

**PUBLIC SELECTION FOR ONE FIXED-TERM TENURE TRACK RESEARCHER (RICERCATORE A TEMPO DETERMINATO) WITH FULL TIME TEMPORARY CONTRACT PURSUANT TO ITALIAN LAW NO. 240/2010, ART. 24 AS UPDATED BY ARTICLE 14 OF DECREE LAW NO. 36, 30 APRIL 2022, CONVERTED WITH AMENDMENTS BY LAW NO. 79, 29 JUNE 2022, AT THE ACADEMIC FACULTY OF EXPERIMENTAL AND APPLIED SCIENCES AND THE CENTER OF PLANT SCIENCES IN THE ACADEMIC RECRUITMENT FIELD “AGRONOMY AND FIELD, VEGETABLE, ORNAMENTAL CROPPING” (SC 07/B1) – ACADEMIC DISCIPLINE “AGRONOMY AND FIELD CROPS” (SSD AGR/02), ISSUED BY RECTOR’S DECREE 469 OF JULY 3, 2023**

### **MINUTE OF THE THIRD MEETING**

The Evaluation Committee for the selection of one fixed-term tenure track researcher (ricercatore a tempo determinato) for the Academic Recruitment Field “Agronomy and Field, Vegetable, Ornamental Cropping” (SC 07/B1) – Academic Discipline “Agronomy and Field Crops” (SSD AGR/02) at the Academic Faculty of Experimental and Applied Sciences – Center of Plant Sciences of the Sant’Anna School of Advanced Studies - Pisa pursuant to Italian Law No. 240/2010, Art. 24 paragraph 3 letter B, as updated by article 14 of Decree Law No. 36, 30 April 2022, converted with amendments by Law No. 79, 29 June 2022, appointed by Rector’s decree No. 588 of September, 6, 2023, consists of:

- Prof. Massimo Fagnano, Full Professor of the Academic Recruitment Field 07/B1 “Agronomy and Field, Vegetable, Ornamental Cropping” at the University of Napoli Federico II;
- Prof. Maria Finckh, Full Professor at the Universität Kassel;
- Prof. Anna Camilla Moonen, Associate Professor of the Academic Recruitment Field 07/B1 “Agronomy and Field, Vegetable, Ornamental Cropping” at the School, designated member by the Center of Plants Sciences.

The Committee convened for the third time, via teleconference, on October, 27, 2023, at 14.30 p.m. from the following locations:

- Prof. Fagnano located in Napoli, connected via (means - address): massimo.fagnano@unina.it.
- Prof. Finckh located in Germany, connected via (means - address): mfinckh@uni-kassel.de.
- Prof. Moonen located in San Giuliano Terme, connected via (means - address): c.moonen@santannapisa.it.

The President ascertained that all the members of the Committee were present and he declared the session open.

The President took note that the Commission was informed by email on October 26<sup>th</sup> of the withdrawal of candidate **Id 1363928** by note no 17722 of 24/10/2023.

Each member of the Committee declared to have received the link to access online to the applications of the candidates and have examined the documents they have submitted.

The Commission then carried out a collegial examination of the documentation and drew up a brief summary of the qualifications, curriculum and scientific production of the two remaining candidates.

The above-mentioned assessments are annexed to and form an integral part of the present minute (Annex No. 1).

The Committee decided to reconvene on November, 3, 2023, at 10.00 a.m. in the room n. 6 at the School in the Place Martiri della Libertà, 33 - Pisa. to carry out the public interviews with the candidates.

At the end of the meeting, the Committee decided that the Secretary will send a signed copy of these agreed minutes to Staff Office, together with the declarations of approval by the other members of the Committee. These declarations form an integral part of these agreed minutes.

The meeting was adjourned at 17.15

THE COMMITTEE

The Secretary

 Firmato digitalmente  
da: Anna-camilla  
Moonen

## **ANNEX 1**

**PUBLIC SELECTION FOR ONE FIXED-TERM TENURE TRACK RESEARCHER (RICERCATORE A TEMPO DETERMINATO) WITH FULL TIME TEMPORARY CONTRACT PURSUANT TO ITALIAN LAW NO. 240/2010, ART. 24 AS UPDATED BY ARTICLE 14 OF DECREE LAW NO. 36, 30 APRIL 2022, CONVERTED WITH AMENDMENTS BY LAW NO. 79, 29 JUNE 2022, AT THE ACADEMIC FACULTY OF EXPERIMENTAL AND APPLIED SCIENCES AND THE CENTER OF PLANT SCIENCES IN THE ACADEMIC RECRUITMENT FIELD “AGRONOMY AND FIELD, VEGETABLE, ORNAMENTAL CROPPING” (SC 07/B1) – ACADEMIC DISCIPLINE “AGRONOMY AND FIELD CROPS” (SSD AGR/02), ISSUED BY RECTOR’S DECREE 469 OF JULY 3, 2023**

**CANDIDATE: ALI Abid**

### **CURRICULUM**

The candidate obtained his PhD degree in 2020 on the subject in line with the SSD. He currently has a research contract at the University of Bologna, where he has been working for 3 years (following the completion of his PhD) on the topic of developing remote sensing techniques for precision agriculture, a topic on which he has presented some articles in journals with IF. The experiences presented by the candidate in his CV show a good ability to organize and perform experimental activities in the field. Prior to his Ph.D., he had some experiences in a national research center in Pakistan, working mainly on fertilization of herbaceous field crops. The candidate’s current position is related to a research project on the ‘analysis of a large sample of local spontaneous plants and acquisition of information regarding their possibility of cultivation’. The candidate has some teaching experience as part of curricular and training courses coordinated by his scientific supervisor and his contribution to these activities are focused on precision agriculture, GIS, machine-learning, and herbaceous crop yield modeling. The candidate presents a good scientific production within the SSD and has a H-index of 9 having 13 publications with IF.

