



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

HELLENIC REPUBLIC

Α.ΔΙ.Π.

H.Q.A.A.

ΑΡΧΗ ΔΙΑΣΦΑΛΙΣΗΣ ΠΟΙΟΤΗΤΑΣ

HELLENIC QUALITY ASSURANCE AGENCY

ΑΝΩΤΑΤΗΣ ΕΚΠΑΙΔΕΥΣΗΣ

FOR HIGHER EDUCATION

EXTERNAL EVALUATION REPORT

1.1 Department of Animal Production

1.2 Technological Educational Institute of Western Macedonia

TABLE OF CONTENTS

The External Evaluation Committee

Introduction

I. The External Evaluation Procedure

- Brief account of documents examined, of the Site Visit, meetings and facilities visited.

II. The Internal Evaluation Procedure

- Comments on the quality and completeness of the documentation provided and on the overall acceptance of and participation in the Quality Assurance procedures by the Department .

A. Curriculum

APPROACH

- Goals and objectives of the Curriculum, structure and content, intended learning outcomes.

IMPLEMENTATION

- Rationality, functionality, effectiveness of the Curriculum.

RESULTS

- Maximizing success and dealing with potential inhibiting factors.

IMPROVEMENT

- Planned improvements.

B. Teaching

APPROACH:

- Pedagogic policy and methodology, means and resources.

IMPLEMENTATION

- Quality and evaluation of teaching procedures, teaching materials and resources, mobility.

RESULTS

- Efficacy of teaching, understanding of positive or negative results.

IMPROVEMENT

- Proposed methods for improvement.

C. Research

APPROACH

- Research policy and main objectives.

IMPLEMENTATION

- Research promotion and assessment, quality of support and infrastructure.

RESULTS

- Research projects and collaborations, scientific publications and applied results.

IMPROVEMENT

- Proposed initiatives aiming at improvement.

D. All Other Services

APPROACH

- Quality and effectiveness of services provided by the Department.

IMPLEMENTATION

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

RESULTS

- Adequateness and functionality of administrative and other services.

IMPROVEMENTS

- Proposed initiatives aiming at improvement.

Collaboration with social, cultural and production organizations**E. Strategic Planning, Perspectives for Improvement and Dealing with Potential Inhibiting Factors**

- Short-, medium- and long-term goals and plans of action proposed by the Department.

F. Final Conclusions and recommendations of the EEC on:

- The development and present situation of the Department, good practices and weaknesses identified through the External Evaluation process, recommendations for improvement.

External Evaluation Committee

The Committee responsible for the External Evaluation of the Department of Animal Production of the Technological Educational Institute of Western Macedonia consisted of the following three (3) expert evaluators drawn from the Registry constituted by the HQAA in accordance with Law 3374/2005:

1. **Dr. Irene Kokkala (President)**
(Title) (Name and Surname)

North Georgia College & State University
(Institution of origin)

2. **Dr. Vladimiros Christodoulou**
(Title) (Name and Surname)

NAGREF Animal Research Institute
(Institution of origin)

3. **Dr. Konstantin Karras**
(Title) (Name and Surname)

University of Hohenheim
(Institution of origin)

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 Department was visited by the External Evaluation Committee (EEC) on November 21 through 23rd of 2011. Upon arrival in the evening of November 21st we were received by the members of the Internal Evaluation Committee (IEC), including the head of the department Dr. Vasiliki Pappa-Michailidou, Dr. Konstantinos Tzalis, and Dr. Ioannis Nikolakakis. After a short visit with the internal evaluation committee the EEC met with the administration of TEI, the President Dr. George Charalambidis, the Vice President of Academic Affairs, Dr. Nicholas Tsounis, several members of the faculty and Mr. Dimitrios Lougkas representing the administrative staff. The conversation focus on the evaluation process and the program of our visit. In the morning of November 22, the EEC attended a series of presentations by Drs. Pappa and Nikolakakis, and Mr. Lougkas.

The presentations focused on the program of undergraduate study, research activities of local, national, and international focus, report on the collaboration with local producers and industry, and an overview of administrative infrastructure supporting faculty and students. The Committee members were provided with several reports and other documents including the Internal Evaluation Report (IER), the study guide book of the Department, statistical data and various documents related to the operation of the Department.

