

The External Evaluation Report of a Doctoral Study Domain ZOOTECHNICS University of Agricultural Sciences and Veterinary Medicine of Iasi

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I. Introduction

1. The objective of the external evaluation: *periodic evaluation*

Visit period: 20 – 24 September 2021

Doctoral field: Zootechnics

Composition of the ARACIS commission that performs the evaluation:

Coordinator: Prof. univ. Dr. Livia VIDU

International expert: Prof. univ. dr. Petr KONVALINA

PhD student: Maria Maruni CODREA

2. Details about the doctoral school to which the evaluated field of doctoral studies belongs

Brief history

IOSUD is legally represented by the University of Agronomic Sciences and Veterinary Medicine of Iași (USAMV). The head of the institution (USAMV) that legally represents IOSUD is the Rector of USAMV (GD 621/2011).

The beginnings of Iași agricultural education date from the period 1842 - 1848, when the first great Romanian agronomist, Ion Ionescu from Brad, presented the first courses of agriculture at the Mihăilean Academy in the capital of Moldavia.

The year 1912 represents the official date of establishment of agronomic education in Iași, when, by the Law of Higher Education published in the Official Gazette in March, the functioning of the Department of Agricultural Sciences within the Faculty of Sciences of the University of Iași is established (Annex I.1). Starting with 1933, the Agricultural Sciences Section is transformed into the Faculty of Agricultural Sciences of the University of Iași, based in Chisinau (Annex I.2), whose material base consisted of buildings, farms, vineyards and nurseries, including experimental fields. from Ezăreni, Adamachi and the Copou zootechnical point from Iași county. In 1940, as a result of the Soviet ultimatum for the implementation of the Ribentrop-Molotov Treaty, Romania lost Bessarabia, so the Faculty of Agricultural Sciences was abolished. The teaching staff and a part of the material goods were transferred to Iași, where, by Law no. 922 of October 17, 1941, the Faculty of Agronomy at the University of Iași is re-established.

In 1948 is the Agronomic Institute of Iași established with the Faculty of Agrotechnics (Annex I.3). The Agronomic Institute from Iași diversifies its educational offer by establishing two new faculties (HCM no. 1056 / 02.10.1951), namely, the Faculty of Horticulture and the Faculty of Animal Husbandry (Annex I.4). In 1961, the Faculty of Veterinary Medicine (HCM no. 428 / 23.05.1961) was established, which had an modern material base for the respective period and within which outstanding personalities of veterinary higher education in Romania carried out their activity (Annex I.5).

Under this form of organization, with four distinct faculties, the institution operates until 1986, when economic and political conditions in Romania required the return to a single faculty. In 1990, the activity in the Agronomic Institute was reorganized and the four faculties (Agriculture, Horticulture, Animal Husbandry and Veterinary Medicine) were reorganized and re-

established, which, with various transformations and additions, still function today.

Starting with 2001, the official name of the institution becomes the "Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine in Iași.

After 1990, USAMV from Iași expanded its educational offer. Nowadays, the educational offer was completed with 23 master's programs (Annex I.7) and 29 specializations of doctoral studies, which belong to the four basic fields: Agriculture, Horticulture, Zootechnics and Veterinary Medicine (Annex I.8).

Institutional context

USAMV from Iași is the legal representative of IOSUD. The "Ion Ionescu de la Brad" University of Agronomic Sciences and Veterinary Medicine in Iași is a Romanian legal entity, integrated in state higher education and operates in accordance with Romanian laws and the University Charter, as well as with the principles of the European Higher Education Area.

The study programs that take place within USAMV in Iași operate, starting with the academic year 2005-2006, on the new structure of study cycles established by the Bologna Process (Annexes: I.6; I.7; and I.8). USAMV Iași was certified by the Romanian Agency for Quality Assurance of Higher Education with the qualification "High degree of confidence" (27.09.2018) for the period 2018-2023 (Annex II.1.1.).

Within IOSUD-USAMV Iași there are two doctoral schools: the Doctoral School of Engineering Sciences with four doctoral fields (Agronomy, Zootechnics, Horticulture, and Engineering and Management in Agriculture and Rural Development) and the Doctoral School of Veterinary Medicine, with the doctoral field Veterinary Medicine (Annex II. 40).

The general framework for the organization and functioning of the Doctoral School of Engineering Sciences is established by the provisions of GD 681/2011 regarding the approval of the Code of doctoral studies, with subsequent amendments and completions, the IOSUD-USAMV regulation from Iași (Annex II.01), the doctoral school regulation SDSI (Annex II.02).

Number of doctoral supervisors and doctoral students

A number of 28 doctoral supervisors, holders within IOSUD-USAMV from Iași, carry out their activity at the Doctoral School of Engineering Sciences (Annex II. 79). All doctoral supervisors from SDSI have legally obtained the right to conduct a doctorate, meet the performance criteria provided by the legislation in force (Annexes: II 89; II 90), have the teaching degree of professor and are holders within USAMV from Iași (Annexes: II 79; II 80). The doctoral supervisors within SDSI guide the doctoral students only in the field for which they obtained this right.

During the evaluated period, the number of doctoral students enrolled at IOSUD-USAMV in Iași registered a progressive evolution, from 156 students (of which 2 to fee-paying studies) in the 2016/2017 academic year, to 198 students (2 for paid studies) in the academic year 2019/2020, which represented an increase of 21.2% (REI pg. 21).

3. Details about the evaluated doctoral university field of study

Short history

Until 2016, the doctoral studies at USAMV in Iași were organized in a single Doctoral School, established according to GD 411/2011, for four doctoral fields: Agronomy, Horticulture, Zootechnics, and Veterinary Medicine. Since 2016, within IOSUD-USAMV from Iași there are two doctoral schools: the Doctoral School of Agronomy, Horticulture and Zootechnics, and the Doctoral School of Veterinary Medicine, established in accordance with the legislation in force (art. 158 paragraphs (1) and (2) of the National Education Law No. 1/2011 and GD 681/2011 on the approval of the Code of doctoral studies, with subsequent amendments and completions).

The Doctoral School of Agronomy, Horticulture and Zootechnics, was authorized for temporary operation on 29.09.2016 by MENCS Order no. 5382, published in the Official Gazette no. 925 / 17.11.2016. By Senate Decision no. 8 / 28.09.2016, the Doctoral School of Agronomy, Horticulture and Zootechnics, (SDAHZ) became the Doctoral School of Engineering Sciences (SDSI) (Annex II. 03).

Institutional context:

The mission of the Doctoral School of Engineering Sciences is in accordance with that of IOSUD, in accordance with the USAMV Strategy in Iași and defined in the University Charter as that of training highly qualified specialists with skills appropriate to labor market requirements in the fundamental field of hierarchy (DFI) "Engineering Sciences", branch of science (RSI) "Engineering of plant and animal resources", fields of hierarchy (DII): Agronomy, Horticulture, Zootechnics, and Engineering and Management in Agriculture and Rural Development. The SDSI mission aims at the professional and scientific training of doctoral students.

The doctoral study programs in the field of Zootechnics are based on the following principles: quality professional training of doctoral students in the doctoral field of Zootechnics, equal opportunities and the principle of non-discrimination, university autonomy exercised responsibly, quality assurance of doctoral studies and continuous evaluation of results-based performance, ensuring the coherence of the doctoral study program at national and EU level, transparency about the organization, financing and results of the Ph.D. study program.

Number of doctoral supervisors and students:

In the period 2016-2020, 8 doctoral supervisors were active in the doctoral field of Zootechnics (having doctoral students in internship and / or finalization of theses), all being affiliated to SDSI at the time completion of the internal evaluation report (Annex A.3.1.).

The number of candidates admitted to doctoral studies in the field of Zootechnics in the period 2016-2020 was 38 doctoral students, of which 13 (34.2%) to the state budget on a regular basis, and 25 (65.8%) to the budget, but with a reduced frequency (Annex B.1.1.). Out of the total number of enrolled doctoral students, a number of 7 doctoral students withdrew from doctoral studies or were expelled, which represents a dropout rate of 18.4% (Annex B.1.3.). The number of doctoral students who obtained the doctorate in the period subject to evaluation is 18, of which 2 received the doctorate in 2016, 3 in 2017, 6 in 2018, 5 in 2019 and 2 in 2020 (Annex B.2.6.).

II. Method used

In order to elaborate the external evaluation report of the ZOOTECHNICS field within the Doctoral School of Engineering and Management of Plant and Animal Resources from USAMV Iași, the commission of expert evaluators used methods and tools according to the Guide for the process of periodic external evaluation of doctoral studies.

