

agriculture & environmental affairs Department: Agriculture & Environmental Affairs PROVINCE OF KWAZULU-NATAL

Research and Demonstration Projects 2013

| Research Leader | Short Title | Location | Period |
|-------------------------|---|------------------------------|-----------|
| A Nunkumar | Monitor aphid number in seed potato production | Cedara | 2006-2020 |
| A Nunkumar | Epidemiology and control of <i>Phaeosphaeria</i> leaf spot in maize | Cedara & UKZN, PMB campus | 2009-2016 |
| A Nunkumar | Epidemiological research into grey leaf spot and northern corn leaf blight in KwaZulu-Natal | Cedara | 2011-2014 |
| A Nunkumar M Relihan | Plant Health Clinic | Cedara | 1998-2030 |
| AD Manson | Cover crops for maize silage system production | Cedara | 2011-2020 |
| AD Manson | Soil fertility for truffles | Underberg (D Little farm) | 2010-2020 |
| AD Manson | Nitrogen use efficiency for vegetables | Cedara | 2013-2023 |
| AJ Arathoon | National soybean cultivar trial | Cedara & Kokstad | - 2020 |
| AJ Arathoon | The evaluation of vegetable soybean cultivars for adaptability and yield | Cedara, Kokstad & Dundee | 2009-2013 |
| AJ Arathoon | Influence of different phosphorus and potassium rates on the production of three vegetable soybean cultivars | Cedara | 2012-2015 |
| AJ Arathoon | Vegetable soybean cultivar versus seeding rate trial | Cedara | 2012-2014 |
| CF Luthuli | Manure as alternative fertilizer for pastures | OSCA | 2010-2015 |
| CN Mchunu | Effect of tillage on carbon dynamics in KZN's small- scale farming systems | KZN | 2009-2011 |
| D Nash | Raising and managing Friesland dairy heifers for optimum milk production | Cedara | 2014-2019 |
| E van Zyl | Genetic conservation and characterization of indigenous sheep | Dundee Research Farm | 2007-2020 |
| E van Zyl | Investigate the potential of <i>Sericea lespedeza</i> as summer grazing for sheep and establish production norms for NW KZN | Dundee Research Farm | 2010-2015 |
| E van Zyl | Bio-active forages: To determine the value of chicory for small stock in a system where chicory is primarily use for root | Dundee Research Farm | 2010-2015 |
| F Khubone | Dry bean production in the llembe District | llembe District | 2008-2013 |

| FNP Qwabe | Development of fresh maize hybrid model | Dundee Research Farm | 2010-2015 |
|-----------------------------|---|---|--------------|
| FNP Qwabe | Improving productivity and quality of green maize: Green maize potential of Orange Pro-Vitamin A and Yellow Quality Protein maize | Makhathini, Ukulinga, Tugela Ferry, Dundee & Vryheid | 2012-2015 |
| FNP Qwabe | Consumer acceptability of pro-vitamin A bio-fortified green maize | Makhathini Research Farm, Ndumo, Tugela Ferry | 2013-2015 |
| FNP Qwabe & C Dlamini | High density litchi cultivar evaluation | Makhathini Research Farm | 1997-2014 |
| FNP Qwabe & C Dlamini | Evaluation of mango cultivars under irrigation conditions at high density planting | Makhathini Research Farm | 1997-2014 |
| FNP Qwabe & C Dlamini | Demonstration of mango grafting and pruning | Makhathini Research Farm | Ongoing |
| FNP Qwabe & C Dlamini | Sweet potato demo | Makhathini Research Farm | 2004-2018 |
| FNP Qwabe & VAD Gcabashe | Mango cultivar demo | Makhathini Research Farm | Ongoing |
| FNP Qwabe & VAD Gcabashe | Sweet potato demonstration in support of emerging farmers | Makhathini Research Farm | Ongoing |
| GR Thibaud | Soil acidity interactions with no-till | Karkloof, KZN | 2001-2015 |
| GR Thibaud | Tillage effect on N requirements | Loskop, KZN | 2005-2015 |
| J du Toit | Characterization of indigenous goats | OSCA | 2007-2014 |
| J du Toit | Night feeding indigenous goats | OSCA | 2012-2015 |
| J Mann | Biological control of the blue tick using entomopathogenic fungi in cattle on Cedara | Cedara | 2010-2012 |
| J Mann | The grazing of beef breeding cows on kikuyu for 12 months of the year | Cedara | 1989-ongoing |
| M de Figueiredo | The production of rose geranium in tunnels at Cedara | Cedara | 2009-2013 |
| M de Figueiredo | The study of factors affecting the oil quality and quantity of rose geranium in a growth room environment | Cedara | 2009-2013 |
| M de Figueiredo | Establishment and maintenance of an essential oil trial for demonstration purposes | Cedara | 2007-2020 |
| M Khanyile | Feed intake and metabolic response of large white pigs fed on incremental levels of <i>Acacia tortilis</i> leaf meal | UKZN, Pietermaritzburg | 2012-2013 |
| M Naidoo | Commercial potato cultivar trial | Cedara | - 2020 |

