

Universidade de Lisboa, Instituto Superior de Agronomia

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**INTERNATIONAL COMPETITION PROCEDURE TO CONTRACT ONE
DOCTORATE UNDER DECREE-LAW NR 57/2016 DATED AUGUST 29, WITH
THE AMENDMENTS INTRODUCED BY LAW NR 57/2017 DATED JULY 19
AND COMPLEMENTARY LEGISLATION**

Ref. ISA nr 5/2018/SAICT2017

1 – Following the proposal of the Science Council in the meeting of September 10th 2018, and after the approval by the President of the Instituto Superior de Agronomia (ISA), entitled by the Rector of the Universidade de Lisboa, as stated by Ordinance nr 208/2018, dated October 26, an international competition procedure is open to select one doctorate to develop research activities in the scientific field of Agronomic Engineering, Environmental Engineering or Zootechnical Engineering for a public employment contract with term, in order to perform research activities in the scientific areas of Agronomic Engineering, Environmental Engineering or Zootechnical Engineering, under a fixed term employment contract in public functions. The contracted researcher will execute tasks within the project entitled "Sanitation of animal slurry for potential use in horticulture ", under the reference PTDC / ASP-SOL / 28769/2017, approved under the scope of Notice No. 02 / SAICT / 2017 - Scientific and Technological Research Support System (SAICT) and Technological Development (IC&DT) and financed by national funds through FCT, IP. More specifically, the contracted researcher will realize the following functions:

a) planning, preparing and carrying out experiments for the development of a new integrated process for the hygienization of animal slurry (through pH change) which does not produce new waste and which improves its fertilizer value in order to obtain a new use for animal slurry as well as producing alternative fertilizers / correctives for industrial horticulture. The efficiency and environmental and economic impacts associated with these new practices will also be evaluated. In particular, new solutions for the control of emissions of ammonia and other gases during the sanitation process will be developed and tested using biofilters made from raw materials used as growth media. The resulting by-product of the biofilters will then be applied to the soil in order to test its potential as a source of nutrients and organic matter.

An integrated approach will be undertaken considering the following steps:

- i) Hygienization of animal manure through alkalization and / or acidification: process optimization.
- ii) Control of gaseous emissions during the alkalization process through the use of biofilters.

- iii) Complete characterization of treated materials and by-products of the biofilter with special emphasis on N, P and C dynamics after application to soil.
- iv) Soil application of treated animal slurry and biofilter by-products as organic fertilizers, in industrial horticulture.
- v) Evaluation of the impact of slurry hygienization on nutrient dynamics after application to soil.
- vi) Assessment of the economic sustainability of the process as a whole.

The proposed slurry treatments will initially be optimized at laboratory scale and subsequently tested at the pilot scale to obtain sufficient material for subsequent application. We intend to develop a simple, turnkey solution that can be rapidly deployed at the farm scale. The fertilizer value and environmental impact of hygienized animal slurry and derived materials will be compared with those of traditional fertilizers used in industrial horticulture.

- b) Data analysis, interpretation of results and preparation of scientific articles.
- c) Coordination of work and support to project management.
- d) Preparation of project progress reports.
- e) Realization of communication actions and dissemination of results within the scope of the project.

2 – Applicable laws:

- a) Decree-law nr 57/2016 dated August 29, approving a PhD contract regime established to stimulate scientific and technologic employment in all areas of knowledge (RJEC), as worded by Law nr 57/2017 dated July 19, having also in consideration the Regulatory Decree nr 11-A/2017 dated December 29.
- b) The general labour law for public employment (LTFP), approved by Law nr 35/2014, July 20, in its current wording.
- c) Regulation nr 999/2016 dated October 31 – Regulation of Projects Funded Exclusively by National Funds.

3 – Under the terms of article 16 of Decree-Law nr 57/2016, dated August 29, the present competition procedure dismisses the authorization from the government members responsible for Finances and Public Administration areas, namely the ones mentioned on number 3 of article 7 of the LTFP; and is dismissed of obtaining previous favourable consent from government members responsible for Finances and Public Administration areas, as mentioned on the number 5 of article 30 of the LTFP, and of the recruitment procedure of workers in situations of requalification, as mentioned on the article 265 of the LTFP.

