

## PREFACE

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We live in a dynamic world, ever changing with continuous new developments and innovations. Grootfontein is a dynamic agricultural college not afraid to rise to these new developments and innovations. The Grootfontein College of Agriculture faced its challenges successfully during 2013 and grew its capacity to present relevant and quality agricultural education and training.

During 2013 the Grootfontein College of Agriculture confirmed its status as a leading agricultural college by setting the pace with the Competency Based Learning (CBL) curriculum review process. The CBL curriculum review process was completed in October 2013 and the new curriculum will be phased in from 2014.

Negotiations with the University of the Free State resulted in an agreement that a joint B.Agric. degree should be developed by the two institutions. This process is subject to the completion and finalisation of the CBL curriculum.

In anticipation of the implementation of the Norms and Standards for Agricultural Training Institutes, other focus areas for the College were Quality Assurance and Policy Development.

AgriSETA and the colleges of agriculture continued with discussions to formalise an improved working relationship between these institutions to the benefit of both.

The student body functioned well with a number of events on academic, sport and social spheres.



*Non sibi sed patriae*  
*“Not for ourselves but for our fatherland”*

# CHAPTER 1

## INTRODUCTION

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### 1.1 Strategic position

The Grootfontein College of Agriculture is the training division of the larger Grootfontein Agricultural Development Institute (GADI) of the Department of Agriculture, Forestry and Fisheries (DAFF).

The vision of the College is to be a world-class centre in training, research and extension in small stock and agricultural production in semi-arid to arid agro-ecological zones.

The mission of the College is to provide world-class agricultural education and training by highly skilled lecturers.

The objective of the Grootfontein College of Agriculture is to provide vocational agricultural training in order to prepare students for a career in farming and related occupational fields, with particular emphasis on small stock production and farming in the arid to semi-arid agro-ecological zones of South Africa. In the process the College aims to contribute towards household food security and widespread wealth creation within rural communities.

The College aims to:

- Provide formal vocational training in agriculture in the Higher Education band of the National Qualifications Framework (NQF), in order to produce suitably qualified and equipped people, in accordance with requirements for farming and agricultural development work in the technical occupational divisions, with emphasis on the extensive small stock farming areas and the semi-arid to arid agro-ecological zones of South Africa.
- Provide appropriate training programs to satisfy the requirements of the farming sector, educators and development agencies.
- Provide formal and informal training in the Further Education and Training band of the NQF to meet the training needs of the farming communities, Land Reform beneficiaries and development agencies.
- Provide informal training in the General Education and Training band of the NQF to meet the training needs of the farming communities, Land Reform beneficiaries and farm workers who are illiterate.
- Identify the need for training at ground level and to provide custom-designed extra-curricular courses for special interest groups.

- Provide the necessary institutional, infrastructural, financial and administrative support services to effectively support teaching and learning.

The primary beneficiaries of the GADI training program are farmers. The farmers are categorised into three groups, namely subsistence, smallholder and commercial farmers. The majority of the client farmers are in the Eastern, Northern and Western Cape provinces, but client farmers from the rest of the country are not excluded.

Learners are the next important group of clients and include learners in the Higher Education program who study for a qualification on NQF level 6, learners in the Further Education and Training program who do skills training on NQF level 2 - 4 and learners who participate in the skills development program outside the NQF framework. Together with farmers, learners are seen as the primary focus of GADI's work. They justify GADI's existence.

The Provincial Departments of Agriculture are also important clients. These Departments of Agriculture provide most of the prioritisation of the work that GADI undertakes. They set the agenda for training and research by identifying needs for both training and research. The wool, mohair and meat industries form another group of GADI's clients. They are the sector that uses the products of small stock farming. District and local municipalities form the last important client group of GADI. Partnerships in development at the local level are one of the key benefits coming from these clients. GADI supports farmer development programs of the municipalities.

The above is in line with the Norms and Standards for Agricultural Training Institutes and the Agricultural, Forestry and Fisheries Education and Training Strategy.

## **1.2 Staffing**

The staffing situation for 2013 was stable and during the year all functions could continue. GADI is committed to ensure that the posts critical for the education and training program must at all times be filled. A number of engagements with senior officials of DAFF was held to secure funding for the critical and unfunded vacant posts at GADI. The Agricultural Economics Department is not fully functional in the absence of the Head of Department (HOD) and a second agricultural economist. The Pastures and Crops Department is managed by an acting HOD and the post of the Crop Production lecturer is also vacant. The Agricultural Technical Skills department needs a manager who can manage the department and present subjects such as Irrigation. In the case of unfilled lecturing positions, contractors were appointed to present these subjects. Two young professionals are still in the Young Professional Development Program and are exposed to lecturing and research work. A librarian was appointed during 2013 and she accepted her responsibilities with great enthusiasm. Beauty Mokgwamme and Lana Prinsloo were both accredited as presenters of the

“Spingbok Head” course. Some staff members are busy with furthering their studies and some have completed short courses as part of their skills development.

The agricultural colleges and DAFF are working on an organogram to standardise the organisational structures for agricultural training institutes across all the provinces. This includes the development of job descriptions and post levels. This exercise may result in a better dispensation for lecturing staff at agricultural colleges.

