





Careers within the AGRICULTURAL SECTOR

Career	Description – What do they actually do?	Areas of Employment	Degree Name	Duration	CAO Code
	An Agricultural Business Consultant treats the different aspects of raising agricultural products as an integrated system. Farmers raise animals and harvest fruit and vegetables with the help of sophisticated harvesting techniques to direct harvesting operations. Manufacturers develop increasingly efficient machines that can drive themselves. Processing plants determine the best way to clean and package livestock for shipping. While each subset of the industry is unlikely to interact directly with the consumer, each is focused on operating efficiently in order to keep prices reasonable.	<ul style="list-style-type: none"> Universities and colleges Government and private research institutes Animal food producers Department of Agriculture, Land Reform & Rural Development Banking institutes PWC Self-employment 	BSc Agric. Agribusiness	4 years	KN-P-BSB
	Agricultural Economists are concerned with understanding the economic activity within the agricultural sector. They provide forecasts of economic outcomes, assess the current agricultural standing of any area and use that information in relation to the economic situation. Agricultural Economists gather data and offer advice and strategies for businesses and individuals within the agriculture sector. They also monitor the agriculture industry and the factors that could affect production. Agricultural Economists can specialise in farm management, crop and livestock production economics, environmental economics, policy analysis, agribusiness, food safety, international trade, rural development, and marketing systems.	<ul style="list-style-type: none"> Agricultural boards and development corporations Financial houses and commercial banks Insurance companies Commercial and manufacturing companies Development Bank of SA/ other Banks Government departments, e.g. Departments of: Agriculture, Land Reform & Rural Development; Foreign Affairs; Trade & Industry; Employment & Labour; Environmental Affairs, Forestry & Fisheries; Tourism; Water Affairs & Sanitation Self-employment as a consultant Development organisations 	BSc Agric. Agricultural Economics	4 years	KN-P-SAE
	Agricultural Extension Officers aid farmers in making better decisions to improve agricultural production. They act as facilitators and communicators, helping farmers in their decision-making and ensuring that appropriate knowledge is implemented to obtain the best results. Extension officers relay agricultural information on natural resources, animals, crops and on how best to utilise the farmland to farmers with limited information. They consult on how to construct proper irrigation schemes, economic use and storage of water, how to combat animal disease and save on the cost of farming equipment and procedures.	<ul style="list-style-type: none"> Department of Agriculture, Land Reform & Rural Development Farmers' unions and associations Various industries and manufacturers of agricultural products Pest control companies Agricultural co-operatives Self-employment, working as a consultant/deal maker Research Institutes Development organisations 	B Agric. (Extension and Rural Resources Management)	3 years	KN-P-BAC
	Agricultural Managers are responsible for: <ul style="list-style-type: none"> Forward planning and making policy decisions. Budgeting and maintaining accurate financial records. Organising sales and purchases of livestock, farm equipment, crops and agricultural products. Overseeing all functions to ensure that targets and objectives of the organisation are met. Students also have the option of using this qualification to work as a Sales and Marketing Consultant within the Agricultural Sector. 	<ul style="list-style-type: none"> Large farm estates Smaller farms Farm management consultancy firms Research institutes Agricultural colleges Food producing companies The Department of Agriculture, Land Reform & Rural Development 	B Agricultural Management	3 years	KN-P-BAQ
	Agricultural Scientists or Agricultrists study farming and seek to increase productivity. They look for ways to improve quality, but in a less labour-intensive way. They also try to conserve soil and water and make farming safer and more effective. They primarily work in two fields: In basic research, they try to understand the processes behind the growth of crops and animals. In applied research they turn that knowledge into practical methods for improving food quality. Both types can create new food products. These scientists communicate the advantages of their findings to colleagues, managers and the public through reports and presentations.	<ul style="list-style-type: none"> Universities and colleges Government and private research institutes Animal food producers Department of Agriculture, Land Reform & Rural Development Commercial organisations such as manufacturers of agricultural remedies Industrial companies Organisations such as the CSIR, SANParks and SABS Control boards and agricultural unions 	BSc Agric.	4 years	KN-P-BSA
	Animal Science is the study of poultry and livestock production, including companion animals. Animal Scientists play an important role in maintaining the nation's food supply. An Animal Scientist will typically conduct research and experiments concerning animal nutrition; develop ways to improve the quantity and quality of farm animals; and communicate research findings to the scientific community, food producers and the public. Basic research by Animal Scientists seeks to understand the biological and chemical processes by which livestock grow. Applied research uses this knowledge to discover ways to improve the quality, quantity and safety of agricultural products.	<ul style="list-style-type: none"> Managers of livestock and poultry farms Animal feed manufacturers Consultancy and advisory services Agricultural development and extension Nature reserves and game farms Veterinary hospitals or animal clinics Research departments at universities, research councils and institutes Animal product production companies (meat, eggs, dairy) Training centres and programmes Governmental agricultural departments and initiatives Freelance consultants to farmers and animal owners 	BSc Agric. Animal and Poultry Science	4 years	KN-P-SAA
	Crop Scientists focus on the agricultural productivity of crops for livestock and human consumption. Crop scientists often use biotechnology, chemicals and genetic modifications to maintain and improve crop production, enhance nutritional value and help crops withstand pesticides. They apply scientific knowledge to develop better, more efficient methods of growing crops and are concerned with the management and improvement of crops which include all plant life forms that are cultivated to provide food, shelter and clothing for man and his animals.	<ul style="list-style-type: none"> Research institutes and organisations, e.g. Agricultural Research Council Department of Agriculture, Land Reform & Rural Development Farmers' Associations Universities & colleges Agricultural co-operatives Fertiliser manufacturers Seed companies CSIR NGOs Self-employment 	BSc Crop and Horticultural Science OR BSc Agric. Agricultural Plant Sciences (Crop Science stream)	3 years OR 4 years	KN-P-SIH OR KN-P-SAP

