European Association of Establishments for Veterinary Education

European System of Evaluation of Veterinary Training

REPORT ON THE VISIT TO THE FACULTY OF VETERINARY MEDICINE OF TIMISOARA

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This report comprises largely information obtained during the site visit with the SER having been the document of reference. The SER should therefore be available to the reader of this document.

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INTRODUCTION

The Faculty of Veterinary Medicine Timisoara (FVMT) in Romania is one of 4 state owned veterinary faculties in Romania. The others being Bucharest (EAEVE approved), Cluj Napoca (EAEVE approved) and Iasi. In addition to these a private veterinary faculty operates in Bucharest. The population of Romania is 22 million inhabitants.

The Faculty of Veterinary Medicine Timisoara (FVMT) was established in Arad 1944 – 1957, and was reestablished in Timisoara in 1962. The campus is located in the northern outskirts of Timisoara as part of The Banat's University of Agricultural Sciences and Veterinary Medicine, Timisoara (BUASVMT). The university comprises a total of 6 faculties (Agriculture, Horticulture, Farm Management, Agro-Food Processing Technology, Animal Sciences and Biotechnology and Veterinary Medicine).

In 1998 the faculty was visited by representatives from EAEVE on a so-called pre-visit. Numerous category I and II deficiencies were suggested and the faculty has strived to rectify these deficiencies over the years. The pre-visit report is enclosed in the SER as appendix 01, p. 159-170.

Teaching and research facilities have since been significantly improved with funds obtained from the EU and the Romanian government.

Focus for the team was on the present SER, which has been written according to the new SOP.

The team experienced a very well organized site visit, great hospitality and an open door policy, where all requests from the team were fulfilled.

Based on the SER and the observations made by the team a number of category I deficiencies are suggested.

Other suggestions have been made to help the FVMT make the best of their potential to fulfil the objectives.

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1 OBJECTIVES & STRATEGY

Questions to be covered:

1) Clear statement of objectives? Yes see below
2) Do the objectives cover the total education programme adequately? Yes, see below
3) Is undergraduate education the primary reason for the existence and funding of the establishment? Yes, see below

1.1 Findings

The objectives are stated partly as general objectives including provision of a suitable environment for the highest level of education, learning and research to the benefit of animals, human beings and ecosystem health. And partly as specific objectives relating to teaching and research.

The objectives are commendably subdivided into teaching objectives, research objectives and followed by a section on methods for assessment of achievement of the objectives. Especially assessment ("how do we know when we have achieved our goals") will become an issue for evaluation and accreditation in the years to come.

The objectives cover the total education programme adequately but the many objectives seem to be listed more or less at random. The FVMT has established a committee to supervise the teaching objectives (Faculty Commission for Initiation, Approval, Monitoring and Periodic Evaluation of Teaching Programs CIAMPETP) with 7 specified tasks mentioned at p. 15 of the SER.

1.2 Comments and Suggestions

Although it is stated as one of the first objectives of the faculty the team found few issues related to ecosystem health in either teaching or research within the veterinary faculty.

The objectives are numerous and very ambitious.

However, due to the inflexibility of the Romanian university system with long and bureaucratic chains of command it is very difficult to proceed with necessary structural changes. This hindrance is further complicated by an almost total lack of financial autonomy for the Faculty *per se*.

- The FVMT should consider sorting and prioritizing the objectives according to needs and with a view to the economical possibilities.
- Having done that it is important to consider that for goals to be achieved and for objectives to be operational it is advisable to scrutinize the objectives carefully and make sure that the specific details for each goal are mentioned. One example from research – "Manufacturing and testing of new veterinary products" – might read "*It is the goal that the faculty achieves one contract for manufacturing and testing of new veterinary products every second year and that the staff members participating in this type of work are paid fully by the revenues from this activity, and at least two articles in international, peer reviewed journals should appear at the end of the project*".
- The FVMT should consider emphasizing one or two major objectives where the faculty is the best and the leading among the Romanian veterinary faculties. These strongholds should be further supported and promoted so national and international companies recognize the FVMT as a serious, hard working and competent institution to cooperate with in research and testing. This will enhance the possibilities of identifying and attracting major income from externally funded projects.

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2 ORGANISATION

Questions to be covered:

1) Brief structure and organization summary See below
2) Does Faculty have adequate influence on University policy? Yes, see below
3) Is it suitably "autonomous" i.e. does it have adequate flexibility? Yes, at the same level as all the other faculties
4) Effective structure for decision making? As effective as the law allows them to have
5) Are Departments coordinated amongst themselves in terms of use of resources?´Yes

2.1 Findings

The Authorities that regulate Romanian Universities are: the Ministry of Education, Research, Youth and Sport (MERIS) and National Rector's Council (NRC).. The Faculty of Veterinary Medicine, Timisoara (FVMT) is one of the six faculties of The Banat's University of Agricultural Sciences and Veterinary Medicine, Timisoara (BUASVMT) and hence fully embedded into the structure of a university. The other 5 faculties are Faculty of Agriculture, Faculty of Horticulture, Faculty of Farm Management, Faculty of Agro-Food Processing Technology and Faculty of Animal Sciences and Biotechnology. Apart from FVMT the faculties are subdivided in a large number of specializations. Since 2005 all faculties offer a full range of BSc, MSc and PhD degrees.The organization is in detail outlined in the SER, p.20.

Briefly the university is headed by a rector who is elected out of the group of full professors by the entire teaching staff and a quota of the technical staff and students. The rector serves a 4 year term and may be reelected once.

The Faculty of Veterinary Medicine of Timisoara (FVMT) offers a 6 year degree in Veterinary Medicine. Administratively, the structures of the FVMT are dean, vice dean, chancellor, faculty council

office, faculty council, scientific secretary of the Faculty, and departments. The dean is elected by the absolute majority of the votes in the Faculty Council, serves a 4-year term renewable once and is a member of the University Senate.

- the Faculty Council: has 27 members: 16 Professors, 5 Assoc. Prof, 6 Students. The 21 Prof. are elected directly by the Department members and the 6 students are elected directly by the students. The students elect a representative for each year of the course by secret ballot.
- the Faculty Council Office creates 10 commissions. The latter help resolve many questions and decisions made by these commissions and then the Council ratifies them.
- 4 Departments: Departments of Preclinic Teaching, Departments of Clinic Teaching 1, Departments of Clinic Teaching 2, Department of Animal Production and Veterinary Public Health.

The Faculty Council Student representatives are independent and feel free and respected in any decision they take. The representative post is a very demanding role because of the high number of Faculty Commissions. However, the position of student representative lasts only one year.

The numerous and very detailed tasks of the dean, the vice dean, the chancellor, the Faculty Council, the Faculty Council Office, the Commissions and the Heads of Departments are listed on pp. 25 – 28 of the SER.

2.2 Comments and suggestions

The administrative setup for a relatively small university with respect to student numbers and a relatively small veterinary faculty with a total teaching staff of 58 persons is huge.

The administrative tasks for the various units are immense, and especially the 10 commissions under the Faculty Council Office face huge challenges to perform their duties correctly. The team noted that there is only six student members of the Faculty Council, and that all committees and sub committees have student members selected among these 6 students.

It seems that the tasks of the department heads are mostly administratively at a low level (50 % of the listed tasks are only at a proposal level i.e. to be decided elsewhere). The team did not meet any strong departmental cohesion and hence also not any strong departmental competition. The crucial decisions are made at the level of dean and above.

Apparently the autonomy leaves a bit to be desired. With the regulations currently in force, only 20% of the curriculum can be modified by the Faculty in an autonomous manner. In addition, the Departments funds come directly from the University which receives them from the Ministry.

The two teaching farms are very big and there are a high number of housed animals. However, in spite of this high educational potential the crumbling farm building conditions render them impractical and impossible to use in a way which is adequate both from the teacher professionality and student safety point of view.

- The level of decisions must be lowered from the governmental level, to a university level and further on reviving the departments, which are crucial for the day to day running of the business. This would liberate expensive and important power to handle the great challenges the university and the faculty faces today and in the years to come.

- More emphasis should be laid on the departmental level, and financial and Human Resource power should be delegated to the dean and to the department heads immediately.

- The team does not agree with the FVMT that a well balanced number of staff per dept. is important. Departments should have the size that their teaching, research and externally funded activities support. It follows from this that some departments may be considerably bigger than others. As it follows that there is a minimum department size partly laid down by ARACIS and partly decided by local judgment.

- The university should reevaluate its administrative structure towards a more lean, modern and efficient structure with a shorter chain of command. External aid including international experts to perform this task would be advisable.
- Cooperation with the other 3 national veterinary faculties is important. However, for the sake of dynamics and constant modernization the team advises strongly that curriculum changes can be made at the FVMT irrespective of consensus between the 4 veterinary faculties.
- In general input from external advisors and stakeholders should be incorporated in the organisational structure.
- A much wider selection of students should be called for to man the various committees and subcommittees. First of all to reduce the workload for the individual student, but secondly to widen the democratic process at the university, and thirdly to bring young students' views into an old fashioned university structure.

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3 FINANCES

Questions to be covered:

1) Short summary of financial and budgetary structure and who controls it? See below
2) Any additional income generated? Yes
3) Is level of funding adequate? No
4) Is there a good balance between capital spends and running costs?Almost nothing spent on capital investments
5) Is there a good balance between research and teaching funding? Comes mainly from 2 separate sources. Research is externally funded teaching is funded by basic funding
6) How much autonomy to allocate budget? None at levels of departments, faculty or university. Everything decided in the ministry of education and the ministry of finances

3.1 Findings

The SER chapter on finances gives a brief and precise description of the very complicated and bureaucratic Romanian system of applying for, allocating, spending and accounting for money.

The overall present problem is the very severe lack of finances. As an example it was made known to the team, that the university budget for 2010 was not yet approved by the Ministry of Education, Research, Youth and Sport (MERYS) during the time of the visit in mid-October. Furthermore there was a recent decree that the total amount of money supplied to the Romanian universities will be reduced to 50 % of the budgeted amount in November and 0 % in December.

The research budgets at the university were cut with a dramatic 61 % in August 2010, followed by a reduction in budgeted expenditures from 20 % of the total university budget to a mere 12 %. The recovered 8 % has been used to fill in acute needs.

Under financially normal circumstances the budget for the fiscal year is approved and made known to the university in the springtime. Money is allocated to the university based on the number of full time equivalent students and after application to the MERYS, who applies for all Romanian universities to the Ministry of Finances. When the government has decided on the budget money is allocated monthly from ministry of finances to the MERYS and further on to the university. The budget may be revised at any time of the year, and the university must deliver a balance sheet every 4 months.

Within the BUASVMT the distribution of money is decided based on the actual figures for number of students within the 6 faculties. A detailed description of the allocation of basic money is given in the SER at p. 34-35. The FVMT is proportionally slightly better funded than the other faculties but not taking into consideration that the training of a veterinarian is one of the most expensive higher

education courses primarily because of its length of study and also the advanced facilities as well as teaching intensity necessary.

Department heads have no financial autonomy.

Apart from basic funding there are detailed regulations for supplementary funding (capital expenditure etc.) also heavily regulated by Romanian law.

In accordance with another law it is possible for faculties to derive extra income from external sources e.g. clinical and diagnostic work. Ninety (90) % is retained by the clinics, laboratories etc, and ten (10) % is supplied to the university as internal tax.

Revenue from research projects are taxed by the university with sixteen (16) % and eightyfour (84) % is retained by the project director.

3.2 Comments and Suggestions

The FVMT is highly limited in its work mainly by the total uncertainty of the financial basis for the faculty but also to a certain degree by the enormous bureaucracy with very long chains of command where it seems that even minor changes and investments must be discussed and approved in Bucharest.

The team was told that the Romanian government has promised that 6 % of the gross national product is allocated to education, but currently this figure is a mere 3.8 % which is heavily reflected in the chaotic financial situation at the university and the FVMT.

It is inhibitory for a modern learning and research environment not to work within a known budget, and financial autonomy for the university and for the FVMT must be established as soon as possible to make the most of the faculty's potential.

Despite the very difficult economic situation the FVMT has succeeded in getting its share of the central funding for capital expenditures although some of the facilities are still inadequate. The detailed information of lack of facilities will be delt with in the relevant chapters.

