# **CURRICULUM VITAE**

# Pride Mudavanhu

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#### **Personal Details**

Gender:
Date of Birth:
Marital Status:
Languages:
Driver's License:
National ID Number:
Health:

Male 06/01/1981 Married English 02699HC (Class 4/Code 08) 8101066320183 Excellent

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#### Education

December 2012:	PhD. Agric. (Entomology) Stellenbosch University.
December 2009:	MSc. Agric. (Entomology) Stellenbosch University.
June 2004:	BSc. Hons. Agric. (Crop Science) University Of Zimbabwe

#### THESES

1. PhD. Agric. (Entomology) Stellenbosch University: December 2012

Performance of sterilized *Eldana saccharina* (Walker) (Lepidoptera: Pyralidae) in mating and cage trials: Further steps towards its control using the sterile insect technique. PhD Dissertation, University of Stellenbosch. 159pp. (Specialization area: Area-wide integrated management of pests of agricultural, medical & economic importance)

### 2. MSc. Agric. (Entomology) Stellenbosch University: December 2009

An investigation into the integrated pest management of the obscure mealybug, *Pseudococcus viburni* (Signoret) (Hemiptera: Pseudococcidae), in pome fruit orchards in the Western Cape Province, South Africa. MSc Dissertation, University of Stellenbosch. 110pp. (Specialization area: Pest forecasting & their integrated management in the deciduous fruit industry)

### 3. BSc. Hons. Agric. (Crop Science) University Of Zimbabwe: June 2004

Morphological diversity study in a promiscuous soybean, *Glycine max* (I.) Merrill variety 'Magoye' using the mass selection method of plant breeding. BSc. Hons Dissertation, University of Zimbabwe. 60pp. (Specialization area: Plant breeding & genetics, agronomy and crop improvement)

### Major subjects at undergraduate level

Statistical Methods & Experimental Design Agricultural Practice Microbiology Soil Science Crop Production Crop Ecology & Physiology Fruit & Plantation Crop Production Post-Harvest Physiology & Processing Research Methods Agricultural Biochemistry Plant Breeding & Genetics Farm Business Management Horticulture Olericulture Molecular Physiology Agricultural Economics Plant Biology Communication Skills Agricultural Marketing Plant Pathology & Insect Pests Weed Science & Management Floriculture

#### **Teaching experience**

Course Taught	Institution taught	Level (i.e. study year)	No. of years taught
Insect Pest Management	Stellenbosch University	3	4
Introduction to Plant Protection & Improvement	Stellenbosch University	I	2
Biological control of alien invasive weeds (principles & examples)	Stellenbosch University Elsenburg Agricultural- College	3 5	6 6
Insect Diversity & Taxonomy	Stellenbosch University	4	3
Sustainable Plant Production & Plant Protection	Stellenbosch University	5	2

#### Publications

- Chidawanyika, F., **Mudavanhu, P**. & Nyamukondiwa, C. (2019). Global climate change as a driver of bottom-up and top-down factors in agricultural landscapes and the fate of host-parasitoid interactions. *Frontiers in Evolution and Ecology 7:80; doi: 10.3389/fevo.2019.00080*
- Mudavanhu P (2019). Management of invasive Acacia longifolia and A. pycnantha in South Africa using biological control - Progress thus far. In: H.L. Hinz et al. (Eds), Proceedings of the XV International Symposium on Biological Control of Weeds, Engelberg, Switzerland, pp. 275–276. https://www.ibiocontrol.org/proceedings/
- Mudavanhu, P., Addison. P & Conlong, D.E. (2017). Effect of mass rearing and gamma irradiation on the mating behaviour of *Eldana saccharina*. *Entomologica Experimentalis et Applicata 162 (2): 159-167*.
- Mudavanhu, P., Carpenter, J.E., Addison, P. & Conlong, D.E. (2016). Mating compatibility and competitiveness between wild and laboratory strains of *Eldana saccharina* (Walker) after irradiation treatment. *Florida Entomologist 99* (1): 54-65.
- Mudavanhu, P., Addison, P. & Conlong, D.E. (2014). Impact of mass-rearing and gamma radiation on thermal tolerance of *Eldana saccharina* (Walker) (Lepidoptera: Pyralidae). *Entomologia Experimentalis et Applicata* 153, 55-63.
- Mudavanhu, P., Conlong, D.E. & Addison, P. (2013). Releases of irradiated moths to suppress wild populations of Eldana saccharina Walker (Lepidoptera: Pyralidae). *Proceedings of the South African Sugar Technologists Association 86, 328-333.*
- Chidawanyika, F., **Mudavanhu, P**. & Nyamukondiwa, C. (2012). Biologically based methods for pest management in agriculture under changing climates: challenges and future directions. *Insects 3, 1171-1189*
- Mudavanhu, P., Addison, P. & Pringle, K. L., (2011). Monitoring and action threshold determination for the obscure mealybug *Pseudococcus viburni* (Signoret) (Hemiptera: Pseudococcidae) using pheromone-baited traps. *Crop Protection 919-924.*
- Mudavanhu, P., Conlong, D.E. & Addison, P. (2011). Performance of sterilized Eldana saccharina Walker (Lepidoptera: Pyralidae) in mating trials. *Proceedings of the South African Sugar Technologists' Association* 84, 287-291.

