Annex No. 3

The External Evaluation Report of a Doctoral Study Domain

Contents

I. Introduction[1]

External evaluation report was drafted for evaluation of doctoral university studies, study domain Horticulture at the "University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca" (USAMVCN), Faculty of Horticulture, in order to comply with the legal provision of the Emergency Ordinance no. 75/2005, approved with amendments and additions by Law no. 87/2006 and Ministerial Order no. 3651/2021. Evaluation was performed during November 1th-5th, 2021. Due to the ongoing pandemic situation, evaluation in person was not possible and my participation was online via ZOOM platform.

Members of the Expert Panel for domain Horticulture:

- Prof.univ.dr. Sina Cosmulescu, coordinator
- Prof.univ.dr. Mato Drenjančević, international expert
- Ioana-Cătălina Nicolae, PhD student

The University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca (USAMVCN) organizes doctoral university studies within the Organizing Institution of Doctoral University Studies - the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca (IOSUD USAMVCN). The rector of the University of Agricultural Sciences and Veterinary Medicine in Cluj-Napoca is the legal representative of IOSUD USAMVCN. IOSUD USAMVCN is led by the Council for University Doctoral Studies, hereinafter referred to as CSUD - USAMVCN. In USAMVCN the doctoral university studies are carried out on the basis of the National Education Law no. 1/2011, of Law no. 49/2013, of the Code of Doctoral Studies GD 681/2011, an amended form including and completing GD no. 134/2016, valid from 10.03.2016, of the USAMV Charter, of the RU24 Regulation RU 24 for the organization and development of doctoral university studies, as well as of the subsequent modifications of these regulations.

CSUD-USAMV CN is led by a director, assimilated to the position of vice-rector, and the doctoral university study programmes are organized and carried out within IOSUD - USAMV CN, within two doctoral schools - Doctoral School of Veterinary Medicine (SDMV) and Doctoral School of Agricultural Engineering (SDSAI). The Doctoral School of Agricultural Engineering Sciences organizes doctoral studies in 5 fields:

[1] Each time when applicable the information shall be presented gender-wise.

Agronomy, Horticulture, Biotechnology, Animal Husbandry and Engineering and Management in Agriculture and Rural Development. In Horticulture field there were several areas of expertise according to the area of doctoral supervisors: Vegetable growing, Genetics and plant breeding, Floriculture and ornamental arboriculture, Pomiculture, Viticulture, Biodiversity, bioconservation and biostatistics, Ecology, Sustainability, Modern technologies in fruit growing, Phytosanitary protection of fruit trees and Ecologic pomiculture. In the field of Horticulture, the doctoral training was carried out during the evaluation period under the guidance of 10 doctoral supervisors. During the evaluation period, 48 PhD students were enrolled in the Horticulture PhD field.

II. Methods used

Methods and tools used in the external evaluation process:

- Internal evaluation report of the doctoral study domain Horticulture and its Annexes;
- analysis of documents, data and information available on the USAMVCN /Faculty of Horticulture website, in electronic format;
- meeting with representatives of the institution and the Council for Academic Doctoral Studies
- meeting with the contact person for the doctoral study domain under review and the team who drafted the internal evaluation report;
- meeting with the academic staff corresponding to the doctoral study domain;
- meeting with the members of Ethics Commission;
- meeting with the persons in charge of the research centres and laboratories within the doctoral study domain;
- meeting with the graduates of the doctoral study domain Horticulture;
- meeting with employers of the graduates in the doctoral study domain Horticulture;
- meeting with doctoral students in the doctoral study domain Horticulture;
-meeting with the Doctoral School Council;
- information about research infrastructure delivered electronically by USAMVCN.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

Criterion A.1. The administrative, managerial institutional structures and the financial resources

Performance Indicator A.1.1.1. *The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain.*

The doctoral study field Horticulture operates in an adequate institutional, administrative and managerial framework, having adequate financial resources to fulfil the undertaken mission and objectives. Specific regulations exist and are applied.
I have not noticed anything that indicated the lack of regularities.

The indicator is fulfilled.

Performance Indicator A.1.1.2. *The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.*

The regulation of the doctoral school (RU 65) was drawn up in accordance with the legal provisions, in consultation with all active-affiliated doctoral coordinators and was voted by their absolute majority, by universal, direct, secret and equal suffrage. The last update was approved by the Senate on 19/02/2021. The Rules of the Doctoral School shall include mandatory criteria, procedures and standards for the matters specified in Article 17 paragraph 5, HG 681 / 2011, with subsequent modifications and additions. I have not noticed anything that indicated the lack of regularities.