The qualifications and field of expertise of the lecturing staff are given in Table 1 and the management and academic support staff are listed in Table 2.

**Table 1:** Academic staff of the Grootfontein College of Agriculture during 2013

Name	Qualification	Lecturing field
<b>Animal Production</b>		
Greeff H.	B.Sc.Agric.Hons.	Angora goats & mohair
Hoon J.H.	M.Sc.Agric.	Animal nutrition
King B.R.	M.Tech.	Animal production
Lee K.	M.Sc.Agric., PGDTE	Small stock production
Letsoalo P.T.	B.Agric.Hons.	Pasture science
Mashinini I.	M.Sc.Agric	Animal breeding
Mokgwamme B.N.	Dipl.Agric.	Wool & mohair practical
Mukwevho H.L.	B.Sc.Agric.	Nutrition & dairy cattle
Olivier W.J.	M.Sc.Agric.	Animal breeding
Pretorius A.P.	Dipl.Agric.	Equine studies, small stock practical & meat processing
Prinsloo L.	Dipl.Agric.	Wool & mohair practical
Van Heerden W.J.	Dipl.Agric	Sheep practical
Van Rooyen J.A.	M.Med.Vet., M.B.A., M.S.A., PGDTE	Animal health
Viljoen J.V.	B.V.Sc.	Animal health
<b>Agricultural Management</b>		
Marais P.G. *	Ph.D.	Agricultural extension
Van der Vyver I.W.*	M.S.A., LL.B.	Personnel management
Van der Walt A.S.J.	B.Sc.Agric.Hons.	Agricultural management & Agricultural law studies
Van Heerden J.	Dipl.CAP.	Computer use
<b>Pastures and Crops</b>		
Bekker A.*	M.Sc.Agric.	Crop Production
Du Toit J.C.O.	M.Sc.Agric	Cultivated pastures
Sekwadi K.P.	B.Sc.Agric.	Small stock production
Schoonraad C.J.S.	B.Sc.Agric.	Crop production
Van den Berg L.	Ph.D.	Botany
Van Eeden D.G.*	M.Sc.	Environmental management
Van Lingen M.	B.Sc.Agric.Hons.	Pasture science & Game farming
<b>Agricultural Technical Services</b>		
Esterhuyse P.	Mechanical Diploma	Mechanics & implements
Herrmann R.H.	Welding Diploma, N4	Welding & metal work
Kyzer Q.E.	N3	Carpentry & building science

\* Contractor

**Table 2: Management and administrative staff**

Name	Designation	Responsibility
<b>Management</b>		
Herselman M.J.	Director: GADI	Strategic leadership of GADI
Schoonraad C.J.S.	Principal	Manage training programs
Elie A.	Deputy-director: Support Services	Manage support services to College & Research
Mapekula M.	Deputy-director: Animal Production	Head of Animal Production Department
Oosthuizen J.J.	Communication officer	Internal & external communication
Tshikungulu A.A.	Assistant-director: Administration	Manage administration
Van den Berg L.	Acting Deputy-director : Pastures and Crops	Head of Pastures and Crops Department
<b>Administrative staff</b>		
Kitching E.	Administrative officer	Procurement, typing, alumni & museum
Pollock M.G.	Examination officer	Academic administration
Schoeman A.D.	Student liaison officer	Recruitment, SRC & sport
Van der Merwe M.	Student administrative officer	Student administration

The terms of reference for the Advisory Board of Grootfontein was submitted to DAFF and once approved the first Advisory Board of the College will be appointed.

### 1.3 Accreditation

The Diploma in Agriculture at NQF6 remains accredited by the Higher Education Quality Committee (HEQC) of the Council for Higher Education (CHE). The program approval by AgriSETA for the NQF2-4 training program expires in 2014.

The College participates in the Quality Assurance Community of Learning and Action (COLA) of the Transformation of Agricultural Colleges into Agricultural Training Institutes (TACATI) project. A training session on quality assurance, presented by a board member of the CHE, was attended by three members of the Academic Committee of Grootfontein. Some work has been done to develop a quality assurance guideline for colleges. A culture of quality assurance will be established at Grootfontein since it forms a critical part of any accreditation process.

### 1.4 Transformation

The College Revitalisation Plan (CRP) forms part of the transformation of Agricultural Colleges into Agricultural Training Institutes (ATI's). The Department of Agriculture, Forestry and Fisheries (DAFF) secured a budget from Treasury for the recapitalisation of agricultural colleges to meet the requirements of the Norms and Standards for ATI's. Grootfontein was granted R6,8 million for 2013/14 and R6,8 million for 2014/15.

High level negotiations between DAFF and the Department of Higher Education and Training (DHET) were held to discuss the transfer of Agricultural Colleges to the DHET. Successful negotiations were held with the University of the Free State (UFS). The end result is that a joint B.Agric. degree may be presented at Grootfontein in the near future.

### **1.5 Infrastructure and equipment**

After the first two maintenance projects under the control of the Public Works Department (PWD) were completed, the infrastructure at GADI is generally in a very good condition. In addition, some minor infrastructure projects were also completed through the year. Two new projects have been registered with PWD for the upgrading of the water reticulation network and the sewerage system. A business plan for the expansion of the Grootfontein Campus has been submitted to DAFF to incorporate in their medium term planning as part of the Presidential infrastructure development plan.