Career	Description – What do they actually do?	Areas of Employment	Degree Name	Duration	CAO Code
	Dietitians, or Human Nutritionists, play a key role in modern medicine in public and private healthcare sectors as qualified healthcare professionals. Dietitians apply the science of human nutrition to influence the eating behaviour of individuals, groups and communities, and select food to promote and maintain health and to prevent and treat illness by correcting eating habits. Dietitians use their skills and knowledge to modify diets in order to treat medical conditions. They serve a wide variety of nutrition fields and assess, diagnose and treat dietary and nutritional problems.	<ul style="list-style-type: none"> Hospitals, nursing homes, clinics and other healthcare facilities Educational institutions Industrial concerns Government departments Nutrition research laboratories / units Medical research councils Food industry (e.g. hotels, large food companies) Self-employed (consultant in private practice) 	BSc Dietetics and Human Nutrition	4 years	KN-P-BSD
	Farmers raise living organisms for the production of food and raw materials for human and/or animal consumption, and often combine the cultivation of field crops, orchards, timber plantations, vineyards, poultry, or other livestock. They provide an essential service for the survival, health and development of society. Farming requires wide knowledge of the agricultural sector, comprising technology, labour systems, economics, and more. It requires good knowledge of planting and harvesting dates, disease management, breeding cycles, animal welfare, regulations governing the industry, logistics and more.	<ul style="list-style-type: none"> Self Farming company Farmer 	BSc Agric. Agribusiness OR B Agricultural Management OR B Agric. (Extension and Rural Resources Management)	4 years OR 3 years	KN-P-BSA OR KN-P-BSB OR KN-P-BAQ OR KN-P-BAC
	Game and wildlife management involves the development of effective management plans, maintaining healthy game/wildlife population sizes, creating and maintaining conservation and eco-tourism areas, advising government, environmental agencies and educational institutions, conducting research and analysing data, and monitoring animal and plant species.	<ul style="list-style-type: none"> Game farms Ecotourism companies/venues Wildlife conservation and research organisations National Parks Conservancies Environmental consulting Environmental education The Wildlife and Environment Society of South Africa (WESSA) Conservation trusts and non-profit organisations 	BSc Agric. Agribusiness (Wildlife Management Science stream)	4 years	KN-P-BSB
	Horticulturists are professionals involved in the growing, selling, and maintenance of plants for indoor and outdoor use. Horticulturists undertake intensive plant cultivation for: <ul style="list-style-type: none"> food crops (fruits, vegetables, culinary herbs) non-food crops (flowers, trees, shrubs, turf-grass, hops, medicinal herbs) services in plant conservation and landscape restoration/ design/ construction/ maintenance. 	<ul style="list-style-type: none"> Large fruit, vegetable and flower farms Farmers'/growers' associations Parkhouse and processing plant managers Department of Public Works Provincial administrations Municipalities Public corporations and parastatals Nurseries and botanical gardens; landscape manager Manufacturers of pesticides, fungicides and fertilisers Universities and universities of technology Research institutes Self-employment 	BSc Crop and Horticultural Science	3 years	KN-P-SIH
