

Filippo Guzzon

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E-mail: filippo.guzzon01@universitadipavia.it
Date of birth: 12/09/1990
Nationality: Italian

Research topics

Seed Ecology and eco-physiology: Germination requirements of crop wild relatives (CWR), landraces and underutilized crops. Effects of osmotic stress on the seed germination of CWR and landraces. Relationships between the effects of different osmotic potentials, light and temperature treatments on seed germination. Seed longevity testing.

Effects of drought on seedlings: Relationships between the effects of photoperiod, water availability and temperature on CWR and landraces. Measurement of plant performance (biomass and reproduction) and physiological parameters (chlorophyll content, antioxidants, relative water content).

Plant genetic resources: Ecological characterization and conservation of CWR, crops landraces and neglected crops. Ethnobotanical surveys.

Education

*Oct 2015
to
present*

PhD in: Earth and Environmental Sciences, XXXI cycle
University of Pavia, Italy

Project Title: "Adaptation of Poaceae and Cucurbitaceae to climate change-driven abiotic stress: A focus on drought and salinity".

Internships abroad: Millennium Seed Bank of the Royal Botanic Gardens, Kew (UK). 15 August-23 December 2016.

Supervisor: Dr. Andrea Mondoni (Univ. of Pavia); Co-supervisors: Dr. Jonas Müller (Kew Gardens), Dr. Thomas Abeli, Prof. Graziano Rossi (Univ. of Pavia), Dr Simone Orsenigo (Univ. of Milan).

*Oct. 2012
to
Oct. 2014*

Master Degree in: Experimental and Applied Biology with curriculum: Biodiversity and Environmental Biology
University of Pavia, Italy

Graduated with honors.

Thesis title: "Response of the artic-alpine plant *Silene suecica* to the interaction between photoperiod and drought".

Supervisors: Prof. Graziano Rossi, Dr. Thomas Abeli.

Sep. 2009
to
Dec. 2012

Bachelor Degree in: Natural Sciences

University of Milan, Italy

Graduated with a grade of 110 (out of 110).

Thesis title: “Bioaccumulation of PFOA (perfluorooctanoic acid) in the bivalve *Tapes philippinarum*”.

Experiments performed in collaboration with CNR-IRSA (National Water Research Institute) of Monza-Brugherio and University of Padua.

Supervisors: Prof. Paolo Tremolada, Dr. Sara Valsecchi.

Language skills

Italian: first language

English:

Listening	Reading	Speaking	Writing
Good	Good	Good	Good

Positions and grants

August
to
Sept. 2016

Mobility grant for PhD students of the University of Pavia

Pavia (Italy)

Awarded with a mobility scholarship for carrying out research activities in the Millennium Seed Bank of the Kew Gardens (UK)

Oct.2015
to
present

PhD grant at University of Pavia

Pavia (Italy)

Research project: “Adaptation of Poaceae and Cucurbitaceae to climate change-driven abiotic stress: A focus on drought and salinity”

Supervisor: Dr. Andrea Mondoni

14/18-9-
2015

Participation grant

Pavia (Italy)

Awarded by the Italian Botanic Society (SBI) with a participation grant for the International Plant Science Congress: “Not only food: sustainable development, agro-biodiversity conservation & human well being”.

Feb.2015
to
Sept. 2015

Research grant

Millennium Seed Bank of the Royal Botanic Gardens, Kew.
Wakehurst Place, Ardingly, West Sussex, RH17 6TN, United Kingdom.

Research topics:

- Tolerance of different landraces and wild populations of Citron melon (*Citrullus amarus*) to drought stress.
- Germination requirements of the Abyssinian banana (*Ensete ventricosum*), an understudied high-yielding African crop.

Supervisor: Dr. Jonas V Müller.

Oct.2014
to
Feb. 2015

Erasmus + traineeship grant

Millennium Seed Bank of the Royal Botanic Gardens, Kew.
Wakehurst Place, Ardingly, West Sussex, RH17 6TN, United Kingdom.