During the presentations several of the faculty attended and were available for the conversation on the topics presented. The meeting with faculty members (permanent academic staff) was very productive. Most of them participated in a lively discussion and expressed freely their personal views and they were directly or indirectly involved with the preparation of the IER. The EEC appreciates their willingness to proceed with the internal self-evaluation and to be evaluated externally. It shows very clearly self confidence and drive for improvement that ultimately leads to better education and better prospects for graduates and staff.

The EEC also visited the dining facilities available to students. Following lunch the EEC visited the Laboratory of Physiology of Reproduction, attended a short portion of the introductory material to the lab exercise presented by Dr. George Kourousekos, followed by a visit with the students attending. The next meetings were with representative graduates of the department and another group of students. The Committee notes the high number of students participating at the meeting with the Committee in the absence of

faculty members and considers the outcome as very useful and productive. The views expressed by students indicate their real interest and concerns about the value and quality of their education.

On Wednesday, November 23rd, the EEC met with several non-permanent faculty, visited classrooms, the computer science laboratory, a video conferencing equipped classroom, the training farm, including the laboratories for milk analysis and processing, meat processing, chemistry, animal nutrition, poultry science, and all the animal holding facilities, with feedstuff storage and preparation of diets for the animals kept, such as sheep, goats, poultry, milking cows, etc. The next visit was to the library, the administration offices, and the gym.

II. 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 recognizes that the time allotted to the visit of the Department was sufficient and points out the willingness of the staff and the students to cooperate. The detailed materials provided were useful and complete which facilitated the work of the EEC and when questions were raised they were answered in a timely and appropriate manner. The objectives of the internal evaluation process were met by the department as evident by the presentations and documentation. 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.

A. Curriculum

APPROACH

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

The Department offers a single undergraduate program. “The Department of Animal Production has the mission to promote the development and transfer of knowledge in technology and science of animal production through teaching and basic and applied research. 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 department has as goals to:

- Provide theoretical and practical education adequate to apply scientific, technological, and skill based knowledge in the profession of animal production in order to contribute to the development of specialized graduates able to respond to the needs of the work market.
- Conduct basic and applied research in the area of animal production.
- Follow the international development in the scientific and technological areas of the

subject.

- Serve as a center for knowledge dissemination and as a provider of services to the farmers of the region.
- Establish academic and educational collaboration with national and international universities funded through national, European, and international grants. The greater need is based in the development of collaboration to recruit students from the Balkan countries, to submit grants for collaborative programs and the exchange of knowledge by specialized faculty of the department.
- Utilize innovative modern technologies in course delivery to enhance the knowledge and skills of the graduates of the department, and uses new educational technologies for online teaching.
- Organize and participates in national and international conferences.
- Adapt to the fast changing educational, economic, and social circumstances at the regional, national, and international level.
- Prepare to secure and improve the delivery of education through international evaluation.
- Target the employment of all graduates.
- Contribute to the cultural, educational, and economic development of the region.
- Contribute to the decrease of student and faculty transfer to comparable institutions in larger cities of the country.
- Develop plans of studies for continuing education and flexible scheduling.

The aim of the Department is to make graduates capable of working in all areas of animal production, from stable to marketing and processing, with the ultimate aim to modernize the animal farms and the production of products that combine quality and safety for the consumer, while being competitive and profitable for the stockfarmer. The teaching format of the Department of Animal Production covers the cognitive subject of Animal Science and associated fields with emphasis on the application of modern technological methods in farming, nutrition, breeding, reproduction, and health protection of farm animals. Moreover, it addresses the methods of production, processing and standardization of animal origin products.

- **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 present curriculum was developed and implemented during the 2000-2001 academic year. Considerations for the development included the results of the internal evaluation of the department, through surveys focused on students, graduates, and industry. The most useful information came from the employment data of the graduates. Other important information came from the content of the studies, the facilities, and instrumentation. New elective courses were added. The duration of studies is eight semesters long with the eighth semester used for the completion of the six months practical exercise.

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

According to the Internal Evaluation Report, the academic staff of the Department considers that the objectives are accomplished, especially with regard to the quality of the graduates and their response to market needs in the wider area of Animal Production. The employment of graduates reaching 65% is commendable. Continual collection of information on the needs of the market should be established.

