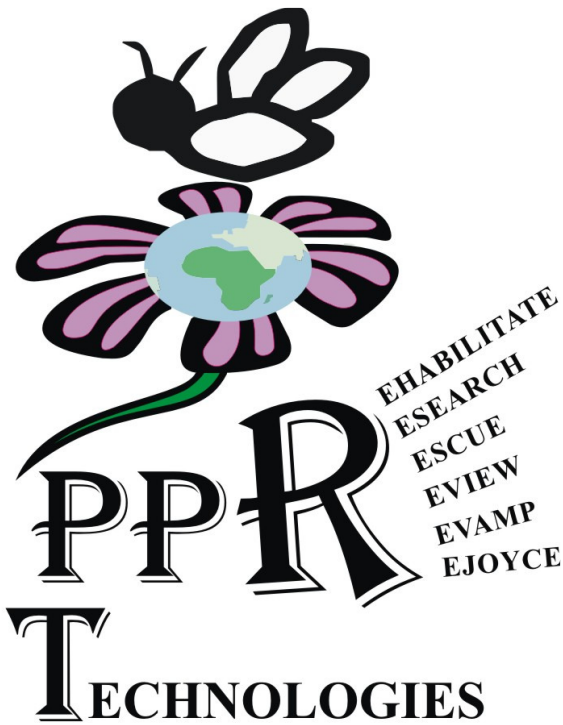


**Enhancing Biodiversity
Compliance
Increased Productivity through
Dedicated Research**

Project Portfolio



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Member: Dr Lenie Venter
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B-BBEE contributor level: 4
B-BBEE procurement level: 100%

**Plant Propagation and
Rehabilitation Technologies cc**

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Rehabilitation and Biodiversity projects

Year	Description, client, role
2023	Plant search and rescue survey Coleskop Wind Energy Facility near Middelburg in the Eastern Cape. Commissioned by Ufefe Development Consultants (Pty) Ltd for WBHO Construction (Pty) Ltd and Coleskop Wind Power (Pty) Ltd..
2022 - 2023	Rehabilitation and Biodiversity enhancement of two reconstructed pans for Mafube Coal (Pty) Ltd, Mpumalanga, South Africa
2022	Transalloys Phase 1: Phytoremediation plan to address concerns around the expansion of the Manganese plume over time. Transalloys SiMn Smelter plant, Mpumalanga, SA
2022	Development of Miombo conservation, rehabilitation and Mushroom cultivation research trials for Mumi SARL in the Democratic Republic of the Congo. Mutanda Mining SARL & Knight Piésold.
2022 - 2023	Research and Implementation of land rehabilitation trials, Miombo tree propagation for biodiversity conservation and comestible mushroom business development for social development. MMG Kinsevere SARL mine & Knight Piésold (Pty) Ltd, Democratic Republic of the Congo.
2021	Replace two tunnels at Mafube Rehabilitation nursery and construct windbreak to protect the tunnels during windstorms. Mafube Coal (Pty) Ltd.
2021	Plant tree screen at development site for Omnia Holdings Sasolburg. EkoInfo cc & Omnia Holdings Ltd.
2020 - 2022	Review Black Mountain Mine Biodiversity Protocol: Rehabilitation and Search & Rescue. EkoInfo cc & Black Mountain Mining, Vedanta Resources.
2020 - 2022	Determine the significant cumulative residual impact(s) that will require a biodiversity offset for transmission powerline projects: 400KV Ferrum – Garona-Nieuwehoop transmission line case study, Eskom & EkoInfo cc
2019 - 2023	Kwezela dragline rehabilitation, maintenance and monitoring: Revegetation and erosion control along N4 and two wetland crossings. EkoInfo cc & Anglo American.
2019 – 2022	Propagating Imperata cylindrica and other indigenous plant species for pan rehabilitation at Mafube Colliery, Mpumalanga.
2019	Survey of approximately 900 trees at Arnot mine rehabilitation site to determine amelioration needs, Mpumalanga, SA.
2019	Tunnel repair and maintenance at Mafube Rehabilitation nursery. Mafube Colliery, Mpumalanga, Me Ingrid Sithole.
2019	Establishment of 205 indigenous trees and the transplant of Phragmites plants at Pit06 to enhance the development of biodiversity in the post rehabilitation landscape at Kriel Colliery, Mpumalanga. Client: Seriti Coal Pty (Ltd), Mr W van Zyl; EkoInfo & Associates, Mr W de Frey.
2018	Amelioration of 300 indigenous trees established at Ramp 44A and Rampt 7 to alleviate per- and post establishment cattle damage. Client: Kriel Colliery, Seriti Coal Pty (Ltd), Kriel, Mpumalanga, Mr W van Zyl.
2018 - 2022	Mafube Colliery Rehabilitation nursery – training and support. Client: Mafube Colliery, Anglo American and Exxaro, Me Ingrid Sithole
2017	Using cover crops and hydrogels as soil amelioration techniques at Kriel Colliery. In association with AGT Foods, EkoInfo & Deojon. Client: Anglo American Coal, Mr W van Zyl