It is commendable that the FVMT has been able to attract some big EU funded projects among them a research platform for biochemical and food analyses and a new multimillion €-project for research and teaching facilities. This latter project will make the use of the totally inadequate university farm superfluous and give the students a basic understanding of modern research and animal housing facilities.

However, the FVMT must be aware that the very expensive equipment financed by EU will need expensive maintenance, service, repair and exchange within a few years, so sufficient funding must be set aside to cover these near future expenses.

One should bear in mind that finances for EU projects cannot be redirected into teaching and hence the team found some very well equipped research laboratories in contrast to some more modestly equipped teaching facilities. However, with respect to the basic funding of the FVMT there appears to be a good balance between research and teaching funding.

But it is essential that the Central Government and the local management at university level recognises that the training of a veterinarian is one of the most expensive higher education courses primarily because of its length of study and also the advanced facilities as well as teaching intensity necessary.

- **The financial situation of the university and the FVMT is unstable and highly unsatisfactory hence indicating a potential Cat I deficiency.**
- The team suggests that the financial issues are dealt with immediately e.g. by establishing an advisory board for the FVMT. This advisory board should incorporate representatives from international veterinary faculties, and national stakeholders.

- It is suggested to establish a smaller advisory board to carefully revise the existing procedures for external funding through services (e.g. clinical, diagnostic laboratories) and help establish modern, market oriented calculation of relevant prices for services rendered.
- The team furthermore suggests that a contract/budget for a fiscal year should be presented, discussed and approved not later than 1 March in the actual year.
- The university should try to clarify the problem of ownership to the 2,500 hectars of fertile land run by the university but not owned by the university. This might prove to be a real asset for the university.
- The farm owned by the university is so poorly maintained and managed that the team does not hesitate to recommend immediate closure of the farm. The conditions are in all relevant aspects unsuitable for teaching purposes and even the most simple biosecurity measures are not in place.
- The legal basis for quotation (licitation in Romanian) needs to be simplified. When larger projects have been decided e.g. one or more of the unsuccessful bidders may bring the decision to court. And this action postpones the whole project for the duration of the court case which may be up to 2 years.
- The minimum level above which a quotation (licitation in Romanian) must be done should be raised for the university to act more freely in minor building projects, change of equipment etc.

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4 CURRICULUM

4.1 GENERAL ASPECTS

Questions to be covered:

1) Seems as in SER or indicate variances? Yes
2) Curriculum fixed by law or otherwise? Yes fairly strictly but there is some degree of freedom
3) Important to verify clinical training figure in SER corresponds to supervised intensive hands-on clinical training in small groups. Note: extramural vacation work or large group demonstrations should not be included as clinical work. Clinical training appears to be sufficient or even exceeding requirements in some areas.
4) Curriculum balance and coverage OK? No major discrepancies were observed in curriculum balance. See text
5) Comment on practical : theory ratio OK
6) Ratio of clinical work : lectures and practical work must be checked with SOP OK
7) Ratio of theory : practical and clinical work must be checked with SOP OK
8) Comment on courses integration, electives & extramural work arrangements See text

4.1.1 Findings

An overview of the curriculum is given in the SER, but no detailed data of specific learning objectives of each individual component/course has been presented. It is therefore difficult to comment on individual courses. On balance the information about the curriculum given in the SER appears correct.

The curriculum is based on the EU Directive 36/2005 and is also designed according to a Governmental Decision (n. 1477/2003) which approves minimum teaching requirements for the regulated professions (medicine, dentistry, pharmacy, veterinary medicine and architecture) in Romania. A *Curriculum Committee* of all faculties in Romania exists to ensure some degree of harmonisation. A new strategy is developed every 4 years. This could potentially influence the autonomy of the faculty to make changes in its own curriculum. Decisions regarding the number of hours per discipline and the balance between theoretical and practical training are approved by the

Faculty Council. A significant problem appears to be the legal imposition of set teaching hours within the curriculum by the Ministry of Education. The senior clinical staff feel there is little opportunity for flexibility.

Each Veterinary Faculty in Romania has the freedom to modify up to 20% of the frame governmental programs. Curricular contents have not been verified in details as no power-point presentation was prepared by the Faculty. However, curricular contents were discussed with most teachers. It is the team's impression that curricular contents are well balanced and meeting minimum requirements.

The SER indicates a reasonable balance between the theoretical and practical tuition time allocation (SER states 40.98% theoretical / 59.02% practical), though the total teaching time may be somewhat high. The practical teaching is done in groups. The group size and subsequent split of each into x2 sub-groups means that student numbers in practical sessions are approx 15 in years 1-3 and 8-10 in years 4-6. This is generally favourable for student tuition (though some staff would prefer smaller groups) but may result in an additional unacceptable workload for teaching staff. However this appears to be determined by the legal regulations specifying the number of hours in the curriculum.

The amount of practice is more than enough. For each year, students are divided into groups and each group does a different practical activity at the same time of the day. For instance, 4th year students attend lectures on Mondays and Tuesdays, and for the rest of the week they are divided in 6 groups performing practical, hands-on activities for 6 hours each day with one teacher: the first groups does practice on infectious diseases, the second on surgery, the third on parasitology, the fourth on internal medicine, the fifth on reproduction, the sixth on milk control. Each practical activity is carried out for 2 weeks. A semester is composed of 14 weeks. Two days every week are allocated to theoretical introductio e.g. lectures and the remaining three days of the week are spent on practicals.

A practical problem highlighted by the clinical staff was the problem that students receive practical training say one day per week rather than as a block. This is said to compromise the ability of students to track a particular clinical case. However, the students felt this was possible, though it required effort.

Intramural studies are described in the SER (p62) and relate to the night work (guard service) performed within faculty hospital during the 2nd semester of year V (90 hours = 3 weeks, equivalent to 11.19% of total study time) and the night work (guard service) performed within faculty hospital during the 1st semester of year V1 (60 hours = 2 weeks, equivalent to 7.91% of total study time).

Extra Mural Studies (EMS) are obligatory and are outlined in table 4.5 (page 62) of the SER. They account for 90 hours in year I, 90 hours in year II, 90 hours in year III, 90 hours in year IV and 60 hours in year VI. This adds up to a total of 420 hours (14 weeks), equating to approx 8 – 11% of total study time during these years. The type of work to be undertaken at each stage appears to be specified but the exact location is not. There is a signed agreement between the EMS provider, the faculty and the student but no specific reporting or assessment procedure appears to be in place. The student produces a diary that may be referred to during the final examination. However, there is no specific setting of agreed goals and a method of assessment of these goals.

Students are not covered by liability insurance provided by the Faculty during extramural work.

4.1.2 Comments The curriculum seems to be well structured and reported in the SER in an objective and truthful way. There is a relevant amount of time spent on practical activities (both in terms of demonstrative lectures in small groups, laboratories, clinical demonstrations or clinical training in small groups. The Faculty is to be commended for devising an elaborate system in which so much space is given to practice. Even though we have seen in some cases 11 students working with only 2 cows (clinical cases to be diagnosed for the owner), the total amount of time spent on practical activities is certainly enough for students to get sufficient exposure to practice, although it is not clear whether all large animal day-1 skills are learned prior to graduation.

The EMS concept generally involves students being placed with private practitioners. This has the potential disadvantage of difficulty in ensuring standards – however it does expose the student to the "real world" and the wider aspects of veterinary practice.

It would be useful to have a routine survey of recent graduates (1 yr / 3 year / 5 year) from the Timisoara school and all schools in Romania. The survey could address issues such as "Is the curriculum meeting their hopes and aspirations?" or "How many leave the country and do not return?" Also, many of the students expressed a desire to travel abroad – maybe for a temporary period.

4.1.3 Suggestions

- Make better use of cows at the Teaching Farms particularly during practical activities of certain topics such as internal medicine or reproduction – there should be no more than 1-2 students per cow.
- EMS represents a significant time of student learning so it must be better regulated. Set specific learning objectives for each placement and ensure these are fully understood by the EMS provider and the student.
- Devise a system of assessment.
- Check with how this is done by other schools.
- The Faculty should consider the provision of liability insurance cover for students during EMS.

4.2 BASIC SUBJECTS & SCIENCES

1) Do basic subjects form part of the internal curriculum or are they taught elsewhere? YES internal curriculum
2) How are carcases handled for anatomy and pathology with relation to chilling/freezing, hoists, trolleys, changing facilities and disposal? See text below
3) Do incoming students have adequate basic knowledge? Not uniform but all Romanian students have had a minimum level of biology
4) Are items taught in basic sciences brought into relation to later courses? YES
5) Adequacy of hours and course materials as well as balance between practical and theoretical work? OK
6) Is there adequate hands-on participation by students in anatomy and pathology? No, see text below
7) Are the groups too large? See text below

4.2.1 Findings

The basic subjects are part of an internal curriculum at FVMT.

The teachers in the basic subjects and sciences stated that all Romanian students on admission have had a minimum level of biology.

In the first year of the anatomy course, practical classes consist of examination of skeletal and other preparations. Dissections occur in the second year and thawed frozen cadavers are used. The students had changed into laboratory coats in the dissection room. The dissection was performed in a room with fresh plants on the window sills and there was no possibility to hose the room down after use. The cadavers were stored in a freezer prior to thawing for the class. There was one cadaver for the whole group. The number of companion animal cadavers is low but within the established limits (SER Table 7.1). The teacher informed that at the end of each major section of the course in the second year, a horse is killed in the Surgery area and transported on a trolley to a large animal dissection room. This was not observed during the visit (SER p. 95 Table 7.1 indicates 2 horses in 2009 and 11 in 2008). The disposal of preparations was through an arrangement with the Pathology Department. The room for preparation of formalin fixed specimens consisted of large closed containers for formalin. Open water bath for washing formalin fixed preparations was present and a digestion bath for skeletal preparations was in use.

In Pathology, a new room had been built for performing necropsies but this room did not possess facilities suitable for performing necropsies on large animals (cattle and horses) and necropsies on these large species were not performed at FVMT. The newly built necropsy room lacked electric saws, cooling rooms, cranes, adequate tables, arrangements to dispose of large animal cadavers and biosecurity measures were not in place. The teachers stated that the students could attend necropsies on large species performed at factory farms if facilities were available at the farm. The number of companion animal necropsies is limited but within the established limits. Inadequate biosecurity was observed in other rooms used for pathology teaching. Students were observed examining fresh pathological preparations of single organs in a room that could not be hosed down.

The majority of the teachers of the basic sciences are veterinary surgeons, a situation which should allow the basic sciences to be taught according to the future need of the veterinary training and present the basic sciences in relation to the later courses. Practical examples used in the laboratory courses often referred to clinical situations or problems.

The proportion of theoretical and practical classes is appropriate with the content of the basic subjects taught in general being the same as in other veterinary establishments.

4.2.2 Comments

The number of animals used in anatomical dissections is scarce and should be increased, especially with respect to companion animals. Optimal teaching cannot be provided when twenty students crowd around a table, dissecting or watching others dissect. With more cadavers for dissection, the students could be able to participate in dissections in smaller groups.

The necropsy room did not possess facilities suitable for large animals necropsies and this deficiency needs to be addressed by FVMT. The necropsy facility should contain equipment and space to handle and dispose of large animals including cranes and cold rooms.

The number of companion animal necropsies is low.

4.2.3 Suggestions

- There is an insufficient number of cadavers for dissection performed by students, suggesting this as a potential Category I deficiency.
- There is an insufficient number of large animal necropsies performed at FVMT, suggesting this as a potential Category I deficiency.
- There is a large and newly built room laid out for necropsies, but relevant equipment and facilities for large animal necropsies such as electric saws, cooling rooms, cranes, adequate tables, arrangements to dispose of large animal cadavers and biosecurity measures were not in place. This suggests a potential Category I deficiency.
- Biosecurity measures were not strict or adhered to in the teaching of anatomy and pathology, suggesting this as a potential Category I deficiency.
- FVMT should increase the number of companion animal necropsies.

