

<b>Part A. PERSONAL INFORMATION</b>		<b>CV date</b>	13 December 2023
First and Family name	Workineh, Abebe Zeleke		
Social Security, Passport, ID number	EQ0078933	Age	52
Researcher numbers	Orcid code	0000-0001-7577-3540	
	Scopus Author ID	24280961400	

**A.1. Current position**

Name of University/Institution	Ethiopian Institute of Agricultural Research		
Department	Food Science and Agricultural Engineering		
Address and Country	P.O. Box 2003, Addis Ababa		
Phone number	+251 983 680300	E-mail	<a href="mailto:workineh09@gmail.com">workineh09@gmail.com</a>
Current position	Senior Researcher	From	April 2018 to date
Spec. cód. UNESCO			
Palabras clave			

**A.2. Education**

PhD	University	Year
Ph.D	University of Valladolid, Spain	2015
Master of Science	Haramaya University, Ethiopia	2006

**SPECIAL TRAININGS**

- R&D in Agricultural Engineering Technologies.** Training organized by Institute of Agric. Engineering, Agric. Research Org., Israel, 3<sup>rd</sup> Nov. to 26<sup>th</sup> Nov., 2009.
- Innovation and R&D Management for Rural Technology.** Course organized and managed by Ethiopian Science & Technology, Ethiopia, 22<sup>nd</sup> to 26<sup>th</sup> Mar, 2007.
- Technology for Rural Development.** Training organized by Ethiopian Society of Mechanical Engineers, Addis Ababa, Ethiopia, 2<sup>nd</sup> to 7<sup>th</sup> Aug., 2004.
- Appropriate Mechanization and Water Management for Dryland Agriculture.** Bogor Agricultural University, Bogor, Indonesia, 9<sup>th</sup> Feb to 20<sup>th</sup> Mar, 2004.
- Planning Monitoring & Evaluation of Agricultural Research.** Ethiopian Agricultural Research Organization, Ethiopia. 17<sup>th</sup> to 20<sup>st</sup> Jan., 2001.

**OTHER SHORT-TERM TRAININGS**

- Training of Facilitators workshop on maximizing nutrition using Agrifood System Pathways to Healthy Diets.** FAO. Ethiopia 13/11/23-16/11/23.
- Fellowship program for capacity building for food processing technology in Ethiopia.** International cooperation of rural community cooperation, Republic of Korea, 29/04/19-7/05/19.
- Soft Skill Training** (Critical thinking and work place stress management, interpersonal skill, personal effectiveness, personal effectiveness and time management, giving and receiving feedbacks, and conflict management), ATA Ethiopia, 15/04/18-19/04/18.
- Food safety management system development & implementation (ISO 22000:2018) and Quality Management system development & implementation (ISO 9001:2015),** BLESS Ethiopia. 28/11/19-6/12/19.
- Rheological characterization of food carbohydrate systems.** Training organized by University of Valladolid, Departamento de Ingeniería Agrícola y Forestal, Palencia, 19<sup>th</sup> December, 2014.
- La gestión de la seguridad alimentaria por las administraciones públicas.** Training organized by University of Valladolid, Departamento de Ingeniería Agrícola y Forestal, Palencia, 20<sup>th</sup> March, 2013.
- Agentes texturizantes en la industria agroalimentaria.** Training organized by University of Valladolid, Departamento de Ingeniería Agrícola y Forestal, Palencia, 25-26<sup>th</sup> April, 2013.
- FSTA en Plataforma OvidSP.** Organized by Wolster Kluwer and University of Valladolid, 9 January 2014, Palencia Spain.

### A.3. JCR articles, h Index, thesis supervised...

- PhD thesis co-supervised: 1 finished and 3 under way.
- M.Sc thesis co/supervised: 5 finished.
- Citations 211, h index 7 (**Scopus**)

### Part B. CV SUMMARY (max. 3500 characters, including spaces)

*Under the Ethiopian Institute of Agricultural Researches and the Ethiopian Ministry of Agriculture*

- Reduction of postharvest loss and shelf life improvement
- Characterization of indigenous food products and enhance their utilization
- Study and improve the traditional food processing for energy and time and saving as well as for nutrient loss reduction.
- Development of alternative value added products
- Planning, conducting, leading, monitoring and evaluation of small holder focused agricultural research projects related to Agricultural Mechanization and processing.
- Collaborating with Governmental and Non-governmental Organizations, International Agricultural Research Centers, International organizations.
- Promoting postharvest handling and food processing technologies for adoption by small holder farmers and entrepreneurs.
- Planning, conducting, leading and monitoring and evaluation of assessment and surveys works
- Offering postharvest handling and processing trainings for rural and urban development agents, regional and federal agricultural bureau subject matter specialists and experts.
- Participation and playing leadership role in the development of short and long term national agricultural research strategies for food science and nutrition research in Ethiopia.
- Food system trainer, Ethiopian Ministry of Agriculture.