A 65-seater bus and two mini busses, books, journals and technical literature, as well as numerous other types of equipment were obtained through the Economic Competitive Support Program (ECSP) from DAFF.

With the donor funding from the NUFFIC project more practical equipment for student training, kitchen appliances and blinds for the hostel to the value of about R1 million were procured.

### **1.6 Academic program**

As part of the Transformation of Agricultural Colleges into Agricultural Training Institutes (ATI's), Grootfontein finalised its Competency Based Learning (CBL) curriculum review process. A number of CBL workshops and meetings were conducted as part of the CBL review roadmap for GADI. The approved CBL curriculum is more market orientated. Quality and employability are the main focuses in responding to the priorities of modern agriculture. The curriculum is based on an integration of subject fields, sustainability and competencies of successful farmers. The new CBL curriculum is described in Chapter 2 of this Training Report. Special recognition for leading the CBL review process needs to be given to Dr Johan van Rooyen who spent many hours in the process and guided the academic staff to ensure that a functional and relevant curriculum was developed.

Through NICHE and the TACATI project a number of sub-projects was identified to align College policies, procedures and regulations, to develop an Integrated Information Management System, to develop a quality assurance framework and to develop a Further Education and Training Curriculum for all Colleges of Agriculture. All these are in support of the transformation of Agricultural Colleges into Agricultural Training Institutes.

## CHAPTER 2

### HIGHER EDUCATION PROGRAM

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#### 2.1 Diploma in Agriculture

##### 2.1.1 Aim

The general aim of this study program is to provide training for market-orientated producers in the practical application of functional knowledge, production techniques, agricultural management principles and practices in the field of small stock production, and production in the semi-arid to arid agro-ecological zones of South Africa. The final year of this instructional program aims to develop the student's capacity for integrated decision-making in a sustainable production system.

The program is designed to:

- (a) Facilitate the integration of interdisciplinary teaching and management of production systems
- (b) Allow for intensification of the theoretical knowledge base, technical skills and practical applications
- (c) Provide for a degree of diversification from the small stock focus through broadening of the subject matter base.

##### 2.1.2 Objectives

- (a) To provide training in the following fields of study:
  - The principles and practices of animal production and health, genetics, nutrition, wool production, meat and milk production and mohair production
  - Principles of large stock and game production
  - Agricultural management
  - Natural resource management
  - Principles of crop and fodder production
  - Agricultural technical skills - principles and techniques
  - Human resource management and agricultural laws
  - Information management systems.
- (b) To provide the students with functional knowledge and understanding of the subject matter and its application in the production process.
- (c) To teach practical skills in order to carry out farming production operations effectively.

- (d) To enable the students to undertake development and maintenance work at farm level.
- (e) To provide the students with basic knowledge and practical skills needed for the development of their managerial abilities as market orientated producers.
- (f) To establish an interdisciplinary approach.
- (g) To impart knowledge and skills and to develop attitudes necessary for understanding and appreciating the agricultural production process in relation to ecosystems and their constituent interacting components, in order to achieve optimum resource utilisation for sustained maximum agricultural production.
- (h) To develop knowledge and proficiency in the necessary skills required for market related production in specific farming enterprises.
- (i) To enable students to apply innovative thinking skills advanced technology and problem-solving abilities in the production system process.
- (j) To combine knowledge and skills from different subjects into a holistic approach to ensure sustainable agricultural production.
- (k) To teach knowledge and skills and to develop attitudes necessary for understanding and appreciating the needs and demands of an evolving agricultural environment and global challenges posed by open and competitive markets.

### **2.1.3 Teaching methodology**

The Diploma in Agriculture as a whole consists of approximately 60% theoretical training and 40% practical training, self-study and group work. An 80% class attendance is required. Students are assessed by means of written or oral examinations, tests, assignments and tutorials, or on a basis of continuous assessment, project reports or seminars. Students have to pass all subjects in order to qualify for the Diploma in Agriculture.

Students presented seminars in production units, feedlot management and agricultural management courses that were of a very high standard. Various academic and study tours were undertaken to, amongst others, the wool and mohair industry in Port Elizabeth, the Nampo Harvest Day, the game industry in the Eastern Cape and to the Tsitsikamma. Various short courses were presented by breeders' organisations to ensure the first-hand transfer of knowledge of the various breeds to the students.



The instructional program of 2013 for the Diploma in Agriculture is given in Table 3.

