



Western Cape Department of Agriculture

A - Z of Services

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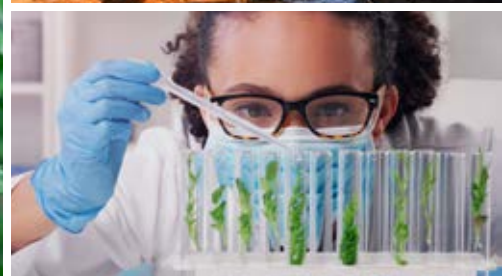
Introduction

The Western Cape Department of Agriculture provides a wide range of development, research and support services to the agricultural community in the Western Cape.

The department's administrative headquarters is situated on the historic Elsenburg Research Farm, near Stellenbosch, while its other research farms, ASD training centres, extension offices and state veterinary offices are spread across the province. The agricultural sector not only stimulates economic growth in the province, it also plays a major role in creating sustainable job opportunities.

This A - Z booklet was compiled to serve as an easy-to-use reference guide to the department's services. We hope that it will become an important resource tool for everyone who forms part of the agriculture sector - whether you are a farmer, have a food garden, are involved in an agribusiness or a student studying in an agri-related field, to name but a few. Use it to find out how we can assist you, our valued agricultural stakeholder. We are here to serve!

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Programmes

Programme 1

EXTERNAL HUMAN CAPITAL DEVELOPMENT INITIATIVES

The Western Cape Department of Agriculture has a number of external human capital development initiatives from which its clients can benefit.

Internship Programme

The department is committed to skills development by providing opportunities for unemployed matriculants, undergraduates (students) and graduates through an internship programme. Interns may be placed within the department or with external host employers.

Graduate Internship

This refers to the individuals who have already obtained a qualification in a SAQA-accredited Further Education and Training or Higher Education Institution. The internship provides graduates with work experience and exposure from one to two years.

Student Internship

This refers to the students who are studying towards a SAQA-accredited qualification, but are required to undergo practical experience towards obtaining their qualification. The institution will indicate the timeframe required for the interns to complete their work integrated learning.

First Work Experience for Grade 12s

The project provides learners who finished grade 12, are between the ages of 18 – 24 and who have not worked or participated in any other internship previously, with the opportunity of a one-year internship.

Applications open during January of each year and the project is advertised on the Western Cape Government website:

www.westerncape.gov.za

Bursary/Scholarship Programme

The department awards bursaries to students studying full-time at a Higher Education Institution, towards obtaining a SAQA-registered qualification in an agricultural related field. Bursaries are awarded for undergraduate and postgraduate studies. Scholarships are also available to high school learners studying mathematics and sciences who have been identified as potential candidates for further studies in the agricultural fields.

The Young Professional Persons (YPP) Programme

This programme is an affirmative action programme to specifically empower previously disadvantaged individuals from the following designated groups: Black, Coloured, Indian, women (White women included) and people with disabilities, who have been accepted by a recognised Higher Education Institution for Honours and Masters degrees, through the gaining of experience and mentorship in obtaining their qualification in the scarce and critical skills of the agricultural sector.

Agricultural Partnership for Youth Development Project (APFYD)

This project specifically focuses on rural youth and children of agri-workers. It offers bursaries/scholarships, internships and learnerships. Academic support is provided for students studying at Elsenburg College.

Internship Programme

The interns appointed on this project will be placed with external host employers who have signed a Memorandum of Understanding with the Western Cape Department of Agriculture. The duration of this internship is 12 months.

Bursary/Scholarship Programme

The bursary/scholarship programme for the APFYD Project is the same as for the External Development Initiatives mentioned above and carries the same requirements for consideration. Preference is given to rural children and learners at agricultural schools.

Learnership Programme

As part of the APFYD Project, 10 learners are funded annually to attend a learnership offered by Elsenburg College.

Programme 2

SUSTAINABLE RESOURCE USE AND MANAGEMENT

The purpose of this Programme is to provide sustainable resource management solutions and methodologies through the provision of agricultural engineering and advisory services, proactive communication, facilitation and implementation of projects as well as technology transfer to clients and partners.

The Programme is also responsible for the implementation and management of disaster aid schemes and to provide comments on applications for sub-division and/or rezoning of agricultural land.

The Programme is structured into four sub-programmes:

- Engineering Services
- LandCare
- Land Use Management
- Disaster Risk Reduction

Engineering Services

- Irrigation

The irrigation section is responsible for improving the effective utilisation of irrigation water. The FruitLook technology utilises satellite imagery to determine the actual crop water use, any water deficit, biomass produced and six other growth parameters. This information is provided to farmers on a weekly basis to increase their water use efficiency and increase crop production. The service provided also includes the evaluation of irrigation systems, both the designs and in-field evaluation, and technology transfer regarding scheduling and system operation. The service provided for small-scale farmers includes the evaluation of water resources and the design of irrigation systems.

- Mechanisation

The mechanisation section renders a full service regarding mechanisation planning and the utilisation of farming implements and equipment. Technical advice and support are provided to farmers who want to change from conventional to conservation farming practices.

- Farm Structures

A comprehensive planning and design service is available for animal housing and handling facilities, as well as the handling of waste from these facilities and labour accommodation. Plans for water reservoirs

and agri-worker accommodation are also available. Affordable animal housing structures are also designed for small-scale farmers.

Soil Conservation

The service rendered by this section includes the planning and design of intricate soil conservation and erosion protection structures.

LandCare

The conservation of the natural resources of the Western Cape is vital for the agriculture sector and all inhabitants of the Western Cape who rely directly and indirectly on these resources.

Here, the department concentrates on the following fields to obtain its mission of striving to rebuild, maintain and improve the natural resources by promoting efficient conservation practices to all land users:

- Resource conservation projects by means of farm planning, specifying the location and design of protection, drainage and veld utilisation works.
- Pro-active resource conservation projects, which involve pro-active ways of preventing the extensive degradation of natural resources, for example through area-wide planning, ecological infrastructure investment, fencing, stock-water systems, erosion structures, river protection works and EMPR's.

Land Use Management

Protection of our limited highly productive agricultural resources is a priority of the department and this sub-programme comments on all applications for sub-dividing and/or rezoning of agricultural land.

Sub-division and rezoning of agricultural land evaluations are based on principles of sustainable agriculture, viz.: socially acceptable, economically viable, ecologically feasible, reasonable production and long-term sustainability. A sound balance between these principles is necessary when evaluating a proposal. This task of the sub-programme is becoming increasingly challenging with urban sprawl and illegal land invasions.

Disaster Risk Reduction

This sub-programme provides support services to clients with regard to agricultural disaster risk management. The services provided include proactive risk reduction and mitigation interventions (i.e. risk reduction workshops, bi-annual provincial risk assessments,

river protections works and structures etc.) as well as post-disaster support and recovery risk prevention, mitigation and recovery services after natural disasters such as floods, fires, droughts and hail storms. Furthermore, this sub-programme facilitates the drafting and amendment and the development of contingency plans and disaster response SOPs for the various disasters that negatively impact the agricultural sector.

Programme 3

AGRICULTURAL PRODUCER SUPPORT AND DEVELOPMENT

The purpose of the Programme is to provide support to producers through agricultural development programmes, enable and support transformation of the agricultural sector to actively contribute to economic growth, inclusion, equality and the creation of decent work and to increase food production through producer support and development initiatives.

The Programme: Agricultural Producer Support and Development (APSD) encompasses the broad development agenda of the Western Cape Department of Agriculture. The design and implementation of the Programme is geared towards supporting predominantly black farmers in the Western Cape Province, but not exclusively. It supports the transformation of the agricultural sector for increased productivity and actively contributes to the economic growth, inclusion, equality and creation of decent work.

With its commodity approach, the Programme creates an enabling environment to leverage on investment (both human and financial resources) from private sector and commodity groupings, creates linkages within the three spheres of government as well as partnerships with other government departments and forges strategic partnerships to achieve greater impact.

Producer Support Services

This sub-programme provides producer support for sustainable agriculture development in line with the National Policy on Comprehensive Producer Development Support (CASP). The

support includes production input, infrastructure development, farm assessments and other critical interventions along the value chain.

Extension and Advisory Services

Knowledge transfer and skills development are promoted as the foundation for equitable, productive, competitive, profitable and sustainable agricultural value chain enterprises. This sub-programme also facilitates mentorships to support farmers, with special emphasis on the development of smallholder farmers and providing post-settlement support for land reform beneficiaries.

Food Security

This sub-programme coordinates the implementation of activities in line with both the National Policy on Food and Nutrition Security of South Africa and National Food and Nutrition Security Plan of South Africa. It supports smallholder and subsistence producers (including community projects), households and school food gardens towards achieving increased food and nutrition security at national and household levels.

Casidra

Through Casidra, the programme supports the department with overall project implementation and oversees the management of the state farms.

The Programme also contributes to the department's own popular publication "AgriProbe" - a quarterly publication packed with interesting research articles and other topics. The well-known "Elsenburg Joernaal" forms part of this publication.

Programme 4

VETERINARY SERVICES

The Programme Veterinary Services is responsible for managing animal diseases, risks and the safety of foods from animal origin in accordance with national and international standards and conventions. The legal mandate for executing these functions is vested in the Animal Disease Act, 1984 and the Meat Safety Act, 2000. The primary

focus is on active and passive disease surveillance, disease control and prevention interventions, export facilitation of animal products and the delivery of a diagnostic laboratory service.

Animal Health

The overall challenge for the Animal Health component of Veterinary Services is to address, in full, the needs of its expanded clientele and to effectively manage the risks posed through globalisation for the introduction and spread of animal and food-borne diseases.

Disease surveillance and monitoring activities are being adapted, moving away from manual and physical inspections to a more targeted and scientific approach supported by the effective utilisation of rapid and scientifically verifiable technologies and diagnostic procedures.

This component has the responsibility to apply the Animal Diseases Act within the Western Cape. Official veterinarians and animal health technicians stationed within eight State Veterinary areas distributed within the province execute the functions demanded by this Act.

The Performing Animals Protection Act, 1935 (Act No. 24 of 1935) ("PAPA"), as amended, regulates the welfare of performing animals and matters related thereto. The State Veterinarians are provincial licencing officers who issue PAPA licences for facilities to keep and train performing animals in line with the Act.

In addition to the abovementioned regulatory responsibilities, officials are intimately involved in servicing the small-scale farmer sector. This is achieved by regular visits to holdings to inspect livestock, providing assistance with the treatment and vaccination of animals, collection of diagnostic samples and the dissemination of information on preventive and corrective animal health.

Food Safety and Export

The Food Safety and Export sections are responsible for the application of the Meat Safety Act. State veterinarians and meat inspectors monitor and audit the application of hygienic procedures at abattoirs to ensure compliance with the Meat Safety Act. Hygiene management practices at abattoirs, meat and dairy export establishments, the humane handling of animals presented for slaughter, the setting of standards for new abattoirs and the grading of existing facilities, are important functions carried out by these officials.

Veterinary Laboratories

The Provincial Veterinary Laboratory (PVL) in Stellenbosch renders

a diagnostic service to the Programme, the private veterinary sector, other departments such as National Health and Nature Conservation, and commerce associated with the agricultural sector. A diagnostic service is also rendered to the dairy, beef, sheep, pork and racehorse industries, as well as the poultry, ostrich and aquaculture sectors. A veterinary laboratory has also been established at the state veterinary office in Beaufort West.

Programme 5

RESEARCH AND TECHNOLOGY DEVELOPMENT SERVICES

In order to keep abreast of technological developments in agriculture and to ensure that all the agricultural role-players of the Western Cape are provided with the most advanced scientific and technical advice, the department provides timely and relevant research and technology development services in the six districts of the Western Cape. Of utmost importance is converting the research rand into an information rand – this means that scientific information should reach the commercial and smallholder farmer at farm level, making our farmers more resilient and competitive in local, national and international markets.

Industrial development and urban spread place tremendous pressure on our natural resources. Therefore, the department's resource scientists and geographical information centre play a prominent role in ensuring the optimum utilisation of our degraded, scarce and diminishing resources – soil, water and natural vegetation. The research agenda and the agricultural practices promoted are focused on optimal resource-use efficiency and the advancement of climate smart agriculture. The identification and prioritisation of research needs are guided by engagement with industry and commodity organisations and other partners, such as agricultural faculties at various tertiary institutions.

The Programme is structured into three sub-programmes: Research, Technology Transfer Services and Infrastructure Support Services that operate as the directorates of Animal Sciences, Plant Sciences and Research Support Services. The latter directorate includes the sub-directorates: GIS Services, Analytical Services and Farm Services.

The research portfolio of the department is executed mainly within the directorates of Animal Sciences and Plant Sciences, with a smaller research portfolio in the directorate Research Support Services. The Programme also has seven research farms serving as open-air laboratories and centres of excellence to support research efforts in the districts of the Western Cape. The directorates collaborate through partnerships with several tertiary institutions in the Western Cape and other provinces, the ARC and various industry organisations.