- Analysis of the Internal Evaluation Report of the evaluated doctoral university field and its annexes. The internal evaluation report is structured as follows:
 - ✓ Part 1: Institutional capacity of the „Ion Ionescu de la Brad” University of Agricultural Sciences and Veterinary Medicine of Iași.
 - ✓ Part 2: Criteria, standards and performance indicators for the accreditation and periodic evaluation of the domain of doctoral studies.
- Other sources of information such as the website of USAMV Iași
- Onsite visit of USAMV Iași (according to the calendar of the periodic evaluation visit - September 23, 2021) – only evaluators from Romania (international experts got information online):
 - ✓ classrooms; reading rooms for students (Library);
 - ✓ Laboratories - Animal Nutrition and Feeding Laboratory, Physiology Laboratory, Milk and Meat Quality Control Laboratory;
 - ✓ Zootechnical Research Center; Microproduction stations for processing milk, meat, bakery products and brewing; Cattle farm from Reditu; Center for Molecular Biology Laboratories at the Faculty of Veterinary Medicine;
 - ✓ Research centers (Research Institute for Agriculture and Environment, Plant and Soil Analysis Laboratory);
 - ✓ student dormitories, canteen and sport base on the USAMV Iași campus.
- Meetings / discussions took place in accordance with the visit schedule attached and agreed by the team of evaluators and the management of USAMV Iași. Considering the hybrid way in which the periodic evaluation of the doctoral field is performed, the discussions took place online, being registered and located on the ARACIS cloud. The meetings took place in accordance with the program annexed to this report.

This is it meeting / discussions with:

 - ✓ doctoral students in the field of evaluated doctoral university studies;
 - ✓ graduates in the field of doctoral studies evaluated;
 - ✓ employers of graduates in the field of doctoral studies evaluated;
 - ✓ management of the Doctoral School;
 - ✓ doctoral supervisors in the field of evaluated doctoral university studies;
 - ✓ representatives of the various structures of IOSUD / Doctoral School (Doctoral School Council, the Quality Evaluation and Assurance Commission, the Quality Assurance Department, the Ethics Commission (including with the students representing these structures)).

Following the analysis of the Internal Evaluation Report and the annexes to the report, it was not necessary to request additional documents for the construction of the evaluation experts.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

The Doctoral School of Engineering Sciences within IOSUD-USAMV from Iași is structured and operates according to the legislation in force.

Within the Doctoral School of Engineering Sciences, doctoral university studies are organized and carried out in the doctoral fields: Agronomy, Horticulture, Zootechnics and Engineering and Management in Agriculture and Rural Development.

The doctoral university study programs in the fields related to the Doctoral School of Engineering Sciences are carried out in a unitary way, respecting the quality standards and promoting the principles of interdisciplinarity.

The doctoral studies in the field of Zootechnics are affiliated to the Faculty of Animal and Food Resources Engineering and represent the higher cycle of professional training, whose purpose involves the training of highly qualified specialists with superior skills in the field of Zootechnics.

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.

The existence of regulations, procedures and other specific documents for the organization of doctoral studies according to the legal provisions was analyzed.

The Doctoral School of Engineering Sciences-SDSI (initially called the Doctoral School of Agronomy, Horticulture and Zootechnics) was established in accordance with the legislation in force (art. 158 paragraphs (1) and (2) of the National Education Law no. 1/2011 and Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies, with subsequent amendments and completions) by the Decision of the USAMV Senate from Iași no. 8 / 28.09.2016 (Annex II. 03) and operates according to the norms in force. The general framework for the organization and functioning of SDSI is established by GD 681/2011 regarding the approval of the Code of doctoral studies, with subsequent amendments and completions, the IOSUD-USAMV Regulation from Iași (Annex A.1.1.) And the Regulation of the Doctoral School of Engineering Sciences (Annex A.1.2.).

The Doctoral School of Engineering Sciences organizes and carries out doctoral university study programs in the doctoral fields: Agronomy, Horticulture, Zootechnics, Engineering and Management in Agriculture and Rural Development.

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:

a) the internal regulations of the Doctoral School;

There is the Regulation of the Doctoral School of Engineering Sciences (Annex A.1.2.), Approved in the CSUD meeting and by the USAMV Senate from 28.09.2016 and available on the website Regulament_SD_SI_2019.pdf (uaiasi.ro) (REI pg. 42).

b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;

The elections for CSUD and SDSI within IOSUD-USAMV from Iași are carried out according to the Methodology for organizing and conducting the elections of management structures and functions in USAMV Iași (Annex A.1.3.) Validated by Senate Decision no. 6 / 24.10.2019 (Annex A.1.4.) And the Procedure regarding the conduct of the elections in the mandate 2020-2024 (Annex A.1.5.) Validated by the Senate Decision no. 7 / 24.10.2019 (Annex A.1.6.).

The elections for the position of CSUD director are carried out according to the specifications of the Methodology for organizing and conducting the public competition for the position of Director of the Doctoral Studies Council (Annex A.1.12.), The Regulation for organizing and conducting elections in management structures and functions. of IOSUD-USAMV from Iași (Annex A.1.13.) and the Procedure regarding the development of the public competition for the position of director of CSUD (Annex A.1.14.).

Evidence: SDSI and CSUD election documents (Annexes: A.1.7. ; A.1.8. ; A.1.9. ; A.1.10. ; A.1.11.). CSUD director election documents (Annexes: A.1.15. ; A.1.16. ; A.1.17. ; A.1.18. ; A.1.19.) (REI pg.42).

c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);

Admission for doctoral studies at USAMV in Iași is regulated by the Regulation for admission to doctoral university studies (Annex A.1.21.) And the Procedure for organizing and conducting admission to the cycle of doctoral university studies (Annex A.1.22.); for citizens of other countries applies the Methodology for admission to university studies of foreign national candidates (Annex A.1.23.).

Completion of doctoral studies is done according to the Methodology for defending doctoral theses at IOSUD-USAMV in Iași (Annex A.1.30.) And the Procedure for submitting and defending doctoral theses (Annex A.1.31.), Which specifies all stages which must be completed by the doctoral student until the defense of the doctoral thesis in public session (REI pg. 42-43).

d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;

There is a Methodology regarding the automatic recognition of the quality of doctoral supervisor or of the qualification obtained in accredited university educational institutions from abroad (Annex A.1.33.) (REI pg. 43).

e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;

The IOSUD-USAMV management from Iași is provided by Prof.univ.dr. Vasile Vîntu-President of the Senate, Prof.univ.dr. dr.H.C. Gerard Jităreanu-Rector of USAMV, Prof.univ.dr. Valeriu V. Cotea-CSUD Director, Prof.univ.dr. Liliana Rotaru-SDSI director and Prof.univ.dr. Gheorghe Săvuța-director of SDMV (Annex A.1.34.) (REI pg. 43).

The functionality of the management structures is demonstrated by the agendas of the CSUD and CSD meetings that contain the debated documents, their resolution and the signature of the participants.

f) the contract for doctoral studies;

The rights and obligations of doctoral students, doctoral supervisors, as well as IOSUD-USAMV Iași, through the doctoral school, are established by the doctoral studies contract.

g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.

There are internal procedures for analysis and approval of the topic of the training program based on advanced university studies (Annexes A.1.1 .; A.1.2.).

The existence of the documents submitted for Indicator A.1.1.1 is confirmed

Recommendations: -

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 SDSI regulation within IOSUD-USAMV from Iași includes mandatory criteria, procedures and standards, in accordance with the aspects specified in art. 17, para. (5) of the Government Decision no. 681/2011 on the approval of the Code of doctoral studies, with subsequent amendments and completions.

The SDSI Regulation (Annex A.1.2.) Contains references to the acceptance of new doctoral supervisors (art. 16, para. C), to the situations in which the SDSI membership of a doctoral supervisor can be withdrawn (art. 10, para. 2), as well as the procedure for changing the doctoral supervisor of a doctoral student (art. 40, para. 5).

Also, the decision-making mechanisms regarding the structure and content of the doctoral students' training program are specified (art. 19, para. 1 8 .8 and art. 28, para. 1... 6), under the conditions in which the doctoral program may be interrupted. (art. 40, para. 1, 2, 3, 4), to the prevention of fraud in scientific research, including plagiarism (art. 42, para. 2, 3, 5 and art. 43 para. 2), to ensuring access to human resources research (art. 36, para. g), as well as the attendance obligations of doctoral students (art. 37, para. a and b).

The eventual dysfunctions in the doctoral-doctoral student relationship are resolved according to the Instructions regarding the mediation and resolution of conflicts regarding the doctoral activity (Annex A.1.41.).

The doctoral student can opt for the interruption / extension of studies for a period of

max. 2 years, based on additional documents to the Doctoral Studies Contract (Annexes: A.1.42.; A.1.43.) (REI pg. 43-44).

It is found that the Doctoral School Regulations include the documents submitted, and they are in accordance with the requirements for Indicator A.1.1.2.

Recommendations: -

The indicator is fulfilled.

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

IOSUD has all the logistical resources necessary to fulfill the mission assumed, through the own patrimony of USAMV from Iași which includes 13 big presentation rooms, 220 seminar rooms and laboratories, library, microproduction spaces (1086 m²), 5 veterinary clinics, hall for agricultural machines, biobase, pilot station for oenology, flower greenhouse, vegetable solariums, didactic fields for agricultural and floricultural crops, pomological and ampelographic collections, viticultural nursery, zootechnical research center, etc. (Annexes: I.57; I.57a).

USAMV from Iași has a complex didactic and experimental base, adequate to the activities of practice and scientific research, represented by the farms from Adamachi, Ezăreni and Reditu, as well as by the practice bases from Făcăieni-jud. Ialomița, Plaiul Șarului-jud. Suceava and Frasin-jud. Suceava (REI pg. 17).

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.

