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HELLENIC REPUBLIC
H.Q.A.
 HELLENIC QUALITY ASSURANCE
 AND ACCREDITATION AGENCY

EXTERNAL EVALUATION REPORT

1.1 Department of Animal Production

1.2 Technological Educational Institute of Larissa

March 2012



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External Evaluation Committee

The Committee, responsible for the External Evaluation of the Department of Animal Production of the Technological Educational Institute of Larissa, consisted of the following Four (4) expert evaluators drawn from the Registry constituted by the HQAA in accordance with Law 3374/2005:

1. Dr. John Sofos (Coordinator)
University Distinguished Professor, Colorado State University, Fort Collins,
Colorado, USA
2. Dr. Andreas P. Mavrogenis
Agricultural Research Institute, Nicosia, Cyprus
3. Dr. Constantin Vamvakas
Professor, Faculty of Bioscience Engineering, University of Ghent, Belgium
4. Dr. Vladimiros Christodoulou
NAGREF Animal Research Institute, Greece

N.B. The structure of the “Template” proposed for the External Evaluation Report mirrors the requirements of Law 3374/2005 and corresponds overall to the structure of the Internal Evaluation Report submitted by the Department.

The length of text in each box is free. Questions included in each box are not exclusive nor should they always be answered separately; they are meant to provide a general outline of matters that should be addressed by the Committee when formulating its comments.

Introduction

I. The External Evaluation Procedure

- **Dates and brief account of the site visit.**
- **Whom did the Committee meet?**
- **List of Reports, documents, other data examined by the Committee.**
- **Groups of teaching and administrative staff and students interviewed**
- **Facilities visited by the External Evaluation Committee.**

The External Evaluation Committee (EEC) visited the Department on March 19 through 21 of 2012. Upon arrival at the site the EEC was received by the members of the Internal Evaluation Committee (IEC), Dr. Anastasia Kambamanoli-Dimou (Head of the Department), Dr. Panagiotis Goulas, Dr. Georgios Rigas, Dr. Demetrios Kantas and Dr. Christos Makrides.

The following day, the EEC met with the above listed as well as the following members of the permanent academic staff: Dr. Constantinos Zoulfos, Dr. Anargyros Moulas, Dr. Vasiliki Spyrou, Mr. Georgios Michael (MSc), Mr. Theodoros Koukoulas, Mr. Zisis Sarlikiotis (MSc), Mr. Pavlos Tzimas (MSc), Mrs. Zoi Mbakasi and Mrs. Georgia Tsafouli (Dr. Deligiannis met with the committee on the next day). In addition, the EEC met with the four members of the Technical Staff and the member of the Administrative Staff of the Department.

The Internal Evaluation Committee presented the outcomes of the internal evaluation focusing on some of the particular features of the Department. A member from the office for employment and career development presented an overview of their activities. Dr Ipsilantis, President of MODIP of the TEI of Larissa, met with the EEC on the last day of the visit.

The EEC members were provided with several reports and other documents including the Internal Evaluation Report (IER), the Study Guidebook of the Department, statistical data, and various documents related to the operations of the Department in printed and electronic form.

The Head and members of the Internal Evaluation Committee of the Department presented overviews of the undergraduate and graduate programs of studies, research activities, student training, and international collaboration. Particular attention was given to the criteria for admission, which in many cases allow admission of not fully or properly qualified students into the Department. Another concern was the low number of students actively participating in the educational process compared to the very large number of students registered. It was also noted and supported by the data that the change in requirements for admission into institutions of higher education, which included the elimination of the required minimum grade of 10 for entrance, resulted in the admission of very high numbers of students with a large proportion of unqualified ones. In contrast, when

the minimum grade of 10 for entrance was in effect, the number of students admitted was lower and they were better qualified to attend classes. Almost unanimously the staff prefers admission to be based on the minimum grade of 10, with a parallel rationalization of the number of admitted students on Pan-Hellenic level, so that the number and qualifications of entering students are controlled.

The Institute has adequate library, housing, sport, and dining on campus facilities. However, housing units are available for only approximately 800 students for a total population of 20,000 students. The Institute's library is stocked with 50,000 volumes. Internet facilities are adequate and every student has access to the literature and administrative requests through password. The staff indicated that their lecture and laboratory teaching rooms are adequate in number, size and instrumentation. They take pride that training of their students involves hands-on exercises in the livestock facilities. However, these facilities need to be expanded and modernized. The EEC visited the indoor and outdoor teaching and laboratory facilities.

