

## College of Agriculture and Environmental Sciences

### Research Focus Areas: 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 2025
<b>CHAIR OF DEPARTMENT</b>					
<b>Agricultural Economics</b>	Prof A Maiwashe-Tagwi <a href="mailto:tagwia@unisa.ac.za">tagwia@unisa.ac.za</a>	<b>Energy Economics &amp; International trade</b>	<p>Prof A Maiwashe-Tagwi (PhD, M.Sc., B.Sc.) is an Associate Professor in the Department of Agriculture and Animal Health. She holds a PhD in Agricultural Economics from University of Venda.</p> <p>Her research interests are in energy economics studies in the agricultural sector with a focus on biomass, biogas and biofuel, machine learning and energy in agriculture, energy poverty, efficiency and Life cycle assessment (LCA) in agriculture.</p>	<ol style="list-style-type: none"> <li>1. Energy Economics</li> <li>2. Just energy transition</li> <li>3. Renewable energy and agri-food systems</li> <li>4. Trade and energy</li> <li>5. Carbon trade and farming</li> <li>7. Machine learning and energy</li> <li>6. Energy efficiency and profiling</li> <li>7. Energy poverty</li> <li>8. Agricultural waste markets</li> <li>9. Agricultural green markets value chain.</li> <li>10. Life cycle assessment (LCA) in agriculture.</li> </ol>	<p>MSc: 3 PhD: 5</p>

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<b>ANIMAL SCIENCE</b>					
<b>Monogastric nutrition</b>	Prof CA Mbajorgu <a href="mailto:mbajica@unisa.ac.za">mbajica@unisa.ac.za</a>	<b>Improving productivity of indigenous and exotic chickens</b>	Prof Mbajorgu is a full 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 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 is 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.	<ol style="list-style-type: none"> <li>1. Feed restriction methods</li> <li>2. Optimization model</li> <li>3. Non-conventional feed resources</li> </ol>	MSc: 6 PhD: 3
<b>Animal Nutrition and Production</b>	Prof JW Ng'ambi <a href="mailto:ngambjw@unisa.ac.za">ngambjw@unisa.ac.za</a>	Nutrient optimization in poultry and small	Prof J W Ng'ambi a Distinguished Professor in the Department of Agriculture and Animal Health, University of South Africa. He	<ol style="list-style-type: none"> <li>1. Nutrient optimization in poultry and ruminant production.</li> </ol>	MSc: 5 PhD: 6

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		ruminant production.	obtained his PhD at the University of London in UK. His research focuses on optimising livestock productivity through better nutrition. At the moment he is focusing on mitigating the effects of climate change on livestock through better nutrition and management.	<ol style="list-style-type: none"> <li>Improving feed and water use efficiencies of ruminant animals.</li> <li>Reducing methane production and emission by ruminant animals through utilization of tanniferous feeds.</li> </ol>	
<b>Poultry Production</b>	Dr BL Mogoje <a href="mailto:mogojbl@unisa.ac.za">mogojbl@unisa.ac.za</a>	<b>Poultry production</b>	Dr Barileng Leonard Mogoje is a senior lecturer in the Department of Agriculture and Animal Health. He holds a PhD from University of South Africa. His research focus is on poultry covering production management, breeding, nutrition and poultry business.	<ol style="list-style-type: none"> <li>Integrated poultry production management</li> <li>Poultry breeding</li> <li>Poultry nutrition</li> </ol>	MSc: 2 PhD: 0
<b>Animal Nutrition</b>	Prof M Mabelebele <a href="mailto:mabelm@unisa.ac.za">mabelm@unisa.ac.za</a>	<b>Utilisation of novel ingredients as food and feed</b>	Prof Monnye Mabelebele is a Professor in the Department of Agriculture and Animal Health. She obtained her PhD at the University of New England, Australia and a postdoc fellow at Newcastle University, in UK. Her research focus is on probable use of	<ol style="list-style-type: none"> <li>Metabolite profiles of possible feed and food ingredients for potential use in animal and human diets</li> <li>Health benefits associated with medicinal plants in livestock</li> <li>Reproductive and digestive physiology of farm animals</li> </ol>	MSc: 2 PhD: 3