## **Book Chapters**

Mudavanhu, P., Addison, P. & Pringle, K. L., (2012). University of Stellenbosch: Monitoring and action threshold determination for the obscure mealybug *Pseudococcus viburni* (Signoret) (Hemiptera: Pseudococcidae) using pheromone-baited traps – In: Acton A. Q [ed], Biological Factors - Advances in Research and Application. Scholarly Editions, Atlanta, Georgia. 753 pp.

### **Popular Articles**

- Mudavanhu P. (2017). Exciting news from Grahamstown: The case of *Acacia longifolia*. Plant protection News 110, 2-3.
- Mudavanhu, P. (2015). An update on post release evaluation of the biological control *Acacia longifolia* and *Acacia pycnantha* in South Africa. *Plant Protection News 105, 4-6.*
- Mudavanhu, P. (2014). Post release impact evaluation of biological control against two alien invasive Australian trees in the Western and Eastern Cape provinces. *Plant Protection News 101, 12-13.*

### Theses

- Mudavanhu, P. (2012). Performance of sterilized *Eldana saccharina* (Walker) (Lepidoptera: Pyralidae) in mating and cage trials: Further steps towards its control using the sterile insect technique. PhD Dissertation, University of Stellenbosch. 159pp.
- Mudavanhu, P. (2009). An investigation into the integrated pest management of the obscure mealybug, *Pseudococcus viburni* (Signoret) (Hemiptera: Pseudococcidae), in pome fruit orchards in the Western Cape Province, South Africa. MSc Dissertation, University of Stellenbosch. 110pp.
- Mudavanhu, P. (2004). Morphological diversity study in a promiscuous soybean, Glycine max (I.) Merrill variety 'Magoye' using the mass selection method of plant breeding. BSc. Hons **Dissertation**, University of Zimbabwe. 60pp.

### **Conference and Symposium Outputs**

- Mudavanhu P (2019). Field observations on two *Melanterius* seed destroyers as biocontrol agents against invasive acacias in South Africa. 21<sup>st</sup> Entomological Society of Southern Africa Congress, Umhlanga, Durban, RSA.
- ii) Chidawanyika F, Mudavanhu P, Nyamukondiwa C (2019). Global climate change as a driver of bottomup and top-down factors in agricultural landscapes and the fate of host-parasitoid interactions. 21<sup>st</sup> Entomological Society of Southern Africa Congress, Umhlanga, Durban, RSA.
- iii) Mudavanhu P (2019). A focus on *Melanterius* weevils as biocontrol agents against invasive acacias in South Africa. National Symposium on Biological Invasions (Theme: Monitoring of Invasions & Future of Invasions). Tulbagh, Western Cape, RSA.
- iv) Mudavanhu P (2019). Acacia seed banks: what do they tell us about the status of biocontrol against woody alien invasives? 41st Fynbos Forum, Baardskeerdersbos, Western Cape, RSA.
- v) Mudavanhu P (2018). Management of invasive Acacia longifolia and A. pycnantha in South Africa using biological control - Progress thus far. International Symposium on Biological Control of Weeds (ISBCW), Engelberg, Switzeralnd.
- vi) Mudavanhu P (2018). Exciting news from Grahamstown The case of *Acacia longifolia*. Fynbos Forum, Goudini Spa, Rawsonville, Western Cape, South Africa.