The EEC met also with 42 students in the absence of faculty members. A high proportion of the students had technological studies as their first choice when competing to enter higher education programs, and came from families practicing agriculture. The views expressed by students confirmed the relevance of the curriculum in meeting their needs. They indicated their real interest and concerns about the value and quality of their education. The presence of livestock facilities on campus allows for practical training involving handling, preventive care, and treatment of live animals. The students prefer that time in laboratory training and especially training involving animal handling should be increased. They stressed the necessity for daylong training visits to livestock and related enterprises.

The EEC met with 14 graduates of the Department. According to one of the graduates who represented their association, a high percentage of registered graduates (53 out of 81) is actively engaged in livestock or livestock-related jobs. This is of course a sample and may not be representative. The general consensus was that the current system of student admission into TEI needs improvement. There was also general agreement that major changes also need to be made in high school education as well. The graduates also stressed the need for upgrading of the farm and farm equipment and facilities. Laboratory training should be carried out in smaller groups. According to comments from graduates, the more recent graduates of the department are better equipped than older ones, indicating an improvement in the quality of education provided by the Department in recent years.

The EEC met with hourly teaching non-permanent staff, visited classrooms, the computer science laboratory, laboratories for milk analysis and processing, chemistry, biochemistry, reproductive physiology, microbiology, anatomy and physiology, meat processing, pasture and grassland plants, and animal nutrition. Most laboratories were adequately equipped with mostly new and specialized instruments. The EEC visited also the facilities for stray dog rehabilitation operated by the Municipality of Larissa, which are housed on Institute property adjacent to Campus.

The Internal Evaluation Procedure

- **Appropriateness of sources and documentation used**
- **Quality and completeness of evidence reviewed and provided**
- **To what extent have the objectives of the internal evaluation process been met by the Department?**

The EEC concluded that the time allocated to the visit of the Department was not sufficient, despite the willingness of the staff and the students to cooperate. Two full days are considered a minimum. The detailed materials provided were useful and complete, which facilitated the work of the EEC. The Department, as evidenced, met the objectives of the internal evaluation process by the presentations, and the original and supplemental documentation, which was updated up to 2011. The strengths and weaknesses of the Department were identified in order to develop a plan to overcome problems and define the future goals and aspirations of the Department. It was evident that the external evaluation of the Department was not only anticipated but also actively sought by the Department.

A. Curriculum

APPROACH

- **What are the goals and objectives of the Curriculum? What is the plan for achieving them?**

The Department offers an undergraduate program. In addition, it offers a postgraduate program in cooperation with the Universities of Bari and Perugia, Italy. As stated in the Internal Evaluation Report, “The goals of the Department of Animal Production are to produce graduates able to improve productivity and quality in agricultural livestock and other animals through the application of modern technologies and scientific methods, etc. The Department provides students with the necessary knowledge that ensures the proper education/training for their scientific and professional careers and development”.

More specifically the goals of the Department are to:

- Implement novel scientific and technological methods in Animal Production.
- Apply methods for the hygienic and safe production of animals and their products.
- Implement novel technological and scientific methods to improve productivity and yield from farm units.
- Follow the international advances in the scientific and technological areas of the subject.
- Establish academic and educational collaboration with regional, national and international universities funded through national, European and international grants.
- Organize and participate in regional, national and international conferences.

The aim of the Department is to deliver highly trained professionals for all areas of animal production, including marketing and processing, with the ultimate goal to make animal farms and relevant industries more competitive and profitable in developing products that combine quality and safety. The curriculum of the Department covers the subject of Animal Science and associated fields with emphasis on the application of modern technological methods in animal housing, farming, nutrition, breeding, reproduction, and health protection of farm animals, within the context of animal welfare. Moreover, it addresses the methods of production, processing and standardization of animals and animal products of protected designation of origin. An example is the successful efforts in establishing as products of protected designation of origin the “baby lamb Ellassona” and the “kid goat of Ellassona”.

- **How were the objectives decided? Which factors were taken into account? Were they set against appropriate standards? Did the unit consult other stakeholders?**
- **Is the curriculum consistent with the objectives of the Curriculum and the requirements of the society?**
- **How was the curriculum decided? Were all constituents of the Department, including students and other stakeholders, consulted?**

The curriculum was implemented following its revision and approval by the General Assembly in 2002 and corresponds to the international standards of Animal Production/Husbandry. In 2006, a partial revision of the curriculum was introduced. It is not clear whether other stakeholders were consulted, but the content of the curriculum corresponds to those of similar Departments. The duration of studies is eight semesters with the last semester being used for the completion of the six-month practical exercise and the submission of diploma thesis.