4.3 ANIMAL PRODUCTION

Questions to be covered:

1)Is there a working farm where students can do practical work on animal production?
YES for bovines and horses. Pigs, poultry and sheep are available in farms outside the faculty, but not throughout the year.
2)Is there any early exposure to handling of farm animals for city students?
YES

3)Are there sufficient hours of teaching in animal production and is there a good balance between practical and theory?
YES
4) Is agronomy taught and where (silage production, pasture management and use of particular feeds/plants etc.? YES
5) Is animal production teaching well integrated with related subjects i.e. herd-health management and ailments caused by poor or in-balanced nutrition? NO
6)Does the teaching of forensic and state veterinary medicine cover the principles of certification with regard to animal transportation? YES

4.3.1 Findings

Animal production is taught in different subjects:

Year	Subject	Lectures	Seminars	Practical work	Total
second	General zootechny and animal amelioration	28		28	56
second	Animal nutrition, alimentation and agronomy	28		28	56
third	Breeding technology and animal production	28		28	56
third	Animal hygiene	28		28	56
third	Ethology	28			28
fourth	Animal welfare and protection	28		28	56
sixth	Veterinary economy and rural economy	16	16		32
sixth	Veterinary legislation and deontology	32	32		64
sixth	Forensic medicine	14		28	42

The theoretical and practical studies are completed by obligatory extramural work at the end of the two first academic year, for a total of 6 weeks (180 hours) with a short report which are part of students' courses.

There is a teaching farm inside the university with bovines, horses and sheep, and another farm which belongs also to the university with dairy cattle two kilometers from the FVMT.

The students can easily handle the animals, carry out clinical examinations and observe the food e.g. maze silage given to these animals.

There are agreements with private or state farms which allow the students to perform certain tasks like blood samples, rectal palpation, for horses, bovines and sheep

4.3.2 Comments

For pigs and poultry, students participate in practical work, but these farms limit the access for biosecurity reasons. Only very small groups are allowed to enter and it is not possible for every student to acquire the minimum skills in these productions.

On the opposite, biosecurity measures are not well applied in traditional animal productions (teachers and students).

During their extramural work, students perform a lot of practical tasks, very useful for their future practice. But the reports they write do not reflect this intensive participation in the daily work of the farmers. The team has not found in these reports a synthetic analysis of the economic situation of the farm, income, expenditure or technico-economic figures that could be easily assessed by the teachers.

The herd health management programs are not taught as it should be, because the students do not agglomerate their knowledge in this very important concept for the future of the veterinary profession, where their expertise could be recognized.

4.3.3 Suggestions

The faculty must improve the quality of the teaching farm, and provide pigs, broilers and laying hens. Every student ought to be able to perform all tasks according to “day one competencies”.

Biosecurity methods must be applied strictly, for the protection of the herds, (horses, cattle, and not only for pigs and poultry) but also for the protection of the teachers and the students, with boots which can be washed and disinfected, with disposable coats, with gloves and masks, and protection for the hair. The poor biosecurity practices constitute a *potential Category I deficiency*.

Students should provide reports of their extramural activities as the teachers can assess this work.

Herd health management should be taught in an entire concept, to make the students understand the importance for their future job, for the benefit of the farmer and for animal and public health.

- The teaching in herd health medicine was uncoordinated and not living up to modern standards and did not take advantage of the animals at the 2 university farms, suggesting this as a potential *Category I deficiency*.

4.4 CLINICAL SCIENCES

Questions to be covered:

1) Does the establishment operate an emergency veterinary service in which students participate and is the latter compulsory or voluntary? YES, compulsory
2) Does the establishment operate a mobile clinic and how do students participate in the activities? YES, students participate in the morning
3) Are students covered by liability insurance during extramural work? NO

4) Are allocated hours adequate and in balance with the curriculum? YES
5) Are disciplines integrated and well coordinated? Is there a satisfactory balance between species? YES, *reasonable species balance but very low surgical caseload of equines and bovines.*
6) Is each student getting adequate hands-on clinical teaching? YES
7) Brief comment on adequacy of facilities, environment, organization, caseload, necropsy case load, staff and support staff? Some of the large animal facilities are well below standards, working environment and organization are good, necropsy caseload is insufficient both for small and large animals, while clinical caseload is adequate
8) Are adequate opportunities offered for each student to handle parturitions, dystocias, displaced abomasums, traumatic reticulitis, milk fever, acetonaemia? NO
9) Would all students be able to perform an ovaro-hysterectomy on a cat alone? Most but perhaps not all, see text

4.4.1 Findings The emergency service operates on a 24/7 basis. A veterinarian is with the students from 7:30 am until 9:30 pm, after which the 2 students who are on night duties are left alone with the animals but a faculty member (from surgery or internal medicine) is available and will arrive at the Veterinary Hospital within 15 minutes of being called by the students. Emergency service duties are obligatory for all students of the 2nd semester of the 5th year and students of the 1st semester of the 6th year. Students on emergency duties start with a 12-hr shift during the day (from 7:30 am to 7:30 pm) then do a 12-hr during the night (from 7:30 pm until 7:30 am) after 21 days, and then continue with this 21-day intervals until they have done a total of 17 12-hr shifts (either 8 day-shift and 7 night-shifts or vice versa). The student is the first line contact with the public. Students were happy with the arrangement and on average would expect to see $\geq$2 cases per night. They were happy with the back-up provided by staff.

The mobile clinic is operated by surgeons, internists and reproductive teacher on a daily basis Monday through Friday for 8 hours/day. The service is offered by the same teacher who accompanies the students for the clinical activities during the morning. Therefore, if there is a call in the morning from a farmer who needs i.e. a surgeon or a reproductive expert, then if the teacher of that area is with the students on a farm s/he will take the students along and instead of going to the farm where the clinical practice was supposed to occur s/he will go to the farm from which the call was received. If the call arrives in the afternoon, the teacher will go with the students who are available, which explains why the rate of student participation in the mobile clinical activity is only 20-50% (page 102 of the SER). However, this is not perceived to be a problem as the number and variety of cases seen by the students during their practical activities during morning certainly exceeds minimum requirements. The SER (P102, Table 7.4A) indicates a significant drop in food producing animals seen by the ambulatory clinic (and an increase in equines) from 2008>2009. This might be due to the fact that not all animals seen by the mobile clinic service are registered by the clinicians and their record entered in the total count of large animals cases.

There appears to be no list of clinical procedures in place that itemises what a new graduate might reasonably be expected to be able to perform at the time of qualification. Accordingly, there is no tracking system to ensure each student is given the appropriate instruction in relevant parts of the curriculum, or an assessment procedure to ensure competence.

All students and teachers have a health insurance (students have it for free, while teachers are obliged to pay for it) but nobody has a liability insurance, as we were told that this is not a legal requirement in Romania.

Disciplines appear to be well integrated and coordinated, there is a satisfactory balance between species, and the amount of hands-on activities is well above standards. Clinical facilities present within the Veterinary School are adequate in some respects (hospitalization spaces for small and large animals) and below standards in other respects (flooring in some large animal stables, organizational sequence of the various rooms in small animal surgery, equipment in surgery and internal medicine). Clinical facilities outside the Veterinary School are absolutely below standards: both the “Teaching Farm” and the “2 km Farm” have stables in very poor conditions with regard to repair, hygiene, rainwater drainage (the area outside the paddock of the “2 km Farm” was flooded) and status and hygiene of equipment (milking equipment is very old, the amount of vacuum is variable from one end to the opposite end of the system, there is no immediate cooling of the milk, and the milk tank had some dead flies on its surface) as well as of cow premises.

Conditions such as large animal parturitions and dystocias, displaced abomasums, traumatic reticulitis, milk fever, acetonaemia are rarely seen at the faculty or at the farms where the mobile clinic goes.

The case load for dogs, cats and equines taken from the SER for the year 2009, together with the surgical load for the months of June – August 2010 are highlighted in the section on Animals.

There is a good range of equipment to perform small animal orthopaedic surgery and arthroscopy. Students can be exposed to this during a specialist elective. The equipment available for ophthalmology, cardiology and ultrasound is relatively basic. The school would benefit from the purchase or upgrade of some equipment, but a priority list of those items that will generate sustainable income in the medium term should be generated. The relatively lack of a wide range of modern equipment is a problem, though debatable whether this is a potential Category I deficiency or a Category II deficiency.

The students receive hands-on experience of anaesthesia, though the relatively low case-load may mean this is somewhat limited. Gaseous anaesthesia using isoflourane is available for dogs and cats. Intubation is practiced by students on live cases and cadavers. Anaesthetic records indicate that regular monitoring by direct observation and a range of monitoring devises is routine. Injectable anaesthesia techniques alone are used for minor procedures in dogs and cats (as well as for neutering). Gaseous anaesthesia is available for large animals, though used rarely due to a low case load.

In general, students get to do a fair amount of hands-on experience in small animal surgery. However, the above data in the section on Animals in the SER suggests there is a limited quantity of clinical material within the hospital for all students to receive adequate hands on experience.Teachers in surgery say that all students get a chance to perform surgical removal of at least one gonad during the second semester of their final year. When questioned, most but not all students confirmed this. When surgery teachers were asked for further explanation, they replied that the students we had asked were in the first semester of their final year, and therefore had not done the surgery rotation yet.

Table 4.2 (page 52) of the SER indicates there is no time allocation for *practice management* or *career planning and opportunities.* The fact that these items are mentioned presumably indicates they think they are important. However, the team could not find any indication that these topics are part of the curriculum

Animal welfare

Teaching of this subject is included in the animal husbandry section which is the traditional way. Some schools now teach animal welfare science earlier in the curriculum and this might be worthy of consideration. The school should investigate welfare teaching in other Romanian schools and outside Romania to see if there are improvements that could be made to the curriculum.

There are a number of large international Non Governmental Organizations (NGOs) specialising in animal welfare and many have excellent teaching material (eg WSPA, CIWF, HSI, IFAW, Interniche). Indeed there was the first international conference on animal welfare teaching held at the EU in Brussels two weeks prior to the Timisoara visit by the EAEVE. It is recommended that the school investigate what material is available – either to directly help the teaching, or simple to be added student resources for the library.

Humane Stray dog control is a big problem throughout the world and Romania is no exception. It would be good if the school was up to date with current thinking and becomes involved in a positive way – the opportunities for teaching include not only welfare, but zoonoses, epidemiology, availability of surgical cases etc. More information can be found on the website of the International Companion Animal Management Coalition (ICAM).

Exposure of students to systems of poor welfare are a useful teaching tool if the student is made to realise why they are poor and what should be done. There are clearly always economic issues, but the students should be taught *best practice*.

The floors in the large animal accommodation in the hospital are quite slippery and could result in injuries.

Reasonable analgesic protocols were in use, though opiates (morphine and pethidine) were not available in Romania for legal reasons.

Pentobarbitone is apparently not available for euthanasia – T61 is used.

Health and safety – radiation

The main X- ray machine is relatively old (though certified as safe by regular inspection). There are plans to replace it with a digital system by 2012. The quality of the radiographs appeared satisfactory and of diagnostic quality with minimal artefacts. The Radiographer must be congratulated on this despite developing wet X Rays in trays. There was no labelling on the radiographs to indicate individual case numbers. A number of radiographs examined were exposed to the edge of the film indicating a lack of collimation. This will increase scattered radiation which can reduce the quality of the film and be a safety hazard.

Romanian Law was said to make exposure monitors mandatory for full time staff only and not for students. A range of appropriate protective equipment was available and appeared in good order.

The outer door had appropriate warning signage. A red warning light was present, but this was not illuminated automatically when the X- ray machine was switched on.

A fluoroscopy machine was situated adjacent to the small animal operating theatre. Post operative pictures were taken. The staff wore aprons, but the patient was hand held with no protective gloves. There was no apparent warning light. Positioning aids (such as troughs, sandbags and ties) were not used.

X ray films are developed by wet processing using trays. Students receive direct experience of this from full time staff. Spent chemicals are disposed of into sealed containers and removed by authorised contractors.

Health and safety – general:

Students performing laboratory work in Parasitology were observed to work on viscera looking for parasites on the floor. Abdominal organs were disposed on large trays, and excess body fluids were being percolated directly on the floor (due to lack of a pathology table connected with the sewage system). Although students were wearing latex gloves, they were not wearing masks, and were working on their knees in a difficult position. Hydatidosis is endemic in some areas of Romania (such as Dobrogea, in the mountain areas, and in the towns located along the Danube River – admittedly not very close to Timisoara) with , 5 cases every 10.000 patients (Tascu et al., Romanian Neurosurgery 17: 359, 2010. A student might get infected by spillage of abdominal fluid on a lip or on a small skin wound. Such lab work should be done using all precautions to avoid contat with pathogens (masks etc.), and on appropriate tables. The biosecurity rules shlould be strictly adhered to irrespective of the animal species handled in the laboratory as intestinal and abdominal contents generally may pose a serious health hazard to students and staff.
Within the hospital – As well as the radiation issues outlined above, there was evidence that considerable effort had been made to put in place health and safety protocols since the preliminary visitation. However, there were perhaps less individual sharps containers / clinical waste bins / eye wash bottles / fire extinguishers etc available than might have been expected from a facility this large. Also appropriate hand and floor washing materials did not appear always to be readily available.