- vii) Mudavanhu P, Madire L (2017). Biological control against two Australian invaders, *Acacia longifolia* and *A. pycnantha* in South Africa Are we winning the war? Combined Congress of the Entomological (ESSA) and Zoological (ZSSA) Societies of Southern Africa. Pretoria, South Africa.
- viii) Mudavanhu P (2016). Post-release evaluation of biological control against two Australian invaders, *Acacia longifolia* and *A. pycnantha* in South Africa. 43rd Annual Research Symposium on the Management of Biological Invasions in South Africa. Worcester, South Africa.
- ix) Mudavanhu P (2015). Post-release evaluation of biological control against two alien invasive Australian trees, Acacia longifolia and A. pycnantha in South Africa. 19th Congress of the Entomological Society of Southern Africa (ESSA) & 37th Congress of the Zoological Society of Southern Africa (ZSSA). Grahamstown, South Africa
- x) Mudavanhu P (2014). Post-release evaluation of biological control against two alien invasive Australian trees, Acacia longifolia (Andr.)Willd. and A. pycnantha Benth. in the Western and Eastern Cape provinces. 42nd Annual Symposium on the Management of Invasive Alien Plants. Durban, South Africa
- xi) Mudavanhu P (2013). Releases of irradiated moths to suppress wild populations of *Eldana saccharina* (Walker) Lepidoptera: Pyralidae. 86th Annual Congress of the Southern African Sugar Technologists Association (SASTA).Durban, South Africa.
- xii) Mudavanhu P, Addison P, Conlong D (2012). Impact of mass-rearing and gamma radiation on thermal tolerance of *Eldana saccharina* (Walker) (Lepidoptera: Pyralidae). 24th International Congress of Entomology (ICE). Daegu, South Korea.
- xiii) Conlong DE, Walton AJ, Mudavanhu P, Potgieter L (2012). Sterile insect technique in sugarcane pest management. 24th International Congress of Entomology (ICE). Daegu, South Korea.
- xiv) Mudavanhu P, Addison P, Conlong D (2012). Impact of mass-rearing and gamma radiation on thermal tolerance of *Eldana saccharina* (Walker) (Lepidoptera: Pyralidae). 85th Annual Congress of the Southern African Sugar Technologists Association (SASTA). Durban, South Africa.
- xv) Mudavanhu P, Addison P, Conlong D (2011). Performance of sterilized Eldana saccharina (Walker) (Lepidoptera: Pyralidae) in mating trials. 84th Annual Congress of the Southern African Sugar Technologists Association (SASTA). Durban, South Africa.
- xvi) Mudavanhu P, Addison P, Conlong D (2011). Performance of sterilized *Eldana saccharina* (Walker) (Lepidoptera: Pyralidae) in mating trials. 17th Congress of the Entomological Society of Southern Africa (ESSA). Bloemfontein, South Africa.
- xvii) Mudavanhu P, Addison P, Pringle KL (2010). Monitoring and action threshold determination for the obscure mealybug *Pseudococcus viburni* (Signoret) (Hemiptera: Pseudococcidae) using pheromone-baited traps. Joint Annual Meeting of the Entomological Societies of Canada and British Columbia (JAM ESC-ESBC). Vancouver, Canada.
- xviii) Mudavanhu P, Addison P, Pringle KL (2009). Development of early monitoring tools for *Pseudococcus viburni* using pheromone baited traps & fruit sampling. 16th Congress of the Entomological Society of Southern Africa (ESSA). Stellenbosch, South Africa.
- xix) Mudavanhu P, Addison P (2008). Potential for the natural regulation of the obscure mealybug, *Pseudococuss viburni* (Hemiptera: Pseudococcidae) in pome fruit orchards. 23rd International Congress of Entomology (ICE). Durban, South Africa.

### Working experience

# 1. Department of Conservation Ecology and Entomology, Faculty of AgriSciences, Stellenbosch University, South Africa

Position held: Honorary Researcher Period: January 2013 – to date

Responsibilities:

Teaching:

- Presenting scheduled lectures, laboratory and field practicals.
- Setting up and marking tests and assignments, examining internal & external thesis dissertations, writing the respective assessment reports.
- Handling of student queries.
- Availing relevant course material, academic oversight and advice.
- Providing mentorship, pastoral care and references to students including career guidance.
- Developing and applying innovative teaching aids, techniques and methods that stimulate interest, understanding and enthusiasm amongst learners.
- Assisting with curriculum design, planning and review of course content.
- Conducting revision of tests, practicals and assignments and identifying areas needing improvement.
- Conducting evaluation and assessment of student performance in various course outcomes.

