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H.Q.A.

HELLENIC QUALITY ASSURANCE AND
ACCREDITATION AGENCY

EXTERNAL EVALUATION REPORT

DEPARTMENT OF AGRICULTURAL DEVELOPMENT
DEMOCRITUS UNIVERSITY OF THRACE

March 2014



External Evaluation Committee

The Committee responsible for the External Evaluation of the Department of Agricultural Development of the Democritus University of Thrace consisted of the following five (5) expert evaluators drawn from the Registry constituted by the HQAA in accordance with Law 3374/2005 :

1. Prof. Athanasios Alexandrou, California State University-Fresno, Fresno-California, U.S.A. (Coordinator)
2. Dr. Dionysia Fasoula, Agricultural Research Institute, Nicosia, Cyprus
3. Prof. Mattheos Koffas, Rensselaer Polytechnic Institute, New York, U.S.A.
4. Prof. George Manganaris, Cyprus University of Technology, Lemesos, Cyprus
5. Prof. Stavros Avramidis, Department of Wood Science, University of British Columbia, Vancouver, British Columbia, Canada

***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.

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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.

II. The Internal Evaluation Procedure

Please comment on:

- 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 External Evaluation Committee (hereafter the EEC) visited the Department of Agricultural Development (hereafter the Department) of the Democritus University of Thrace during the period January 20 - January 22, 2014.

The Department was founded in 1999 and is located in the city of Orestiada. It is part of the newly established School of Agricultural and Forestry Sciences. Its mission, according to the Government Gazette (Φ.Ε.Κ), is to “cultivate and promote the science of Agriculture oriented to new and updated technological developments, advancing scientific knowledge in areas of economics and social development and techniques in the field of agriculture with special reference in peripheral agricultural regions” (Department’s web site).

Orestiada is the northernmost city of Greece with a population of approximately 23,000 inhabitants. It is situated in a key agricultural region, in close proximity with river Evros, close to the Greek-Bulgarian-Turkish border. As the Department's website indicates, the city is in close proximity with the river Evros, the natural border between Greece and Turkey, 23 km far from Andrianoupolis, Turkey, 64 km far from the Greek-Turkish-Bulgarian borders, 110 km from Alexandroupolis and 458 km from Thessaloniki. Its area is considered as one of the most fertile and productive districts of Greece with intense agricultural economic activity and

countryside distinguished for its beauty and richness. Thus, the Department is indeed strategically located for the effective accomplishment of its mission.

In the morning of January 20th, the EEC arrived at the airport of Alexandroupolis where was received by Vice Rector Prof. Kosta. The EEC arrived at Orestiada and had a meeting with Vice Rector Kosta, the Dean of the School, Prof. Koutroubas, the Acting Department Chair and President of the self-evaluation committee (OM.E.A.), Prof. Bezirtzoglou and all faculty of the Department, including the members of OM.E.A., who had undertaken the drafting of the Internal Evaluation Report. The meeting lasted over three hours. The same day the EEC met with the five Lecturers of the Department in a special meeting which lasted about twenty minutes. The EEC met all faculty members again on Tuesday, January 21st at the end of the visit where questions raised during the previous meetings with students, staff and other stakeholders were discussed.

Our discussion with the students took place on January 21st. The Department had already arranged meetings with students from 4th and 5th year (14 students) and with postgraduate students (21 students). To ensure that a representative group of students was interviewed, the EEC requested and met also with students from the second and third year (2 students). Most of the undergraduate students had selected the Department as their first or second choice after the National Entrance Exam. The majority had an agricultural background and expressed an interest in pursuing a career in the agricultural sector following graduation. We found this to be a very positive reflection of the Department's mission. The students were very interested in offering us their opinions. Our meeting with a group of five department alumni was also very productive. They ranged from those who had graduated very recently (last year) to ones who had graduated from the Department during the 2000s.

The EEC also met with the Secretarial support of the Department (4 staff) and with the three members of Technical and Administration Personnel (E.TE.P.). Both meetings were very informative.

The EEC visited various departmental teaching and research laboratories, the greenhouse, the teaching/research farm (Αγρόκτημα), the cafeteria and restaurant, and the office of the Department's Secretariat. The EEC was pleased to see the close proximity (within walking distance) of the Teaching/Research Farm to the Department and considers this a big advantage for an agriculturally-oriented department that needs to be properly exploited. The EEC was also given a tour of the

facilities, including computer labs, the library and student dormitories.

During the preparation of the external evaluation report, the EEC considered the self-evaluation report, which is extensive and well prepared, and the discussions that occurred during the two-day site visit. In addition, the EEC considered several documents provided by the Department upon request of the EEC. We would like to note that the Department provided all the supplementary information the EEC requested during the site visit, as well as additional information requested after the EECs departure from Orestiada. The objectives of the internal evaluation of the Department have been met quantitatively, since all faculty members participated in the evaluation exercise, and qualitatively, since a number of sensible conclusions and recommendations have been formulated by the School on the basis of these findings. The EEC highly commends the Department for its valuable and honest self-assessment.

The EEC is unanimous in expressing its gratitude to the staff, faculty and students of the Department for their hospitality and assistance in all aspects of the evaluation site visit. Moreover, the EEC is indebted to Mayor Mouzas of the municipality of Orestiada and the local club of Gkagkaouzides (Γκαγκαούζηδων) for their hospitality.