Of particular importance is the issue of Rabies. In a 2008 survey Romania had 572 cases of rabies/year with 7 outbreaks in the region of Timis (http://www.fve.org/news/presentations/taiex/2008/2008_5_12_non_commercial_pet_movement_lharbuz.pdf). The faculty should take provisions to avoid that student get infected when handling a dog in the small animal hospital. An obligatory vaccination plan for all students should be seriously considered. The lack of an efficient control programme for the free roaming dogs on the campus (including identification and rabies vaccination), together with the vaccination of staff and students against rabies, poses a biosecurity risk that constitutes a *potential category I deficiency*.

The Technicians confirm that adequate Health and safety information is provided in detail at induction.

On the second day of the visit, as the team was standing on the main road of the campus in front of the Dean's office building, a car arriving from the state road drove by at a very high speed, perhaps

80-90 Km/h, passing extremely close to some of the team members. This created a potentially very dangerous situation due to the high risk of injury in case someone had absentmindedly walked across the road. The team members were told that the driver is a (non-vet) student who does this quite frequently.Something like this cannot be tolerated as it constitutes a major health risk for students, teachers, visitors, clients etc. It is suggested to establish an academic and/or financial penalty for such behavior, and to insert very high bumpers on the main campus roads, so that cars are forced to slow down and almost stop e.g. for every 50 meters.

4.4.2 Comments

With a few exceptions, the amount of clinical activities is good, and the Faculty must be commended for getting the most out of the little which is available. In all practices which we attended the professor would stand on a side while the student would do all the work. Faecal sampling seems to be considered an important aspect of the veterinary profession, as students are asked to perform it quite often, perhaps due to the high incidence of parasitic conditions in food animals. Despite the many instances in which students were observed while doing hands-on activities, we never saw one of them collect a blood sample from horses, cows, calves or ewes (except when we asked why this was not done, in which case a student was immediately asked to collect blood from a ewe; however, blood collection was performed without the vacutainer needle-holder, and the rubber cap of the vacutainer tube was removed, with blood from the jugular vein dripping out on the student's arm).

The curriculum is well organized and the amount of clinical or laboratory hands-on activities is among the highest many of us have ever seen in a Veterinary School in Europe. Students seem to be very confident when restraining animals or performing a clinical exam.

There are some welfare and health hazard issues both in the small animal hospital as well as in the Teaching Farms. When one also considers the lack of appropriate protective clothing / washing facilities on the University farm, the concern is that the importance of Health and safety issues are not stressed to the students. Students are responsible for buying their own personal protective clothing – guidance should be given as to what is required. Staff should set a good example by wearing the appropriate protective clothing and washing at the end of a procedure. For some items, bulk purchasing at reduced cost is apparently done by the Faculty and students have the possibility to buy things such as rectal palpation gloves or disposable boots and coveralls directly by their professors. Such exchange of money between students and professors should be avoided as it may put students in a difficult situation. The poor biosecurity practices constitute a *potential Category I deficiency*.

4.4.3 Suggestions

- Investigate how modifications to the allocation of teaching slots within the framework of the curriculum may improve the continuity of clinical teaching
- Develop a list of "clinical competencies" that students have to achieve. Devise a method of tracking and assessing this.
- Check how this is done in other schools and adapt to your own purpose.
- Attempt to increase case load of clinical cases or utilise other sources (eg stray dog control programmes).
- Appoint an International advisory panel ASAP to help with design and construction of a new hospital facility.
- Purchase or upgrade some equipment in the small animal hospital, giving a priority to those items that will generate sustainable income in the medium term.
- Teach students practice management and career planning, at least as an elective but preferably as a fundamental course
- Contracts with companies for assistant services and researching (Infectious Diseases unit), patents (as it is the case of the Public Health) or advising services and editing scientific journals (Pharmacology) seem to be good examples of how to improve the teaching possibilities and having new equipments and resources at the students´ disposal.
- Check welfare teaching in other Romanian schools and outside Romania to see if there are improvements that could be made to the curriculum.
- Investigate resources available from International NGOs and build partnerships

- Investigate how the school might become more positively involved in Humane Stray Dog Control
- Investigate how the floor in large animal accommodation can be made less slippery and so safer
- Work with other schools in Romania, the Veterinary Chamber and perhaps FVE to lobby government for the licensing of effective products for analgesia and euthanasia.
- Ensure the radiation safety procedures are applied to all areas using radiation.
- Purchase / use a range of positional aids
- Avoid hands (with or without gloves) being in the primary beam.
- Collimate the beam as much as practical
- Use some form of permanent identification on all radiographs indicating the individual case number
- Review the improved Health and safety SOPs and ensure they are relevant to the particular location and that all appropriate equipment is close at hand.
- Teach students and staff the importance of Health and safety procedures
- Implement an obligatory vaccination plan for rabies for all students
- Buy appropriate necropsy-type table for laboratory work in parasitology, and have students work with masks and other appropriate lab attire (disposable coverall etc) when working with abdominal organs from any animal species
- Ensure these are constantly implemented and that staff act in a positive way to be a good example to the students.
- Guide students on what personal protective clothing is required.
- Establish an agreement with a company selling protective clothing, and let this company sell directly to the students, perhaps by using automatic dispensers located on campus
- A mandatory vaccination plan for stray dogs at the university campus should be established. These dogs should be vaccinated against rabies, and they should be either tattooed or chipped and a control program should be established. This might well function as an extremely important and relevant teaching opportunity for the epidemiology and herd health rotations.

4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH

Questions to be covered:

1) Briefly comment on structure of practical training i.e. practicals, slaughterhouse, processing plants etc. See text
2) How is food hygiene course linked to animal production, pathology, pharmacology& toxicology incl. residues and withdrawal times and parasitology? See text
3) Is training mostly internal on-site or external? Both
4) How is inspection experience in milk, cheese, fish, meat, poultry offered? See text
5) Do all students have training in the slaughterhouse? Yes

4.5.1 Findings

The teaching activity of the Department foresees the weekly activity. During the first semester of fifth year, students attend the course “Hygiene, technology and inspection of milk and milk products”. It comprises 28 lectures and 28 hours of practical training. For this purpose, they are divided into groups of 12-14 students, who attend six sessions, two of them as visit to dairy plants. The practical training covers the main aspects of the lab routines in milk and cheese inspection. In the fifth year the Food Hygiene subjects has over 90 students.

During the second semester the students course “Hygiene, technology and inspection of meat in slaughterhouse”, with 28 theoretical hours and 28 hours of non clinical works, divided into four sessions, two of them in different slaughterhouses and two working hands-on with organs or in *Trichinella* inspection. Also, audiovisual resources (videos and pictures) are used to support the learning.

The students participate in at least one working day of practical training in meat inspection at the “Smithfield” slaughterhouse, 10 km. from Timisoara. The operational standards observed at the slaughterhouse are very good, and it supposes a great chance for the students to deal with GMPs and the HACCP implementation in a slaughterhouse, as well as the inspection routines of this type of establishment. The students are able to experience ante-mortem examination. Animal Welfare is being respected. During the slaughtering process students can observe also post-mortem examinations. The students are trained by a Faculty Assistant Professor and the slaughterhouse food safety responsible, who also teach some lessons in the Faculty. The groups are of 9-11 students. Although the group should be smaller, they can profit the teach splitting the group in different steps of the slaughterhouse activity. They cover in a reasonable way the learning objectives with regard to pigs, and have the opportunity to have another practical working day with ovine or poultry and, since the current academic year, bovine facilities. This is possible thanks to the agreements with the respective slaughterhouses.

During the first semester of the sixth year and for 8 weeks of the second semester, students attend “Meat and other food products hygiene, technology and control”. A broad range of topics and competencies are covered including meat products, seafood, eggs and honey. Most Food Hygiene practical lab sessions are in groups of about 14 students.

Although the students have the two related subjects (aforementioned) in the fifth year, it is in this sixth course when they study more deeply the HACCP system. The students have to prepare practical cases on different types of products. Also in the second semester of the sixth year the students follows the extramural subject “Practical work in animal slaughter procedures and animal products processing”, where they can complete their practical skills in this area. Not always they spend the two weeks in the same establishment, and not always in a slaughterhouse.

The students have practical training in the “Ecological Agriculture and Food Safety Platform” laboratories for Food Microbiological and Physical-Chemical analyses. The Platform, which is approved at national level as official laboratory, has a great potential to support the practical teaching.

In general, for the laboratory practical sessions, the topics are well covered although not always the students can directly participate, depending on the material needed. Also, the practical sessions include aspects on organoleptic properties and sensory analysis to recognize food spoilage, etc. Sensory analyses panel are not organized. The practical training on food markets are restricted to activities in a supermarket (“Real”), but most of the students have not done food inspection in markets or establishments where foods are supplied, as restaurants or retailers.

On the other hand, the visits to food industry plants seem to be coherent with the program of the Food inspection subjects.

As the Food Hygiene unit is in the Department of Animal Production and Public Health, the link with Animal Production aspects and Animal Welfare is well coordinated. The residues in food are also explained in this area. Occasionally, group sessions are developed together with Morphopathology staff and students to discuss on some real cases. Links with Parasitology or Pharmacology areas exist for advising when necessary.

4.5.2 Comments

- The standards of operational hygiene and processing observed at the “Smithfield” slaughterhouse are good and appropriated to the students training. The recently signed agreement with a bovine slaughterhouse comes to complete the possibilities of the students to deal with the main aspects of meat inspection.

- The food market inspection as well as the sanitary inspection of establishments where foods are supplied (restaurants, retailers…) should gain prominence, as far as possible, in the practical obligatory works (extramural or not).

- The staff of the Department shows a great interest in their work and consider the major changes of the curriculum (SER, page 65) about “Food security” and “Surveillance and control of emerging diseases” as related to the future legislative changes, as well as the possibilities offered by the “Microbiological Risks on Food Laboratory” foreseen in the Impact Project. Also, the Food Hygiene staff seems so interested in signing agreements with food premises to have most as possible possibilities in practical training.

- The “Ecological Agriculture and Food Safety Platform” laboratories offer an excellent opportunity for practical training in Food Microbiological and Physical-Chemical analyses.

- The Food Safety training depends on the Animal Production and Public Health Department. For this reason, aspects as animal welfare or the study and determination of residues in food are well linked.

- The sensory analysis is an important tool for the food quality control in the food industry, a professional competence fundamental in the next future for this area.

4.5.3 Suggestions

- The training of food inspection in markets and sanitary inspection of establishments where foods are supplied (restaurants, retailers…) should be increased as far as possible. To sign agreements with the local sanitary authorities in that sense seems to be advisable.
- For the food inspection extramural activities (slaughterhouse, etc.) it would be better to work in smaller groups than currently.
- To perform sensory analysis on foods would enrich the food control and analysis perspective of the training. To organize sensory panels with students and to plan a sensory panel room adapted to this activity could be a good possibility.

4.6. ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS

Elective courses are listed in the SER on pages 52-53 (see table below from page 53), while facultative courses are listed on page 54.

Year	Subject	Lecture hours	Lab hours	Clinical hours	Total hours
IV	Mycotic diseases	14		14	28
	Echographic diagnosis in internal disease	14		14	28
	Pet orthopaedics	14		14	28
V	Reproduction biotechniques	14		14	28
	Laboratory and exotic animals pathology	14		14	28
	Farm animals orthopaedics	14		14	28
VI	Laboratory diagnosis in internal disease	14	14		28
	Infectious zoonoses	14	14		28

	Parasitic Zoonoses	14	14		28

4.6.1 Findings

There are 2-6 courses available to choose from in any given year, and students have to choose at least 2/year. Once chosen, the elective course becomes obligatory and the student has to take it in order to graduate. None of the facultative courses must be taken.

4.6.2 Comments

The limited range of companion animal electives probably reflects the lack of specialist staff and equipment, although the SER appears to claim to have specialists in a wide range of subjects. An improved echographic machine would be of value if this is to be a nominated elective. The facultative course on "Driving" is offered through the Faculty of Animal Husbandry, by a professor of that same Faculty and is open to all students of the University. It is very well received as not all students of the Veterinary School have a driving license, and the course is for free.