IMPLEMENTATION

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

According to the IER, head of the department, faculty, staff and students, the curriculum is implemented reasonably and in accordance with the goals and objectives of the department. In the opinion of the EEC, the curriculum is balanced between theoretical and practical training and the goals are achieved as shown by the employment of graduates. However, delays in hiring of eleven permanent staff is a major concern of the academic staff. At present, there are 15 positions for permanent faculty are in place but eleven remain vacant. Moreover, the system of admission to institutions of higher education quite often reflects political decisions in Greece. As a result, the numbers of students admitted fluctuates tremendously from year to year, with either much larger number of students than the actual capacity of the institution, to complete lack of students admitted as observed during the recent year.

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

The curriculum is in line with similar programs. According to the IER, during the development and revision of the curriculum several curricula of similar departments of European and American Universities were consulted. In the curriculum, four categories of courses can be recognized: Ten (10) general infrastructure courses, thirteen (13) special infrastructure courses, thirteen (13) specialty courses and four (4) social studies courses. The curriculum implies that students take 5 to 6 courses each semester, a work load that seems reasonable.

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

For the majority of courses the ratio between theoretical teaching and laboratory practice is 60:40. The practical training, which lasts 6 months, is performed in the 8th semester provided that the student has successfully attended 2/3 of the course work including all courses of specialty. A questionnaire distributed among students (N=1928), revealed that both the course and teaching levels were evaluated as very good to satisfactory at 64-71% (IER). In the opinion of the EEC, the structure of the curriculum is rational and clearly articulated.

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

The curriculum is coherent and functional. The four groups of courses are well developed and sequenced through the years of studies. The combination of theoretical and practical

approaches is effective. Special note should be given to the presence and effective use of the training farm for experiential learning and development of applicable skills.

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

The material is appropriate. Nevertheless, the distribution of the class notes is often very delayed due to administrative procedures. For this reason, the EEC recommends the establishment of a digital archive and the systematic use of e-Class. The average contact time (lectures, labs, etc.) is a total of 50 hours per week.

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

- The department has adequate human resources, with highly qualified professors, most having a PhD. The permanent faculty can not cover all the teaching requirements. Therefore there is a disproportionate dependence on external, part-time staff. There is a total lack of technicians, which obliges the faculty members to perform technical tasks, at the expense of their regular duties.

The physical infrastructure is adequate with appropriate space. The major advantage is the training farm. The library covers the needs of the students in educational materials. Excellent access to electronic resources is also available to the students.

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?**

Based on an inquiry made by the Department regarding employment opportunities of the graduates and the staff perception, the implementation achieves the aims of the curriculum to a high degree. According to the Departmental IER, the positive aspects about the implementation of the curriculum include the publication and update notes by the educational staff, the efficiency and importance of the practical training which contributes to the excellent professional absorption of graduates. The average time to graduation is 5.2 years (according to the IER), which is considered a good percentage related to other institutions. The graduation rate is 43%-36% for students entering the years 2001-2004.

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

The number of students that graduate is considered very low and the time allowed for graduation is unreasonably lengthy. The students not graduating within the average time take a very long time to graduate. One of the reasons for this problem is the examination system and the relaxed graduation requirement within a certain time. With the change of this requirement to graduation limit of 6 (4+2) years these percentages will improve. Another reason for the extension of studies or complete failure to graduate is the admission of students to the institution against their primary choice of career direction. The EEC believes that the admission system must be improved. The current system leads to a

compulsory acceptance of attending an institution of low preference by the student.

The Department considers as disadvantages causing administrative and educational problems the large number of non-permanent staff and the variation in the number of new students enrolling each year. There is a need to assess the reasons for that and undertake corrective measures.

IMPROVEMENT

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

The department is constantly improving the curriculum and making adjustments to the knowledge base introduced to the students by staying abreast of the new information generated from primary research in the various areas of content. The faculties have started uploading their notes in the e-Campus for the students to have immediate access electronically.

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

The Department plans to continue the active exchange of information with the industry and farmer on scientific and technological developments, industry and farmer needs and problems. The continual collaboration with similar departments in FYROM and Albania will continue for mutual benefit in the solution of current issues in animal production.

B. Teaching

APPROACH

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

Teaching methods used

The methods used for teaching include lectures for theory and exercises in laboratory setting for the application of theoretical knowledge. The presentations use electronic methods including power point. Other methods of instruction include seminar style and guest lectures for specialized topics. The program consists of lectures (60 %) and practical exercises (40%). The most significant teaching method used is the work done at the training farm with hands on experiences with the farm animals and animal production applications (e.g. analysis of feedstuff and preparation of diets, the automated milking and milk analysis, artificial reproductive techniques, etc.). In addition to the seven teaching semesters, there is one semester of practical training outside the institute, and completion of diploma thesis. Attendance in lectures is very poor. According to the academic staff this problem is inherent in the regulations that allow non compulsory attendance of lectures.