#### *Ph.D. Research*

- Exploring the intrinsic characteristics of tef [*Eragrostis tef* (Zucc.) Trotter] grain for industrial scale processing and its application for formulation of different products.

#### *Postdoctoral Researcher*

- In the PROCEREALtech research group, at Department of Agricultural and Forest Engineering, University of Valladolid, under Professor Felicidad Ronda. I was involved in the research project entitled "TREATMENT OF NEW GRAINS OF HIGH NUTRITIONAL VALUE WITH MICROWAVE RADIATION. MOLECULAR BASES OF THE TECHNOLOGY-FUNCTIONAL CHANGES INDUCED FOR THE IMPROVEMENT OF GLUTEN FREE PRODUCTS (TECHGFREE). The main activities were improving the quality of gluten-free products, design and study of foods based on cereals and / or derivatives with beneficial health effects, Study of the physical, chemical, thermal and nutritional properties of cereal-based products and their constituents and study of new technologies for the modification of physical properties.

### Part C. RELEVANT MERITS

#### C.1. Publications (including books)

##### *Articles in refered journals*

- Milkias, M.; Emire, S.A.; **Abebe, W.**; Ronda, F. 2023 Effect of Ecotype and Starch Isolation Methods on the Physicochemical, Functional, and Structural Properties of Ethiopian Potato (*Plectranthus edulis*) Starch. *Molecules*, 28, 7260. <https://doi.org/10.3390/molecules28217260>.
- Tolessa, Y., Admasu, S., **Abebe, W.**, & Ronda, F. 2023. Gel Rheological Properties and Storage Texture Kinetics of Starches Isolated from Anchote (*Coccinia abyssinica* (Lam.) Cogn.) Cultivars. *Gels*, 9(8), 631. <https://doi.org/10.3390/gels9080631>.