4.6.3 Suggestions

- Improve the career structure and salary of clinicians to attract and retain good staff.
- Electives available will reflect the staff qualities
- Prioritise what equipment is necessary to service existing electives.

Food Hygiene and Public Health

The three subjects offered by the Food Hygiene / Public Health area are taught by Clinical Teaching Departments. For this reason, Food Hygiene is not represented in the elective curriculum plan.

The Food Hygiene training is well linked with animal welfare or the study and determination of residues in food. The Food Hygiene area should have elective subjects to complete its professional competences profile.

Suggestions:

- To offer elective subjects of the Food Hygiene area in the curriculum.

Curriculum – staff and finance implications

Staff

The SER states approx 90% of teachers graduated from FVM, and this probably does not encourage new ideas. There is no apparent legal structure for post graduate specialisation in Romania and none of the clinical staff have European or American Diplomate status. The "specialists" referred to in the SER are therefore not specialist in the European sense, but simply have a special interest or experience in field (however good they may be). This will have an impact on the quality of teaching, the quality of research, elective options offered to the students (see below) and staff recruitment.

Good quality clinical veterinarians require good quality technical support staff to function efficiently. These in turn will require an appropriate financial remuneration and career structure.

A significant factor in the recruitment and retention of good quality staff is the poor salary and career structure on offer. This is clearly a political issue, but may possibly be resolved if the additional costs are offset from increased clinical income. The biggest asset of a faculty is the quality of its staff and so unless this issue is resolved, the success of any future plans will be compromised.

Suggestions

- Work with other Romanian Schools, the veterinary chamber and FVE to lobby for a system of specialisation in Romania.

- Work with other Romanian Schools, the veterinary chamber and FVE to lobby for an improvement in salaries and working conditions of clinical staff
- Stimulate Internationalisation of school by arranging visits / exchanges

Finances

It was initially suggested that in Romania there is a legal national fee structure. This point has since been questioned, and it has initially been suggested that there is a set minimum fee, and subsequently that there is no legal fee at all. It is clear, however, that the charges made for consultations at the faculty are cheaper than surrounding practices and that the charges made for additional services are often set at a level that reflects what the staff perceive the owner can afford rather than the cost of provision of the service. Invoicing seems a fairly vague process and it is not clear whether or not all consumables are included. This could be much improved by computerisation. Discounts for specific people or services may be OK, but the scale of the discount must be known for that case and for the total work throughout the year. Discounts must be budgeted for.

Services provided to farmers using the mobile laboratories also are extremely cheap / free of charge.

To counter this, the economic situation means that government funding may be reduced and the clinical staff is already underpaid. Yet the faculty takes 90% of the income from the clinics, the FVMT should devise a strategy that maximises the income from clinical services. They have facilities and expertise that local practitioners do not have (even a monopoly on radiography) so they must maximise the return on this. A business strategy is especially important considering the planned re-building programme – this will need a lot of money for running costs / repairs. The sustainability of the faculty as a teaching and research facility is dependent on this change in outlook.

The potential income centres of the hospital are:

1. Fees for clinical work performed
2. Sale of medications
3. Fees for laboratory services for outside agencies
4. Fees for CPD provision

These must be maximised and the hospital managed as a business. Proper pricing will clearly result in an increase in fees which some may find unpalatable. Ways of improving value for money should be found – perhaps even a student project. All schools have the same problem – find out what happens at them.

The SER states the FVMT has a monthly TV and radio broadcast giving specialist advice for the general public. This is a potentially valuable resource and it would be interesting to know if there is a strategy to maximise the potential, for the profession as a whole and the faculty in particular.

Suggestions

- Appoint a hospital business manager
- Computerise records and invoicing
- Identify income generating centres
- Prioritise the purchase of equipment that will give a sustainable medium term return on investment
- Price procedures to take account of real costs (including consumables, staff, repairs and replacement)

Relation to surrounding practitioners

According to the SER, this is said to be good. However, is this really the case in a competitive market? The case load is said to be 65% first opinion (SER p 105), the fees charged are less than surrounding practices, and the facilities available are probably better!

It is reported there are only 10 private clinics in the city, although discussions with local practitioners suggest this number is closer to 30. It was further reported that none had an X ray machine, but this too appears to be an error.

Local practitioners say they have good relations to faculty staff on a personal level, but that there is little communication with the faculty as a whole.

Suggestions

- Set up a regular and effective line of communication with local practitioners

5 TEACHING QUALITY & EVALUATION

5.1 TEACHING METHODOLOGY

Questions to be covered

1) Brief summary of teaching methodology used See text below
2) Are specific learning objectives set for subject and courses? Contained in course notes
3) Do students work from teachers`scripts or textbooks or other information technology form? YES
4) Is problem-oriented teaching used? To a limited extent
5) How are courses and teaching evaluated? YES – including questionnaires by students and colleagues
6) Is teaching mostly theoretical or has practical application a higher range of importance? Basic subjects and sciences the emphasis is on theory but all courses include practical work
7) How much real-life clinical exposure opportunity is offered i.e. hands-on work, 24-hour duty, acute cases, case responsibility, case follow-up, interaction with clients, practice management etc?See text

5.1.1 Findings

In general, teaching is balanced between lectures and practical laboratory courses. A textbook or compendium is produced by the lecturers and used by the students for the theory and practical parts of each subject. The course notes are considered to be the objectives for the subject.

The teachers state that there has been a process of harmonization between the four veterinary schools in Romania and the content of the courses is agreed between the heads of each discipline from the veterinary schools.

Lecture notes and laboratory course notes are available to the students in electronic form, usually on request from the teacher. The website is not used to distribute educational material and information to the students.

The teaching week for the basic subjects and sciences is divided into the first two days of the week being devoted to lectures and the last three days reserved for laboratory work. Friday afternoons are free from teaching so as to be available for additional examinations of the students that had failed their initial examination.

All laboratory courses are obligatory. The laboratory courses for the basic sciences such as histology, immunology, physiology, seminology, and histopathology are conducted for groups of 10-12 students or smaller groups of 4-6 (breeding technology) and involve relevant tasks such as microscope examination of histological sections or performance of immunological tests. The small group size requires each laboratory course to be repeated four to five times or more.

Audio-visual equipment was available for lectures. The electronic presentations were not available on the website.

The courses and teaching are evaluated at five different levels: RAQAHE – Romanian Agency for Quality Assurance in Higher Education – evaluates higher education institutions. This is an evaluation of subjects and programs conducted once every five years.

For the evaluation of the teaching process there is a self-evaluation report. There are also questionnaires for evaluation of each member of staff that are completed by the students and by colleagues and by the Head of Department. The SER reports a high level of student satisfaction with most teachers (Fig 5.3 page 75) with most teachers receiving more than 4 out of 5.

As a result of Romanian animal welfare legislation, the use of animals in physiology and toxicology courses has been significantly reduced. The FVMT uses computer simulation programmes or video-recorded material for teaching purposes.

5.1.2 Comments

The small group sizes for many of the laboratory courses (10-12 students) requires that individual courses need to be repeated a number of times to cover all students in a year. This arrangement results in a high teaching load.

The website of the FVMT is not used as a contact forum and source of information for the students.

5.1.3 Suggestions

- If appropriate laboratories are available, FVMT should consider increasing the student numbers in laboratory courses to reduce the teaching load.
- FVMT should use its website as a contact and information focus for the students.

5.2 EXAMINATIONS

Queries to be covered:

1) How often are students examined and when? Several times within 3 yearly exam sessions
2) Are there external examiners? No
3) How many times can a student retake? As many as they want
4) Are examination structured or piecemeal? See text below
5) Is the examination system effective and does it require students to have to sit and pass examinations in basic subjects and foundation subjects before continuing on to the later disciplines. Yes

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5.2. 1 Findings

The examinations are held in two periods at the end of each semester. There is also a third session in September for the students that have not passed the exams of the current year and of the previous year. In addition the students can be examined between the two main examination sessions on each Friday afternoon to reduce overlapping with courses or practical/clinical activity.
In all disciplines a practical examination is required to get access to both oral and written examinations.

For the Basic subjects and sciences, oral and written examinations are used. For oral examinations, there are two (or three) internal examiners present. The correction of written examinations is performed by two internal examiners. The weighting of theory and practical examinations was mostly 80% for theory and 20% for practical examinations with a requirement to pass (achieve over 50%) in both. For some subjects such as vegetal biology the weighting was 50% for each part of the course.

5.2.2 Comments

Although not mandatory, the possibility to have external examiners is always very positive as it fosters objectivity when examining students. The faculty should have such possibility as an official option in its set of Policies and Procedures. Also, for exam in clinical disciplines, the use of real or simulated patients is always very helpful.

Teachers don't check the extramural because students do not write complete reports (not just copies of patient files but a log book is needed) of this activity.

There is no limit for the number of times a student can retake an examination.

5.2.3 Suggestions

- Include the option of having external examiners into the set of Faculty Policies and Procedures.
- For exams of clinical disciplines, use real life or simulated clinical cases
- It could be useful to try to put in place OSCE'S witch, is the Objective Structured Clinical Examination to improve and verify the day one competencies that any veterinary students should acquire.

6 PHYSICAL FACILITIES & EQUIPMENT

6.1 GENERAL ASPECTS

) Brief description of facilities with observations on age, suitability etc. See text below
2) Adequacy of lecture rooms, laboratory and dissection/necropsy halls? No, see text below
3) Vehicle availability to transfer students from site to site or to external establishments? Yes
4) Health and safety items i.e. biohazard warnings, fire extinguishers, eye washes, sluices, chemicals, medicines and dangerous drugs storage? Fire extinguishers, eye washes & sluices lacking
5) Adequate facilities for training in food hygiene, carcase handling, access to slaughterhouse, the provision of laboratories for microbiology, toxicology, organoleptics and residue work? Yes, especially the Platform. Not a specific organoleptic analysis room
6) Comment on suitability of site in terms of size, area, local animal caseload, access, transport etc. and availability of suitable equipment for teaching and research? EU Impact grant has provided much new equipment

6.1.1 Findings

Facilities

Facilities have clearly been significantly upgraded since the last report and the school should be complemented on this. However, there are deficiencies and further rebuilding will give an opportunity to resolve many of these issues. Advice from an international panel of advisors (from schools that have recently undergone extensive rebuilding) is highly recommended.

After the EAEVE previsit of 1998, the lecture theatres and laboratory rooms have been renovated and were of a good standard. The large lecture rooms were equipped with new seating and had AV equipment (Powerpoint projectors). The renovation of buildings and facilities has involved the tiling and/or painting of most walls, benches and often floors of laboratory rooms. Glass partitions had been fitted to many corridors to restrict and control access. Many of the laboratories had facilities for washing hands. Many of the laboratory rooms were small and able to accommodate only classes of 10-12 students in basic sciences.

The anatomy small animal dissection room could not be hosed down after use.

There were not sufficient facilities for performing necropsies on large animals. The necropsy room had 4 tables suitable for small animals but no attached cold room for storage of cadavers prior to disposal. In an adjacent room, there was one freezer for holding cadavers prior to necropsy and a second freezer for holding cadavers after examination until collection once a week by a commercial company for incineration. Washing facilities did not allow “hands-free” operation.

Ventilation cabinets were not present for handling formalin-fixed pathology samples and performing histochemical staining methods. Eye washes and fire extinguishers were not observed. Student locker facilities or changing rooms separate from the laboratories were not observed. Footbaths were used for entry and exiting some rooms but sluices and protective footwear were not used in the necropsy room or in the anatomy dissection room. Elsewhere, health and safety items, i.e. biohazard warnings, fire extinguishers, eye washes, sluices as well as separate storage facilities for chemicals, medicines and dangerous drugs are almost completely nonexistent.

The university offers many student facilities. Students may take advantage of the numerous sports fields inside the campus, which are free and satisfy a great number of disciplines. The quality of canteen service seems to be good, the capacity is more than sufficient and there are no lines, not even during peak hours. Actually the team did not see any students near the canteen during the site visit. The price is, however, much too high for the majority of students (4 euros for a full lunch). Moreover, there are 4 cafeterias for the students.