- **Has the unit set a procedure for the revision of the curriculum?**

The formal procedure for the revision of the curriculum is based on number 46350/E5/2006 Decision of the Ministry of Education. An unsuccessful attempt was made to rename the Department and change the curriculum to include veterinary nursing. After the attempt, the Department proceeded with the revision of the curriculum (based on the procedures described in the above mentioned decision) which was approved by all necessary parties in the beginning of 2011 and is applied to the students admitted for the academic year 2011-2012.

IMPLEMENTATION

- **How effectively is the Department's goal implemented by the curriculum?**

Based on the number and variety of courses described in the program of studies the curriculum covers the goals and objectives of the Department. As indicated by academic staff and students, the recent reduction in laboratory teaching hours established by law is undesirable. The time devoted to laboratory teaching should not only be restored to the previous level but also increased as desired by students and graduates. The recent reduction in non-permanent teaching staff and other staff position vacancies should be addressed, as financial conditions allow.

The system of admission to institutions of higher education does not reflect the actual needs of the individual educational institutions. As a result, the number of students admitted fluctuates tremendously from year to year, with either much higher or lower numbers of students being admitted, than the actual capacity of the institution.

- **How does the curriculum compare with appropriate, universally accepted standards for the specific area of study?**

The curriculum is similar to that in corresponding departments in other institutions. The curriculum is composed of five groups of course work: (i) the general foundation, which

contains 9 courses for 34 ECTS, (ii) the specialized foundation section, offering 15 courses for 80,5 ECTS, (iii) specialization in the major, requiring 12 courses for 81 ECTS; of these 2 courses are required electives selected from 5 offered, (iv) a total of 4 courses for 14,5 ECTS, in business administration, agricultural legislation and economics, and humanities, and (v) 6 free electives selected from a total of 14 courses (including 30 ECTS for practical training and diploma thesis). The duration of the studies is 4 years (8 semesters) with 15 weeks per semester. The requirements for the degree are 240 credit units (ECTS).

- **Is the structure of the curriculum rational and clearly articulated?**

The current ratio between theoretical teaching and laboratory practice is 48:52. The practical training lasts 6 months and is offered in the last (8th) semester provided that the student has successfully completed 2/3 of the course work including all courses of specialty or 4/5 of the total number of teaching hours. Certain overlapping occurs in courses of the specialized foundation section, which is inevitable but requires some consideration.

- **Is the curriculum coherent and functional?**

The curriculum is considered coherent and functional, as evidenced by the high degree of relevance among laboratory, practical training and theory. Students indicated that they consider effective the implementation of theoretical and practical training. As previously stated, practical training is preferred by students and is characterised as very effective.

- **Is the material for each course appropriate and the time offered sufficient?**

The students consider the course material adequate and appropriate. However, it is generally believed (academic staff and student body) that the Pan-Hellenic entrance examinations are not suitable for all institutions, resulting in the admission of students with no appropriate background in subjects, such as chemistry, directly related and required by the Department. They suggest that admitted students should have a better background of science subjects (2nd and 3rd science field).

- **Does the Department have the necessary resources and appropriately qualified and trained staff to implement the curriculum?**

The Department operates at the low limit of human resources. The permanent academic staff is well qualified. The permanent faculty cannot cover all the teaching requirements and claim to be overloaded with administrative duties. Therefore, there is a marked dependence on external, part-time non-permanent teaching staff. As indicated in the IER not all part-time teaching staff is adequately qualified. The four technicians are well qualified and enthusiastic with their work.

The infrastructure and equipment are adequate. The library, as mentioned above, is well equipped with teaching and research material relevant to the subjects of the Department in a pleasant environment. The students have free access to electronic literature and course material.

RESULTS

- **How well is the implementation achieving the Department's predefined goals and objectives?**
- **If not, why is it so? How is this problem dealt with?**

As indicated, according to a former student affiliated with the Association of Departmental graduates, a high percentage of registered graduated former students (53 out of 81) are actively engaged in livestock or livestock-related employment. About 18% of the graduates follow postgraduate studies (according to the IER).

Based on findings of a Departmental investigation, the staff perception, and as determined by the EEC from its meetings with alumni and industry representatives, employment opportunities for those that actually graduate indicate that implementation of the program achieves the aims of the curriculum to a high degree.

Based on data provided by the Department, only 24,61% of the students enrolled complete their studies within $n+4$ ($4+4=8$) years. The EEC considers this ratio as highly unacceptable for the Greek economy, especially since a similar picture exists in many Departments of institutions of higher education. Also, these statistics are not necessarily due to shortcomings of specific Departments or faculty but inherent to structural limitations in the Greek system of education, career planning and economic development.

The average time to graduation, although difficult to calculate, for most students is unacceptably long; a significant number of admitted students never graduates. For example in 2002-03, 321 students were admitted, but by the end of 2011 only 70 of them had graduated. In the year 2003-04, 289 were admitted of which only 43 graduated. In the year 2006-07, 35 (the low number of admissions is due to the minimum required grade of 10 for admission) were admitted of which 2 graduated by the end of 2011.