2017	Protected plants survey on 9.7 hectares at UMK, near Hotazel, Northern Cape. Commissioned by United Manganese of Kalahari. In association with EkolInfo cc.
2017	Mafube Colliery LifeX project: Plant translocation (Rescue & re-location) considerations. Client: Anglo American, Me Cindy Smith.
2017	Protected Plants – Identification and recommendations guide: Garona – Groblershoop 132 kv Power line, commissioned by Eskom Pty (Ltd), Dec 2016. Association with EkolInfo cc
2016	Mafube tree inspection, client: EkolInfo cc, Mr W de Frey
2015 - 2017	Development and establishment of a Propagation Nursery for plants to be used during rehabilitation at Mafube Colliery, Mpumalanga. Client: Me Mary-Lou Watkins, Anglo American.
2016	Feasibility report – Mafube Colliery: Plant harvesting and nursery. Client Terrasoil cc
2015	Review of plant propagation needs for the production of woody species for the re-vegetation of three mini pits at Tshikondeni mine. Clients: Exxaro and Golder and Associates.
2015	Development of an implementation plan for the establishment of a temporary plant propagation nursery for the production of wetland plant species for the rehabilitation of a pan. Client: Anglo American, Mafube Colliery.
2015	Development of an implementation plan for the establishment of a plant propagation nursery at Kriel Colliery. Client: Mr W van Zyl, Anglo Inyosi Kriel Colliery.
2014	Rehabilitation and re-vegetation implementation review at Mapochs mine, Mpumalanga. Client: Mr A Brown, Golder and Associates, SA.
2014	Revegetation plan for the rehabilitation of two steep sloped dam walls at Quion Rock Winery, Stellenbosch, Western Cape in SA. Clients: Quion Rock Winery (Pty) Ltd. and Melisdup Engineers.
2014	Step point plant survey of plant succession of rehabilitated site at Wetland crossing, Kromdraai colliery, EkolInfo cc & Anglo American.
2014	Site evaluation and recommendation of current rehabilitation practices at Mapoch's strip mine near Roosenekal. Client: Golder and Associates.
2013 - 2014	Seedbank and biodiversity study of soil sampled at Wetland crossing, Kromdraai Colliery, Anglo American.
2013	Seedbank study for private land owner at Curry's Post, KZN
2013	Desktop study: Report on research done to determine the best plant species, plant characteristics and most suitable planting techniques for rehabilitation of co-disposal site at Mooiplaats Colliery, Coal of Africa.
2011-2012	Rehabilitation and layout plan for 0.7ha portion of Rappa Holdings waste disposal site located in Knight, North of Johannesburg. Client Rappa Holdings
2011	Rehabilitation of Moreletta Spruit Catchment area, part of Moreletta Spruit – Adopt a River Programme, Golder and Associates.
2010 - 2013	Rehabilitation of riparian zone of Jukskei River at 175 St Andrews, Bedfordview. Client: Mr N Lambrakis, EuroArt Shoes.
2010 - 2011	Consultant for Bird-park project at Anglo Inyosi Coal (Propriety) Limited, Zibulo Colliery.
2010	Survey of Perceus-Hydra 765KV Transmission line from De Aar to Dealesville to determine the plant rescue and rehabilitation measures that needs to be done. Client: ESKOM
2008	Aesthetic enhancement of a portion of the Apies River (Mandela corridor) using

	indigenous vegetation for AUDI SA, dealership situated in Church street, Pretoria, Gauteng.
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Agricultural production systems – post rehabilitation landscapes: Business case study, Standard Operating procedures (SOP); Global GAP