Animal Sciences

The directorate Animal Sciences provides animal science services to stakeholders and includes the disciplines of breeding, reproduction, feeding and management. Major expertise lies in small stock, dairy and ostrich research. Extensive research facilities also include a feed laboratory, while the directorate is the owner of 11 herds and flocks of national importance, which are crucial in the research effort. The Oudtshoorn Research Farm is dedicated to ostrich research – the only one of its kind in the world.

Plant Sciences

The directorate Plant Sciences focuses on the areas of sustainable agronomic, vegetable, rangeland and pasture production systems, alternative crops, crop protection in the areas of weed science, plant pathology and entomology as well as soil-plant interactions.

Conservation agricultural practices in grain, potato and pasture systems for dairy are some of the most important approaches advocated in response to climate change. The directorate has the only dairy pasture research group in South Africa that links biological soil management, pasture management and milk quantity and quality to gross margins for producers.

Research Support Services

The directorate Research Support Services renders a support service to the department's research team and external stakeholders. An analytical laboratory for soil, water and plant analyses provides a pivotal service to scientists and producers in the Western Cape, while a diagnostic service for plant diseases addresses enquiries in this regard.

The directorate also provides soil science, climatological (risk and potential) management, crop estimates and spatial analysis services (GIS) to an array of clients. Online decision-making tools and novel technology transfer techniques are developed. The unit was expanded to include a climate change focus that serves to integrate the various

disciplines within research but also links with the other Programmes in the department to create broad awareness of the challenge and how to address it.

The directorate also includes infrastructure support services (farm services) with the research farms situated at Nortier (near Lamberts Bay), Langgewens (near Moorreesburg), Elsenburg, Worcester (Veld reserve), Tygerhoek (near Riviersonderend), Outeniqua (near George) and Oudtshoorn, and operate as open-air laboratories and centres of excellence where research projects of particular importance for that region, are executed. Projects and trials are frequently visited by producers and other role-players from these regions. The farms also serve as research hubs for tertiary institutions, locally and abroad, the institutes of the ARC and other role-players in the agricultural value chain.

Information Dissemination

Information emanating from research is disseminated to producers in effective, problem-focused and user-friendly packages. This includes on-farm visits and consultations, online via the department's website, lectures, scientific and popular papers, radio talks, press releases and various other forms of technology transfer. Several farmers' information days, as well as "walk-and-talks", are also held to bring the latest technology to district and farmer level.

The department also boasts its own popular publication "Agriprobe" – a quarterly publication packed with interesting research articles and other topics. The semi-scientific "Elsenburg Joernaal" forms part of this publication.

Programme 6

AGRICULTURAL ECONOMIC SERVICES

The economic security of the Western Cape agricultural sector is something that cannot be taken for granted, but which must be nurtured and cultivated. In the extremely competitive global environment characterised by fast-changing consumer preferences and the market environment, the services of this Programme provide a buttress for this security. The services are provided through units

i.e. Marketing and Agribusiness, Production Economics, Statistics, Macro- and Resource Economics and Agri-processing Support.

Marketing and Agribusiness

Access to markets and information, fair participation as well as retaining and repositioning into sustainable markets are some of the critical concerns that this division aims to address. The focus is skewed towards the identification of market opportunities and risks through research, packaging and dissemination of such information through appropriate channels. While the research conducted focuses on traditional markets, research is also conducted on niche and differentiated products and industries that need to be developed and exploited.

Facilitation of market access e.g. establishing links with buyers and providing compliance support and training related to market and market access to ensure uptake of identified opportunities at both local and international markets are also among the services provided. This component also aims to improve the bargaining power of farmers, sharing of expertise and collective pulling of resources through facilitation of co-operative development. The division also promotes agribusiness support through provision of advisory services to unlock opportunities provided by the AgriBEE Charter, facilitation of partnerships and acquisition of funding for increased investment in the sector.

Production Economics

With the change of the nature of competitiveness from land, labour and capital to information and knowledge, the root of global agricultural competitiveness is embodied in farming systems and farm management practices. This division researches and analyses the relative competitiveness of local farming systems and management practices in relation to international best practice. The results of these actions are wrapped in advice packages and disseminated to the whole spectrum of clients.

Due emphasis is placed on financial recordkeeping with a goal to assist small, medium and microenterprises (SMMEs) to effectively keep financial records. The service has seen growth in effecting financial management and understanding of business, especially statutory requirements by SMMEs within the sector. The unit also acknowledges that access to finance is the lifeblood of any business.

Therefore, one of the interventions has been to facilitate access to finance for SMMEs. The aim is to help agribusinesses to effectively

choose the correct financing mechanisms. Added to this, is the business analysis service to help in identifying business needs, lending and determining solutions to business problems and focuses on analysing business stability, solvency, liquidity and profitability using ratios. Other services include budgeting, business plan development and evaluation.

Statistics

In order to monitor trends and to make good decisions at all levels of responsibility (both within and outside the department) good and reliable data or statistics are critical. It follows that it is necessary to source data and develop a comprehensive database in order to monitor certain actual trends in the agricultural sector. The Statistics Division maintains several databases ranging from enterprise prices to land price movements, game species prices, pluri-activity data and information and others. Aggregated data is generally available to clients. The client data needs to play an important role in developing new databases on demand and these are identified through recorded requests (enquiry database) that the division also maintains. The data is also analysed and packaged for dissemination.

Macro- and Resource Economics

Trends and data are not enough to ensure sound decisions, but are needed to distil the truly crucial variables and to evaluate the impact of these on the agricultural economy of the Western Cape. Mathematical and/or computerised models are a representation of reality, which can be “changed” under controlled conditions in order to evaluate the impact of a specific variable. However, models are only a representation and simplification of reality. Consequently, various angles on the same problem need to be developed. The purpose of this division is to develop and use the necessary sector and multisector level models to evaluate the impact of various local and international environmental and policy measures on the agricultural and agribusiness sector, including the economy of the province.

Due emphasis is also placed on resource economics research to promote sustainable use of natural resources in the context of climate change (valuation and management of the natural resources, renewable resources as alternatives, water resource allocation and management, as well as agriculture and the environment etc.).

Agri-processing Support

Farming products are very seldom consumed in its pure form. For

instance, wheat needs to be turned into flour and then bread, barley into beer, grapes into wine and livestock into meat. Even fruit need to be sorted and packed before it finds its way into a consumer's shopping basket. It follows that a healthy agricultural sector cannot be created by focusing on primary production alone. The capacity of the whole value chain, from inputs, production and finally, to consumption, needs to be enhanced.

Services are provided to support various activities which include, but are not limited to, activities such as milling, meat processing, juicing and pulping, packaging, slicing and dicing, pasteurisation and handling of agricultural produce to make it usable as food, feed, fibre, fuel or industrial raw material.

The services rendered include the following:

- Compliance, including regulatory support (advisory, testing, product improvement, labelling).
- Research and development of new products or processes.
- Infrastructure development, product designs and flows etc.
- Enterprise development (direct financial support to individual enterprises, analysis of the economics of various processes, the competitiveness of value chains and the enhancement thereof).
- Training of existing and potential agri-processors.

Programme 7

AGRICULTURAL EDUCATION AND TRAINING

The Elsenburg Agricultural Training Institute (also referred to as Elsenburg College) was established in 1898 and was the first centre for agricultural training in Africa. The college has secured an eminent track record in agriculture and especially in the field of agricultural training in South Africa.

At present, training programmes are offered at Higher Education and Training (HET) and Agricultural Skills Development (ASD) levels.

The following qualifications can be obtained:

- Bachelor of Agriculture degree (B.Agric degree) (3 years, NQF7)
- Diploma in Agriculture (3 years, NQF6 – 3-year programme with the final (third) year completing Workplace Integrated Learning)
- Short Skills Courses
- National Certificate in Plant- and Animal Production NQF level 4 (Learnerships) (Minimum of 10 months)
- Certificate in Horse Mastership and Preliminary Riding Instruction

The abovementioned training is based on farming enterprises and demands, with the main focus on the agri-ecological regions of the Western Cape.

The courses are practice-oriented and emphasises the application of the principles of science and management to agricultural production operations. The objective is to maintain a healthy balance between theory and practice and practising the philosophy of “training by doing” is an important feature during practical sessions. Close collaboration with researchers from the Western Cape Department of Agriculture and commercial farmers is a special supporting feature, enhancing the standard of tuition.

Higher Education and Training

The Bachelor of Agriculture (B.Agric) degree is a three-year qualification on NQF level 7 offered in association with Stellenbosch University. The study fields within the B.Agric degree are: Plant Production, Animal Production, Plant and Animal Production, Cellar Technology, Cellar Management, Extension and Plant Production or Extension and Animal Production.

The Diploma in Agriculture programme is a three-year qualification on NQF level 6 where students follow a formal, full-time academic Programme in the first two years and the third year is for Work Integrated Learning(WIL). WIL provides an opportunity for students to gain experience in the workplace, be it on a farm or within the agricultural sector. The study fields within the Diploma in Agriculture Programme are: Plant Production, Animal Production, Plant and Animal Production and Cellar Technology.

The Equine Studies programme offers a National Instructor's Course for Riders and follows the Equine Qualifications Authority of South Africa (EQASA) syllabus. Modules 1 to 3 cover all aspects of horse care and stable yard management. The modules are progressively studied and assessed. A successful learner at Module 3 will be qualified to run a stable yard.

Agricultural Skills Development

The National Certificate in either Plant or Animal Production is a Learnership programme that empowers the student with a practical qualification. The Learnership approach includes classroom-based theoretical learning, and practical and workplace experience. The Learnership is accredited by AgriSeta and offered on NQF level 4.

Admission requirements:

- Learners in possession of practical experience in farming operations, with numeracy literacy and communication competencies (equivalent to Grade 11);
- School leavers from agricultural schools (Grade 12)
- Youth, women and unemployed individuals from previously disadvantaged communities and those involved in agricultural projects as well as agri-workers.
- **COMPULSORY:** Access to land or farm for the purpose of WIL.

Skills-based short courses are provided to farm workers, small-scale, commercial and resource-poor farmers, beneficiaries of the national land reform programme as well as anybody who desires to study agriculture and related fields.

Various short skills courses are presented on farms, in rural communities, at the main campus of the Elsenburg Agricultural Training Institute and at the Agricultural Skills Development (ASD) decentralised training campuses in George, Oudtshoorn, Bredasdorp and Clanwilliam.

These short skills courses cover a wide range of study fields, including Irrigation, Tractor Maintenance, AVCASA (responsible handling of agricultural chemicals), Marketing, Financial Management, Animal Production and Vegetable Production, to name a few.

The focus of these short courses is on the practical applications, supported by relevant theoretical principles. Once completed, students will have the required skills to cope with the demands of the workplace. The Elsenburg Agricultural Training Institute is in the process of phasing out the Learnership Programme and implementing occupational qualifications in line with the requirements of the Quality Council for Trades and Occupations (QCTO). This will ensure assessment on all three aspects of the curriculum, namely, Theory Practical and WIL. The occupational qualification also allows for career pathing.

Programme 8

RURAL DEVELOPMENT

In a dynamic world where migration to urban living is the norm and sustainable rural livelihoods are under significant pressure, this Programme aims to coordinate developmental programmes amongst stakeholders in rural areas.

The purpose of the Programme is fourfold and is facilitated by three sub-programmes. The Department also prioritised Rural Safety as a Ministerial Priority, which is located within the Programme.

- **Rural Development Coordination**

Focusing on initiating, planning and monitoring development efforts amongst the three spheres of government in specific rural areas to ensure that identified needs are responded to through an integrated approach.

- **Social Facilitation**

Dedicated to engage with communities and civil society on developmental priorities in rural areas and to provide support to ensure their participation in initiatives geared towards rural development and deeper social cohesion.

- **Farmworker Development**

Geared towards enhancing the image and socio-economic conditions of agri-workers and their family members through training and development initiatives.

- **Rural Safety**

Fostering and strengthening partnerships with safety structures in districts to contribute to an overall improved, protected and safe agricultural environment. Facilitate coordination with other departments to develop safety initiatives and monitor rural safety incidents with an in-house Rural Safety Monitoring Dashboard.

A - Z of Services



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Abattoirs

The department's state veterinarians and meat inspectors monitor and audit the application of hygienic procedures at abattoirs to ensure compliance with the Meat Safety Act. Hygiene management practices at abattoirs, the humane handling of animals presented for slaughter, the setting of stands for new abattoirs and the grading of existing facilities are important functions carried out by these officials.

Abundant Harvest

The Abundant Harvest is a coffee table book published by the WCDoA. There are a total of eight books in this series. This book concerns various championship projects and topics of celebratory status for the WCDoA.

Go to www.elsenburg.com/resource_library to download your free copies.

Agricultural Producer Support and Development

See page 8 for more information.