IOSUD has and uses two computer systems to record doctoral students and their academic background:

1. RMU - UNIC Matriculation Register - contains the records of doctoral students starting from 2015-2016, with information regarding personal data, schooling (promotion, expulsion, interruption of studies, extension) scholarships, completion of studies and study documents issued (series and registration number) etc. (Annex II.80).
2. UMS-University Management System - contains the record of students -doctoral students starting with the academic year 2009/2010, with information regarding personal data, school situation, financial situation, etc. (Annex II.80).

The situation of doctoral students is permanently updated at the level of the doctoral service and presented to the faculties, corresponding to the doctoral field.

It confirms the existence and efficient application of adequate information systems for the record of doctoral students and their academic path according to the requirements of indicator A. 1.2.1.

Recommendations: -

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-USAMV from Iași uses the anti-plagiarism program (Sistem Antiplagiat.ro) (Annex A.1.46.) Which verifies the percentage of similarity of each doctoral thesis before defending it before the guiding commission, according to the Procedure for submitting and defending doctoral theses (Annex A.1.31.).

In the doctoral field of *Zootechnics*, all 18 doctoral theses defended in the period 2016-2020 were within the limits allowed in terms of anti-plagiarism verification (7.21 = average per field for similarity coefficient I; 1.52 = field average for similarity coefficient II) (Annex A.1.47.).

Within IOSUD / SDSI there are computer programs and there is evidence of their use to verify the percentage of similarity in all doctoral theses according to the requirements of indicator A.1.2.2.

Recommendations: -

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.

USAMV from Iași is a public institution of higher education, whose annual budget consists of government funds and own funds (REI pg. 20-21).

The financial situation of the university for the period 2016-2020 is presented in the Annexes: I.72; I.73; I.74; I.75; I.76.

Doctoral students benefit from an additional funding of 3500 lei / year, intended for the purchase of materials necessary for research, travel for doctoral documentation or for participation in scientific events, as well as for the publication of scientific papers.

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.

In the period 2016-2020, the doctoral supervisors in the field of *Zootechnics* won through competition a number of 7 research projects (ADER, FDI, AG, POCU), at which the date of signing the financing contract falls within the analyzed interval; of the mentioned projects, 3 projects started and were completed in the evaluated period, and 5 projects are in progress

until 2022.

In the 7 research projects won through the competition, the PhD supervisors in the field of Zootechnics had the quality of project director (5 cases) or USAMV partner manager (2 cases).

The doctoral supervisors in the field of Zootechnics had the quality of director (1 case) or responsible partner of USAMV from Iași (2 cases) for 3 research projects won through competition before the analyzed interval, but which were completed in the period 2016-2020 (Annex A.1.48.).

It is found that the requirements for indicator A.1.3.1 are met and the evidence of this is presented in the report and annexes.

Recommendations: -

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%.

At IOSUD-USAMV from Iași, 20 scholarships were granted for at least 6 months offered through the POSDRU institutional development programs.

Of the total scholarships awarded, 25% scholarships were obtained by doctoral students in the field of Zootechnics (REI pg. 45).

The reported data are confirmed according to the annexes.

Recommendations: Increasing the number of doctoral students who benefit for several months from other sources of funding than the government

The indicator is fulfilled.

Performance Indicator *A.1.3.3 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.).

In the period 2016-2020, for the Doctoral School of Engineering Sciences the amount of 3876608.9 lei from doctoral grants was returned, out of which 731792.73 lei were spent for the development of research activities and for the professional training of doctoral students, as follows: 113538.9 lei in 2016; 164138.8 lei in 2017; 146886.2 lei in 2018; 174434.5 lei in 2019; 132795,33 lei in the year 2020.

The share of expenses used for the professional training of doctoral students

(participation in conferences, summer schools, courses, internships abroad, publication of specialized articles or other specific forms of dissemination, etc.) in relation to total expenses, was between 15.6% (year 2016) and 22.2% (year 2017), with an average on SDSI of 18.88% (Annex A.1.49.).

PhD students in the field of Animal Science who defended their doctoral thesis in the evaluated period (2016-2020) published a total of 82 scientific papers, of which 24 papers were presented at prestigious international events in the field held in the country or abroad (Annexes: B.3.1.; B.3.2.).

*According to the financial data, the requirements of the Indicator * A.1.3.3 are met.*

Recommendations: -

The indicator is fulfilled.

Criterion A.2. Research infrastructure

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

The material basis of IOSUD / Doctoral School within the research centers and laboratories, Resorts and teaching farms is analyzed based on the reported documents, discussions with the staff involved and the personal visit.

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 research infrastructure to which doctoral students in the field of Zootechnics have access and the offer of research services is presented on the web page of the Faculty of Animal and Food Resources Engineering, in the "Research" section (<http://www.uaiasi.ro/zootehnie/research.html>).

The research activity of the doctoral students is carried out in the didactic and research laboratories of the Faculty of Animal and Food Resources Engineering, related to the doctoral specializations for which each of them opted. The laboratories have a modern material base (apparatus, equipment, instruments, reagents, computers, specialized software, etc.) adequate to the mission and objectives assumed, allowing both fundamental and applied research (Annexes: A.2.1. ; A.2.2.) .

Also, doctoral students have access to the research infrastructure of the Center for quantitative and qualitative monitoring of animal production - Reditu farm (Annex A.2.3.) With the two components: Laboratory for quality control of milk and dairy products (http://www.uaiasi.ro/Laborator_Lapte_Reditu/index.html) and the Laboratory for quality control of meat and meat products (http://www.uaiasi.ro/Laborator_Carne_Reditu/index.html), as well as the existing facilities in Feed quality control laboratory (http://www.uaiasi.ro/laborator_control_calitate_nutreturi).

We mention that all the equipment from the Center for quantitative and qualitative monitoring of animal productions-Reditu were purchased during 2014-2015, and those from research laboratories related to doctoral specializations are mostly purchased after 2012, from the research grants of the leaders doctorate.

The Biobase of the Faculty of Animal Resources and Food Engineering provides the infrastructure for conducting experiments on birds (broiler hall; laying hen hall; quail hall; incubation sector) and fur animals (3 compartments), and Ferma Reditu offers research conditions on cattle (shelter cattle, fodder kitchen, milking parlor, related mechanical



equipment, dairy cows + related youth).

For documentation, PhD students can use both the USAMV Library and the personal book collections of the PhD supervisors, as well as the book collection from the two Departmental Libraries within the Faculty of Animal and Food Engineering (REI pg. 45-46).

The research infrastructure presented complies with the standards necessary for the activity of doctoral students. PhD students have access to IOSUD libraries and international databases.

Recommendations: -

The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

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

The human resources policy of USAMV Iași in the field of doctoral schools took into account the legal requirements in the field and the training of teachers (annexes: II 92; II 93).

The rights and obligations of doctoral supervisors are regulated by the IOSUD Regulation (Annex II.01) and the SDSI Regulation (Annex II. 02); the status of doctoral supervisor is maintained as long as the teacher meets the performance criteria, participates in the competition for doctoral grants (Annex II 87) or works as a consultant (Annex II 88).

Teachers who have the quality of doctoral supervisor within SDSI meet the performance criteria in scientific research work, provided by the legislation in force (annexes: II 89; II 90); all the 29 doctoral supervisors within SDSI (Annex II. 79) are full-time, have the teaching degree of university professor and have the basic norm in USAMV Iași (Annex II 80).

Within the field of Zootechnics, there are 8 (eight) doctoral supervisors who obtained this quality according to the law, by ministerial order, in the period 2005-2019. At SDSI-field of Zootechnics are also assigned 3 (three) consulting professors, who obtained the quality of doctoral supervisors also by order of the minister (Annex A.3.1.).

The doctoral supervisors in the field of Zootechnics obtained this quality based on the didactic, scientific and professional prestige in the respective field, attested by the CNATDCU self-assessment sheets for the entire activity carried out (Annex A.3.2.).

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.

In the doctoral field of Zootechnics, 8 doctoral supervisors work, one of whom supported the habilitation in the period subject to evaluation (Prof. Dr. Maciuc Vasile); all doctoral supervisors have the didactic degree of university professor, are holders within IOSUD – USAMV from Iași and are scientifically active (Annexes: A.3.1. ; A.3.3.). Over 50% of the doctoral supervisors in the field of Zootechnics meet the minimum standards in force at the time of the evaluation, necessary and obligatory for obtaining the habilitation certificate; according to the CNATDCU self-assessment sheets for the activity carried out in the last 5 years, the doctoral supervisors in the field of Zootechnics obtained between 634.66 and 2026.77 points, with an average per field of 1065.34 points (Annex A.3.3.).

Over 50% of the doctoral supervisors in the field of Zootechnics meet CNATDCU standards.

Recommendations: -

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.*

The eight doctoral supervisors in the field of Zootechnics are holders of IOSUD-USAMV from Iași within the Doctoral School of Engineering Sciences. All doctoral supervisors in the field of Zootechnics are full-time teachers, having an employment contract for an indefinite period at USAMV in Iași (Annex A.3.4.).

The requirements of indicator A.3.1.2 are met, respectively 100% of the doctoral supervisors are holders with employment contract for an indefinite period within IOSUD.

Recommendations: -

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 disciplines in the training program for doctoral students in the field of Zootechnics are taught by tenured teachers who have the quality of doctoral supervisor in the field (Annex A.3.5.).

The teachers with teaching in the doctoral field of Zootechnics are holders within IOSUD-USAMV from Iași, personalities recognized at international and national level, with expertise in the field of the discipline they teach (Annex A.3.6.).