## Research:

- Promoting and strengthening scientific and educational exchange through quality collaborative research.
- Recruiting, co/supervising, mentoring and guiding the work and research of postgraduate students.
- Investigating new areas of research within specialist subject area, determining, adapting and applying appropriate research methodologies.
- Actively investigating funding opportunities within area of research including sourcing support for own or joint research proposals and funding bids.
- Analysis of data, results and conclusions to formulate new concepts and ideas.
- Disseminating findings in peer reviewed publications, conference proceedings, industry meetings and symposia.
- Developing new techniques as may be necessary to achieve research objectives and generate novel information.
- Regular reporting and establishing links with external bodies & relevant industries to encourage funding for continued research, technology transfer and opportunities for future research.
- Peer review of manuscripts for scientific journals.

# 2. Agriculture Research Council Plant Health & Protection (ARC-PHP) Vredenburg Campus: Stellenbosch.

Position held: Research Entomologist (Alien Invasive Weed Biocontrol). Period: April 2013 – Date

Responsibilities:

- Planning, coordinating and undertaking independent or collaborative research in alien invasive weed biological control.
- Actively sourcing and managing of external funding for executing the biological control research mandate.
- Stakeholder engagement and participation in relevant working groups at local, national and international levels.
- Progress reporting, organizing and coordinating departmental and project meetings.
- Providing theoretical and practical training on agricultural, pest and environmental management issues to implementation agencies, field officers, landowners, relevant stakeholders and the public.
- Capacity building through postgraduate student mentoring and supervision.
- CAPEX management, identification of needs and determining specifications.
- Undertaking personnel performance and development evaluations.

- Publishing research outputs as popular articles, peer reviewed journal articles, pamphlets & technical reports
- Information dissemination through congresses, farmer field days, workshops, conferences and symposia.
- Moderating at tertiary Institutions/External examiner.
- Departmental administration, people management and ensuring ccompliance with company policies and procedures as well as occupational health and safety regulations.
- Setting quality standards and implementing steps to improve team and own performance
- Organising conferences, symposia and training workshops.

# 3. FSI Agricom Holdings – Seeds Division (Harare)

Position Held:	Seed Agronomist
Period:	January 2006 – November 2007

Responsibilities:

- Technical know-how and experience in agronomy, production of commercial, breeder and certified seed.
- Planning and overseeing implementation of the company's seed production program, budget preparation and control.
- Identifying, training and contracting potential certified seed growers.
- Monitoring contracted growers through constant farm visits to ensure adherence to Government Seed Certification Scheme standards and that production targets are met.
- Engaging Government Inspectors for on-site seed certification.
- Monitoring crop harvesting and ensuring seed delivery to company warehouse.
- Advising growers on status of input credits, payment of seed delivery consignments and recovery of outstanding and unused inputs.
- Grower consultation regarding crop agronomy, pest management, cultivar choice and performance.
- Identification of viable cropping enterprises.
- Planning and conducting field days, on farm visitations and agricultural shows.

Community technology development (Small-holder Seed Project):

- Coordinating and promoting rural and smallholder farmer involvement in seed production.
- Project evaluation and forecasting production output.
- Linking farmers with field officers, input suppliers, credit providers and non-governmental donor organizations.
- Organizing training workshops for field officers on grower recruitment.
- Farmer training on aspects of production through field days and demonstration plots.
- Responsible for buy-back of harvested seed and ensuring payment for seed deliveries.

# 4. Tobacco Research Board (Kutsaga Research Station – Harare)

Position Held:	Research Officer
Period:	June 2004 – December 2005

Responsibilities:

- Conducting research & development on aspects of pest management and cultivar development in tobacco production.
- Testing and evaluation of new tobacco pesticides for purposes of registration and certification.
- Recruitment of growers for multi-location variety and product trials
- Providing technical support and supervising research technicians and departmental staff.
- Reporting on research findings and participating in annual planning and review meetings.
- Training farmers and industry stakeholders on pest problem diagnosis and management, cultivar choice, general tobacco husbandry and production legislation.
- Organizing and conducting farmer interactive meetings, field days and agricultural shows.
- Seed marketing and sales
- 5. Ministry of Primary & Secondary Education ( Centenary Government Secondary School: Zimbabwe) Position Held: Relief Teacher (Mathematics, Physical Science, Biology & Geography at GCE ZJC, A & O Level)

Period: January 2001 – August 2001.