AgriProbe

AgriProbe is a quarterly popular/semi-scientific magazine of the WCDoA of which all the written content is produced internally. The magazine consists of two sections – one part popular agriculture-related articles and another part research results in the form of semi-scientific articles, known as the Elsenburg Joernaal.

The magazine has a print-run of 7 000 per edition, of which approximately 3500 is posted and 3500 hand-delivered. Its readership is mainly based in the Western Cape, but because subscription is free of charge, a portion of the readers are also outside of the provincial borders. The target audience is mainly farmers: commercial and smallholder, agri-workers, people working in the agricultural sector and government officials.

AgriProbe is completely funded by the department and no income is generated from advertisements.

AgriProbe is available online at the department's website (<http://www.elsenburg.com/resource-library/agriprobe>). Alternatively, send an e-mail to DoA.Info@westerncape.gov.za to be placed on the mailing list and receive a free hard copy quarterly.

Agricultural Economic Services

The economic security of the Western Cape agricultural sector is something that cannot be taken for granted, but which must be nurtured and cultivated. The services are provided through units i.e. Marketing and Agribusiness, Production Economics, Statistics, Macro- and Resource Economics and Agri-processing Support. For more information see page 13.

Agri-Processing Support

Agri-processing is emerging as an important sub-sector with potential to spur economic growth and create jobs. The Agri-Processing Support sub-programme enables agricultural producers to enter into the value-adding activities related to the processing and marketing of new products. The aims of this sub-programme are to facilitate the production of new products, create and expand marketing opportunities and thereby increase producers' incomes. The role of the sub-programme is to create an enabling environment for the development of the agri-processing capacity in the Western Cape in order to create a vibrant rural economy. The sub-programme, through the Agri-Hub located at Elsenburg, provides support on a broad range of services, including but not limited to, the following:

- Encouraging downstream beneficiation of agricultural products through new product development and existing product improvement.
- Compliance support with regards to food safety and quality.
- Product analysis and testing.
- Technical advice on procurement of agri-processing equipment.
- Facilitate agro-processing funding-related applications.
- Capacity building on various agri-processing initiatives.

Agri-Hub

Farming products are very seldom consumed in its pure form. For instance, wheat need to be turned into flour and then bread, barley into beer, grapes into wine and livestock into meat. Even fruit need to be sorted and packed before it finds its way into a consumer's shopping basket. It follows that a healthy agricultural sector cannot be created by focusing on primary production alone. The capacity of the whole value chain, from inputs, production and finally, to consumption, needs to be enhanced.

Services are provided to support various activities which include, but are not limited to, activities such as milling, meat processing, juicing and pulping, packaging, slicing and dicing, pasteurisation and handling of agricultural produce to make it usable as food, feed, fibre, fuel or industrial raw material.

The services rendered include the following:

- Compliance, including regulatory support (advisory, testing, product improvement, labelling).
- Research and development of new products or processes.
- Infrastructure development, product designs and flows etc.
- Enterprise development (direct financial support to individual enterprises, analysis of the economics of various processes, the competitiveness of value chains and the enhancement thereof).
- Training of existing and potential agri-processors.

Agricultural Dictionary

This trilingual dictionary has been compiled by the Western Cape Department of Agriculture. It fulfils a need that has existed for decades in both the primary and the secondary agricultural sector in which target groups of all races, gender and especially languages, are served by a variety of role-players. This department is committed to serving the people of the Western Cape in their official language of choice – English, Afrikaans and isiXhosa. In an attempt to enhance the standard and usefulness of the dictionary, all its users are requested to forward any comments, recommendations etc. to ***DOA.info@westerncape.gov.za***.

AgriFemina

The department hosts the AgriFemina event in a different region of the Western Cape annually. Female agri-workers and food garden owners make a valuable contribution towards food production and food security and are seldom recognised. The event focuses on celebrating the achievements and inputs of women within the agricultural sector. During the event, the ladies are exposed to a variety of educational topics.

Annual Report

The department's Annual Report is released at the end of September every year. It is a comprehensive document, providing an overview

of the department's performance in the preceding financial year. It contains information such as the activities and performance of the various departmental Programmes, an overview from the Western Cape Minister of Agriculture and Head of Department, financial information and objectives and goals for future years. It can be accessed on [**www.elsenburg.com/resource-library/official publications**](http://www.elsenburg.com/resource-library/official-publications).

Agricultural Partnership for Youth Development Project

The Western Cape Department of Agriculture offers opportunities to seven student interns requiring Work Integrated Learning (WIL) exposure in Agriculture to obtain their qualifications. The initiative targets qualified student in agriculture, who require a Work Integrated Learning Exposure in agriculture to obtain a qualification.

The key placement components, but not limited to, are the following:

- Livestock rearing and poultry production;
- Horticulture/crop production;
- Aquaculture production;
- Agri-processing
- Agricultural Economics
- Agricultural Engineering
- Viticulture
- Agriculture Management (Finance, HR, Supply Chain Management)

Requirements

Students must be South African citizens residing in the Western Cape, registered towards a recognised diploma /degree in agriculture from colleges and universities in the province. Preference will be given to applicants from Colleges of Agriculture.

Application must be accompanied by a letter from the institution of higher learning indicating the required WIL period.

Open to youth (18 – 35 years old only).

Alien clearing

Invasive alien vegetation poses a significant threat of land degradation. By competing with indigenous vegetation, alien vegetation reduces biodiversity and increases soil erosion. Thirsty alien vegetation also uses more water than indigenous plants, because indigenous plants have adapted to the dry conditions and become dormant during the dry season. Alien plants have longer roots and continue to draw water

from the river and groundwater reserves during dry seasons, thus reducing the amount of water available to support other terrestrial and aquatic communities.

The department has spearheaded various alien clearing projects throughout the year, thereby creating hundreds of green jobs, increasing biodiversity, preventing soil loss and making more water available for agriculture.

Alternative crops

Alternative crops refer to crops such as berries, cherries, nuts, pomegranates, olives and honey bush. These are smaller crops, but have the added benefit of being labour-intensive, and requiring less water. Alternative crops are also in high demand in export markets and fetch higher prices.

The department has supported the research needs of the alternative crops industry over the past years with funding from its Alternative Crops Fund, with significant positive outcomes. Projects supported through the research fund include growth and production studies, irrigation, pests and diseases, quality grading, phytosanitary research, chemical registrations, root stocks and new cultivars. The department also assists farmers growing these crops with market access support and support at farm level, especially for emerging and small holder farmers. The focus on alternative crops has seen an increase in the number of hectares of these crops planted in the province.

Animal Health and Disease Control

State veterinarians (SV) assisted by animal health technicians (AHT) at eight state veterinary offices throughout the province are responsible for the surveillance, control and eradication of animal diseases. Access a map of the SV areas and contact details for the offices [here](#).

Regular testing, monitoring and surveillance are conducted on livestock, ostriches, poultry, and pet animals for diseases such as bovine tuberculosis, bovine Brucellosis, rabies and sheep scab and trade-sensitive diseases such as foot and mouth disease and mad cow disease.

These actions play a major role to provide disease-free guarantees for exports of animals and animal products. The province exports more than 90% of the country's ostrich meat and other products generated by the ostrich industry. Intensive surveillance for Newcastle disease

and avian influenza and a registration system on ostrich export farms is conducted in several of the state veterinary areas.

A serum data bank has been established to provide scientific evidence on the occurrence or absence of animal diseases. The province is free of the major trade-sensitive diseases such as foot and mouth disease and also has the only African horse sickness free zone in the country from where horses are accepted for export worldwide.

The epidemiology section of Western Cape Veterinary Services is tasked with assisting State Veterinarians during outbreaks. Epidemiology also encompasses the design of surveillance programs for various animal diseases and assists in determining the status of diseases in the Western Cape Province. The section maintains animal surveillance databases as well as information on the animal census. It also publishes a monthly newsletter with pertinent epidemiological information which can be used by private veterinarians as an information source.

State veterinarians are responsible for training and education on both a formal and informal basis. Although the department and Elsenburg Agricultural Training Institute does not train vets, formal training is provided through the EATI to students pursuing a Bachelor's degree in Agriculture in the form of subjects on animal health, as well as a registered bovine artificial insemination course. Animal Health Technicians (AHTs) also complete the Tuberculosis and Brucellosis component of their studies under the supervision of a state veterinarian and experienced AHT. Informal training is given to veterinary science students during their studies to expose them to the work of a state veterinarian.

The control animal health technician (CAHT) in each state veterinary office monitors and oversees the work of the other AHTs and also mentors AHT students during their final year of training, which is an experiential training year.

Animal Sciences

The Directorate: Animal Sciences conducts research on aspects of herd management, breeding, nutrition and welfare of dairy and beef cattle, sheep and ostriches. The main focus of the Research Programme is to improve production efficiency, which contributes to the increase of net profit and in turn, the assurance of food security. The transfer of technical information to stakeholders forms an integral part of the Research Programme and new information from research efforts are published in both scientific and popular formats. This expertise is also

transferred directly to farmers and relevant industries via advice and talks provided by the research scientists at the Directorate. Extensive research facilities include a feeds laboratory, while the Directorate maintains eleven herds and flocks of national importance, which are crucial in the research effort.

The Directorate also:

- Conducts research in the fields of feeding, breeding/ genomics and management of dairy cattle, sheep and ostriches.
- Focuses its research on improving efficiency of production under a variety of environments.
- Has a world-renowned ostrich research team and facilities.
- Has two dairy research facilities at Outeniqua and Elsenburg.
- Executes projects at Nortier, Langgewens, Elsenburg, Tygerhoek, Oudtshoorn and Outeniqua.
- Collaborates with various tertiary institutions locally, nationally and internationally on various research programmes and projects.



B

BFAP

The BFAP Baseline is an annual event, of which the department is a sponsor. It presents a 10-year outlook for South African agriculture, agri-processing production, consumption, prices and trade. It considers the performance of South African agriculture and agro-processing and their contribution to inclusive growth and economic prosperity in the South African economy.

Biosecurity

Biosecurity is the prevention of disease-causing agents entering or leaving any place where they can pose a risk to farm animals, other animals, humans, or the safety and quality of a food product.

The department's Veterinary Services programme plays an important role in biosecurity by assisting with the management of animal diseases, risks and the safety of food from animal origins in the province.

Bursary/Scholarship Programme

The department awards bursaries to students studying full-time at a Higher Education Institution, towards obtaining a SAQA-registered qualification in an agriculture-related field. Bursaries are awarded for undergraduate and postgraduate studies. Scholarships are also available to high school learners studying mathematics and sciences who have been identified as potential candidates for further studies in the agricultural fields. Contact ***EDI@westerncape.gov.za*** for more information.



CapeFarmMapper

CapeFarmMapper is a product of the Western Cape Department of Agriculture. This online mapping tool is designed to assist with spatial information queries and decision-making in the fields of agriculture and environmental management.

The application provides functionality to:

- View and query spatial layers from the spatial database.
- Search the Western Cape Surveyor-General farm and erven cadastre database.
- Draw and measure features on the map.
- Import and export geographical data.

Career Booklets

• Living Agriculture

It is crucial for the youth to follow careers in agriculture, to ensure the sustainability of the sector. As part of its efforts to promote careers in agriculture, the department launched an agricultural career booklet titled: Living Agriculture: 50 Career Opportunities.

There are a plethora of careers in the agricultural sector, such as agricultural engineers, advisors, economists and more. The book covers 50 agriculture-related careers. It is aimed at school leavers investigating career opportunities and young professionals considering a career change.

Download a copy at **www.elsenburg.com/resource-library** or e-mail **DOA.info@westerncape.gov.za** to request a free hard copy.

• Looking Into the Future

The world as we know it is changing at a phenomenal rate and the agricultural landscape is no different, making it important to keep pace as technology changes so that we are not left behind.

We have entered the 4th Industrial Revolution (4IR) and what this means is a whole new way of work. Where the physical, digital and biological worlds come together, technologies are interconnected. This brings new and exciting career opportunities for the youth to venture into. The WCDoA has thus packaged these futuristic career opportunities into its latest career booklet, Looking into the Future: 30 Careers in Agriculture.

Download a copy now at **www.elsenburg.com/resource-library** or e-mail **DOA.info@westerncape.gov.za** to request a free hard copy.

Career Expos

With the average age of farmers being 55, it is necessary to have more youth in agriculture in order to sustain the sector.

During the 2019 World Food Day in Murraysburg, the WCDoA decided that the agricultural sector on its own cannot absorb all the rural youth entering the labour market. There was a shift and it was decided to host career expos that allow for youth to explore job opportunities in other sectors. The department has since hosted a number of Career Days specifically focusing on the rural nodes of the province.

For more information about the Career Days, contact us at tel: (021) 808 5111 or e-mail ***DOA.Info@westerncape.gov.za***

Cheese Making

The department supports smallholder farmers through training and funding. E-mail ***DOA.Info@westerncape.gov.za*** for more information.

Comprehensive Agricultural Support Programme (CASP)

The purpose of the grant is to provide effective agricultural support services, promote and facilitate agricultural development by targeting beneficiaries of land reform's restitution and redistribution as well as other black producers who have acquired land through private means and are engaged in value-adding enterprises domestically, or who are involved in export.

