

The External Evaluation Report of a Doctoral Study Domain

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I. Introduction¹

External evaluation report was drafted for evaluation of doctoral university studies , study domain Horticulture at University of Craiova 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 July 5th-9th, 2021. Due to the ongoing pandemic situation, evaluation in person was not possible and my participation was online via ZOOM paltform.

Members of the Expert Panel for domain Horticulture:

- Prof.univ.dr. Dorel Hoza, coordinator
- Prof.univ.dr. Mato Drenjančević, international expert
- Maria Maruni Codrea, PhD student

The University of Craiova, an institution organising doctoral study programmes, complies with the provision of art. 158 par. (2) of Law 1/2011 and for the proper conduct of this activity a specific strucutre, IOUSD, was established. The University doctoral studies at IOUSD Craiova are carried out throught the 10 Doctoral Schools being divided into fields of doctoral or interdisciplinary university studies.

II. Methods used

Methods and tools used in the external evaluation process:

- Self-evaluation report of the doctoral study domain Horticulture and its Annexes;
- analysis of documents, data and information available on the IOSUD/Doctoral School website, in electronic format;
- meeting with representatives of the institution and of 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 persons in charge of the research centers and laboratories within the doctoral study domain;
- meeting with the academic staff corresponding to the doctoral study domain;

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



- meeting with the members of Ethics Commission;
- meeting with employers of the graduates in the doctoral study domain Horticulture;
- meeting with the Doctoral School Council;
- meeting with doctoral students in the doctoral study domain Horticulture;
- meeting with the graduates of the doctoral study domain Horticulture;
- information about research infrastructure available on delivered video presentation clips.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

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

Standard A.1.1. The institution organizing doctoral studies (IOSUD) has implemented the effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies.

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.*

At the level of IOSUD and at the level of the doctoral school, specific regulations exist and are applied. In the institutional regulation for the organisation and functioning of the doctoral study programmes of IOSUD - University of Craiova, under articles 40 – 44, the stages and methodology for completing doctoral studies are presented in detail.

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 regulations of the Doctoral School include criteria, procedures and mandatory standards for the aspects specified in art. 17, paragraph (5) of the Government Decision no. 681/2011 on the approval of the Code of Doctoral Studies, with subsequent amendments and completions.

Doctoral School regulations and graduation regulations establish mandatory criteria, procedures and standards for the affiliation of new PhD supervisor members, regulations regarding the way in which a PhD supervisor may be removed from the doctoral school, the ways to prevent fraud in scientific research, including plagiarism. In order to support PhD students, the Doctoral School Council has developed a guide and rules for writing PhD theses in the field of Horticulture.

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.

The Student Records Information System of the University of Craiova records and processes the data of students in all education cycles, namely the first, second and the third cycle - Doctoral studies and postgraduate students. After enrolling, any change in the status of the PhD student is recorded in the electronic records at the level of each secretariat of the faculty within which the Doctoral School operates. The secretary appointed for the processing of the PhD students' data uploads the data on the exams and submitted research reports in the Student Records, as well as on interruptions, extensions, transfers from one supervisor to another, payment of tuition fees, public defence of the thesis. At the request of MEC or other competent authorities, the Student Records Information System of the University of Craiova generates annual or current statistical data on the PhD students of IOSUD - University of Craiova. The Office of Doctoral Studies of IOSUD - University of Craiova, based on the Ministerial Order on conferring the PhD title, verifies all data on the schooling of PhD students in the Student Register and generates tables with graduates of doctoral studies based on which PhD diplomas are issued. Accessing and processing information in the database is based on a password and is done only by authorized personnel. To access these records and for other information of general interest, each student has a password generated by the Information System. At the level of IOSUD there is an adequate information system for the record of PhD students regarding their academic career.

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.

IOSUD - University of Craiova uses the software www.sistemantiplagiat.ro as a tool in verifying the originality of the scientific works of doctoral students, without basing their analysis and conclusions exclusively on the data generated by the program to verify the authenticity. This software is recognised by the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU), according to the provisions of art. 2 of the MEN Order no. 3485 of 4.04.2016. The procedure by which the authenticity of a PhD thesis is verified exist 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.