## TITLES PRESENTED

|  |  |
|--|--|
| evaluation themes  | presented work in CV   |
| a) PhD or equivalent, awarded in Italy or abroad:  | PhD 1/4/2020 at University of Bologna. Title: 'REMOTE SENSING AND SITE SPECIFIC CROP MANAGEMENT IN PRECISION AGRICULTURE' (2016-2019)  |
| b) teaching activities at university level in Italy or abroad  | Giving lecture, assigned by Professor Lorenzo Barbanti, at the Department of Agricultural and Food Sciences-DISTAL, University of Bologna, Italy. Lectures are focused on "Precision Field Cropping"; Invited as a Guest Speaker for "Master's Program in Food Studies", in the course "GIS for Food and Agriculture" at The American University of Rome on "site-specific irrigation and nutrient management in precision agriculture" (1.5 hours). |
| c) documented training or research activities carried out in qualified institutes in Italy or abroad:            | Research activities: Since 2020 research fellow at Bologna University. Training: 3 months Scientific Internship at USDA-Salinity Laboratory, Riverside, California, USA during PhD; 11 months research assistant at NIGAB, National Agriculture Research Centre (NARC), Islamabad, Pakistan, during MSc; 3 months internship at National Agriculture Research Centre (NARC), Islamabad, Pakistan, during BSc.  |
| d) project activities as regards the academic recruitment fields where applicable                                | No responsibilities in research projects have been documented besides the actual contract related to SANSahrawi project related to World Hunger Intervention.  |
| e) organization, management and coordination – or participation – in national and international research groups: | none presented   |
| f) ownership of patents as regards the academic recruitment fields where applicable                              | none presented   |
| g) participation as a speaker in national and international conferences  | not declared. Is first author on a conference paper.   |
| h) national and international awards for research activities   | winner of research grant for 'durum and bread wheat yield estimation model', by Arete - The Agri-food Intelligence Company in Bologna, Italy although it is not clear what this means and no proof has been submitted.   |

## PUBLICATIONS PRESENTED

1. Aouz, A.; Khan, I.; Chattha, M.B.; Ahmad, S.; Ali, M.; Ali, I.; Ali, A.; Alqahtani, F.M.; Hashem, M.; Albishi, T.S.; et al. (2023). Silicon Induces Heat and Salinity Tolerance in Wheat by Increasing Antioxidant Activities, Photosynthetic Activity, Nutrient Homeostasis, and Osmo-Protectant Synthesis. *Plants*, 12, 2606
2. Martelli, R.; Civitarese, V.; Barbanti, L.; Ali, A.; Sperandio, G.; Acampora, A.; Misturini, D.; Assirelli, A. (2023). Multi-Parametric Approach to Management Zone Delineation in a Hazelnut Grove in Italy. *Sustainability*, 15, 10106.
3. Ali, A., Martelli, R., Scudiero E., Lupia, F., Falsone, G., Rondelli, V., Barbanti, L. (2023). Soil and Climate Factors Drive Spatio-temporal Variability of Arable Crop Yields under Uniform Management in Northern Italy. *Archives of Agronomy and Soil Science*. Vol. 65, No. 1, pp. 75-89.
4. Ali, A., Rondelli, V., Martelli, R., Falsone, G., Lupia, F., Barbanti, L. (2022). Management zones delineation through clustering techniques based on soils traits, NDVI data and multiple year crop yields. *Agriculture*, 12(2):231
5. Hassan, M. U., Chattha, M. U., Khan, I., Chattha, M. B., Barbanti, L., Aamer, M., Iqbal, M. M., Nawaz, M., Mahmood, A., Ali, A. & Aslam, M. T. (2020). Heat stress in cultivated plants:

- nature, impact, mechanisms, and mitigation strategies-A review. *Plant Biosystems-An International Journal Dealing with all Aspects of Plant Biology*, pp.1-56
6. Ali, A., Martelli, R., Lupia, F., & Barbanti, L. (2019). Assessing Multiple Years' Spatial Variability of Crop Yields Using Satellite Vegetation Indices. *Remote Sensing*, 11(20): 2384.
  7. Hassan, M. U., Chattha, M. U., Khan, I., Chattha, M. B., Aamer, M., Nawaz, M., Ali, A., Khan, M. A. U., & Khan, T. A. (2019). Nickel toxicity in plants: reasons, toxic effects, tolerance mechanisms, and remediation possibilities—a review. *Environmental Science and Pollution Research*, 26(13): 12673-12688.
  8. Mustafa, G., Ali, A\*, Ali, S., Barbanti, L., & Ahmad, M. (2019). Evaluation of dominant allelopathic weed through examining the allelopathic effects of four weeds on germination and seedling growth of six crops. *Pakistan Journal of Botany*, 51(1): 269-278
  9. Chattha, M. U., Hassan, M. U., Barbanti, L., Chattha, M. B., Khan, I., Usman, M., Ali, A., & Nawaz, M. (2019). Composted Sugarcane By-product Press Mud Cake Supports Wheat Growth and Improves Soil Properties. *International Journal of Plant Production*, pp. 1-9.
  10. Aamer, M., Muhammad, UH, Abid, A., Su, Q., Liu, Y., Adnan, R., Tahir, A. K., & Huang, G. (2018). Foliar application of glycinebetaine (GB) alleviates the cadmium (Cd) toxicity in spinach through reducing Cd uptake and improving the activity of antioxidant systems. *Applied Ecology and Environmental Research*. 16: 7575-7583
  11. Ali, A\*, Hussain, M., Habib, H. S., Kiani, T. T., Anees, M. A., & Rahman, M. A. (2016). Foliar spray surpasses soil application of potassium for maize production under rainfed conditions. *Turkish Journal of Field Crops*, 21(1): 36-43
  12. Anees, M. A., Abid, A\*, Shakoor, U., Farooq, A., Hasnain, Z., & Hussain, A. (2016). Foliar applied potassium and zinc enhances growth and yield performance of maize under rainfed conditions. *International Journal of Agriculture and Biology*, 18(5): 1025-1032

## RESEARCH PROJECT

The candidate presented a research proposal entitled 'Integrating precision agriculture, agroecology and crop modelling technologies for enhancing nitrogen use efficiency in crop production'.