The department advertises annually around February/March to alert smallholder farmers that applications are open. For more information, go to www.elsenburg.com or e-mail ***DOA.Info@westerncape.gov.za***

Climate change

The WCDoA is aware of the potentially disastrous consequences climate change could have on agriculture and food production. For this reason the department compiled the SmartAgri Plan to assist farmers in mitigating the effects of climate change. A dedicated Climate Change researcher was appointed to conduct research and to keep the department updated on the most recent developments in climate mitigation and adaptation.

- **SmartAgri**

The report constitutes a review and update of the climate information (Status Quo Review 1) that formed the basis for the second SmartAgri

Plan. The updates entail integration of more analytical variety as well as more recent datasets that have become available since the previous report. Inclusion of more recent literature has drawn heavily from academic analysis of the “Day Zero” drought event. The sections below reference the original Status Quo Review sections; however, some sections have been combined into a single section as this provides a more cohesive narrative.

- **GreenAgri**

GreenAgri is a one-stop portal for all farmers, researchers, and private and non-governmental agencies interested in smart agricultural practices – supporting green farming practices, balancing farming and conservation needs, resource efficiency and waste minimisation in the Western Cape.

Conservation Agriculture

Conservation agriculture is a farming system that promotes minimum soil disturbance (i.e. no tillage), maintenance of a permanent soil cover and diversification of plant species. It enhances biodiversity and natural biological processes above and below the ground surface, which contribute to increased water and nutrient use efficiency and to improved and sustained crop production.

Commodity Groups

The department maintains close working relationships with the various agricultural commodity groups active in the province, including, but not limited to Berries ZA, Citrus Growers Association, Grain SA, Hortgro, Milk Producers’ Organisation, Red Meat Producers’ Organisation, South African Ostrich Business Chamber, South African Pork Producers’ Organisation, South African Table Grape Industry and Hortgro.



D

Dam and River Restoration

The department assists with river protection works when rivers are eroded and in need of rehabilitation. A weir is a small dam built across a river to control the upstream water level. Weirs have been used for ages to control the flow of water in streams, rivers and other water bodies. Unlike large dams which create reservoirs, the goal of building a weir across a river isn't to create storage, but only to gain some control over the water level. Over time, the term weir has taken on a more general definition in engineering to apply to any hydraulic control structure that allows water to flow over its top, often called its crest. In fact, the spillways of many large dams use weirs as control structures.

Diagnostic Services

- **Animals**

The Provincial Veterinary Laboratory at Helderfontein, Stellenbosch renders an extensive diagnostic service to the livestock, poultry, ostrich and aquaculture industries and also delivers a supporting service to other provincial and national departments.

A wide spectrum of tests is conducted in the diagnostic bacteriology, serology, virology, parasitology, histology, PCR and biochemistry sections of the laboratory. The laboratory also receives samples such as meat, water, animal feed and swabs for hygiene monitoring for veterinary public health and food safety testing. The laboratory has a laboratory information management system (LIMS) that greatly enhances the capturing and availability of data on all functions performed.

The Provincial laboratory has obtained ISO 17025 accreditation for several test methods including controlled disease testing for Brucellosis, avian influenza, Newcastle disease, African Horse Sickness and Salmonella spp. detection. The food safety section is accredited for several methods of testing food, animal feed, meat and water samples. Accreditation facilitates international recognition and the maintenance of a high standard of service delivery. Please visit the SANAS website for the latest schedule of accredited tested methods for our laboratory (V0029).

- **Plants**

The plant pathology laboratory renders a plant disease diagnostic service to the researchers of the Department. Occasional samples

from the public will be accepted, depending on the workload. The laboratory specialises in the fields of vegetable, small grain and canola diseases.

Disaster Risk Reduction

The main function of Disaster Risk Reduction is to protect the natural resources of the Western Cape with the aim of achieving resource-saving agricultural production with acceptable profits and high sustained production levels while conserving the environment. Floods, droughts and fires are all associated with an abundance or lack of water. The Western Cape Province is a semi-arid region where a lack of sufficient water is the most significant resource constraint on development. The sub-programme: Disaster Risk Reduction aims to lessen the impact of natural hazards and related risks through an integrated and coordinated manner.

The sub-programme renders a number of services, including:

- **Institutional capacity:** The sub-programme aims to prevent and limit resource loss by compiling frameworks and plans to direct disaster risk management away from a reactive function to a proactive function within the broader framework of the National Development Plan (NDP). The NDP highlights improving disaster preparedness for extreme climate events by calling for increased investment in new agricultural technologies, research and the development of adaptation strategies for the protection of rural livelihoods and expansion of commercial agriculture.
- **Disaster risk reduction:** The sub-programme aims to promote the implementation of disaster risk reduction measures and conservation of agricultural resources as required by the Conservation of Agricultural Resources Act (Act No. 43 of 1983) and other natural resources legislation.
- **Declaration of a disaster:** The sub-programme collaborates closely with Western Cape Disaster Management (WCDM) in declaring local and/or provincial disasters. A submission is forwarded to the National Disaster Management Centre (NDMC) to classify the events as a provincial disaster in terms of the Disaster Management Act, 2002 (Act No. 57 of 2002). The sub-programme further corresponds to local vulnerabilities by aiming to enable farming communities to access disaster relief funding schemes, by assisting professional service providers (PSPs) in the verification of damage assessments and ownership of farms.
- **Disaster response: Rehabilitation and reconstruction:** The

declaration of a disaster typically leads to the establishment of a disaster relief funding scheme. The sub-programme facilitates the planning and response efforts of allocated disaster relief funding schemes, including the administration of financial relief payouts in real time. Where possible, appropriate common or mutually supportive projects or programmes are created e.g. the sub-programmes Disaster Risk Management and LandCare both concentrate on resource conservation. LandCare supports Disaster Risk Management in e.g. prioritising and managing the construction of river protection works (gabions, groynes and weirs). The construction work is monitored throughout the building phase and upon completion.

- The sub-programme manages the scheme funds in accordance with the relevant prescripts to ensure that all irregularities, corruption and mismanagement of the scheme are completely prevented where possible.

Drones

Innovative technologies such as drones benefit the agricultural sector immensely. In the last few years, the use of drones in agriculture have boomed. Agricultural drones can be used to do anything from precision agriculture, to efficiently dispersing weed control or fertilisers, to optimizing field management and monitoring livestock. The results include reduced operation costs, improved crop quality and increased yield rate.

The department encourages the use of drones among farmers in order for them to reap the various benefits of this 4th IR tool. It conducts research on drone technology and the applications thereof and shares the information with farmers. In 2021 the department hosted a drone users' conference which explored drone applications in agriculture through professional speakers who are experts in their field. The department's engineers also use drones for agri-engineering work.



ECOS

Due to the location and history of South Africa, we have an extremely diverse set of products, factories and processes. We also have a complex food and export legislative system with different authorities (religious, state and authorised signatories), with overlap between authorities as often we work on similar products and the same locations. Due to our endemic diseases, our rich diversity of wildlife and animal health system we need to have a systems approach to disease risk mitigation and international trade in animal products. We must therefore focus on commodity-based trade and compartmentalisation if we are to remain internationally relevant when it comes to trade in animal products.

South Africa is busy with a project called LITSSA (Livestock Identification and Traceability System South Africa) which is divided into two main parts:

- Identification and traceability of cattle (for now) from birth to abattoir.
- Identification and traceability of products from abattoir to export or retail.

The Western Cape is developing and piloting ECOS (Export Control Office System), as we have over 160 export factories and experience in many different types of production processes as well as retail export. We are hoping ECOS will become the national system for composite and animal-based products.

South Africa currently has no electronic system which tracks the movement of animal products that are to be exported, in line with the guidelines of the Organisation for Animal Health (OIE) and Food and Agricultural Organisation (FAO) of the United Nations.

An electronic data management system – ECOS – is being developed by the Western Cape Government to address these deficiencies and create a platform that supports market access and export certification in line with global standards.

South Africa has an eCert system that is linked to the plant hub and ECOS will “talk” to the rest of the world via that system, to create a unified international view of South African products.

Education and Training:

Elsenburg Agricultural Training Institute

The Elsenburg Agricultural Training Institute was established in 1898 and was the first centre for agricultural training in Africa. In the Republic of South Africa, the Institute has secured an eminent track record in agriculture especially in the field of agricultural training.

Vision: The Advancement of the Elsenburg Agricultural Training Institute as an agricultural and educational centre of excellence to the benefit of the broader community.

Mission: To promote sound, integrated managerial and skills training in agriculture with advanced specialisation in area-specific fields of excellence informed by industry and societal needs.

At present, training programmes are offered at Higher Education and Training (HET) and Agricultural Skills Development (ASD) levels.

The following qualifications can be obtained:

- Bachelor of Agriculture degree (B.Agric degree) (3 years, NQF7)
- Diploma in Agriculture (3 years, NQF6 – 3-year programme with the final (third) year completing Workplace Integrated Learning)
- Short Skills Courses
- National Certificate in Plant- and Animal Production NQF level 4 (Learnerships) (Minimum of 10 months).

Engineering Services

The main function of the sub-programme: Agricultural Engineering Services is to protect the natural resources of the Western Cape with the aim of maintaining a sustainable agricultural sector.

At the same time, we also deliver a number of specialised agricultural engineering services to our clients, as well as to all the department's research farms in the Western Cape.

Equine Studies

The Equine Studies programme offers a National Instructor's Course for Riders and follows the Equine Qualifications Authority of South Africa (EQASA) syllabus. Modules 1 to 3 cover all aspects of horse care and stable yard management. The modules are progressively studied and assessed. A successful learner at Module 3 will be qualified to run a stable yard.

Evaluations

The department conducts a number of evaluations annually. Evaluations are guiding processes to enable the department to ensure improved, efficient and appropriate services to the range of clients within the Province.

It is the department's quest to improve through measurement and external scrutiny for a better agricultural sector in the province, not only in implementation but in critical assessments as well.

Exhibitions

The department exhibits its services at selected agricultural shows such as NAMPO and the George Agricultural Show. The aim is to create awareness of the department's services and latest technology, encourage the use thereof and create an opportunity for citizens to engage directly with departmental officials and managers.

External Human Capital Development Initiatives

The Western Cape Department of Agriculture has a number of external human capital development initiatives from which its clients can benefit:

- Internship Programme
- Graduate Internship
- Student Internship
- First Work Experience for Grade 12s
- Bursary/Scholarship Programme
- The Young Professional Persons (YPP) Programme
- Agricultural Partnership for Youth Development Project (APFYD)
- Learnership Programme

Extension and Advisory Services

The purpose of the directorate is to provide extension and advisory services to farmers.

The directorate has employed the digital Smart Pen to assist in monitoring the quality of services rendered to farmers.

The directorate facilitates the delivery of:

- Farmers' days
- Information days

- Skills Audits
- The appointment of mentors to assist smallholder farmers through the commodity approach.

Exports: Pets

Pets travelling out of South Africa generally require a Veterinary Health Certificate certified by a state veterinarian. Info sheets are available on the department's website [**www.elsenburg.com/exporting-pets-and-products**](http://www.elsenburg.com/exporting-pets-and-products) to assist citizens with their travels. However, these are to serve as a guide only and those wishing to export their pets are ultimately responsible for obtaining the import requirements from the country to which they are travelling.

The department's export certification office is situated at 22 Lobelia Street, Milnerton. It is open by appointment only to assist with pets leaving South Africa from the Western Cape. Main times are 09:00 to 12:00. The main contact numbers are 021 808 5400/5401/5407 or e-mail [**vetexport@westerncape.gov.za**](mailto:vetexport@westerncape.gov.za)

Exports: Products

Requirements for export certification of products:

- An import permit from the country you wish to export to. These are usually issued by the Department of Agriculture in the relevant country.
- All production facilities in the chain (including cold stores) must be registered to export – they must have a 'ZA' approval number.
- Products must be traceable through all production facilities in the production chain.
- Where required by the importing country, the animals from which the product is derived must be traceable to and originate from approved farms (compartments).
- The product must be handled in a suitable manner and this should be proven in some way.
- The products should be identified accurately enough to prevent the export of product with an unknown origin using the same documentation.
- Certain commodities need to be inspected by state veterinary officials before an export certificate can be signed. This is usually determined by the commodity, but can be a requirement of the certificate.

All relevant documentation must be supplied to the State Veterinary office by the exporter when initially applying for export certification. These can be e-mailed to ***vetexport@westerncape.gov.za***.

For more information on procedures, as well as documents to assist you with export of products and interaction with departmental offices, go to ***www.elsenburg.com/exporting-pets-and-products***



F

Farm and Factory Approval for Export

Export certification can only be done for products originating from facilities specifically registered for this purpose with the Department of Agriculture.