The indicator is fulfilled.

Standard A.1.2. The IOSUD has the logistical resources necessary to carry out the doctoral studies' mission.

Performance Indicator A.1.2.1. *The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.*

With the integrated academic management system USAMVCN has the possibility to monitor the activity of students from all forms of education, as well as the financial situation of students in the fee places. PhD students benefit from accounts in which they upload their research activity annually. This activity is monitored and audited according to a timetable approved by the Board of Directors and announced, respectively posted on the department's website for quality assurance. The advantage of the existence of this database is that it can be accessed at any time, and the stored data can be downloaded both by PhD students and for their use in the processes of periodic evaluation of doctoral schools. The file with personal data corresponds to the admission file, which, after the candidate is admitted, becomes the Study Contract. The Comments section contains details of possible interruptions of the period of schooling or transfers in accordance with the legislation in force. These interruptions are approved by the decision-making bodies and operated in software by the doctoral school secretariat. Each doctoral student has the access to their own personal data.

The indicator is fulfilled.

Performance Indicator A.1.2.2. *The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.*

The doctoral thesis is checked for the percentage of similarity, in accordance with the legislation in force and the Regulation for the completion of doctoral studies (RU24A). From 2019, the program used to verify doctoral thesis is "Sistemantiplagiat" (https://sistemantiplagiat.ro/), a program recognized by CNATDCU according to OMEN 5229/2020. Prior to this date, during the evaluation period, the program

used was Plagiarisim Detector. The procedure by which the authenticity of a PhD thesis is verified exists and it is well organized.

The indicator is fulfilled.

Standard A.1.3. The IOSUD makes sure that financial resources are used optimally, and the revenues obtained from doctoral studies are supplemented through additional funding besides governmental funding.

Performance Indicator A.1.3.1. *Existence of at least one research or institutional / human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation, or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.*

Within the field of Horticulture, during evaluation period, PhD supervisors have been and are the advisors/responsibles of 11 research or institutional development grants in accordance with Annex. One of the research projects is won in international competition. 5 out of 7 active PhD supervisors are also grant coordinators.

The indicator is fulfilled.

Performance Indicator *A.1.3.2. *The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional / human resources development grants is not less than 20%.*

According to the Internal evaluation report, during the evaluation period there were 13 students who benefited from other sources of funding. The total number of students is 48 and the percentage is 27 %. From Annex A1.3.2. it is visible that two PhD students received external financial support form Hungary.

The indicator is fulfilled.

Performance Indicator *A.1.3.3.[2] *At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).*

[2] The indicators marked with an asterisk (*) hold a special status, referring exclusively to the evaluation of doctoral studies domains, as per Article 12 from the annex No.1 of the Order of the minister of education No. 3651/12.04.2021 approving the Methodology for evaluating university doctoral studies and the system of criteria, standards and performance indicators used in the evaluation. In case they are not met, the Agency extends a period of maximum 3 years to IOSUD to correct the respective deficiencies.

According to the Internal evaluation report and Annex A 1.3.3.a the PhD, students have been supported for different types of their professional activities. Each PhD student has an annual allocation of 2000 lei for participation in conferences, courses, research internships, publication etc. Based on a selection criteria during evaluation period PhD students were financially supported for participation in international symposiums across Slovakia, Serbia and Poland. It is worth pointing out that according to the Administration Council decision supervisors and PhD students are financially supported for publishing articles in magazines in quartile Q1 (75%) and Q2 (50%). The amount for all these purposes exceeded 10% of the total budget allocation per doctoral student during the evaluation period.

The indicator is fulfilled.

Criterion A.2. Research infrastructure

**general description of the criterion analysis.*

Standard A.2.1. The IOSUD has a modern research infrastructure to support the conduct of doctoral studies' specific activities.

Performance Indicator A.2.1.1. *The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly.*

The scientific research activities of supervisors, researchers and PhD students are carried out within USAMVCN institutes, centres and laboratories. Within the 'King Miahi I of Romania' Institute for Life Sciences on an area of 4,192 sqm, 59 research laboratories are functioning. At this moment there is a technology transfer center CTT – BIOTECH of USAMVCN under construction. PhD students have a good material basis at their disposal. There are well organized experimental fields on several locations. According to students and graduates' statements, the research infrastructure is very good and available to students.