The EEC would like to express its condolences to the Department, for the recent tragic loss of Professor Abas.

A. Curriculum

To be filled separately for each undergraduate, graduate and doctoral programme.

APPROACH

- What are the goals and objectives of the Curriculum? What is the plan for achieving them?
- 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?
- Has the unit set a procedure for the revision of the curriculum?

A. Curriculum

The goals and objectives of the Curriculum are to provide students with education and training in the area of Agricultural Sciences, with special reference to the sectors of Plant Science, Food Science/Technology and Agro-economics/Rural Development. The curriculum also aims to equip students with knowledge and skills that would qualify them for post-graduate education. The current undergraduate curriculum is comprised of ten semesters. Each faculty member tries to adapt and incorporate the new technological advances and knowledge. The courses of the first five semesters are common to all students. Then, the student must select one of the three specializations that are offered. Each student should successfully attend approximately sixty courses over nine semesters, including theory and laboratory sessions and a two-month internship (πρακτική άσκηση) during the summer between the 8th and 9th semester. The 10th semester is dedicated to the diploma thesis (πτυχιακή διατριβή), for which students, 50% on the average, undertake a research topic that includes hands-on experience. Recently, the Department has developed an M.Sc. program in Sustainable Agriculture, which consists of eight courses, usually shared between two instructors, without a laboratory component. The third semester of the program includes a seminar series and the M.Sc. thesis (μεταπτυχιακή διατριβή), for which students, undertake a research topic that includes hands-on experience.

Attendance to laboratory sessions is mandatory, but not for lectures. Although students voiced no concern on how lecture material is presented, attendance in some specialized courses is low (<10 attendees). All faculty members need to take ownership of this issue and come up with creative solutions, as for example, the rewarding of exceptional good teaching performance. From the discussions with faculty members, emerged that they are already making some steps toward this direction.

It should be the Departments' expectation that students spend at least 1-3 hours per lecture unit per week to study outside of class. Most students will need to spend 10 or more hours each week outside of class to gain a strong understanding of the material. Students may require more or less time depending on their level of preparation, their studying efficiency, computer skills, and comfort with the material.

The curriculum appears to have been designed so as to be in general agreement with other Schools of Agriculture programs in Greece. Decisions on curriculum composition and implementation are made by the faculty of the Department. The curriculum has been recently updated and this is commendable. However, in certain cases, the curriculum needs to be further revisited, analysed and aligned with the current national and international training trends. Also, some courses may need to move in different semesters. Several students expressed the desire that agricultural courses are not delayed until after the 3rd or the 4th semester, and are instead offered from the beginning of their studies.

Considering the relatively small number of Faculty members and the recent loss of funding for special (non-permanent) teaching personnel, an extraordinary number of courses is offered; some of them not regularly. It is highly recommended that the amount of courses is substantially reduced. The decisions should be based on the following criteria: (1) faculty expertise, (2) addressing current needs of the “real world”, (3) redundancies in the curriculum, by merging some courses, team-teaching at the undergrad level, streamlining and condensing, (4) removal from the curriculum (οδηγός σπουδών) of courses that are offered quite infrequently.

Classroom course delivery shall not exceed the internationally established standard of ninety minutes maximum. EEC noticed that some of the courses are taught in three hour blocks. The recommended change will assist the learning process since it

is scientifically proven that a student cannot focus in a classroom for more than one hour and a half.

The EEC noticed the lack of cutting-edge courses in the curriculum such as Plant Molecular Biology and strongly recommends the possibility of offering such courses in the near future. Moreover, the Department shall consider the introduction of a Farm Machinery course.

For each undergraduate course, a short description (περίγραμμα μαθήματος) should be given both in electronic form (uploaded in the e-class) to each student in the beginning of the semester. The Department should prepare a template that shall be the standard for each member. This standardized file should include the course objective, learning outcomes, lecture and lab schedule, relevant bibliographic references, means of student evaluation and office hours.

Overall, the importance and value of the Faculty should not be underestimated, and in the opinion of the EEC the Department should be given every opportunity to improve, adjust and modernize its curriculum as Greece enters an era of changes, even if this means reducing the time length required to get the degree (πτυχείο).

The EEC noticed that most laboratories are also used as lecture rooms, thus limiting the time and space available to display and use existing equipment. The EEC suggests that faculty explores the use of existing simulating software as a way to eliminate the space issue in, e.g., Chemistry labs. The Department has already made arrangements with local KEGE (Κέντρο Γεωργικής Εκπαίδευσης) and secured additional spaces. A more permanent solution will be the execution of the Department's strategic plan which envisions the construction of a new building in the new Orestiada university campus.

The Department shall continue considering European, national, and regional, scientific and economic trends and make revisions when necessary in order to enhance the relevance of its curriculum, its ability to provide marketable skills and knowledge, and its ability to attract high quality students.

Due to the Department's geographical position, an MSc program in English language is highly recommended. The programme shall have only one direction, most likely

on the area of Rural Development, Business and Economics.