Teaching staff/ student ratio

The teacher to student ratio is 1:29 for lectures and 2:25 for laboratory work and practical training with livestock. Based on the capacity of the labs and the current teacher/student ratio human resources seem adequate.

Teacher/student collaboration

According to the IER the faculty are available to work with the students during publicized office hours. Students are also welcome to meet with faculty before and after lectures or labs. The EEC found this to be accurate based on communication from the students. The students appear to be very satisfied with their collaboration with the faculty who make themselves available for work outside scheduled times. The same was reported emphatically by the alumni of the department.

Adequacy of means and resources

According to the IER, only half of the teaching staff finds the classrooms functionally adequate. The overall feeling is that the number of lecture rooms (2) is inadequate to cover the teaching needs, which leads to the use of laboratories as lecture rooms. The existing lecture rooms have the basic equipment, but are antiquated and inappropriate for projection and good visibility. Most of the laboratories are characterized as appropriate and equipped with modern equipment. In their majority laboratories are small compared to the needs of the student body. This problem is exaggerated by the admission of students in numbers in excess of the capacity of the department in previous years. The availability of the equipment for research is regarded as very limited. It is noted that the only study areas available are limited within the library. The library is adequate and appropriate for the needs of students. The overall teaching facilities (2 lecture rooms and 6 laboratories) of the department are considered inadequate to completely cover the educational needs of the students. According to the IEC, there is need for more teaching spaces and larger laboratories with modern educational technologies and expert technical staff. The EEC supports these documented facts. The EEC underlines the fact that insufficient funding is available for subscriptions to electronic journals and other resources.

Book and other teaching material can be considered adequate. Teaching material is upgraded and updated quite often. However, students argue that there is a problem with the timely availability of teaching material, mostly because of the printing and procurement procedures of the industry. Efforts were made for the solution of existing problems by providing textbook through the Evdoxos program. Subsequently, this program was reported to have failed to work efficiently. The availability of books was still delayed.

Use of information technologies

Approximately, 60% of the lectures are presented using multimedia educational technologies, primarily power point, access of materials using the internet. Educational multimedia technologies are systematically used in the laboratories, including video presentations. Some faculty communicate with students using email.

Examination system

The examination system is considered satisfactory. It provides the opportunity for the evaluation of the student at different stages of the course and for different parts of the subject, such as mid-term exams, lab tests and final exam for the theoretical and practical part of the course. In addition the students have the right to discuss with the teacher his/her evaluation for the course.

Multiple methods of assessing students in intermediate evaluations include written tests, lab exams, practical exercises, oral exams, or take home exams. Students are required to participate actively during lab and for that they are rewarded. All exams 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.

In cases of learning disabilities special arrangements for examinations are made. Most of the time the examinations are conducted orally. The diploma thesis defence takes place in the presence of a three member committee, including the major advisor of the student.

The EEC finds this examination system with all its characteristics to be representative of an educational program of high calibre.

IMPLEMENTATION

- **Quality of teaching procedures**

Teachers' performance was evaluated by the students for the first time during the 1998-1999 academic year. A questionnaire distributed among students (N=1928), revealed that both the course and teaching levels were evaluated as very good to satisfactory at 64-71% (IER). Since the 2008-2009 academic year the evaluation of the instruction is conducted in each course. The questionnaire presently used was acquired from the Hellenic Quality Assurance Agency (HQAA). The results of the evaluation are shared with the faculty who in turn use the information to improve their teaching procedures. The totality of the results is also used for the annual assessment of the department. The EEC feels that this evaluation system can help the improvement of teaching methodologies and the use of innovative and more efficient teaching techniques. The recommendation is that instructors attend faculty development seminars to improve their teaching technique.

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

The EEC believes that the teaching material is adequate. Book and other teaching material can be considered adequate. Teaching material is upgraded and updated quite often. However, students argue that there is a problem with the timely availability of teaching material, mostly because of the printing and procurement procedures of the industry. Efforts were made for the solution of existing problems by providing textbook through the Evdoxos program. Subsequently, this program was reported to have failed to work efficiently. The availability of books was still delayed. One of the ways the materials will reach the students faster is to use the e-Campus for notes distribution by all faculty. The library is adequate and appropriate for the needs of students, but greater funding is recommended for the increase of access to electronic journals and other resources.

