

Sosa del Castillo Daynet
Main Professor



Websites (Google scholar):

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ORCID: [0000-0001-5403-9072](https://orcid.org/0000-0001-5403-9072)

EDUCATION

Doctor's degree, 2004. Program: "Biotechnology of microorganisms and plants".

University of León, León, Spain

Agricultural Engineering, 1994, University of Matanzas, Matanzas, Cuba

SERVICE ON THIS FACULTY (6 years)

08/2016-present, Main Professor

OTHER RELATED EXPERIENCE

11/2015 – 02/21, Researcher at the Biotechnological research center of Ecuador-CIBE, ESPOL Polytechnic University, Guayaquil, Ecuador.

11/2014 – 11/2015, Promethean researcher, ESPOL Polytechnic University, Guayaquil, Ecuador.

07/2007 – 11/2014, Researcher-8, Institute for advanced studies- IDEA, Caracas, Venezuela.

11/2005 – 06/2007, Post-Doctoral Researcher, Institute for advanced studies- IDEA, Caracas, Venezuela.

CONSULTING AND PATENTS (n/a)

STATE IN WHICH REGISTERED (n/a)

PUBLICATIONS LAST FIVE YEARS (10 of 13 Selected)

1. Espinoza-Lozano F, Amaya-Márquez D, Pinto CM, Villavicencio-Vásquez M, Sosa del Castillo D, Pérez-Martínez S. "Multiple Introductions of *Moniliophthora roreri* from the Amazon to the Pacific Region in Ecuador and Shared High Azoxystrobin Sensitivity". *Agronomy*. 12(5):1119. 2022. <https://doi.org/10.3390/agronomy12051119>
2. Castells A., Leon A., Sosa D., Cadena I., Ramirez D., Serrano L., Larrea F., Almeida Streitweiser D., Alvarez-Barreto J. "Evaluation of Lactic Acid Production by Different *Bacillus Subtilis* Strains Isolated from Theobroma Cacao Crops in Ecuador". *Chemical Engineering Transactions*, 93, 55-60. 2022. <https://doi.org/10.3303/CET2293010>
3. Amaya Márquez, D. J., Espinoza-Lozano, F., Villavicencio-Vásquez, M. E., Sosa

- del Castillo, D., & Pérez-Martínez, S. "Inhibition and stimulation of mycelial growth of *Moniliophthora roreri* by flutolanil in populations of Ecuador". *Acta Agronómica* 70 (3). 2022. <https://doi.org/10.15446/acag.v70n3.88905>
4. René Pérez-Pérez, Ionel Hernández Forte, Yarixa Openda Zanabria, Juan Carlos Salcedo Benítez, Daynet Sosa del Castillo, Simón Pérez-Martínez. "Characterization of potassium solubilizing bacteria isolated from corn rhizoplane". *Agronomía colombiana* 39(3). 2021. <https://doi.org/10.15446/agron.colomb.v39n3.98522>
5. Hernández-Aranda V, Rojas-Tortolero D, Álvarez-Barreto J, Arias-Vega C, Pro - Saraguro J, Portalanza-Chavarria A, Sosa D. "Characterization and Use of a Crop-Residue-Based Mat Mulch in the Production of Pepper (*Capsicum annuum*) during Dry Season". *Agronomy*. Volume 11(6):1173 2021. <https://doi.org/10.3390/agronomy11061173>
6. Maria Quijano-Avilés, Ivan Chóez-Guaranda, Rafael Viteri, Ana Barragán-Lucas, Daynet Sosa and Patricia Manzano. "Effect of cocoa bean shell addition on metabolite profile and antioxidant activity of herbal infusions". *International Journal of Food sciences*. Volume 2021 |Article ID 9915797 | <https://doi.org/10.1155/2021/9915797>.
7. Serrano, Lizette, Moreno, Andrea Sosa, Castillo, Daynet Sosa Del, Bonilla, Julio, Romero, Christian A, Galarza, Luis Lenin, & Coronel-León, Jonathan Ricardo. "Biosurfactants synthesized by endophytic *Bacillus* strains as control of *Moniliophthora perniciosa* and *Moniliophthora roreri*". *Scientia Agricola*, 78 (Suppl. 1), e20200172. Epub April 02, 2021. <https://doi.org/10.1590/1678-992x-2020-0172>.
8. Adela Quevedo, Marcos Vera-Morales, Fernando Espinoza-Lozano, Rafael F. Castañeda-Ruiz, Daynet Sosa, Freddy Magdama. "Assessing the predatory activity of *Arthrobotrys oligosporus* strain C-2197 as biocontrol of the root-knot nematode *Meloidogyne* spp.". *Bionatura* No 1 Vol 6. 2021. <http://dx.doi.org/10.21931/RB/2021.06.01.22>.
9. Daynet Sosa del Castillo, José Johnatan Quintero Mesa., Yeifre José Rojas Alvear, María Rodríguez, Ramón Antonio Rea Suárez y Migdalia Miranda Martínez. "Chemical evaluation and anti-radical activity of varieties of *Morus alba* L. (morera, moraceae) from Venezuela". *Bionatura* No 1 Vol 6. 2021. <http://dx.doi.org/10.21931/RB/2021.06.01.21>.
10. Ramón Rea, Sandy Molina-Moret, Darío Torrealba, Sabino Jiménez, Laura Gelves y Daynet Sosa. "Evaluation of the genetic diversity of a Venezuelan collection of mulberry using molecular markers". *Bionatura* No 1 Vol 6. 2021. <http://dx.doi.org/10.21931/RB/2021.06.01.13>.
11. Checa-Artos Miriam, Sosa del Castillo Daynet, Vanegas María Eulalia, Ruiz-Barzola Omar, Barcos-Arias Milton. "Removal of five pharmaceutical products classified as emerging pollutants in aqueous medium using the vetiver species (*Chrysopogon zizanioides*)". *Bionatura* No 1 Vol 6. 2021. <http://dx.doi.org/10.21931/RB/2021.06.01.7>.
12. Sandra Heredia, Diego Costa, Iván Choez, Ana Barragan, María F. Quijano,