Year	Description, client, role
2019	Potential for additional agricultural activities at farm Driekop, Machadodorp, Mpumalanga. Client Mr Barry van Wyk, Farm Driekop
2018 - 2019	Developing a training course and manual for training personnel working in a commercial vertical hydroponic production greenhouse. Client: CAN Agri Global, Saal straat, Olympus, Gauteng, Mr F van der Merwe.
2018	Development of Standard Operating Procedures for a commercial hydroponic leafy green production system: SOP's: General greenhouse, Propagation, Transplantation, Crop production – growth and care, Harvesting. Client: CAN Agri Global, Saal straat, Olympus, Gauteng, Mr F van der Merwe.

Research

Year	Description, client, role
20220-2023	Miombo tree and grass rehabilitation and Mushroom cultivation research trials for MMG Kinsevere SARL mine and Mumi SARL in the Democratic Republic of the Congo. MMG Kinsevere SARL, Mutanda Mining SARL & Knight Piesold.
2020 - 2022	Soil seedbank germination trials to demonstrate the value of good topsoil management for post mining land rehabilitation and biodiversity enhancement, Mafube Coal (Pty) Ltd.
2021	Desktop study and research to determine the viability to establish commercial bamboo plantations on the Fines residue dam at Voorspoed mine, Kroonstad. Client: Voorspoed mine, De Beers UK Ltd.
2019	Investigating if adding a superabsorbent polymer (Hydrogel) to the planting medium of nursery bag when transplanting young trees will contribute to a better survival of young trees and if it will be economical for a nursery to provide these pre-treated trees for land rehabilitation projects.
2019	Investigating the use of superabsorbent polymer (Hydrogel) during establishment of indigenous trees in a rehabilitated mine area with different clay content to determine – will hydrogels improve tree survival?
2017	Investigating the impact of cover crops and superabsorbent polymers (hydrogel) as soil amelioration techniques on the improvement of soil condition and land capability in post mining rehabilitation areas at Kriel Colliery. Client: Anglo American Kriel Colliery, Mr W van Zyl.
2017	Cultivar and nutrition evaluation of hydroponically grown salad. Client: CleanAir Nurseries, Mr Gideo van der Merwe.
2016	GreenSpy – development of cost effective and intelligent technology for monitoring the environment of greenhouses and hydroponic units.
2014	Identikit of the threatened plant species of Mozambique, Northern Region: subtropical and tropical forest, coastal and moist savanna, District of Palma in Cape Delgado Province. Client: EkoInfo cc.
2014 - 2015	Vegetable production studies in a new concept hydroponic unit. Client: CleanAir Nurseries, Mr Gideo van der Merwe.
2014	Seed germination studies to determine the best germination protocol for the