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			alternative food sources and their impact in animal and human nutrition.	<ol style="list-style-type: none"> <li>Meat and egg quality parameters</li> <li>Cost–benefit analysis of utilising novel feed ingredients</li> </ol>	
<b>Animal Nutrition and reproductive physiology</b>	Prof NA Sebola <a href="mailto:sebolan@unisa.ac.za">sebolan@unisa.ac.za</a>	<b>Animal Nutrition and reproductive physiology</b>	<p>Prof Amenda Sebola is an associate professor in the Department of Agriculture and Animal Health. She obtained her PhD at North West University. Her research interest is on Animal nutrition and reproductive physiology: focusing on finding alternative feed resources and their efficiency on fertility of livestock especially ethnomedicinal plants.</p> <p><b>Methodology expertise:</b> Quantitative and Qualitative studies</p>	<ol style="list-style-type: none"> <li>Animal Nutrition</li> <li>Reproductive physiology</li> <li>Ethnomedicinal plants</li> <li>Food security</li> </ol>	MSc: 1 PhD: 2
<b>Animal Reproduction and physiology</b>	Dr TR Netshirovha <a href="mailto:netshtr@unisa.ac.za">netshtr@unisa.ac.za</a>	<b>Antioxidants and reproduction biology</b>	<p>Dr Thivhilaheli Richard is a lecturer in the Department of Agriculture and Animal Health. He holds a PhD degree from University of KwaZulu Natal. His research focus is on assisted reproduction technologies such as, oestrous synchronisation, artificial insemination, in vitro embryo</p>	<ol style="list-style-type: none"> <li>Semen collection in bulls, bucks, boars, cocks and rams and evaluation by Computer Assisted Sperm Analyzer (CASA) system</li> <li>Synchronization, artificial insemination and pregnancy</li> </ol>	MSc: 2 PhD: 1

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			production and gametes cryopreservation in livestock to improve the genetic progress and conservation of valuable genetic material and understanding how specific antioxidants (as semen extender) and reproduction biology can improve livestock (cattle, goats, pigs, chicken and sheep) production following the use of assisted reproductive technologies.	diagnosis in cattle, goats, pigs, chicken and sheep. Research on <i>in vivo</i> & <i>in vitro</i> embryo production and cryopreservation/freezing of gametes (semen and embryos).	
Dairy production	Dr PM Moshidi <a href="mailto:moshipm@unisa.ac.za">moshipm@unisa.ac.za</a>	Optimizing dairy production	Dr PM Moshidi is a senior lecturer in the Department of Agriculture and Animal Health. She is holding PhD from University of Fort Hare. Her research focus is on modulating ruminal microbes, and their effects on fermentation and productivity in dairy cows.	<ol style="list-style-type: none"> <li><b>Smallholder Livestock development:</b> <ul style="list-style-type: none"> <li>Capacity development</li> <li>Dairy infrastructure and business development</li> <li>Dry-land and irrigation pasture establishment</li> <li>Access to market</li> <li>Dairy products</li> </ul> </li> <li>Replacement of antibiotics as feed additives in dairy production.</li> </ol>	MSc: 6

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				3. Modulating ruminal microbes, and their effects on fermentation and productivity in dairy cows.	
<b>Animal Breeding and genetics</b>	Dr DP Malatji <a href="mailto:malatdp@unisa.ac.za">malatdp@unisa.ac.za</a>	<b>Livestock genomics, molecular biology and parasitology</b>	Dr Petunia Malatji is a Senior Lecturer in the Department of Agriculture and Animal Health. She obtained her PhD at the University of Pretoria. Her research focus is on genomics and molecular biology.	1. Animal-pathogen interaction 2. Genetic control in livestock 3. Molecular parasitology	MSc: 2 PhD: 3
<b>Veterinary Parasitology</b>	Prof N Nyangiwe <a href="mailto:nyangn@unisa.ac.za">nyangn@unisa.ac.za</a>	<b>Ticks and tick-borne diseases</b>  <b>Veterinary Parasitology</b>	Prof Nkululeko Nyangiwe is a Distinguished Professor in the Department of Agriculture and Animal Health. He is a registered Professional Natural Scientist under the South African Council for Natural Scientific Profession (SACNASP). He holds a PhD from the University of Stellenbosch. His research interests are mainly on veterinary parasitology, elucidating the	1. Evaluating the development of acaricide resistance in single and multi-host ticks against commonly used acaricide. 2. Establishing the occurrence of anthelmintic resistance against the common widely used anthelmintic drug classes	MSc: 3 PhD: 2

