CURRICULUM VITAE

DATOS PERSONALES

Nombre y Apellido: Roberto Luis BENECH ARNOLD
Nacionalidad: Argentino
Domicilio Laboral: Av. San Martín 4453. (1417) Capital Federal
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ESTUDIOS CURSADOS Y GRADOS OBTENIDOS

Perito Mercantil (1976), Instituto John F.Kennedy

Ingeniero Agrónomo (orientación Fitotecnia) (1984), Facultad de Agronomía. Universidad de Buenos Aires.

Magister Scientiae (M.Sc.) (Producción Vegetal) (1989), Facultad de Agronomía. UBA.

Doctor of Philosophy (Ph.D.) (1991), School of Biological Sciences. University of Southampton (Inglaterra).

POSICION ACTUAL

- Profesor Titular Plenario (Dedicación Exclusiva). Res. C.S. 7358/17. Cátedra de Cultivos Industriales, asignatura: Producción de Granos. Facultad de Agronomía. UBA.
- Investigador Superior. CONICET. Consejo Nacional de Investigaciones Científicas y Técnicas.
- Director de la Carrera de Agronomía (Facultad de Agronomía UBA). Res. C.D. 1591.
- Profesor de la Escuela para Graduados de la Facultad de Agronomía. UBA. Area Producción Vegetal.
- Categoría en el Programa de Incentivos para docentes investigadores: I

PUBLICACIONES (últimos 5 años) (135 en total) Indice h Scopus: 38; índice h Scholar: 48

112) **Martínez A., Lema V., Capparelli A., López Anido F., Benech-Arnold R.L. and Bártoli C.** (2018) Differences in seed dormancy associated with the domestication of

Cucurbita maxima: elucidation of some mechanisms behind this response. Seed Science Research doi.org/10.1017/ S0960258517000320
113) **Benech-Arnold RL and Rodríguez MV** (2018) Pre-harvest Sprouting and Grain Dormancy in Sorghum bicolor: What Have We Learned? Frontiers in Plant Science, 9:811. doi: 10.3389/fpls.2018.0081.
114) **Dominguez, Constanza P., Rodríguez, María V., Batlla, Diego, García de Salamone, Inés E., Mantese, Anita I., Andreani, Ana L. and Benech-Arnold, Roberto L.** (2019) Sensitivity to hypoxia and microbial activity are instrumental for pericarp-imposed dormancy expression in sunflower (Helianthus annuus L.). Seed Science Research, 29, 85-96.
115) **Fernández Farnocchia, R.B., Benech-Arnold, R.L. and Batlla, D.** (2019) Regulation of seed dormancy by the maternal environment is instrumental for maximizing plant fitness in *Polygonum aviculare*. Journal of Experimental Botany, 70, 4793-4805.
116) **Batlla, D., Ghersa C.M. and Benech-Arnold R.L.** (2020) Dormancy, a critical trait for weed success in crop production systems. Pest Management Science, 76(4), 1189-1194.
117) **Batlla D., Malavert C., Fernández Farnocchia R. B. and Benech-Arnold R.L.** (2020) Modelling weed seedbank dormancy and germination. In (G. Chantre and J.L. González-Andújar, eds.) Decision support systems for weed management. Springer nature. Pp. 61-83. 118) **Malavert C., Batlla D. and Benech-Arnold R.L.** (2020) The role of seed water content for the perception of temperature signals that drive dormancy changes in *Polygonum aviculare* buried seeds. Functional Plant Biology **DOI:** 10.1071/FP20011.
119) **Laspina N.V., Batlla D. and Benech-Arnold R.L.** (2020) Dormancy cycling in *Polygonum aviculare* seeds is accompanied by changes in ABA sensitivity. Journal of Experimental Botany, 71, 5924-5934.
120) **Lastuvka M., Benech-Arnold R.L. and Windauer L.B.** (2021) A stratification thermal time-based model as a tool for designing efficient methodologies to overcome seed dormancy constraints to kiwifruit seedling production. Scientia Horticulturae, 277, 109796.
121) **Otero E.A., Miralles D.J. and Benech-Arnold R.L.** (2021) Development of a precise thermal time model for grain filling in barley: A critical assessment of base temperature estimation methods from field-collected data. Field Crops Research https://doi.org/10.1016/j.fcr.2020.108003
122) **Malavert C., Batlla D. and Benech-Arnold R.L.** (2021) Light sensitivity changes during dormancy induction in Polygonum aviculare L. seeds: development of a predictive model of annual changes in seed-bank light sensitivity in relation to soil temperature. Weed Research, 61, 115-125.
123) **Fernández Farnocchia, R.B., Benech-Arnold, R.L., Mantese, A., Batlla, D.** (2021) Optimization of timing of next-generation emergence in Amaranthus hybridus is determined via modulation of seed dormancy by the maternal environment. Journal of Experimental Botany, 72, 4283-4297.
124) **Marques, A.R., Gonçalves, A.L.B.R., Santos, F.S., Batlla, D., Benech-Arnold, R. and Garcia, Q.S.** (2021) Thermal requirements and germination niche breadth of Polygonum ferrugineum Wedd. from southeastern Brazil. Seed Science Research, 31, 91-97.
125) **Rodríguez, M.V., Arata, G.J., Díaz, S.M., Rentería, S. and Benech-Arnold, R.L.** (2021) Phenotyping for resistance to pre-harvest sprouting in grain sorghum. Seed Science Research, 31, 178-187.