The average graduation grade, based on the 2008-11 data presented by the Department, was 6,17. The EEC considers this average as low for students aspiring to compete at the European level or be able to enter graduate school. It is recognized, however, that some of the reasons for such low grades are associated, not only with this or other Departments and their personnel, but also with lack of adequate student efforts, and other issues associated with the educational system. The long time needed for graduation may reflect partly the current system of admissions, which requires changes. It is stressed that additional departments and institutions in Greece share such highly undesirable statistics. It is expected that the new law for education will shorten this period, provided that it is properly implemented.

- **Does the Department understand why and how it achieved or failed to achieve these results?**

It is not easy to determine the share of responsibility by the Department for the above undesirable results because the EEC considers the student entrance system into higher education institutions and the legal framework of higher education as the most important contributors towards these results. When student entrance requirements are improved, and adequately qualified and interested students are admitted and follow a framework that does not allow for "perennial students", the departments and Institutions should be held more

accountable for such results. Our visit and discussions demonstrated the willingness and efforts of Department staff to improve these results.

A major cause for the extension of studies or complete failure to graduate is the admission to the institution of students for whom this orientation was not their first choice. The number of students admitted each year should be fixed, and should reflect the actual capacity of the Department and the needs of the Greek economy. In addition, entering students should be better prepared to attend the curriculum offered.

IMPROVEMENT

- **Does the Department know how the Curriculum should be improved?**

The Department has developed a new curriculum which has been accepted by the relevant bodies and it is implemented for the students admitted for the academic year 2011-2012. These developments were not present in the IER but are included in the annual report for the academic year 2010-11.

- **Which improvements does the Department plan to introduce?**

The Department has every intention to implement plans that assure the success of the curriculum that was stated above.

B. Teaching

APPROACH

- **Does the Department have a defined pedagogic policy with regard to teaching approach and methodology?**

Teaching methods used

Teaching methods used include lectures and exercises in laboratory settings for the application of theoretical knowledge. Power point and slide presentations are some forms of teaching aids. The study program consists of lectures (48%) and practical exercises (52%). In addition to the seven teaching semesters, there is one semester of practical training in the animal industry, and completion of a diploma thesis. Attendance in lectures is very poor as a result of being optional for the students. Many students, acknowledging the usefulness of attendance to the lectures, stated that they would consider the matter in case compulsory attendance was established as a component in determining the course grade.

Teaching staff/ student ratio

According to data provided by the Department for the year 2010-11, the ratio of permanent academic staff (16) to total registered students is 1:74 and the ratio of total teaching staff (permanent + temporary = 27) to active students is 1:17. Based on the capacity of the laboratories and the current teacher/student ratio, human resources seem adequate.

Teacher/student collaboration

According to the supplemental material provided to the EEC by the Department, the total number of permanent faculty members for the years 2006-07, 2007-08, 2008-09, 2009-10 and 2010-11 were 16, 16, 17, 16 and 16, respectively. The corresponding numbers of admitted students were 34, 38, 38, 25 and 220 (this year the required base grade of 10 was eliminated). Hence, for the year 2010-11 the teacher to student ratio is 1:17 taking into account the number of permanent staff (16) and non-permanent staff (equivalent to 11 full time members), and the active student population (473) without considering the technical staff (4 permanent employees). The students appear to be satisfied with their collaboration with the faculty who make themselves available for consultations outside scheduled times. The students would welcome a formal advising system with assigned advisors from the beginning of their studies. This concept has been proposed by the Department in its IER, and should be applied to all departments and Institutions in the future.

Adequacy of means and resources

According to the IER and discussions of the EEC with Department personnel and students, the existing lecture rooms and laboratories are adequate and properly equipped. Additional laboratory space is expected in the premises of the new building of the School of Agriculture currently under construction. The animal facilities, which are prized and considered necessary by students and staff, need expansion, updating and upgrading, which is under consideration. On campus student housing is limited, considering the number of students attending the Institute. Housing is available in the city of Larissa but the students consider the cost of transportation high. Potential solutions should be considered. The facilities of the library and the pertinent literature are adequate for the needs of the students.

Books and other teaching materials are considered adequate. The students expressed satisfaction with the availability of books and other teaching materials through the EUDOXUS program. The central library of the Institute, with 50,000 volumes and electronic access to international literature, is considered satisfactory by faculty and students.