**Table 3:** The Instructional Program for the Diploma in Agriculture

Year of Study	Sem	Subjects			Credits
		Code	Title	Content	
1	1	KTW111	Small Stock Production IA	Wool histology, physical & chemical properties of wool	10
		TEL111	Animal Breeding I	Basic breeding & genetic principles	10
		VOE111	Animal Nutrition I	Basic nutrition	10
		DGE111	Animal Health IA	Anatomy & physiology	10
		LBS111	Agricultural Management IA	Agricultural management	10
		PLK111	Botany I	Botany	10
		GRK111	Soil Science I	Soil physics, chemistry & biology	10
		VBS111	Veld Management	Introductory pasture science	10
		ATS110	Agricultural Technical Services IA	A: Building science and carpentry B: Mechanics C: Arc welding D: Fences	15
		RKG110	Computer Use IA	Computers & programs	5
				<b>100</b>	
1	2	KTA121	Small Stock Production IB	Angora goats theory	10
		KTB121	Small Stock Production IC	Sheep management – wool, mutton & dual purpose breeds	10
		DGE121	Animal Health IB	Handling of farm animals & farm operations	10
		LBS121	Agricultural Management IB	Agricultural management	10
		PBS121	Personnel Management I	Contracts, duties & labour relations	10
		GWP121	Crop Production I	General crop production, pest & plague control	10
		ATS120	Agricultural Technical Services IB	A: Electricity on the farm B: Windmills C: Farm dams, surveying & soil conservation D: Blacksmithing & gas welding E: Implements	15
		KPW120	Small Stock Practical IA	Wool classing & shearing	10
		KPS120	Small Stock Practical IB	Sheep practical	10
		RKG120	Computer Use IB	Computers & programs	5
				<b>100</b>	
				<b>200</b>	

Year of Study	Sem	Subjects			Credits	
		Code	Title	Content		
2	3	KTW231	Small Stock Production IIA	Wool processing, marketing & textile fibres	10	
		DGE231	Animal Health II	Diseases, symptoms & control	10	
		GVV231	Large Stock Production IA	Beef cattle	10	
		LBS231	Agricultural Management IIA	Agricultural management	10	
		LBR231	Agricultural Law Studies I	Agricultural laws	10	
		VBS231	Veld Management IA	Pasture science	10	
		KPA230	Small Stock Practical IC	Angora goats	10	
		KPV230	Small Stock Practical IE	SA Mutton Merino, Boer goat, Vermin control, Drakensberger cattle	5	
		KPW230	Small Stock Practical IIA	Wool classing (registration)	10	
		KPS270	Small Stock Practical IIB	Merino ewes	5	
		RKG230	Computer Use IC	Computers & programs	5	
		<b>Options (1 of the following)</b>				
		GVM231	Large Stock Production IB	Dairy cattle & dairying	10	
		GVP231	Large Stock Production IC	Horse care & handling, pigs & ostriches	10	
				<b>105</b>		
2	4	TEL241	Animal Breeding II	Breeding	10	
		VOE241	Animal Nutrition II	Nutrition	10	
		KTA241	Small Stock Production IIC	Angora goats	10	
		LBS241	Agricultural Management IIB	Agricultural management	10	
		VBS241	Veld Management IIB	Pasture science	10	
		GWA241	Crop Production IIA	Cultivated pastures	10	
		GWB241	Crop Production IIB	Irrigation	10	
		KPB240	Small Stock Practical ID	Mohair classing	10	
		KPV240	Small Stock Practical IF	Junior Dorper judging course, Dohne Merino course	5	
		KPS270	Small Stock Practical IIB	Merino rams	5	
		RKG240	Computer Use ID	Computers & programs	5	
				<b>95</b>		
				<b>200</b>		

Year of Study	Sem	Module			Credits
		Code	Title	Content	
3	5	VOE350	Animal Nutrition III	Nutrition feedlot project	10
		DPD370	Animal Production IIIA	Production units	15
		DPP350	Animal Production Practical IIIA	Large stock pregnancy diagnosis, small stock AI, Senior Boer goat course	10
		LBS370	Agricultural Management IIIA	Integrated farm planning	15
		LBE370	Agricultural Management IIIB	Entrepreneurship	5
		LBV351	Agricultural Extension IA	Agricultural extension	10
		OMG351	Environmental Management IIIA	Environmental management	20
		RKG350	Computer Use IIA	Applied software	5
		TEL370	Animal Breeding III	Applied breeding & stud management	10
		VVW370	Meat Processing I	Meat processing	5
		SVW370	Dairy Processing I	Dairy processing	5
				<b>110</b>	
3	6	DPD370	Animal Production IIIA	Production units	15
		DPP360	Animal Production Practical IIIB	Large stock AI, Senior Dorper judging course	10
		LBS370	Agricultural Management IIIA	Integrated farm planning	15
		LBE370	Agricultural Management IIIB	Entrepreneurship	5
		LBV361	Agricultural Extension IB	Agricultural extension	10
		RKG360	Computer Use IIB	Applied software	5
		TEL370	Animal Breeding III	Applied breeding & stud management	10
		WBR361	Game Farming IB	Game farming	10
		VVW370	Meat Processing I	Meat processing	5
		SVW370	Dairy Processing I	Dairy processing	5
				<b>90</b>	
				<b>200</b>	

## 2.2 Competency Based Learning Curriculum

The Competency Based Learning (CBL) curriculum review process was completed to the extent that the new CBL curriculum of Grootfontein will be phased in from 2014. This was an exhaustive process requiring a lot of time, energy and perseverance. However, at the end of the day a curriculum to be proud of was developed and the new curriculum will facilitate learning by the students more effectively. This curriculum will ensure that the graduating student will have gained all the competencies, knowledge, skills and attitudes to become a successful farmer or advisor. A number of NQF 7 credits were incorporated into the curriculum to add more value to the qualification. Students will be stimulated to apply their minds, explore, investigate, discuss, take responsibility and do it themselves.