The competencies in the field of doctoral supervisors are also proven by their quality as holders of disciplines (Prof. Dr. Boișteanu Paul Corneliu: Animal physiology, Technology of meat and meat preparations and Control and expertise of the quality of meat and meat preparations; Prof. Dr. Creangă Șteofil: Animal genetics, Genetics applied in animal breeding, Prof. Gîlcă Ioan: Cattle breeding technology, Animal raw materials, Prof. Maciuc Vasile, PhD: Cattle breeding technology, Livestock production management, Prof. Dr. Pascal Constantin: Sheep and goat breeding technology, Sheep and goat production management, General animal technologies, Prof. Dr. Păsărin Benone: Pig breeding technology, Pig production management, Aquaculture, Quality control and expertise of fish and derived products, Prof. Dr. Pop Ioan Mircea: Animal nutrition and agronomy, Special feeding problems by species, Optimizing feeding at r humidifiers; Prof. Garlic Marius Giorgi: Poultry Technology, Poultry Production Management and Food Quality Control (REI pg. 47).

The analysis of the documents confirms the fulfillment of the requirements of the indicator A.3.1.3.

Recommendations: -

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 does not exceed 20%.*

In the doctoral field of Zootechnics, in the period 2016-2020 there were no situations for a doctoral supervisor to have coordinated at the same time more than 12 doctoral students during the legal internship of doctoral studies or during the extension period.

The share of doctoral supervisors in the field of Zootechnics who simultaneously coordinated more than 8 doctoral students was 25% in 2016 (2 cases out of 8 supervisors) and 12.5% in 2017 and 2018, respectively (1 case each).

During the entire analyzed period (2016-2020), the average share of doctoral supervisors who guided more than 8 doctoral students at the same time was 10.0% (Annex A.3.7.).

A number of 9 doctoral supervisors have in coordination between 1 and 8 doctoral students. A single PhD supervisor (10%) coordinates 12 PhD students. Given that this represents 10%, we consider the indicator fulfilled.

Recommendations: -

The indicator is fulfilled.

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

The scientific production of doctoral supervisors and their international visibility are analyzed.

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.

The 8 doctoral supervisors in the field of Zootechnics can be found on the Web of Science platform, where they have published as first author or co-author, a total of 217 scientific papers

(between 16 and 39 papers per supervisor) in prestigious journals for the field assessed; the works total a number of 211 citations by other authors (Annex A.3.8.).

The PhD supervisors have published at least 5 scientific papers in various ISI indexed journals, which include contributions attesting to the progress of scientific research in the field, as confirmed by the fact that the papers have accumulated a total of 72 citations, between 1-20 citations / paper (Annex A.3.9.).

Doctoral supervisors in the field of Zootechnics have international visibility, some of them having the quality of member in the scientific committees of some publications (Elsevier-Scopus & Food Control) or international conferences (World Academy of Science, Engineering and Technology; Agrarnîi Visnik Priceornomorea), member of the boards of international scientific associations (International Goat Association; American Dairy Science Association) or guests in international expert groups (FAO-UN Permanent Group of World Experts on Food Security and Safety; Global Forum on Food and Nutrition ; The State Agrarian University of Odessa) (Annex 3.10.).

The reported data are compliant, meeting the requirements of indicator A.3.2.1.

Recommendations: -

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.

Doctoral supervisors in the field of Zootechnics have carried out an intense didactic and scientific activity during their professional careers (Annex A.3.2.) And are active in the last 5 years scientifically, aspect revealed by the scores from the IRVA self-assessment sheets of the last period (Annex A.3.3.), As well as by publications in ISI indexed journals (Annex A.3.9.).

All 8 PhD supervisors working in the field of Zootechnics have at least 25% of the minimum score specific to the CNATDCU standards for obtaining the habilitation certificate (REI pg. 46), based on the scientific results of the last five years (Annex A.3.3.).

All doctoral supervisors (100%) affiliated to the field of doctoral studies Zootechnics, have achieved at least 25% of the score required by the minimum standards CNATDCU in force at the date of evaluation.

Recommendations:-

The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS

For the field of Zootechnics within the Doctoral School of Engineering and Management of Plant and Animal Resources, the correct and complete information regarding the doctoral studies program is provided to the candidates for this program, to the university community and to all those interested.

It is ensured the publication on the internet of all the necessary information regarding the doctoral university study program, such as: the doctoral school regulations; information on the content of doctoral study programs; the model of the framework contract for doctoral studies; information on doctoral supervisors; information on doctoral theses, respectively elaboration standards, procedures and criteria for their evaluation; the summaries of the doctoral theses to be defended publicly, as well as the date, time and location related to the public defenses, at least 20 days before their defense; the addresses to which the completed doctoral theses can be accessed, published on a site administered by MEN; information on the process of obtaining the authorization certificate.

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.

At the Doctoral School of Engineering Sciences within IOSUD-USAMV from Iași, the admission and selection of candidates is carried out in accordance with the legislation in force and the Methodology of conducting the admission to USAMV from Iași (Annex A.1.20.).

IOSUD-USAMV from Iași ensures all candidates equal opportunities and equitable access to doctoral studies, transparency of selection procedures and admission to doctoral studies and guarantees access to information through various and accessible means, including through the website: University of Sciences "Ion Ionescu de la Brad" from Iași (uaiasi.ro) providing the necessary information to the university community and the public.

The admission criteria for doctoral studies, including those for evaluation, are established in detail and posted on the University's website prior to the organization of the admission competition (Annex A.1.24.). For the admission to the doctoral university studies in the fields within SDSI, only the graduates with a master's degree or its equivalent, from the country or abroad, can enroll, according to art. 152 par. (2) of Law no. 1/2011.

The candidate's level of knowledge in the field of doctoral field and research topic are assessed by an entrance exam; a certificate of language proficiency in languages of international circulation is required in the entrance examination or a colloquium is held to verify these skills. Citizens belonging to other states have access to doctoral studies within SDSI under the conditions provided by law (Annex A.1.23.).

*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.*

During the analyzed period (2016-2020), at the entrance exams for doctoral studies in the field of Zootechnics, 38 places financed from the state budget were put up for competition, for the part-time and part-time form, respectively. There were 40 candidates registered in the mentioned places, Romanian graduates of higher education, respectively 5.3% more than the distributed places, which attests the capacity of IOSUD-USAMV from Iași to attract more candidates than the number of available places (Annex B.1.1.).

Out of a total of 38 PhD students enrolled in Zootechnics, 33 PhD students are bachelor and master graduates of USAMV in Iasi, and 5 PhD students are graduates of other educational institutions in the country (Alexandru Ioan Cuza University of Iasi-2 cases; University of Medicine and Pharmacy from Iași-1 case; Eftimie Murgu University from Reșița-1 case; USAMV Cluj Napoca-1 case).

The ratio between the number of master's graduates from other institutions in the country or abroad and the number of places financed from the state budget for doctoral studies for the field of Zootechnics is 0.132% (Annex B.1.2.). Also, in 2020 there is an increase in the number of candidates, respectively the ratio between the number of candidates and the number of places financed from the state budget was 1.25.

Recommendations: Attracting to the doctoral studies a larger number of master's degree graduates from other universities in the country or abroad.

The indicator is fulfilled.

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

During the reporting period, 38 doctoral students were enrolled in doctoral studies in the field of Zootechnics, whose quality is attested by the fact that they all had at least an average of 8 in undergraduate and master's studies, a mandatory and eliminatory condition at admission to IOSUD-USAMV in Iasi. In the training program based on advanced university studies (PSUA), doctoral students obtained good and very good qualifying exams.

When evaluating doctoral theses by official commissions, the grades obtained were very good (92.31%), good (5.77%) or excellent (1.92%) (Annex II.60) and no thesis was rejected. All the theses defended were validated / attested by the National Commission for the Attestation of University Degrees, Diplomas and Certificates (CNATDCU), their authors receiving the scientific title of Doctor.

The capitalization of the results obtained from doctoral studies materialized in the

participation of doctoral students in national and international conferences and the publication of scientific papers in ISI-rated specialized journals with impact factor, ISI indexed or in international BDI databases (Annexes: B. 3.1 .; B.3.2.).

The results obtained during the reference period allow the appreciation that the activity in SDSI was carried out in good conditions, in compliance with the legislation in force, contributing to the training of highly qualified specialists for scientific research, education and economic activity in specific fields (Annex II 72).

*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.*

Admission to USAMV Iași is regulated by the Methodology of conducting admission to USAMV in Iași (Annex A.1.20.), and the admission of candidates for doctoral studies by the Regulation for admission to doctoral studies (Annex A.1.21.) and the procedure of organization and development admission to the cycle of doctoral studies (Annex A.1.22.); for citizens of other countries applies the Methodology for admission to university studies of foreign national candidates (Annex A.1.23.). Admission to doctoral studies is carried out in accordance with the Calendar approved by the Rector of USAMV from Iași posted on the university's website (Annex A.1.24.), within the number of places approved by the relevant ministry and distributed to each doctoral supervisor (A.1.25.). In order to participate in the admission competition for doctoral studies, candidates must submit a file containing various documents according to legal regulations (Annex A.1.26.), complete an application form (Annex A.1.27.), a registration form for a doctorate (Annex A.1.28.) and an information note regarding the processing of personal data (Annex A.1.29.).