Strengths

- University farm in close proximity to the Department, facilitating students to get hands-on field training, particularly in agronomic crops.
- Regular student course evaluation and assessment of evaluation data in an objective and productive way by the faculty.
- The curriculum that was presented to the EEC was up-to-date, including certain advances compared to the previous one.
- Lecture material and PowerPoint presentations of all courses are offered electronically through the e-class platform.
- A good number of elective courses are offered.
- Clear metrics for student evaluation of instruction were presented.
- Although it is a young Department, a post-graduate MSc and PhD program has already been developed and implemented.
- The existence and use of academic advisors.

Weaknesses

- The three specializations are not similarly represented as far as number of students registered.
- An English version of the Studies Guide and the web page is absent.
- Disparity in student number attendance among courses.
- Teaching facilities, lab and farm, are in some cases inadequate for proper course delivery. Although farm is very closed to the Department, its small size is not efficient for all teaching and research purposes.

Recommendations:

Recommendation A1: An updated curriculum both in Greek and English language should be prepared being comprehensive, current with a hands-on approach and relevant to the societal needs. Some suggestions are the following: (1) ECTS should be reconsidered reflecting the actual course content, (2) Some courses may be eliminated or merged with others, with the aim to avoid overlap and unnecessary repetition, (3) the outline of laboratory course sections should be thoroughly described in the course outline, (4) all individual course syllabi should be standardized and updated on a regular basis, (5) where possible, the number of teaching hours may be reduced by condensing and streamlining course content. The

long lecture hours (more than 90 min) should be eliminated or substantially reduced.

Recommendation A2: The creation of a post-graduate program in English should be incorporated in the Department's Strategic Plan.

Recommendation A3: The EEC encourages the faculty to team-teach some of the offered courses, including Department faculty members with diverse areas of expertise; this is already the case in the post-graduate courses.

Recommendation A4: Outline of all courses offered should be provided in the Department's website.

Recommendation A5: Student majoring in the field of Agro-economics/Rural development must attend and be examined in key courses dealing with the Plant and Food Sciences sector.

Recommendation A6: A database on potential hosts of students in agribusiness or public institutions during their internship should be established, updated and be enriched continuously over time.

Recommendation A7: The EEC encourages the Department to consult with all appropriate bodies and other departments and examine the possibility to condense their undergraduate Program by one or even two semesters. If properly done, i.e., fewer courses but without compromising the quality of all the necessary information, the reduced number semesters may offer a competitive advantage to the Department, especially under the current financial climate in Greece.

B. Teaching

APPROACH:

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

Please comment on :

- Teaching methods used
- Teaching staff/ student ratio
- Teacher/student collaboration
- Adequacy of means and resources
- Use of information technologies
- Examination system

Teaching Methods Used

Teaching methods include PowerPoint presentations, laboratory exercises, activities in the Department's facilities, opportunities to engage in laboratory research, and fieldtrips in selected courses. Most of the faculty also place class-related material on electronic platforms (e-class). The EEC recommends that material placed on e-class should be updated. The committee also believes that alternative lecture formats that may include participatory components (presentations by students, group discussions) would further student engagement and attendance.

It should be noted that the majority of the courses contain a laboratory component. The committee appreciates the fact that the student groups are of relatively small size (about 20), but it should be noted that for some laboratories the physical size of the room is a limiting factor. The Department's Acting Chair indicated that there is planning for expanding the existing facilities. Meanwhile, they have made arrangements to use KEGEs abandoned facilities in Orestiada.

Teaching staff/ student ratio

The faculty/student ratio for the department is 1 to 41 which is considered very high. It should be noted that the majority of the courses contain a laboratory section. The lab provides practical skills to the student, and is taught in small groups with no more than 20 per session for most courses. Some laboratory sessions use specialized teaching personnel. Several students brought up the fact that labs were often

demonstration-based, where the students observed rather than actively participate. They also stated that their exposure to the real field conditions is delayed until after the 3rd or 4th semester. Several students wished that field exposure happens as soon as they enter the University. This also means that the relevant agricultural courses may need to start being offered during the 1st or 2nd or 3rd semester vs. later semesters.

Teacher/Student Collaboration

It was evident from discussions with a number of undergraduate and postgraduate students that teaching staff is largely accessible and responsive to the students' needs. Several students strongly appreciated the fact that the peripheral nature and smaller size of this Orestiada department permits a closer contact between students and staff, greatly enhancing their educational experience. They respected the teaching staff both for their expertise and their dedication to the teaching mission. Teaching staff makes a concerted effort to have an open-door policy and provide assistance to the students outside the classroom.

Adequacy of Means And Resources

The Department has increased its faculty members by eight (8) the last few years. This is considered very positive and encouraging for the Department's future.

Overall, students were quite satisfied with the available resources, although they wished that the Department gets access to a bigger training farm space, as well as to some additional lab space. In this context, field space of about 8 hectares exists in close proximity to the department, belonging to the old ETHIAGE. The EEC considers it a very good idea for this field space to be allocated to the Department through the appropriate agreements. Laboratory consumables appeared adequate and equipment was well maintained despite the fact that only 600 € per year are allocated for such purpose. Students have satisfactory access to major libraries and databases through the internet. The library is located on campus and was well staffed and maintained. It was an attractive space that was in sufficient use by students at the time of the visit. It provides reference material, books, an adequate reading room and a computer room.

Use of Information Technologies

All students and faculty have been issued university e-mail addresses. However, the buildings of the Department were not equipped with wireless connections. Computer labs are available but students complained that the computers were dated and slow.