The majority of dormitories (the old ones) are rather old and the electricity construction is not particularly safe, the buildings are not thoroughly clean and bathroom and kitchen are in common for every floor; the number of bathrooms is sufficient and they are relatively clean. The kitchens, however, are not of a standard suitable for a European faculty. 4-5 students share a room which is then very cheap (15-20 euro/month). This is a very important factor for the students. In each room there is a cable internet connection. They have just built a dormitory for PhD students, which is modern and beautiful, each apartment being equipped with both a private bathroom and a kitchen.

6.1.2 Comments

The laboratories for practical work would appear to have a small capacity with places mostly for 10 or 13. The small capacity of the laboratories results in a favourable ratio between numbers of teachers (often 2) to students but requires repetition of laboratory classes increasing teaching load.

The ventilation system in the lecture theatres and most laboratories had not been addressed in the renovation programme. Some laboratories contained temperature control units.

The inventory and equipment in many of the student laboratories was in need of renewal or lacking such as appropriate tables for washing of intestinal contents in parasitology and microscopes in histology. Some laboratories possessed considerable new and modern machinery supplied through the EU Impact grant.

6.1.3 Suggestions

- Biosecurity measures and health and safety items were not strictly applied or absent, suggesting this as a potential Category I deficiency.
- FVMT should consider creating larger laboratory rooms for the basic subjects and sciences to enable rationalisation teaching loads in these subjects.

6.2 CLINICAL FACILITIES & ORGANISATION

Questions to be covered:

1) Make brief overview of facilities indicating departmental responsibilities See text

2) Are there diagnostic laboratory facilities and do they carry out external work? Yes
3) Comment on clinical facilities and organization of clinical services. OK, major problem in large animals
4) Is there a 24h emergency care service, adequate hospitalization/treatment ? isolation facilities and/or mobile clinic? Yes, except for large animal isolation facilities
5) Are there possibilities for additional animal materials from stables, farms, kennels, game reserves etc? YES

6.2.1 Findings - The Veterinary Faculty in Timisoara is composed of 6 buildings which belong exclusively to the Veterinary Medicine (buildings 1, 2, 3, 4, 17 and 18 – see map on page 81 of the SER), plus a number of other buildings which are shared with other faculties of the University of Timisoara, such as a Cafeteria, a Gymnasium, 4 buildings for student housing, a Library, the Rector's office, the Main Auditorium (Aula Magna). The two other buildings belonging to the Faculties of Agriculture (n. 12) and Technology of Animal Production (TPA, n. 16) host offices and laboratories of some of the basic sciences (chemistry, biochemistry, physics, statistics and computing).

Hospitalization for small animal is adequate, dogs are separated from cats and the number of places (18 total) is OK. Hospitalization for large animals is not OK, as the floor is slippery in some wards and full of holes and crack in other wards. Isolation facilities for small animals are brand new and of good quality, while those for large animals are located in the teaching farm and are not acceptable as the walls are not washable (no tiles) and there is not a sink to wash hands upon leaving the premises, there are no facilities for changing clothes, there are no facilities for ensuring cleaning of boots, there is a large ditch with manure in the middle of the room which makes it impossible to clean properly.

The "Teaching Farm I" (map on page 83 of the SER) is literally falling apart, but no money is going to be spent on it. Unlike what is reported in the SER, this Farm does not have any pigs or poultry, and only a handful of male horses. All stables are old and dirty, manure is piled everywhere outside of each used building and it is removed not frequently enough from some of the premises (such as from the heifer's barn). The surroundings are not tidy with broken farm equipment scattered all over the farm area, machines with flat tyres left in improper positions, remnants of buildings and equipment, debris from renovation etc etc. Despite its surface (2,500 ha) this farm is left to itself. However, the animals kept here are conveniently used for teaching purposes as the farm is within walking distance from the Vet School.

The "Teaching Farm II" (also known as the "2 km Farm") is in approximately the same poor condition, although the cows kept there seem to be followed up in a slightly better way. The conditions of the premises of the Teaching Farm and the "2-km Farm" are very bad, but both farms are owned by the State, and the Veterinary School has not interest in putting resources to repair them as resources invested there would probably be "wasted" by bureaucrats in Bucharest (or at least this is the perception of the Faculty). A small building within the Teaching Farm II has been recently renovated and will be turned into student housing or a small hostel. It is not clear whether or not the Faculty has any right or has made any investment in this building.

6.2.2 Comments

The 2 Teaching Farms are not of an adequate standard. Their advantage is that there is plenty of animals (mostly ruminants, only a few horses) available for students to train on. While such an abundance of animals is very important for teaching, the conditions of those two farms are not acceptable for a Veterinary Faculty seeking approval from EAEVE. It would probably be cheaper to pull everything down and build a new farm from scratch than restructure the existing facilities. One option could be to stop using one of them and concentrate the Faculty's efforts on renovating the other one, as one teaching farm is enough for a Veterinary Faculty.

The floor of the large animal wards in the Veterinary Hospital needs to be fully repaired.

The large animal isolation facility is inadequate and must be provided with hand-washing and boot-washing facilities and a dispenser of disposable items (gloves, coveralls etc.), and floor and walls must be washable (this is a potential Cat I deficiency).

6.2.3 Suggestions

- Restructure completely at least one of the 2 teaching farms
- Renovate the floor of the large animal ward in the Veterinary hospital – suggestion of a Cat 1 deficiency
- Provide the large animal isolation facility with washable floor and walls, with sinks for hand and boot washing and with dispenser of disposable items.

7 ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

Questions to be covered:

1) What sources are available which provide access to animal material? Hospital clinic, range of university and private farms and slaughterhouse
2) Is there a working farm where students can do practical work in the animal production subjects? Yes.
3) Ratios students graduating : clinical caseload pets / livestock / necropsies Not adequate
4) Adequate fresh chilled or prepared material for anatomy?No
5) Adequate necropsy material and is it balanced? No
6) Are adequate clinical materials available to enable staff to maintain or develop their skills and is there a reasonable balance between small animal and large animal cases? Relatively low case-load in hospital (esp equines and bovines) though clinical material is present on farms.
7) Are the students given adequate exposure to slaughtering of various species as well as to materials for supporting food hygiene training? Yes.

7.1 Findings

There is a sufficient number of cattle at the university farm for student use. Also, there is a flock of sheep which the team could only observe from a distance as the shepherd had already taken the sheep out to the field by the time the team arrived. The only other species available at either Teaching Farm is the horse. There is a complete lack of disease control protocols in the normal stables as well as in the isolation facilities. No washing/disinfecting facilities for boots were apparent; students have to purchase their own protective clothing, but often students do not use them as it appears that there is no encouragement to wear boots and adequate wash-down protective clothing. Table 7.3 (p101) of the SER indicates that in 2009, the patient flow included:

Species	Consultations	Hospitalised
Canine	2184 (equiv .. per week)	105 (equiv .. per week)
Feline	658 (equiv .. per week)	39 (equiv ... per week)
Equine	50 (equiv ... per week)	26 (equiv .. per week)

Additional data from the appropriate departments indicate that for the 3 months from June to August 2010:

Species	Number of surgical procedures
Dogs / Cats / pets	63 (equiv to approx 0.7 per day)
Equine	1 (major surgical procedure)

Bovine	1 (major surgical procedure)
Total number of X ray cases	192 (equiv to approx 2.31 per day)

Some neutering operations of male and female dogs and cats are performed in the reproduction department. A local private veterinary clinic (Sal-Vet) also allows students to perform neutering surgery on street dogs for a local animal protection society on an *ad hoc* basis (approx x2 per week). Whilst these additional sources of clinical exposure are to be welcomed, it is important to ensure appropriate standards of anaesthesia, analgesia and aseptic technique. The number of large animal necropsies as well as the number of animals used in anatomical dissection also appears low, as detailed in chapter 4.2.1 of this report. This data suggests there is a limited quantity of clinical material (both live and necropsy cases) for students to receive hands on experience at the Faculty. The students say that not all have the opportunity to perform a neutering surgery on their own prior to graduating. However, if they wanted to, they could bring their own dog or cat. It was claimed by the staff that each student is “guaranteed “ to remove one testicle surgically – but this does not seem to be always the case.

The clinical case load for food animals is adequate, as the mobile clinic service offers an opportunity for all students to deal with large numbers of ruminants. Hands-on practice of herd medicine is adequately provided for all students, although not all opportunities are taken advantage of. Herd health management is taught during the course of reproduction, but students do not appear to have a clear grasp of what proper and up-to-date herd health management should be. This is a modern and quickly expanding area of bovine medicine and reproduction which faculty professors at Timisoara should master as it is virtually unknown to many farmers. No regular calculation and assessment of reproductive indices was done in some of the farms we visited. On the other hand, there are modern and well kept cattle farms in the Timis region (owned by Italian investors, who invite on a regular basis Italian veterinarians). These farms should be contacted by the Faculty as the students should be taken there to have a chance to see how cattle breeding and management should be done.

The current load of clinical material available at the Faculty is adequate for staff to maintain their skills, at least in small animal medicine, surgery and reproduction, while the low case load in large animal surgery certainly is not adequate. With regard to large animal practice, there are a lot of opportunities for staff to practice through the mobile clinic service, especially considering that the level of premises and breeding techniques of many farms in Romania appears to be fairly low, which would give them an opportunity to show their students how things should not be done and what is the proper type of approach to farm management problems.

Through the mobile clinic service, there appears to be adequate opportunities offered to each student to learn about rectal palpation in cows as well as to handle parturitions, dystocias and milk fever, while this is not the case for conditions such as displaced abomasums or traumatic reticulitis. A couple of teaching mares are available at the Teaching Farms, furthermore rectal palpation in mares is done by the students of the 6th year in a private equine farm. Each student has more than one opportunity to do rectal palpation in adult mares, although this appears to be the only chance to do this procedure. In this equine farm, students were observed to palpate mares with little restraint and simply with a wooden fence behind the mare (Figure n° 1).

Figure n° 1 – Veterinary students from the Faculty of Timisoara palpating a mare at a private farm under teacher's supervision**.** The type of protection arranged for the student who is actually performing the palpation exam is not sufficient, creating a very dangerous situation for the student. If the mare feels pain and suddenly pulls herself down, the student may be unable to quickly pull out of the mare's rectum and may end up with a broken arm. If a chute is not available, the mare should be pushed with her flank against the wall (which would minimize chances of lateral movements) and the protection for the arm of the student should be lower. A bail of hay or something similar is sufficient, as the protection only need to be up to the level of the hock.

No poultry or swine farm could be visited during the visit, as they appear to be available during other parts of the academic year. When interviewed, student told the team that they are taken at least once to a poultry farm and at least once to a swine farm during their studies. However, this could not be verified.

Exposure to slaughtering of various species as well as food hygiene is considered adequate (see Chapter 4.5.1 and 4.5.2 of this report).

The following ratios have been re-calculated during the site visit using data provided by the Dean's office at Timisoara. The original ratio (reported in the SER) were done using as a denominator the number of student graduating during the last academic year, instead of the average number of students graduating over the last 5 years,

Ratio	Numerator/Denominator raw	1/Denominator	Established range of denominators
R11	94/121	1,29	2.47-1.73
R12	94/1779	18,93	0.51-7.87
R13	94/9	0,09	0.20-0.09
R14	94/73	0,78	1.78-0.92
R15	94/27	0,29	0.58-0.37

R16	94/2800	29,79	48.74-37.94
R17	94/3	0,03	
R18	94/185	1,97	0.75-0.46
R19	94/511	5,44	0.26-0.12
R20	94/86	0,91	1.26-0.89

7.2 Comments

The number of farms where students go with the mobile clinic and/or during their morning's practical training sessions is very high. Students always go in small groups (6-8 students/group) and the teacher lets them do all the work. However, a great amount of time is spent in repeating technique such as clinical exam or faecal sampling, while blood sampling is not practiced. Also, when questioned about which technique can be used to collect a blood sample from a cow, a student replied that he was taught to do it from the jugular vein as this is best technique. However, blood collection from the tail vein is currently considered the safest and most efficient technique to be performed in bovine. Students should be trained also in bovine blood collection from the tail. In general, every opportunity for students to learn a professional technique should be taken. From this point of view, a trip to a cattle or a sheep farm could be a good occasion to practice herd health management. Also, if the Faculty could purchase a portable ultrasound unit (even a used one) each trip to sheep or cattle farms could become an opportunity for students to practice ultrasound pregnancy diagnosis. This is a very common technique used in veterinary practice, and a good source of income for food animal veterinarians.