Use of information technologies

Most of the lectures are presented using multimedia educational technologies, primarily power-point. Access to materials is also available through the internet. Educational multimedia technologies are systematically used in the laboratories, including video presentations. Lectures and audio-visual material presented in lecture rooms and laboratories, when applicable, are also demonstrated in the animal facilities.

Examination system

The examination system of the Department consists of a mid-term examination (40% of the final grade) based on tests and/or take home assignments, and the final examination (60% of the final grade) based on essay or other types of questions. The exact type of examination depends on the nature of the course. The essay type is frequent for lecture material, although other forms, such as true/false and multiple-choice examinations are also used.

Participation in laboratory sessions and field practice constitute an important part of the overall grade. All examinations are proctored. It is required that the evaluation procedure and schedule are communicated to all students at the beginning of the course, and all students are evaluated in the same way.

The proportion of students participating in examinations is low, ranging from 25,5 % of registered students to 47,5% of active students. The grades achieved by students are low, the average being approximately 6,5.

IMPLEMENTATION

- **Quality of teaching procedures**

The teaching methods utilized by the faculty are consistent with those used in other academic and technological institutions. Multimedia, chalkboard, intranet, laboratory and fieldwork are some of the means available for teaching. The EEC believes that faculty members utilize appropriately all means available for teaching.

- **Quality and adequacy of teaching materials and resources.**

As indicated by the students, the EEC believes that the teaching material is adequate. In general, books, instructor notes and other teaching material are considered adequate. The Department was successful in including in EUDOXUS a number of teaching aids (notes, text books, CD's, etc.) making available to the students optional and supplementary sources of educational material. The library is adequate and appropriate for the needs of students; however, more consistent and timely funding would increase access to electronic journals and other resources. The livestock facilities, although requiring upgrading, are presently significant for student training.

- **Quality of course material. Is it brought up to date?**

The quality of course material is adequate and consistent with that of other corresponding Institutions.

- **Linking of research with teaching**

Since research is not a major activity of the Department, student involvement in research is limited. Students are introduced to research through bibliographic searches during their thesis preparation. The involvement of students in field research is limited. Sometimes their thesis activities include experimental work.

- **Mobility of academic staff and students**

Mobility of students and staff is limited to activities associated with postgraduate studies in cooperation with the Universities of Bari and Perugia. The EEC believes that the Department would benefit from stronger participation in mobility programs. For example, they may consider participation in programs such as ERASMUS.

- **Evaluation by the students of (a) the teaching and (b) the course content and study material/resources.**

The students have evaluated teachers' performance and course quality for the last 4 years (2007-2011) using a score scale of 0 to 5. Questionnaires were distributed and completed by approximately 350 students in 2007-08, 2008-09 and 2009-10.

RESULTS

- **Efficacy of teaching**

The evaluation scores by students revealed that the mean quality score for all courses was 3,26, 3,50 and 3,50 for the years 2007-08, 2008-09 and 2009-10, respectively. The corresponding average evaluation score for instructors was 3,74, 3,76 and 3,63. The mean score in 2009-10 was equal to or over 4,5 for one course and less or equal to 3 for two. For instructors corresponding course numbers were 1 and 2, and 2 and 7. Average evaluation scores for laboratory training were 3,45 to 3,50 for 2007 to 2010. Self-evaluation by students for their interest and participation in teaching activities ranged between 3,4 and 3,49, for the same period.

According to the Department, the evaluation data are filed by academic year, the teaching staff is informed electronically, and the results are discussed in the general assembly. The EEC feels that this evaluation system can help to improve teaching approaches and promote the use of innovative and more efficient teaching techniques, if the results are further analyzed and appropriate conclusions are drawn.

According to the Department, strengths (average scores 3,61 to 3,64) of the teaching program include: course goals are clear, material taught covers the subject, books and notes and additional bibliography is provided timely, and good organization of material taught. Weaknesses (average scores 3,2 to 3,4) include, quality of laboratory exercises, usefulness of laboratory exercises, usefulness of prerequisite courses, and usefulness and correlation with material from other courses.

- **Discrepancies in the success/failure percentage between courses and how they are justified**

Discussions of the EEC with faculty revealed that most of the students entering the Department are weak in subjects closely associated with the biological nature of the Department; mathematics, chemistry and physics are subjects that cause relatively high rates of failure early in studies. There is a strong belief (IER), which is shared by the EEC that these deficiencies result from the inherent deficiencies of the system of pan-Hellenic examinations. The Department as well as the EEC strongly suggest that subjects, such as chemistry, should be included in the entrance examinations for students interested in agricultural and geotechnical studies.