4 – In accordance with the article 13 of the RJEC, the jury for this competition has the following composition:

President of Jury:

David Paulo Fangueiro, Assistant Professor at the Instituto Superior de Agronomia, Universidade de Lisboa.

Members:

Henrique Manuel Filipe Ribeiro, Assistant Professor at the Instituto Superior de Agronomia, Universidade de Lisboa.

Maria Luísa Lopes Castro Brito, Assistant Professor at the Instituto Superior de Agronomia, Universidade de Lisboa.

5 – The work place will be located at Instituto Superior de Agronomia, Universidade de Lisboa..

6 – The gross monthly remuneration is € 2.128,34, according to number 1 of article 5 of Regulatory Decree nr 11-A/2008, dated December 29, corresponding to the level 33 of the Standard Remuneration Table, approved by the Ordinance nr 1553-C/2008 dated December 31.

7 – The contract has the duration of 3 years, which may be renewed for 1 year periods with the maximum of 6 years, unless:

a) The Science Council of ISA requests the termination of the contract based on an unfavourable evaluation of the doctorate performance, in accordance with the School regulations, which must be communicated to the concerning person until 90 days before the end of the initial contract or its renovation.

b) By application of any of the extinction causes mentioned on the article 289 of the LTFP.

c) The public employer, or the employee, communicate the will of not renewing the contract in writing, until 30 days before the end of the initial contract or its renovation, with the consequent contract expiration.

8 – Will be considered national, foreign and stateless candidates holding a doctoral degree, in the knowledge field or speciality covering the Agronomic Engineering, Environmental Engineering or Zootechnical Engineering scientific area or related, as well as those to whom, under the Decree-Law nr 341/2007 dated October 12, regulated by Ordinance nr 227/2017 of July 25, has been granted the whole rights of the title of Doctor, or to whom, under the terms of the Decree-Law nr 283/83 dated June 21, has been granted equivalence or the recognition of a doctoral degree, and are also holders of a scientific and professional curriculum revealing suited profile for the activities to be developed. The equivalence, degree recognition or registry of the doctoral degree must be obtained till the term of contact is signed in the case the candidate is ranked in an eligible position and has obtained the doctoral degree in a foreign country.

9 – The general admission requirements are defined by the article 17 of the LTFP and the special requirements by the previous item.

10 – Formalization of applications:

10.1 – Applications are formalized by means of an application form, available at <https://www.isa.ulisboa.pt/go/nrhFormPhD>, addressed to the President of ISA, stating the ref. of this notice, full name, identity card number and expiring date, or civil identification number, tax number, date and place of birth, profession, residence and contact address, e-mail address and telephonic contact.

10.2 – The candidate must give the consent for all communications and notifications regarding this competition procedure to be made by e-mail, to the address mentioned on the application form.

10.3 – The application must be accompanied by documentation supporting the conditions stipulated on items 8 and 9, in particular:

- i) Certificate or diploma copy;
- ii) PhD thesis or equivalent document determining the academic degree;
- iii) Detailed C.V., structured in accordance with items 15 and 17, with remarks and attached copies of the works the candidate finds more relevant for both items 15 and 17;
- iv) Other relevant documents for evaluating the qualification on related scientific area;
- v) Other documents the candidate may find relevant for the analysis of the application.

10.4 – Candidates must send the documents mentioned on items 10.1 and 10.3 in PDF format to the e-mail address nrh@isa.ulisboa.pt until the last working day before the deadline for applications, which is set at 30 working days after the Publication of this notice on the Diário da República, on the Public Employment Pool, on the FCT, I.P. site and on the ISA site, in both Portuguese and English languages. The candidates may, on the grounds of the impossibility or technical difficulties regarding the e-mails containing any of the documents requested on items 10.1 and 10.3, deliver those in physical support, within the time limits mentioned above, by registered post with acknowledgement of receipt, to the postal address Instituto Superior de Agronomia, Tapada da Ajuda, 1349-017 Lisboa, or by hand at the same address. If the candidate's justification for not delivering the required documents electronically is not found reasonable, the President of the Jury allows a 5 working days period to the candidate to present them in digital support.

10.5 – The application form and the documents may be presented in Portuguese or English, notwithstanding the President of the Jury's right if one of its members does not dominate the Portuguese language, to demand, on a reasonable timeline, that the candidate proceeds to translate to English any documents previously presented in Portuguese.