The financial resources necessary to carry out the doctoral activity are provided by the government for the budgeted places and by tuition-fee paying PhD students. In addition to these financial resources, PhD supervisors and PhD students are involved in attracting additional funds through research contracts, funds used to purchase equipment, materials, and cover travel expenses in relation to scientific events attendance, etc. In the field of Horticulture, the PhD supervisors have been involved in 9 research projects in the last 5 years. One of the research projects is ongoing at the time of submission of the Self-evaluation report, 6 of the projects have been obtained in the last 5 years by PhD supervisors as directors or project managers.

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 Self-evaluation report during the evaluated period there was more than 20% of PhD students who were members of the research teams, together with the PhD supervisors, benefiting from all the rights deriving from their membership in the research team or benefited from other material support.

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.).*

Accordin to Self-evalutaion at least 10% of the total amounts related to doctoral grants obtained by the university, based on the institutional contract and tuition fees collected from tuition-fee paying PhD students were used to reimburse the training expenses of PhD students (participation in conferences, summer courses, internships abroad, publication of papers, or other specific forms of dissemination). This fact was also confirmed by the PhD students and graduates.

The indicator is fulfilled.

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.



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 PhD students have at their disposal good material basis, both in the form of experimental fields and laboratory equipment. The University of Craiova has established the Research Hub in Applied Sciences (INCESA) with well-equipped laboratories. On several locations there are experimental fields with impressive 3086 ha surface.

According to students and graduates statements the research infrastructure is very well 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.*

The Doctoral School of Animal and Plant Resources Engineering – in the field of Horticulture counting 7 PhD supervisors who are qualified and have the necessary experience to carry out the doctoral study programme and over 50% of them meet the CNATDCU minimum.

There is a big difference in scientific activity and published papers in journals indexed in Web of Science between some scientists.

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.*



Out of 7 PhD supervisors in the field of Horticulture, 6 are full-time teachers at IOSUD (85.71%) and 1 PhD supervisor is an associate professor (retired, but continuing his activity based on the approval of the Senate of the University of Craiova).

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 subjects in the curriculum of the advanced university studies programme related to the field of Horticulture are taught by academics having the status of PhD supervisor/habilitated with proven expertise in the field of the subjects they teach. In the case of the subjects that aim to develop transversal competences or that are based on specialised knowledge there is a possibility that course coordinator invites other full-time university teachers or specialists from outside the higher education and research entities. All supervisors have the necessary skills according to their CVs. According to the PhD students' statements supervisors are good experts and researchers in their field and they collaborate very well.

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 programs³ does not exceed 20%.*

From Annex A.3.1.4.a. and page 13 of Self-evaluation report, field of Horticulture, it can be seen that out of seven supervisors, none exceeds more than twelve PhD students. Over the years the number of students per supervisor changes. It is visible that some individual supervisors are overloaded with PhD students in comparison with others. The share of PhD supervisors who coordinate at the same time more than 8 PhD students, but not more than 12, to which are added the granted extension periods, exceeds 20%, being 28.57% in the academic year 2019-2020 and 42.85% in the academic year 2020-2021. This situation occurred due to the restrictions imposed by the COVID-19 pandemic and should decrease in the coming years in which the Doctoral School invests efforts. According to PhD students' and graduates statements supervisors are available for all kinds of questions and help. It is visible that some individual supervisors are overloaded with PhD students in comparison with others, but if the distribution of students per supervisor was equal the problem would be solved.

The indicator is partially fulfilled.

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.



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.*

Doctoral supervisors' research activity is carried out in their field of expertise and the results are published in national and international journals. Most PhD supervisors in the field of Horticulture have at least 5 ISI publications, indexed in Web of Science, or other achievements with relevant significance for the field, they are members of the scientific boards of international publications or events or in the boards of professional associations, over 50% of PhD supervisors meet the CNATDCU minimum standards. It is noticeable that some supervisors do not publish papers in journals with an impactor factor. Reason for that could be the fact that focus of they research is of national importance and of local interest. On the other hand, some supervisors have a large number (more that 40) of papers published in high-ranking journals and at the same time well established international cooperation. In order for all supervisors to reach their research level it will be necessary to focus more on international co-opration projects.

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.*

The PhD supervisors affiliated with the IRVA Doctoral School – in the field of Horticulture continue to be scientifically active even after receiving the right to supervise PhD theses or after the habilitation examination. Summarazing the score from the report for the last five years, the research activity of doctoral supervisors is constant over the time and the minimum score is satisfied by all supervisors in the Horticulture field. For some supervisors quality of research and the publications is reflected in small number of citations and could obtain more focus and visibility, especially compared to the best supervisors, with large number of publications and citations, which achive European standards.