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			acaricide resistance, climate change impact on Ixodid ticks and is recently advancing in helminthology. His dream is to champion the epidemiology of ticks, tick-borne diseases and improve current control strategies.	<ol style="list-style-type: none"> <li>3. Application of molecular techniques to detect tick-borne pathogens and thereby improve tick control strategies as well as endoparasites (gastro-intestinal nematodes) in particular for small ruminants</li> <li>4. Longitudinal studies on population dynamics of the two boophilids occurring in South Africa</li> <li>5. Developing distribution maps for the ticks of veterinary important</li> </ol>	
<b>Ruminant nutrition, health and behaviour</b>	Mr F Phiri <a href="mailto:phirif@unisa.ac.za">phirif@unisa.ac.za</a>	<b>Ruminant growth performance and urinalysis Blood and rumen microorganism profiling</b>	Mr F. Phiri is a lecturer in the Department of Agriculture and Animal Health. He holds an MSc degree and currently doing a PhD in agriculture. His research mainly focuses on small and large ruminant nutrition and foraging behaviour.	<ol style="list-style-type: none"> <li>1. Plant secondary metabolites profiling.</li> <li>2. Urine sediments and blood serum profiling.</li> <li>3. Ruminant dietary development</li> <li>4. Profiling of rumen microorganism composition.</li> </ol>	MSc: 2

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			<b>Methodology expertise:</b> Quantitative & Qualitative studies		
<b>Production Physiology</b>	Dr E Janse van Rensburg <a href="mailto:dutoie@unisa.ac.za">dutoie@unisa.ac.za</a>	<b>Production physiology, specifically meat production for red meat.</b>	Dr E Janse van Rensburg (PhD, M.Sc., B.Sc.) is a senior lecturer in the Department of Agriculture and Animal Health. She holds a PhD in Agricultural Animal Science from University of Pretoria.  <b>Methodology expertise:</b> Quantitative & Qualitative studies	1. Production physiology: meat science	MSc: 1 PhD: 1
<b>Animal Breeding and Genetics</b>	Dr L Nesengani <a href="mailto:nesentl@unisa.ac.za">nesentl@unisa.ac.za</a>	<b>Livestock Genomics, Quantitative Genetics, Applied microbiology and Bioinformatics</b>	Dr Lucky Nesengani is a Senior lecturer in the Department of Agriculture and Animal Health. He obtained his PhD at the Jilin Agricultural University, China. His research focus is on genomics, quantitative genetics, and applied microbiology.	1. Animal breeding and genetics 2. Livestock Genomics Metagenomics	MSc: 3 PhD: 2
<b>ANIMALHEALTH</b>					
<b>Animal Nutrition and Animal Health</b>	Prof BG Mokolopi <a href="mailto:kgobebg@unisa.ac.za">kgobebg@unisa.ac.za</a>	<b>Minerals research and assessment of safety and</b>	Prof BG Mokolopi (PhD, M.Sc., Hons and B.Sc. (Animal Health) is an Associate Professor in the Department of Agriculture and	1. Minerals supplements in livestock. 2. Minerals Homeostasis	MSc: 4 PhD: 2



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		<b>quality of feed supplements</b>	Animal Health. She holds a PhD in Agriculture (Animal Health, obtained from the North West University.  <b>Methodology expertise:</b> Quantitative. Qualitative and Mixed methods	<ol style="list-style-type: none"> <li>3. Assessment of feed safety and quality as a source of supplements.</li> <li>4. Assessing the impact of climate change on feed supplements.</li> <li>5. Nutritional practices and combatting antimicrobial resistance through a One Health Strategy</li> <li>6. Aquaculture Apiculture</li> </ol>	
<b>Microbiology/Infectious diseases/Phytomedicine</b>	Dr PN Kayoka <a href="mailto:kabonpnk@unisa.ac.za">kabonpnk@unisa.ac.za</a>	<b>Zoonoses and others</b>	Dr Kayoka is a senior lecturer in Animal Health with a PhD in Environmental Sciences focussing on Microbiology, epidemiology, and diagnosis of infectious diseases, zoonoses (Tuberculosis, brucellosis, and others), phytomedicine/ethnopharmacology antimicrobial resistance and drug development.	<ol style="list-style-type: none"> <li>1. Antimycobacterial activity of plants derived and chemical compounds/drug development</li> <li>2. Antimicrobial resistance patterns of different micro-organisms</li> <li>3. Epidemiology and diagnosis of infectious diseases</li> </ol>	MSc: 7 PhD: 1
<b>Veterinary Public Health/applied epidemiology</b>	Prof JW Oguttu <a href="mailto:joquttu@unisa.ac.za">joquttu@unisa.ac.za</a>		Prof James W. Oguttu a Veterinary Epidemiologists and a Full Professor in the Department of Agriculture and	<ol style="list-style-type: none"> <li>1. Epidemiology of Food borne diseases</li> </ol>	MSc: 4 PhD: 3