11 – By decision of the President of ISA, all candidates who do not include the documents mentioned on item 10 will not be admitted to the competition, being immediately

excluded all candidates who have not presented the complete application form or all the documents mentioned on subparagraphs i) to iii) of item 10.3, or that present documents in a non-legible form, filled incorrectly or considered invalid. The President of ISA may also demand any candidate to present documentary evidence regarding the declarations made, in case of doubt and for the purpose of the admission to the competition.

12 – False declarations given by candidates will be punished in the terms of the current Law.

13 – Approval on absolute merit:

13.1 – The Jury will deliberate on its approval or rejection on absolute merit voting by justified roll-call, where abstentions are not allowed.

13.2 – Will be considered approved on absolute merit the candidates that obtain a favourable vote from more than half of the members of the Jury.

13.3 – Will be approved on absolute merit the candidates with a scientific and curricular background considered relevant to the scientific area(s) of the competition, and taking into account their suitability for the additional criteria mentioned on item 17.5.

14 – According to article 5 of the RJEC, the selection will result from the evaluation of the scientific and curricular path of the candidates.

15 – The evaluation of the scientific and curricular path will focus on relevance, quality and timeliness of:

a) The scientific, technological, academic and cultural or artistic production from the last five years, and considered most relevant by the candidate;

b) The applied or practice-based research activities developed during the last five years and considered as having the greatest impact by the candidate;

c) The activities of extension and dissemination of knowledge developed during the last five years, particularly in the context of promoting the culture and scientific practices, considered most relevant by the candidate.

16 – The five years period mentioned on the previous item may be increased by the Jury, upon the candidate's request, for the suspension of the scientific activity by socially protected reasons, namely by parental leave, serious or protracted illness and other unavailability motifs legally protected, when substantiated and documented.

17 – The evaluation criteria set out in this paragraph give particular relevance to the curriculum vitae and to the contributions considered most relevant by the candidate in the last 5 years:

17.1. - Quality of scientific, technological, cultural or artistic production, considered more relevant by the candidate, and relevant to the project (PTDC/ASP-

SOL/28769/2017) to be developed, which was given a weighting factor of 70% considering:

i) Scientific publications: a parameter which takes into account the books, chapters of books, articles in scientific journals and in international conference proceedings of which the applicant was the author or co-author, considering:

- Its nature;
- Its impact;
- The scientific / technological level and innovation;
- Diversity and multidisciplinary;
- International collaboration;
- The importance of contributions to improve the current state of knowledge;
- The importance of the works selected by the candidate as more representative, in particular, their contribution to the development and evolution of the scientific area for which the competition is open.

ii) Creation and improvement of laboratory resources: a parameter that takes into account the participation and coordination by the candidate of initiatives that have resulted in the creation or improvement of experimental and / or computational laboratory infrastructures in support of the research areas.

iii) Recognition by the international scientific community: a parameter that takes into account:

- Prizes from scientific societies;
- Editorial activities in scientific journals;
- Participation in editorial boards of scientific journals;
- Coordination and participation in program committees of scientific events;
- Holding of invited lectures in scientific meetings or in other institutions;
- Participation as a member of scientific societies and other similar distinctions.

iv) Authorship and co-authorship of patents, models and industrial designs, taking into account their nature, territorial scope, technological level and results obtained.

v) Coordination and participation in scientific projects: a parameter that takes into account the participation and coordination of scientific projects by the candidate, subject to competitive bidding, considering:

- The territorial scope and its size;
- The technological level and the importance of the contributions;

– Innovation and diversity.

vi) Dynamization of scientific activity: a parameter that takes into account the capacity of coordination and leadership of research teams demonstrated by the candidate.

vii) Supervision and orientation of students, trainees and research fellows: a parameter that takes into account the supervision of doctoral students, master's students and undergraduate students, trainees and research fellows taking into account the number, quality, scope and scientific / technological impact of the resulting publications, theses, dissertations and graduate reports, distinguishing especially the awarded works and the international recognition.

17.2. - Practical or practice-based research activities considered to be of greatest impact by the candidate and relevant to the project to be developed; which was given a weighting factor of 20% considering:

i) vocational training and lifelong learning actions: a parameter which takes into account the participation and coordination of technological training actions oriented for citizens, businesses and the public sector, taking into account their nature, technological intensity and outputs.

ii) Services and integrated consultancy in the institutional mission: a parameter that takes into account the participation in activities involving the business community and the public sector, taking into account the type of participation, size, diversity, technological intensity and innovation.