You may only export animals or animal products if they come from premises that comply with international standards or the legislation of the importing country. These premises could be an approved abattoir, quarantine station, artificial insemination centre, embryo collection centre, farm, feedlot, food processing factory, food storage premises, etc.

Financial Recordkeeping

Due emphasis is placed on financial recordkeeping with a goal to assist small, medium and microenterprises (SMMEs) to effectively keep financial records. The service has seen growth in effecting financial management and understanding of business, especially statutory requirements by SMMEs within the sector. The unit also acknowledges that access to finance is the lifeblood of any business.

Therefore, one of the interventions has been to facilitate access to finance for SMMEs. The aim is to help agribusinesses to effectively choose the correct financing mechanisms. Added to this, is the business analysis service to help in identifying business needs, lending and determining solutions to business problems and focuses on analysing business stability, solvency, liquidity and profitability using ratios. Other services include budgeting, business plan development and evaluation.

Food Gardens

The department supports household, community, church and school gardens, among others. See Food Security page 55.

Food Safety and Export

All meat consumers have the right of access to safe meat from known approved sources. The sub-directorate: Veterinary Public Health therefore facilitate the supply of healthy food of animal origin to the consumer by promoting household food security with regard to animal products and enforcing the Meat Safety Act (Act 40 of 2000) & Regulations, and thus improving public health and enhancing quality of life.

Veterinary Public Health Officers and State Veterinarians working in the sub-directorate Veterinary Public Health, are responsible for the following functions:

Core Functions:

- **Food Safety Awareness:**

Participate in exhibitions and farmers'/community information days throughout the province, with emphasis on Food Safety and Zoonotic diseases.

Provide training, technical assistance and health education to communities on food safety, thus empowering them to make an informed choice when consuming meat.

Promote abattoir hygiene awareness to meat inspection staff, slaughter personnel, quality control officers and owners, through training.

Liaise with various departments, non-governmental organisations and other role-players to promote and implement meat safety awareness programs.

- **Law enforcement:**

Investigate and control illegal slaughtering in collaboration with the relevant authorities and stakeholders (Police Stock Theft Unit, Environmental Health, SPCA etc.); if necessary, combating the said violation via prosecution of the perpetrators by a court of law.

Investigate and control illegal imports, the illegal transport of animals and animal products in conjunction with the relevant authorities, to ensure that no illegal animals or animal products enter the province.

Serving of directives (warning letters, notices, instructions) when abattoir owners are not complying with the national essential standards, or when owners illegally slaughter or cull food animals.

- **Sampling and analyses:**

To identify diseases in animals, for example, test for possible Mad Cow Disease (BSE) and TB in animals. Taking of samples (kidney, liver, fat) to test for the presence of residue in meat, for example: antibiotics, growth hormones and pesticides.

Taking carcass swabs to determine if bacteriological levels on meat are at acceptable levels and to determine the standard of the slaughtering and dressing processes.

Taking of water samples to determine if quality of water comply with SANS 241.

Taking swabs of meat contact surfaces/equipment, to determine effectiveness of cleaning and sanitation.

Taking hand swabs of food handlers to determine effectiveness of personnel hygiene.

- **Hygiene audits/inspections of sterilising plants:**

Act as technical advisors for the Register of Act 36 of 1947; monitor the structural and procedural requirements at sterilising plants e.g. in the production of blood meal, carcass meal and bone meal.

- **Hygiene audits/inspections of game harvesting and game depots:**

Monitoring the culling of animals for the local market to ensure that the game harvesting processes, game meat inspections and equipment comply with national standard requirements.

- **Hygiene audits/inspections of abattoirs:**

Regular systematic hygiene audits/inspections of all red meat, poultry and ostrich abattoirs to assess the following processes for compliance, namely:

- Ante-mortem inspections
- Humane handling of animals, prior to slaughter
- Slaughter and dressing techniques
- Primary meat inspections
- Cleaning and sanitation of building and equipment
- Chilling and transportation of meat

Evaluate and making recommendations to abattoir owners and abattoir personnel on the following matters:

- Disposal of condemned meat and inedible products, thus preventing it from reaching the food chain
- Occupational health and safety issues (Identification of possible hazards in the workplace).

- **Structural planning of abattoirs:**

Structural planning of all red meat, ostrich, game and poultry abattoirs and cutting plants for local markets.

Evaluate and make recommendations to the public (architects) regarding design drawings of facilities and approval of design drawings from a hygienic point of view (e.g. recommendations in regard to the layout of the abattoir) the layout of equipment, process, product and personne flow, floor drainage, ventilation, disposal of effluent and condemned material, and cooling and ablution facilities etc.

Monitoring progress while under construction to ensure compliance with approved design drawings.

Determine structural standards at existing abattoirs and cutting plants and facilitate the registration, upgrading and repair thereof where necessary, to meet minimum norms and standards under the Act through extension.

- **Promote the implementation of food safety management and hygiene assessment systems:**

Assistance is given to abattoir owners with the implementation and application of Food Safety Management Systems (FSMS/HMS) at all abattoirs, to ensure good manufacturing practices during slaughtering of food animals.

Assistance is also given with the implementation of Hygiene Assessment Systems (HAS) at all abattoirs in the Province and verification of the scores and monitoring of the corrective action taken, to bring all abattoirs up to standard.

- **Extension practices:**

Determine through consultation the slaughtering needs of communities and render technical assistance for the establishment of new abattoirs and upgrading of existing abattoirs to meet these needs and thus adding value to food production.

Promotion of primary and preventative human health by initiating control programs involving relevant governmental and non-governmental agencies, through the prevention of animal diseases transmissible to humans (zoonotic diseases) with emphasis on Tuberculosis, Brucellosis, internal parasites (tapeworms) and food poisoning (Salmonella).

- **Administrative functions:**

Collection of data; process monthly slaughter returns from abattoir owners to provide data of numbers of animals slaughtered and to report on disease incidence.

Compile and submit reports, letters and notices regarding routine abattoir inspections; audits at abattoirs and sterilising plants and correspondence to role-players as required.

Provide inputs to the operational plan/regulations and policies for Veterinary Public Health.

Register and issue registration certificates to all abattoirs complying with the provisions of the Meat Safety Act.

Registration of persons performing meat inspection services at abattoirs.

Registration of facilities approved as sources for the export of hides and skins.

- **Export control:**

Inspection of meat and dairy products and verification of accompanying documentation for compliance, for export to various African countries.

Auditing of export facilities for compliance (abattoirs, cutting plants, sources for hides and skins).

Monitoring the culling of animals for the export market to ensure that the game harvesting processes, game meat inspections and equipment comply with national and international standards/requirements.

- **Procedures to follow when applying to build a new abattoir:**

Contact the office of the sub-directorate: Veterinary Public Health of the Department of Agriculture, Tel: 021 808 5273, to discuss your intentions and plans. The procedures to follow will be discussed with the applicant in detail by a Veterinary Public Health Officer (VPHO). A site inspection will also be arranged with the applicant after the consultation.

- **What is approved meat?**

It is meat obtained from healthy animals which have been slaughtered at approved abattoirs, which have been examined before slaughtering

and which the meat has also been inspected after slaughtering by a registered meat inspector. Inspected meat can be recognised by the stamp “PASSED” on each quarter of the carcass (beef; sheep; pigs) and in the case of poultry the stamp of approval or registration number of the abattoir will be printed on the packaging material or on labels of each individual carcass or cut portions.

- **Did you know?**

In terms of the Meat Safety Act, 2000 (Act 40 of 2000), anyone who is selling meat to the public, which was not obtained from an approved abattoir, is guilty of an offence and can be prosecuted by a court of law.

- **What can consumers do when in doubt about the quality of meat they buy?**

When in doubt, it is your right to ask the dealer/shop owner if the meat was obtained from a legitimate source, such as an approved abattoir.

Look out for the stamp of approval (“PASSED”) on the meat or packaging material.

People who sell meat from illegal slaughtering activities should be reported to the Sub-directorate Veterinary Public Health of the Department of Agriculture (Tel: 021 808 5273) or at the nearest police station.

Food Security

The purpose of the directorate is to support, advise and coordinate the implementation of pillar one of the Integrated Food Security Strategy of South Africa (IFSS).

The directorate contributes directly to the alleviation of food insecurity through the delivery of household and community gardens.

This directorate supports household food production in communities through the Suitcase Programme (household food production programme).

It also supports community and school gardens and conducts Food Security Awareness campaigns.

Visit www.elsenburg.com/agricultural-producer-support-and-development to download our free food garden brochures.

- How to create a peace garden
- Square foot gardening
- Growing vegetables in containers

Funding

Qualifying farmers can apply annually for CASP Funding (national funding which is administered by the department for Western Cape farmers). Visit ***www.elsenburg.com*** or e-mail ***DoA.Info@westerncape.gov.za*** for more information.



GIS

G



Game Auction Statistics

The department publishes electronic game auction statistics on a monthly basis, which is indicative of the performance of the industry since 2002. These statistics cover the price movements of more than 1500 game species' categories and lists the number of each species sold, its weighed average prices achieved as well as the highest price realised over the years.

This allows prospective game ranchers to budget and plan for future game auctions, providing a sound and realistic platform. These statistics have proved to be invaluable to the game auction, as well as game ranching industries, in the sense that it tracks the industries' progress over time.

Geographic Indicators

A protected designation of origin is an indicator that identifies and links a particular product to a particular region or locality; the product quality, reputation or other unique characteristic is directly linked to that geographical area. Registered product names have the strongest links to their origin, since every aspect of production, processing and preparation must take place in that specific place of origin.

Rooibos became the first African food to join Champagne, Irish Whiskey, Port and other iconic products in the European Commission register of protected designations of origin (PDO) and protected geographical indications (GI). Geographic indications offer a valuable competitive advantage.

The Western Cape Department of Agriculture has been working with the Rooibos Industry since the 1990s to prevent the name 'Rooibos' from being misused by others.

The registration means 'Rooibos' or 'Red Bush' can only be used to refer to the dried leaves of 100% pure 'Rooibos'/'Red Bush' derived from *Aspalathus linearis* that has been cultivated or wild-harvested in designated local municipalities of the Western and Northern Cape.

It is believed that the registration will make way for other indigenous species, such as Buchu and Aloe Ferox, to also be indicated as PDOs and reap similar rewards.

Geographic Information Systems (GIS)

The department has been active in GIS for over three decades. During that time, it has developed a vast resource of spatial information related to agriculture in the province. Analysis of the data regularly helps provide information to support decision-making among stakeholders, planning partners, officials and management.

GIS allows integration of various data types from multiple sources and is used in almost every sector of the economy, science and government. In agriculture, it can be used for many applications, ranging from simple farm mapping to monitoring agricultural production with the aid of satellites, complex modelling of crops in response to natural resources and supporting management of natural disasters. In addition, GIS helps us understand how climate change will affect our world and keep tabs on agriculture's dynamic "footprint" in the Western Cape.

The latter is supported by a four-yearly airborne census of agriculture (the so-called "Flyover") which places a wealth of information at the fingertips of our administrators and regional planners, agribusinesses, researchers and producers.

The department's innovative web application, CapeFarmMapper (CFM), is particularly popular. It allows free access to much of our local data to non-specialist users – even facilitating their production of report-quality maps.

GIS technology helps organisations track, analyse and visualise data in a way that has never been done before. The department is committed to mainstreaming GIS as it recognises the value of recording geographic location for its activities to facilitate spatial analysis and decision making.

CapeFarmMapper can be accessed at:

<https://gis.elsenburg.com/apps/cfm/> or via the Agri-Tools menu on the department's website, ***www.elsenburg.com***

GreenAgri

GreenAgri is a one-stop portal for all farmers, researchers, private and non-governmental agencies interested in smart agricultural practices - supporting green farming practices, balancing farming and conservation needs, resource efficiency and waste minimisation in the Western Cape. In doing so, it supports the Western Cape's Provincial Strategic Goals and its Green Economy Strategic Framework. The portal was developed by the department, in collaboration with GreenCape. (GreenCape is a sector development agency in the Western Cape and supports businesses that operate in the green economy.)

Go to ***www.greenagri.org.za***



Household Food Production

The department contributes directly to the alleviation of food insecurity through the delivery of household, school and community gardens. The One Home, One Garden Campaign is a drive to combat the high levels of food insecurity and promote the resilience and wellbeing of local communities. There has recently been a significant rise in food inflation and more pressure on food security and nutrition. Therefore, the department encourages households and communities, to shift away from their reliance on supermarkets and produce food sustainably in response to the challenges of household food insecurity. No space is too small for a food garden (think vertical gardens, for instance). Food garden competitions are also held annually across the province by the department in an effort to encourage the sustainability of food gardens.

For more information and assistance to start a food garden at a home, school or community space, contact ***DOA.Info@westerncape.gov.za***



Indigenous nursery

The Worcester Veld Reserve was established in 1935 in response to the severe drought of the 1920's. A need was recognised to provide help to farmers to improve their natural rangelands, which had already severely deteriorated because of the drought.