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			Animal Health. He 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 application of epidemiological techniques to address problems of public health importance.	<ol style="list-style-type: none"> <li>2. Epidemiology of Antimicrobial drug resistance among human and animal isolates</li> <li>3. Application of epidemiological techniques and study designs to address public health problems</li> </ol>	
<b>Ethnoveterinary plants</b> <b>Anthelmintic drugs</b> <b>Isolation of compounds</b>	Dr BM Sakong <a href="mailto:sakonbm@unisa.ac.za">sakonbm@unisa.ac.za</a>	<b>Antimicrobial activity of ethnoveterinary plants, Isolation of compounds, helminth activity and ant-helminthic efficacy drugs</b>	Dr Bellonah Sakong is a Senior Lecturer in the Department of Agriculture and Animal Health.	<i>In vitro</i> essays Isolation of compounds Anthelmintic and antimicrobial activities	MSc: 2 PhD: 1
<b>Animal disease/health and nutrition</b>	Dr CJ Smit <a href="mailto:smitcj@unisa.ac.za">smitcj@unisa.ac.za</a>	<b>Disease occurrence/prevalence.</b> <b>Alternative feeding</b>	Dr CJ Smit is a Senior Lecturer in the Department of Agriculture and Animal Health. He obtained his PhD at the University of South Africa. His research focus is on Animal disease	<ol style="list-style-type: none"> <li>1. Disease occurrence within a specific area with climatic and seasonal variability.</li> <li>2. Dairy disease prevalence</li> </ol>	MSc-4 PhD-2

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			prevalence and alternative cattle feed sources.	3. Possible feed and food ingredients for potential use in animal feeds.	
<b>Veterinary Parasitology</b>	Dr S Mbizeni <a href="mailto:mbizes@unisa.ac.za">mbizes@unisa.ac.za</a>	<b>Ticks and tick-borne diseases</b> <b>Veterinary Parasitology</b>	Dr Sikhumbuzo Mbizeni is a Senior Lecturer in the Department of Agriculture and Animal Health. He holds a MSc, in Veterinary Science from the University of Pretoria. Currently studying PhD in Biological Sciences, with the University of KwaZulu-Natal.	<ol style="list-style-type: none"> <li>1. Ecology of vector ticks of veterinary importance.</li> <li>2. Surveillance of tick-borne diseases and parasites in livestock and wildlife</li> </ol>	MSc: 4
<b>Legume crops</b>	Dr K Mohale <a href="mailto:mohalkc@unisa.ac.za">mohalkc@unisa.ac.za</a>	<b>Agronomy, Plant metabolomics, Grain legume crop Nitrogen fixation</b>	Dr Keletso Mohale is a senior lecturer in the Department of Agriculture and Animal Health. She holds a PhD from UNISA. Her research focus is on sustainable agronomic practices on different grain legume crops.	<ol style="list-style-type: none"> <li>1. Metabolomics and nitrogen fixation on different grain legume crops</li> <li>2. Inoculation (rhizobial and plant growth promoting rhizobacteria)</li> <li>3. Biostimulant application (organic) Nanoparticle application as sustainable agro-inputs</li> </ol>	MSc: 2 PhD: 1
<b>Animal health and welfare</b>	Dr JM Mokoale <a href="mailto:Mokoejm@unisa.ac.za">Mokoejm@unisa.ac.za</a>	<b>Pig herd health and production.</b>	Dr Japhta Mokoale is a Senior Lecturer in the Department of Agriculture and Animal Health. He	<ol style="list-style-type: none"> <li>1. Pig herd health and diseases.</li> <li>2. Food borne pathogens.</li> </ol>	MSc: 4