Research topic:

Germination of different Italian population of *Aegilops geniculata* under osmotic stress.

Supervisor: Dr. Jonas V Müller.

Relevant courses and workshops

23-26/10/2017

Data Management for successful seed banking.

Millennium Seed Bank Partnership, Sociedad de Ciencias, Aranzadi, San Sebastian, Spain.

Academic year
2016/2017

**Writing in English for Scientists; Presentation making;
Public speaking.**

Collegio Nuovo, Pavia, Italy.

5/2/2016

How to write a scientific paper.

University of Pavia, Italy.

Laboratory and technical skills

Use of seed bank equipment: cleaning machines, incubators, growth chambers, microscopes.
Evaluation of chlorophyll content and use of spectrophotometer. Preparation of NaCl and

PEG solutions. Preparation of agar and agar + gibberellic acid media. Accelerated ageing testing.

Software skills

Good knowledge of: Microsoft Word, Microsoft Excel, Microsoft Power Point, Microsoft Outlook, Diva GIS, QGIS, Image J, GIMP, SPSS, Origin, Genstat, Brahms.

Publications

Publications on indexed journals

Guzzon, F., Ardenghi, N.M.G. (2017) Could taxonomic misnaming threaten the *ex situ* conservation and the usage of plant genetic resources? Biodiversity and Conservation (accepted).

Guzzon, F., Müller, J.V., do Nascimento Araujo, M., Cauzzi, P., Orsenigo, S., Mondoni, A., Abeli, T. (2017) Drought avoidance adaptive traits in seed germination and seedling growth of *Citrullus amarus* landraces. South African Journal of Botany, 113: 382-388.

Ardenghi, N.M.G., Bodino, S., Ballerini, C., Cauzzi, P., **Guzzon, F.** (2017) “*Lándar*”, “*Lándra*”, “*Barlánd*” (*Bunias erucago* L.): A Neglected Crop From the Po Plain (Northern Italy). Economic Botany, 71(3): 288-295.

Orsenigo, S., **Guzzon, F.**, Abeli, T., Rossi, G., Vagge, I., Balestrazzi, A., Mondoni, A., Müller, J.V. (2017) Comparative germination responses to water potential across different populations of *Aegilops geniculata* and cultivar varieties of *Triticum durum* and *T. aestivum*. Plant Biology 19(2): 165-171.

Ardenghi, N.M.G., Barcheri G., Ballerini, C., Cauzzi, P., **Guzzon, F.** (2016) *Gymnocoronis spilanthoides* (Asteraceae, Eupatorieae), a new naturalized and potentially invasive aquatic alien in S Europe. Willdenowia, 46(2): 265-273.

Guzzon, F., Müller, J. V. (2016). Current availability of seed material of enset (*Ensete ventricosum*, Musaceae) and its Sub-Saharan wild relatives. Genetic Resources and Crop Evolution, 63(2): 185-191.

Guzzon, F., Müller, J. V., Abeli, T., Cauzzi, P., Ardenghi, N.M.G., Balestrazzi, A., Rossi, G., Orsenigo, S. (2015). Germination requirements of nine European *Aegilops* species in relation to constant and alternate temperatures. Acta Botanica Gallica, Botany Letters, 162(4): 349-354.

Abeli, T., Orsenigo, S., **Guzzon, F.**, Fae, M., Balestrazzi, A., Carlsson-Graner, U., Müller, J. V., Mondoni, A. (2015). Geographical pattern in the response of the arctic-alpine *Silene suecica* (Cariophyllaceae) to the interaction between water availability and photoperiod. Ecological Research, 30(2): 327-335.

Congresses

Guzzon, F. (2017) Drought avoidance adaptive traits in seed germination and seedling growth of *Citrullus amarus* landraces. Congress of the Italian Botanic Society. IV International Plant Science Conference. Parma (Italy) 20-23/09/2017. Poster.