Teaching mares should be purchased and stabled at the Teaching Farm, as this would allow students to get more opportunities to practice equine rectal palpation.

7.3 Suggestions

- Increase the small animal case load at the Veterinary Hospital
- Increase the large animal surgery case load at the Veterinary Hospital
- Increase the large animal necropsy load
- Teach students how to do blood collection in all animal species. Teach them how to perform blood collection in bovine using the tail vein
- Blood samples might be examined at the new central laboratory which has both the expertise, the time and the capacity to do this
- Purchase 8-10 teaching mares to be used to train students in equine rectal palpation
- Purchase a portable ultrasound unit for the mobile clinic, to give students an opportunity to practice ultrasound pregnancy diagnosis in sheep.

8 LIBRARY & EDUCATIONAL RESOURCES

Questions to be covered:

1) Brief overview of library facilities See below
2) Number of journals subscribed to and on-line services?Eighteen (18). Via the library website they redirect students to all types of important (uncountable) on-line services as long as students are logged in on-campus
3) Exchanges with other university libraries? Yes

4) Central library indexing?Yes
5) Departmental libraries, accessible easily to students? Yes
6) Are journals, periodicals, standard texts sufficient? Yes
7) Is the balance teaching : research acceptable? Yes
8) Are the opening hours student-friendly and are there adequate staff? Yes
9) Do students use the library well and are they trained to use it? Yes
10) Do students really have access to departmental libraries? Yes

8.1 Findings

The library is located centrally in the campus and it covers research and teaching in all the 6 faculties of Banat University of Agricultural Sciences and Veterinary Medicine. It occupies 953 square meters on two floors, and it has six reading rooms, two of them with internet access and one for old and valuable books Apart from the central library there are smaller department and section libraries where students can also borrow books.

The library is affiliated to the Romanian Librarian Union and is accessible for interlibrary loans. It includes veterinary medicine books and books on related biomedical subjects. The number of employees is sufficient and the library opening hour are good (7:30-21:30). There are 267 reading places and students in the reference room can consult books and journals. The reference room can also be used for personal study and students have the possibility of printing (for free) and scanning relevant pages. The possibility to access old books, non-book material and out of print publications is limited. All 20 computers are on line and are connected to printers. The sections of non-book materials and the electronic journals are poorly developed.

The subsidiary libraries are: library of the Departments of Pre-clinical Education, library of the Department of Clinical teaching I, library of the Department of Clinical teaching II. The main library handles all the bibliographic material loaned to the Subsidiary libraries.

Students are allowed to borrow textbooks and print versions of several of the most relevant veterinary journals (including Am J Vet Res, Eq Vet J, Vet Rec, JAVMA, Vet J, J An Sc, J Small Anim Pract and Vet Path).

The most frequently used text books were in a good condition and there were several copies of each for loan. The borrowing procedures were uncomplicated with a minimum of bureaucracy. The staffing seemed adequate and the staff was adequately trained.

Each class has a compulsory course in the use of the university library.

8.2 Comments

The library is housed in adequate rooms in need of a slight makeover. The shelves are in a very poor condition and need to be renewed.

Reference textbooks on the main fields of veterinary education in the study room were mainly in Romanian and the non-Romanian books were in many cases obsolete due to age. The chief librarian complained about the relatively low number of students visiting the library, but meant that it was due to the fact that students seek information on the internet in other locations than the library.

8.3 Suggestions

- The number of up-to-date textbooks/journals available for borrowing, especially in English/French/German, should be dramatically increased. This is a potential Cat I deficiency.
- Library staff should be allowed to enroll in continuous education to get familiar with modern library management systems and exchange system should be established with other non-Romanian university libraries.

- Study rooms should be refurbished e.g. with comfortable chairs (presently hard wooden chairs), vendor machines etc. to attract more staff and students to the library.
- Finding opportunities to increase the Library budget for increasing the number of science journals and the acquisition of more new textbooks on veterinary medicine.
- English web-site

9 ADMISSION & ENROLMENT

Questions to be covered:

1) *Is a selection procedure in operation and is it legal?* Yes
2) *Is there a "numerous clauses" and what are the criteria used?* Yes
3) *What is the link between budget and the number of students?* Because of national regulation, the number of students is a criteria to define the Faculty budget
4) *Does the intake take account of the national need for veterinarians?* Yes
5) *Does the admission procedure result in students who have the aptitude, knowledge base and motivation for veterinary studies?* Not completely
6) *Does the admission procedure take into account the limitations of the resources available?* Yes
7) *Is there a high drop-out rate and what are the reasons?* See text
8) *Does the admission process result in access inequalities?* No

9.1 Findings

Student admission is covered by the regulation on the organization and management of the admission contest in accordance with legal provisions and of the University Senate. The access to the studies in Veterinary Medicine specialization is conditioned by the finalization of all the previous compulsory courses (pre-university), high school and a baccalaureate diploma. The admission is organized based on the number of places subsidized from the national budget and on tuition-fee paying places. The Faculty proposes the number of enrolling students taking into account the facilities and staff numbers. The proposed number has to be approved by the University Senate. Finally the MERYS approves the proposals from the Faculties taking into account the actual veterinarian needs in the different regions of Romania. Usually the Ministry approves the numbers proposed by the Faculty. In 2009/10, the number of new students was 138, with 199 applicants. The average of the last 5 years was 131.6 (mean of 189.2 applying for admission).

The number of future admitted students is established in accordance with the human and material resources of the Faculty. The admission contest consists in analysis of the candidates portfolios, and it is based on the descending order of a general contest score mean values obtained by the candidates, within the number of available places. If the available places are not occupied, a second admission process is organized. The admission mean score is calculated by the media of the addition of mean baccalaureate score plus the mean score from every high school year. Also, if the tuition-fee paying places are not completely occupied, these places can be transferred to Government-funded places. Extra students are only admitted when regular students drop out, and following the same aforementioned criteria.
There is a high drop-out rate. Only 60% of first-time student entering the FVMFVMT are able to progress up to their third Academic year. The reasons for interrupting the studies include: failing in exams, failing to achieve the mandatory attendance rate of practical courses, incomplete practical training session, long term illness, maternity leave as well as financial reasons. Most students graduate in 6 years.

9.2 Comments

There is not an aptitude test to entry in the Veterinary Medicine course and, as a result, it is impossible to make a proper student selection.

The Faculty must be commended for making strong efforts to attract foreign students. Having a sufficient foreign student number in the future will enable to start a parallel curriculum in English. The courses in English are on the verge of being implemented; up to now there have not been sufficient applications from foreign students. In fact, the number of international students at the FVMT is very low.

9.3 Suggestions

- The Faculty should enrol a higher number of international students, through admission processes or through international mobility programmes

- Although respecting the admission number, the Faculty should have the possibility to establish its own admission criteria, such as aptitude test, or the type of subjects studied previously.

- The drop-out rate is high. The faculty should investigate ways to tackle this issue, by setting own academic selection criteria and also figuring out what are the reasons and how can students be helped to pass their exam and stay on track until the end of their studies. This could be done by providing more tutorial and advisory support to students (extra program), at least in the first and second year.

10 ACADEMIC & SUPPORT STAFF

Questions to be covered:

1) Ratio of teaching staff / students is? 1:9,58 – good.
2) Ratio of teaching staff to support staff is?1:0,64 – good.
3) How and by whom are all staff appointments and staffing levels decided? See text
4) Percentage of staff who are veterinarians? 90%. 100% for clinical teaching
5) Comment on staff ratios in relation to the SOP. See text
6) Comment on staff shortage or mis-proportion See text
7) Can staff move within the establishment? Not usually
8) Are posts which fall vacant automatically filled or must they be fought for? Currently, they are fought for and the Ministry has blocked the promotion processes.
9) Are certain staff able to be flexibly deployed i.e. for clinical services etc.? Yes
10) Does the establishment encourage staff to acquire additional skills and training? Yes
11) How free is the establishment to decide staffing levels and benefits? See text

10.1 Findings

The academic staff is competent to perform teaching activities in a Faculty of Veterinary Medicine.89% of academic staff is composed of veterinarians, and for clinical teaching the figure reaches 100%.80% of academic staff has a PhD in Veterinary Sciences. Only for certain disciplines such as Foreign Languages, Biomathematics, Chemistry or Sports the staff are from other University Departments.

The Departments of the Faculty have an approximate similar number of academic staff, although the type of practical sessions or the specific needs can be different according with the discipline, the year of study, the type of practical training or the differences between each academic year circumstances. The academic staff is divided into the following categories: Professor, Associate Professor, Lecturer and Assistant Professor.

Staff strictly respects a mandatory number of teaching hours (Professor: 11 hours/week plus 0.5 hours/week for each PhD student; Associate Professor: 13 hours/week; Lecturer: 15 hours/week; Assistant Professor: 15 hours/week). In the first courses (academic years) the number of students in the classroom can be high. Nevertheless most of them show a great determination in their work. The work atmosphere is friendly and the attitude for collaboration between them and also with external practitioners seems to be positive.

The support staff includes veterinarians specially employed for the monitoring and treatment of hospitalized animals. These activities are performed outside of clinical hours. Support staff from the clinic and laboratory animals' facility supplies the feed and water and also take care of hygiene of the premises. Support staff involved in the departments helps with teaching and research activities (only one full time person for researching purposes) and administration.

Both academic and support staff selection is based on theoretical skills, practical skills and research activities. The Departments and Faculty Council periodically analyse the teaching needs and defines new academic positions in accordance with the available budget. The applicants need to obtain the approval of the Faculty Quality Assurance Commission and of the Faculty Council. In the case of the Assistant Professor and the Lecturer categories, the Faculty Council establishes a Commission coordinated by the Head of the Department, which assess the professional skills of the candidate as well as the fulfilment of the legal requirements. For Associate Professor and Full Professor categories, it is a panel of specialists which carries out the evaluation. The University Senate must accept the candidate, and the National Council for Academic Recognition of Titles, Diplomas and Certificates must validate the decision. Currently, the Ministry has blocked the promotion processes because of the financial situation.

Sometimes the recruitment of personnel is difficult because the salary is low.

10.2 Comments

The academic staff is competent with their respective disciplines, 90% are veterinarians and for clinical teaching this figure is 100%. They show great determination in their work. However, the strict respect of the mandatory number of teaching hours force them to spend a huge amount of their time in theoretical teaching, which must be officially reported to and accepted from the Faculty Council, and then transmitted to the Central Government in Bucharest in order for each teacher to receive the monthly salary. This is thwarting faculty members' initiatives in many circumstances, as some of them are overloaded with teaching and still have to fulfil lecturing requirements even if they have completed all the topics of their course.

The distribution of the staff in the different departments has not necessarily to be in equal number. The different activities or circumstances should lead the Faculty to revise periodically departmental size and constitution. This consideration can also be held for specific knowledge fields or areas, as in Food Hygiene where there is not a full professor position.

The academic staff has the impression of a high load of work. The established load of work generally makes them feel that it is not possible to change the organization of the work load, as well as the interaction with students becomes more difficult.

The recruitment of personnel has the difficulty of the low salary, especially in support staff. This is a factor which also would influence aspects of personnel motivation. They often can feel promotion as unreachable because of financial reasons. Although the Romanian legislation permits to support and researching staff to conduct various professional activities as well as to attend continuing education courses, this is actually made impossible because of the high load of routine work and lack of time.

It is sometimes difficult to retain specialized personnel.

Ratio	Numerator/Denominator raw	1/Denominator	Established range of denominators	
R1	62,9/603	9,58	8.85-10.42	
R2	62,9/603	9,58	8.75/12.54	
R3	56/603	10,76	10.62-12.62	
R4	56/99	1,77	4.91-7.21	

R5	62,9/40,5	0,64	0.53-2.20	

All ratios are within the established range of denominators – except for R4 (no. total VS FTE in veterinary training/no. students graduating annually) .