The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

**general description of the criterion analysis.*

Standard A.3.1. At the level of each domain there are sufficient qualified staff to ensure the conduct of doctoral study program.

Performance Indicator A.3.1.1. *Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than three) meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and mandatory for obtaining the enabling certification.*

According to the Annex A 3.1.1 it is noted that all PhD supervisors carrying out guidance and management activities in the field of Horticulture and 7 (70%) met the CNATDCU minimum standards at the time of evaluation. By analysing the standards compliance sheets, it can be observed that even those advisors who currently do not meet 100% of the standards have a sustained publishing activity, with total scores exceeding the minimum thresholds.

The indicator is fulfilled.

Performance Indicator *A.3.1.2. *At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.*

Within the Doctoral School of Agricultural Engineering Sciences in the field of Horticulture, 7 out of 10 PhD advisors are full-time teachers with permanent contract and 3 are associate teachers at the moment, but were titular before the retirement age.

The indicator is fulfilled.

Performance Indicator A.3.1.3. *The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.*

The specialized and fundamental disciplines are taught under the Advanced University Studies Training Programme and through the individual scientific research programme, the PCS are supported by teachers and specialists who have the status of doctoral/habilitated advisor. The Course of Ethics and Academic Integrity is taught by a teacher with a background in the field, licensed PhD in Sociology. Optional disciplines are also supported by USAMVCN PhD supervisors or external collaborators. Doctoral supervisors have competences in the specialization in which they coordinate doctoral students according to their CVs. According to the PhD students and graduates' statements, supervisors are excellent experts and researchers in their field and they collaborate very well. It is visible that some supervisors successfully participate in preparing the dissertations at other prestigious universities abroad.

The indicator is fulfilled.

Performance Indicator *A.3.1.4. *The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs[3] does not exceed 20%.*

[3] 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No.1/2011 with subsequent amendments and additions, with additional extension periods approved as per Article 39, paragraph (3) of the Code of doctoral studies approved by the GD No. 681/2011 with subsequent amendments and additions.

According to Internal evaluation report PhD advisors do not coordinate more than 12 PhD students. There are two situations in which the PhD supervisors have 9 PhD students and one situation with 8 students. Such situations arise as a consequence of extension period of some PhD students under same supervisor. According to PhD students and graduates' statements, supervisors are available for all kinds of questions and help.

The indicator is fulfilled.

Standard A.3.2. The Doctoral advisors within the domain are carrying out a scientific activity visible at international level.

Performance Indicator A.3.2.1. *At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science- or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defense commissions at universities abroad or co-leading with universities abroad. For Arts and Sports and Physical Education Sciences, doctoral thesis advisors shall prove their international visibility within the past five years by their membership on the boards of professional associations, membership in organizing committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions.*

According to Internal evaluation report, Annex A3.1.1. and data available on the Internet all PhD advisors in the field of Horticulture have more than 5 WoS indexed publications. Some supervisors are members of the scientific and editorial committees of international publications and conferences, in the boards of international professional associations, even representatives for Romania of EU associations. PhD supervisors were also invited to conferences or expert groups abroad, or as members of committees supporting doctoral thesis at universities abroad, obtained patents of national and international inventions and awards.

The indicator is fulfilled.

Performance Indicator *A.3.2.2. *At least 50% of the doctoral thesis advisors in a specific doctoral study domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years.*

Summarizing the score from the report for the evaluation period, the research activity of doctoral supervisors is constant over the time and they have more than 100% of the score required by the minimum CNATDCU standards in force with exception of one retired associate teacher with 25%.

The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS

Criterion B.1. The number, quality and diversity of candidates enrolled for the admission contest

Standard B.1.1. The institution organizing doctoral studies has the capacity to attract candidates from outside the higher education institution or a number of candidates exceeding the number of seats available.

Performance Indicator *B.1.1.1. *The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1,2.*

According to the Internal evaluation report, Table 12 and 13, it can be seen that during evaluation period there were students who graduated at other educational institutions and entered the competition for admission to doctoral studies in the field of Horticulture. Their number varies from year to year and total ratio between candidates from other universities and number of available places during evaluation period was 0.21. Total ratio between the number of candidates within the past five years and the number of seats funded by the state budget was 1.24.

The indicator is fulfilled.

Standard B.1.2 Candidates admitted to doctoral studies demonstrate academic, research and professional performance.

Performance Indicator *B.1.2.1. *Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.*

Selection process is public and selection criteria was found to be clear and open.

The indicator is fulfilled.