Examination System

The quality and effectiveness of the teaching is evaluated mostly by a single final examination; only certain classes employed midterm exams (πρόοδος). In a rather large number of courses, the students can present a project which counts up to 30% of total grade. Examinations are almost exclusively written. Students have the opportunity to take an exam at the end of the semester during a three week exam period. If they fail an exam in either semester, they have the opportunity to repeat it in an additional exam period in September. Additional options for grading may promote participation and attendance for students, and reduce the portion of students that have to take the same course multiple times, thus requiring an excessive amount of time for graduation.

Quality of Teaching Procedures

Attendance of lecture courses is frequently low. Current legislation does not allow for the instructor to introduce compulsory attendance. However, instructors can implement measures that can encourage and reward attendance, as indicated above, including enthusiastic teaching, quick multiple choice quizzes on a weekly base or mid-term exams, bonus points for participation in group discussions and presentations, etc.. Students interviewed agreed that the introduction of quizzes and midterm exams will increase participation.

Quality and Adequacy of Teaching Materials and Resources

The committee examined available books for selected classes and found them to be excellent resources, frequently in effective formats (e.g. soil science books with numerous photographs of high quality). Books are available to the students at no cost. Equipment used in teaching laboratories was generally well maintained. However, a fume hood needs to be established in the chemistry laboratory, as well as some additional updates.

Mobility of Academic Staff and Students

Many of the Department's faculty has recently been appointed; thus they are not satisfying the criteria for sabbatical leave as established in the corresponding law. The EEC considers prudent for the Department to actively encourage participation of faculty on existing mobility programs such as Erasmus Plus that will assist them to advance their scientific skills. Likewise, it was disappointing that only a limited number of students (4) made use of Erasmus the last five years. Three foreign students studied in the Department using the same program. It is worth noting that

the Department respects the Bologna process and transfers the credit for the courses that its students earn while studying abroad. The current financial climate in Greece was mentioned as a potential reason for this low student participation.

Evaluation by the Students of (a) the Teaching and (b) the Course Content and Study Material/Resources

The OM.E.A. provided student evaluation of instruction for courses taught in the Department. The questionnaire used is considered appropriate, based on HQAA standards, and included questions on teaching, course content, and material used. Student evaluation of instructors is used in every semester and course, and efforts are made by the staff to ensure the objectivity of the process and incorporate student feedback, which is highly commendable.

Recommendations:

Recommendation B1: New faculty should be hired to cover critical needs.

Recommendation B2: Given the importance of farm space for all agriculturally-oriented departments, the EEC fully supports the Department efforts to secure more farm space for its training and research needs.

Recommendation B3: The introduction of weighted grading where the student grade will depend on midterm exams, multiple choice quizzes, assignments, group discussions or presentations, laboratory exercises, a final exam, and above all, enthusiastic teaching, may provide an incentive for students to attend the classes. Higher attendance and multiple grading options may improve the fraction of students who fail each course.

Recommendation B4: Pre-requisites for some courses should be established and enforced. The number of pre-requisites should be kept to the absolute minimum, in order to serve their intended purpose.

Recommendation B5: Evaluations of teaching can be further utilized to support excellence in teaching. The Department Chair should confer with the faculty, discuss the faculty's student evaluation of instruction scores and provide support if needed. Teaching Excellence Awards (or equivalent tools for recognition of excellence) can be instituted to recognize individuals who excel in teaching. These awards should be presented at gatherings of the entire faculty to increase their prestige. When possible, the awards should be accompanied by a one-time allocation of resources to improve the teaching laboratory/methods of the awardee.

Recommendation B6: An outcomes assessment process with metrics should be

gradually introduced for courses taught. The assessment should be referred to individual courses and examine if at the end of the course the student has achieved the learning outcomes of the course. The EEC recognizes that this is a long and cumbersome process but considers it necessary for the future of the Department.

Recommendation B7: The EEC recommends that the Department encourages its students to get involved in mobility programs particularly Erasmus.

C. Research

For each particular matter, please distinguish between under- and post-graduate levels, if necessary.

APPROACH

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

The faculty is determined to excel in research and most of its members aspire to publish in peer-review papers, in the area of their expertise. However, it was not clear to the EEC how determining a factor research output is for faculty promotion. Undergraduate and graduate students participate in the department's research activities and are supervised by the faculty in the area of the faculty's expertise. It is very positive that the 5th year students have the option to carry out a research project in one of the laboratories in the Department as part of their diploma thesis work during the last semester of their studies. According to faculty, 50% of diploma theses involve research work with the remaining involving literature review in a particular research topic. In addition, it is positive that post-graduate students participate in research in the third and final semester of their post-graduate studies. This is particularly advantageous, in view of research fund shortages, as it serves a dual purpose: student training in a research environment concomitantly providing technical skills and assistance to the faculty members. The EEC also viewed positively the fact that, despite the harsh economic conditions, there is a steady increase in the number of PhD students enrolled, namely, from 15 in 07-08 to 18 in 12-13. There is however a concern that the number of post-graduate applicants has steadily decreased from 29 in 07-08 to only 9 in 12-13; out of the 9 applicants, only 4 actually registered in the graduate program. One concern of the EEC is that in some publications the supervising Professor rather than the graduate student executing the research is the first author; such practices should strongly be discouraged as first authorship in publications is vital for the future professional development of the student.