	A Plant Pathologist is a person who specialises in plant health just like a doctor specialises in human health. Plant Pathologists study plant diseases caused by pathogens (infectious organisms) and environmental conditions (physiological factors), and how to manage them. Plant diseases can be caused by plant pathogens such as fungi, bacteria, viruses, nematodes, insects, protozoa, and parasitic plants. Non-living agents such as air pollutants, nutrient imbalances, and various environmental factors including climate change can also affect plant health. Plant Pathologists contribute towards reliable food production; the reduction in agricultural use of land, water, fuel and other inputs; and in improving disease control to prevent crop losses.	<ul style="list-style-type: none"> Universities or Colleges Research institutes (e.g. ARC, CSIR) South African Bureau of Standards (SABS) Perishable Produce Export Control Board (PPECB) Nursery industry Forestry industry Private estates Seed companies Consulting firms Agrochemical companies Biotechnology firms Biological control companies Department of Agriculture, Land Reform & Rural Development 	BSc Agric. Agricultural Plant Science OR BSc Plant Pathology (with further study at postgraduate level.)	4 years OR 3 years	KN-P-BSP OR KN-P-BS2
	Plant Scientists specialise in the science of breeding new crops for higher yield; pest, disease and drought resistance; regional adaptability; and improved quality and increased nutrition. Plant Science covers plant culture, plant health, landscape horticulture, biotechnology, gene editing and genetic engineering. Graduates with degrees in Plant Science may pursue a variety of careers, including farm management and plant breeding. Plant Scientists can specialise in landscape design and construction, crop production, horticulture science, turfgrass science or biotechnology.	<ul style="list-style-type: none"> Research institutions and government departments (e.g., ARC, SASRI, CSIR, SAPPI, Mondi etc) Nature conservation organisations Large farm estates Herbaria Biodiversity planning organisations Universities and Colleges Biotechnology companies Scientific Journalism Commercial Plant Breeding Companies (Seed companies, Biotechnology & Genetic engineering firms) Specialist Seed Producers NGOs, CGIAR Centres, FAO 	BSc Agric. Agricultural Plant Sciences	4 years	KN-P-SAP

DEGREE INFORMATION			
Degree Name	Campus Location	Entry Requirement	Point Range
B Agric. (Extension and Rural Resources Management)	PMB - Cedara College	NSC Deg pass with Maths, Engl and LO level 4 and Agric Sci or Life Sci or Phys Sci level 4.	28-48
B Agricultural Management	PMB	NSC Deg pass with Maths, Engl and LO level 4 and Agric Sci or Econ or Life Sci or Phys Sci level 4.	28-48
All other Degrees	PMB	NSC Deg pass with Maths, Engl and LO level 4 and Agric Sci or Life Sci or Phys Sci level 4.	28-48



Enquiries: Agricultural Programmes
Pietermaritzburg: Mrs Loveness Ndlovu • Tel: 033 260 5184 • Email: ndlovul@ukzn.ac.za / sciencepmb@ukzn.ac.za
website | caes.ukzn.ac.za