- **Abebe, W.** Náthia Neves, G. Calix-Rivera, C. Villanueva, M. and Ronda, F. 2023. Lipase Inactivation Kinetics of Tef Flour with Microwave Radiation and Impact on the Rheological Properties of the Gels Made from Treated Flour. *Molecules*, 28(5):2298. DOI: 10.3390/molecules28052298.
- Tolessa, Y., Admasu, S., **Abebe, W.**, & Ronda, F. (2022). Physicochemical, Morphological, Thermal, and Rheological Properties of Native Starches Isolated from Four Cultivars of Anchote (*Coccinia abyssinica (Lam.) Cogn.*) Tuber. *Gels*, 8(9). <https://doi.org/10.3390/gels8090591>
- Kore. T. and **Abebe, W.** and Getachew, P. 2022. Optimization of cooking, textural, and sensorial qualities of macaroni supplemented with tef (*Eragrostis tef (Zucc.) Trotter*) and chickpea flours. *International Journal of Food Properties* 25(1):2254-2266. DOI:10.1080/10942912.2022.2130941
- Yegrem, L., Mengistu, D., Legesse, O. and **Abebe, W.** 2022. Nutritional compositions and functional properties of New Ethiopian chickpea varieties: Effects of variety, grown environment and season. *International Journal of Food Properties*, 25 (1), 1485-1497 .
- Villanueva, M., **Abebe, W.**, Pérez-Quirce, S., Ronda, F. 2022. Impact of the variety of tef [*Eragrostis tef (Zucc.) Trotter*] on physical, sensorial and nutritional properties of gluten-free breads. *Foods*. 11, 1017.
- Villanueva, M., **Abebe, W.**, Collar, C. and Ronda, F. 2021. Tef [*Eragrostis tef (Zucc.) Trotter*] variety determines viscoelastic and thermal properties of gluten-free dough and bread quality. *LWT - Food Science and Technology*, 135, 110065.
- Yigerem, L., Yimam, M, Kore. T. and **Abebe, W.** 2019. Comparative analysis of proximate and mineral composition of released Tef (*Eragrostis tef (Zucc.) Trotter*) varieties in Ethiopia. *Academic Research J. of Agric. Sc. and Res.* 7(6), 372-379, DOI:10.14662/ARJASR2019.110.
- Kore. T. and **Abebe, W.** and Getachew, P. 2018. The Effect of Blending Ratio of Durum Wheat, Tef [*Eragrostis Tef (Zucc) Trotter*] and Chickpea on Nutritional Composition and Sensory Attributes of Macaroni. *Academic Research J. of Agric. Sc. and Res.* 6(7):433-442, DOI: 10.14662/ARJASR2018.072.
- Assefa Y., Admassu, S., **Abebe, W.** Ronda, F.. 2018. Effect of Mill Type and Mechanical Kneading Conditions on Fermentation Kinetics of Tef Dough during Injera making and Phytate to Mineral Molar Ratio of Injera. *Research & Reviews: J. of Food Sc. and Tech.* 7 (2): 9-19.
- Assefa Y., Admassu, S., Villanueva, M., **Abebe, W.** Ronda, F. 2018. The effect of mechanical kneading and absit preparation on tefinjera quality. *African J.1 of Food Sci.*, 12(10) pp. 246-253, DOI: 10.5897/AJFS2018.1722.
- Assefa Y., Admassu, S., Villanueva, M., **Abebe, W.** Ronda, F.. 2018. Influence of milling type on tef injera quality. *Food Chemistry* 266: 155–160.
- **Abebe, W.** 2017. Optimum disc type and operating speed of a pneumatic precision planter for acala type cotton planting. *Ethiopian Journal of Sciences and Sustainable Development* 4:2, 87-97.
- **Abebe, W.** Ronda, F., Villanueva, M., and Collar, C.. 2015. Effect of tef [*Eragrostis tef (Zucc.) Trotter*] grain flour addition on viscoelastic properties and stickiness of wheat dough matrices and bread loaf volume. *European Food Research and Technology*. DOI 10.1007/s00217-015-2476-0.
- Ronda, F., **Abebe, W.**, Perex-Quierce, S., Collar, C. 2015. Suitability of tef varieties in mixed wheat flour bread matrices: a physico-chemical and nutritional approach. *Journal of Cereal Science* 64, 139-146.
- **Abebe, W.** and Ronda, F., 2015. Flowability, moisture sorption and thermal properties of [*Eragrostis tef (Zucc.) Trotter*] grain flours. *Journal of Cereal Science* 63, 14–20.
- **Abebe, W.**, Ronda, F. and Collar, C. 2015. Impact of Variety Type and Particle Size Distribution on Starch Enzymatic Hydrolysis and Functional Properties of Tef Flours. *Carbohydrate Polymers* 115, 260–268.
- **Abebe, W.** and Ronda, F., 2014. Rheological and Textural Properties of Tef [*Eragrostis tef (Zucc.) Trotter*] Grain Flour Gels. *Journal of Cereal Science*, 60, 122-130.
- **Abebe, W.** 2013. Investing on Agricultural Mechanization: A Means to Realize the Crop Production Target in the Growth and Transformation Plan (GTP) of Ethiopia. *Ethiopian Journal of crop Sciences*, 3:1, 1-12.
- **Abebe, W.**, Bultossa, G and Lemmessa, F. L. 2011. Flour Starch Properties of of Six Ethiopian Durum Wheat (*Triticum turgidum*) Varieties Grown at Debre Zeit, Ethiopia. *East African Journal of Applied Sciences and Technology*, 2:1.

- **Abebe, W.**, Bultossa, G and Lemmessa, F. L. 2011. 2008. Physicochemical and Rheological Properties of Six Ethiopian Durum Wheat (*Triticum turgidum*) Varieties Grown at Debre Zeit Suitable for Pasta Making. Journal of Food Science and Technology, 45:3.

## **Book Chapters**

- **Abebe, W.** Kore, T. Bultosa, G. And Ronda, F. 2022. Tef Grain Utilization and Processing. In: Assefa, K., Chanyalew, S., Girma, D., and Taddele, Z. Principles and Practices of Tef Improvement. Ethiopian Institute of Agricultural Research and Agricultural Transformation Institute, Addis Ababa Ethiopia. Pp: 345-365.
- Alemu, D., **Abebe, W.**, Getenet, B., Abebe, F. and Kebede, L. 2022. Tef Mechanization. . In: Assefa, K., Chanyalew, S., Girma, D., and Taddele, Z. Principles and Practices of Tef Improvement. Ethiopian Institute of Agricultural Research and Agricultural Transformation Institute, Addis Ababa Ethiopia. Pp: 323-341.