Although the curriculum was approved some growing pains may yet be experienced and some adjustments to streamline it may be needed during implementation over the next three years.

This CBL curriculum review process is part of the Competency Based Learning COLA for Higher Education programs of agricultural colleges. This is in turn part of the TACATI project that is a joint venture between DAFF and a Dutch consortium.

Grootfontein is the only college of all the colleges that participated in the CBL COLA that succeeded to develop a new curriculum. The CBL curriculum is given in Table 4.

**Table 4:** CBL curriculum to be phased in from 2014

Year of Study	Sem	Module			Credits
		Code	Title	Content	
1	1	ABI111	Agricultural Biology 1	Biology of farm animals, plants and micro-organisms	6
		ABG111	Animal Breeding 1A	Ecology of farm animals	6
		ACH111	Agricultural Chemistry 1	Introduction to organic and inorganic chemistry and application in agriculture	6
		WSP111	Wool Production 1A	Introduction to wool production	6
		MHP111	Mohair Production 1A	Introduction to mohair production	6
		MMP111	Meat & Milk Production 1A	Introduction to mutton, goat meat and milk production	6
		NRM111	Veld Management 1A	Introduction to veld management	6
		AGR111	Soil Science 1	Introduction to soil as a natural resource	6
		ATS111	Agricultural Technical Skills 1A	A: Building construction, hand tools and practice B: Welding science and practice C: Motor mechanics D: Control of fire, occupational health and safety	6
		SBM111	Agricultural Management 1A	Introduction to agricultural economy	5
		IMS110	Information Management Systems 1A	Introduction to general computer terminology and uses	3
					<b>62</b>
1	2	AHM121	Animal Health 1	Animal diseases	5
		ABG121	Animal Breeding 1B	Genetics	5
		NUT121	Animal Nutrition 1	Feeds and rations	5
		WSP121	Wool Production 1B	Wool industry and farming systems	6
		MHP121	Mohair Production 1B	Mohair industry and farming systems	6
		MMP121	Meat & Milk Production 1B	Meat, mutton and milk industry and farming systems	6
		NRM121	Veld Management 1B	Terminology and growth cycles	6
		AGR121	Crop Production 1	Introduction to cultivated pastures and production	6
		ATS121	Agricultural Technical Skills 1B	A: Fence making B: Electricity on the farm C: Windmill maintenance D: Introduction to soil conservation	6
		HRM121	Human Resource Management 1	Personnel management	5
		SBM121	Agricultural Management 1B	Marketing of agricultural products	5
		IMS120	Information Management Systems 1B	Advanced word processing and spreadsheets	3
					<b>64</b>
					<b>126</b>

Year of Study	Sem	Module			Credits
		Code	Title	Content	
2	3	AHM231	Animal Health 2A	Animal husbandry	5
		ABG231	Agricultural Calculations 1	Calculations in animal production	3
		AIR231	Artificial Insemination 1	Artificial insemination in small ruminants	3
		NUT231	Animal Nutrition 2B	Feeding practices	3
		WSP231	Wool Production 2A	Wool theory and genetics. Wool and sheep classing	10
		MHP231	Mohair Production 2A	Mohair theory & genetics. Mohair classing	6
		MMP231	Meat & Milk Production 2A	Judging courses, product classes and standards	6
		NRM231	Veld Management 2A	Grazing systems	6
		AGR231	Crop Production 2A	Crop production under irrigation	6
		ATS231	Agricultural Technical Skills 2A	Tractors and implements	6
		SBM231	Agricultural Management 2A	Financial statements	5
		AGL231	Agricultural Law 1	Laws applicable to agriculture	5
		IMS230	Information Management Systems 2A	Advanced word processing and spreadsheets	3
					<b>67</b>
2	4	AHM241	Animal Health 2B	Livestock health and production plans	6
		ABG241	Animal Breeding 2B	Genetic improvement and selection	6
		NUT241	Animal Nutrition 2B	Fodder flow planning	5
		WSP241	Wool Production 2B	Production cycles and production plans	6
		MHP241	Mohair Production 2B	Production cycles and production plans	6
		MMP241	Meat & Milk Production 2B	Production cycles and production plans	6
		NRM241	Veld Management 2B	Veld management & farm planning	6
		AGR241	Crop Production 2B	Irrigation systems	6
		ATS241	Agricultural Technical Skills 2B	Applied agricultural technical skills	6
		SBM241	Agricultural Management 2B	Financial record keeping	5
		IMS240	Information Management Systems 2B	Presentations	3
					<b>61</b>
					<b>128</b>

