

CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date 9/06/2023

First name	Ana M ^a		
Family name	Morales Sillero		
Gender (*)	Female	Birth date	
Social Security, Passport, ID number			
e-mail	amorales@us.es	URL Web	
Open Research and Contributor ID (ORCID)(*)		0000-0002-8436-3620	

(*) Mandatory

A.1. Current position

Position	Associate Professor		
Initial date	30/11/2018		
Institution	University of Seville		
Departament/Center	<u>Agronomy</u>		
Country	Spain	Teleph. number	0034954486460
Key words	Olive, table olive and oil quality, olive breeding high-density design and management, NIR spectroscopy, postharvest, crop ecophysiology, olive irrigation, olive fertigation		

A.2. Previous positions (research activity interruptions, art. 45.2.c))

Period	Position/Institution/Country/Interruption cause
July 2008-November 2018	Profesor contratado doctor/University of Sevilla/Spain
April 2007-July 2008	Profesor colaborador/University of Sevilla/Spain
October 2001-April 2007	Profesora asociada/University of Sevilla/Spain
May-December 1996	Research staff training scholarship Junta de Andalucía/Spain
August-December 1997	Profesora asociada/University Católica de Valparaíso/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD, Doctor Ingeniero Agrónomo	Córdoba	2005
Graduate, Ingeniero Agrónomo	Córdoba	1994

Part B. CV SUMMARY (max. 5000 characters, including spaces)

I am currently an Associate Professor at the Departamento de Agronomía in the University of Sevilla (US), where I teach 'Fruit crops', 'Oliviculture and Viticulture' and 'Integrated management of intensive agricultural crops'. My scientific activity has been particularly related

to the search for sustainable and efficient olive crop to meet the competitive challenges of the olive sector. My first research experience took place in the 90s working on the isoenzymatic identification of olive varieties. In 2005 I defended the doctoral thesis on the influence of fertigation in the production and quality of table olives and olive oil. Since 2003 I belong to the research team of the US table olive breeding program. We focus on the development of efficient selection tools for developing new high quality olive cultivars adapted to the challenges of the olive sector (mechanisation, climate change, tolerance to biotic and abiotic stresses, among others). At present, we have more than 50 promising advance selections in field trials, and we have initiated the register of one new olive cultivar. Besides, since 2012 I am the Leading researcher of a line related to the table olive production in super-high-density conditions. This cropping system is commercially used in olive groves for olive oil production, but it is an absolute novelty in the table olive sector. Olives can be produced under this growing system with minimum damage depending on the cultivar and the working conditions of the harvester. Another line of research is the application of NIR technology for rapid evaluation of fruit quality traits, particularly in olive and cacao species. Current research objectives are mainly focused on the study of olive fruit traits related to the tolerance of genotypes to three important stresses: water stress, mechanical damage that occurs during the harvest, and *Bactrocera oleae* infestation (the most important pest of olive orchards worldwide).

To summarize, I have participated in 9 national projects from competitive calls and I have taken part in 11 projects with companies, in 8 of them as a Leading researcher. Besides, two new projects have recently been achieved, in one of which I am Leading researcher. I have published 36 papers in international indexed journals (34 in Q1 and Q2) and 6 national book chapters, with 1410 citations and a h index of 19 (837 and 14, from 2017 to 2022, respectively). I have also published more than 40 communications to congresses and meetings and 8 divulgative articles. I have supervised one PhD thesis and more than 45 Bachelor's and Master's research, and I am currently supervising another PhD thesis. I frequently review papers for SCI journals and I am Assistant Editor of Grasas y Aceites Journal. From 2011 to June 2019, I coordinated the Olive Working Group of the Spanish Society of Horticultural Sciences (with experience in the organization of national seminars, >6), being also a member of its board of directors. I have been coordinator and member of scientific committees in international (2) and national congress (2). I did a three-month postdoctoral stay at the Walloon Agricultural Research Centre (CRA-W, Geamblou, Belgium) in 2013 and two stays of approximately 15 days at the CRILAR (CONICET, La Rioja, Argentina). Academic Undergraduate education abroad: University of Comahue (Argentina) (2 months, 1996); Wageningen University, Netherlands (1991-1992; 4 months). I also have recognized three six-year research periods and one transference six-year period.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications