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

According to the IER, the content of each course is renewed every four year as approved by the general assembly of the department. The teaching process is constantly evaluated and improved in terms of technique, enrichment of content, and development of new teaching materials.

- **Linking of research with teaching**

Most of the equipment is used for teaching and research. Early the students learn how to compose bibliographic reviews by accessing primary research sources and evaluating experimental designs and the use of scientific method. Usually diploma thesis research is integrated in research projects and makes use of project resources.

- **Mobility of academic staff and students**

There is limited Erasmus mobility of both students and teachers, with bilateral agreements with other educational institutions in Albania, FYROM, and England. The EEC believes that the Department would benefit from stronger participation in mobility programs.

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

A comprehensive questionnaire (36 questions) was used in the evaluation of teaching by the students. Evaluations of teaching were presented for the year 2007-2008. The students felt that they are satisfied with the quality and organization of teaching, the quality of teaching materials, the collaboration with the teaching staff, and generally they have a positive opinion of their instructors at a rate of 71%. The teaching schedule is adhered to consistently, the instructors are experts in the content area, and they constantly update their course content. The instructional technologies are not used enough by all faculty. The general opinion was confirmed by the students in discussions with the EEC.

RESULTS

- **Efficacy of teaching.**

Based on the IER, the success rate of the students during the academic year 2007-2008 was 89.42% passing with an average grade of 5.565/10. Although this grade average appears to be low it should be noted that 38.49% of students earned grades between 6 and 10. It should also be noted that the information does not include the times a student has sat for the examination in each course before passing, which would have given a clearer picture of the success rate. During the work of the EEC certain questions were raised and further clarifications were required which satisfied the committee and the results presented are indeed representative of the records.

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

During conversations the EEC had with faculty it was pointed out that most of the students entering the institution are weak in mathematics, chemistry, and physics resulting in

relatively high rates of failure early in their studies.

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

According to the IER the average time to graduation is 5.2 years and the graduation grade ranges between 6.0 and 6.9 for the 82.92% of the graduating students. The graduation rate for four years the graduation rate is 36.36%, for seven years the rate reaches 13.65%. In the opinion of the EEC the graduation rate and graduation grade are satisfactory, indicating reasonable efficacy of teaching.

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

The obvious efficacy of teaching is attributed to the excellent preparation of the teaching faculty and high level of collaboration between students and faculty. The presence of the training farm is a major advantage for the institution allowing the students to apply theoretical knowledge in an in depth experiential environment. All laboratory experiences afford the students the opportunity to enrich their knowledge through practice.

The Department recognizes that the trends are common to other departments and are related to the drop of the minimum threshold of 10 for entrance to higher educational institutions, along with entrance of students with poor backgrounds in science and mathematics. With the reinstatement of the threshold, there is the expectation of improvement of student performance and decrease of the number of years to graduation. Another reason presented was the very low attendance in lectures sometimes reaching complete lack of attendance by students. The EEC believes that the admission system must be improved. The current system leads to a compulsory acceptance of attending an institution of low preference by the student.

IMPROVEMENT

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

According to the IER, the primary improvement proposed relates to the hiring of permanent faculty in the presently open positions (11), and specialized technical and administrative staff. Further recommendations include the addition of necessary buildings and purchase of equipment for the laboratories and training farm, increase of the library subscriptions and resources. The department will be better served if the curriculum planning was more flexible to match innovative and modern trends, along with fiscal management and administrative autonomy. According to the academic staff the change of policy to compulsory attendance of lectures would result in higher rates of student success.

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

Strategic planning of the department will include the modernization of the educational process with support of innovative teaching and learning based on international standards. This can only be achieved through the engagement of highly qualified faculty exposing graduates to administrative and practical experiences making them highly competitive both

nationally and internationally. Another initiative involves the possibility of adjusting the curriculum with new courses to match the needs of the profession more closely, based on information directly from the industry, in order to improve the new Greek agricultural economy. The promotion of student mobility at the international level and increase of international collaborations will also contribute to the overall improvement of the departmental performance. Further efforts will focus in research and external grant applications, along with the organizations and attendance of conferences, publications in internationally recognizes venues. The department strongly desires the establishment of graduate programs in collaboration with national and international universities, and the membership in international educational and research societies (e.g. European Universities Association).