The farm's main objective is seed production for the re-establishment and improvement of natural pastures. Species established include:

- *Tripteris sinuata* (karoobietou)
- *Gorteria integrifolia* (haarbossie)
- *Chaetobromus involucratus* (hartebeest grass)

Inclusive of these species, seeds harvested in large quantities are for sale to farmers to improve their veld and use in research projects. This farm plays a pivotal role in the veld research programme of the Directorate: Plant Sciences. Research includes germination and seed bank studies in the nursery, plant surveys for veld condition assessments, rehabilitation of degraded veld/old lands, and farm visits advising farmers on veld condition and improvement.

Information days

Several farmers' information days, as well as "walk-and-talks" are held to share information emanating from research with farmers and to keep farmers up to date with the latest technology.

Innovation

Creativity and innovation are the key drivers behind the growth and overall success of the department's service delivery agenda and how it responds to the needs of its citizens.

Listed below are a few of the department's innovations.

- The Rural Safety Monitoring Dashboard was shortlisted for the Public Service Innovation Awards recently. This in-house developed tool monitors rural crime incidents and identifies hotspots within the agricultural landscape.
- The Resource Efficiency Project received the Gold Award in the category: Replication and Adaptation of Innovative Solutions at the 19th Public Sector Innovation Awards ceremony and has significantly reduced the department's water and electricity bill.

- In 2021 the department launched an e-commerce platform to enable Black-owned Wine Brands to market their products throughout South Africa.
- The Agri-Processing on Wheels Initiative is another first for South Africa. It enables officials to develop the agri-processing capacity in the Western Cape by offering workshops to interested groups across the Western Cape.
- The Ostrich Slaughter Planner assists ostrich producers with recordkeeping and planning in digital format before receiving a permit to slaughter ostriches at the abattoirs.
- The satellite-based FruitLook enables fruit farmers to manage their water use to optimum levels.
- World-class technology and innovation is driving precision agriculture in the Western Cape. The department is involved in the research and use of technology smart research, production and monitoring methods, including drones, sensors, real-time data probes and camera technology, are also critical to advance the agricultural sector and open new opportunities to attract and equip youth with the necessary skills to pursue careers in 4IR related businesses.

Internship Programme

The department is committed to skills development by providing opportunities for unemployed matriculants, undergraduates (students) and graduates through an Internship programme. Interns may be placed within the department or with external host employers.

• Graduate Internship

This refers to the individuals who have already obtained a qualification in a SAQA-accredited Further Education and Training or Higher Education Institution. The internship provides graduates with work experience and exposure from one to two years.

• Student Internship

This refers to the students who are studying towards a SAQA-accredited qualification, but are required to undergo practical experience towards obtaining their qualification. The institution will indicate the timeframe required for the interns to complete their work integrated learning.

- **First Work Experience for Grade 12s**

The project provides learners who finished grade 12, are between the ages of 18 – 24 and who have not worked or participated in any other internship previously, with the opportunity of a one-year internship.

- **Internship Programme**

The interns appointed on this project will be placed with external host employers who have signed a Memorandum of Understanding with the Western Cape Department of Agriculture. The duration of this internship is 12 months.



Junior LandCare

First-hand experience about the wonders of nature while spending time in the outdoors, makes all the difference to levels of enthusiasm and information retainment. Herein lies the success of the approach to environmental education as presented by the department's Junior LandCare sub-programme. In tandem with the curriculum of the National Department of Basic Education, it aspires to teach young children about topics such as conservation, sustainable agriculture and food security.

Whereas various other institutions also offer some measure of environmental education, DoA LandCare is the only entity that brings this vital information to rural communities that are generally excluded from such activities. The programme was initiated some 30 years ago and has since grown substantially and is now presented in five rural districts. An estimated 7 000 learners in Grades 4 – 6 from 35 schools have been reached annually since the start of the Programme.

Along with exposure to subjects such as birdlife, reptiles and soil health – all taught in a fun and interactive way – inter-school competitions and provincial and national conferences contribute to heightened awareness. Attendance of the national biannual Junior LandCare conferences is enjoyed greatly and about 350 children from Grade 4 – 6 benefit from the expertise of international speakers and learning through drama, dance, speech and debate.



LandCare

LandCare is a national movement aimed at restoring sustainability to land and water management in both rural and urban areas. It encompasses integrated sustainable natural resource management where the primary causes of natural resource decline are recognised and addressed.

LandCare is community-based and community-led and seeks to achieve sustainable livelihoods through capacity building and related strategies.

LandCare policies will be developed and achieved through the formation of partnerships with a wide range of groups from within and outside government, through a process that blends together appropriate upper level policy processes with bottom-up feedback mechanisms.

Land Reform

It should be noted that the department is not responsible for the redistribution of land (this mandate lies with the national Department of Agriculture, Land Reform and Rural Development). It merely assists recipients of land to make a success of the venture, through the delivery of extension, support and training of farmers.

Land Use Management

The main function of the sub-programme: Land Use Management is to protect the agricultural land of the Western Cape with the aim of maintaining a sustainable agricultural sector.

This is done by providing advice and comments to clients on applications for subdivision and/or rezoning of agricultural land.

Learnership Programme

The Learnership programme forms part of the Agricultural Partnership for Rural Youth Development (APFRYD) Project.

Based on the high rate of unemployment among our youth within the rural areas and the reluctance of youth to follow careers in agriculture, this project was implemented. As the agricultural sector needs to undergo major changes in transforming itself, it is necessary to bring previously disadvantaged skilled individuals into the agricultural labour market.

This project specifically focuses on rural youth and the children of farmworkers. It offers bursaries/scholarships, internship, learnerships, a bridging course for mathematics and science learners and a summer/winter school at the Elsenburg College.

As part of the APFRYD Project, 10 learners are funded annually to attend a Learnership offered by the Elsenburg Agricultural College.

Literature

The department publishes a variety of publications on its services, the research it conducts as well as a range of agricultural topics. Listed below are a few of these publications, housed on ***www.elsenburg.com/resource-library/books***

- AgriProbes (quarterly magazine) – latest and previous issues
- Western Cape Department of Agriculture Brochure
- The Agricultural Trilingual Dictionary
- Principles of Wound Healing and Top-Working in Fruit Trees (available in English and Afrikaans)
- National Agro-meteorological Committee (NAC) Advisory on the 2022/23 summer and autumn seasons Statement from Climate Change and Disaster Risk Reduction 06 DALRRD 2022 06 March 2023
- Abundant Harvest Series (seven books)
- Living Agriculture – 50 Career Opportunities (available in English and Afrikaans)
- Looking into the Future – 30 Careers in Agriculture
- Basic Guidelines to Veld Management (available in English, Afrikaans and isiXhosa)
- Outeniqua Information Day booklets
- SmartAgri: Updated Climate Change Trends and Projections for the Western Cape
- The Mercury Rises - climate change related articles (Available in English, Afrikaans and isiXhosa)
- Western Cape Agricultural Sector Profile 2020
- Ostrich Manual (available in English and Afrikaans)

- Manual for the Prevention of Stock Theft (Available in English and Afrikaans)
- Outeniqua Research Farm 60 years
- Oudtshoorn Research Farm 50 years
- The Soil Blanket (available in English, Afrikaans and isiXhosa)
- Droogtevoeding
- The Dairy Farming Handbook
- The Fig
- SKOG Saamdragids 2022
- Swartland Crop Rotation

Official Publications

In addition to the above, the latest and previous editions of the following official departmental publications are available on ***www.elsenburg.com/resource library/official-publications***

- Annual Report
- Strategic Plan
- Service Delivery Charter
- National Policy on Extension and Advisory Services



M



Marketing and Agribusiness

Access to markets and information, fair participation, retaining and repositioning into sustainable markets are some of the critical concerns that this division aims to address. The focus is skewed towards the identification of market opportunities and risks through research, packaging and dissemination of such information through appropriate channels.

While the research conducted focuses on traditional markets, there is also research conducted for niche and differentiated products and industries that need to be developed and exploited. Facilitation of market access to ensure uptake of identified opportunities at both local and international markets is also one of the services provided. This component also aims to improve the bargaining power of farmers, sharing of expertise and collective pulling of resources through facilitation of co-operative development.

The division also promotes agribusiness support through value-adding, provision of advisory services to unlock opportunities provided by the AgriBEE Charter, facilitation of partnerships and acquisition of funding for increased investment in the sector.

Macro and Resource Economics

Trends and data are not enough to ensure sound decisions, but are needed to distil the truly crucial variables and to evaluate the impact of these on the agricultural economy of the Western Cape. Mathematical and/or computerised models are a representation of reality, which can be “changed” under controlled conditions in order to evaluate the impact of a specific variable. The purpose of this division is to develop and use the necessary sector and multisector level models to evaluate the impact of various local and international environmental and policy measures on the agricultural and agribusiness sector, including the economy of the province.

Due emphasis is also placed on resource economics research to promote sustainable use of natural resources in the context of climate change (valuation and management of the natural resources, renewable resources as alternatives, water resource allocation and management, as well as agriculture and the environment etc.).



N

Natural Resources

The department plays an important role in the conservation of the natural resources of the Western Cape as it is vital for the agricultural sector and all inhabitants of the Western Cape. The conservation of the natural resources of the Western Cape is vital for the agriculture industry and all inhabitants of the Western Cape who rely directly and indirectly on these resources.

Here, the department concentrates on the following fields to obtain its mission of striving to rebuild, maintain and improve the natural resources by promoting efficient conservation practices to all land users:

- Resource conservation projects by means of farm planning, specifying the location and design of protection, drainage and veld utilisation works.
- Pro-active resource conservation projects, which involve pro-active ways of preventing the extensive degradation of natural resources, for example through area-wide planning, ecological infrastructure investment, fencing, stock-water systems, erosion structures, river protection works and EMPR's.



Organised Agriculture

The department liaises on a regular basis with organised agriculture in the province.

- **Agri Western Cape**

The need of Western Cape producers to manage their common interests by means of an organised structure, stretches as far back as 1807 when the first agricultural association was established. Over 200 years later, organised agriculture in the province is still standing strong.

AWC enters into discussion with the private sector and actively negotiates at government level to gain support for the agricultural sector. They have representatives in each municipal area and is therefore well-informed when arguing legislation and policy on behalf of their members. AWC utilises the extensive pool of expertise among its members and affiliates to serve the needs of its members.

Read more: Agri Western Cape (www.awk.co.za)

Ostriches

The Oudtshoorn Research Farm is dedicated to ostrich research – the only one of its kind in the world.



P

Percheron Horses

Percheron horses are a heavy draft breed known for their calm temperament, large stature and strength. The Elsenburg Percheron stud was established in the 1940s with horses transferred from the Grootfontein research farm (purebred French Percherons) and is an important genetic resource. The gene flow of imported purebred stallions has maintained genetic variation in the Elsenburg stud, an important factor for the conservation of genetic material.

It all started because farmers in the early days needed working horses, but could not afford to keep their own breeding stock. Therefore, the state took it upon themselves to keep a stud and supply draft horses to farmers. These days, Percherons are mostly used to draw carts for entertainment or merely kept for their beauty, but a demand for them remains.

Plant Sciences

The Directorate: Plant Sciences focuses on the areas of sustainable agronomic, vegetable, rangeland and pasture production systems, alternative crops, crop protection in the areas of weed science, plant pathology and entomology, as well as soil studies.

- Conducts research on Conservation Agriculture in grain systems, potato production systems, as well as pasture systems for dairy. The field is extending into regenerative farming practices to reclaim mismanaged fields into productive units.
- Has the only dairy pasture research group in South Africa linking biological soil management with pasture management and milk production, quality and ultimately gross margins for producers.
- Is pioneering soil biological research in pastures in the Southern Cape.
- Conducts research on natural pastures and veld management, production of indigenous seed for arid areas, weed science, entomology, plant pathology, cultivar evaluation, vegetables and alternative crops.
- Has a diagnostic service for plant diseases.
- Executes research at Nortier, Langgewens, Worcester, Elsenburg, Tygerhoek and Outeniqua Research Farms.

- Has glass houses, laboratories, two indigenous seed production units at Worcester and near Lamberts Bay, implements and equipment for field trials.
- Executes large research trials on privately owned farms in the Southern Cape, which are now research hubs for the Western Cape in the field of grain production systems.
- Collaborates with various tertiary institutions in the Western Cape and other provinces, the ARC and various industry organisations.

Predation Management

The department is aware that livestock predation is one of the biggest challenges facing farmers in the Karoo. Therefore, the Department recently partnered with the Endangered Wildlife Trust (EWT) to present a one-day workshop to unravel the challenge. It also highlighted the need for more opportunities to share lessons and to encourage interaction and discussion between conservation bodies, agricultural organisations and farmers. More of these workshops will be presented as part of the department's effort to assist farmers to mitigate the predation problem.

Prestige Agri Awards

The Western Cape Prestige Agri Awards was originally initiated in 2002 by the Hex Valley Table Grape Association in the Hex Valley area. The competition was established to give recognition to the valuable and important contribution of the agri-worker to the sustainability and growth of agriculture in the Western Cape.