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			holds MMed Vet ( <i>suil</i> ) from the University of Pretoria. Currently, a PhD candidate in Veterinary Science with the University of Pretoria.	3. Antimicrobial use and resistance in production animals	
<b>Animal Health Animal Diseases</b>	Ms G Bentley <a href="mailto:ebentlga@unisa.ac.za">ebentlga@unisa.ac.za</a>	<b>Primary Animal Health care in rural farmer Ticks &amp; tick-borne diseases</b>	Ms G Bentley is a Lecturer in the Department of Agriculture and Animal Health. She obtained her MSc, in Veterinary Science: Production Animals from the University of Pretoria. She is currently registered for a PhD in Animal Science with the University of Pretoria.	1. Socio-economic impact of Tick-borne diseases in rural & emerging farmers 2. Rural farmers husbandry and the effect on Trichomoniasis in bulls	MSc: 2
<b>AGRICULTURAL ECONOMICS AND FOOD SECURITY</b>					
<b>Agricultural Economics, Climate change, Land reform &amp; Food security</b>	Prof MA Antwi <a href="mailto:antwima@unisa.ac.za">antwima@unisa.ac.za</a>	<b>Analyses of production, agribusiness, land reform, marketing, food security, international trade, rural finance, climate change, CSA, PA, agricultural policy, socio-economic research &amp;</b>	Prof MA Antwi (PhD) is a Full Professor in the Department of Agriculture and Animal Health. He is an Agricultural Economist (PhD Agric Economics, M.Sc. Agric Economics, MBA, B.Sc. (honours) Agric Economics). <b>Methodology expertise:</b> Quantitative and Qualitative studies	1. Achieving continuous improvement and innovation (ci & i) in freshwater aquaculture sector of South Africa 2. Vulnerability and Productivity Assessment of Climate Smart Agricultural Practices (CSAs) Adopted by Farmers in South African Maize and potato Based Cropping and livestock Systems.	MSc: 2 PhD: 2

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		<b>cooperatives research</b>		<ol style="list-style-type: none"> <li>3. Agricultural infrastructure and productivity of smallholder farmers in South Africa.</li> <li>4. Access to markets and commercialisation among Land Reform/farmers in South Africa.</li> <li>5. Impact of land reform sub-programmes / support programmes.</li> <li>6. Precision agriculture: assessment of its adoption amongst smallholder farmers in Gauteng province, South Africa.</li> <li>7. Pastoral livelihood, commercialization of camel milk production efficiency and its impact on household food security.</li> <li>8. Impact of Urban Expansion and Forced Eviction on Livelihood Security of Peri-Urban Farming Households.</li> </ol>	
Agricultural Economics	Prof PK Chauke <a href="mailto:echaukpk@unisa.ac.za">echaukpk@unisa.ac.za</a>	<b>Agricultural Policy, Trade, Rural Development, Agricultural Finance. Agribusiness,</b>	Prof PK Chauke who holds a PhD in Agricultural Economics with a focus on Land Policy is Distinguished Professor of Agricultural Economics in the Department of Agriculture and Animal Health. He held the position of Head of Department at the	<ol style="list-style-type: none"> <li>1. Agricultural policy analysis: land, input, marketing, research and impact,</li> <li>2. Trade: Regional and international.</li> </ol>	MSc: 7 PhD: 10

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		<b>Small and Emerging Farming and Climate Change</b>	University of Venda for ten years where his research focus was on agricultural cooperatives, smallholder and emerging farming, land reform policy and climate change. He is a sought-after researcher for land claims by both public and private agencies countrywide, having successfully completed more than 20 restitution projects throughout the country. Presently he is engaged in a massive interdisciplinary study that seeks to enhance Communal Property Associations (CPAs) in South Africa.	<ol style="list-style-type: none"> <li>Market analysis: local, regional, international and impact.</li> <li>Agricultural capital: analysis and impact</li> </ol> Small and emerging farming: analysis and impact	
<b>Food Security</b>	Dr M Masekoameng <a href="mailto:masekmr@unisa.ac.za">masekmr@unisa.ac.za</a>	<b>Food security. Household food and nutrition security</b>	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"> <li>The impact of climate change on food security of small -holder and emerging farmers in South Africa.</li> <li>The contribution of urban agriculture to food security.</li> </ol>	
<b>Food security</b>	Dr TP Mbombo-Dweba <a href="mailto:mbombtp@unisa.ac.za">mbombtp@unisa.ac.za</a>		Dr TP Mbombo-Dweba is a Senior 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"> <li>Interventions/strategies towards improving household food security.</li> <li>Utilisation and consumption of indigenous/ traditional vegetables and fruit.</li> <li>Interventions/strategies towards improving the</li> </ol>	MSc: 3 PhD: 3

