

College of Agriculture and Environmental Sciences

Research focus areas for 2020: Department of Agriculture and Animal Health

Focus area	Researchers in the focus area	Specialisation of researchers in the focus area	Profile of the researcher	Research project themes	Capacity per researcher for 2019
Indigenous crops research Contact person Prof G Prinsloo prinsg@unisa.ac.za	Prof G Prinsloo E-mail: prinsg@unisa.ac.za Dr N Nogemane E-mail: nogemn@unisa.ac.za Prof FN Mudau E-mail: mudaufn@unisa.ac.za Dr L Nemadodzi nemadle@unisa.ac.za Dr K Mohale mohalkc@unisa.ac.za	Propagation and cultivation of indigenous crops and the effects on their chemical profile and biological activity	<p>Prof Gerhard Prinsloo is a professor in the Department of Agriculture and Animal Health. He holds a PhD from the University of Pretoria. His research focus is on quality assessment of indigenous plants and identification of important secondary metabolites.</p> <p>Dr Noluyolo Nogemane is a senior lecturer in the Department of Agriculture and Animal Health. She holds a PhD from Unisa. Her research focus is propagation and cultivation of medicinal plants and assessment of these effects on the chemical profiles and biological activity of the plants.</p> <p>Prof FN Mudau is a professor in the Department of Agriculture and</p>	<ol style="list-style-type: none"> 1. Propagation of indigenous crops with commercial potential 2. Determine the effects of cultivation on the yield and chemical profile and biological activity 3. Identify the important secondary metabolites as affected by these methodologies 4. Identification of compounds with beneficial or adverse effects 5. Determine the effect of soil and soil organisms on plant survival and establishment 	Masters: 10 PhD: 10

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			<p>Animal Health. He holds a PhD from the University of Pretoria.</p> <p>Dr Nemadodzi is a lecturer in the Department of Agriculture and Animal Health. She holds a PhD from Unisa. Her research focus is propagation and cultivation of medicinal plants and assessment of soil and soil organisms on the chemical profiles and biological activity of the plants.</p>		
	<p>Prof G Prinsloo E-mail: prinsg@unisa.ac.za</p> <p>Dr Noluyolo Nogemane nogemn@unisa.ac.za</p> <p>Dr L Nemadodzi nemadle@unisa.ac.za</p>	Plant metabolomics	<p>Prof Gerhard Prinsloo is a professor in the Department of Agriculture and Animal Health. He holds a PhD from the University of Pretoria. His research focus is on quality assessment of cultivated plants and identification of important secondary metabolites.</p> <p>Dr Noluyolo Nogemane is a senior lecturer in the Department of Agriculture and Animal Health. She holds a PhD from Unisa. Her research focus is propagation and cultivation of medicinal plants and assessment of these effects on the chemical profiles of the plants.</p> <p>Dr Nemadodzi is a lecturer in the Department of Agriculture and Animal Health. She holds a PhD from Unisa. Her research focus is</p>	<ol style="list-style-type: none"> 1. Identify changes in the chemical profile and biological activity of plants due to environmental or other external factors 2. Identification of compounds affected by environmental or other external factors 3. Identification of compounds with beneficial or adverse effects 4. Identification of compounds in soil that affects growth and soil organisms 	Masters: 3 PhD: 3