- Has the Department set internal standards for assessing research?

Internal Departmental standards, such as number of publications per year, average IF of publications, number/percentage of publications with IF>3, average number of citations per publication, are not clearly set. It is not clear what effect research output has on faculty promotion, or on the Ph.D. dissertation grading. A concern of the EEC is that one out of about 20 Ph.D. dissertations that the Department produced was graded with less than Excellent (while all the rest have been graded as Excellent), despite the fact that the student in question had 3 publications/meeting attendances as a first author and participated in a 4th, and despite the fact that other dissertations have not similar publication output. Such practices should strongly be discouraged,

as they reflect badly on the supervisor and/or the committee members' attitude towards individual students, while at the same time provide unnecessary obstacles to the future professional development of the student. At the same time, the EEC did not have the time and the opportunity to discuss adequately faculty promotion. Based on the publications listed in the internal evaluation report, it was obvious that some faculty are clearly more productive than others in research publications and conference participation; while in some cases the publication record was poor. This, to some extent, could be attributed to the assignment of excessive teaching duties in addition to lack of adequate and appropriate laboratory space. There is an effort in progress in remedying the problem of inadequate space by using room facilities from neighbouring KEGE (Κέντρο Γεωργικής Εκπαίδευσης) after a special arrangement and by building two new buildings right next to the existing campus. Specifically, land has been bought adjacent to the existing laboratory building while the municipality of Orestiada has offered the University more space right next to the laboratory building. This, in conjunction with potentially building a whole new campus right outside Orestiada (for which land has already been bought), is expected to boost research and at the same time enable the faculty to set more distinct internal standards for high quality research.

IMPLEMENTATION

- How does the Department promote and support research?

The Department supports and promotes undergraduate and post-graduate students to engage in research. The overall amount of funding raised by the faculty from competitive funding sources was moderate. Specifically, a total of 3.700.000 € were raised through competitive grants and another 150.000 € through non-competitive sources. This translates to 96.1% of the total funding coming from competitive sources. Applications in agricultural and biological sciences and technology are a contemporary driving force for development and one expects that this rather new Department, which is still in its developing phase, should have had better treatment. The EEC strongly feels this should be remedied because it is a Department with promising potentials, both because of its very nature (several new young faculty members) as well as because of its geographic location (closeness to Turkey and to Bulgaria). No mechanisms are in place to identify and promote national and international research interactions and identification of new funding solicitations.

- Quality and adequacy of research infrastructure and support.

The quality of research infrastructure varies among laboratories. In some sections

there is adequate equipment that supports reasonable research, which enables faculty to set goals leading to several solid publications. However, some other laboratories are less equipped. With some notable exceptions, the lack of research funding prevents them from obtaining enough consumables for their everyday research needs. This has a bearing on the quality and quantity of the research work.

Only one PhD student is fully supported, through an external fellowship from Onaseio Foundation. The majority of the Department's Ph.D. students have been participating in research program and receiving financial support.

- Scientific publications.
- Research projects.
- Research collaborations.

Overall, under the circumstances, publication output is considered commendable, with ample room for improvement, provided that certain things will change (see below). There are some research projects in progress by a number of faculty members; however, the spectrum of collaborations and networking within and outside Greece is moderate and is mostly based on personal relationships of individual PIs. There are publications of the various groups with co-authors from several other centers and Universities, which shows that at least some faculty members are pursuing high quality and excellence, in their capacity.

The EEC considers that changes such as some reduction of the teaching load should be encouraged, along the lines described previously about curriculum adjustments, while at the same time enhancing teaching quality. It is expected that this may also provide the PIs with free up time to invest in research and grant writing, although it is already obvious that some faculty have engaged in intense grant writing in the recent years. The EEC also recommends that a major effort is made by the Department in collaboration with the Rector's office to obtain additional funding from central University sources in order to support, even at a low level, junior faculty. The EEC noticed with satisfaction the Onassis scholarship to a graduate student supervised by junior faculty.

RESULTS

- How successfully were the Department's research objectives implemented?
- Scientific publications.
- Research projects.
- Research collaborations.
- Efficacy of research work. Applied results. Patents etc.
- Is the Department's research acknowledged and visible outside the

Department? Rewards and awards.

In the absence of adequate research funds, few faculty members have been able to excel in their research goals. A handful of the Department faculty aspires to engage in high quality research but due to limited space, lack of equipment and research fund shortages it is difficult to achieve its set goals. Especially, the young and recently appointed faculty members, unless they are supported by internal funds for a while, they will be reduced to good teachers with poor publication output in a few years, due to difficulties in securing independent external research funding. Therefore, as mentioned before, the Departmental council should seek more support from central funds in order to maintain their potentials until better opportunities arise.

All things considered, a small number of faculty members are internationally known and visible, as judged by invitations to participate in EU grants, deliver lectures, review manuscripts for peer-review journals, membership in journal editorial boards, and organization of conferences.

No patents have been filed by any of the faculty members. In general, the EEC noted an overall lack of entrepreneurial spirit among the faculty of the Department. The faculty are encouraged to find venues for commercializing their research through collaborations with the local, national and international industry. It was also noted that, while a number of faculty receive funding from private industrial sources, there is no clear IP policy set by the University about the results obtained through such research. A clear and transparent IP policy that will take into consideration the university's open public role is a pre-requisite for developments and collaborations with other stakeholders.