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				<p>production and consumption of pulses.</p> <p>4. Food safety challenges at informal markets/ household level.</p>	
<b>Agricultural Economics, Marketing and value adding</b>	Dr DL Mthombeni <a href="mailto:mthomdl@unisa.ac.za">mthomdl@unisa.ac.za</a>	<b>Agricultural Marketing and Agribusiness Management</b>	<p>Dr DL Mthombeni is a senior lecturer in the Department of Agriculture and Animal Health. She holds a PhD in Agriculture at UNISA.</p> <p><b>Methodology expertise:</b> Quantitative &amp; Qualitative studies.</p>	Agricultural Marketing (including informal marketing), climate change, commercialization of agricultural commodities, agricultural value chain and agro-processing.	MSc: 5 PhD: 3
<b>Agricultural Economics</b>	Dr SS Tekana <a href="mailto:tekanss@unisa.ac.za">tekanss@unisa.ac.za</a>	<b>Socio-economic, climate change and food security research</b>	<p>Dr SS Tekana (PhD, M.Sc., B.Sc. (honours)) is a senior lecturer in the Department of Agriculture and Animal Health.</p> <p><b>Methodology expertise:</b> Quantitative &amp; Qualitative studies</p>	<ol style="list-style-type: none"> <li>1. Market participation of smallholder farmers in the agricultural value chain.</li> <li>2. Sustainable land management practices for food security</li> <li>3. Women empowerment in the agricultural sector to improve household food security and nutrition.</li> </ol>	MSc: 5 PhD: 4

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				<ul style="list-style-type: none"> <li>4. Interventions of grain producers' organizations on the productivity of smallholder agricultural producers</li> <li>5. Adoption of agroforestry practices and climate change mitigation strategies amongst smallholder farmers</li> </ul>	
<b>Agricultural Economics, and Agribusiness management</b>	Dr PF Tshilowa <a href="mailto:tshilpf@unisa.ac.za">tshilpf@unisa.ac.za</a>	<b>Climate Smart Agriculture (CSA), climate change, and land utilisation</b>	Dr Tshilowa PF is a senior lecturer in the Department of Agriculture and Animal Health. She holds a PhD degree in agricultural economics. Her research interests are climate-smart agriculture, climate adaptation strategies, agricultural land utilization, agricultural sustainability, natural resource	<ul style="list-style-type: none"> <li>1. Climate Smart Agriculture (CSA)</li> <li>2. Soil and water conservation</li> <li>3. Climate adaptation strategies</li> <li>4. Land utilisation</li> <li>5. CSA's influence on input cost</li> <li>6. Farming insurance</li> </ul>	MSc: 3 PhD: 1



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			management, climate change, and environmental management.		
Agricultural Economics	Ms NM Masufi <a href="mailto:masufnm@unisa.ac.za">masufnm@unisa.ac.za</a>	Agricultural Marketing, <b>Bioenergy, Small and emerging farming</b>	Ms MN Masufi is a Department of Agriculture and Animal Health lecturer. She holds an MSc in Agriculture and is currently studying PhD with UNISA. The research focus is on bioenergy and marketing for smallholder farmers.  <b>Methodology expertise:</b> Mixed method studies Qualitative and quantitative studies	<ol style="list-style-type: none"> <li>1. Agricultural marketing for smallholder farmers in SA</li> <li>2. Participation of smallholder farmers in the bioenergy sector</li> </ol>	MSc: 2
<b>Agricultural Economics</b>	Mr MJ Mamashila <a href="mailto:mamasmi@unisa.ac.za">mamasmi@unisa.ac.za</a>	<b>Agricultural production Economics, Risk and Decision research Agribusiness and value Adding, Marketing, International trade, Climate change, socio-</b>	Mr. Mamashila is a lecturer in the Department of Agriculture and Animal Health: <ul style="list-style-type: none"> <li>▪ PhD Agric Economics (Current studies), UNISA</li> <li>▪ MSc Agric Economics, UNISA</li> <li>▪ Master of Economics, Japan</li> <li>▪ Honours Agric Economics, UL</li> <li>▪ BCom Economics, UNIVEN</li> </ul>	<ol style="list-style-type: none"> <li>1. Economic and Technical Efficiency</li> <li>2. Market Participation</li> <li>3. Profitability and sustainability</li> <li>4. Risk and decision analysis</li> <li>5. Trade and development</li> <li>6. The economics of climate change in agriculture</li> </ol>	MSc: 2