- Washington Cárdenas, Patricia Manzano, Carol Reyes, Daynet Sosa, Jose F. Alvarez-Barreto. "Porous Sponges from the Mesocarp of *Theobroma cacao* L. Pod Shells for Potential Biomaterial Applications". Bionatura No 1 Vol 6. 2021. <http://dx.doi.org/10.21931/RB/2021.06.01.14>.
13. Amalia Domínguez Suárez, Rodolfo Darias Rodríguez, Yordanys Martínez Dávalos, Maryla Sosa del Castillo y Daynet Sosa del Castillo. "Selection of varieties of common red bean (*Phaseolus vulgaris* L.), tolerant to drought in different irrigation conditions in the field". Bionatura No 1 Vol 6. 2021 <http://dx.doi.org/10.21931/RB/2021.06.01.6>.
 14. Rodrigo Oviedo-Anchundia; Daynet Sosa del Castillo; Jaime Naranjo-Morán; Nora Francois; José Álvarez-Barreto; Alejandro Alarcón; Jhonny Saulo Villafuerte; Milton Barcos-Arias. "Analysis of the degradation of polyethylene, polystyrene and polyurethane mediated by three filamentous fungi isolated from the Antarctica". African Journal of Biotechnology 20(2), 66-76. 2021. <https://doi.org/10.5897/AJB2020.17200>
 15. Vera, Marcos; Sosa, Daynet; Magdama, Freddy; Quevedo, Adela; Espinoza, Fernando; Serrano, Lizette; Villavicencio, Mirian; Choez-Guaranda, Ivan; Pérez-Martínez, Simón; Castañeda-Ruiz, Rafael F. "*Similitrichoconis wongii* gen. & sp. nov. from Ecuador". : Mycotaxon, Volume 135(4), October-December 2020, pp. 829-838(10). DOI: <https://doi.org/10.5248/135.829>.
 16. Quevedo, Adela; Sosa, Daynet; Vera, Marcos; Espinoza, Fernando; Magdama, Freddy; Serrano, Lizette; Villavicencio, Mirian; Castañeda-Ruiz, Rafael F. "*Beltrania nodulosa* sp. nov. from Ecuador". : Mycotaxon, Volume 135(4), October-December 2020, pp. 853-860(8). DOI: <https://doi.org/10.5248/135.853>.
 17. Villavicencio, Mirian; Sosa, Daynet; Vera, Marcos; Espinoza, Fernando; Quevedo, Adela; Magdama, Freddy; Serrano, Lizette; Pérez-Martínez, Simón; Castañeda-Ruiz, Rafael F. "*Zanclospora bicolorata* sp. nov. from Ecuador". : Mycotaxon, Volume 135(4), October-December 2020, pp. 895-900(6). DOI: <https://doi.org/10.5248/135.895>.
 18. René Pérez-Pérez, Maxime Oudot, Ionel Hernández, María C. Nápoles, Simón Pérez-Martínez, Daynet Sosa del Castillo. " Isolation and characterization of Stenotrophomonas asociated to maize (*Zea Mays* L.) rhizosphere". Cultivos tropicales vol.41 no.2 La Habana abr.-jun. 2020 <http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0258-59362020000200003&lng=es&nrm=iso>. Epub 05-Abr-2020. ISSN 0258-5936.
 19. Lizette Serrano Mena, Daynet Sosa del Castillo, Freddy Magdama Tobar, Rodrigo Espinoza Lozano, Adela Quevedo Pinos, Marcos Vera Morales, Mirian Villavicencio Vásquez, Gabriela Maridueña Zavala, Simón Pérez, Rafael Castañeda. "*Neomyrmecridium asymmetricum* sp. nov. from Ecuador". Mycotaxon. Volume 135(1), January-March 2020, pp. 151-165(15). DOI: <https://doi.org/10.5248/135.151>
 20. Checa-Artos Miriam, Sosa del Castillo Daynet, Ruiz-Barzola Omar, Barcos-Arias Milton. "Presence of pharmaceutical products in water and its impact on the environment". Bionatura. 2020. <http://dx.doi.org/10.21931/RB/2021.06.01.27>