- **Differences between students in (a) the time to graduation, and (b) final degree grades**

The average time to graduation is very long and the graduation grade low (6.17). According to the IER, the proportion of students who do not complete their studies within n+4 (8) years is 24,6%. In the opinion of the EEC the mediocre graduation rate and graduation grades reflect

weaknesses in the overall educational system of the country and procedures for student admission.

- **Whether the Department understands the reasons of such positive or negative results?**

The Department recognizes that the trends are common to other Departments and are related to the elimination of the minimum threshold of grade 10 for admission to higher educational institutions, along with entrance of students with poor background in science and with no background in mathematics and chemistry.

The data collected through course and teacher evaluation should be utilized for future improvements.

IMPROVEMENT

- **Does the Department propose methods and ways for improvement?**

The Department indicated the need for completion of new buildings to house livestock, which play a major role in student training. Students also indicated the need for better livestock facilities.

The EEC suggests that the Department should consider the incorporation of additional appropriate courses to increase qualifications of their graduates.

The academic staff and student body believe that change of policy to compulsory attendance of lectures could result in higher rates of student success. The IER points to a reasonable number of freshmen every year (50) which, in the opinion of the EEC, appears to be realistic.

- **What initiatives does it take in this direction?**

The Department has submitted plans for the relocation and building of new teaching animal facilities.

C. Research

APPROACH

- **What is the Department's policy and main objective in research?**

As the Department operates within a technological educational institution, research is not one of its main activities.

- **Has the Department set internal standards for assessing research?**

There are presently no internal standards for assessing research.

IMPLEMENTATION

- **How does the Department promote and support research?**

As indicated, research is not a main objective of TEI even though research is a component considered for promotions and of evaluations such as this.

Results from research have been successfully transferred to the animal food and feed industry as well as stakeholders.

- **Quality and adequacy of research infrastructure and support.**

For the most part research is accomplished through existing teaching infrastructure.

- **Scientific publications.**

The Department staff has published, in the period 2006 to 2011, 18 refereed journal papers, 13 refereed presentations in international conferences, 56 refereed presentations in national meetings, and 20 other publications. In addition, two patents have been assigned to the Department.

- **Research projects.**

For the period 2002-2011, members of the Department have participated in 30 research programs for a total of approximately 642.000 Euros from private, national and international sources.

- **Research collaborations.**

Members of the Department have collaborated with other institutes in two programs totaling approximately 1.300.000 Euros.

RESULTS

- **How successfully were the Department's research objectives implemented?**

As the Department operates within a technological educational institution, research is not one of its main activities.

- **Scientific publications**

Given the limited available research facilities and the amount of time devoted to teaching and administrative tasks, the publication levels of the faculty members are satisfactory.

- **Research projects**

For the period 2002-2011, members of the Department have participated in 30 research programs for a total of approximately 642.000 Euros from private, national and

international sources.

- **Research collaborations**

The Department has collaborated with other institutes in two programs totaling approximately 1.300.000 Euros.

- **Efficacy of research work. Applied results. Patents etc.**

In addition to what was stated above, it should be noted that a major effort has led to two patents and the establishment as products of protected designation of origin the “baby lamb Ellassona” and the “kid goat of Ellassona”.

- **Is the Department’s research acknowledged and visible outside the Department? Rewards and awards**

The Department won the first prize from the Centre of Entrepreneurial and Technological Development (KETA) of Thessaly.

Obviously the establishment, as products of protected designation of origin of the “baby lamb Ellassona” and the “kid goat of Ellassona”, is an internationally recognized accomplishment.

IMPROVEMENT

- **Improvements in research proposed by the Department, if necessary**

Faculty should be commended for present research accomplishments and be encouraged to increase research activities for the benefit of the Department and their students.

- **Initiatives in this direction undertaken by the Department**

The EEC recommends the development of a clear research strategy that enhances animal production at the local and national level and contributes to student training. The EEC believes that the Department recognizes the necessity of direct involvement of the primary industry in solving real life problems and maintains a positive attitude towards this matter.

D. All Other Services

APPROACH

- **How does the Department view the various services provided to the members of the academic community (teaching staff, students)**

According to Department staff and the student body, services, such as administration, Information Technology and Library are adequate. Livestock units need enlargement and improvements. The Library, in addition to its primary function as a book lending service,

provides online access to data bases, e-books, and scientific journals.

- **Does the Department have a policy to simplify administrative procedures? Are most procedures processed electronically?**

The secretarial staff has made significant progress in this direction and the use of TEI-online has provided streamlining for administrative procedures. Most procedures exist in electronic form, including applications, certifications needed by students, submission of grades, etc.

- **Does the Department have a policy to increase student presence on campus?**

The limited number of dormitories and cost of transportation impede the student presence on campus.