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 statements of the teaching staff the IRVA Doctoral School has the capacity to attract a larger number of candidates than the number of assigned places financed from the state budget. Candidates graduating from the University of Craiova, as well as higher education graduates from other institutions in the country or abroad, entered the competition for admission to doctoral studies in the field of Horticulture. The ratio between the number of graduates of masters' programs of other higher education institutions, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget is 0.29. 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 1.56.

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 criteria was found to be clear and open. Selection criteria include: candidates' prior academic performance, their interest in scientific research, publications in the field and a research proposal. An interview with the applicant as a mandatory part of the doctoral admission procedure exist.

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 admission⁴ does not exceed 30%.*

According to Self-evaluation report and Annex 18 D IOSUD the dropout rate of doctoral students does not exceed 30%. 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 advanced university studies programme includes 5 subjects in the curriculum, relevant for the PhD students' training in scientific research, out of which one discipline is intended for the in-depth study of research methodology and statistical data processing - Methodology of scientific research in Agronomic Sciences.

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.*

The advanced training programme, related to the doctoral programme in the field of Horticulture, includes a subject Ethics and academic integrity dedicated to ethics in scientific research and intellectual property with well-defined topics.

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 activities⁵.*

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.

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. Beside course coordinators there is a possibility that other invited full-time university teachers or specialists from outside the higher education and research entities in the country or abroad may teach.

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.*

According to PhD students and graduates' statements throughout the doctoral training programme, PhD students in the field of Horticulture benefit from the guidance of functional advisory committees, through regular meetings, complementary to that offered by the PhD supervisor. They also receive advice on the organization of experiments or on carrying out laboratory analyses according to the specificity of each topic. PhD students should be more focused on their independent project work, which should start at the very beginning of the programme. Thesis topic should be defined from the first day of the enrolment/a part of the selection process.

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.*

Within the field of doctoral studies in Horticulture, the ratio between the number of PhD students and the number of academics/researchers who provide guidance is 2.39:1.

The indicator is fulfilled.

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

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 review of five papers (Călugăru Iulian Viorel: The concept of „Road of the wine” in Oltenia and the plus of value for a touristic destination; Florin-Cătălin Croitoru: Behavior in culture at Oprișor, vine varieties, for black grapes, from Western European



vineyards; Mihaela Bizera: Identification of black elderberry (*Sambucus nigra* L.) valuable biotypes from the spontaneous flora of Oltenia region; Felicia Cornescu: Variability in physical and chemical characteristics of Cornelian cherry fruits (*Cornus mas* L.) from Romanian Oltenia region's spontaneous flora and role of the climatic conditions; Tărășescu Florina: Research on the influence of crown shapes on growth and fruiting of apple cultivars in the superintensive system; Dămureanu Andreea Ionela: The influence of climatic factors on the vegetation development phases of peach species) it is evident that all of them have relevant contribution per doctoral study domain Horticulture. I think it should be avoided that PhD student is not first or coresponding author as it is in the case of Felicia Cornescu. If a PhD student is submitting their own work then he/she should be the first author in the paper and that should make them the corresponding author by default.

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.

Research results were presented by PhD students at international scientific events and each of them participating with at least one paper in scientific sessions of the country's faculties or in international events. The ratio between the number of scientific symposium participation and PhD graduates is at least 1.79 (43 presentations and 24 graduates).

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.

Concerning the number of theses coordinated by a supervisor of the Doctoral School and assigned to a reviewer from outside IOSUD, there were no situations where a professor participated in more than 2 committees per year for the same scientific supervisor.

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.



According to Self-evaluation report and Annex B.3.2.1.a for doctoral field Horiculture during the evaluation period the ratio between the number of PhD theses assigned to a certain scientific reviewer from another higher education institution than the one in which the PhD thesis is defended and the number of PhD theses defended in the same doctoral field within the doctoral school is 0.29.

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.*

The management of University of Cariova is constantly concerned with the continuous improvement of the organization and execution of activities, feedback, with priority on the main dimensions: teaching, scientific research and social insertion which has been confirmed according to the statements of PhD students and graduates. The scientific activity of the PhD supervisors in the field of Horticulture is evaluated periodically, as well as the infrastructure and facilities necessary to carry out the research activity, the procedures and norms on the basis of which the doctoral studies are organized, the scientific activity of the PhD students, as well as the advanced university studies programme of PhD students.