The proposal presents a series of RCB experiments to be performed in the Pisa area. Different Nitrogen levels will be tested on three main crops (wheat, maize and oilseed rape). Soil analysis and yield data will be collected and used to test the ANN-based crop yield models. Multispectral images will be acquired and analysed in relation to yield and soil data. Data will be managed with open-science data management tools and scientific publications are foreseen.

**PUBLIC SELECTION FOR ONE FIXED-TERM TENURE TRACK RESEARCHER (RICERCATORE A TEMPO DETERMINATO) WITH FULL TIME TEMPORARY CONTRACT PURSUANT TO ITALIAN LAW NO. 240/2010, ART. 24 AS UPDATED BY ARTICLE 14 OF DECREE LAW NO. 36, 30 APRIL 2022, CONVERTED WITH AMENDMENTS BY LAW NO. 79, 29 JUNE 2022, AT THE ACADEMIC FACULTY OF EXPERIMENTAL AND APPLIED SCIENCES AND THE CENTER OF PLANT SCIENCES IN THE ACADEMIC RECRUITMENT FIELD “AGRONOMY AND FIELD, VEGETABLE, ORNAMENTAL CROPPING” (SC 07/B1) – ACADEMIC DISCIPLINE “AGRONOMY AND FIELD CROPS” (SSD AGR/02), ISSUED BY RECTOR’S DECREE 469 OF JULY 3, 2023**

**CANDIDATE: CARLESI Stefano**

### **CURRICULUM**

The candidate presents a mature curriculum with a rich experience in teaching, research and dissemination activities (Third Mission activities). He obtained his PhD degree in 2012 on the subject in line with the SSD. The candidate has a RTD-A position at Scuola Sant’Anna since 2022 working on optimisation of the use of planned biodiversity to increase the efficiency of resource use in agro-ecosystems through technology-digital transfer in farms. Before obtaining this position he had a Technologist position for 2.5 years and he was Research Fellow for 6 years. The candidate actively worked on and contributed to 19 national and international research projects and he won one EU project of which he is scientific leader for Scuola Sant’Anna. He is a lecturer in CIHEAM-MAIB’S MSc Degrees since 2014, he taught in several courses of Sant’Anna lecturers and since 2023 he is the holder of two courses. He has co-supervised 7 PhD students. He has published 25 papers with IF mostly in Q1 journals, and has an H-index of 10. He has contributed to numerous conference proceedings since 2008 and was speaker at conferences on 12 occasions. Besides this, he is dedicated to dissemination activities aimed at farmers, advisors and other relevant stakeholders through participation and organisation of demo-events, farm field days, and videos.

## TITLES PRESENTED

| evaluation themes  | presented work in CV  |
|--|---|
| a) PhD or equivalent, awarded in Italy or abroad:  | Maize weed communities composition dynamics under land abandonment and urbanisation trends at landscape level (2008-2012)   |
| b) teaching activities at university level in Italy or abroad  | Since 2017 regular teaching in courses of Lecturers of Scuola Sant'Anna and yearly at least 1 week teaching in CIHEAM-MAIB'S MSc Degrees. Since 2023 holder of two courses, one for PhD students and one for ordinary students of Sant'Anna. Co-tutor of 7 PhD students (evidenced also from co-authorship of papers).  |
| c) documented training or research activities carried out in qualified institutes in Italy or abroad:            | Training: Besides BSc and MSc at University of Pisa (Agronomy) candidate was selected student in Agricultural Sciences with ministerial grant at Sant'Anna for first and second level degree obtained with high votes and cum laude. Research activities: After PhD the candidate was 6 year research fellow at Scuola Sant'Anna, 2.5 year Technologist (EP level; highest level) and since March 2022 RTD-A all at Scuola Sant'Anna working on Optimisation of the use of planned biodiversity to increase the efficiency of resource use in agro-ecosystems through technology-digital transfer in farms. |
| d) project activities as regards the academic recruitment fields where applicable                                | Since 2007 actively involved in 19 national and international research projects in line with the SSD. Since 2020 with responsibility of coordinating or co-coordinating research groups and activities in the more recent projects.   |
| e) organization, management and coordination – or participation – in national and international research groups: | participation in EWRS since 2012; Agroecology Europe since 2018; Deputy representative of Scuola Superiore Sant'Anna at 'European Research Alliance Towards a chemical-free pesticide agriculture' since 2022; 'Italian Society of Agronomy' since 2022.  |
| f) ownership of patents as regards the academic recruitment fields where applicable                              | non presented   |
| g) participation as a speaker in national and international conferences  | speaker at 12 national and international conferences and workshops relevant to the SSD (most relevant are Italian Society of Agronomy; European Weed Research Society and Agroecology Europe)   |
| h) national and international awards for research activities   | non presented   |

## PUBLICATIONS PRESENTED

1. Adeux G., Vieren E., Carlesi S., Barberi P., Munier-Jolain N., Cordeau S. (2019). Mitigating crop yield losses through weed diversity. *NATURE SUSTAINABILITY*, vol. 2, p. 1018-1026, ISSN: 2398-9629, doi: 10.1038/s41893-019-0415-y
2. Armengot, L., Blanco-Moreno, J. M., Bàrberi, P., Bocci, G., Carlesi, S., Aendekerk, R., ... & Sans, F. X. (2016). Tillage as a driver of change in weed communities: a functional perspective. *Agriculture, Ecosystems & Environment*, 222, 276-285.
3. Bàrberi, P., Bocci, G., Carlesi, S., Armengot, L., Blanco-Moreno, J. M., & Sans, F. X. (2018). Linking species traits to agroecosystem services: a functional analysis of weed communities. *Weed Research*, 58(2), 76-88.
4. Ranaldo M., Carlesi S., Costanzo A., Bàrberi P. (2020). Functional diversity of cover crop mixtures enhances biomass yield and weed suppression in a Mediterranean agroecosystem. *WEED RESEARCH*, vol. 60, p. 96-108, ISSN: 0043-1737, doi: 10.1111/wre.12388
5. CARLESI, STEFANO, BOCCI, Gionata, MOONEN, Anna Camilla, FRUMENTO, Paolo, BARBERI, Paolo (2013). Urban sprawl and land abandonment affect the functional response