126) **Otero, E.A. Miralles D.J., Petón A., Conti V., Giménez F. and Benech-Arnold R.L.** (2021) On-field assessment of the environmental modulation of malting quality in barley crops. Field Crops Research, **DOI** 10.1016/j.fcr.2021.108252

127) **Benech-Arnold R.L., Rodríguez M.V., Batlla D. and Fernández-Farnocchia R.B.** (2022) Understanding the effects of maternal environment in controlling seed dormancy. In (J. Buitink and O. Leprince, eds.) Advances in Seed Science and Technology for More Sustainable Crop Production. Burleigh Dodds Science Publishing. ISBN-13 978-1786769176 (en prensa).

128) **Batlla D., Malavert C., Fernandez Farnocchia R.B., Footitt S., Benech-Arnold R.L. and Finch-Savage W.E.** (2022) A quantitative analysis of temperature-dependent seasonal dormancy cycling in buried Arabidopsis thaliana seeds can predict seedling emergence in a global warming scenario. Journal of Experimental Botany (en prensa).

129) **Benech-Arnold R.L. and Batlla D.** (2022) Environment and dynamics of weed seed banks and seedling emergence. In (M.K. Upadhyaya, D. Clements and A. Shrestha, eds.) Persistence Strategies of Weeds. Wiley Blackwell. ISBN-13 978-1119525608 (en prensa).

130) **Malavert C., Batlla D. and Benech-Arnold R.L.** (2022) Modelling changing sensitivity to alternating temperatures during induction of secondary dormancy in buried Polygonum aviculare L. seeds to aid in managing seed-bank behavior. Weed Research (en prensa).

131) **Gómez-Maqueo, Ximena; Soriano, Diana; Chávez-Esquivel, Edwin Alejandro; Alvarado-López, Sandra; Martínez-Barajas, Eleazar; Flores-Ortíz, César Mateo; Benech-Arnold, Roberto Luis; Gamboa-de Buen, Alicia** (2022) Different response to priming in Ceiba aesculifolia seeds is associated to the initial transcriptome landscape and to differential regulation of ABA and lipid metabolism. Environmental and experimental Botany, 204.

132) **Wangzhuang Liang, Huixue Dong, Xiaojiang Guo, Verónica Rodríguez, Mengping Cheng, Maolian Li, Roberto Benech-Arnold, Zhien Pu, Jirui Wang** (2023) Identification of long-lived and stable mRNAs in the aged seeds of wheat. Seed Biology, 2, 4.

133) **Benech-Arnold R.L., Malavert C.J., Otero E.A. and Ortiz M.** (2024) Cebada Cervecera. En (Elba de la Fuente, Roberto Benech-Arnold, Alejandra Gil, Adriana Kantolic, Mónica López Pereira, Edmundo Ploschuk, Daniel Sorlino y Diego Wassner, eds.): Producción y Usos de Cultivos Industriales. Editorial Facultad de Agronomía. p. 695-715.

134) **Rodríguez M.V., Sánchez D.H., Glison N., Ríos, C.D., Demkura P. V., Alvarez Correa C. C., Fernández L.G., Filippi C.V., Heinz R., Padro P., Rentería S., Guillaumet L., Benech-Arnold R.L.** (2025) Introgression of dwarfing allele dw1 reduced seed dormancy and increased pre-harvest sprouting susceptibility in grain sorghum converted lines. Plant Biotechnology Journal **DOI:** https://doi.org/10.1111/pbi.70007

135) **Fernández-Farnocchia R., Benech-Arnold R.L. and Batlla D.** (2025) Maternal temperature effects on seed dormancy mitigate the negative impact of global warming on germination and population fitness. Journal of Experimental Botany (en prensa).

FORMACION DE RECURSOS HUMANOS

DIRECCION DE TESISTAS DE GRADO: 28 finalizadas

DIRECCION DE TESISTAS DE POSGRADO: 10 de doctorado finalizadas (director); 6 de maestría finalizadas (director)

DIRECCION DE INVESTIGADORES

Diego Batlla. Investigador Asistente CONICET
María Verónica Rodríguez. Investigador Asistente CONICET
Guillermina Mónica Mendiondo. Investigador Asistente CONICET
Natalia Laspina. Investigador Asistente CONICET
Cristian Malavert Pineda Investigador Asistente CONICET

TRABAJO EDITORIAL

Journal of Experimental Botany: Handling Editor
Seed Science Research: Editor Asociado
Weed Biology and Management: Editor Asociado
Theoretical and Applied Plant Physiology: Editor Asociado