## **C.2. Research projects and grants**

### **GRANTS**

- Beca MEC-AECID. Ministerio de Asuntos Exteriores y de Cooperación (1-10-2011 al 30-09-2020). Resolución del 10 de Diciembre de 2010 de la Presidencia de AECID (BOE 27 de Diciembre de 2010) .Awarding entity: Asociación Española de Cooperación Internacional para el Desarrollo 01/10/2011-30/09/2014, Entity where activity was carried out: University of Valladolid.
- Food Processing Technology Transfer in Ethiopia. A project aimed at establishing specialized tef processing research laboratory being executed at Debre Zeit Agricultural Research Center together with the Korean Rural Community Corporation (KRC) (2017-2020). 1,391, 304 USD -as a main local counterpart (on-going).
- Different annual to three year research budgets allocated by the Ethiopian Government under the Food Science and Nutrition Directorate of the EIAR-as a PI and team member.
- Development of value added food products from Ethiopian agricultural produces. (2017-2020). Project financed by the Agricultural Growth Program II- under the World Bank 65,000 USD- as a PI and focal person.
- Promotion of tie-ridging technology in selected dry areas of Amhara and Tigray Regions. Project financed by the FAO-Ethiopia. Project code: FAO/DRUU/LOA 117/10, 50,000 USD. (completed 2010)-as PI and project focal person.
- **Name of the project:** Ref: AGL2012-35088. MEJORA NUTRICIONAL Y FUNCIONAL DE PANES SIN GLUTEN: ADICIÓN DE BETAGLUCANOS DE DIFERENTES ORÍGENES Y PESOS MOLECULARES ATENDIENDO A LAS DECLARACIONES DE SALUD APROBADAS POR EFSA.

**Name principal investigator:** Felicidad Ronda Balbás

**Entity where project took place:** Universidad de Valladolid

**City of entity:** Palencia, España

**Funding entity or bodies:** Ministerio de Economía y Competitividad

**Start-End date:** 01/01/2013 - 31/12/2015

**Total amount:** 76.050

**Type of participation:** Personal Investigador en Formación

**Geographical area:** Nacional

## **C.3. Other achievements**

### **PROFESSIONAL EXPERIENCE**

March 2018- to date. Senior Researcher, Food Science Agricultural Engineering Research Directorate-Ethiopian Institute of Agricultural Research.

February 2021-February 2023. Postdoctoral Researcher, PROCEREALtech Research Group, Higher School of Agricultural and Forest Engineering, University of Valladolid, Spain.

April 2015-March 2018. Researcher II, Food Science Agricultural Engineering Research Directorate-Ethiopian Institute of Agricultural Research

- 2008 - Sept. 2011 Director, Agricultural Mechanization Research Directorate- Ethiopian Institute of Agricultural Research
- 2006 - 2008 Research Staff- Ethiopian Agric. Research Institute
- Research in the National Agricultural Mechanization, Food Science and Postharvest Technology Research Department
- 2002 - 2004 Ethiopian Agric. Research Institute- Department Coordinator
- Research in the Agricultural Mechanization, Food Science and Postharvest Technology Department.
- 2001 - 2002 Ethiopian Agric. Research Institute- Research Staff
- Research in the Agricultural Mechanization, Food Science and Postharvest Technology Department.
- 1998-2001 Elfora Agro-Industries Private Ltd. Company - Expert
- Processing livestock products and horticultural crops both for local and export market.
- 1992-1998 Ethiopian Livestock Development and Meat Processing Corporation- Junior expert and Ag. Engineer

## TEACHING

- Engineering properties of Agricultural Products (M.Sc. Program, Agricultural Machinery Engineering, Adama Science and Technology University, Ethiopia)
- Agricultural processing Engineering (B.Sc. Program, Agricultural Engineering, Adama Science and Technology University, Ethiopia)
- Food texture (Ph.D. Program, Food Engineering, Institute of Technology, Addis Ababa University)

## OTHER ACTIVITIES AND MEMBERSHIP OF SCIENTIFIC SOCIETY

- August 2010 - September 2011, Management Board Member for Coffee Processing and Warehouse Enterprise (the biggest export coffee processing plant in Ethiopia)
- December 2014 - 2015, Member Asociación de Científicos y Tecnólogos de Alimentos de Castilla y León.
- December 2020- to date, Founding member of Ethiopian Society of Agricultural Engineers
- June 2023 -to date, Member, Ethiopian Society of Postharvest Mangement.
- Reviewed a number of manuscripts for local and international journals.
- Participated and made presentations in a number of local and international conferences and workshops. Published various abstracts in books and articles in the wokshop proceedings.

Signature:



Date: 13 December 2023

Place Addis Ababa, Ethiopia