- traits of maize weed communities in a heterogeneous landscape. *AGRICULTURE, ECOSYSTEMS & ENVIRONMENT*, vol. 166, p. 76-85, ISSN: 0167-8809, doi: 10.1016/j.agee.2012.12.013
6. Pellegrini, F., Carlesi, S., Nardi, G., & Barberi, P. (2021). Wheat–clover temporary intercropping under Mediterranean conditions affects wheat biomass, plant nitrogen dynamics and grain quality. *European Journal of Agronomy*, 130, 126347.
  7. Leoni F., Lazzaro M., Ruggeri M., Carlesi S., Meriggi P., Moonen A. C. (2022). Relay intercropping can efficiently support weed management in cereal-based cropping systems when appropriate legume species are chosen. *AGRONOMY FOR SUSTAINABLE DEVELOPMENT*, vol. 42, ISSN: 1774-0746, doi: 10.1007/s13593-
  8. Antichi D., Carlesi S., Mazzoncini M., Barberi P. (2022). Targeted timing of hairy vetch cover crop termination with roller crimper can eliminate glyphosate requirements in no-till sunflower. *AGRONOMY FOR SUSTAINABLE DEVELOPMENT*, vol. 42, ISSN: 1774-0746, doi: 10.1007/s13593-022-00815-2
  9. Carlesi S., Martelloni L., Bigongiali F., Frasconi C., Fontanelli M., Barberi P. (2021). Effects of band steaming on weed control, weed community diversity and composition and yield in organic carrot at three Mediterranean sites. *WEED RESEARCH*, vol. 61, p. 385-395, ISSN: 0043-1737, doi: 10.1111/wre.12496
  10. Carlesi S., Bigongiali F., Antichi D., Ciaccia C., Tittarelli F., Canali S., Barberi P. (2020). Green manure and phosphorus fertilization affect weed community composition and crop/weed competition in organic maize. *RENEWABLE AGRICULTURE AND FOOD SYSTEMS*, vol. 35, p. 493-502, ISSN: 1742-1705, doi: 10.1017/S1742170519000115
  11. Warren Raffa, D., Antichi, D., Carlesi, S., Frasconi, C., Marini, S., Priori, S., & Barberi, P. (2021). Groundcover mulching in Mediterranean vineyards improves soil chemical, physical and biological health already in the short term. *Agronomy*, 11(4), 787.
  12. Adeux G., Rodriguez A., Penato C., Antichi D., Carlesi S., Sbrana M., Barberi P., Cordeau S. (2023). Long-term cover cropping in tillage-based systems filters weed community phenology: A seedbank analysis. *FIELD CROPS RESEARCH*, vol. 291, ISSN: 0378-4290, doi: 10.1016/j.fcr.2022.108769

## RESEARCH PROJECT

The candidate presents a complex research proposal without indicating a title. The proposal contains research activities for three scales at which functional biodiversity needs to be managed in relation to developing agroecological cropping systems through participatory research approaches. For each research part potential funding agencies are named. The innovation of the project lies in the development of digital tools to support uptake by farmers of the knowledge-intensive agroecological solutions. The first research line looks at landscape scale vegetation management solutions and approaches 1) agroforestry systems and the effect that the inclusion of tree lines has on the yield and floristic composition in the arable and fodder crops in these systems and 2) sown flower strips and the effect these strips have on the surrounding vegetation. The second level looks at species diversification and the effects on ecosystem services such as soil fertility and weed suppression. In particular, the effect of cover crop mixtures in the magnitude and stability of these services will be tested by using data from long-term experiments. Other research lines will focus on selection of candidates for living mulches and functional trait selection for intercropping and polycultures. 3) The last level focusses on variety mixtures and their capacity to create yield stability in lentil and chickpea,



in pure stands and in intercropping systems. The idea is to create a regional living lab that can host these research activities and support the participatory dimension of the trials.

The proposal concludes with a list of scientific objectives, a translation of these research activities and data analysis skills in courses of MSc and PhD students, knowledge transfer to various stakeholder groups and it places the activities in the current national and European policy perspectives.

**PUBLIC SELECTION FOR ONE FIXED-TERM TENURE TRACK RESEARCHER (RICERCATORE A TEMPO DETERMINATO) WITH FULL TIME TEMPORARY CONTRACT PURSUANT TO ITALIAN LAW NO. 240/2010, ART. 24 AS UPDATED BY ARTICLE 14 OF DECREE LAW NO. 36, 30 APRIL 2022, CONVERTED WITH AMENDMENTS BY LAW NO. 79, 29 JUNE 2022, AT THE ACADEMIC FACULTY OF EXPERIMENTAL AND APPLIED SCIENCES AND THE CENTER OF PLANT SCIENCES IN THE ACADEMIC RECRUITMENT FIELD “AGRONOMY AND FIELD, VEGETABLE, ORNAMENTAL CROPPING” (SC 07/B1) – ACADEMIC DISCIPLINE “AGRONOMY AND FIELD CROPS” (SSD AGR/02), ISSUED BY RECTOR’S DECREE 469 OF JULY 3, 2023**

**MINUTE OF THE FOURTH MEETING**

The Evaluation Committee for the selection of one fixed-term tenure track researcher (ricercatore a tempo determinato) for the Academic Recruitment Field “Agronomy and Field, Vegetable, Ornamental Cropping” (SC 07/B1) – Academic Discipline “Agronomy and Field Crops” (SSD AGR/02) at the Academic Faculty of Experimental and Applied Sciences – Center of Plant Sciences of the Sant’Anna School of Advanced Studies - Pisa pursuant to Italian Law No. 240/2010, Art. 24 paragraph 3 letter B, as updated by article 14 of Decree Law No. 36, 30 April 2022, converted with amendments by Law No. 79, 29 June 2022, appointed by Rector’s decree No. 588 of September, 6, 2023, consists of:

- Prof. Massimo Fagnano, Full Professor of the Academic Recruitment Field 07/B1 “Agronomy and Field, Vegetable, Ornamental Cropping” at the University of Napoli Federico II;
- Prof. Maria Finckh, Full Professor at the Universität Kassel;
- Prof. Anna Camilla Moonen, Associate Professor of the Academic Recruitment Field 07/B1 “Agronomy and Field, Vegetable, Ornamental Cropping” at the School, designated member by the Center of Plants Sciences.