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			propagation and cultivation of medicinal plants and assessment of soil and soil organisms on the chemical profiles and biological activity of the plants.		
Plant-microbes interactions Contact person Prof K Ntushelo ntushk@unisa.ac.za	Prof K Ntushelo E-mail: ntushk@unisa.ac.za	Molecular profiling of plants interacting with microbes especially microbial pathogens	Prof Khayaletu Ntushelo is an associate professor in the Department of Agriculture and Animal Health. He holds a PhD from the University of Florida. His research focus is on genetic and metabolite profiling of plants interacting with microbes especially pathogens.	<ol style="list-style-type: none"> 1. Gene expression profiling of crops under pathogen attack. 2. Metabolite profiles of crops under pathogen attack 3. Investigating the role of plant hormones in lessening disease effects 	Masters: 0 PhD: 1
Commercial Crops Contact person Prof FN Mudau mudaufn@unisa.ac.za	Dr S Figlan figlas@unisa.ac.za Prof FN Mudau E-mail: mudaufn@unisa.ac.za	Commercial crops: Fruits, Vegetables and Field crops	Prof FN Mudau is a professor in the Department of Agriculture and Animal Health. He holds a PhD from the University of Pretoria. Dr S Figlan focuses on plant breeding and genetic improvement of plants.	<ol style="list-style-type: none"> 1. Propagation and cultivation of Fruits and vegetables 2. Genetic improvement of commercial crops 	Masters: 2 PhD: 2
Animal Diseases - Brucellosis	Mr J Oosthuizen oostej@unisa.ac.za	Occurrence of Brucellosis in South Africa	Mr Johan Oosthuizen is a Senior Lecturer in Animal Health with a Master's Degree in Environmental Sciences focussing on infectious Animal Disease like Brucellosis	<ol style="list-style-type: none"> 1. Prevalence and Risk factors associated with infectious diseases like <i>Brucella abortus</i> and <i>canis</i> within South Africa 2. Prevalence and risk factors for Avian tuberculosis 	Masters: 3
Veterinary Public Health/applied epidemiology	Prof J Oguttu joguttu@unisa.ac.za	Veterinary public Health and	Prof James W Oguttu is an Associate Professor in the Department of Agriculture and Animal Health. He	<ol style="list-style-type: none"> 1. Epidemiology of Food borne diseases 	2 PhD and 2 Masters

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		applied epidemiology	holds a PhD from the University of Pretoria. His research focus is the epidemiology of food borne diseases and antimicrobial drug resistance in domestic animals and humans. He is also interested in developing study designs.	<ol style="list-style-type: none"> 2. Epidemiology of Antimicrobial drug resistance among human and animal isolates 3. Application of epidemiological techniques to develop appropriate study designs 	
Poultry Production	Mr BL Mogoje mogojbl@unisa.ac.za	Poultry production	Mr Barileng Leonard Mogoje is a lecturer in the Department of Agriculture and Animal Health. He holds a M. Tech degree from Tshwane University of Technology. His research focus is on poultry covering production management, breeding, nutrition and poultry business.	<ol style="list-style-type: none"> 1. Poultry production management and bio-security 2. Poultry breeding 3. Poultry nutrition 	Masters: 2 PhD: 0
Monogastric nutrition	Dr Monnye Mabelebele	Improving productivity of indigenous and exotic chickens	Dr Monnye Mabelebele is a Senior Lecturer in the Department of Agriculture and Animal Health. She obtained her PhD at the University of Queensland Australia. Her research focus is on use of non-conventional feed resources in chickens Methodology expertise: Quantitative and Qualitative studies	<ol style="list-style-type: none"> 1. Feed restriction methods 2. Optimization model 3. Non-conventional feed resources. 	Masters: 2 PhD: 1
Monogastric nutrition	Prof CA Mbajiorgu mbajica@unisa.ac.za	Improving productivity of indigenous and exotic chickens	Prof Mbajiorgu is an Associate professor in the Department of Agriculture and Animal Health. He obtained his PhD at the University of Limpopo. His research focus is the use of non-conventional indigenous	<ol style="list-style-type: none"> 1. Feed restriction methods 2. Optimization model 3. Non-conventional feed resources 	Masters: 6 PhD: 4