The admission procedure to doctoral study programme is based on requested selecton criteria.

Recommendations:-

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 does not exceed 30%.

Out of the total of 38 doctoral students enrolled in the doctoral field of Zootechnics, 7 doctoral students gave up this form of training, for various reasons (health, change of job, immigration, etc.). The dropout rate of doctoral students 2 years after admission to the doctoral field of Zootechnics was between 12.5% and 22.2% per academic year, with an average of 18.4% over the entire reporting period (Annex B.1.3.).

The expulsion rate registered in the field is on average 18,4%, within the provisions of ARACIS.

Recommendations:-

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.

The completion of the training program based on advanced university studies lasts for a period of 3 months and leads to the granting of a number of 30 transferable credits for doctoral students in doctoral fields within SDSI. The training program based on advanced university studies includes disciplines established by the training program and specialized disciplines provided in the annexes of the curriculum. The evaluation of the courses from the advanced university training plan is done with the grades "Very good", "Good", "Satisfactory" and "Unsatisfactory".

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 doctoral university study program (PSUD) has the following components: Training program based on advanced university studies (PSUA); Individual Scientific Research Program (PCS); Seminars.

For candidates admitted by 2017, inclusive (Annex B.2.1.), the training program based on advanced university studies included four disciplines relevant to training in the field of scientific research, of which two specialized disciplines (established from a package of three disciplines, depending on the topic of the doctoral thesis, by the doctoral supervisor in consultation with the doctoral student) and two disciplines for the in-depth study of research methodology, namely: Modern research methods (Annex B.2.2.); Career management (Annex B.2.3.).

In each specialized discipline, hours are allocated both for the presentation of research methods and statistical data processing, specific to the respective doctoral specialization (Annex A.3.5.).

The training program based on advanced university studies includes disciplines relevant to the training in scientific research of doctoral students.

Recommendations:-

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.

Within the discipline "Modern research methods" (compulsory for doctoral students in the field of Zootechnics) are included topics related to ethics in scientific research and intellectual

property (Annex B.2.2.).

For doctoral students admitted in September 2018, the training programs based on advanced university studies (Annex B.2.1.) contain 5 disciplines, being introduced the discipline "Ethics and academic integrity" (Annex B.2.4.) along with 2 specialized disciplines and 2 disciplines aimed at the in-depth study of research methodology.

The training program based on advanced university studies includes the discipline Ethics and academic integrity.

Recommendations:-

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

According to art. 50 of the Institutional Regulation for the organization and development of doctoral study programs at IOSUD-USAMV in Iași (Annex A.1.1.), doctoral study programs must ensure the formation of professional skills (content, cognitive and research) in the fields of specialty, as well as of transversal competences.

The doctoral school council establishes the content of the doctoral study program, which gives IOSUD the possibility to verify if the training program aims at the learning outcomes.

The subject sheets in the training programs of the doctoral students in the field of Zootechnics include the specific competences (professional and transversal), as well as the skills and aptitudes that they will acquire by going through each of them (Annex A.3.5.).

Mechanisms are provided to ensure that the training program, based on advanced university studies, aims at "learning outcomes".

Recommendations:-

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.

Each doctoral student in the field of Zootechnics benefits from the professional and scientific advice of a guiding commission established by the doctoral supervisor, depending on the topic of the doctoral thesis (Annex B.2.5.).

The steering commissions are composed of the doctoral supervisor and specialists in the respective field (teachers or researchers from the Faculty of Zootechnics), being approved by the CSUD director and the SDSI director; the composition of the commission can be found in the annexes from the Doctoral Studies Contract of each doctoral student (Annex B.2.1.).

There is a predetermined number of official meetings between the doctoral student and the steering committee (examination exams, presentation of scientific research projects, research reports, thesis presentation), held at precise deadlines and which are stipulated in the doctoral student's PSUA (Annex B.2.1.); also, each doctoral student can request the expertise of the members of the commission within the consultancy programs or whenever it is needed.

For doctoral students in the distance form, there are individual training programs, in which meetings are set prior to the examination with the doctoral supervisor and the members of the guidance committee (Annex B.2.1.).

The functionality of the cooperation between the steering commissions and the doctoral students in the field of Zootechnics is proved by the fact that the doctoral students who defended their doctoral thesis in 2016-2020 published a number of 82 scientific papers under the coordination of the scientific director (Annex B.3.1.), of which 15 scientific papers were carried out in collaboration with one or more of the members of the steering committee (Annex B.2.8.). Another proof of the cooperation between the guiding committee and the doctoral student is that all 18 theses defended in the period 2016-2020 in the field of Zootechnics received the favorable opinion of the appreciation commissions appointed by decisions of the Rector of USAMV in Iasi and the grade "very good" , all being confirmed by ministerial order (Annex B.2.6.).

PhD students benefit throughout the training period from the guidance of a functional guidance committee composed of the doctoral coordinator and three other specialists with research activity in the field.

Recommendations:-

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.

The guiding commissions of the doctoral students in the field of Zootechnics were made up of the doctoral supervisor in question and 2-4 members, teachers (with the teaching degree of professor, associate professor or supervisor) or researchers (1 case, with a doctorate in the field) with competencies in the respective specialty.

For the field of doctoral studies in Zootechnics, the ratio between the number of doctoral students (38) and the number of teachers / researchers who provide their guidance during the doctoral internship (22) was 1.73:1 (Annex B.2.5.).

The ratio recorded for the reporting period was less than 3:1, this indicator being met.

Recommendations:-

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.

The results of the scientific research of the doctoral students in the field of Zootechnics were capitalized, depending on their character, through scientific publications, consultancy and specialized assistance, etc. Coordinating teachers and PhD students annually publish results of their own scientific research in articles published in ISI scientific journals (with and without Impact Factor), journals indexed in international databases (Annexes: B.3.1.; B.3.2.).

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 who defended their doctoral thesis in the evaluated period (2016-2020) participated in national and international events where they presented a number of 82 scientific papers, published in volumes listed BDI or indexed ISI (with or without impact factor) or at ISI indexed conferences. As an individual production, the graduates published between 2-6 scientific papers, returning an average of 4.56 scientific papers / graduate (Annex B.3.1.).

For doctoral students who have obtained a doctorate in the last 5 years, there is between 2-6 scientific papers.

Recommendations: -

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.*

In the doctoral field of Zootechnics, out of a total of 82 scientific papers published by doctoral students for which they defended their doctoral thesis during the evaluated period (with the title validated by CNATDCU), a number of 24 papers were presented at prestigious international events in the field carried out in the country or abroad (Annex B.3.1.).

The ratio between the number of scientific papers presented at prestigious international events held in the country or abroad (24) and the number of doctoral students who completed their doctoral studies in the evaluated period (18) is 1.33 (Annex B.3.2.).

Recommendations:-

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.

In the period 2016-2020, 18 doctoral theses were defended in the doctoral field of Zootechnics, all of them being approved favorably by the appreciation commissions and evaluated with the grade “very good”; all theses were confirmed by Ministerial Order (Annex B.2.6.).

For the evaluation of these doctoral theses were nominated, by decisions of the Rector of USAMV Iași, a number of 18 appreciation commissions, which included 16 official references from institutions other than the one in which the doctoral thesis is organized; as external references, doctoral supervisors from the same doctoral specializations, holders of disciplines or researchers working in the respective field have been appointed (Annex B.3.3.).

*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.*

In the doctoral field of Zootechnics, 18 doctoral theses were defended in the period 2016-2020, in the presence of the appreciation commissions which included 16 official references from institutions other than the one in which the doctoral thesis is organized (Annex B.3.3.).

The number of doctoral theses assigned to a single official referent from another higher education institution than IOSUD-USAMV from Iași was not higher than two theses defended in the same year and coordinated by the same doctoral supervisor (Annex B.3.4.).

No more than 2 participations / year of a referent in the analysis of theses coordinated by the same doctoral supervisor.

Recommendations: -

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 doctoral field of Zootechnics, the ratio between the number of doctoral theses allocated to a certain official referent from another higher education institution than the one in which the doctoral thesis is organized and the number of theses defended in 2016-2020 ranged between 0,06% and 0.28%, resulting in a range average of 0.133% (Annex B.3.4.).

The maximum ratio registered between the number of doctoral theses assigned to an external scientific referent and the total number of theses defended was 0.28.

Recommendations: -

The indicator is fulfilled.

Domain C. QUALITY MANAGEMENT

Through the educational and research offer, USAMV from Iași, the legal representative of IOSUD, pays special attention to satisfying the current requirements of the labor market and disseminating to the productive sphere the results of specialized research.

The USAMV management in Iași is permanently concerned with improving the organization and execution of basic activities (education and scientific research), but also with the feedback regarding the quality of these activities and social inclusion.

The quality of the educational process is achieved through the annual internal evaluation of all study programs, based on accepted standards at national and international level, in order to make the educational offer compatible with EU universities in terms of skills, quality and timeliness of knowledge taught, skills practices and attitudes specific to each study program.

Within the established deadlines, each study program is subject to external evaluation by the ARACIS specialized commissions.

The USAMV in Iași aims to implement (where appropriate) and improve the Quality Management System in all organizational departments of the University, both to achieve internal objectives regarding quality and to meet the requirements of national and international quality standards in the field of education.