C. Research

APPROACH

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

The department follows the policy as set by the TEI of Western Macedonia. No evidence was found of the existence of a main objective in research. According to the IER, the research objectives are defined primarily by the research interests of the faculty. The Department places emphasis on education but at the same time it encourages and promotes research activities. The results in this area are satisfactory considering the availability of research facilities and the insufficient state funding for research in the field of animal production.

The permanent staff developed research initiatives in their respective fields focusing on the applied technological part of research, exploiting their own facilities and also cooperating with other institutions within the country and overseas. The Committee believes that certain labs are well equipped for research purposes while other labs need to be renovated. The number of research technicians is nil and this is one of the disadvantages for performing research activities.

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

There are no internal standards for assessing research presented in the IER. All research performed is funded by either national or international agencies indicating that the department has adopted the standards of quality of research set forth by these agencies in order to be successful in supporting research projects.

IMPLEMENTATION

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

The EEC's understanding is that the research record of a faculty member is a decisive factor for tenure and promotion considerations. The department supports travelling to conferences for presentations on research projects.

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

The level of research activity taking in consideration the low numbers of human resources and equipment supporting research in several areas of animal production is satisfactory. Nevertheless, due to the lack of space and time, research potential cannot be developed adequately. Inhibiting factors for the increase of research projects include the lack of a graduate program, the limited number of permanent faculty position filled, the lack of technical personnel, and available funding.

- **Scientific publications.**

During the last five years the faculty (N=8) published two books, and 91 publications of which 44 were peer reviewed, 3 non-reviewed, 17 conference proceedings, 22 peer-reviewed abstract of conference presentations, and 1 peer-reviewed conference presentation without published abstract. Given the available research facilities and the amount of time devoted to teaching and administrative tasks, the publication levels of the faculty members are quite satisfactory.

- **Research projects.**

The faculty is actively involved in submitting proposals for obtaining competitive research projects and funds. During the last five years, the faculty of the institution had 7 research programs funded through Archimedes (I and II) and INTERREG III. Additionally, faculty participated as member of research teams in 13 other projects in collaboration with other TEI and universities.

- **Research collaborations.**

Regional studies were conducted through collaborations with the local government agencies, including a series of seminars and presentations focused on the development of animal production application in the region of Western Macedonia. Several faculty participated as presenters in the Open University of Florina prefecture. Research collaborations include work with the Department of Electric Power of Greece, the Department of Animal Production of TEI of Epirus, the Aristotle University of Thessaloniki, the University of Saint Clementine of Ochride, FYROM, and the University of Korytsa, Albania, the University of Newcastle Upon Tyne, Great Britain.

RESULTS

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

The departmental research is focused on solving problems of animal production in the region. The internal evaluation report mentions that the degree of participation of students in research is limited and depends on the requirements of each research project.

- **Scientific publications.**

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

- **Research projects.**

The faculty is actively involved in submitting proposals for obtaining competitive research projects and funds. Information about application of research findings is not provided in the internal evaluation report. The EEC feels that based on the content of the research activity the results have contributed to the regional animal production improvement.

- **Research collaborations.**

Research collaborations are mainly with other national partners, but also include international partnerships with scientists from countries such as FYROM, Albania, and England. The EEC feels that the level of collaborations is sufficient but it could improve if the vacant positions for permanent faculty are filled.

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

Specific information about application of research findings is not provided in the internal evaluation report.

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

The Faculty members publish in specialized scientific journal, and their publications are cited. The internal evaluation report provides information on the number of scientific citations for the years 2003-2008 related to the published research results of the permanent and temporary staff. Specifically, according to the IER, for the permanent faculty (N=8) there were 70 citations of which 52 were external citations, and for the temporary faculty (N=12) there were 155 citations.

IMPROVEMENT

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

The Department would like to improve its research capabilities. A key issue is the lack of space and updated infrastructure for research, along with the lack of permanent faculty. Furthermore, the department believes that by being allowed to offer graduate degrees, the research potential and capability will be enhanced. The EEC feels that given the current setup, future possibilities and needs of the industry, emphasis should be given to closer dialogue and collaboration with other stakeholders. The EEC recommends the development of a clear research policy and an identification and definition of proper objectives.

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

According to information presented to the EEC, the department will work towards developing programs of graduate studies, increase of the number of permanent faculty (existing positions now vacant), increase of specialized technical personnel, and improving opportunities of hiring of research faculty. The EEC feels that as long as the faculty evaluation is based partially on research productivity the implementation of graduate

programs is needed. The primary duty of the faculty remains excellence in teaching using innovative techniques.