Year of Study	Sem	Module			Credits
		Code	Title	Content	
3	5	AHP301	Animal Health 3	Applied flock health and production	4
		ABG301	Animal Breeding 3	Applied breeding	4
		NUT351	Animal Nutrition 3A	Nutrition in practice	5
		WSP350	Wool Production 3A	Practical farming with wool sheep	3
		MHP350	Mohair Production 3A	Practical farming with Angora goats	3
		MMP350	Meat & Milk Production 3A	Practical farming with meat, mutton and milk producing small stock. Meat and milk processing	8
		NRM351	Natural Resource Management 3A	Global applications.	6
		SBM370	Agricultural Management 3	Integrated farm planning and management	5
		AEX351	Agricultural Extension 1A	Communication processes and skills	4
		APU370	Agricultural Production Units 3	Planning, and management of and reporting on an agricultural production unit	11
					<b>53</b>
3	6	AHP301	Animal Health 3	Integrated industry case studies	6
		ABG301	Animal Breeding 3	Farm case studies with the emphasis on breeding and genetics	4
		NUT361	Animal Nutrition 3B	The interrelatedness of human health, animal health, human and animal nutrition	5
		WSP360	Wool Production 3B	Practical farming with wool sheep	4
		MHP360	Mohair Production 3B	Practical farming with Angora goats	4
		MMP360	Meat & Milk Production 3B	Practical farming with meat, mutton and milk producing small stock. Meat and milk processing	8
		NRM361	Natural Resource Management 3B	Sustainable resource management case studies and applications	6
		SBM370	Agricultural Management 3	Integrated farm planning and management	5
		AEN361	Agricultural Entrepreneurship 1	Business plans, markets and practical entrepreneurship project	5
		AEX361	Agricultural Extension 1B	Extension methods and leadership	4
		APU370	Agricultural Production Units 3	Planning, and management of and reporting on an agricultural production unit	12
					<b>63</b>
					<b>116</b>
					<b>370</b>

### 2.3 Recruitment

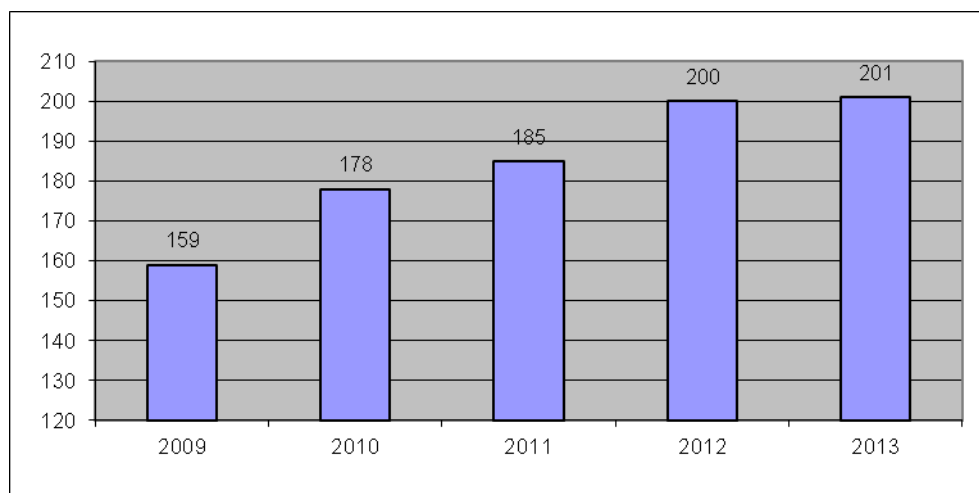
An extensive recruitment campaign in the small stock farming areas and semi-arid to arid agro-ecological zones of South Africa was launched during 2013 for the 2014 academic year. About 90% of the learners that visited the career exhibitions were from black communities. The aim of the recruitment campaign was to expose learners to agriculture, more specifically to small stock production and related occupations. During this campaign approximately 20 000 learners had the opportunity to find out more about the courses that Grootfontein offers.

### 2.4 Admission

There were 186 applications were received for the first year of the Diploma in Agriculture program of 2013. Students are admitted after qualifying on a modified Swedish system. A total of 120 first year students were admitted for the 2013 academic year. Restrictions in the available practical facilities place a limitation on the number of students that can be admitted. However, not all the admitted students registered as some of them withdrew at the last moment or simply did not register. Only 81 of the admitted first-year students were registered.

Applications were received from 105 black students and 81 white students during 2013.

The total number of students who registered from 2009 to 2013 is shown in Figure 1.



**Figure 1:** Student numbers from 2009 to 2013



From Figure 1 it is evident that the qualification that Grootfontein offers is in high demand. It is expected that the student number will stabilise around 200 due to physical limitations such as accommodation, lecture halls, practical equipment and material.

## 2.5 Results

The results of the subjects presented during 2013 are shown in Table 5. The students are required to pass all the subjects to qualify for the Diploma in Agriculture.

**Table 5:** Student academic statistics for 2013

Subject	Enrolled	Passed	Pass Rate (%)	Subject	Enrolled	Passed	Pass Rate (%)
KTW111	78	66	85	KTA121	71	71	100
TEL111	78	70	90	KTB121	72	71	99
VOE111	77	69	90	DGE121	71	70	99
DGE111	77	69	90	LBS121	72	66	91
LBS111	77	72	94	PBS121	72	67	93
PLK111	81	62	77	GWP121	73	72	99
GRK111	86	61	71	ATS120	82	69	84
VBS111	88	61	69	KPW120	70	70	100
ATS110	86	48	56	KPS120	70	70	100
RKG110	76	76	100	RKG120	70	70	100
KTW231	60	57	95	TEL241	60	60	100
DGE231	61	58	95	VOE241	60	60	100
LBS231	67	66	99	KTA241	59	59	100
LBR231	65	64	98	LBS241	58	58	100
VBS231	70	57	81	VBS241	69	60	87
KPA230	60	60	100	GWA241	64	50	78
KPV230	62	60	97	KTV241	61	59	97
KPW230	59	58	98	GWB241	58	53	91
RKG230	60	60	100	KPB240	59	58	98
GVV231	60	59	98	RKG240	59	59	100
GVM231	37	35	95	KPV240	61	56	92
GVP231	25	24	96	KPS270	60	60	100
VOE350	59	58	98	WBR361	59	59	100
DPP350	61	58	98	DPD370	59	55	93
LBV351	59	58	98	LBS370	59	58	98
OMG351	52	61	98	LBE370	59	59	100
RKG350	59	59	100	DPD370	59	55	93
TEL370	59	59	100	DPP360	60	60	100
LBE370	60	60	100	LBV361	59	59	100
VVW370	59	59	100	RKG360	59	59	100
SVW370	59	57	97				