For doctoral schools, CSUD has developed the Methodology on the periodic internal evaluation of doctoral schools (Annex II. 64). CSUD appoints the internal evaluation commission, composed of doctoral supervisors and doctoral students and coordinated by the director of SDSI. The internal evaluation commission proposes the evaluation criteria, analyzes the received data and prepares the internal evaluation report, presents the evaluation results of the Council of the Doctoral School of Engineering Sciences and sends the evaluation report for approval by CSUD, which submits the report for analysis-approval to the Board. Administration and Senate of USAMV Iași (REI pg. 31).

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.

According to the Organization Chart, at the level of USAMV in Iași, the Department for Quality Assurance (DAC) and the Commission for Evaluation and Quality Assurance (CEAC) function (Annex I.31); at the level of each faculty, the Quality Evaluation and Assurance Commission, coordinated by a Quality Assurance Officer, carries out its activity.

DAC operates based on the internal regulations of the University and its own organization and functioning regulation (Annex I.37), and CEAC based on the Quality Assurance Regulation in USAMV from Iași (Annex I.26) and its own organization and functioning regulation (Annex I.35).

The Quality Assurance Department, together with the Quality Assurance Managers at each faculty, develops the general procedures of the quality management system, which is the

basic documentation for implementing and maintaining the quality management system, as well as the operational procedures that specify the objectives and the expected results of the various activities affecting quality.

The development of quality procedures envisages compliance with the requirements of ARACIS standards, as well as those specific to other national and international evaluation bodies. Through the activities carried out, all USAMV employees in Iași participate directly or indirectly in maintaining and improving quality.

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 following assessed criteria being mandatory:

- (a) the scientific work of Doctoral advisors;*
- (b) the infrastructure and logistics necessary to carry out the research activity;*
- (c) the procedures and subsequent rules based on which doctoral studies are organized;*
- d) the scientific activity of doctoral students;*
- e) the training program based on advanced academic studies of doctoral students;*
- f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students*

IOSUD-USAMV from Iași has implemented and applies it constantly, the procedure of evaluation and internal monitoring of the evolution of doctoral schools, specified in chap. IX- Evaluation of doctoral schools and doctoral supervisors (Annex A.1.1.).

On the web page of USAMV from Iași, the section „Doctoral university studies” can be found the presentation sheets of the doctoral supervisors, respectively CV (in Romanian and English) and the synthesis of the activity (articles, proceeding paper, review published in ISI listed journals; thesis doctoral books, university books and textbooks; scientific papers published in the volumes of international conferences; papers published in BDI journals; patents) (University of Agricultural Sciences and Veterinary Medicine, Iași (uaiasi.ro).

Periodic internal evaluation of Doctoral Schools is initiated by the Council of the Doctoral School of Engineering Sciences, according to the Regulation for quality assurance at USAMV Iași (Annex C.1.1.) And is achieved by applying the provisions of the Methodology of periodic internal evaluation of Doctoral Schools (Annex C .1.2.).

The evaluation of the activity of doctoral supervisors is carried out in accordance with the Methodology of periodic internal evaluation of the activity of doctoral supervisors (Annex C.1.3.). In this regard, each doctoral supervisor will complete a Self-Assessment Report of the activity carried out (Annex C.1.4.) And the List of scientific publications (Annex C.1.5.) On the basis of which the Internal Evaluation Report on the activity of doctoral supervisors from SDSI (Annex C.1.6.).

On the basis of the Annual Evaluation Reports at the level of Doctoral Schools, CSUD prepares an Activity Report on doctoral studies which includes data on the scientific activity of doctoral supervisors, infrastructure and logistics necessary for conducting research, updating

procedures and rules on organizing doctoral studies etc. and which is published on the USAMV-Iași website, in the Doctoral University Studies section (Annex C.1.7.).

The analyzes and conclusions of this report, including the recommendations for improving the quality of doctoral studies, are included in the Annual Quality Assessment Report at USAMV in Iași prepared by the Quality Assurance Department (Annex C.1.8.).

The report is presented to the university Senate for approval, and the monitoring of the implementation of the recommendations resulting from these analyzes is performed by the Council for Doctoral Studies.

In the doctoral studies contract, at art. 5 pcs. 6 (j) stipulates that the doctoral student has the obligation to publish, with the opinion of the supervisor, at least 3 scientific papers in BDI volumes and to be the first author of at least 2 papers, in which to find results from the thesis topic (Annex B. 2.1.). The scientific activity of the doctoral students is sent to SDSI by the doctoral supervisors, who complete and sign the List of scientific publications for each doctoral student under guidance (Annex B.2.7.).

The doctoral studies within IOSUD-USAMV from Iași are organized based on the following norms: the procedure for admission to the doctorate (Annex A.1.22.), instructions regarding the mediation and resolution of conflicts regarding the doctoral activity (Annex A.1.41.), norms of elaboration and drafting of doctoral theses (Annex A.1.50.), procedure for submitting and defending doctoral theses (Annex A.1.31.).

The elements that define the Training Program based on advanced university studies of doctoral students are found in art. 19 (p. 1... 8) and art. 20 (pc. 1... .2) of the SDSI Regulation within IOSUD-USAMV from Iași (Annex A.1.2.).

For doctoral students in the field of Zootechnics, the training program based on advanced university studies lasts one semester and involves two compulsory subjects (three in 2018) and two specialized disciplines, chosen by the doctoral supervisor, in consultation with the doctoral student, depending on the specifics of the doctoral thesis. The PSUA of each doctoral student is analyzed in the meeting of the Doctoral School Council and endorsed by the signature of the SDSI director, and is subsequently approved by the CSUD director (Annex B.2.1.).

The doctoral students within IOSUD-USAMV from Iași benefit from social and academic support services, namely: 1722 accommodation places in five own dormitories (Annex I.99.), canteen-restaurant that can serve 320 people for a single cycle, modern sports base, Alumni Association from USAMV Iași, Career Counseling and Guidance Center ("Ion Ionescu de la Brad" University of Life Sciences from Iași (uaiasi.ro), annual grants for carrying out scientific research activity, purchase of materials for experiments, participation in scientific events, publication of scientific papers, etc.).

The doctoral school is proof of the constant development of the process of evaluation and internal assurance of its quality.

Recommendations: -

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.*

Doctoral students who face various problems can address, in a hierarchical way, the doctoral supervisor, the members of the guidance committee, the IOSUD secretariat, the Doctoral School Council, the Council for Doctoral University Studies or the USAMV Rector of Iași, these being solved operatively, at one level or another, depending on the case (REI pg. 52). PhD students are represented in the Doctoral School Council, in the Council for Doctoral Studies (Annex A.1.11.), as well as in the University Senate, thus having the possibility to address to the governing forums any requests and proposals regarding their needs, for increasing the degree of satisfaction with the doctoral program as a whole, in order to continuously improve the academic and administrative services offered by IOSUD-USAMV in Iași.

CSUD has developed a procedure for collecting feedback from doctoral students, in order to identify their needs and the level of satisfaction with the doctoral program, in order to permanently improve the academic and administrative processes. In this sense, each doctoral student receives and completes a Questionnaire for assessing the degree of satisfaction of doctoral students (Annex C.1.9.) And a Questionnaire for consulting doctoral students (Annex C.1.10.).

The current problems faced by doctoral students are addressed by them, in a hierarchical way, to the doctoral supervisor, members of the steering committee, secretariat, Doctoral School Council, Council for Doctoral Studies or Rector of the university, being solved operatively, at a level or another, as appropriate.

Recommendations: -

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.

The Doctoral School of Engineering Sciences within IOSUD offers transparency regarding the doctoral study programs to the candidates for these programs, to the university community and to other interested natural or legal persons.

The doctoral school, with the logistical support of IOSUD, ensures the publication on the internet of all the necessary information regarding the doctoral university study programs, https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat.html, how would be: the doctoral school regulations; information on the content of doctoral study programs; the model of the framework contract for doctoral studies; information on doctoral supervisors; information on doctoral theses, respectively elaboration standards, procedures and criteria for their evaluation; the summaries of the doctoral theses to be defended publicly, as well as the date, time and location related to the public defenses, at least 20 days before their defense; the addresses to which the completed doctoral theses can be accessed, published on a site administered by MEN; information on the process of obtaining the authorization certificate.