D. All Other Services

APPROACH

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

Regarding other services such as student facilities, administration, Information Technology, Library, restaurant, mechanical and electrical support to livestock units, the general consensus is that they are adequate. The secretarial staff is very competent and helpful. The collaboration between administration and faculty is excellent, providing electronic services at a high level supporting the work of the faculty. 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 secretariat has made significant progress in this direction and the use of TEI-online has provided streamlining for administrative procedures. Indeed most procedures exist in electronic form, including all applications, certifications needed by students, submission of grades, etc.

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

The student presence on campus is significant since there are dormitories and very good dining facilities and many students leave in town. There is no such problem with this institution.

IMPLEMENTATION

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

The Department's administration is well organized and supported by a effective and competent secretarial staff.

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

The library has adequate resources in terms of subscriptions and book collections. Online access to journals exists but needs to be improved. There are no student counseling services available, but the faculty is very engaged with all students. There is on site athletic facility, and the Department has arrangements with the municipality to provide access to other

sports facilities. The department has offered students the opportunity to participate in theatrical and musical productions presented to the people of Florina and surrounding communities.

RESULTS

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

The secretariat is not adequate at present because due to recent changes to the personnel the office administrator for the Department of Animal Production serves additionally as the school secretary. Despite this shortness of personnel the integration of the secretarial personnel among all three departments housed together successfully addresses the needs of students and faculty. The lack of technical personnel is also a problem.

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

There is concern within the department for both issues. The Department is aware of the limitations in term of services provided to the students and staff, but recognizes the funding challenges, and do their best to maintain reasonable levels of activities.

IMPROVEMENTS

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

The Department is doing its best, given the current restrictions. However, some solutions are clearly unsatisfactory, and require alternatives.

- **Initiatives undertaken in this direction.**

The department depends on the temporary faculty to supplement the technical laboratory preps due to lack of technical personnel. There is an effort to maintain continuity in hiring of temporary faculty.

Collaboration with social, cultural and production organizations

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

Such collaborations are primarily based on the need for student practical experience within relevant businesses and production organizations during the final semester of studies. Moreover, there are collaborations with local and regional governments through a series of studies aimed to improve the status of the region in terms of animal production. Collaborations also exist with local cultural organizations. Educational seminars are routinely offered to the teachers of the region on information technology and communication. It is obvious the involvement of this department with local communities is significant.

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.**

Inhibiting factors include the lack of a graduate program, the limited number of permanent faculty positions filled, the lack of technical personnel, and available funding. In their majority laboratories are small compared to the needs of the student body. This problem is exaggerated by the admission of students in numbers in excess of the capacity of the department in previous years. The availability of the equipment for research is regarded as very limited.

It is noted that the only study areas available are limited within the library. The overall teaching facilities (2 lecture rooms and 6 laboratories) of the department are considered inadequate to completely cover the educational needs of the students. According to the IEC, there is need for more teaching spaces and larger laboratories with modern educational technologies and expert technical staff. Another issue is the shrinking of the size of the animal stock in the training farm due to shortage of funding affecting both teaching and research activities.

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

The short term goals of the department include: enhancement of the connection with institutions in FYROM and Albania, development of tighter connections to local governments, development of research activities targeting problem in animal production of the region, the prospect of new ways production and distribution of animal products in the region e.g. ecological animal production, the formation a core of services for the farmers involving animal product processing, and the acceleration of the efforts to participate in international research projects and student and faculty exchange programs.

Medium term goals include the modernization of educational processes and innovation, direct research efforts with focus the needs and problems of regional farmers and industries related to animal production, the development and implementation of graduate programs in collaboration with national and international universities, the membership in international educational and research societies, to increase the presence and recognition of its faculty in international circles, to fill all vacant positions in the department, to update all buildings and equipment, and improve administrative processes and assessment procedures.

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

To achieve the above mentioned goals the buildings will need improvements and additions, the laboratory equipment will have to be improved, technical personnel will have be added, and flexibility to curriculum adjustment and redesign is needed. The means to achieve the goals include administrative and fiscal independence and greater participation in collaborative projects.