17.3. - Activities of extension and dissemination of knowledge, namely in the context of the promotion of culture and scientific practices, considered of greater relevance by the candidate, and relevant to the project to be developed, which has been given a weighting of 5% considering:

i) Industrial and intellectual property.

ii) Legislation and technical standards: a parameter that takes into account the participation in drafting legislative and standards projects taking into account their nature, territorial scope and technological level.

iii) Publications of scientific and technological dissemination: parameter that takes into account the articles in magazines and national conferences and other publications of scientific and technological diffusion, taking into account their professional and social impact.

iv) Services to the scientific community and society: a parameter that takes into account the participation and coordination of scientific and technological dissemination initiatives and taking into account the nature and the

18 – The Jury may select up to “X” candidates approved on absolute merit, whom will be asked to make a presentation, with the sole purpose of clarifying aspects relating the results of their investigation and where the Jurors shall stimulate an open debate on its content and innovative character.

18 – The jury may decide to select up to 5 candidates who are approved on absolute merit and will be called upon to hold a presentation session, which is exclusively intended to clarify aspects related to the results of their research and following which the members of the jury should stimulate an open debate on its content and innovative character. This presentation was given a weighting factor of 5%. Candidates who are not selected for the interview will be awarded 0 in this exam.

19 – The Jury, whenever finds required, may ask the candidate to present additional supporting documents to their statements, which may be relevant for the analysis and for the application classification.

20 – Assessment of the candidates:

20.1 – Each member of the Jury assigns to each one of the candidates a score on every evaluation criteria on a scale of 0 to 20, ranking all candidates by their final classification based on the sum of all partials attributed to each criteria, taking in consideration the weighting percentage of each parameter.

20.2 – Candidates are sorted through the successive voting method mentioned on number 3 and following, of the article 20 of the General Regulation of Calls from ULisboa, published by Ordinance nr 2307/2015, dated March 5.

20.3 – The Jury decides by absolute majority, and abstentions are not allowed.

20.4 – Each candidate's final score matches its ranking position, resulting from the application of the method mentioned on item 20.2.

21 – Every Jury meeting will be compiled in a minute report, with a summary of all that took place during the meeting, as well as the votes casted by each of the members including information to substantiate them, which will be given to any candidate, when requested.

22 – The Jury's final deliberation will be approved by the President of ISA and the contract handling will be under the President of ISA responsibility, entitled by the Rector of the Universidade de Lisboa, as stated by Ordinance nr 208/2018, dated October 26.

23 – The list of admitted and excluded candidates, as well as the final ranking, will be posted at the ISA facilities, sited at Tapada da Ajuda, 1349-017 Lisboa, online at the ISA website, being all candidates notified via e-mail with delivery receipt, without prejudice to articles 110 to 114 of the Administration Procedure Code.

24 – Previous hearing and final decision deadline: after being notified, the candidates have 10 working days to submit a formal rebuttal. The jury's final decisions will be rendered within 30 days counted from the deadline for the presentation of applications.

25 – This competition addresses solely the specific vacancy filling, may cease until the candidates final list approval, and expires with the job vacancy occupation.

26 – Non-discrimination and equal access policies: ISA actively promotes a non-discrimination and equal access policy, under which no candidate can be favoured,

befitted, hampered or deprived of any rights or exempt from duties based particularly on ancestry, age, gender, sexual orientation, marital status, family circumstances, economic situation, education, origin or social condition, genetic heritage, reduced capacity for work, disabilities, chronic disease, nationality, ethnic origin or race, region of origin, language, religion, political or ideological beliefs and trade union membership.

27 – In accordance with the Decree-Law nr 29/2001, dated February 3, candidates with disabilities will have preferential rights when with the same score as other candidates, prevailing against any other legal preference. The candidates must state on the application form, on their honour, the level of incapacity, type of disability and the means of communication/expression to be used during the selection process, under the terms of the mentioned Decree-Law.

28 – The Jury has approved this announcement in the meeting of August 21st of 2018.

30/10/2018 - O Presidente do Instituto Superior de Agronomia, Professor Doutor António Guerreiro de Brito