivalent to having obtained a master degree (SER, p 141) graduates of the FVM may directly enter the PhD program. However, FVM still offers a 2 year research based Master Program for students having graduated on a lower level than veterinary surgeons.

All postgraduate programs of the University are controlled by the Institute of Health Sciences.

The PhD course is a 4 year program and students have to participate in courses, they have to give 2 seminars and defend their thesis in front of a panel of 3 lecturers, one of them being invited from another university.

According to Table 12.1.4 (SER, p 144) at present 13 students are enrolled at a PhD study at the FVM, being placed in 5 divisions (3 x basic sciences, 2 x clinical sciences). PhD students have to teach.

Having obtained a PhD is a prerequisite to enter an academic career.

### **12.2 Comments and suggestions**

FVM is bound to Turkish university regulations. Nevertheless it is suggested that the 4 year PhD program is reduced to a 3 year program which is more or less the international standard and might be more attractive to some students; it might also stimulate students to finish the program and to avoid the many drop outs (SER, chpt. 12.2,

p 147): A greater number of students in the program would foster research in general. It is suggested that prior to graduation from the PhD program students should at least have published 1 paper in a peer reviewed journal.

## **13. RESEARCH**

### **13.1 Findings**

Research is an important issue to the FVM and most of the academic staff seems to be actively involved. As is indicated in table 12.1.3 SER, p 146 there were 25 research projects started from 2007 until the end of 2009 with a total funding of 81419 €.

There is a substantial number of publications resulting from these activities, (67 in total) and compared to the number of teaching staff, FVM took lead in Turkey 2006.

Publication is in national and international peer reviewed journals.

### **13.2 Comments and suggestions**

FVM must be congratulated on the active research performed. As there is no situation which could not be improved there is the suggestion that FVM better develops a research strategy and joins forces with other interested groups.

Undergraduate students should be made aware of the ongoing research and asked for participation – if suitable – as soon as possible.

## **EXECUTIVE SUMMARY**

The Faculty of Veterinary Medicine (FVM) of the Afyon Kocatepe University is a young and still growing faculty with highly motivated staff and students. FVM has developed ambitious objectives and strategies, however, though very successful in some areas, there are still a number of obstacles preventing FVM meeting these objectives for the time being.

The issues raised relate to the following points:

### **1. Curriculum (4) and teaching quality and evaluation (5)**

The curriculum is not in accordance with the requirements of a science and problem based teaching/learning process. The time allotted to hands-on clinical teaching is well below average. This may be due to several reasons, e.g. the lack of patients, but

it is never the less non acceptable. There are justified doubts that students will meet the respective day 1 competences on graduation (see 4.1.2).

**As long as these deficiencies in the curriculum, also in respect to hands on clinical training, are not recertified there remains a category 1 deficiency**

Further problems with the curriculum relate to the teaching/instruction in propaedeutics.

FVM is advised to develop a new profile in propaedeutics with instructions on live animals of all major domestic animal species and to develop a stock of propaedeutical animals which would also support clinical instruction.

**There remains a category 1 deficiency as long as the problems with propaedeutical instructions have not been rectified.**

Evaluation of teaching and teachers by the students is an important part of securing quality of teaching. FVM so far has not established such a system.

**There remains a category1 deficiency until such a system has been established.**

## **2. Facilities (6) and Availability of Animals and Teaching Material (7)**

Access to the necropsy room does not meet the necessary hygienic standards.

**As long as this situation has not been rectified there remains a category 1 deficiency.**

Adequate facilities to cast a cow are missing. The recovery area for small animal patients and the facilities for hospitalization must be improved. Similarly the boxes to hospitalize horses must brought up to European standards. Isolation facilities for large animals must be provided, those for the small animals must be brought in a functional stage (see 6.3.3).

**As long as the above requirements are not met, in particular in respect to the isolation facilities, there remains a category 1 deficiency.**

There is an insufficient number of carcasses available for necropsies and student education (see 7.1.2).

**As long as there is this lack of carcasses for student training in necropsy there is the suggestion of a category 1 deficiency.**

For clinical instruction and other teaching purposes there is a lack of companion animal and equine patients (see 7.1.2).

**As long as there is no distinct improvement in the availability of these type patients there remains a category 1 deficiency.**

Finally the team has observed that there is a distinct lack of technical staff serving the clinics and laboratories. It can not be foreseen how the clinics will develop unless this situation is changed. The development of a long term plan to change this situation is suggested.

**Until this process has been initiated there remains a category 1 deficiency.**

Though not relevant to achieve the status “approved” category 2 deficiencies should also be considered seriously by the establishment visited. To classify a deficiency as category 1 or 2 is often a borderline decision and if not rectified a category 2 deficiency could easily become a category 1 deficiency at the next regular visit.

In case of FVM attention should be given to the following category 2 deficiencies:

Chpt. 4.3.2 **Improvement of the feeding system at the FAARC, and Teaching of Herd Health Management as an entity.**

Chpt. 4.5.2 **Extramural training in a slaughterhouse should be compulsory.**

Chpt. 6.2.2 **Protective measures to secure the health of staff and students are missing in several areas and proper instructions on hygienic measurements should be given.**

Chpt. 6.3.3 **Better use should be made of the mobile clinic**

The FVM is also advised to also follow the other suggestions included in the report.

Clearly some of the deficiencies listed and the suggestions given are interrelated. However, the team is of the opinion that virtually all of the issues raised can be solved by FVM. While there are easy solutions for some problems, others will need more time. In any case resolution of the problems will need a substantial effort and support of the rectorate.

Decision by ECOVE: Non approval

Wien, 30.11.2010