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:

On the USAMV Iași website there is an area dedicated to doctoral studies where candidates and doctoral students find the necessary information, related to: doctoral school regulations, doctoral admission, admission schedule, regulations, content of study programs, doctoral supervisors for each field, conditions elaboration of the doctoral thesis, links for the summaries of the defended doctoral theses, etc.

https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat.html

a) the Doctoral School regulation

https://www.uaiasi.ro/ro/files/doctorat/documente/2021/Regulament-IOSUD_2021.pdf; Anexa II.03 https://www.uaiasi.ro/ro/files/doctorat/documente/2019/Regulament_SD_SI_2019.pdf; Anexa II.04

b) the admission regulation

<http://www.uaiasi.ro/admitere/files/doctorat/04-Regulament-admitere-doctorat.pdf>

<http://www.uaiasi.ro/admitere/index.php>

http://www.uaiasi.ro/admission/files/Admission_guide.pdf

<http://www.uaiasi.ro/admitere/doctorat.php?sectiune=conditii-de-admitere>

c) the doctoral studies contract

https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat_documente.html

d) the study completion regulation including the procedure for the public presentation of the thesis

<https://www.uaiasi.ro/ro/files/doctorat/documente/2021/Metodologie-sustinere-teze-doctorat.pdf>

e) the content of training program based on advanced academic studies

in: Institutional regulation for the organization and functioning of doctoral university study programs at USAMV Iași (https://www.uaiasi.ro/ro/files/doctorat/documente/2021/Regulament-IOSUD_2021.pdf; Anexa II.03),

SDSI Regulation

https://www.uaiasi.ro/ro/files/doctorat/documente/2019/Regulament_SD_SI_2019.pdf; Anexa II.04) and in the Contract for doctoral studies

(https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat_documente.html; Anexa II.16);

f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data

https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat_SDSI.html;

http://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat_contact.html

g) the list of doctoral students within the domain with necessary information (year of registration; advisor)

https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_teze_2021.html

h) information on the standards for developing the doctoral thesis

https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat_procedura.html

https://www.uaiasi.ro/ro/files/doctorat/documente/2016/Norme_elaborare-redactare-teza-doctorat.pdf

i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation

https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_teze_2021.html

All information is public on the university / IOSUD website

Recommendations: -

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.

USAMV from Iași, the legal representative of IOSUD, supports the research activity of doctoral students in the fields of Agronomy, Horticulture, Zootechnics and IMADR and pays special attention to the endowment of research infrastructure (research centers, laboratories, research stations) at the highest level and allocates financial resources to the participation of doctoral students in national and international scientific events, mobilities, collaboration agreements, publication of scientific papers.

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.

The operation regulation of IOSUD-USAMV from Iași specifies in Art. 64, pc. 1 (d) that doctoral students have the right to use the logistics, documentation centers, libraries and equipment of the doctoral school and IOSUD for the elaboration of research projects and doctoral thesis (Annex A.1.1.).

All IOSUD-USAMV doctoral students from Iași have free access to platforms-collections of scientific research journals relevant to the fields of doctoral studies: Science Direct: www.sciencedirect.com; SpringerLink: www.springerlink.com; Trandfonline: <http://www.tandfonline.com/toc/wijv20/current>; Ebsco Academic Search Premier: www.ebscopublishing.com and others: <http://biblioteca.uaiasi.ro/Liberty3/gateway/gateway.exe?application=Liberty3&displayform=frame>), as well as international bibliographic and bibliometric databases (ProQuest CSA; Thomson ISI - Web of Sciences; Thomson ISI - Journal Citation Report; Thomson ISI - Derwent Innovation Index etc).

Students' access to information on the platform with free and open databases is ensured.

Recommendations:-

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.

At the level of USAMV Iași, starting with 2016, the Sistemantiplagiat.ro platform is implemented, which allows verifying the degree of similarity of the scientific achievements of students, masters and doctoral students, with other existing scientific papers (Annex A.1.46.).

The verification of the degree of similarity is applied to all doctoral theses completed

within IOSUD-USAMV from Iași, the access of doctoral students to this system being made on the basis of a written request, with the approval of the doctoral supervisor and approved by the Doctoral School Council (Annex C.2.1.).

In the case of the 18 doctoral theses defended in the period 2016-2020 in the field of Zootechnics, anti-plagiarism checks revealed average values of 7.21 for the similarity coefficient I. and 1.52 for the similarity coefficient II., respectively, which attests to the originality of the theses (Annex A.1.47.).

Recommendations:-

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 art. 5, pc. 2 (c) of the Contract for doctoral studies, IOSUD-USAMV from Iași ensures permanent access to the research infrastructure of the university for all doctoral students (Annex B.2.1.).

Depending on the research topic of the doctoral thesis, based on a prior appointment, with the approval of the doctoral supervisor and with the approval of the Doctoral School, doctoral students have access (under direct or indirect supervision of the doctoral supervisor) throughout the internship to the laboratories. research, equipment, IT resources or other resources necessary to carry out the contracted research program (REI pg. 53).

At the IOSUD level there is a regulation applied by the CSUD and the doctoral school, which regulates the planning of access under the conditions of a prior appointment for the case of limited resources and / or for the case of resources that require a special regime of use.

http://www.uaiasi.ro/ro/files/doctorat/documente/2016/Regulament-IOSUD_martie2016.pdf

Recommendations:-

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.

The role of the International Relations Service is to implement the objectives of the internationalization strategy of USAMV in Iași, in order to increase the visibility and promote the image of the university as an institution of higher education and research at international level. USAMV from Iași is a member of six international associations (AUF-Agence Universitaire de la Francophonie, EUA-European University Association, CASEE-Association for European Life Sciences Universities, etc.) and has concluded bilateral collaboration agreements with numerous universities in Europe, in which they are provided mobility for teachers and students, lasting between two weeks and 12 months.

International relations in the field of scientific research have been promoted with universities in Germany (Giessen), Italy (Naples, Padua, Verona, Bologna, Perugia), France (Dijon, Lille, Bordeaux, Angers), Czech Republic (Prague), Chile (Santiago de Chile), the Republic of Moldova (Chisinau) and others. (REI pg. 27).

As a member of the University Agency of Francophonie, USAMV from Iași coordinates two professional training projects (Reinforcement of French and French research for non-specialist students in a multicultural and francophone climate and Modern analysis of bioactive chemical compounds in products agri-food of plant origin), which aims to strengthen French-language training and scientific research in French and to harmonize the methods and contents of the programs.

Also, USAMV from Iași, in partnership with AUF and the Romanian Ministry of Foreign Affairs, annually hosts 2-3 interns from French-speaking countries, who carry out 3-month internships to complete doctoral or post-doctoral studies, benefiting from the expertise of Romanian leaders. doctorate and their teams.

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.

USAMV Iași has concluded a number of 137 mobility agreements within the ERASMUS + program (2014-2021), with profile universities abroad, with research institutes or companies that carry out activities in the field and target doctoral students and university teachers (Annex I. 110). Also, at institutional level, 69 inter-university agreements for didactic-scientific collaboration are concluded, established through bilateral protocols (Annex I. 111).

Out of a total of partnerships concluded, a number of 22 agreements are in the field of

Zootechnics, in which teachers and doctoral supervisors in the field of Zootechnics participated (http://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/5_programul_erasmus-plus_acord.html)

In the period 2016-2020, PhD students from IOSUD-USAMV from Iași applied 61 international mobilities, consisting of training courses, participation in international scientific conferences, participation in summer schools or working meetings, etc.

Among the doctoral students in the field of Zootechnics, two students participated in international conferences (Valencia-Spain and Prague-Czech Republic), a doctoral student completed a 60-day training course at Zoo-Food companies in the United Kingdom, five students participated in mobilities supported by the SOP HRD program (Annex C.3.1.). Also, there are doctoral students who carry out part of the laboratory research / analysis in the Republic of Moldova or Ukraine, as a result of the implementation of a cross-border project.

Recommendations: Continue to increasing the number of mobilities and participation in international conferences among doctoral students.

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.

In the IOSUD-USAMV Regulation of Iasi, the Art. 21 (2) this module for the organization of university studies in the international study is specified, as referred to in Art. 44. 49 module for financing doctoral studies (Annex A.1.1.).

In the period 2016-2020, for doctoral studies of the Zootechnics domain, they were organized as part of various seminars on various areas of animal growth and production valorisation (genetic and animal reproduction, production control, health care). further special precedents in relation to Austria, Germany, Hungary and Egypt (Annex C.3.2).

There are no doctorates organized in international co-supervision in the analyzed period.

Recommendations: Improving the strategy regarding the organization of doctorates in international co-supervision.

The indicator is 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 professors from USAMV Iași participated in various international events (congresses, conferences, fairs, exhibitions, etc.) both for professional training and for attracting foreign students / doctoral students.

Among the PhD supervisors in the field of Zootechnics, Prof.dr. Boișteanu Paul Corneliu



performed two ERASMUS mobilities (University of Udine-Italy and University of Istanbul-Turkey), and Prof.dr. Pop Mircea Ioan a mobility ERASMUS (University of Florence-Italy), occasions on which they presented the offer of doctoral studies of IOSUD-USAMV from Iași (Annex C.3.3.).

Concrete measures are applied.

Recommendations: Increasing the degree of internationalization of doctoral studies in the field of Zootechnics by attracting international doctoral students; inclusion of international experts in committees for the guidance or defense of doctoral theses.

The indicator is fulfilled.

IV. SWOT Analysis

Based on the Self-Assessment Report and its annexes, the discussions / on-site visits that took place in accordance with the program of the visit, the SWOT analysis of the doctoral field Zootechnics - part of the Doctoral School of Engineering Sciences (SDSI) from USAMV Iași.

It aims to be a tool capable of providing an overview of the doctoral field, while assessing internal and external influencers in order to highlight strengths and weaknesses in relation to existing opportunities and threats.

