

CURRICULUM VITAE

NAME: *Belay Simane Birhanu*
PROFESSION: Environment and Development
DATE OF BIRTH: 1957
NATIONALITY: Ethiopian
CURRENT ADDRESS: Belay Simane

INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Addis Ababa University, Awassa College of Agriculture, Awassa, Ethiopia	Dip	1979	Crop Production and Protection
Timiriazhev Agricultural Academy, Moskow, Russia	M.Sc	1986	Plant Breeding and Agronomy
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)	Dip	1990	Agroclimatology
Wageningen Agricultural University, Wageningen, Netherlands	PhD	1993	Agronomy and Environmental Sciences

Addis Ababa University

A. Personal Statement

Dr Belay Simane, who holds a PhD in Environment and Agriculture, has had a specialized training in natural resources management, dry-land agronomy, agricultural input, agro-meteorology, and genetic resource conservation and utilization. He has more than 20 years of varied experience in agricultural research, teaching and rural development in Ethiopia, India, Syria, Kenya, and Mozambique mostly related in environment, agronomy, input system and watershed development. He worked in Alemaya University from 1986 to 1996 as lecturer, associate professor of agronomy and ecology and as director of research and development. As a senior staff and director of research proposed and carried out several research projects. He has also taught several courses at both undergraduate and graduate levels and advised many graduate students. From 1997 to 2000, he served as Research Advisor in Sida/ANRS Rural Development Project. He played an important role in the preparation of the regional research master plan and on-farm research activities either particular emphasis with watershed development. From January 2000 to 2002 he had been working in EARO as a senior agronomist at Debre Zeit Research Center. Areas of competence encompass agronomy, stress physiology, seed technology and sustainable agriculture. Since July 2002 he is working as Quality Control and Certification Department Head, in the National Agricultural Input Authority (NAIA). Development of appropriate seed system and quality control and certification was the area of competence. As of 2004 he is Associate professor of environment and agronomy. Currently he is Associate professor of Environment and Agriculture in the Institute of Development Research under Addis Ababa University. He has been also engaged at various

consultancy works in the areas of climate change, environmental management, agronomy, biodiversity conservation and environmental issues, rural development, agricultural input system, agricultural extension and research system development. Currently he is working as a senior staff member in the Center for Environment and Development under the College of Development Studies of the Addis Ababa University and a lead scientist for Choke Mountains Development and Research Initiative, and Ecosystem-based climate change analysis: mitigation and adaptation options in Ethiopia. He is also teaching the course Environmental Impact Assessment, Integrated Natural Resources Management and Climate Change for graduate students at MA and PhD students. He is a co-leader of the applied research project that has been initiated by AAU and UNESCO-IHE, entitled "In Search of Sustainable Catchments and Basin-wide Solidarities: Transboundary Water Management of the Blue Nile River Basin". This 4-year project is supported by the WOTRO. Dr. Belay has developed and is leading the thematic research on Climate Change Adaptation entitled "supporting climate resilient sustainable development in Ethiopia" which is a long term project supported by EPA, AAU and UNDP. He is also a PI of an NSF supported research project titled: Building Resilience to Climate Change in the Upper Blue Nile Highlands, Ethiopia. This project focuses on the fulfilling the post-2015 Development Agenda at community level by integrating economic development, natural resources management and protection and social equity based on research outcomes.

Positions and Employment

1986-1989	Lecturer, Department of Plant Science, Alemaya University of Agriculture, Head of Agronomy Section and breeder and leader of the University's sorghum improvement program
1989-1990	Research Fellow, Agroclimatology in International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
1991-1992	Research Fellow, Cereals Physiology, International Centre for Agricultural Research in Dry Areas (ICARDA)
1993-1996	Assistant Professor of Agronomy and Ecology, Alemaya University of Agriculture, Department of Plant Sciences, Director of Research
1997-2000	On-Farm Research Advisor, Orgut-Danagro/Sida "Support to Rural Development in Amhara National Regional State, Ethiopia"
2000-2002	Senior Researcher, Head, Agronomy/Physiology Division. Debre Zeit Agricultural Research Center, EARO.
2002-2004	Quality Control and Certification Department Head, National Agricultural Input Authority
2004-2005	National Resource Person for ASSARECA on Seed Regulation and Procedures and Consultant on environmental and biodiversity issues, rural development, agricultural input system development, and agricultural research.
2005-	Associate Professor, Environment and Agriculture (Agronomy). Center for Environment and Development, College of Development Studies. Addis Ababa University.