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.*

During the doctoral training programme, feedback mechanisms are implemented in order to identify the PhD students' needs, as well as their level of satisfaction with the doctoral study. According to the statements of PhD students and graduates, they have the possibility and obligation to fill in different types of surveys to IOUSD can identify their needs and level of satisfaction to ensure continuous improvement of academic and administrative processes.

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.*



The Doctoral School through IOSUD web site ensures transparency of all public interest information where data of interest to doctoral students, professors and other interested persons are presented. On this website you can find all the necessary information about organization and functioning of Doctoral School.

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 Self-evaluation report and the statements of PhD students and graduates, all doctoral students have possibility for free access to a platform with international academic databases related to the field of Horticulture.

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 the statements of PhD students and graduates, doctoral students have the possibility to check the scientific papers 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.*

According to the Selef-evaluation report and the statements of PhD students and graduates, scientific research laboratories or other facilities are available for their scientific work. This is regulated with internal rules of Doctoral School.

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.*

There were 43 mobilities to scientific congress and symposiums and 20 external mobilities carried out during the period under review. All of these 20 mobilities were carried out at the level of the European Higher Education Area. Based on this, it is clear that more than 35% of the PhD students have completed a training period abroad or participation at international scientific symposiums. From discussion with PhD students and graduates, lack of longer mobilities is noticeable. Reason for that could be the fact that some of them are employed and some of them even do two jobs in order to be able to study. Internationalization could be the key for improving the international connections and visibility in European Research Area.

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.*

University of Craiova assists the engagement of external experts invited to deliver lectures for PhD students for which there is a rulebook. There was no co-tutelage during evaluation period. I recommend using English, which is required for lifting the research level and better establishment of international collaborations.

The indicator is partially 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.).*

The internationalisation of the activities within the doctoral studies programme is supported by the participation in educational fairs for attracting international PhD students, integration of international experts to the advisory committees or the Thesis defence committees. University of Craiova has published Presentation Guidebook which contains information in Romanian and English and about the Doctoral



School IRAV – Horticulture. In regard to well equipped laboratories and very good research experimental fields the potential for the arrival of international doctoral students is big. English should be used more generally. This is required to get the international perspective and to work towards excellence.

The indicator is partially fulfilled.



IV. SWOT Analysis

<p><u>Strengths:</u></p> <ul style="list-style-type: none">- good research infrastructure and experimental fields- human capacities- compliance of studies with studies abroad	<p><u>Weaknesses:</u></p> <ul style="list-style-type: none">- lack of courses in English- some individual supervisors are overloaded with PhD students in comparison with others
<p><u>Opportunities:</u></p> <ul style="list-style-type: none">- international cooperation and participation in international consortiums- better cooperation with former students	<p><u>Threats:</u></p> <ul style="list-style-type: none">- a number of similar studies inside the country and in the surrounding countries- new trends in the labor market

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (*, C)	Performance indicator	Judgment	Recommendations
1.	A	1.1.1.	<i>fulfilled</i>	
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.	partially fulfilled	It is visible that some individual supervisors are overloaded with PhD studnets in comparison with others, but if the distribution of students per supervisor was equal the problem would be solved.
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.	partially fulfilled	Too little use of English, which is required for lifting the research level and better establishment of international collaborations.
34.	C	3.1.3.	partially fulfilled	In regard to well equipped laboratories and very good research experimental fields, the potential for the arrival of international doctoral students is big. English should be used more generally. This is required to get the international perspective and to work towards excellence.



VI. Conclusions and general recommendations

- *Laboratories and experimental fields are well equipped, which enables supervisors and PhD students quality science research.*
- *There is a noticeable high level of satisfaction and harmony between students and 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.*
- *Supervisors are dedicated and open-minded, but they have to widen their horizon to ensure research level is of European standard.*
- *Some supervisors are having good international connections. However, this is a point where other supervisors should improve significantly.*
- *There is a need to use English more generally. This is required to get the international perspective and to work towards excellence.*
- *Research work could obtain more focus and visibility.*
- *More support should be given for international stays.*
- *Supervisors understand knowledge level of each PhD student, but they need some instructions how to follow them. For that purpose I suggest some lectures for supervisors in order to educate them about different skills, especially how to follow each PhD student throughout the whole education process.*
- *If a PhD student is submitting their own work then he/she should be the first author in the paper and that should make them the corresponding author by default.*

In Osijek, Croatia, 22/07/2021