10.3. Suggestions

Through the representatives in their respective institutions the Faculty should lobby administrations and political authorities, to:

- **Increase the salaries, especially for Assistant Professors, Lecturers, and very especially for support staff. That is the best way to motivate staff, recognize their work, and make it more attractive to recruit and retain competent staff.**

- **Be allowed to consider in the most flexible way the work load in order to achieve an efficient organization of the teaching activities and having the possibility of a better interaction with the students.**

11 CONTINUING EDUCATION

Questions to be covered:

1) Is Continuing Professional Education (CPE) in the objectives? Yes.
2) Is a CPE programme in place? Yes.
3) Who is the CPE programme aimed at (practitioners, state veterinarians, specialists, production animal/herd health veterinarians, small animal veterinarians)?Principally practitioners involved in production animals and herd health veterinarians.
4) How is the CPE structured? Mandatory CPE assessed by amassing points for attendance.

This can be divided into a CPD policy for staff and the CPD provision for private practitioners

Staff

There is a desire for staff to attend courses abroad, but money seems to be a limiting factor.

In reality, there is little planned further training for support staff / technicians for financial reasons.

Practitioners

In 2008, the Romanian Ministry of Education introduced an official annual VCE programme organised through the collection of certified credits.

Table 11.1 of the SER (p133) lists the courses organised by the faculty. The numbers of participants from 2008 onwards dramatically increased, reflecting the need of practitioners to attend mandatory CPD.

Staff of the school may participate in CPD courses organised by other providers. The Faculty introduced a x2 year programme in “Management of Animal health” but this has not been successful. (Zero applications this year). Is this because they have not really assessed what practitioners need. According to practitioners, there are a range of CPD providers.

Local small animal practitioners tended not to be attracted to CPD offered by the faculty. Alternative providers are the Romanian Small Animal Association, commercial companies or conferences organised in Serbia, Hungary or Vienna. This was said in part to be due to the subject matter on offer, but also the quality of staff in the small animal clinical field.

Suggestion

- The Faculty should survey practitioner requirements for CPD and assess the other providers in the market. The design of courses should be geared to providing for an identified need – and be charged for accordingly.

Food hygiene

The Food Hygiene staff have benefited from the Intensive Programme – Lifelong learning "Broadening of skills in food sanitary safety", coordinated by the AgroCampus Ouest Rennes (France) since 2008. Up to now, 7 PhD students and two teachers have actively participated. Also, the activity in this area (conferences organized by external organizations) has been positive, especially through the project "Modernization of Agricultural knowledge and information system" (MAKIS), financed by the World Bank

However, according to the SER (p. 133-135) few Courses of Short specialization has been organized in this area.

The Intensive course "Broadening of skills in food sanitary safety" has been successful up to now. This initiative could be complemented with short specialization courses at national level to transfer the expertise. Also, the project "Modernization of Agricultural knowledge and information system" (MAKIS), financed by the World Bank is a very good example of initiatives in the Continuing education for the Food Safety area.

Suggestions

- It would be useful to organize more short specialization courses in the Food Hygiene area, as such initiative may improve the contact as well as range and quality of services offered by the Faculty to the food specialist professionals.

12 POSTGRADUATE EDUCATION

1) Outline the types and structure of post graduate research training See text below
2) How many interns and residents are enrolled? None
3) Does a Masters or PhD programme exist and what structured training is given? Masters and PhD programmes exist
4) Are there minimum publication requirements for postgraduates? Masters: dissertation; PhD 3 scientific reports plus dissertation.

12.1 Findings

The FVMT conducts 4 forms of postgraduate research training: Postgraduate Master programme in "Hygiene and veterinary epidemiology" (2 years), Diploma course in "Animal health management" (2 years), Grants for young researchers (1-3 years), and Doctoral (PhD equivalent) courses (4 years).

The FVM does not run an intern or resident programme.

For the PhD programme, the PhD student has to pass 5 examinations in subjects related to their chosen field in the first year of study. The FVMT presented 22 PhD theses in 2009 and 21 in the period 2005-2008 (average 8.6 per year over the last 5 years). In 2010, there were 106 PhD students enrolled.

The minimum publication requirements for the Masters and Diploma programmes are a dissertation. For the PhD programme, the PhD student has to present 3 scientific reports in their 2nd and 3rd year and write a PhD thesis by the end of the 4th year.

12.2 Comments

The Masters postgraduate studies are to be stopped in 2011 (SER p. 148) with the veterinary course to adopt the form of a degree and a Masters in line with EU recommendations.

Romanian legislation does not recognize intern or resident programmes in veterinary schools (SER p. 141). The Faculty is strongly urged to press for changing this situation. The participation of FVMT graduates in European diplomat programmes for veterinary specialisation would strengthen and add to the internationalisation of disciplines within the FVMT.

Presently there are no minimum requirements in respect to publishing in international journals within the Doctorate (PhD) programs offered by the Faculty. The Faculty might consider changing this situation by requesting at least one paper.

Suggestions

- The FVM should encourage graduates to participate in European diplomat programmes for veterinary specialisation. Young faculty members or PhD students should be stimulated and helped to go abroad, to participate in a residency program in a European University under the provision that their return to the Faculty is in Timisoara is guaranteed at the end of the residency. For most European College Diplomas, it is sufficient that 2 years of full-time work under close supervision of a Diplomat are enough, is followed by a third year of distant supervision (the resident could go back home and keep in contact with the supervisor). Following this 3-year program, the candidate is allowed to take the diplomat examination. The Faculty should have a long-term vision and start investing on in the development of a hard core of European College Specialists at least in the most important disciplines such as Internal Medicine, Surgery, Diagnostic Imaging, Pathology and Anesthesia. This would make the Faculty of Timisoara a leader in Romania and an important reference point among national and international veterinary practitioners

- The Faculty should seriously consider changing the minimum requirements in terms of publishing in international journals within the Doctorate (PhD) programs by requesting that at least one paper be published in an international journal be included in a doctoral thesis.

13 RESEARCH

Questions to be covered:

1) Briefly outline the research commitment and concepts See text
2) Is there sufficient use of existing research to introduce undergraduates to the concepts? Yes
3) Is the research effort cohesive or fragmented? See text
4) Is there a clear research strategy within the establishment? Yes

13.1 Findings

The FVMT has an operational plan revised annually which include researching activities. Also, the Strategic Plan deals with the research lines for the following four years.

Research activity is closely related to the didactic activity. For this reason, it is organized through the Departments. Also, the Research Centre for Animals Hygiene and Pathology, the Institute of Comparative Medicine – Timis branch, and the Platform of Ecological Agriculture and Food Safety are facilities used for these purposes.

Taking into account these facts two types of research activities for students can be identified: Research activities for the writing and presentation of the Thesis and Research within the teams that work on research grants. According to current Romanian legislation to obtain a DVM degree it is compulsory to complete and submit a Thesis in all veterinary faculties. Moreover, in the FVM from Timisoara the diploma exam is organized according to the Faculty's own Internal Regulations, which establishes mandatory research activities leading to the completion of the Thesis, the criteria for student allocation and various research areas and rules for writing the Thesis. The choice of Thesis supervisor is decided at the fourth year and monitored by the student's tutor. All the teachers that

teach courses and/or have a PhD can be supervisors for students. The assistants and also the PhD students are involved in this activity and help students in their thesis research acting as co-supervisors. Each tutor can supervise 2-4 theses. Until the end of the second semester of the fifth year, a student can change the supervising tutor. In the last semester of the sixth year two weeks are allotted to the completion of the Thesis. That means eight hours a day of activity for two weeks (80 hours). So, at least 332 hours are allotted to the Thesis.

The students can also participate in researching activities of teams who have been awarded research grants and external projects, depending of the student's interest. This participation is estimated by the Faculty to be around 30%.

In researching labours, the interdisciplinary activities and collaboration with teams of other Faculties appears to be a positive aspect.

The investment already carried on from the Impact Project – POSCCE – DICES RO05 has an evident impact in the equipment and facilities involved. Most of the most modernized equipment are purchased thanks to this Project. The perspectives of the remaining tasks are promising.

13.2 Comments

The students have the opportunity to get some experience in research works, mainly through the Thesis which they have to do to obtain their degree. It is estimated that 332 hours are devoted to this task.

Most of the staff is involved in these research activities.

The Impact Project – POSCCE – DICES RO05 have proven to be a remarkable support to achieve the state-of-the-art facilities and equipment completion in several areas.

The Ecological Agriculture and Food Safety Platform has the national approval and is a very good opportunity for performing high level research activities.

13.3 Suggestions

- It is important to encourage the students to get involved in research activities, in order to give them the opportunity to participate in projects, handle equipments and be a future guarantee of sustainable efficiency of the resources obtained.

EXECUTIVE SUMMARY

Based upon the Self Evaluation Report and the very open discussions held with faculty, administrators, students and alumni at the FVMT a number of very positive aspects emerged. The SER as well as the site visit was very professionally arranged and performed according to the usual high standards of the evaluation system.

The team was well received with great professionalism and hospitality and we enjoyed a week with enthusiastic and dedicated colleagues and students.

The one most important, general suggestion that the team would put forward to the FVMT would be to increase considerably the international connections and cooperation e.g. by introducing an international advisory board at the faculty level helping prioritizing and planning future investment, research activities, and commercialisation of services.

However, the team identified some problematic issues some of which may warrant a Category I deficiency.

Amongst the most relevant issues, the Visiting Team would highlight the following points:

1. The excellent standing of the Faculty in the region of Timis with special emphasis on cattle and horses and a sufficient case load.

2. The friendly atmosphere that is clearly evident in the establishment, mirroring the good relationship between the students and the teaching and support staff.

3. The physical facilities, some of which are modern, pleasant and functional and which offer a useful environment for students to study.

4. The teaching and support staff appears to be very motivated and the students appeared to be genuinely enthusiastic.

5. A well organized curriculum.

Nevertheless there are some defects that, in the opinion of the visiting team, *must* be corrected and the following main items are highlighted and suggested as cat. 1 deficiencies which were confirmed by ECOVE as follows:

1. There is an insufficient number of large animal necropsies ; a large and newly built room is laid out for necropsies, but relevant equipment and facilities for large animal necropsies such as electric saws, cooling rooms, cranes, adequate tables, arrangements to dispose of large animal cadavers and biosecurity measures were not in place

2. There is an insufficient number of cadavers for dissection performed by students

3. The isolation facilities for large animals were not suitable for the purpose with broken windows, a makeshift door, open gutters in the middle of the large room, no washing or disinfection facilities, and no biosecurity measures

4. The flooring of the large animal clinic was not adequate (holes, slippery when wet).

5. The amount of modern, clinical equipment including state of the art X-ray equipment was low.

6. No registered survey and vaccination (e.g. against rabies) and control of tattoo marks or chips of the numerous stray dogs in the university campus was in place, rendering an unacceptable risk of spreading rabies to other animals including farm animals as the stray dogs followed students and staff into the stables.

7. In general biosecurity measures were not strict or adhered to (students supposed to buy their own rubber gloves, students or staff not wearing washable foot wear on the farm premises, parasitological examination of intestinal contents performed on the floor, dissection performed in a room with fresh plants at the window sills and no possibility of hosing it down after use, the same inadequate procedure being performed by students doing pathology on single organs in a room that could not be hosed down)

8. The teaching in herd health medicine was uncoordinated and not living up to modern standards and did not take advantage of the animals at the 2 university farms.

Status of the faculty: NOT APPROVED

Annex 1 Indicators

Ratio	Numerator/Denominator raw	1/Denominator	Established range of denominators	Notes
R1	62,9/603	9,58	8.85-10.42	
R2	62,9/603	9,58	8.75/12.54	
R3	56/603	10,76	10.62-12.62	
R4	56/99	1,77	4.91-7.21	Significantly outside range
R5	62,9/40,5	0,64	0.53-2.20	
R6	6071/2471	0,40	0.51-0.36	
R7	854/1467	1,71	1.88-2.21	Below range
R8	4044/7109	1,76	0.51-7.87	
R9	276/4946	17,92	Still open	
R10	276/420	1,52	Still open	
R11	94/121	1,29	2.47-1.73	Outside range
R12	94/1779	18,93	0.51-7.87	Significantly outside range
R13	94/9	0,09	0.20-0.09	
R14	94/73	0,78	1.78-0.92	Outside range
R15	94/27	0,29	0.58-0.37	Outside range
R16	94/2800	29,79	48.74-37.94	Outside range
R17	94/3	0,03		
R18	94/185	1,97	0.75-0.46	Significantly outside range
R19	94/511	5,44	0.26-0.12	Significantly outside range
R20	94/86	0,91	1.26-0.89	

Annex 2 Student`s Report

The student's findings have been discussed fully by the team and they are incorporated in the full report.