Selected Peer-reviewed Publications

1. **Belay Simane** and Benjamin F., 2014. The Sustainability of Community-Based Adaptation Projects in the Blue Nile Highlands of Ethiopia. *Sustainability* **2014**, *6*, 4308-4325; doi:10.3390/su6074308
2. **Belay Simane**, Benjamin F. Zaitchik and Jeremy D. Foltz, 2014. Agroecosystem-specific climate vulnerability analysis: application of the livelihood vulnerability index to a tropical highland region. *Mitig and Adapt Strateg Global Change* 2014. DOI 10.1007/s11027-014-9568-1.
3. **Belay Simane**, 2013. The Sustainability of Community-Based Adaptation in the Choke Mountain Watersheds, Blue Nile Highlands, Ethiopia. *In Proceedings of the 3rd World Sustain. Forum*, 1-30 November 2013; Sciforum Electronic Conference Series, Vol. 3, 2013, h001; doi:10.3390/wsf3-h001
4. **Belay Simane**, Benjamin F. Zaitchik and Mutlu Ozdogan, 2013. Agroecosystem Analysis of the Choke Mountain Watersheds, Ethiopia. *Sustainability* **2013**, *5*, 592-616.
5. **Belay Simane**, Benjamin F. Zaitchik and Desalegn Mesfin, 2012. . Building climate change resilience in the Blue Nile / Abay Highlands. A framework for action. *International Journal of Environmental Research and Public Health*. 2012, *9*, 610-631.