Performance Indicator B.1.2.2. *The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission[4] does not exceed 30%.*

[4] 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No. 1/2011 with subsequent amendments and additions.

A total of 4 students have dropped their doctoral studies, which represents 8.3% for the whole period. Doctoral School collects the drop-out numbers and analyses them.

The indicator is fulfilled.

Criterion B.2. The content of doctoral programs

Standard B.2.1. The training program based on advanced university studies is appropriate to improve doctoral students' research skills and to strengthen ethical behavior in science.

Performance Indicator B.2.1.1. *The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.*

The curriculum includes several mandatory disciplines common to all PhD students (Principles of research methodology in plant and animal resource engineering, Methodology of elaboration of doctoral thesis, Scientific documentation, Elaboration of scientific works, oral presentations and posters, Design and management of research grants, Ethics and academic integrity). The Discipline Principles of Research Methodology in Plant and Animal Resource Engineering treats the statistical processing of experimental data. With the exception of the ethics discipline, all other disciplines are presented by Doctoral school of Agricultural Engineering Sciences PhD supervisors.

The indicator is fulfilled.

Performance Indicator B.2.1.2. *At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.*

Curriculum contains the mandatory discipline of Ethics and Academic Integrity. Starting with the academic year 2020-2021, Doctoral school of Agricultural Engineering Sciences PhD students can participate in the optional subject Bioethics of Scientific Research. Particular aspects of ethics and deontology in the elaboration of the doctoral thesis are also treated within the mandatory course Methodology of elaboration of the doctoral thesis.

The indicator is fulfilled.

Performance Indicator B.2.1.3. *The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes", specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities[5].*

[5] Or by what the graduate should know, understand and to be able to do, according to the provisions of the Methodology of 17 March 2017 regarding inscription and registration of higher education qualifications in the National Register of Qualifications in Higher Education (RNCIS) approved by the Order No.3475/2017 with subsequent amendments and additions.

Each discipline in the curriculum has foreseen competences that doctoral students should acquire after completing the discipline and the expected outcomes. The mechanism is well established and functional.

The indicator is fulfilled.

Performance Indicator B.2.1.4. *All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.*

PhD students in the field of Horticulture are supported by a guidance committee, consisting of 3 other members who can be part of the research team of the Doctoral supervisor, or other persons affiliated with the doctoral school or from teachers and research staff not affiliated with it. The composition of the guidance committee is settled by the doctoral supervisor following consultation with the PhD student. This committee is established from the moment of registration of PhD students. According to Internal evaluation report and PhD students and graduates' statements the doctoral student is entitled to the support, guidance and coordination of the doctoral advisor, as well as the guidance committee; to submit activity reports to the Doctoral advisor and the guidance committee whenever requested; to give, at his request and at least every 12 months, a presentation of the progress of his scientific research programme before the guidance committee and the PhD advisor, whose role is to guide, correct and support the scientific development of the doctoral student. The involvement of the guidance committee in advising PhD students is reflected in written feedback and regular meetings, at least once a year, completed by signing a report, which is part of the doctoral student's file.

The indicator is fulfilled.

Performance Indicator B.2.1.5*. For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1.*

According to data presented in Internal evaluation report, the ratio between the number of doctoral students in the field of Horticulture, during evaluation period, and number of teaching staff does not exceed 3:1.

The indicator is fulfilled.

Criterion B.3. The results of doctoral studies and procedures for their evaluation.

**general description of the criterion analysis.*

Standard B.3.1. Doctoral students capitalize on the research through presentations at scientific conferences, scientific publications, technological transfer, patents, products and service orders.

Performance Indicator B.3.1.1. *For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall*

randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain.

Doctoral students participate in conferences and symposiums with scientific papers during their doctoral studies and publish their research results partially or entirely. After reviewing five papers (Pleșa V. Ioana-Maria: Responses to Drought in Seedlings of European Larch (Larix decidua Mill.) from Several Carpathian Provenances; Borsai G. E. Orsolya: The genus Portulaca as a suitable model to study the mechanisms of plant tolerance to drought and salinity; Urcan C. Delia Elena: Effect of different postharvest dehydration conditions of wine grapes cv. Malvasia moscata (Vitis vinifera L.); Hitter T. Timea: The evaluation of therapeutic horticulture effects on urinary tryptophan metabolites by using the spectrofluorimetric analysis in a group of students; Ciobanu I. Ioana: he Influence of Storage Conditions on the Biochemical Composition and Morphology of Dahlia Tubers) it is evident that all of them have relevant contribution per doctoral study domain Horticulture.