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

The department proposes the following necessary actions for future success:, improvement of communication between all stakeholders, adjustment of entering student number to the match the capacity of the Department of Animal Production whether independent or combined with the Department of Plant Production into one department with two majors, increase of funding opportunities for improvement of the building infrastructure, laboratory equipment, and research. It is also proposed that all vacant faculty and administrative positions are filled, and autonomous graduate programs established.

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 Department of Animal Production functions at an excellent level producing well educated graduates with high percentage of employment despite the recent shortages in permanent faculty and staff. The collaborative nature of the work conducted and attitude of all employees was obvious and it is instrumental for the success of the educational experience of the students. These conditions are ideal for the purposes of education and research in the sector of animal production. The Committee believes that the Department has the potential to offer scientific technological education of the highest level and to respond to the current and future needs of the animal production sector.

The main positive aspects identified are:

- the Committee underlines the importance of the location of this Department in this area of Greece, being a purely agricultural border community;
- the Department provides teaching, expertise, research and training in an area of strategic agricultural economic importance for Greece;
- in general, the staff, the equipment, the teaching methods, the excellent communication between teachers and students, and the catering services are of high quality;
- the presence of the training farm is a major advantage for studying, enhancing the curriculum through introduction of experiential learning ;
- the social dimension of the Department and its interactions with local communities is very important;
- the evaluation of the students during the interview was very positive in all aspects;
- the faculty members are productive, with a sufficient numbers of publications and presentations of their research, and collaborations with national and international institutions, such as in FYROM and Albania having geopolitical implications;
- the students are motivated and engaged in their studies and the program in general;

- the short time to graduation compared to other comparable departments;
- the high employment rate of the graduates;
- the certification for international recognition of the degree held by the graduates of the department, which has also received recognition by the European Union;
- the EEC agrees with the position of the academic staff that changes in the curriculum should be largely dictated by market/industry needs. Therefore, a system for continuous exchange of information between the department and the industry on scientific and technological developments, industry needs and problems is very important;
- the video conference capability, which facilitates collaboration with researchers and remote teaching.

The main weaknesses identified are:

- the vacant positions of permanent faculty;
- the variation in the number of new students admitted each year at the department is a disadvantage causing serious administrative and educational problems. In some years, the number of students admitted, is far beyond the capacity of the department. The admission system allows for poorly qualified students or students having very low interest for the department, to enroll.
- non-compulsory attendance of lectures is a problem inherent in the regulations that apply to higher education in the country. The faculty and the students agree that lectures must be compulsory.
- problems related to the timely supply of books and other teaching material to students, are expected to be solved by providing them through the e-campus facilities.
- there is a heavy dependence on part-time faculty members;
- the fiscal regulations inhibit the good functioning of the department;
- delays in the procedures of hiring and promoting on the part of the Ministry of Education;
- lack of technical staff and adequate lecture rooms and laboratory spaces.

The EEC recommends:

General recommendations:

- A. to continue the constructive dialogue with all stakeholders;
- B. to ensure that staff and policy makers are fully aware, supportive and involved in the implementation of the strategic plan;
- C. it is suggested that the issue of student admission be resolved at the state level taking into consideration the views of Higher Education Institutions.

Curriculum related recommendations:

- D. establish compulsory attendance to lectures;
- E. determine the limit and timing of repeated attempts at taking a course exam ;
- F. to maintain flexibility in the curriculum able to be adjusted to the needs of the sector;

Teaching related recommendations:

- G.** to continue uploading notes and course related information on the e-class repository;
- H.** to improve online access to journals;
- I.** to enhance and increase usage of video conference capability, to facilitate collaboration with researchers and remote teaching;
- J.** to make every effort to increase stakeholder participation in teaching (e.g. invited seminars);
- K.** to provide incentives in order to improve student and faculty mobility.

Research and service related recommendations:

- L.** to increase national and international research collaboration;
- M.** to improve the participation in applications for international project funding, taking into account the limited access to the national funds;
- N.** to make every effort to secure funding for infrastructure improvement through the ministry and the private sector.

The Members of the Committee

**TECHNOLOGICAL EDUCATIONAL
INSTITUTE OF WESTERN MACEDONIA
DEPARTMENT OF ANIMAL PRODUCTION**

Prof. Irene Kokkala

North Georgia College & State University, Dahlonega, Georgia, U.S.A.

Dr. Vladimiros Christodoulou

Director of Animal Research Institute,
National Agricultural Research Foundation (N.AG.RE.F.), Giannitsa, Greece

Dr. Konstantin Karras

University of Hohenheim, Stuttgart, Germany