6. Zaitchik B.F., **Simane B.**, Habib S., Anderson M.C., Ozdogan M., Foltz J.D, 2012. Building Climate Resilience in the Blue Nile/Abay Highlands: A Role for Earth System Sciences. *International Journal of Environmental Research and Public Health*. 2012; 9(2):435-461.
7. **Belay Simane**, 2012. Climate change: impacts and responses for carbon neutral and climate resilient development in Ethiopia. *Journal of Natural Resources* 2012: 12: in press.
8. Habtemariam Abate and **Belay Simane**, 2012. Multiple Benefits of Vetiver System and its environmental application in Ethiopia. *Journal of Natural Resources* 2012: 12: in press.
9. Temesgen, M., Uhlenbrook, S., **Simane, B.**, van der Zaag, P., Mohamed, Y., Wenninger, J., and Savenije, H. H. G. 2012: Impacts of conservation tillage on the hydrological and agronomic performance of Fanya juus in the upper Blue Nile (Abbay) river basin, *Hydrol. Earth Syst. Sci.*, 16, 4725-4735, doi:10.5194/hess-16-4725-2012, 2012.
10. Teferi, E., Uhlenbrook, S., Bewket, W., Wenninger, J., and **Simane, B.** 2010: The use of remote sensing to quantify wetland loss in the Choke Mountain range, Upper Blue Nile basin, Ethiopia, *Hydrol. Earth Syst. Sci.*, 14, 2415-2428, doi:10.5194/hess-14-2415-2010, 2010.
11. Setegn Gebeyehu ; **Belay Simane** and Kirkby, Roger, 2006. Genotype×cropping system interaction in climbing beans (*Phaseolus vulgaris* L.) grown as sole crop and in association with maize (*Zea mays* L.). *European Journal of Agronomy*, Volume 24, issue 4 (May, 2006), p. 396-403. ISSN: 1161-0301 DOI: 10.1016/j.eja.2006.01.005 Elsevier Science.
12. Gemechu Keneni and **Belay Simane**. 2003. Implications of geographic origin and botanical sub-species for parental selection in genetic enhancement of groundnut (*Arachis hypogaea* L.) *Journal of Genetics and Breeding* 57: 93-100.
13. **Belay Simane**, Wortman, C. And Hoogenboom, G., 1998. Haricot Bean Agroecology in Ethiopia: Defining using agroclimatic and Crop Growth Models. *African Crop Science Journal*, Vol.6. No. 1, 9-18.
14. **Belay Simane**, Tanner, D.G, Amsal Tarekegn and Asefa Taa, 1999. Agro-ecological Decision support system for sustainable wheat production in Ethiopia. *African Crop Science Journal*, Vol.7. No. 1, 9-19
15. Tesfaye Teferra, Hailu Teferra, **Belay Simane** and M. Tuinstra, 2000. The effect of moisture stress on growth, leaf water loss rate and phenological development of tef (*Eragrostis tef*). *Tropical Science* 40:100-107.
16. Gemechu Keneni, **Belay Simane** and Getinet Gebeyehu. 1997. Genetic diversity of groundnut germplasm in Ethiopia. *Ethiopian Journal of Agricultural Sciences* 16 (1&2): 1-13.
17. Belay Simane, Zerihun Woldu, Berhe G.Egziabher. 2003. Public-Private Partnership in Biotechnology Product Development in Ethiopia. Discussion paper. No. 03-8 October 2003. International Service for National Agricultural Research (ISNAR).
18. **Simane, B** and Struik, P.C., 1993. Agroclimatic analysis: a tool for planning sustainable durum wheat (*Triticum turgidum* var. *durum*). *Agriculture Ecosystem & Environment* 47: 36-47.
19. **Simane, B.**, Peacock, J.M. and Struik, P.C., 1993. Differences in developmental plasticity and growth rate among drought resistant and susceptible genotypes of durum wheat (*Triticum turgidum* var. *durum*). *Plant and Soil* 157: 155-166.
20. **Simane, B.**, Struik, P.C. and Peacock, J.M., 1993. Ontogenetic analysis of yield components and yield stability of durum wheat in water-limited environments. *Euphytica* 71: 211-219.
21. **Simane, B.**; Keulen, H.Van, Stol, W. and Struik, P.C., 1994. Application of crop growth model (SUCROS-87) to assess the effect of moisture stress on yield potential of durum wheat in Ethiopia. *Agricultural Systems* 44: 337-353.
22. Martha C.Anderson, Benjamin F.Zaitchik, and **Belay Simane**, 2012. Water Balance from Space:Promoting climate resilience in the Blue Nile/Abay Highlands. data and ingenuity for climate change solutions. May/June 2012 RESOURCE.
23. Tesfaye Teferra, Hailu Teferra, **Belay Simane** and M. Tuinstra, 2000. The influence of drought stress on yield of tef (*Eragrostis tef*). *Tropical Science* 40:45-45.
24. Assefa, Kebebew; Ketema, Seyfu; Tefera, Hailu; Nguyen, Henry T.; Blum, Abraham; Ayele, Mulu; Bai, Guihua; **Simane, Belay**; Kefyalew, Tiruneh Diversity among germplasm lines of the Ethiopian cereal tef [*Eragrostis tef* (Zucc.) Trotter]. *Euphytica*, Volume 106, issue 1 (March 1999), p. 87 - 97. ISSN: 0014-2336 DOI: 10.1023/A:1003582431039. Kluwer Academic Publishers, Dordrecht

Book Chapters

1. Belay Simane, 2008. Seed policies and regulations and informal seed supply in Ethiopia. In: Thijssen, M.H. Z.Bishaw, A. Beshir and W.S. de Boef (Eds). *Farmers, Seeds and Varieties: supporting informal seed supply in Ethiopia*. Wageningen, Wageningen International. 348p. ISBN: 978-8585-215-5.

2. Zewdie Bishaw, Yonas Sahilu, and **Belay Simane**. 2008. The status of the Ethiopian seed industry. In: Thijssen, M.H. Z.Bishaw, A. Beshir and W.S. de Boef (Eds). *Farmers, Seeds and Varieties: supporting informal seed supply in Ethiopia*. Wageningen, Wageningen International. 348p. ISBN: 978-8585-215-5.
3. Yonas Sahilu, **Belay Simane** and Zewdie Bishaw. 2008. The Farmer-based seed production and marketing scheme: lessons learnt. In: Thijssen, M.H. Z.Bishaw, A. Beshir and W.S. de Boef (Eds). *Farmers, Seeds and Varieties: supporting informal seed supply in Ethiopia*. Wageningen, Wageningen International. 348p. ISBN: 978-8585-215-5.