- Morales-Sillero A.**, Jiménez R., Suárez M.P., Rallo P., Casanova L. Mechanical harvesting at dawn in a super-high-density table olive orchard. Effect on the quality of fruits. *Journal of the Science of Food and Agriculture*, 103(6):2989-2996. doi: 10.1002/jsfa.12384.
- Lodolini E.M., Fernández A., **Morales-Sillero A.**, Mendián A., Martín-Vertedor D. 2023. Influence of pre-harvest calcium applications on table olive characteristics during Spanish-style elaboration process. *Scientia Horticulturae* 308,111577. <https://doi.org/10.1016/j.scienta.2022.111577>.
- Hernández-Hernández C., Fernández-Cabanás, V.M., Rodríguez-Gutiérrez G., Fernández Prior, Á., **Morales-Sillero, A.** 2022. Rapid screening of unground cocoa beans based on

- their content of bioactive compounds by NIR. *Food Control*. 2022. Vol. 131. Núm. 108347. Pag. 1-9. <https://doi.org/10.1016/j.foodcont.2021.108347>
- Morales-Sillero A.**, Lodolini E.M., Suárez M.P., Navarrete V., Jiménez M.R., Casanova L., Gregori L., Rallo P., Martín-Vertedor D. 2021. Calcium applications throughout fruit development enhance olive quality, oil yield, and antioxidant compounds' content. *Journal of the Science and Food Agriculture* 101: 1944–1952. <https://doi.org/10.1002/jsfa.10810>
- Hernández-Hernández C., Fernández-Cabanás, V.M., Rodríguez-Gutiérrez G., Bermúdez-Oria A., **Morales-Sillero, A.** 2021. Viability of near infrared spectroscopy for a rapid analysis of the bioactive compounds in intact cocoa bean husk. *Food Control* 120. 107526. <https://doi.org/10.1016/j.foodcont.2020.107526>
- Rallo P., de Castro A.I., López-Granados F., **Morales-Sillero A.**, Torres-Sánchez J., Jiménez M. R., Jiménez-Brenes F.M., Casanova L., Suárez M.P. 2020. Exploring UAV-imagery to support genotype selection in olive breeding programs. *Scientia Horticulturae* 273, 109615. <https://doi.org/10.1016/j.scienta.2020.109615>.
- Hernández-Hernández C., **Morales-Sillero A.**, Fernández-Bolaños J., Bermúdez-Oria A., Morales-Azpeitia A., Rodríguez-Gutiérrez G. 2019. Cocoa bean husk: industrial source of antioxidant phenolic extract..*Journal of the Science of Food and Agriculture* 99, 325-333. <https://doi.org/10.1002/jsfa.9191>.
- Hernández-Hernández C., **Morales-Sillero A.**, Fernández-Prior M.A., Fernández-Bolaños J., Aguilera-Herrera M.P., Rodríguez-Gutiérrez G. 2019. Extra virgin olive oil jam enriched with cocoa bean husk extract rich in theobromine and phenols. *Food Science and Technology* 111, 278-283. <https://doi.org/10.1016/j.lwt.2019.05.027>.
- Rallo P., Jiménez M.R., Casanova L., **Morales-Sillero A.**, Suárez M.P. 2019. Genetic Diversity of Stone Fruit cultivars preserved on-farm in southern Spain. *Journal of Agricultural Science and Technology* 21, 943-955.
- Rallo P., Suárez M.P., Torres-Sánchez J., Casanova L., Jiménez-Brenes F.M., **Morales-Sillero A.**, Jiménez M.R., López-Granados F. 2019. High-throughput system for the early quantification of major architectural traits in olive breeding trials using UAV Images and OBIA Techniques. *Frontiers in Plant Science* 18, 1472. <https://doi.org/10.3389/fpls.2019.01472>.
- Casanova L., Corell M., Suárez M.P, Rallo P., Martín-Palomo M.J., **Morales-Sillero A.**, Moriana A., Jiménez M.R. 2019. Bruising response in 'Manzanilla de Sevilla' olives to RDI strategies based on water potential. *Agricultural Water Management* 222, 265-273. <https://doi.org/10.1016/j.agwat.2019.06.007>.
- Pérez-Ruiz M., Rallo P., Garrido-Izard M., Jiménez M.R., Suarez M.P., Casanova L., Valero C., Martínez-Guanter J., **Morales Sillero A.** 2018. Evaluation of over-the-row harvester damage in a super-high-density olive orchard using on-board sensing techniques. *Sensors* 18, 1242. <https://doi.org/10.3390/s18041242>.
- Rallo P., **Morales-Sillero A.**, Brenes M., Jiménez M. R., Sánchez A. H., Suárez M.P., Casanova L., Romero C. 2018. Elaboration of table olives: assessment of new olive genotypes. *European Journal of Lipid Science and Technology* 1800008. <https://doi.org/10.1002/ejlt.201800008>.
- Rallo L., Díez C.C., **Morales-Sillero A.**, Miho, H., Priego-Capote F., Rallo P. 2018. Quality of olives: A focus in agricultural preharvest factors. *Scientia Horticulturae* 233, 491-509. <https://doi.org/10.1016/j.scienta.2017.12.034>.
- Hernández-Hernández C., Viera-Alcaide I., **Morales-Sillero A.**, Fernández-Bolaños J., Rodríguez-Gutiérrez G. 2018. Bioactive compounds in Mexican genotypes of cocoa cotyledon and husk. *Food Chemistry* 240, 831-839. <https://doi.org/10.1016/j.foodchem.2017.08.018>.
- Morales-Sillero A.**, Fernández Pierna J.A., Sinnaeve G., Dardenne P., Baeten V. 2018. Quantification of protein in wheat using near infrared hyperspectral imaging: Performance comparison with conventional near infrared spectroscopy. *Journal of Near Infrared Spectroscopy* 26, 186-195. <https://doi.org/10.1177/0967033518780506>