IMPROVEMENT

- Improvements in research proposed by the Department, if necessary.
- Initiatives in this direction undertaken by the Department.

Recommendations:

Recommendation C1. A central move to improve research conditions at the Department is to introduce the scheme of start-up funding for newly elected and appointed faculty members for all ranks. Currently, some faculty members do not even have a private office space for themselves, their students, and their postdocs. This is totally unacceptable.

Recommendation C2. Similarly, another unacceptable situation is when PhD students pursue their research with no stipend. Every effort should be made,

including reaching out to the society and industry, for obtaining scholarships for supporting them (philanthropy).

Recommendation C3. Another suggestion would be the introduction of a research award to the most productive faculty in terms of research expenditure as well as publication record.

Recommendation C4. The EEC recommends that the Department encourage faculty to take sabbaticals at other institutions with the provision that resources are available to cover that faculty member's teaching responsibilities during the sabbatical period. Sabbaticals and collaborations all contribute to the high research profile of the Department.

Recommendation C5. A positive development is the future construction of new research buildings by the Democritus University of Thrace, for hosting research labs and offices of PhD students and faculty. The EEC fully supports the Department's vision to obtain this additional laboratory space next to the current facilities for hosting an integrated mini biologically oriented Center.

D. All Other Services

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

APPROACH

- How does the Department view the various services provided to the members of the academic community (teaching staff, students).
- Does the Department have a policy to simplify administrative procedures? Are most procedures processed electronically?
- Does the Department have a policy to increase student presence on Campus?

Department services are located in three shared buildings, shared with the sister department of forestry and with no specific split between areas. These buildings form a mini-campus at the north-east corner of the city of Orestias. The campus encompasses the main building that includes faculty and staff offices, the department office, the library, teaching rooms, a chemistry and couple dry labs. The second building is comprised of two large auditoriums whereas the third is a mixed use one that houses faculty offices and wet labs. A fourth satellite facility about one kilometer away to the south houses a dining facility and dormitory-style rooms for the students.

The secretarial support staff is comprised of four in the department office and three shared (with forestry) in the library. The last few years much effort has been placed into replacing old paper-based practices for student registration and support with digital means that can take place online within and outside the campus. The system is working efficiently according to testimony from both providers and users although some improvements could be brought by better and faster transmission lines that have been proven quite a bottleneck in some cases. Significant use by the students of the database and online documents in the last few years has considerably decreased time to obtain information and forms and has also provided extra time to the office staff to pursue other also important functions related to faculty and department support. The EEC feels that the high quality of service provided is the result of talent, long working hours and strong effort of the staff that it's highly commendable. This conclusion was strongly supported by the discussion the EEC had with the undergraduate students who also expressed their appreciation for the great effort by the staff to promptly provide them with necessary documents during not only open to the public hours but also beyond.

Regarding library services, much effort has been placed into acquiring important books in both paper and digital format. Online access to various journals and databases is good and effective. There are two full-time librarians during the day and one in the evening. There is no librarian for the weekend and thus, the library is closed. The EEC believes that this is educationally atypical and that the university should provide funding for a position to keep the library open for few hours during weekends.

According to the library staff, new students are given a seminar concerning the facility and its uses and they are strongly urged by staff and faculty to use it as much as possible during their studies. The EEC suggests that the librarians should provide short workshops on how to use EndNote as well as databases (e.g. PubMed, Google Scholar) in order to find literature and insert citations. Overall, the EEC believes that the library is in good shape and comments the librarians for making sure that high quality support is provided to both students and researchers.

The department does have in place the eClass system which is a significant tool assisting students to obtain information about course outline, requirements, homework and exam format among other things. Most faculty members use this service and students were very positive about its existence and usage. Faculty members that do not use the eClass system are strongly encouraged to use it and provide course information such as Syllabi, PowerPoint presentations, announcements etc.

Dedicated IT support is non-existent. The whole maintenance and support system depends on the utilization of relevant faculty and postgraduate student talent. The EEC believes that such an important teaching and research infrastructure should have at least one permanent dedicated staff member for optimum performance.

Concerning internet connection that is paramount in the situation due to the remoteness of the unit, many faculty, staff and students had some complain regarding service quality such as low speeds and interruptions. The former is a very important issue that has resulted in an additional problem – lack of a teleconferencing facility. Owing to its distance from the rest of the DUTH campuses and the central administration offices, teleconferencing is imperative for committee meetings regarding appointment, promotion and tenure (APT) matters as well as research and administration issues. The lack of such service forces faculty members to travel to

Alexandroupolis when there is an APT case. This is an unacceptable financial and time loss burden that is placed on faculty and must be immediately rectified by DUTH. Such a dedicated unit will also assist researchers to better communicate and participate in meetings with others within Greece and abroad and thus foster scientific exchange of ideas, development of collaborative research projects and information sharing. Daily functions, teaching and the fostering of research will greatly benefit by such an improvement.

There is no wi-fi system in place.