Books

1. *Building Resilience to Climate Change: Lessons from the Choke Mountain Ecosystems*, Belay Simane. Addis Ababa University Press, Under Review,
2. *Drought Resistance in Durum Wheat*, Belay Simane. Publisher Landbouwniversiteit Wageningen, 1993 ISBN 9054851627, 9789054851622 Length 159 pages
3. *Challenges and opportunities of irrigated agriculture: The Case of Gedeb River, Amhara Region of Ethiopia* Paperback – March 6, 2013 by Lijalem Abebaw (Author) , Belay Simane (Author). LAP LAMBERT Academic Publishing (March 6, 2013). 144 pages, ISBN-10: 3659356662, ISBN-13: 978-3659356667

Other publications

1. Zwedu Eshetu, Belay Simane, Gebeyehu Tebeje, Workneh Negatu, Aklilu Amsalu, Abeje Berhanu, Neil Bird, Bryn Welham and Nella Canales Trujillo, 2014. *Ethiopia National Climate Change Finance Analysis*. Overseas Development Institute, London and the Climate Science Centre, Addis Ababa University, Addis Ababa.
2. Simane, B. 1989. *Agroclimatology of Ethiopia in relation to dry land Agriculture in Ethiopia*. International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, A.P., India. pp 125.
3. Belay Simane. 2002. *The National Seed Industry Policy and Strategy: Current Status of Sorghum and Millets*. Paper to be presented at the 1st sorghum and millet national workshop to be held at Melkassa Agricultural Research Center, October 12-14, 2002.
4. Belay Simane. 2002. *Fertilizer Demand and Status of Soil Testing Laboratories*. Paper presented at SG-2000 workshop. Addis Ababa, Ethiopia.
5. Belay Simane. 2003. *Agricultural Input System and Public-Private Partnership in Ethiopia*. Paper presented at the Food Security Conference 2003 "Challenges and Prospects of Food Security in Ethiopia" to be held at UN Conference Center, Addis Ababa, August 13-15, 2003.
6. Belay Simane. 2003. *The National Seed Industry Policy and The Status of Legumes Seed System in Ethiopia*. Paper presented at the Second National Review Workshop on Food and Forage Legumes. Ethiopian Agricultural Research Organization, September 22-26, 2003, Addis Ababa, Ethiopia.
7. Belay Simane and Paddy Abot, 2009. *Africa Adaptation Project: Supporting climate resilient sustainable development in Ethiopia (2009)*. Commissioned by the UNOPS and UNDP.
8. *Alliance for a Green Revolution in Africa: Soil Health Program Business Planning Process. Country Report for Ethiopia (2008)*, commissioned by the Rockefeller and Bill & Melinda Gates Foundations in conjunction with Cambridge Economic Policy Associates (CEPA) as part of the development of the Program for Africa's Soil health program (AGRA).
9. Belay Simane, 2007. *Seed system country report for Ethiopia (2007)*, commissioned by the Rockefeller and Bill & Melinda Gates Foundations in conjunction with Cambridge Economic Policy Associates (CEPA) as part of the development of the Program for Africa's Seed Systems (PASS).
10. Belay Simane, 2004. *The Seed Regulations and Standards of Ethiopia: The Way Forward*. Eastern and Central Africa Program for Agricultural Policy Analysis (ECAPAPA) Report. Entebbe, Uganda: ECAPAPA.