	germination of six indigenous South African herbaceous species – <i>Pentanisia angustifolia</i> , <i>Haplocarpha scaposa</i> , <i>Hypoxis hemerocallidea</i> , <i>Hypoxis argentea</i> , <i>Becium obovatum</i> and <i>Gnidia caffra</i> . Client: Johan Wentzel of Wild Flower cc (2014).
2013	Seedbank study to determine the seed viability and species diversity in the soil of samples collected at rehabilitated sites at Kromdraai. Client: EkolInfo cc and Anglo American (2013).
2013	Research to determine the best plant species, plant characteristics and most suitable planting techniques for rehabilitation of co-disposal site at Mooiplaats Colliery, Coal of Africa.
2012	Research the probability of measuring leaf thickness accurately and quickly. This is done as a prelude to the future development of a rapid screening method to identify polyploid <i>Eucalyptus</i> trees based on differences in leaf thickness. Clients: Creation Breeding Innovations cc and Hans Merensky Timber Holdings.
2012	Literature review of early flower induction (Phase Change) in forestry trees and the feasibility there of in subtropical and tropical Eucalypt trees for Creation Breeding Innovations and Hans Merensky Timber Holdings.
2009 - 2010	Study the seed germination of <i>Cassinopsis ilicifolia</i> in different germination media, Clean river sand, River sand soaked with worm tea and mix of commercial germination media and vermiculite.
2008	Desktop study to determine the probability that certain characteristics can be used as ecological linkages to indicate the presence of difficult to spot animal species.
2007	A brief survey of the reproductive ecology characteristics of the flora of the Pondoland centre – desktop study.
2007 - 2008 2005 - 2007	Project manager: Eucalypt hybrid saw timber project. Post Doc study: Understanding tree reproductive biology for hybrid seed production. Develop a model to determine best place and species combination for open pollinated seed orchards for hybrid seed production.
2003 - 2008	Researcher and leader on PG grant project: Reproductive biology research for mass seed production of <i>Eucalyptus</i> tree species
2003 - 2006	Project leader and researcher for NRF-Thrip project: Determining the fertility control mechanisms of Forestry trees.
2001 - 2003	Project leader for DACTS funded Poverty Alleviation Project, Seeds for a better future.
2001 - 2003	Project leader and researcher for UP/CSIR initiative project on studying the reproductive biology of Eucalypt spp.
1994 - 1999	Study the leaf anatomy of legume pastures to determine the relationship between organizational leaf anatomy and leaf strength as well as the tempo of digestion of the leaf by rumen microbes. Techniques applied are standard anatomical techniques, image analysis, plant biomechanics and stereology. Statistical analyses include AMMI, CVA and Neural network computing.
1994 - 1999	Study the leaf anatomy and histochemistry of legume species in order to determine if suitable parameters could be selected to be used in a screening programme for bloat.
1990 - 1994	Study the pollen viability and fertilization of <i>Vigna unguiculata</i> cultivars.
1992 - 1996	Study the reproductive biology and genetics of a field of <i>Themeda triandra</i> plants under fire and grazing treatments.
1989 - 1991	Study the reproductive biology of <i>Portulacaria afra</i> .
1988 - 1992	Evaluate <i>Voandzeia subterranea</i> cultivars in a cutting trial to determine the best cultivars to be used for a breeding programme.
1988 - 1991	Study the anatomy, reproductive biology, ecology and cultivation possibilities of <i>Tylosema esculentum</i> .

EIA/ Public participation/Document reviews

Year	Description, client, role
2021	Document review: EIA report – EESTech Ferrochrome Recovery Plant Emalahleni, Mpumalanga, commissioned by EESTech Inc Ltd, compiled by EkoInfo cc & Associates.
2020	Document review: Scoping report – Ferrochrome Recovery, commissioned by EESTech Inc Ltd, compiled by EkoInfo cc & Associates.
2019	Document review: Richards Bay DSR Executive summary, compiled by EkoInfo cc.
2019	Document review: Scoping Report - East Coast Gas 400 KV Power Lines Richards Bay, KwaZulu-Natal, Commissioned by ESKOM HOLDINGS PTY (Ltd), Compiled by EkoInfo CC & Associates January 2019
2018	Temporary ECO duties for EkoInfo cc at Mafube Colliery, Mpumalanga. Client: EkoInfo cc, Mr W de Frey.
2016	Contribution to EIA report on the propagation of two indigenous tree species – Ficus abutiliflora and F ingens observed at the development site at Erf 1821, SilvertonX13, Gauteng. Client: EkoInfo cc, Mr W de Frey.
2016	Environmental Management Plan for Kriel Golf Course, Mpumalanga. Client: Mr W van Zyl, Anglo Inyosi Kriel Colliery and Kriel Golf Course management.
2015	Public Participation and Knock and Drop process, Powerline Bloemfontein, August 2015. Client: Baagi Environmental Consultancy, Eskom.
2014	Environmental Risk Assessment at Ingagane Power Station. Prepared for ESKOM HOLDINGS SOC. Compiled by EkoInfo CC.
2014	Bid document reviews and Public participation meetings, Musina 12 – 15 May 2014, Nshelele power line. Client: Baagi Environmental Consultancy cc, Eskom.
2014	Knock and Drop process Musina, 8-10 April 2014, Nzhelele power line. Client: Baagi Environmental Consultancy cc, Eskom.
2014	Knock and Drop process, Witbank, 7 March 2014. Client: Baagi Environmental Consultancy cc, Eskom.
2012	Specialist Report – One Hectare Site Selection For Initial Mining Infrastructure. Commissioned by Exxaro Pty (Ltd), compiled by EkoInfo & Associates
2012	Environmental Risk Assessment For Proposed Expansions at SASOL's Secunda Plant, Mpumalanga Province. Commissioned by SASOL Pty (Ltd), compiled by EkoInfo cc & Associates.
2012	Specialist Report: An Assessment Of The Resource Potential In The Post Mining Landscape To Offset Biodiversity And Economical Losses – Proposed New Largo Colliery, Mpumalanga. Commissioned by Anglo ThermoCoal, compiled by EkoInfo cc.
2011	Compilation and summary of specialist reports into EIA document for N3T. Client: Cave Klapwijk & Associates.
2011	SPECIALIST REPORT: Biodiversity Issues Related To Geological Exploration In Limpopo. Commissioned by Anglo American Thermal Coal Geological Services, compiled by EkoInfo cc & Associates.
2011	Basic Assessment Report. Commissioned by Hartzoghoop Colliery, compiled by EkoInfo cc.
2011	Informative/ Scoping Level Report: Ecological Assessment Of The Proposed Paardeplaats Mining Area, Belfast, Mpumalanga. Commissioned by Groundwater