The indicator is fulfilled.

Performance Indicator *B.3.1.2. *The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious international events (organized in the country or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1.*

During evaluation period PhD students disseminated their research results through participation in international conferences both in the country and abroad. According to Internal evaluation report and Annex B.3.1.2. 68 conferences related to the 28 theses defended during the reporting period were registered, so the report is 2.3.

The indicator is fulfilled.

Standard B.3.2. The Doctoral School engages a significant number of external scientific specialists in the commissions for public defense of doctoral theses in the analyzed domain.

Performance Indicator *B.3.2.1. *The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.*

According to Internal evaluation report and Annex B.3.2.1., in the field of Horticulture during evaluation period there were not found as official external referents, from other higher education or research institutions, at more than two thesis conducted by the same doctoral advisor in the same year. It is worth pointing out that there were three international cotutelles during evaluation period.

The indicator is fulfilled.

Performance Indicator *B.3.2.2. *The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the*

doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed.

In the last five years in the field of Horticulture, 28 theses have been presented. According to Annex B3.2.2. the ratio between the number of doctoral thesis allocated to a particular scientific specialist from another higher education institution and the number of doctoral thesis in the field of Horticulture is less than 0.3.

The indicator is fulfilled.

Domain C. QUALITY MANAGEMENT

Criterion C.1. Existence and periodic implementation of the internal quality assurance system

Standard C.1.1. There are an institutional framework and procedures in place and relevant internal quality assurance policies, applied for monitoring the internal quality assurance.

Performance Indicator C.1.1.1. *The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD.*

At the level of IOUSD there is a procedure for the evaluation and internal monitoring of the evolution of doctoral school. This procedure includes the evaluation of the following criteria: the scientific work of PhD supervisors and PhD students, the infrastructure and logistics necessary to carry out the research activity, as well as the procedures and rules on the basis of which doctoral studies are organized, the content of the doctoral studies program – analysis of learning outcomes, modalities and specific tools to increase the competitiveness and visibility of the doctoral research activity, including the use of financial resources for this purpose, other aspects specific to the activity of doctoral schools. The assignment of student number is based on the scientific performance of the PhD supervisors, on the analysis at the doctoral school level, on the presentation files of the PhD supervisors. The annual evaluation of the activity of PhD supervisors and PhD students is visible inside of Intranet system. The structures responsible for monitoring internal quality assurance are the Commission for Quality Assessment and Assurance at the level of doctoral schools and the Commission for Quality Assessment and Assurance) at university level, which also includes a representative of doctoral schools.

The indicator is fulfilled.

Performance Indicator *C.1.1.2. *Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing to identify their needs, as well as their overall level of satisfaction with the doctoral study program in order to ensure continuous improvement of the*

academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented.

PhD students provide feedback to PhD supervisors through regular meetings. PhD students assess the level of satisfaction with the learning environment by completing an online questionnaire through their institutional account. According to the statements of PhD students and graduates, they have the possibility and obligation to fill surveys to IOUSD to identify their needs and level of satisfaction and ensure continuous improvement of academic and administrative processes. PhD students do not have the opportunity to evaluate their supervisors anonymously.

The indicator is fulfilled.

Criterion C.2. Transparency of information and accessibility of learning resources

Standard C.2.1. Information of interest to doctoral students, future candidates and public interest information is available for electronic format consultation.

Performance Indicator C.2.1.1. *The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:*

All regulations, methodologies and principles of the organisation and conduct of doctoral studies, as well as other information of public interest, are available on the website of the University.

The indicator is fulfilled.

Standard C.2.2. The IOSUD/The Doctoral School provides doctoral students with access to the resources needed for conducting doctoral studies.

Performance Indicator C.2.2.1. *All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.*

According to the Internal evaluation report and the statements of PhD students and graduates, all doctoral students have the possibility to access a platform with international academic databases related to the field of Horticulture by confirming the public IP addresses of the subscriber institution. Access to platforms is free and can also be used outside the institution.

The indicator is fulfilled.

Performance Indicator C.2.2.2. *Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.*

According to the statements of PhD students and graduates, doctoral students have the possibility to verify the degree of similarity with other scientific results that they are preparing through the plagiarism detector software www.sistemantiplagiat.ro.

The indicator is fulfilled.