IMPLEMENTATION

- **Organization and infrastructure of the Department's administration (e.g. secretariat of the Department)**

The Department's administration consists of one member within the Department while the second staff member has been transferred to the main administration office.

- **Form and function of academic services and infrastructure for students (e.g. library, PCs and free internet access, student counseling, athletic- cultural activity etc.)**

Students and faculty presented all the above services as adequate. There are athletic facilities on campus, such as gym, tennis and basketball courts and football field.

RESULTS

- **Are administrative and other services adequate and functional?**

The secretarial support staff is competent and helpful. The collaboration between administration and faculty is excellent, providing high-level support to the faculty.

- **How does the Department view the particular results?**

Not applicable.

IMPROVEMENTS

- **Has the Department identified ways and methods to improve the services provided?**

The Department has identified the need for upgrading and improvement of livestock facilities. The students identified the need for a ramp and lifts to allow access of the handicapped people to the Department building and elsewhere if needed. This has also been

recognized in the IER.

- **Initiatives undertaken in this direction**

The Department has submitted plans for the relocation and building of new livestock teaching facilities. These improvements may also enhance the capacity of the Department to successfully participate in competitive calls for research proposals.

Collaboration with social, cultural and production organizations

Please, comment on quality, originality and significance of the Department's initiatives

The collaboration with local and regional, public and private bodies through a series of studies, seminars and conferences were instrumental in improving the economy of the region in terms of animal production and animal products. As a result of cooperation between the Department and the community a stray dog rehabilitation facility is operated by the Municipality of Larissa, but is housed on Institute property adjacent to the Campus. A second example is the collaboration with the town of Elassona in establishing the “baby lamb Elassona” and the “kid goat of Elassona” as products of protected designation of origin.

E. Strategic Planning, Perspectives for Improvement and Dealing with Potential Inhibiting Factors

- **Potential inhibiting factors at State, Institutional and Departmental level, and proposals on ways to overcome them**

The main need for the Department is the replacement and upgrading of the livestock facilities. Additional dormitories would increase the student presence on campus, which could also be increased through better and more economical transportation from and to the city of Larissa where most students find housing. More emphasis on research should be considered within the overall context of research in Technological Educational Institutes.

- **Short-, medium- and long-term goals**

The Department will continue its efforts for the establishment of a reference laboratory for chemical and microbiological analysis of feeds, foods and related materials.

Long term goals for strategic development presented by the Department include improved quality of its activities, enhancement of the personnel with additional permanent faculty to replace temporary staff, use of new electronic developments, postgraduate studies, research, improvement of facilities and in the operation of the Department, and efforts for the better public recognition of the Department and its activities which will enhance student recruitment.

The main objective of the short-term goals is the maintenance and improvement of its activities through its educational, administrative and electronic services. Defining and implementing procedures for personnel training in these activities should accomplish this. This is especially needed due to the high reliance on temporary employees. To accomplish this, the Department has started writing SOPs for various activities, and has submitted a proposal for improved quality in its educational activities within the program “ERASMUS” and in collaboration with the Universities of Bari and Perugia of Italy, the European University of Cyprus, and the Open University of Greece. The Department has proposed increases in permanent faculty of all levels to reach a total of 40 by 2011-12; however, it still remains at 16. It is noted by the EEC, that any changes in faculty numbers should be considered in conjunction with corresponding student numbers.

Develop autonomous postgraduate programs in the wider area of animal production. Other proposed medium term goals are for improvement in their activities and services. Informational brochures and a CD have been created. Conduct programs for new students and their parents.

- **Plan and actions for improvement by the Department/Academic Unit**

As indicated above, the Department pursues plans for renaming the Department and revising the curriculum to include veterinary nursing, relocating and expanding the animal facilities, and establishment of a reference analytical laboratory.

- **Long-term actions proposed by the Department**

In addition to the above listed long and short term goals, the Department propose to reform the program of studies. However, this is regulated by national law that has recently reduced the laboratory hours of training in favour of classroom teaching, which is set to be at least 50% higher than time allocated to laboratories. However, such changes lead to de-emphasis of the technological nature of the Department and Technological Education Institutions. The EEC supports the position of the Department, which is also shared by students who indicated that hours for practical training should increase instead of decreasing.

Another proposal by the Department is the development of a system that these institutions are funded based on quantitative and qualitative criteria, and according to their productivity. Such a system should be just and transparent.