| M Naidoo | Elite potato cultivar trial | Cedara | - 2020 |
|--------------------------|---|---|-----------|
| M Naidoo | Potato production demonstrations | Umthentweni, Harding, Ixopo | 2009-2015 |
| M Naidoo | Small-scale farmer potato cultivar trials at different Bio-Resource Units in KZN | Highflats, Bulwer | - 2020 |
| M Relihan | Effects of diversely acidic soil sites on mineral levels of potato foliage and on late blight susceptibility, as modified by pre-plant soil application of gypsum, lime or biochar | Cedara | 2011-2014 |
| M Relihan | In depth research on diseases associated with infection by <i>Lagena</i> sp on pepper & other crops | University of KZN | 2009-2015 |
| MF Msomi | Plant introductions – evaluate commercially available summer fodder species for use in KZN livestock production systems | OSCA | Ongoing |
| MP Sikhakhane | Maize silage cultivar evaluation trial | Kokstad Research Farm | 2009-2013 |
| N Mtum-tum | Long season maize cultivar trial | Kokstad, Dundee & Loskop area | - 2020 |
| N Mtum-tum | Short-season maize cultivar trial | Kokstad , Cedara & Dundee Research Farm | - 2020 |
| N Vilakazi | Evaluation of cheaper and more easily accessible agricultural waste for substrate in oyster mushroom production (<i>Pleurotus ostreatus</i>) | Cedara | 2013-2015 |
| NC van Rij | Effectiveness of six different fungal storage procedures in maintaining the viability of mushroom cultures | Cedara | 2013-2014 |
| NC van Rij | Using spent mushroom substrates of Oyster mushroom (<i>Plueurotus ostreatus</i>) to produce vegetables | Cedara | 2013-2014 |
| NJ Findlay | Catalysis of phosphodieterase by manganese dioxide | Cedara, Danesfort Farm, Kamberg | 2013-2014 |
| NJ Findlay | Improving N-use efficiency in pastures | Rosetta | 2010-2012 |
| NJ Tembe & NC van Rij | Optimizing substrate requirement in production of Oyster mushroom | Cedara | 2012-2013 |
| PA Oosthuizen | An investigation into the effect of different breeding strategies on an Nguni herd's performance | Dundee Research Farm | 2008-2020 |
| PA Oosthuizen | Small scale dairying in an integrated farming system | Dundee Research Farm | 2003-2020 |
| R Osborne | Sweet potato cultivar evaluation | Cedara and OSCA | 2009-2020 |
| S Ammann | Germplasm conservation | Estcourt & other Research Farms | 2014-2020 |
| S Madiba | Plant spacing under no-till in maize production in rural communities of KZN | Potshini | 2010-2014 |

| S Moodley | Use of essential oils on the control of agricultural pathogens | Cedara, KZN | 2009-2015 |
|-----------------------------|---|---|-----------|
| S Ngcamu | The effect of different management / breeding strategies has on Nguni performance | Bartlow Combine | 2012-2022 |
| SA Gumede | The current state, role and the future of goat commercialization in communal areas of KwaZulu-Natal | KZN | 2012-2014 |
| SB Radebe | Mulch effect on weed growth, soil moisture, yield and yield components of groundnuts under conditions of KZN Province | Matiwane | 2010-2016 |
| SB Radebe | National Soyabean cultivar trial | Dundee Research Farm | 2013-2020 |
| SD Househam | The effect of cattle to sheep ratio and stocking rate on veld condition (Simulation Trial) on Kokstad Research Farm | Kokstad Research Farm | 1989-2014 |
| SD Househam | The effect of a two-camp "blaze and graze" system on sheep performance, veld condition and soil loss | Kokstad Research Farm | 1992-2014 |
| SD Househam | Lucerne cultivar evaluation at Kokstad Research Farm | Cedara & Kokstad Research Farm | 2014-2018 |
| SD Househam | Control of <i>Senecio</i> species in the Dry Highland Sourveld of KwaZulu-Natal | Kokstad Research Farm | 2013-2025 |
| SR Bezuidenhout | Influence of cover crops and crop rotations on weed density and Zea mays (maize) competitiveness | Dundee Research Farm | 2013-2023 |
| SR Bezuidenhout | The management of cover crop residues to reduce weed growth in maize | Cedara | 2011-2015 |
| SR Bezuidenhout | The influence of different weed types on the growth and development of maize and sunflower | Cedara & Kokstad Research Farm | 2008-2014 |
| SR Bezuidenhout | Characterization of the biology of <i>Cyperus esclentus</i> (yellow nutsedge) growth | Cedara | 2012-2014 |
| ST Gcumisa | The untold story of the pig farming sector of rural KwaZulu-Natal: A case study of Uthukela District | Ladysmith area | 2009-2013 |
| TE Ntombela & MP Sikhakhane | National dry bean cultivar trial | Cedara and Kokstad Research Farm & Loskop | - 2020 |
| TP Mpanza | Examining the potential of using grey water generated by the rural households for irrigation of the homestead vegetable gardens | Ladysmith area | 2011-2015 |
| VG Roberts | Soil P requirements of vegetables | Dundee Research Farm | 2011-2016 |
| VG Roberts | Phosphorus fertilizers for resource-poor farmers on acid soils | Mbabazane | 2013-2018 |
| VG Roberts | The improvement of FERTREC nitrogen recommendations | Cedara | 1999-2019 |