Research based Consultancy Works

1. Belay Simane, 2013. Vulnerability Assessment of Ethiopia adaptation project: Coping with Drought and Climate Change. GEF PROGRAM, The United Nations Development Programme Ethiopia Country Office (UNDP-CO)
2. Belay Simane, 2011. ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT Training Module Prepared for EPA Experts
3. Conduct training on Environmental and Social Impact Assessment for Federal and Regional Agricultural Experts April 13-23, 2012 Akaki Campus Addis Ababa University
4. Conduct training on Environmental and Social Impact Assessment for Federal and Regional Environmental Protection Authorities from February 03-23, 2010. Ghion Hotel, Addis Ababa
5. Africa Adaptation Project: Supporting climate resilient sustainable development in Ethiopia (2009). Commissioned by the UNOPS and UNDP.
6. Alliance for a Green Revolution in Africa: Soil Health Program Business Planning Process. Country Report for Ethiopia (2008), commissioned by the Rockefeller and Bill & Melinda Gates Foundations in conjunction with Cambridge Economic Policy Associates (CEPA) as part of the development of the Program for Africa's Soil health program (AGRA).
7. Afar Regional Environmental Action Plan Development (2007), Commissioned by UNDP
8. Environmental Impact Assessment of Jatropha plantation (2008). Commissioned by the Sun Biofuels.
9. Seed system country report for Ethiopia (2007), commissioned by the Rockefeller and Bill & Melinda Gates Foundations in conjunction with Cambridge Economic Policy Associates (CEPA) as part of the development of the Program for Africa's Seed Systems (PASS).
10. Preparation of National Capacity Needs Self-Assessment Action Plan for Environmental Protection Authority, Addis Anteneh, Consultant/Economist, 2005 – Team Leader
11. Impact assessment of BIO-EARN Program II in Ethiopia. The Ethiopian Science and Technology Agency, 2006. Team Leader
12. Preparation of the Agricultural Input System for Mozambique. IFDC, 2005, **Seed Agronomist**
13. Harmonization of the Ethiopian Seed System for ECAPAPA/ASARECA 2004. **Team Leader**
14. Strategic Plan development for The Hunger Project for Addis Anteneh, Consultant/Economist, 2004, **Team leader**
15. Agricultural Inputs Market Development for Ethiopia. IFDC/USAID, 2004. **Seed agronomist**
16. Evaluation and Assessment of the Agricultural Research and Training Project for Addis Anteneh, Consultant/Economist, 2004. **Team Leader**
17. Public-Private Partnerships in Biotechnology Product Development in Ethiopia. The Ethiopian Science and Technology Commission, 2003. **Team Leader**
18. Agricultural Inputs Project (Fertilizer, seed and pesticide project to be submitted to the World Bank), Ministry of Rural Development (NAIA, 2002). **Team Leader**
11. Analysis of Market and Socio-economic Situations Affecting *in situ* Biodiversity Conservation in Ethiopia (IBCR, 2001) for Addis Anteneh, Consultant/Economist. **Team Leader**
12. Techno-economic Feasibility Study for Private Seed Farms, NSIA, 2001 Team Leader and Agronomist **Team Leader**
13. Technical assistance for the Private Seed Farms, NSIA, 2001, Team Leader and Agronomist
14. Agricultural Research Master Plan for Amhara National Regional State (1999), Coordinator.
15. Agricultural Intervention Strategies in the Somali Regional State (1997), **coordinator and agronomist**

Ongoing Research Activities

NSF Grant

CNH: Agroecosystem-based Climate Resilience Strategies in the Blue Nile Headwaters of Goal is to undertake agroecosystem-based analysis of climate change impacts and adaptation opportunities and risks in the Blue Nile Headwaters (BNH) region of Ethiopia. 20012-2017. (financed by NSF; Role: PI-Ethiopia.

AAU Thematic Research Grant

Building Resilience to Climate Change in Ethiopia: a Thematic Research (AAU). Goal is to support policy makers and development actors to manage climate change risks and strengthen evidence-based recommendations and enhance Ethiopia's capacity to adapt to and mitigate climate change. 20010-2018. (Financed by AAU (SIDA supported, Ethiopia) Role: PI

WOTRO Grant (AAU and UNESCO-IHE)

In Search of Sustainable Catchments and Basin-wide Solidarities: Transboundary Water Management of the Blue Nile River Basin. Goal is to understand the positive externalities of sustainable land use practices of upstream catchment areas for sustainable and integrated basin management. 2002-2006 (Financed by the WOTRO, the Netherlands, Co-PI)

MAINBIOSYS: "Mainstreaming Biofarming System in Ethiopian and Ugandan Higher Education Institutions", 2005-2008 (Financed by EU and University of Molise, Italy, Co-PI)

AFRHINET: An ACP-EU Technology Transfer Network on Rainwater Harvesting Irrigation Management for Sustainable Dryland Agriculture, Food Security and Poverty (Ethiopia, Kenya, Mozambique, and Zimbabwe) Financed by ACP:EU programme and Hamburg University of Applied Sciences, Germany)

Referees:

CERTIFICATION:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications and work experiences.