F. Final Conclusions and recommendations of the EEC

Conclusions and recommendations of the EEC on:

- **the development of the Department to this date and its present situation, including explicit comments on good practices and weaknesses identified through the External Evaluation process and recommendations for improvement**
- **the Department’s readiness and capability to change/improve**
- **the Department’s quality assurance**

The EEC identified the following main positive aspects:

- The site visit, and the meetings and discussions with Departmental of Animal Production employees and students were positive in all aspects.
- Overall, the goals of the Department and its curriculum coincide with those of similar departments and the needs of the industry.
- The Department functions at a high level producing well educated graduates with a good percentage of employment.
- There is good collaboration and positive attitude of all employees and students.
- The Department has demonstrated cooperation with the local animal production sector.
- The region contributes a substantial part of the animal and animal product output of the country.
- The EEC strongly believes that the Department is capable of offering scientific and technological education of the highest level and of responding readily and positively to current and future needs of the animal production sector.
- In general, the staff, the equipment, the teaching methods, the communication between teachers and students, and the library services are at a high level.
- The current on-campus laboratory and other facilities are considered satisfactory for student teaching and training.
- The existence of graduate (Master's and PhD) programs in collaboration with the University of Bari and the University of Perugia.

The main weaknesses identified are:

- The system of admissions does not allow selection of qualified and interested students, which is a major cause for the extension of studies or complete failure to graduate.
- The average grades achieved by students are generally low, as in other institutions in Greece, and probably reflect the weaknesses of the educational system in the country as it relates to legal framework associated procedures, lack of student interest, economic, and infrastructure problems.
- The high reliance on temporary personnel is limitation, especially when those employed have limited qualifications.
- The on-campus animal facilities need expansion and improvement.
- Faculty and students recognize the lack of a formal advising system with assigned advisors from the beginning of their studies.
- As in other institutions, the quality of education is impeded by the low attendance of lectures by students.
- The available dormitory on-campus facilities are limited.
- The faculty and student mobility through national and international programs is limited.

The EEC recommends:

General recommendations:

- The number of students admitted each year should be fixed and should reflect the actual capacity of the Department and the needs of the Greek economy.
- In order for student performance and education to be improved, including grades, there is a need for reforms in high school education, student selection for admission, and operation of educational institutions. This will improve the quality and grades of graduates who will be better qualified for job opportunities and be competitive for postgraduate studies with students from other countries. Furthermore, economic savings due to timely and successful graduation will be enormous.
- In order to improve the quality of education, temporary personnel should be replaced with qualified permanent faculty.
- The plans for expansion and improvement of on-campus animal facilities should be implemented in order to improve student training.
- A formal student advising program with assigned advisors from the beginning of studies should be established by the Department as well as other institutions in Greece.
- Ways should be explored to improve student attendance of lectures.
- Further development of collaboration with all animal industry stakeholders is needed.
- Since the central TEI administration has the animal facilities under direct control, in order to improve operations and address needs more efficiently, changes, such as transfer of administration to appropriate Departments or the school of Agriculture, should be considered.

Curriculum related recommendations:

- Establish compulsory student attendance to lectures.
- Allow flexibility in the curriculum to adjust to the needs of the sector.

Teaching related recommendations:

- The Departmental web site needs further development and expansion.
- Increase the on-line available course-related information and material as well as access to journals.
- The teaching material, including books, notes, and other related resources, should be continuously updated and upgraded.
- Improve student and faculty mobility through national and international programs.
- Increase practical work and training within diploma thesis.
- Increase use of animals in student training.
- Establish student visits to commercial production facilities and related sites.

Research and service related recommendations:

- Within the framework of research goals in technological institutes, improve national and international research activities and collaboration.
- Seek increased participation in international project funding, considering the limited access to national funds.
- Continue efforts to upgrade livestock facilities.
- Be receptive to the feedback from the animal industry and consider undertaking research of practical use within the livestock production sector of the region and the country.

Other recommendations:

- Relative to the evaluation process, the EEC recommends that external evaluations be undertaken shortly after the completion of the corresponding internal evaluations.
- The EEC recommends that the time allotted to the site visit of Departments may need to be extended in certain cases.
- The research expectations from personnel in TEI should be defined as the specific goals of TEI and Universities are clarified in Greece.

Additional recommendations suggested by Department personnel:

- Strengthening of the technological identity of TEI.
- National strategic development in primary food production and associated strengthening of appropriate departments training the necessary number of properly selected and qualified students. Undertake associated revision of Departmental structure for better utilization of personnel and improved output.
- Differentiation of necessary qualifications between faculty of TEI and AEI. TEI faculty should have professional technical and not necessarily research program involvement.
- The state, through the Ministry of Agricultural Development and Foods, should consider allocating a portion of the EU subsidies for animal producers to educational and research institutes in support of targeted work designed to solve real and local food production problems.
- Reduction of the administrative tasks of faculty.
- Better and more streamlined utilization of funding allocated by EU programs in order to facilitate student practical training in the industry through ESPA instead of OAED.