Canella, M., Mondoni, A., Orsenigo, S., Vagge, I., **Guzzon, F.** (2017) Seed heteromorphy influences seed longevity in *Aegilops*. Congress of the Italian Botanic Society. IV International Plant Science Conference. Parma (Italy) 20-23/09/2017. Poster.

Guzzon, F. (2017) The role of botany in global food security. I PhD Congress, Pavia (Italy) 4-5/06/2017. Oral communication.

Tagliaferri, A., Tonesi, R., Ronchi, L., Rossi, G., Abeli, T., Valoti, P., Schiavi, M., Tazzari, E., Bodino, S., Cauzzi, P., Orsenigo, S., Ardenghi, N.M.G., Balestrazzi, A., **Guzzon, F.** (2016). Biodiversità in landraces: un patrimonio antico per l'innovazione del futuro. XI Convegno Nazionale sulla Biodiversità. Matera (Italy) 9-10/6/2016. Oral communication (lecturer: Ronchi L.)

Orsenigo, S., **Guzzon, F.**, Rossi, G., Mondoni, A., Abeli, T., Cauzzi, P., Vagge, I. Drought tolerance in germination of *Aegilops geniculata* Roth populations along a latitudinal gradient: implications for crop improvement. XV OPTIMA meeting. Montpellier (France) 6- 11/6/2016. Poster.

Guzzon, F., Orsenigo, S., Müller, J. V., Abeli, T., Cauzzi, P., Ardenghi, N.M.G., Balestrazzi A., Rossi, G. (2015) Pre-breeding characterization of germination in *Aegilops* spp. 110° Congress of the Italian Botanic Society. II International Plant Science Conference: “Not only food: sustainable development, agro-biodiversity conservation & human well being”. Pavia (Italy) 14-18/9/2015. Oral communication (lecturer: **Guzzon F.**)

Tazzari, E.R., Abeli, T., Mondoni, A., Cauzzi, P., Bodino, S., Ardenghi, N.M.G., Vagge, I., **Guzzon, F.**, Orsenigo, S., Rossi, G. (2015). Conservation and characterization of landraces in northern Italy. 110° Congress of the Italian Botanic Society. II International Plant Science Conference: “Not only food: sustainable development, agro-biodiversity conservation & human well being”. Pavia (Italy) 14-18/9/2015. Poster.

Other international publications:

Galasso, G., Domina, G., [...] **Guzzon, F.**, [...] Nepi, C. (2017) Notulae to the Italian alien vascular flora: 3. Italian Botanist 3, 49-71.

Bartolucci, F., Domina, G., [...] **Guzzon, F.**, [...] Nepi, C. (2017). Notulae to the Italian native national flora: 3. Italian Botanist 3, 29-48.

Guzzon, F., Abeli T., Mondoni A., Orsenigo S., Müller, J. V. (2015). Seed germination and longevity in a changing climate. A focus on alpine plants and crop wild relatives. Samara, 28.

Teaching activity

Supervisor of the following Bachelor thesis at the University of Pavia:

Gianella M. (2016): Studio sulla longevità delle cariossidi nel genere *Aegilops* L.

Rabaiotti B. (2016): Conservazione *ex situ* e germinazione a diverse temperature di semi di *Citrullus amarus* Schrad. Cucurbitaceae.

Ottobriano V. (2017): Tecniche di propagazione *ex situ* del genere *Citrullus* Schrad. ed effetto del fotoperiodo sulla germinazione di *Citrullus amarus* Schrad.

Spialtini E. (2017) Caratterizzazione morfologica e prove di conservazione *ex situ* di alcune cultivar tradizionali locali di mais (*Zea mays* L.) dell'Emilia-Romagna

Referee activity

Reviewer for: Plant Ecology and Agriambi.

“Ai sensi del D.Lgs 196 del 30/06/2003, autorizzo il trattamento dei miei dati personali per le vostre esigenze di selezione e ricerca del personale e dichiaro di essere informato dei diritti di cui all'articolo 7 della predetta legge”

4/12/17