Lastly on internet communications, the EEC noticed that announcements regarding exams, teaching cancellations and other information are posted online on the Department's webpage that makes it easy for students to be informed while away from campus. Although this is highly worthy, the EEC also proposes the creation of a mailing list (electronic bulletin board) where all student emails will be included and where with minute effort all announcements will be sent before they are even posted on the boards or on the webpage.

Faculty and staff are generally satisfied with the level of support and services provided by central administration within the parameters of the current financial crisis and the short life of the Department. There are however some concerns that were raised regarding the significant challenges associated with the distance from central administration and the never ending long-distance commuting under extreme weather condition in many cases.

Specifically, while the DAD faculty, staff and students are overwhelmingly in support of the key location of the unit, the distance from the DUTH Rectorate of about 180 km is deemed a big obstacle to the daily contact requirements with important university administration units. Furthermore, the cost and time for travel to communicate and carry out collaborative efforts both at teaching and research levels does put an obstacle to optimum functioning level. A high capacity and fast internet pipeline accompanied by the proper infrastructure will provide great relief and save countless wasted hours by faculty and staff.

Teaching facilities are in good shape and well equipped although the acoustics of some classrooms is far from being ideal in many cases due to bad design and building material choices. However, there is plenty capacity for classes to be held

although some creative planning is quite often needed.

Faculty and staff office space is not optimum. Current offices are small and cramped. There is need for more faculty offices since shared ones are not conducive to a private and fruitful environment. Furthermore, staff offices in the central building are inappropriate by being located in hallways with no acoustic insulation and air conditioning. A new building should remedy this problem.

Laboratory space for teaching and research, especially the wet ones located in the new building, are few and small. There is a great need for more space as the EEC noticed thus creating a bottleneck in the teaching of undergrads that poses extra time burden on teaching staff. Moreover, the fact that they are used both for teaching and research does create a problem of order and security. Some of them were so overcrowded that problems with potential accidents and injuries were apparent.

Related to that, the EEC also noticed in some labs that safety issues were not given a serious consideration probably due to lack of experience and guidance. The EEC strongly recommends the formation among the two departments of a common Safety Committee that will create strict guidelines according to international safety practices and implement an annual safety inspection for the benefit of both students and researchers.

Besides the great advantage of the Department's location in the middle of a large and very fertile agricultural region of Greece, the existence of a university farm (agroktima) that is located a short distance from campus is very agreeable. The farm is a piece of land that is used for teaching and research. Such a facility in close proximity and easily accessible is a large asset to the department and must be maintained and increased in the future, as described elsewhere. Although due to bad land and weather conditions the EEC did not have the opportunity to have a complete tour of the facility, it was apparent that the farm is an indispensable teaching and research facility. The farm is complemented by a small greenhouse unit located in the main campus.

Handicapped access is deemed adequate in the main campus.

Community outreach is paramount in academia and even more important in such a

small and remotely located unit. The EEC is commenting the department faculty and staff for making every possible effort to keep in touch with local community and businesses. The department's liaison office is responsible for organizing such events that will bring closer the local community and stakeholders to the unit.

No database regarding alumni whereabouts and career progress was seen. The EEC recommends more effort put into tracking of the whereabouts of the department's graduates by the liaison office and thus maintain contact. Perhaps, the use of social media might be a first step toward that objective. A semi-annual newsletter might be a good first step.

There are no dedicated facilities for extracurricular activities on campus to support athletics and cultural events. The EEC was informed that students are allowed to use some of the teaching and public areas for the latter, but that is sporadic. A dedicated area will possibly promote further interaction among students and the local community.

RECOMMENDATIONS

In the light of the information provided by the internal evaluation document and the ones gathered by the EEC during the visit, the following recommendations are provided for the improvement of services.

Recommendation D1. Installation of proper internet infrastructure and the creation of a teleconferencing center is an imperative step for a better function of the unit regarding faculty participation in committees within and outside DUTh. This will also assist with the networking of the researchers and possibly attract new research projects.

Recommendation D2. Addition of more laboratory space to reduce teaching load and allow decoupling of research from teaching for safety and productivity. Recent efforts to use space from KEGEs to remedy the situation are agreeable.

Recommendation D3. Formation of a Laboratory Safety Committee that will create a safety policy with rules and regulations which are standard in other universities that will be enforced through annual or semi-annual inspections.

Recommendation D4. Creation of an alumni database and production of a semi-annual newsletter that will promote the unit's achievements among the scientific community and the public.

Collaboration with social, cultural and production organizations

The Department's initiatives are mainly oriented towards maintaining active outreach programs to the community, the local agricultural sectors and the industry. It has developed a number of initiatives with local and regional organizations. However, there is need for improvement. For instance, workshops on specialized applied topics can be offered (free or for a nominal fee to cover the cost of meetings) to farmers and agricultural businesses. Seminars open to the public can be given on a regular basis (e.g. once each semester) to present those aspects of faculty research programs that are of special relevance and interest to the Department and to the community.

Recommendation D5: The EEC recommends that faculty or other academic personnel organize field days where growers could have the opportunity to see first-hand an important problem and /or problem solving activities.

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

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

Please, comment on the Department's:

- Potential inhibiting factors at State, Institutional and Departmental level, and proposals on ways to overcome them.
- Short-, medium- and long-term goals.
- Plan and actions for improvement by the Department/Academic Unit
- Long-term actions proposed by the Department.