21. Kai Zhang, Weihua Guo, Daynet Sosa , Freddy Magdama , Lizette Serrano, Elaine Malosso, De-Wei Li, Rafael F. Castañeda-Ruiz. "Phylogeny and morphology of *Ellismarsporium parvum* and the new combination *E. varium*". Mycotaxon. Volume 135 (2), pp. 443-452. 2020. DOI: <https://doi.org/10.5248/135.443>
22. María Fernanda Gonzalez, Freddy Magdama, Luis Galarza, Daynet Sosa & Christian Romero. "Evaluation of the sensitivity and synergistic effect of *Trichoderma reesei* and mancozeb to inhibit under *in vitro* conditions the growth of *Fusarium oxysporum* ". Communicative & Integrative Biology. Volume 13 (1), pp. 160-169. 2020. DOI: <https://doi.org/10.1080/19420889.2020.1829267>
23. Espinoza, Fernando; Sosa, Daynet; Serrano, Lizette; Quevedo, Adela; Magdama, Freddy; Vera, Marcos; Pérez-Martínez, Simón; Malosso, Elaine; Castañeda-Ruiz, Rafael F. Castañeda-Ruiz. "*Bactrodesmium pulcherrimum* sp. nov. from Ecuador". Mycotaxon. Volume 134 (4), October-December 2019, pp. 627-632(6). 2019. DOI: <https://doi.org/10.5248/134.627>
24. René Pérez-Pérez, Maxime Oudot, Lizette Serrano, Ionel Hernández, María Nápoles, Daynet Sosa, and Simón Pérez-Martínez. "Rhizospheric rhizobia identification in maize (*Zea mays* L.) plants". Revista Agronomía Colombiana Vol. 37 No. 3. 2019. <https://doi.org/10.15446/agron.colomb.v37n3.80189>
25. Magdama F, Monserrate-Maggi L, Serrano L, Sosa D, Geiser DM, Jiménez-Gasco MdM. "Comparative analysis uncovers the limitations of current molecular detection methods for *Fusarium oxysporum* f. sp. cubense race 4 strains". PLoS ONE 14(9): e0222727. 2019. <https://doi.org/10.1371/journal.pone.0222727>.
26. Sosa, D; Quevedo, A; Espinoza, F; Serrano, L; Magdama, F; Vera, M; Pérez-Martínez, S; Malosso, E; Castañeda-Ruiz, RF. : "*Coronosporidium ecuadorianum* gen. & sp. Nov. From submerged decaying leaf from Ecuador". Mycotaxon 134(1): 111-117. 2019. <https://doi.org/10.5248/134.111>
27. Villavicencio-Vásquez M, Espinoza-Lozano RF, Pérez-Martínez S, Sosa del Castillo D. : "Foliar endophyte fungi as candidate for biocontrol against *Moniliophthora* spp. of *Theobroma cacao* (Malvaceae) in Ecuador". Acta biol. Colomb. 2018; 23(3): 235-241. <http://dx.doi.org/10.15446/abc.v23n3.69455>. : 2018.
28. Bernal, Carolina, Sosa, Daynet, Galindo-Castro, Iván, & Diez, Nardy. "Two-dimensional gel electrophoresis to identify arcelins from *Phaseolus vulgaris* with immuno-proteomic analysis". Agronomía Colombiana, 36(2), 114-119. 2018. <https://dx.doi.org/10.15446/agron.colomb.v36n2.67694>.
29. Nardy Diez García, José Faks, Jais Nieves y Daynet Sosa. "Caracterización de moléculas bioactivas presente en los extractos de la anémona *Condylactis gigantea*". INVESTIGATIO No. 10, pp. 18-31. 2018. <https://doi.org/10.31095/investigatio.2018.10.3>
30. Amalia Domínguez, Yunel Pérez, Maryla Sosa, Silvia Alemán, Leticia Fuentes, Rodolfo Darias, Ramón Rea, Daynet Sosa. "Evaluación de líneas avanzadas de caraota al déficit hídrico durante la fase de plántula". Agronomía Tropical, ISSN