Performance Indicator C.2.2.3. *All doctoral students have access to scientific research laboratories or other facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures.*

All PhD students have free access to scientific research laboratories and experimental fields according to their statements. The Regulation of the Institute of Life Sciences (ISV) allows access to PhD students and regulates their scientific research activities carried out under the guidance of the PhD supervisor or other teachers and researchers.

The indicator is fulfilled.

Criterion C.3. Internationalization

Standard C.3.1. There is a strategy in place and it is applied to enhance the internationalization of doctoral studies.

Performance Indicator *C.3.1.1. *IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.*

USAMVCN has international agreements with 38 universities abroad and is a signatory to the Erasmus Charter and has 154 active agreements with 57 countries. In the field of Horticulture 10 PhD students enrolled during the reporting period and benefited from Erasmus internships, 1 PhD student received DBU scholarship. A number of 11 PhD students (37.9%) participated in other types of research courses, internship training courses or conferences, with a total number of 28 participations. It is a very commendable fact that all students' Erasmus mobilities have lasted from three up to 14 months.

The indicator is fulfilled.

Performance Indicator C.3.1.2. *In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.*

From Internal evaluation report it can be seen that in the field of Horticulture during evaluation period three theses were created and defended in international cotutelle with the universities from Italy and Spain. Six lectures were given by the international experts.

The indicator fulfilled

Performance Indicator C.3.1.3. *The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees etc.).*

USAMVCN participated in several international exhibitions and fairs during evaluation period in which it promoted the academic offer of the Doctoral School. . This promotion could be more effective on national and international level, because the lack of candidates from other universities is noticeable.

The indicator is partially fulfilled.

IV. SWOT Analysis

Strengths:	**Weaknesses:**
- tradition - existence of good research infrastructure - compliance with studies abroad	- lack of better marketing and promotion abroad - shortage of invited professors included in study program - some supervisors are overloaded with work
Opportunities:	**Threats:**
- international cooperation and participation in international consortiums - better cooperation with former students	- a number of similar studies inside the country and in the surrounding countries - new trends in the labour market

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (*, C)	Performance indicator	Judgment	Recommendations
1.	A	1.1.1.	fulfilled	
2.	A	1.1.2.	fulfilled	
3.	A	1.2.1.	fulfilled	
4.	A	1.2.2.	fulfilled	
5.	A	1.3.1.	fulfilled	
6.	A	1.3.2.	fulfilled	
7.	A	1.3.3.	fulfilled	
8.	A	2.1.1.	fulfilled	
9.	A	3.1.1.	fulfilled	
10.	A	3.1.2.	fulfilled	
11.	A	3.1.3.	fulfilled	
12.	A	3.1.4.	fulfilled	
13.	A	3.2.1.	fulfilled	
14.	A	3.2.2.	fulfilled	
15.	B	1.1.1.	fulfilled	
16.	B	1.2.1.	fulfilled	
17.	B	1.2.2.	fulfilled	
18.	B	2.1.1.	fulfilled	
19.	B	2.1.2.	fulfilled	
20	B	2.1.3.	fulfilled	
21.	B	2.1.4.	fulfilled	
22.	B	2.1.5.	fulfilled	
23.	B	3.1.1.	fulfilled	
24.	B	3.1.2.	fulfilled	
25.	B	3.2.1.	fulfilled	
26.	B	3.2.2.	fulfilled	
27.	C	1.1.1.	fulfilled	
28.	C	1.1.2.	fulfilled	
29.	C	2.1.1.	fulfilled	
30.	C	2.2.2.	fulfilled	
31.	C	2.2.3.	fulfilled	
32.	C	3.1.1.	fulfilled	
33.	C	3.1.2.	fulfilled	
34.	C	3.1.3.	partially fulfilled	Promotion could be more effective on national and international level,

				because it is noticeable the lack of candidates from other universities.

VI. Conclusions and general recommendations

- *There is a noticeable high level of satisfaction and harmony between PhD students and their supervisors.*
- *The supervisors are very flexible and they adapt to each PhD candidate as much as time allows them and the PhD students are satisfied with their availability.*
- *Some supervisors are very active and productive in the international scientific community.*
- *Research work of some supervisors could obtain more focus and visibility.*
- *Laboratories are well equipped, which enables supervisors and PhD students quality science research.*
- *To attract foreign students English language should be used more generally.*
- *Promotion of Doctoral School could be more effective on national and international level.*
- *PhD students should have opportunity to evaluate anonymously their supervisors.*
- *There is no systematic collection of feedback from former students and their employers.*

In Osijek, Croatia, 12/11/2021