Short-, medium- and long-term goals.

Based on the Internal Evaluation Report, the various presentations as well as the discussions of the External Evaluation Committee with the School's Dean and members of the Faculty, the following were identified as goals of the Department:

Faculty, Students, Curriculum and Teaching:

- a) To update the curriculum both in Greek and English language and further develop initiatives that would allow the Department to train/educate students from Turkey and Bulgaria.
- b) Develop a post-graduate program in English to attract students from neighboring countries.
- c) Continue efforts to secure more farm space for its training and research needs.
- d) To upgrade major equipment, which are aging rapidly and help with a more even access of all Divisions to modern, high-quality instrumentation.
- e) To enhance faculty members' activity in competing for research funding with appropriate incentives and support services.
- f) Initiate an outcomes assessment process.

Strengths and Weaknesses

The School's goals and wishes regarding faculty members, students, curriculum and teaching are reasonable and appropriate. The External Evaluation Committee strongly agrees with the School's self-assessment.

The same is true with the Department's goals regarding its research: the enhancement of its effectiveness as an instrument of economic development and of its overall visibility and recognition are fully endorsed by the EEC.

Strategies, programming and actions.

1) Curriculum and Teaching.

- a) The majority of faculty members have participated in discussions on adapting the curriculum and streamlining the teaching. Students also wish to have more relevant preparations for their chosen profession.
- b) Overall, the School has collected the required data and teaching indicators. However assessment of these data should become a regular activity.
- c) There is no clear and institutionalized monitoring plan regarding the attainment of goals. Also, there is no institutionalized plan as to how to respond to deviations from current strategies.

2) Research.

Despite the recognized initiatives to address individual issues regarding research productivity and establish criteria of excellence for faculty members' promotion, the Department's current structure does not seem to emphasize the setting of goals and the formulation of long range strategic plans. These are important and the 'culture' change required for this could come from an institutionalized Annual Assessment Report that should register the Department's progress and accomplishments in full transparency (to be posted on its website).

Strengths and weaknesses

Strategies to address weaknesses discussed in the preceding section have been recommended in previous sections of the report.

Potential inhibiting factors at state, institutional and departmental level.

Several inhibiting factors were identified, including:

- 1) Suboptimal governmental funding, which is exacerbated by the location of the Department.
- 2) Insufficient autonomy of the universities and their dependence on a micromanaged "framework law" ("nomos-plaisio"), which in addition to the areas discussed above, affects all aspects of university life.
- 3) The paucity of incentives, such as scholarships and awards for both students and faculty members.

Recommendations:

Most of the problems discussed in the preceding paragraph are problems that can only be corrected at the state level. We therefore recommend that the state assumes the leadership to

correct these problems because their correction is vital for the well-being and advancement not only of higher education but of the entirety of Greek society.

F. Final Conclusions and recommendations of the EEC

For each particular matter, please distinguish between under- and post-graduate level, if necessary.

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.

General

The EEC was generally satisfied with the teaching and research facilities available to the students including lecture rooms, adequately equipped laboratories. We found a very positive relationship among faculty, staff, and students. Faculty and staff were focused on providing the best possible education to the students. This included providing advising, an open door policy, and an opportunity to do meaningful work for their internship ("Practical Exercise").

The Department has developed a novel identity and a cohesive, long term mission. In so doing, agricultural sectors of local and regional importance were taken into account. The EEC recommends that the strategy should take into account factors such as the prime geographical location of the Department which allows it to access the educational markets of Turkey and Bulgaria. The Department should add a strong international dimension to its future by offering English to its students and encouraging them to participate in international exchange programs.

The Department has established evaluation metrics of performance for members of the faculty. A system must be established to recognize and reward high performers and motivate underperformers. Underperformers who refuse to improve their performance should be removed from the Institute. Faculty members who are not fulfilling the mission entrusted to them by the taxpayers of the state are consuming resources which should be allocated to those who are performing.

Similarly, an award system should be developed to recognize student academic performance at multiple levels – Department, School, and University.

Curriculum

The EEC recommends that the Department: streamline its curriculum using the strategies

described earlier; introduces a compulsory policy with respect to the availability of a detailed syllabus for every course; that it introduces measures to prevent registration for courses for which the appropriate pre-requisites have not been successfully completed; that it incorporates components (availability of additional grading options; group discussions and class participation etc.) to encourage attendance; and that it introduces a faculty-led student advisement program to assist students in decision-making for enrolment and reduce time to degree completion.

Teaching

The Department should establish processes to assess the efficacy of teaching and act upon the findings. It should fully utilize the student evaluations of courses to improve instruction as discussed earlier. Teaching excellence should be acknowledged and rewarded as described earlier.

Research

The Department should concentrate its activities in targeted areas of demand that can catapult the program into excellence while maintaining the present high quality of research. Research excellence should be acknowledged and rewarded as described earlier.

Planning

The Department should develop a long term vision with main aims to carry out a thorough review and restructuring of the curriculum to truly reflect the core aims and objectives. The Department should also draft a research strategy that will include specific methods and procedures for the identification, fostering and development of high-impact, high-relevance research areas. Lastly, the Department should encourage and assist faculty, staff and students in design and implementation of novel and expanded outreach efforts. In turn, the Greek Ministry of Education should support the Department in its effort to redefine itself.