Responsibilities:

- Teaching allocated subjects to pupils in Form 1 to 6 (equivalent of Grade 8 to 12 in RSA)
- Planning teaching schedules as per given syllabus, conducting exercises, assignments, tests and examinations.
- Developing teaching aids and appropriate learning methodologies
- Student mentorship and career guidance
- Participation school's sports programmes
- Supervising student duties (school cleaning and maintenance general work).
- Parent/Teacher consultation.
- Reporting on work progress to H.O.D of respective subject areas

## Supplemental training

- 1. Embracing a New Normal: Transformation Competencies Series Training Course for Academic Staff, Transformation Office, Stellenbosch University, STIAS Centre 16 18 May 2018.
- 2. Biological Control of Alien Invasive Weeds Principles and Practice, Rhodes University, Grahamstown, South Africa, (7 12 September 2014).
- Biological Control & Soil Health: Interactions between below- and above ground organisms a capacity building programme funded by the Swedish government through the Swedish University of Agricultural Sciences (SLU) for building collaborations between Sweden and South Africa. Stellenbosch University (25-30 November 2012).
- 4. South African Biodiversity Information Facility (SABIF) Geo-referencing Course, University of the Western Cape, Cape Town (4-8 April 2011)
- 5. 2nd Research Coordination Meeting (RCM) of Coordinated Research Projects on Increasing the Efficiency of Lepidoptera SIT by Enhanced Quality Control, Stellenbosch, South Africa (15-19 November 2010).
- 6. R-Beginner Course Stellenbosch University, Botany & Zoology Department (14-16 July 2009).

# Affiliations

- 1. Entomological Society of Southern Africa
- 2. South African Green Industries Council (SAGIC)
- 3. Golden Key International Honour Society.

# Awards and Scholarships

- 1. International Symposium on Biological Control of Weeds (ISBCW) & CABI Travel & Conference Grant for the ISBCW Engelberg, Switzerland (July 2018)
- 2. Department of Environmental Affairs Natural Resources Management Programme (DEA-NRMP) Research Grant for Biological Control Research (January 2018).
- 3. Department of Environmental Affairs Working for Water Research Grant for Biocontrol Research (April 2014)
- 4. Entomological Society of Southern Africa (ESSA) ICE 2012 South Korea Travel Grant (April 2012).
- 5. South African Sugar Research Institute (SASRI) full PhD. Bursary (January 2010 December 2012).
- 6. Stellenbosch Postgraduate Merit Bursary (January 2010 December 2012).
- 7. South African Sugarcane Technologists Association (SASTA) President's Prize for Best Agricultural Presentation at 84<sup>th</sup> Annual SASTA Congress Durban, (August 2011)
- Kynoch Prestigious Prize for Best Student Presentation at 84<sup>th</sup> Annual SASTA Congress Durban (August 2011).
- 9. Stellenbosch University Rector's Prestigious Award for Academic Excellence (14 October 2010).
- 10. Golden Key International Honour Society Award (16 August 2010)
- 11. Stellenbosch University Travel Grant for Canada international conference (October 2010)
- 12. African Network of Scientific & Technological Institutions (ANSTI) Conference Grant (27 September 2010).
- 13. Hortgro research grant for MSc Agric Entomology (2008 2009).
- 14. First National Runner Up (Commonwealth Parliamentary Association Essay Writing Competition) (1999)

#### **Hobbies & sports**

Community outreach	Hiking	Travelling and cam
Road cycling	Tennis	Softball

#### REFEREES

Dr. Frank Chidawanyika <sup>1</sup>Agriculture Research Council – Plant Protection Research Council Cedara Agricultural College Block A 14 Ground floor Weeds Lab Old Main Road Pietermaritzburg KwaZulu Natal 3201, South Africa <sup>2</sup>Department of Zoology and Entomology, University of the Free State, Bloemfontein, South Africa. Tel: +27 73 756 4787 E-Mail: frankchidaz@gmail.com ; chidawanyikaF@ufs.ac.za

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Prof. Des E. Conlong (Senior Lecturer & Research Entomologist) South African Sugar Research Institute (SASRI) 170 Flanders Drive, Crop Biology Resource Centre P Bag X02 Mt Edgecombe, 4300. Durban, RSA Tel: +27 82 655 0386; +27-31-508 7477 Email: <u>Des.Conlong@sugar.org.za</u>