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			feed resources and Feed restriction methods including both quantitative and qualitative methods and Skip a day feeding system in chickens. To this end, the aim was to develop, test, apply and adapt optimization models for the estimation/prediction of nutrient requirements of indigenous chickens under commercial production system in addition to investigating their contributions to household income of rural dwellers.		
Animal Breeding and Genetics	Dr DP Malatji malatdp@unisa.ac.za	Parasitology, Genomics, Molecular Biology	Petunia Malatji is a senior lecturer in the Department of Agriculture and Animal Health. She holds PhD in Animal Science from the University of Pretoria. Her research focuses mainly on livestock improvement using latest cutting-edge breeding technologies.	Parasitology, Genomics, Molecular Biology	Masters: 3 PhD: 3
Animal Nutrition	Dr NA Sebola sebolan@unisa.ac.za	Animal Nutrition and Reproductive physiology	Sebola Amenda is a senior lecturer in the Department of Agriculture and Animal Health. She holds PhD in Animal Science from North West University. Her research focuses on improving nutritional and fertility status of livestock using alternative feed ingredients.	Animal Nutrition and Reproductive physiology	Masters: 3 PhD: 2
Animal Science	Ms E Janse van Rensburg dutoie@unisa.ac.za	Meat science research	Ms E Janse van Rensburg holds an MSc Agric (Animal Production Physiology)	Production physiology – meat science	Masters: 2

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Animal Health	Dr CJ Smit smitcj@unisa.ac.za	Animal health and nutrition	Dr Smith holds a PhD in Agriculture (Animal Health) from Unisa.	Animal health and nutrition	MSc: 2 PhD: 2
Animal Health	Dr PN Kayoka kabonpnk@unisa.ac.za	Microbiology, Infectious diseases, Ethnobotany and Virology.	Prudence Kayoka-Kabongo holds a PhD in Agriculture from Unisa. She currently works at the Department of Agriculture and Animal Health, University of South Africa as a senior lecturer. Her research includes: Microbiology Infectious diseases (zoonoses/Public Health), Phytomedicine	Microbiology, Infectious diseases, Ethnobotany and Virology. Their current project is 'Antimycobacterial activity and cytotoxicity of selected plants'.	MSc: 2 PhD: 2
Animal Health	Dr S Mbizeni mbizes@unisa.ac.za	Veterinary Parasitology	Dr Sikhumbuzo Mbizeni is a Senior Lecturer in the Department of Agriculture and Animal Health. He holds an MSc degree from the University of Pretoria. His research focus is the epidemiology of tick-borne diseases of livestock and wildlife.	<ol style="list-style-type: none"> 1. Surveillance of vector ticks of veterinary importance. 2. Surveillance of tick-borne diseases in livestock and wildlife. 	MSc: 3
Food Security	Dr M Masekoameng masekmr@unisa.ac.za	Food security. Household food and nutrition security	Mosima Masekoameng is a senior lecturer in the Department of Agriculture and Animal Health with a Masters in Agricultural Extension and a PhD in Rural Development from the University of Venda.	<ol style="list-style-type: none"> 1. The impact of climate change on food security of small-holder and emerging farmers in South Africa. 2. The contribution of urban agriculture to food security. 	Masters: 1
Food security	Dr TP Mbombo-Dweba		Dr TP Mbombo-Dweba is a lecturer in the Department of Agriculture and Animal Health. She holds a PhD from Unisa. Her research focus is on Household Food Security through food based strategies.	<ol style="list-style-type: none"> 1. Indigenous/ traditional vegetables and fruit. 2. Ethnic foods 3. Food safety challenges at informal markets 	Masters 3 PhD: 1
Animal Nutrition/ Animal Health	Dr BG Mokolopi E-mail: kgobebg@unisa.ac.za	Animal Nutrition/Minerals	Dr B Gloria is a Senior Lecturer in the Department of Agriculture and Animal Health. She obtained her	<ol style="list-style-type: none"> 1. Mineral status on the communal cattle depending on natural grazing 	Masters: 2 PhD: 1