<u>Strengths:</u>	<u>Weaknesses:</u>
<ul style="list-style-type: none"> • USAMV Iași is a high-performing university that enjoys prestige among Romanian universities; • Diverse educational offer, specific to the field at all three cycles of studies; • ARACIS accreditation for all study programs: bachelor's, master's, doctorate; • High-performing teaching and research staff, with meritorious activities in the field of professional training based on skills and abilities, but also in guiding the activity of doctoral students; • Human resource represented by doctoral supervisors in the field of Zootechnics with proven skills in scientific research, in university management - a fundamental condition for conducting scientific research at a high scientific level; • SDSI and the doctoral field of Zootechnics have a modern research infrastructure that can support the development of activities specific to doctoral university studies; • Consistent university library in terms of the number and diversity of books and publications, access to scientific literature in the field, databases provided free of charge to doctoral students; • Effective communication with doctoral students; • The existence of quality assurance policies and strategies targeting doctoral schools, as well as their fields; • Existence of specific measures to promote professional ethics and deontology, avoidance of plagiarism; • Transparency in the selection, admission and enrollment of students in doctoral university study programs; • The university financially supports doctoral students with the amount of 3500 RON, for carrying out the scientific activity; • The research directions are topical, and the results obtained have practical applicability. 	<ul style="list-style-type: none"> • Reduced number of teachers / researchers from abroad who participate in the guidance commissions, respectively public defense of the doctoral theses of the doctoral schools; • Lack of doctorates in co-tutoring and low visibility of leading PhD teachers; • Lack of foreign doctoral students in doctoral studies in the field of Zootechnics; • Reduced capitalization of research results of PhD students in ISI listed journals; • Low number of PhD students who have benefited from training courses abroad or Erasmus-type mobility; • Low number of graduates who were integrated on the labor market after obtaining the doctorate in the field of doctoral studies.

<u>Opportunities:</u>	<u>Threats:</u>
<ul style="list-style-type: none"> • International cooperation programs for doctoral students that offer doctoral students the opportunity to carry out training courses in the form of various external mobilities for their professional development; • Increasing the degree of internationalization of doctoral studies based on the existing strategy at IOSUD-USAMV in Iasi; • The availability of the private sector to hire PhD students due to their skills, knowledge, etc. with consequences on the interest for doctoral studies and the facilitation of the collaboration between the university and companies (investments, additional financing, joint projects, possibility of financing doctoral students); • The possibility of collaboration with foreign research centers involved in the international network of agricultural research centers; • Development of new European programs such as “Life Long Learning” and e-Platforms that offer the possibility of doctoral theses in international co-supervision, as well as stimulating doctoral students to carry out external training courses; • Constant adaptation of research topics, in accordance with existing research directions at national and international level; • Additional funding based on performance criteria, which also includes the results of doctoral students' research; • Unlocking the potential for cross - border cooperation with Moldova republic. 	<ul style="list-style-type: none"> • The tendency of demographic decrease, with a negative impact on the dynamics of the number of students and the gradual increase of the costs that contribute to the lack of interest for university studies; • Lack of interest in accessing doctoral training programs determined by the weak insertion on the labor market; • Reducing the number of master's graduates who want to complete their professional training through doctoral studies; • International competition for attracting students and the aggressive policy of European universities; • Reduced pay compared to the private sector; • Low budget available for research and academia; • Reduced research duration to 3 years which, in certain situations, does not allow the timely completion of doctoral theses.

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (*, C)	Performance indicator	Judgment	Recommendations
1	*	Indicator A.1.1.1.	fulfilled	
2	*	Indicator A.1.1.2	fulfilled	
3	*	Indicator A.1.2.1	fulfilled	
4	*	Indicator A.1.2.2	fulfilled	
5	*	Indicator A.1.3.1	fulfilled	
6	*	Indicator A.1.3.2	fulfilled	Increasing the number of doctoral students who benefit for several months from other sources of funding than the government
7	*	Indicator *A.1.3.3	fulfilled	
8	C	Indicator A.2.1.1	fulfilled	
9	C	Indicator A.3.1.1	fulfilled	
10	*	Indicator *A.3.1.2	fulfilled	
11	*	Indicator A.3.1.3	fulfilled	
12	*	Indicator *A.3.1.4	fulfilled	
13	C	Indicator A.3.2.1	fulfilled	
14	*	Indicator *A.3.2.2	fulfilled	
15	*	Indicator B.1.1.1	fulfilled	Attracting to the doctoral studies a larger number of master's degree graduates from other universities in the country or abroad.
16	*	Indicator *B.1.2.1	fulfilled	
17	*	Indicator B.1.2.2	fulfilled	
18	*	Indicator B.2.1.1	fulfilled	
19	*	Indicator B.2.1.2	fulfilled	
20	*	Indicator B.2.1.3	fulfilled	
21	*	Indicator B.2.1.4	fulfilled	
22	C	Indicator B.2.1.5	fulfilled	
23	C	Indicator B.3.1.1	fulfilled	
24	*	Indicator *B.3.1.2	fulfilled	
25	*	Indicator *B.3.2.1	fulfilled	
26	*	Indicator *B.3.2.2	fulfilled	
27	*	Indicator C.1.1.1	fulfilled	
28	*	Indicator C.1.1.2	fulfilled	
29	C	Indicator C.2.1.1	fulfilled	
30	*	Indicator C.2.2.1	fulfilled	
31	*	Indicator C.2.2.2	fulfilled	
32	*	Indicator C.2.2.3	fulfilled	
33	*	Indicator *C.3.1.1	fulfilled	Continue to increasing the number of mobilities and participation in international conferences among doctoral students.
34	*	Indicator C.3.1.2	fulfilled	Improving the strategy regarding the organization of doctorates in international co-supervision.
35	*	Indicator C.3.1.3	fulfilled	Increasing the degree of internationalization of doctoral studies in the field of Zootechnics by attracting international doctoral students; inclusion of international experts in committees for the guidance or defense of doctoral theses.

VI. Conclusions and general recommendations

Based on the information contained in the Self-Assessment Report prepared, the on-site visit and online discussions with representatives of USAMV management, doctoral schools, teachers, PhD students and employers, as well as with those who coordinate the activity of research centers and laboratories in In general, the activity within the doctoral field Zootechnics was analyzed by reporting on the way of fulfilling the indicators.

Conclusions:

- It is found the fulfillment of the performance indicators regarding the implementation of the functioning mechanisms provided in the specific legislation regarding the organization of the doctoral studies.
- At the level of the Doctoral School of Engineering Sciences within IOSUD-USAMV from Iași, efficient functioning mechanisms are implemented and in accordance with the legislation in force;
- USAMV from Iași, the legal representative of IOSUD owns teaching and research stations, agricultural production farms and practice bases, as well as a complex and modern research infrastructure, adequate to the process of ensuring the quality of doctoral studies and which allows improving performance academic and scientific studies of human resources that are formed within the doctoral studies in the field of Zootechnics;
- All scientific education and research activities related to doctoral studies in the field of Zootechnics are carried out in accordance with good practices in the field, resulting from their own experience and / or accumulated from the exchange of experience with similar universities;
- At IOSUD-USAMV in Iași there is an institutional, organizational, logistical, professional and scientific climate favorable to increasing the educational effectiveness;
- There are relationships between participants in doctoral studies (doctoral supervisors and doctoral students) based on respect and cordiality, effectiveness and educational and scientific productivity;
- USAMV from Iași has a network of partnerships at national and international level, including with large economic agents, with beneficial effects on the quality of educational and scientific research processes;
- USAMV from Iași is permanently concerned with the implementation of quality improvement measures and has partnerships with specialized institutions for the identification and adoption of best practices;
- The university community of USAMV from Iași is of high academic standing, whose activity is carried out in a unitary way, in order to promote the defining values for the prestige of the university;
- In the field of Zootechnics within SDSI, research topics are addressed that are part of the research strategy and the scientific area of the university and that correspond to the current trends in international scientific research;
- For doctoral students graduating from fields other than Zootechnics, a guidance strategy adapted to the previous level of training is applied;
- Capitalizing on the professional knowledge acquired by completing the bachelor-master-doctoral route is achieved by hiring graduates in universities, research institutes or production units;
- Completing doctoral studies facilitates entrepreneurial activities, due to the accumulated professional skills.

Recommendations:

- Increasing the number of doctoral students who benefit from other sources of funding than the governmental one, by establishing partnerships with the economic environment that would financially support the realization of doctoral theses;
- Encouraging doctoral students to participate in training courses in the field at foreign universities for a period of more than 2 months;
- Improving the internationalization policy, focused on better placing the university in the European Higher Education Area;
- Increasing the degree of internationalization of doctoral studies by attracting foreign doctoral students, including international experts in guidance commissions or defending doctoral theses, conducting doctorates in co-supervision at national and international level.
- Increasing the number of scientific papers published in WoS journals and the number of / patents / inventions, as a result of the research activity.
- Realization of doctoral thesis in international co-supervision.
- Continuous updating of the proposed research topics, inclusion in the topic of topics of interest with applicability in practice, consultation of economic partners in establishing the proposed topic.
- Intensifying the collaboration between the university and the farmers' associations.

Conclusion and general recommendations

The doctoral studies in the field of Zootechnics within IOSUD-USAMV from Iași are properly structured, benefit from a modern research infrastructure and adequate to the assumed mission and have doctoral supervisors with expertise in the field, elements that ensure the high quality training of doctoral students in the field.

All employers of doctoral graduates in the field of Zootechnics showed a high level of satisfaction regarding their professional quality.

The weak point of the doctoral studies in the field of Zootechnics is represented by internationalization, a component that can be improved by implementing an adequate strategy at IOSUD level, with economic and institutional support.

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