The Committee convened for the fourth time, via teleconference, November, 3, 2023 at 10.00 a.m. Prof. Massimo Fagnano and Prof. Anna Camilla Moonen were in the room n. 6 at the School in the Place Martiri della Libertà, 33 - Pisa.

- Convened on teleconference, as authorized by the Rector, Prof. Finckh located in Germany, connected via [mfinckh@uni-kassel.de](mailto:mfinckh@uni-kassel.de).

The draft of the following minute was agreed on and approved by the members of the Committee.

The President ascertained that all the members of the Committee were present and he declared the session open.

The Committee ascertained that no 2 candidates are present.

The President informs the candidates that the interview will be held on English and in alphabetical order and identified the candidates (identification form is Annex 1 to these minutes).

The Committee notes that in addition to the candidates, other interested parties are not present.

The President invites candidate Dr. Abid Ali to hold his seminar to ascertain the knowledge of English language and then starts the interview about his qualifications, publications and research experience,

The President invites candidate Dr. Stefano Carlesi to hold his seminar to ascertain the knowledge of English language and then starts the interview about his qualifications, publications and research experience.

At the end of the interviews the Committee invited the candidates to leave the meeting room and continue the meeting.

Then, after a thorough debate, the Committee assigned the scores to the qualifications, to each publication submitted by the candidate and to the overall consistency of the scientific production, on the basis of the criteria defined in the preliminary meeting. The scores assigned are listed in Annex No. 2.

Thereafter the Committee summarised the scores assigned to the candidates.

| <b>Name and surname</b> | <b>Application number</b> | <b>Qualifications</b> | <b>Publications</b> | <b>Overall consistency of the scientific production and the research project.</b> | <b>Final score</b> |
|-------------------------|---------------------------|-----------------------|---------------------|---|--------------------|
| ALI Abid                | 1366202                   | <b>11</b>             | <b>33,85</b>        | <b>19</b>   | <b>63,85</b>       |
| CARLESI Stefano         | 1369062                   | <b>22</b>             | <b>40,13</b>        | <b>25,5</b>   | <b>87,63</b>       |

On the basis of the scores obtained, the Committee declared **Dr. Stefano CARLESI** winner of the selection.

Therefore, the Committee declared the work finished and decided that the Secretary will send a signed copy of this minutes to Staff Office together with the declarations of approval by Prof. Maria Finckh.

These declarations form an integral part of this agreed minute.

The meeting was adjourned at 13.10

THE COMMITTEE

## ANNEX 2

**PUBLIC SELECTION FOR ONE FIXED-TERM TENURE TRACK RESEARCHER (RICERCATORE A TEMPO DETERMINATO) WITH FULL TIME TEMPORARY CONTRACT PURSUANT TO ITALIAN LAW NO. 240/2010, ART. 24 AS UPDATED BY ARTICLE 14 OF DECREE LAW NO. 36, 30 APRIL 2022, CONVERTED WITH AMENDMENTS BY LAW NO. 79, 29 JUNE 2022, AT THE ACADEMIC FACULTY OF EXPERIMENTAL AND APPLIED SCIENCES AND THE CENTER OF PLANT SCIENCES IN THE ACADEMIC RECRUITMENT FIELD “AGRONOMY AND FIELD, VEGETABLE, ORNAMENTAL CROPPING” (SC 07/B1) – ACADEMIC DISCIPLINE “AGRONOMY AND FIELD CROPS” (SSD AGR/02), ISSUED BY RECTOR’S DECREE 469 OF JULY 3, 2023**

**CANDIDATE: ALI Abid**

### QUALIFICATIONS PRESENTED

| evaluation themes  | presented work in CV  | obtained score | max       |
|--|---|----------------|-----------|
| a) PhD or equivalent, awarded in Italy or abroad:  | PhD 1/4/2020 at University of Bologna. Title: 'REMOTE SENSING AND SITE SPECIFIC CROP MANAGEMENT IN PRECISION AGRICULTURE' (2016-2019)   | 4              | 4         |
| b) teaching activities at university level in Italy or abroad  | Giving lecture, assigned by Professor Lorenzo Barbanti, at the Department of Agricultural and Food Sciences-DISTAL, University of Bologna, Italy. Lectures are focused on "Precision Field Cropping" (15 h for 4 years); Invited as a Guest Speaker for "Master's Program in Food Studies", in the course "GIS for Food and Agriculture" at The American University of Rome on "site-specific irrigation and nutrient management in precision agriculture" (1.5 hours). | 1,5            | 3         |
| c) documented training or research activities carried out in qualified institutes in Italy or abroad:            | Research activities: Since 2020 research fellow at Bologna University. Training: 3 months Scientific Internship at USDA-Salinity Laboratory, Riverside, California, USA during PhD; 11 months research assistant at NIGAB, National Agriculture Research Centre (NARC), Islamabad, Pakistan, during MSc; 3 months internship at National Agriculture Research Centre (NARC), Islamabad, Pakistan, during BSc.   | 2,5            | 5         |
| d) project activities as regards the academic recruitment fields where applicable                                | No responsibilities in research projects have been documented besides the actual contract related to SANSahrawi project related to World Hunger Intervention. During the interview the candidate explained that he won a small research project funded by Arete - The Agri-food Intelligence Company in Bologna, Italy.   | 2              | 7         |
| e) organization, management and coordination – or participation – in national and international research groups: | During the interview the candidate declared to have research collaborations with some national and international research groups and this is confirmed by the publication record.   | 1              | 3         |
| f) ownership of patents as regards the academic recruitment fields where applicable                              | none presented  | 0              | 0,5       |
| g) participation as a speaker in national and international conferences  | not declared.   | 0              | 2         |
| h) national and international awards for research activities   | none presented  | 0              | 0,5       |
|  |   | <b>11</b>      | <b>25</b> |