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 2025
		<b>economic research, Trend analyses research</b>	<b>Methodology expertise:</b> Quantitative and Qualitative studies		
Agricultural Extension and Rural Development	Prof RH Khwidzhili <a href="mailto:khwidrh@unisa.ac.za">khwidrh@unisa.ac.za</a>	<b>Sustainable Agriculture (Practices), Agricultural Extension, Rural Development, Food Security, Livelihood Agricultural Policies and small scale and emerging famers development.</b>	Professor Khwidzhili RH is an Associate Professor of Agricultural Extension and Rural Development within the Department of Agriculture and Animal Health at UNISA. He holds a PhD in Agricultural Extension and Rural Resource Management from University of KwaZulu Natal. Prior joining UNISA, he was a Senior Lecturer and Program Leader for Agricultural Extension at The University of Mpumalanga. His research focus is on Agricultural Extension, Food Security, Rural Development, Urban Agriculture and Sustainable Agricultural Practices.	<ol style="list-style-type: none"> <li>1. The impact of development activities on agricultural land in the city of Tshwane Municipality, Gauteng Province.</li> <li>2. The impact of agricultural practices in special schools on food security and income generation in Capricorn District Municipality, Limpopo Province,</li> </ol>	Masters: 2 PhD:
<b>PLANT SCIENCE</b>					

Legume crops	Prof G Prinsloo <a href="mailto:prinsg@unisa.ac.za">prinsg@unisa.ac.za</a>	<b>Propagation and cultivation of indigenous crops and the effects on their chemical profile and biological activity</b>	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.	<ol style="list-style-type: none"> <li>1. Propagation of indigenous crops with commercial potential</li> <li>2. Determine the effects of cultivation on the yield and chemical profile and biological activity</li> <li>3. Identify the important secondary metabolites as affected by these methodologies</li> <li>4. Identification of compounds with beneficial or adverse effects</li> <li>5. Determine the effect of soil and soil organisms on plant survival and establishment</li> </ol>	
Legume crops	Dr K Mohale <a href="mailto:mohalkc@unisa.ac.za">mohalkc@unisa.ac.za</a>	<b>Agronomy, Plant metabolomics, Grain legume crop Nitrogen fixation</b>	Dr Keletso Mohale is a senior lecturer in the Department of Agriculture and Animal Health. She holds a PhD from UNISA. Her research focus is on sustainable agronomic practices on different grain legume crops.	<ol style="list-style-type: none"> <li>1. Metabolomics and nitrogen fixation on different grain legume crops</li> <li>2. Inoculation (rhizobial and plant growth promoting rhizobacteria)</li> <li>3. Biostimulant application (organic)</li> <li>Nanoparticle application as sustainable agro-inputs</li> </ol>	MSc: 2 PhD: 1

<b>Indigenous crops research</b>	Dr L Nemadodzi <a href="mailto:nemadle@unisa.ac.za">nemadle@unisa.ac.za</a>	<b>Propagation and cultivation of indigenous crops and the effects on their chemical profile and biological activity</b>	Dr Nemadodzi is a Senior Lecturer in the Department of Agriculture and Animal Health. She holds a PhD in from UNISA. Her research focus is the propagation and cultivation of medicinal plants, indigenous vegetables, and Cannabis and the assessment of soil types and soil organisms on the chemical profiles and biological activity.	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	MSc 3  PhD 2
<b>Indigenous crops research</b>	Dr N Nkobole <a href="mailto:nkobon@unisa.ac.za">nkobon@unisa.ac.za</a>	<b>Plant metabolomics</b>	Dr Nkobole is a senior lecturer in the Department of Agriculture and Animal Health. She holds PhD from UNISA. Her research interests include metabolomics and the anti-diabetic properties of South African indigenous vegetables.	1. Using metabolomics technologies to identify antidiabetic biomarkers in indigenous vegetables from South Africa.  2. The effect of biostimulants on the biological activity of indigenous vegetables, particularly in relation to type 2 diabetes mellitus.	MSc 4  PhD 2