	Consulting Services Pty (Ltd), compiled by EkolInfo cc & Associates.
2011	Ecological Specialist Assessment for the New Largo Coal Mine, Mpumalanga. Commissioned by Synergistics Environmental Services, compiled by EkolInfo cc & Associates.

Community Projects

Year	Description, client, role
2019 - 2022	Skills development and transfer to ten community members from Emalahleni local community who assisted with rehabilitation tasks of the Kwezela Dragline, Mpumalanga.
2018	Present talk at the Mafube local community village Arbour day, 6 September 2018
2018	Establish trees as the local community soccer field on behalf of Mafube Colliery
2017	Garden design for community school at Mafube, Mpumalanga.
2016	Develop Standard Operating Procedure for Hydroponic leafy vegetable production at Bekkersdal Community project. Client: Mr Martin Perry, 1 Source and Mr Simphiwe Khumalo, 1 Agri Can, Johannesburg.
2011	Guest speaker at Laerskool Garsfontein on tree planting day (5 Sept. 2011)
2011	Present a talk on Biodiversity and Us to Gr 4 – 7 at Laerskool Garsfontein (4 August 2011).
2010	Tree planting at Weavers Nest, Moreleta Spruit, Pretoria.
2010	Outreach and development of vegetable garden project at a bible school and orphanage in Mozambique.
2009 - 2013	Community vegetable garden at Lux Mundi Church in Pretoria.
2003 - 2005	Part of the SERA Sustainable Rural Development task team concerned with the launching of the Greater Giyani Indigenous Resource Development Programme.
2001-2003/4	Project leader for DACTS funded Poverty Alleviation Project, Seeds for a Better Future. The project is concerned with the establishment of high quality, commercial forestry <i>Eucalyptus</i> mass production seed orchards at communities. Concurrently an SMME is developed and the community people are trained to manage a commercial seed production and seed sale business for both the local and international commercial forestry markets. Three seed orchards have been established of which two are located in the Mpumalanga province and one in Limpopo province.

Garden design/ Vegetable Gardens

Year	Description, client, role
2021	Provision of trees and shrub for the gardens at Omni Fertilizer Plant, Sasolburg.
2021	Build VegPatch planter boxes for the vegetable garden of Dr R Oosthuizen, Garsfontein, Pretoria.
2021	Garden design and establishment for Venessa & Helge Switala at Bronberg Retirement Estate, Pretoria.
2019	Tunnel and vegetable production project. Client Seriti Coal Pty (Ltd), Kriel Colliery, Mr W van Zyl
2018	Establishing <i>Thunbergia alata</i> at Seriti Coal office garden. Client Seriti Coal Pty (Ltd), Kriel Colliery, Mr W van Zyl
2017	Design and establishment of container vegetable garden for Mr D Lourens at Lala Palm street, Montanapark.
2017	Design and establishment of container vegetable garden for Me Ali Geake at Seeleu str 1051, Pretoriuspark, Pretoria.