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			<p>PhD the North-West University. Her research focus is on Animal Nutrition related to minerals and animal health</p> <p>Methodology expertise: Quantitative and Qualitative studies</p>	<ol style="list-style-type: none"> Effect of supplements on mineral status of cattle Haematological and blood chemical indices on supplemented animals 	
Agricultural Economics and value adding	Ms D Mthombeni mthomdl@unisa.ac.za	Agricultural Marketing and Agribusiness Management	<p>Ms D Mthombeni is a lecturer in the Department of Agriculture and Animal Health. She holds an MSc in agriculture from UNISA. Currently studying PhD in Agriculture at UNISA.</p> <p>Methodology expertise: Quantitative & Qualitative studies.</p>	Agricultural Marketing (including informal marketing) and agro-processing.	MSc: 2
Agricultural Economics	Dr SS Tekana tekanss@unisa.ac.za	Socio-economic, climate change and food security research	<p>Dr SS Tekana (PhD, M.Sc., B.Sc. (honours)) is a senior lecturer in the Department of Agriculture and Animal Health.</p> <p>Methodology expertise: Quantitative & Qualitative studies</p>	<ol style="list-style-type: none"> Agricultural marketing Land reform Climate change Food security 	MSc: 3 PhD: 2
Agricultural Economics	Dr A Tagwi tagwia@unisa.ac.za	International trade, cooperatives, value chain analyses, land reform, climate change, rural finance and agribusiness.	<p>Dr A Tagwi (PhD, M.Sc., B.Sc.) is a senior lecturer in the Department of Agriculture and Animal Health. She holds a PhD in Agricultural Economics from University of Venda.</p> <p>Methodology expertise: Quantitative & Qualitative studies</p>	<ol style="list-style-type: none"> Interventions towards the transformation of small-holder farming to commercial farming. Commercialisation of renewable energy using co-generation system among sugarcane growers in South Africa. Impact of land reform programme / projects 	MSc: 3 PhD: 3

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				<ol style="list-style-type: none"> 4. Risk analyses of sheep farming 5. Informal traders' knowledge and compliance level in fruit and vegetables sanitary and phytosanitary measures 	
Agricultural Economics, and Agribusiness management	Ms FP Tshilowa tshilpf@unisa.ac.za	Agricultural Marketing, socio-economics and Agribusiness Management aspects	Ms FP Tshilowa is a lecturer in the Department of Agriculture and Animal Health. She holds an MSc in agriculture from Unisa. Currently studying PhD in Agriculture at Unisa. Methodology expertise: Quantitative & Qualitative studies.	<ol style="list-style-type: none"> 1. Agricultural Marketing and agro-processing. 	MSc: 2
Agricultural Economics, Climate change, Land reform & Food security	Prof MA Antwi antwima@unisa.ac.za	Analyses of production, agribusiness, land reform, marketing, food security, international trade, rural finance, climate change, agricultural policy & cooperatives research	Prof MA Antwi is an Agricultural Economist (PhD Agric Economics, M.Sc. Agric Economics, master's in business administration MBA, B.Sc. (honours) Agric Economics). Methodology expertise: Quantitative and Qualitative studies	<ol style="list-style-type: none"> 1. Achieving continuous improvement and innovation (ci & i) in freshwater aquaculture sector of South Africa 2. Interventions towards the transformation of small-holder farming to commercial farming. 3. Vulnerability and Productivity Assessment of Climate Smart Agricultural Practices (CSAs) Adopted by Farmers in South African Maize and potato Based Cropping and livestock Systems. 4. Competitiveness of the South African agricultural products/industry. 	MSc: 2 PhD: 2

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				<ul style="list-style-type: none"> 5. Commercialisation of renewable energy using co-generation system among sugarcane growers in South Africa. 6. Agricultural infrastructure and productivity of smallholder farmers in the South Africa. 7. Access to markets and commercialisation among Land Reform/farmers in South Africa. 8. Impact of land reform sub-programme / projects 	
Agricultural Extension, Rural Development and Food Security	Mr MMS Maake maakems@unisa.ac.za	Agricultural extension approaches and reform, agricultural development and poverty alleviation programmes, household food security	Mr Maake hold an MTech in Agriculture from TUT. He specialised in rural development and extension and is an agricultural sociologist. Currently registered for PhD: Agriculture at Unisa.	<ul style="list-style-type: none"> 1. Contribution of school gardens to food security 2. Adoption of alternative broiler chicken feeds 3. Gender participation in community gardens 4. Contribution of farmer support programmes to agricultural production, food security and poverty alleviation 	MSc: 3