Since 2005, the department has been financially involved with the competition and is responsible for the administration and coordination thereof. The competition has grown from 36 entries in the Hex Valley in 2002, to the participation of 1 318 entries in 16 regions in 2018. To date, a total of 14 041 agri-workers have participated in the competition.

Provincial Veterinary Laboratory

The Provincial Veterinary Laboratory (PVL) in Stellenbosch renders a diagnostic service to the Programme, the private veterinary sector, other departments such as National Health and Nature Conservation and commerce associated with the agricultural sector. A diagnostic service is also rendered to the dairy, beef, sheep, pork and racehorse

industries, as well as the poultry, ostrich and aquaculture sectors. A veterinary laboratory has also been established at the state veterinary office in Beaufort West.

Production Economics

With the change of the nature of competitiveness from land labour and capital to information and knowledge, the root of global agricultural competitiveness is embodied in farming systems and farm management practices. This division researches and analyses the relative competitiveness of local farming systems and management practices in relation to international best practice. Due emphasis is also placed on resource issues, with prominence given to alternative and sustainable uses of scarce natural resources. The results of these actions are wrapped in advice packages and disseminated to the whole spectrum of clients.



Research and Technology Development Services

In order to keep abreast of technological developments in agriculture and to ensure that all the agricultural role-players of the Western Cape are provided with the most advanced scientific and technical advice, the department provides timely and relevant research and technology development services in the six districts of the Western Cape. Of utmost importance is converting the research rand into an information rand – this means that scientific information should reach the commercial and smallholder farmer at farm level, making our farmers more resilient and competitive in local, national and international markets. See page 11 for more information.

Reports

Read more on various reports of the department:

<https://www.elsenburg.com/Programmes/agricultural-economic-services-agricultural-statistics-macro-economics-resource-economics-production-economics-marketing-and-agribusiness-support-agro-processing-support/agricultural-economic-services/agricultural-statistics-reports/>

Resource Library

Visit ***www.elsenburg.com/resource-library*** for a wide variety of books, publications and research published by the department.

River Protection Works

The Department's River Protection Project is an effective risk reduction measure in rivers that recent floods have negatively impacted. These interventions involve stabilising the riverbanks, preventing further soil erosion of the riverbanks and improving ecosystem functioning. Restoring ecological infrastructure increases agricultural productivity, socio-ecological resilience, improved water security and job creation.

During the last few years, the department set aside R37 million for restoring ecological infrastructure and R18.5 million for river protection planned along the Keurbooms, Jan du Toits, and Upper Hex rivers. In 2020 three river protection works (Holsloot Weir near Rawsonville and the Meerlustkloof and Meul Projects near Genadendal) were handed over to the respective water users associations. Built at the cost of R69 million, Holsloot Weir, for example, responds to the severe damage caused by flooding, alien invasive plants and damaging ecological maintenance performed within the river.

RSG Landbou

The Department produces two weekly radio programmes broadcasted on RSG 101 – 104 fm. Tune in to listen to RSG Landbou Fridays mornings at 05:25 and Saturday mornings at 11:45.

Eloise Pretorius, radio presenter, interviews interesting people in agriculture across the country. During these broadcasts, listeners get to meet innovators and farmers who come up with great agri ideas. Listeners also get to learn more about the latest agricultural research conducted. Don't miss out on these agricultural stories of hope and inspiration!

If you miss the live broadcasts, be sure to listen to the podcasts on www.elsenburg.com Tips and ideas are welcome and can be sent to Eloise Pretorius – eloise.pretorius@westerncape.gov.za

Rural Development

In a dynamic world where migration to urban living is the norm and sustainable rural livelihoods are under significant pressure, this Programme aims to coordinate developmental programmes amongst stakeholders in rural areas. See page 20 for more information.

Rural Safety

Sustainable agriculture is dependent on sustainable production and therefore safety is a collective responsibility for all in the sector. The impact of a lack of safety measures across the sector negatively impacts on the sector, and therefore creating safe spaces speaks to the very core of our foundational values of dignity, equality and freedom.

Producers and agri-workers, as the agents who enable our food security, deserve to be acknowledged, appreciated and protected. For this reason, the department prioritised Rural Safety as a Ministerial Priority and Rural Safety has been institutionalised and formally signed off and approved in August 2020. In this regard, the department has taken the lead in the Inter-Ministerial Committee on Rural Safety chaired by Minister Meyer and the Technical Committee on Rural Safety chaired by the Deputy Director General (DDG), Mr. Darryl Jacobs.

Furthermore, a Rural Safety Desk has been established within the department. The desk provides a platform for the public, farmers/ producers, agri-workers and agricultural stakeholders to log enquiries,

queries and matters on rural safety. A dedicated rural safety desk e-mail address has been created: ***DOA.ruralsafety@westerncape.gov.za.***

The Rural Safety Pocket Guide was also compiled by the department. It provides practical guidelines to address safety issues in the agricultural sector and the broader rural community.



SmartAgri Plan

The SmartAgri Plan was launched during May 2016 with the vision “Leading the way to a climate-resilient agricultural future for the Western Cape with a coordinated sector plan”. It has set the scene for focused action and implementation in the agricultural sector. The plan has been widely acknowledged by the agricultural sector as one of the best plans developed for the sector. Furthermore, owing to its position as a highly vulnerable sector, agriculture is the first sector in the province to benefit from a sectoral climate change response framework and plan. The plan presents the “road map” for the agricultural sector to travel towards a more productive and sustainable future, despite the uncertainties around specific climate projections. The detailed background to the plan, its four strategic focus areas, six priority projects, regional and commodity briefs and case studies, as well as proposed actions, are available on this website.

Although developed after intensive stakeholder engagements, the SmartAgri plan has to be “taken back” to the sector with focused and well-coordinated actions to enhance the resilience of our farmers and other stakeholders. In this regard, the department plays a coordinating and catalytic role to give impetus to the implementation of the plan. Since January 2021, the WCDoA has launched a renewed drive towards the deeper implementation of the SmartAgri plan and the building of climate resilience across the agricultural sector.

Smart Pen

Digital pen technology, also referred to as Smart Pen, monitors and evaluates the quality of extension advice offered to smallholder farmers. The pen automatically stores information within itself as the officials fill in a form. The information is then transferred to a smartphone already paired with it via Bluetooth, in real time. Next, the smartphone transfers the information to a computer back in the office for analyses and reporting. The pen can also take pictures and have them transferred with the information.

Soil Analysis

Soil analysis is important for planning the correct fertiliser application. With an effective fertiliser program in place, farmers can have optimum crop production. A soil analysis will also help in identifying nutrient deficiency.

The aim of sampling is to collect a portion of material that is small enough in volume to be transported conveniently and handle easily in the laboratory, while still accurately representing the material being sampled. Avoid contaminating samples through contact with fertiliser or used fertiliser bags and the use of inadequate sampling equipment.

It is advisable to sample samples per hectare, one at each corner and one in the centre. If there are no obvious differences (texture, slope, drainage, colour and past pest and fertility management), these samples can be pooled together and one representative sample submitted. Obtain soil from the surface through the primary rooting zone of the crop. The rooting depth will vary with crop type. For most plants, the top 0 – 20 cm is appropriate. For established grasses, sample the top 0 – 10 cm. For vines and fruit, it is necessary to sample topsoil (0 – 30 cm) and subsoil (30 – 60 cm) separately. For a full analysis, the laboratory needs 400g soil. The turnaround time for soil samples is normally two to four weeks, depending on the workload of the laboratory. The result report will be e-mailed to the client as soon as the analysis is completed. The invoice will also be mailed to the appointed person as indicated on the submission form.

All samples must include a completed application form:

Price lists and forms can be accessed at **www.elsenburg.com/analytical-services**

Statistics

In order to monitor trends and make informed decisions, good and reliable data or statistics are necessary. The department has a variety of agricultural statistics available - ranging from macro- down to microeconomic, or production economics data and information. Some of the data compiled by the department is available on the departmental website **www.elsenburg.com** (Under Agri-Tools or Agricultural Economic Services) or alternatively, contact **DOA.Info@elsenburg.com** to request specific data/statistics.

Sustainable Agriculture

The department encourages the agricultural sector to adopt sustainable resource use and management practices to preserve our natural resources for future generations. Climate change poses a threat to food and job security in the agricultural sector. For this reason, the department is committed to managing its resources more sustainably.

In recent years, there has been an increase in the frequency and intensity of natural disasters. The WCDoA is one of the few provincial departments with a dedicated disaster risk reduction unit within the Western Cape. The key focus of this Programme has shifted from post-disaster support and recovery and adapted to the global trends of disaster risk reduction and mitigation. The ultimate goal is to build a resilient agricultural sector that can thrive within a climate change landscape. The sub-programme Disaster Risk Reduction (DRR) prevents and limits resource loss by compiling frameworks and plans to direct disaster risk management from a reactive function to a more proactive function.

Sustainable Resource Use and Management

Through its Sustainable Resource Use and Management (SRUM) sub-programme, the department provide sustainable resource management solutions and methodologies. For more information see page 6.



Technology and Smart Tools

The Directorate: Technology Transfer renders services directly to the Programme Research and Technology Development. This aids in enhancing research and helps with solutions to technological problems. These services include web and media updates, publications, design, photo/videography and technology-driven solutions. This includes electronics, drone technology and 3D printing. Opinions and solutions are also given to other programmes, departments and the public sector.

Training

Agricultural training is based on farming enterprises and demands, with the main focus on the agri-ecological regions of the Western Cape.

The courses are practice-oriented and emphasises the application of the principles of science and management to agricultural production operations. The objective is to maintain a healthy balance between theory and practice and practising the philosophy of “training by doing” is an important feature during practical sessions. Close collaboration with researchers from the Western Cape Department of Agriculture and commercial farmers is a special supporting feature, enhancing the standard of tuition.

For more information see page 17.



Vaccinations

The department assists with the vaccination of animals, specifically for smallholder farmers. See Animal Health on page 10. It also conducts regular Rabies campaigns in disadvantaged communities to vaccinate animals against this deadly disease.

Veterinary Export Certification

The department assists with export certificates. For more information go to [*www.elsenburg.com/exporting-pets-and-products/*](http://www.elsenburg.com/exporting-pets-and-products/)

Veterinary Laboratories

See Provincial Veterinary Laboratory on page 81.

• Sample submission:

A completed sample submission form (PDF/MS Word) for disease testing or for veterinary public health/food safety testing (PDF/MS Word) must accompany each submission. Forms can be obtained at [*www.elsenburg.com*](http://www.elsenburg.com). Please complete the form in detail, including all information with each submission. Samples will not be released for testing until full client (owner and sender) information is provided. To avoid unnecessary delays in testing, please ensure that submission forms are completed in full. The published turnaround time will only commence once the samples have been released for testing.

Please make use of specific forms for disease testing for:

- Bovine Brucellosis for milk ring test (MRT) (PDF/MS Word)
- Bovine Brucellosis testing on serum (RBT; CFT): a Department of Agriculture, Land Reform and Rural Development: Department of Animal Health (DALRRD: DAH) approved Brucellosis testing form (BR5 PDF/BR5 MS Word), should accompany Bovine Brucellosis samples (forms are also available from your local State Veterinarian).
- Caprine and Ovine Brucellosis CFT testing (PDF/MS Word).

Accurate diagnosis and testing depends on the correct submission of quality specimens; please refer to the tabulated testing services for sample submission details. Where applicable, please include animal history (purpose of testing, age, vaccinations, medication, date of sampling, number of animal deaths, etc.).

Please consult this specimen submission guideline for more information on sample requirements and turnaround times for the various tests.

- **Sample packaging:**

Please ensure that samples transported by road or air are packaged according to OIE regulations. The principle of a three-layer system should be followed. All biological material should be packaged and transported to:

- Minimise the risk of exposure for those in transportation and should protect the environment and susceptible animal populations from potential exposure.
- Protect the integrity of the specimens and avoid cross-contaminating other specimens and the environment.