2017	Refurbish two existing vegetable planter boxes, Mrs M Swart.
2017	Design and establishment of container vegetable garden for Me N Prinsloo at Seeleu str 1028, Pretoriuspark, Pretoria.
2016	Revamp of garden at Equistria estate: Client mrs Rose Allers.
2016	Design and establishment of small vegetable garden for mr Vivien de Klerk
2016	Design and establishment of garden for Mrs Woodborne at Silverlakes home.
2015	Design and establishment of Garden at managers House at Kriel Golf Course. Client: Mr W van Zyl, Anglo Inyosi Coal- Kriel Colliery.
2015	Design and establishment of Garden at Kriel Golf Club. Clients: Mr W van Zyl and Me J Pain (Golf club manager).
2013	Re-design and layout of community Vegetable Garden at Lux Mundi Gemeente, Garsfontein, Pretoria.
2013	Sourcing of large tree for special tree planting at Lux Mundi Gemeente, Garsfontein, Pretoria.
2012	Small office garden design and establishment for Westdunes Holdings, Pretoria.
2011	Back garden design and establishment for Mrs S Sims, Nyala street, The Wilds, Pretoria.
2010	Front garden design and establishment for Mrs S Sims, Nyala street, The Wilds, Pretoria.
2010	Sourcing of trees for Parking area, Lux Mundi Gemeente, Garsfontein, Pretoria
2010	Sourcing of plants, Mr J Myburgh, Newmark Estate, Silver Lakes road, Pretoria
2009	Sourcing and establishment of plants for Mr W de Frey, Chelsea singel, Garsfontein, Pretoria.
2009	Aesthetic enhancement and garden design of the private property of A Venter, Waterkloof Gholf estate, Pretoria.
2008	Office Garden design and establishment for Orthoprost (Mr P Hurter), Jacqueline drive, Garsfontein Pretoria.
2008	Rehabilitation of private property of O Thompson, Fearie Glenn, Pretoria.

External examiner/ lecturing/ mentoring

Year	Description, client, role
2022	External examiner for Land reclamation and restoration ecology, BOT 791, Faculty Natural and Agricultural Sciences, University of Pretoria.
2019 - 2020	External examiner for Faculty for Faculty of Natural and Agricultural Sciences, Land Rehabilitation and Restoration, BOT 791, University of Pretoria
2013	External examiner for Faculty of Education, Department of Science, Maths and Technology: Courses JPK 310 and 320 Botany, University of Pretoria.
2012	External examiner for Faculty of Education, Department of Science, Maths and Technology: Courses JPK 210, 220, 310 and 320 Botany, University of Pretoria.
2012 - 2013	External examiner for Faculty of Natural and Agricultural Sciences, department Plant Production and Soil Sciences: HCS 783, University of Pretoria.
2010 - 2013	Mentor for Thulisile Jaca as part of the SANBI Mentorship programme: Early detection and evaluation of invasive alien plants.
2011,2012	Present a lecture on Rehabilitation and Planting Techniques to Landscape architecture students at the dept. of Architecture, University of Pretoria.
2010 - 2011	External examiner for Landscape Technology Management 3 (LMT 300T), Department of Horticulture at Tshwane University of Technology.
2009-2010	Mentor for two mentees, Modise Kganye and Thulisile Jaca as part of the SANBI Mentorship programme: Early detection and evaluation of invasive alien plants.
2006 - 2011	External examiner for Faculty of Natural and Agricultural Sciences, department Plant Production and Soil Sciences: HCS 783 & HSC 788, University of Pretoria.
2006-2007	External examiner for Faculty of Natural and Agricultural Sciences, Department of Botany: BOT 717, University of Pretoria.

2004-2007	<p>Co-leader for two MSc students and one PhD student at the department of Plant Production and Soil Sciences, University of Pretoria.</p> <ol style="list-style-type: none"> 1. PhD: Mr. Simon Mng'omba - Propagation of potential wild tree crops for biodiesel (Completed). 2. MSc: Miss Anzelle Venter - Reproductive biology studies on 4 pure and 2 hybrid Eucalyptus species. 3. MSc: Miss Melrose Tlou Ramokonyane - Reproductive biology studies on 4 pure and 2 hybrid Eucalypt species.
2003-2005	External examiner for Faculty of Education, Biology JBI 310,320; University of Pretoria, 2003 - 2005.
2003 - 2004	External examiner for Faculty of Natural and Agricultural Sciences, Department of Botany, BOT 745 - Seed & Fruit Morphology; BOT 353 - Ecophysiology; BOT 717 - Plant Morphology; BOT 743 - Gynology; BOT 744 - Andrology; University of Pretoria.



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