C.2. Research projects

- Project title: Olive breeding for resilience: the role of the cuticle in the control of abiotic stresses (Cuteolive) (Administrative reference: ted2021-131198b-I00). Funded by: Ministerio de Ciencia e Innovación. Proyectos de transición ecológica y transición digital. Leading researcher: P. Rallo and **A. Morales-Sillero** (E.T.S.I.A.-US). From 12/2022 to 11/24. Amount: 146.740 €.
- Project title: Analysis of olive fruit cuticle and its relation to mechanical damage (Administrative reference: ProyExcel_01000). Funded by: Consejería de Universidad, Investigación e Innovación de la Junta de Andalucía. Proyectos de Excelencia. I.P.: E. Domínguez (CSIC/IHSM-La Mayora). From 01/2023-12/2025. Amount: 121.000 €

C.3. Contracts

Between 2017 and 2022 I have been the principal researcher of contracts with companies for a value of approximately 282.000 euros and I've also collaborated in others with a value of 182.000 euros:

Evolución a largo plazo de los ensayos de material vegetal de Novamesa (Longmesa, año 1). 01/07/2022 to 30/06/2024. Entity: Interaceituna (Spanish Table Olive organization). Leading researcher: P. Rallo. Amount: 84.700 €.

Adaptation to high-density and rainfed cultivation of traditional table olive varieties and new genotypes of the US Table Olive Breeding program (Secanoliva). 25/06/2021 to 24/06/2023. Entity: Interaceituna. Leading researcher: M. P Suárez and **A. Morales-Sillero**. Amount: 122.883 €.

Yield estimation using multispectral images and improvement of the quality of table olives produced in high-density hedgerows. 10/02/2020- 09/02/2021. Entity: Interaceituna. Leading researcher: **A. Morales-Sillero**. Amount: 27.830 €.

Evaluation of olive fruit damage in SHD hedgerow with respect to the working conditions of the straddle harvester. 28/08/2017- 31/07/2018. Entity: Interaceituna. Leading researcher: **A. Morales-Sillero**. Amount: 27.777 €.

High-density growing alternatives for rainfed table olive groves. 09/05/2017 to 08/05/2021. Company: Angel Camacho Alimentación S.L. Leading researcher: M. P Suárez and **A. Morales-Sillero**. Amount: 117.370 €.

New plant material and growing systems alternatives for table olive groves. Novamesa II. 14/11/2017 to 11/07/2022. Entity: Interaceituna. Leading researchers: P. Rallo and M. P. Suárez. Amount: 139.418 €.

Study of the damage in table olives according to the working conditions of the straddler harvester in super-intensive orchards. 28/08/2017 to 27/08/2018. Entity: Interaceituna. Leading researcher: **A. Morales-Sillero**. Amount: 27.561,1 €.

C.4. Others

- Member of the Scientific Committee of EVOO Research's Got Talent 2020. Bari. Italy. 2020.
- Director of the training course Keys to EVOO (Extra Virgin Olive Oil) production (56 hours). Two editions (2020, 2022).