### PUBLICATIONS PRESENTED

|  | a) originality, innovativeness, methodological rigor and relevance of each scientific publication | b) congruence of each publication with the competitive sector for which the procedure is announced and with the eventual profile, defined exclusively through the indication of one or more | c) scientific relevance of the editorial placement of each publication and its dissemination within the scientific community | d) analytical determination, also on the basis of criteria recognized in the international scientific community of reference, of the individual contribution of the candidate in the case of his/her participation in collaborative work | Max points per publication |
|--|---|---|--|--|----------------------------|
| Interpretation of the criteria   | scientific quality of the paper (max 1)   | Relevance of the article to the disciplinary field (AGRO2) or profile through related SSD definition (max 1)  | Quartile of Journal attribution and number of citations for each article (max 1)   | the candidate is first, last or corresponding author (max 1)   | 4                          |
| 1. Aouz, A.; Khan, I.; Chattha, M.B.; Ahmad, S.; Ali, M.; Ali, I.; Ali, A.; Alqahtani, F.M.; Hashem, M.; Alblshi, T.S.; et al. (2023). Silicon Induces Heat and Salinity Tolerance In Wheat by Increasing Antioxidant Activities, Photosynthetic Activity, Nutrient Homeostasis, and Osmo-Protectant Synthesis. <i>Plants</i> , 12, 2606       | 0,8   | 0,8   | 0,75   | 0  | 2,35                       |
| 2. Martelli, R.; Civitarese, V.; Barbanti, L.; Ali, A.; Sperandio, G.; Acampora, A.; Misturini, D.; Assirelli, A. (2023). Multi-Parametric Approach to Management Zone Delineation in a Hazelnut Grove in Italy. <i>Sustainability</i> , 15, 10106.  | 0,8   | 1   | 0,5  | 0  | 2,3                        |
| 3. Ali, A., Martelli, R., Scudiero E., Lupia, F., Falsone, G., Rondelli, V., Barbanti, L. (2023). Soil and Climate Factors Drive Spatio-temporal Variability of Arable Crop Yields under Uniform Management in Northern Italy. <i>Archives of Agronomy and Soil Science</i> . Vol. 65, No. 1, pp. 75-89.                                       | 1   | 1   | 0,5  | 1  | 3,5                        |
| 4. Ali, A., Rondelli, V., Martelli, R., Falsone, G., Lupia, F., Barbanti, L. (2022). Management zones delineation through clustering techniques based on soils traits, NDVI data and multiple year crop yields. <i>Agriculture</i> , 12(2):231   | 1   | 1   | 0,875  | 1  | 3,875                      |
| 5. Hassan, M. U., Chattha, M. U., Khan, I., Chattha, M. B., Barbanti, L., Aamer, M., Iqbal, M. M., Nawaz, M., Mahmood, A., Ali, A. & Aslam, M. T. (2020). Heat stress in cultivated plants: nature, impact, mechanisms, and mitigation strategies-A review. <i>Plant Biosystems</i> , pp.1-56  | 0,5   | 0,6   | 0,875  | 0  | 1,975                      |
| 6. Ali, A., Martelli, R., Lupia, F., & Barbanti, L. (2019). Assessing Multiple Years' Spatial Variability of Crop Yields Using Satellite Vegetation Indices. <i>Remote Sensing</i> , 11(20): 2384.   | 1   | 1   | 1  | 1  | 4                          |
| 7. Hassan, M. U., Chattha, M. U., Khan, I., Chattha, M. B., Aamer, M., Nawaz, M., Ali, A., Khan, M. A. U., & Khan, T. A. (2019). Nickel toxicity in plants: reasons, toxic effects, tolerance mechanisms, and remediation possibilities—a review. <i>Environmental Science and Pollution Research</i> , 26(13): 12673-12688.                   | 0,5   | 0,4   | 0,875  | 0  | 1,775                      |
| 8. Mustafa, G., Ali, A*, Ali, S., Barbanti, L., & Ahmad, M. (2019). Evaluation of dominant allelopathic weed through examining the allelopathic effects of four weeds on germination and seedling growth of six crops. <i>Pakistan Journal of Botany</i> , 51(1): 269-278  | 0,5   | 1   | 0,75   | 1  | 3,25                       |
| 9. Chattha, M. U., Hassan, M. U., Barbanti, L., Chattha, M. B., Khan, I., Usman, M., Ali, A., & Nawaz, M. (2019). Composted Sugarcane By-product Press Mud Cake Supports Wheat Growth and Improves Soil Properties. <i>International Journal of Plant Production</i> , pp. 1-9.  | 0,7   | 1   | 0,875  | 0  | 2,575                      |
| 10. Aamer, M., Muhammad, UH, Abid, A., Su, Q., Liu, Y., Adnan, R., Tahir, A. K., & Huang, G. (2018). Foliar application of glycinebetaine (GB) alleviates the cadmium (Cd) toxicity in spinach through reducing Cd uptake and improving the activity of antioxidant systems. <i>Applied Ecology and Environmental Research</i> . 16: 7575-7583 | 0,5   | 0,7   | 0,75   | 0  | 1,95                       |
| 11. Ali, A*, Hussain, M., Habib, H. S., Kiani, T. T., Anees, M. A., & Rahman, M. A. (2016). Foliar spray surpasses soil application of potassium for maize production under rainfed conditions. <i>Turkish Journal of Field Crops</i> , 21(1): 36-43   | 0,5   | 0,9   | 0,75   | 1  | 3,15                       |
| 12. Anees, M. A., Abid, A*, Shakoore, U., Farooq, A., Hasnain, Z., & Hussain, A. (2016). Foliar applied potassium and zinc enhances growth and yield performance of maize under rainfed conditions. <i>International Journal of Agriculture and Biology</i> , 18(5): 1025-1032   | 0,5   | 0,9   | 0,75   | 1  | 3,15                       |
| obtains points   | 8,3   | 10,3  | 9,25   | 6  | 33,85                      |
| max  | 12  | 12  | 12   | 12   | 48                         |