From Table 5 it is evident that the academic performance of the students for 2013 was satisfactory.

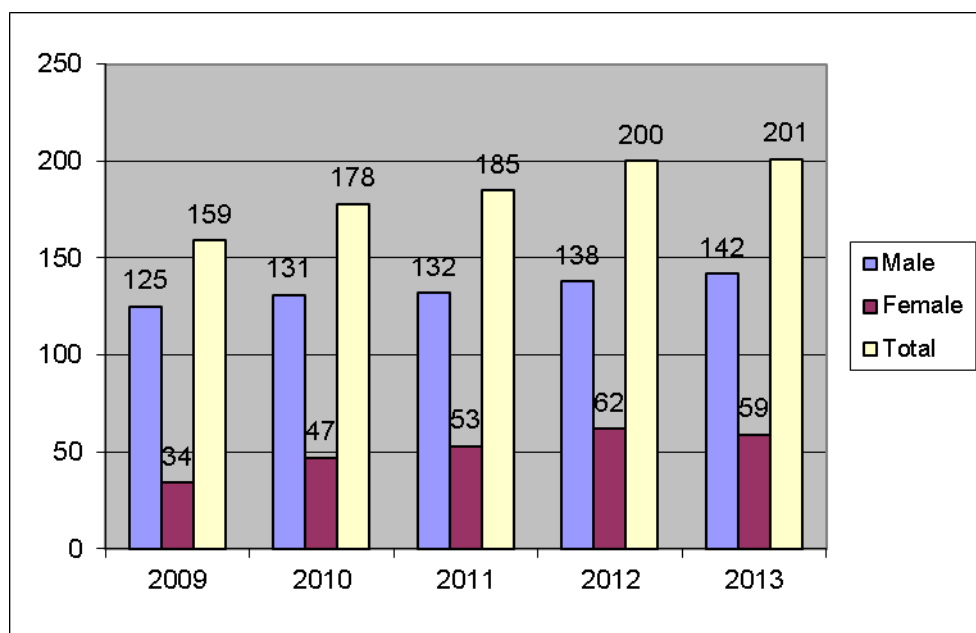
## 2.6 Statistics for 2013

The student numbers, according to gender and population group from 2009 to 2013, are given in Table 6.

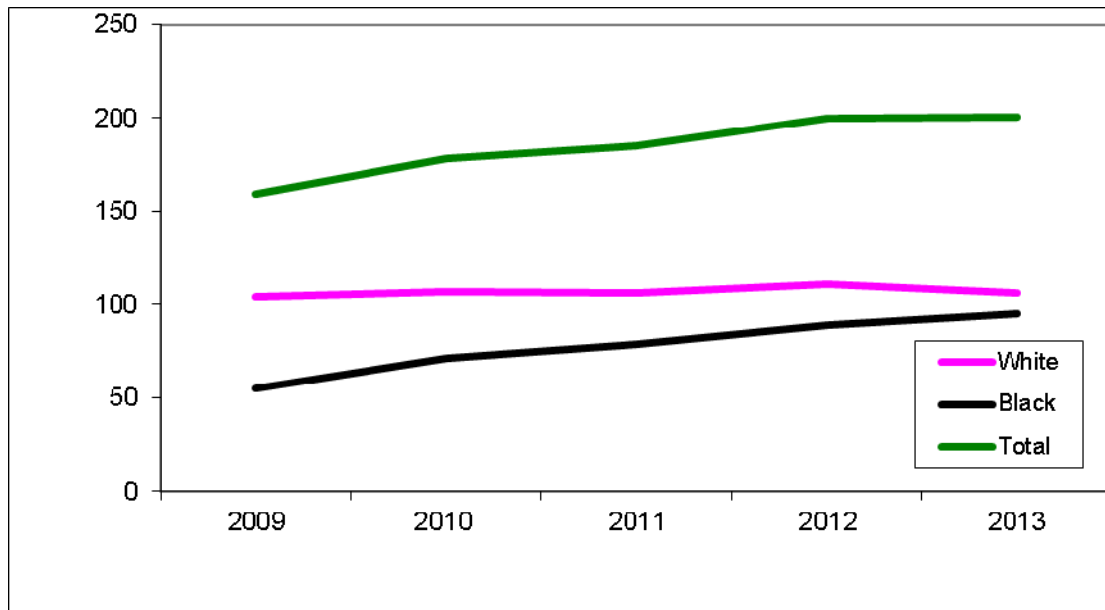
**Table 6:** Student numbers per gender and population group for 2009 to 2013