A three-layer system comprises of the following elements:

- First layer: a leak-proof receptacle (avoid glass containers). The primary receptacle must be packaged within enough absorbent material to absorb all fluid in case of breakage and sealed in a clear plastic bag.
- Second layer: The secondary packaging must be durable, watertight and leak-proof to enclose and protect the primary receptacle e.g. plastic container or water-tight plastic bag.
- Third layer: a rigid outer packaging of adequate strength for its capacity, mass and intended use e.g. plastic or cardboard box. The delivery address, name and telephone number of the laboratory and sender's details should be indicated. The proper shipping name and UN number should be indicated on the third layer and the overpack (e.g. cooler box). Routine diagnostic specimens will be packaged as "Biological substance, Category B, UN3373". Refer to the OIE website for more information. A courier service should be used where possible, or samples may be hand-delivered to the following address:

Western Cape Provincial Veterinary Laboratory
Helshoogte Road
Stellenbosch
7600

Tel: 021 808 5710

GPS Coordinates: 33.91992 S, 18.86915 E

- **Latest specimen submission guideline: Food safety, zoonotic, controlled and notifiable disease testing and reporting**

Please note that it is compulsory for all laboratories performing tests for food safety, zoonotic, controlled and notifiable disease conditions to report an incidence of a positive or suspected case to the Department of Agriculture, Land Reform and Rural Development (DALRRD) as per amendments to Regulation 12, Section 31, of the Animal Diseases Act (Act No. 35 of 1984) and the Meat Safety Act (Act No. 40 of 2000). In some instances, both positive and negative test results may be reported at the request of state veterinarian(s) and/or DAFF. Client information and results will be disclosed to the provincial state veterinarian, the submitter (private veterinarian or laboratory), the Director (Animal Health) and/or the National Executive Officer of DALRRD. In addition, client information and results will also be disclosed to external auditors subject to the requirements of external auditing or assessment bodies performing auditing activities. Client information is also disclosed to sub-contractor or referral testing laboratories and institutions that perform additional testing.

- **Protection of customer information:**

At the WC PVL we are committed to protecting your privacy and to ensure that your personal information is collected and used properly, lawfully and transparently. Please refer to our Customer privacy notice for more information - <https://www.elsenburg.com/wp-content/uploads/2022/03/Customer-privacy-notice.pdf>

Veterinary Public Health

All meat consumers have the right of access to safe meat from known approved sources. The sub-directorate: Veterinary Public Health therefore facilitates the supply of healthy food of animal origin to the consumer by promoting household food security with regard to animal products and enforcing the Meat Safety Act (Act 40 of 2000) & Regulations, and thus improving public health and enhancing quality of life.

Veterinary Public Health Officers and State Veterinarians working in the sub-directorate Veterinary Public Health, are responsible for the following functions:

- **Food safety awareness:**

Participate in exhibitions and farmers/community information days throughout the province; with emphasis on Food Safety and Zoonotic diseases.

Provide training, technical assistance and health education to communities on food safety, thus empowering them to make an informed choice when consuming meat.

Promote abattoir hygiene awareness to meat inspection staff, slaughter personnel, quality control officers and owners, through training.

Liaise with various departments, non-governmental organisations and other role-players to promote and implement meat safety awareness programs.

- **Law enforcement:**

Investigate and control illegal slaughtering in collaboration with the relevant authorities and stakeholders (Police Stock Theft Unit, Environmental Health, SPCA etc.); if necessary, combatting the said violation via prosecution of the perpetrators by a court of law.

Investigate and control illegal imports and the illegal transport of animals and animal products in conjunction with the relevant authorities, to ensure that no illegal animals or animal products enter the province.

Serving of directives (warning letters, notices, instructions) when abattoir owners are not complying with the national essential standards or when owners illegally slaughter or cull food animals.

To identify diseases in animals, for example, test for possible Mad Cow Disease (BSE) and TB in animals.

- **Sampling and analyses:**

Taking of samples (kidney, liver, fat) to test for the presence of residue in meat, for example: antibiotics, growth hormones and pesticides.

Taking carcass swabs to determine if bacteriological levels on meat are at acceptable levels and to determine the standard of the slaughtering and dressing processes.

Taking of water samples to determine if quality of water comply with SANS 241.

Taking swabs of meat contact surfaces/equipment, to determine effectiveness of cleaning and sanitation.

Taking hand swabs of food handlers to determine effectiveness of personnel hygiene.

- **Hygiene audits/inspections of sterilising plants:**

Act as technical advisors for the Register of Act 36 of 1947; monitor the structural and procedural requirements at sterilising plants e.g. in the production of blood meal, carcass meal and bone meal.

- **Hygiene audits/inspections of sterilising animals:**

Monitoring the culling of animals for the local market to ensure that the game harvesting processes, game meat inspections and equipment comply with national standards/requirements.

- **Hygiene audits/inspections of abattoirs**

Regular systematic hygiene audits/inspections of all red meat, poultry and ostrich abattoirs to assess the following processes for compliance, namely:

- Ante-mortem inspections;
- Humane handling of animals prior to slaughter;
- Slaughter and dressing techniques;
- Primary meat inspections;
- Cleaning and sanitation of building and equipment;
- Chilling and transportation of meat.

Evaluate and making recommendations to abattoir owners and abattoir personnel on the following matters, namely:

- Disposal of condemned meat and inedible products, thus preventing it from reaching the food chain;
- Occupational Health and Safety issues (identification of possible hazards in the workplace).

- **Structural planning of abattoirs**

Structural planning of all red meat, ostrich, game and poultry abattoirs and cutting plants for local markets.

Evaluate and make recommendations to the public (architects) regarding design drawings of facilities and approval of design drawings from a hygienic point of view (e.g.: recommendations in regard with the layout of the abattoir; layout of equipment; process, product and personnel flow; floor drainage; ventilation; disposal of effluent and condemned material; cooling and ablution facilities etc.).

Monitoring progress while under construction to ensure compliance with approved design drawings.

Determine structural standards at existing abattoirs and cutting plants and facilitate the registration, upgrading and repair thereof where necessary, to meet minimum norms and standards under the Act through extension.

- **Promote the implementation of food safety management and hygiene assessment systems:**

Assistance is given to abattoir owners with the implementation and application of Food Safety Management Systems (FSMS/HMS) at all abattoirs, to ensure good manufacturing practices during slaughtering of food animals.

Assistance is also given with the implementation of Hygiene Assessment Systems (HAS) at all abattoirs in the Province and verification of the scores and monitoring of the corrective action taken, to bring all abattoirs up to standard.

- Extension practices:

Determine through consultation the slaughtering needs of communities and render technical assistance for the establishment of new abattoirs and upgrading of existing abattoirs to meet these needs and thus adding value to food production.

Promotion of primary and preventative human health by initiating control programs involving relevant governmental and non-governmental agencies, through the prevention of animal diseases transmissible to humans (zoonotic diseases), with emphasis on Tuberculosis, Brucellosis, internal parasites (tapeworms) and food poisoning (Salmonella).

- **Administrative functions**

Collection of data; process monthly slaughter returns from abattoir owners to provide data of numbers of animals slaughtered and to report on disease incidence.

Compile and submit reports, letters and notices regarding routine abattoir inspections; audits at abattoirs and sterilising plants and correspondence to role players as required.

Provide inputs to the operational plan/regulations and policies for Veterinary Public Health.

Register and issuing of registration certificates to all abattoirs complying with the provisions of the Meat Safety Act.

Registration of persons performing meat inspection services at abattoirs.

Registration of facilities approved as sources for the export of hides and skins.

- **Export control**

Inspection of meat and dairy products and verification of accompanying documentation for compliance, for export to various African countries.

Auditing of export facilities for compliance (abattoirs, cutting plants, sources for hides and skins).

Monitoring the culling of animals for the export market to ensure that the game harvesting processes, game meat inspections and equipment, comply with national and international standards/requirements.

- **Procedures to follow when applying to build a new abattoir.**

Contact the office of the sub-directorate: Veterinary Public Health of the Department of Agriculture. Discuss your intentions and plans. The procedures to follow will be discussed with the applicant in detail by a Veterinary Public Health Officer (VPHO). A site inspection will also be arranged with the applicant after the consultation.



Water Analysis

Water samples are analysed at the department's headquarters at Elsenburg. For more information visit [**www.elsenburg.com/analytical-services/**](http://www.elsenburg.com/analytical-services/) or email [**raynette.topley@westerncape.gov.za**](mailto:raynette.topley@westerncape.gov.za)

Winemaking

The majority of South Africa's winemakers receive their training at Elsenburg Agricultural Training through the Cellar Technology and Cellar Management programmes.

World Food Day

The Food and Agriculture Organisation (FAO) of the United Nations was founded on 16 October 1945, after World War II. FAO continues to lead the annual World Food Day global celebrations, which has become the most celebrated event in the UN calendar. Each WFD has a different theme.

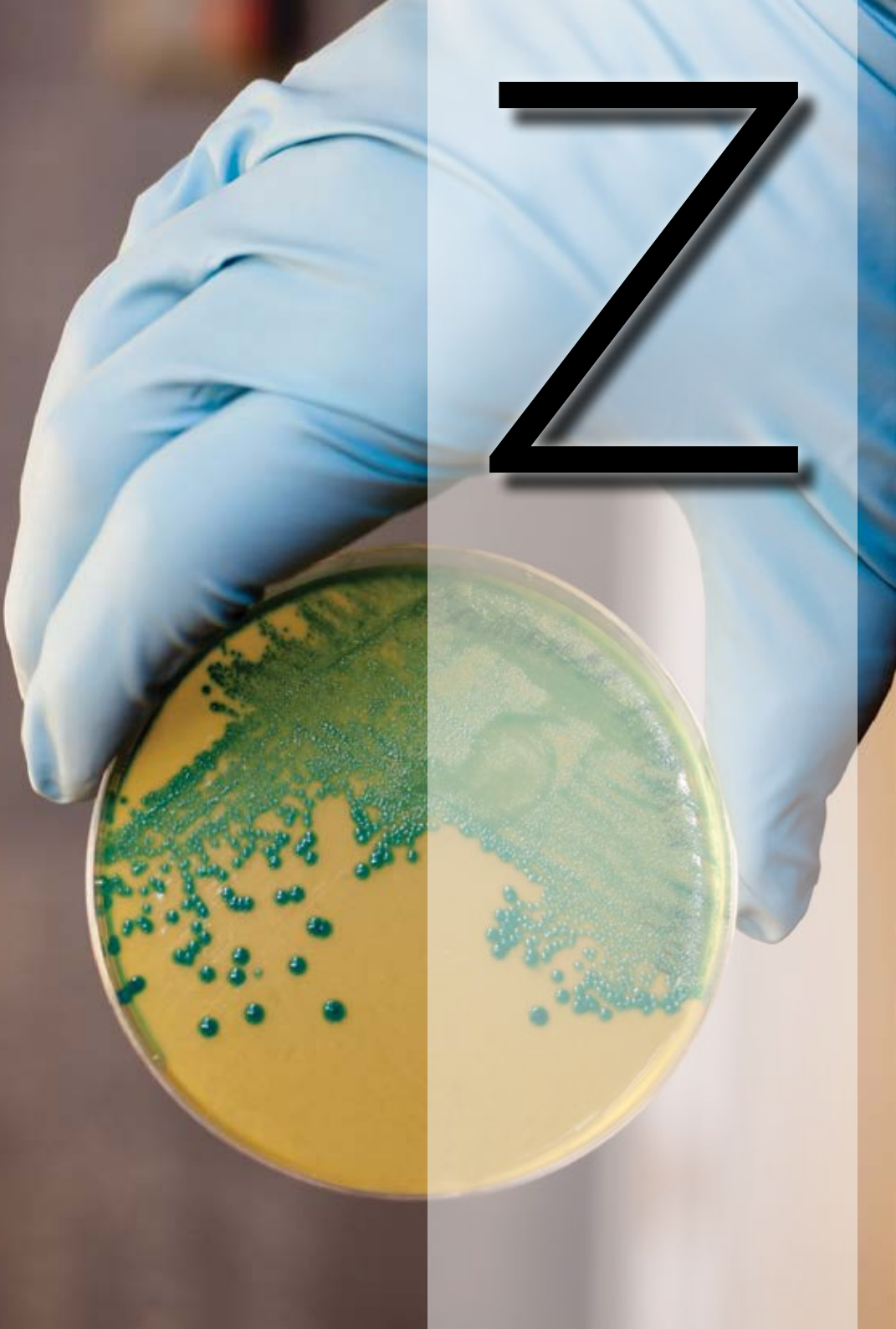
The WCDoA focuses on a different town each year. Food gardens are established in communities (e.g. school, church and household gardens), as well as chicken coops. In addition, fruit trees are planted and a "food mountain" is handed over to pre-identified beneficiaries in the identified community. This is part of the WCDoA's drive as the provincial government to provide residents with opportunities for self-reliance and dignity through opportunities to supplement their food needs.



Young Professional Persons (YPP) Programme

The programme is an affirmative action program to specifically empower previously disadvantaged individuals from the following designated groups: Black, Coloured, Indian, females (White females included) and people with disabilities, who have been accepted by a recognised Higher Education Institution for Masters, Honours or Doctorate, through the gaining of experience and mentorship in obtaining their qualification in the scarce and critical skills.

Z



Zoonotic Diseases

Diseases transmitted from animals to humans. A zoonosis (zoonotic disease or zoonoses – plural) is an infectious disease that is transmitted between species from animals to humans (or from humans to animals). The Programme: Veterinary Services is responsible for managing animal diseases and risks to prevent it from getting out of control and infecting humans.

Western Cape Department of Agriculture
Private Bag X1
Elsenburg
7607 | South Africa
Tel: 021 808 5111 | DOA.info@westerncape.gov.za
www.elsenburg.com | www.westerncape.gov.za



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