## RESEARCH PROJECT

| Research project evaluation  | max points | obtained points |
|--|------------|-----------------|
| coherence with the academic recruitment field  | 3          | 3               |
| innovation   | 3          | 1               |
| originality  | 3          | 1               |
| quality of the presentation and the way the project was linked to the candidate's previous research activities | 6          | 3               |
| <b>total points</b>  | <b>15</b>  | <b>8</b>        |

## PUBLICATION RECORD

| Criteria                                  | comment  | max points | obtained points |
|---|--|------------|-----------------|
| consistency of the publication record     | The Commission will consider the H-Index and the number of total citations (taken from SCOPUS on the day of evaluation) to make an assessment of the overall consistency of the scientific production  | 4          | 4               |
| Intensity of the total publication record | The Commission will consider the total number of journal articles, contributions to conferences, books or book chapters, or scientific reports including dissemination reports, in relation to the first date of publication to make an assessment of the intensity of scientific production and dissemination | 5          | 4               |
| continuity of the publication record      | The Commission will consider the temporal continuity of scientific production based on the academic age of the candidates as indicated above, and possible previous periods of publication   | 3          | 3               |
| <b>total</b>                              |  | <b>12</b>  | <b>11</b>       |

**PUBLIC SELECTION FOR ONE FIXED-TERM TENURE TRACK RESEARCHER (RICERCATORE A TEMPO DETERMINATO) WITH FULL TIME TEMPORARY CONTRACT PURSUANT TO ITALIAN LAW NO. 240/2010, ART. 24 AS UPDATED BY ARTICLE 14 OF DECREE LAW NO. 36, 30 APRIL 2022, CONVERTED WITH AMENDMENTS BY LAW NO. 79, 29 JUNE 2022, AT THE ACADEMIC FACULTY OF EXPERIMENTAL AND APPLIED SCIENCES AND THE CENTER OF PLANT SCIENCES IN THE ACADEMIC RECRUITMENT FIELD “AGRONOMY AND FIELD, VEGETABLE, ORNAMENTAL CROPPING” (SC 07/B1) – ACADEMIC DISCIPLINE “AGRONOMY AND FIELD CROPS” (SSD AGR/02), ISSUED BY RECTOR’S DECREE 469 OF JULY 3, 2023**

**CANDIDATE: CARLESI Stefano**

**QUALIFICATIONS PRESENTED**

| Criteria   | presented work in CV   | obtained score | max |
|--|--|----------------|-----|
| a) PhD or equivalent, awarded in Italy or abroad:  | Maize weed communities composition dynamics under land abandonment and urbanisation trends at <b>landscape level (2008-2012)</b>   | 4              | 4   |
| b) teaching activities at university level in Italy or abroad  | Since 2017 regular teaching in courses of Lecturers of Scuola Sant'Anna and yearly at least 1 week teaching in CIHEAM-MAIB'S MSc Degrees. Since 2023 holder of two courses, one for PhD students and one for ordinary students of Sant'Anna. Co-tutor of 7 PhD students (evidenced also from co-authorship of papers).   | 3              | 3   |
| c) documented training or research activities carried out in qualified institutes in Italy or abroad:            | <b>Training:</b> Besides BSc and MSc at University of Pisa (Agronomy) candidate was <b>selected</b> student in Agricultural Sciences with ministerial grant at Sant'Anna for first and second level degree obtained with high votes and cum laude. <b>Research activities:</b> After PhD the candidate was 6 year research fellow at Scuola Sant'Anna, 2.5 year Technologist (EP level; highest level) and since March 2022 RTD-A all at Scuola Sant'Anna working on Optimisation of the use of planned biodiversity to increase the efficiency of resource use in agro-ecosystems through technology-digital transfer in farms. | 4              | 5   |
| d) project activities as regards the academic recruitment fields where applicable                                | Since 2007 actively involved in 19 national and international research projects in line with the SSD. Since 2020 with responsibility of coordinating or co-coordinating research groups and activities in the more recent projects.  | 7              | 7   |
| e) organization, management and coordination – or participation – in national and international research groups: | participation in EWRS since 2012; Agroecology Europe since 2018; Deputy representative of Scuola Superiore Sant'Anna at 'European Research Alliance Towards a chemical-free pesticide agriculture' since 2022; 'Italian Society of Agronomy' since 2022.   | 2              | 3   |
| f) ownership of patents as regards the academic recruitment fields where applicable                              | none presented   | 0              | 0,5 |
| g) participation as a speaker in national and international conferences  | speaker at 12 national and international conferences and workshops relevant to the SSD (most relevant are Italian Society of Agronomy; European Weed Research Society and Agroecology Europe)  | 2              | 2   |
| h) national and international awards for research activities   | none presented   | 0              | 0,5 |
|  |  | 22             | 25  |

**PUBLICATIONS PRESENTED**

With reference to publications no. 5 and 7, Prof. Moonen abstains from the evaluation as she is co-author of them.