Field Code Changed

<b>Indigenous crops research</b>	Mr MN Msomi <a href="mailto:msomimn@unisa.ac.za">msomimn@unisa.ac.za</a>	<b>Crop Science, plant metabolomics, Indigenous Plants</b>	Mr Msomi is a lecturer in the Department of Agriculture and Animal Health. He holds MSC from the university of South Africa. His research focus is assessment of plant biostimulants (natural compounds) to improve stress tolerance on various crops/plants.	<ol style="list-style-type: none"> <li>1. Metabolomics in commercial and indigenous crops.</li> <li>2. Determine the effect of biostimulants (natural compounds) on chemical profile and biological activity of various crops/plants.</li> <li>3. Determine the effect of drying and storage on indigenous plants.</li> </ol>	MSc: 2
<b>Agronomy and soil science</b>	Dr ME Malobane <a href="mailto:malobme@unisa.ac.za">malobme@unisa.ac.za</a>	<b>Soil productivity and sustainable production of field crops</b>	Dr M.E Malobane is a senior lecturer in the Department of Agriculture and Animal Health. He holds a PhD from University of South Africa. His research focus is on soil science and principles of agronomy, with the aim of establishing sustainable production systems that preserve soil as a natural resource, mitigate climate change while enhancing crop yields for both food security and biofuel production.	<ol style="list-style-type: none"> <li>1. Sustainable agronomic practices.</li> <li>2. Implementation of climate smart agriculture techniques to enhance marginal soils productivity and yields of field crops.</li> <li>3. Application of X-ray computed tomography in soil physics</li> <li>4. Soil fertility and carbon sequestration</li> <li>5. Soil quality</li> </ol>	Masters: 3 PhD: 1
<b>Plant-pest interactions</b>	Dr PP Sibisi <a href="mailto:sibispp@unis.ac.za">sibispp@unis.ac.za</a>	<b>Molecular profiling of plants interaction with pests</b>	Dr Phumzile Sibisi is a senior lecturer in the Department of Agriculture and Animal Health. She holds a PhD from University of Johannesburg. Her	<ol style="list-style-type: none"> <li>1. Plant priming against pest attack</li> <li>2. Gene expression profiling of crops under pest attack.</li> <li>3. Metabolite profiles of crops under pest attack</li> </ol>	MSc: 3 PhD: 2

			research focuses on the molecular interaction between plants and pests.		
<b>Plant-microbes interactions</b>	Prof K Ntushelo <a href="mailto:ntushk@unisa.ac.za">ntushk@unisa.ac.za</a>	<b>Plant-microbe interaction, molecular and biochemical characterization</b>	Prof Khayaletu Ntushelo is a Professor in the Department of Agriculture and Animal Health. He holds a PhD from the University of Florida, USA.	1. Plant-microbe interaction, molecular and biochemical characterization	MSc: 0 PhD: 1
<b>Indigenous crops research</b>	Dr N Nogemane <a href="mailto:nogemn@unisa.ac.za">nogemn@unisa.ac.za</a>	<b>Propagation, Cultivation, postharvest practices and plant metabolomics</b>	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, cultivation and postharvest management of medicinal plants and assessment of these effects on the chemical profiles of the plants.	2. Propagation of cuttings using various technologies. 3. Identify changes in the chemical profile and bioactivity of plants in response to cultivation, environmental and postharvest operations	MSc: 3 PhD: 2
<b>Plant Breeding and Genetics (Plant-environmental stress interaction)</b>	Dr S Figlan <a href="mailto:figlas@unisa.ac.za">figlas@unisa.ac.za</a>	<b>Plant*environmental stress interaction (Plant molecular characterisation and breeding of Indigenous and Modern crops: Fruits, Vegetables and Field crops)</b>	Dr S Figlan is a senior lecturer in the Department of Agriculture and Animal Health. She holds a PhD in Plant Breeding from the University of Kwa-Zulu Natal, and her research focus is mainly on molecular plant breeding and genetic improvement	1. Plant*environmental stress interaction. 2. Molecular characterisation making use of advanced omics tools 3. Plant breeding	MSc: 3 PhD: 3