0002-192X, Vol. 66, N°. 1-2, 2016, págs. 145-153.

31. J.F. Alvarez-Barreto, D. Quintero, M. Rodríguez, R. Rea, D. Sosa. Evaluation of phenolic compounds, lignins, aminoacids and carbohydrates in *Theobroma cacao* L. from three different climate regions in Venezuela. *Emirates Journal of Food and Agriculture* Vol 30, Issue 6. Special Issue on "Climate Change effects on Agriculture". 2018. <http://dx.doi.org/10.9755/ejfa.2018.v30.i6.1726>.
32. V. Gallino, C. A. Martín, D. Sosa and M. Barcos-Arias, "A Control Engineering and System Identification Approach to Improve a Cocoa Biofertilization Process," 2018 Annual American Control Conference (ACC), 2018, pp. 380-385, doi: 10.23919/ACC.2018.8431481.
33. Phelipe Costa, Marcela Barbosa, Gabriela da Silva, Daynet Sosa, Simón Pérez-Martínez, Rafael F Castañeda-Ruiz, & Elaine Malosso. "*Castanediella diversispora* sp. nov. from the Brazilian Atlantic Forest". *Mycotaxon* Volume 133: 63–69. 2018. <https://doi.org/10.5248/133.63>
34. Reyes G., García J., Piña F., Mendoza J., Sosa D., Blasco M., Noceda C., Flores J. "In vitro proliferation and cryoconservation of banana and plantain elite clone trees". *Journal of Horticultural Research* vol. 25(2): 37-47. 2017. DOI: 10.1515/johr-2017-0020
35. Phelipe M.O. Costa, Marcela A. Barbosa, Wanderson L. Tavares, Daynet Sosa, Rafael F. Castañeda-Ruiz & Elaine Malosso. "*Acumisporea delicata* sp. nov. from the Brazilian Atlantic Forest". : *Mycotaxon* 132 (4) pp 971-975 (5). octubre-diciembre 2017. <https://doi.org/10.5248/132.971>
36. Simón Pérez-Martínez, Carlos Noceda, Oskary Zambrano, Dercy Parra, Luis Córdoba, Daynet Sosa. "Descripción de plagas en viveros de cacao en el cantón Milagro a partir de diferentes fuentes de información". *Revista ciencia UNEMI* Revista ciencia UNEMI Vol. 10, N° 24, pp. 19 – 38. septiembre 2017.
37. Rafael F. Castañeda-Ruiz, De-Wei Li, Xiu-Guo Zhang, Bryce Kendrick, Beatriz Ramos, Simón Pérez-Martínez, & Daynet Sosa. "*Ellismarsporium* gen. nov. and *Stanhughesiella* gen. nov. to accommodate several *Helminthosporium* and *Corynespora* species". *Mycotaxon* 132(4). pp. 759–766(8). octubre-diciembre 2017. DOI: <https://doi.org/10.5248/132.759>
38. Rafael F. Castañeda-Ruiz, Xiu-Guo Zhang, De-Wei Li, Luis Fernando Pascholati Gusmão, Simón Pérez-Martínez, & Daynet Sosa. "Notes on *Vamsapriya* and *V. camagueyensis* comb. nov.". *Mycotaxon* 132 (3). Pp553-557. July-September 2017. <https://doi.org/10.5248/132.553>

HONORS AND AWARDS

Graduate Student Goldenseal, 1994. University of Matanzas, Cuba

Graduate Student "suma cum laude". 2004. University of León, Spain.

INSTITUTIONAL AND PROFESSIONAL SERVICE (LAST FIVE YEARS)

Director: Biotechnological research center of Ecuador-CIBE, ESPOL Polytechnic University, Guayaquil, Ecuador.

TIME DISTRIBUTION

70% Undergraduate Teaching, 10% Research, 20% Institutional management program.