|   | a) originality, innovativeness, methodological rigor and relevance of each scientific publication | b) congruence of each publication with the competitive sector for which the procedure is announced and with the eventual profile, defined exclusively through the indication of one or more | c) scientific relevance of the editorial placement of each publication and its dissemination within the scientific community | d) analytical determination, also on the basis of criteria recognized in the international scientific community of reference, of the individual contribution of the candidate in the case of his/her participation in collaborative work | Max points per publication |
|---|---|---|--|--|----------------------------|
| interpretation of the criteria  | scientific quality of the paper (max 1)   | Relevance of the article to the disciplinary field (AGRO2) or profile through related SSD definition (max 1)  | Quartile of journal attribution and number of citations for each article (max 1)   | the candidate is first, last or corresponding author (max 1)   | 4                          |
| Adeux G., Vieren E., Carlesi S., Barberi P., Munier-Jolain N., Cordeau S. (2019). Mitigating crop yield losses through weed diversity. NATURE SUSTAINABILITY, vol. 2, p. 1018-1026, ISSN: 2398-9629, doi: 10.1038/s41893-019-0415-y   | 1   | 1   | 1  | 0  | 3                          |
| Armengot, L., Blanco-Moreno, J. M., Bàrberi, P., Bocci, G., Carlesi, S., Aendekerker, R., ... & Sans, F. X. (2016). Tillage as a driver of change in weed communities: a functional perspective. Agriculture, Ecosystems & Environment, 222, 276-285.   | 1   | 1   | 1  | 0  | 3                          |
| Bàrberi, P., Bocci, G., Carlesi, S., Armengot, L., Blanco-Moreno, J. M., & Sans, F. X. (2018). Linking species traits to agroecosystem services: a functional analysis of weed communities. Weed Research, 58(2), 76-88.  | 1   | 1   | 0,875  | 0  | 2,875                      |
| Rinaldo M., Carlesi S., Costanzo A., Bàrberi P. (2020). Functional diversity of cover crop mixtures enhances biomass yield and weed suppression in a Mediterranean agroecosystem. WEED RESEARCH, vol. 60, p. 96-108, ISSN: 0043-1737, doi: 10.1111/wre.12388  | 1   | 1   | 0,875  | 0  | 2,875                      |
| CARLESI, STEFANO, BOCCI, Gionata, MOONEN, Anna Camilla, FRUMENTO, Paolo, BARBERI, Paolo (2013). Urban sprawl and land abandonment affect the functional response traits of maize weed communities in a heterogeneous landscape. AGRICULTURE, ECOSYSTEMS & ENVIRONMENT, vol. 166, p. 76-85, ISSN: 0167-8809, doi: 10.1016/j.agee.2012.12.013 | 1   | 1   | 1  | 1  | 4                          |
| Pellegrini, F., Carlesi, S., Nardi, G., & Barberi, P. (2021). Wheat-clover temporary intercropping under Mediterranean conditions affects wheat biomass, plant nitrogen dynamics and grain quality. European Journal of Agronomy, 130, 126347.  | 1   | 1   | 0,75   | 1  | 3,75                       |
| Leon F., Lazzaro M., Ruggeri M., Carlesi S., Meriggi P., Moonen A. C. (2022). Relay intercropping can efficiently support weed management in cereal-based cropping systems when appropriate legume species are chosen. AGRONOMY FOR SUSTAINABLE DEVELOPMENT, vol. 42, ISSN: 1774-0746, doi: 10.1007/s13593-022-00787-3                      | 1   | 1   | 1  | 0  | 3                          |
| Antichi D., Carlesi S., Mazzoncini M., Barberi P. (2022). Targeted timing of hairy vetch cover crop termination with roller crimper can eliminate glyphosate requirements in no-till sunflower. AGRONOMY FOR SUSTAINABLE DEVELOPMENT, vol. 42, ISSN: 1774-0746, doi: 10.1007/s13593-022-00815-2   | 1   | 1   | 0,75   | 1  | 3,75                       |
| Carlesi S., Martelloni L., Bigongiari F., Frascioni C., Fontanelli M., Bàrberi P. (2021). Effects of band steaming on weed control, weed community diversity and composition and yield in organic carrot at three Mediterranean sites. WEED RESEARCH, vol. 61, p. 385-395, ISSN: 0043-1737, doi: 10.1111/wre.12496                          | 0,7   | 1   | 0,625  | 1  | 3,325                      |
| Carlesi S., Bigongiari F., Antichi D., Ciaccia C., Tittarelli F., Canali S., Bàrberi P. (2020). Green manure and phosphorus fertilization affect weed community composition and crop/weed competition in organic maize. RENEWABLE AGRICULTURE AND FOOD SYSTEMS, vol. 35, p. 493-502, ISSN: 1742-1705, doi: 10.1017/S1742170519000115        | 0,8   | 1   | 0,75   | 1  | 3,55                       |
| Warren Raffa, D., Antichi, D., Carlesi, S., Frascioni, C., Marini, S., Priori, S., & Bàrberi, P. (2021). Groundcover mulching in Mediterranean vineyards improves soil chemical, physical and biological health already in the short term. Agronomy, 11(4), 787.  | 1   | 1   | 1  | 1  | 4                          |
| Adeux G., Rodriguez A., Penato C., Antichi D., Carlesi S., Sbrana M., Barberi P., Cordeau S. (2023). Long-term cover cropping in tillage-based systems filters weed community phenology: A seedbank analysis. FIELD CROPS RESEARCH, vol. 291, ISSN: 0378-4290, doi: 10.1016/j.fcr.2022.108769   | 1   | 1   | 1  | 0  | 3                          |
| obtains points  | 11,5  | 12  | 10,625   | 6  | 40,125                     |
| max   | 12  | 12  | 12   | 12   | 48                         |



## RESEARCH PROJECT

| Research project evaluation  | max points | obtained points |
|--|------------|-----------------|
| coherence with the academic recruitment field  | 3          | 3               |
| innovation   | 3          | 3               |
| originality  | 3          | 3               |
| quality of the presentation and the way the project was linked to the candidate's previous research activities | 6          | 6               |
| <b>total points</b>  | <b>15</b>  | <b>15</b>       |

## PUBLICATION RECORD

| Criteria                                  | comment   | max points | obtained points |
|---|---|------------|-----------------|
| consistency of the publication record     | The Commission will consider the H-Index and the number of total citations (taken from SCOPUS on the day of evaluation) to make an assessment of the overall consistency of the scientific production   | 4          | 3               |
| Intensity of the total publication record | The Commission will consider the total number of journal articles, contributions to conferences, books or book chapters, or scientific reports including dissemination reports, in relation to the first date of publication to make an assessment of the intensity of scientific production and dissemination activities | 5          | 5               |
| continuity of the publication record      | The Commission will consider the temporal continuity of scientific production based on the academic age of the candidates as indicated above, and possible previous periods of publication  | 3          | 2,5             |
| <b>totale</b>                             |   | <b>12</b>  | <b>10,5</b>     |