Gender	Population group	Number per year				
		2009	2010	2011	2012	2013
Male	Black	37	45	47	48	54
	White	88	86	85	90	88
	<b>Sub-total Male</b>	<b>125</b>	<b>131</b>	<b>132</b>	<b>138</b>	<b>142</b>
Female	Black	18	26	32	41	41
	White	16	21	21	21	18
	<b>Sub-total Female</b>	<b>34</b>	<b>47</b>	<b>53</b>	<b>62</b>	<b>59</b>
Total	Black	55	71	79	89	95
	White	104	107	106	111	106
	<b>Total</b>	<b>159</b>	<b>178</b>	<b>185</b>	<b>200</b>	<b>201</b>

The number of black students increased again in 2013. This can be ascribed to successful recruitment of the target group and the bursaries of the Department of Agriculture, Forestry and Fisheries. The number of female students showed a slight decrease from 2012. The number of students per gender admitted from 2009 to 2013 is shown in Figure 2. The trend in student composition according to population group can be seen in Figure 3.



**Figure 2:** Student numbers by gender from 2009 to 2013



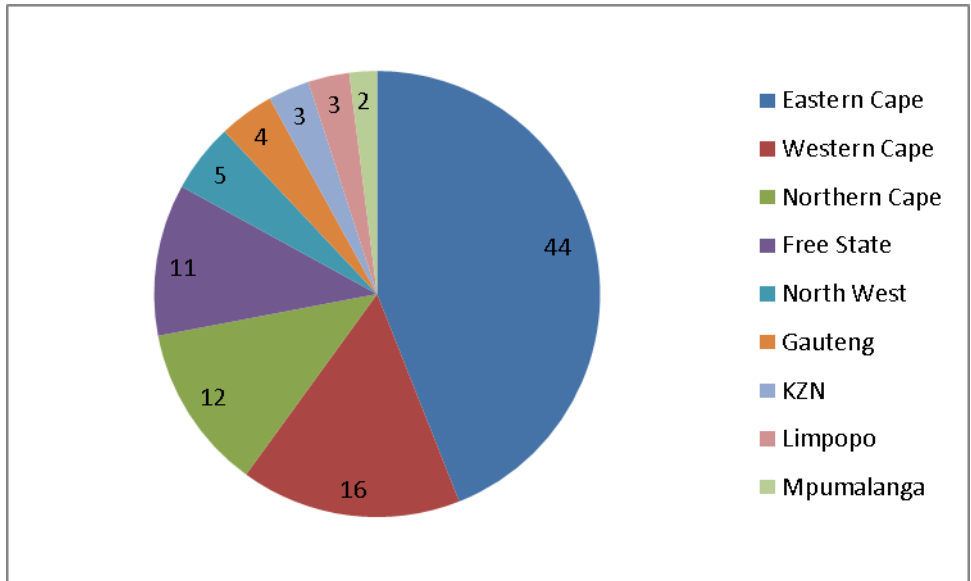
**Figure 3:** Student numbers by population group from 2009 to 2013

A summary of the total student numbers for 2013 is given in Table 7. The number is broken down into gender and population group.

**Table 7:** Total student numbers per year of study (2013)

Population Group	Year of study						Total		
	I		II		III		Male	Female	Total
	Male	Female	Male	Female	Male	Female			
<b>Black</b>	26	14	15	15	13	12	54	41	95
<b>White</b>	33	8	25	5	30	5	88	18	106
<b>Sub-total</b>	59	22	40	20	43	17	142	59	201
<b>Total</b>	81		60		60		201		

The main source of students for the Grootfontein College of Agriculture remains the extensive small stock production areas of the Eastern Cape, Northern Cape and Western Cape Provinces that contributed to 72% of the first-year applications for 2013 (Figure 4).



**Figure 4:** First-year applications for 2013 – percentage per province of origin



First-year team building 2013

In Table 8 the diplomas awarded from 2009 to 2013 are given.

**Table 8:** Diplomas awarded and the academic performance of candidates in the Diploma program from 2009 to 2013

Study Program	Year	Candidates Examined	Pass Grades			Diplomas Awarded
			Distinction	1 <sup>st</sup> grade	Pass	
Diploma in Agriculture	2009	29	2	14	12	28
	2010	55	2	22	31	55
	2011	39	3	9	25	37
	2012	60	3	11	41	55
	2013	60	0	13	44	57

Table 8 indicates that a good pass rate of 95% was obtained in the final year of the Diploma program of 2013.

In Table 9 a summary is given of the pass grades of the students who qualified for the Diploma in Agriculture.



The Dux students of the third and first years of 2013 with the principal. Ms Sophia van der Merwe, third year Dux and Mr Khanyiso Mzayifani first year Dux. Mr Frikkie van Deventer, second year Dux was absent with the photo.

**Table 9:** The pass grades of students in the Diploma in Agriculture

Name	Pass grade	Name	Pass grade
Van der Merwe A.S.	1 <sup>st</sup> class	Kemp P.	Pass
Scholtz D.	1 <sup>st</sup> class	Knoetze A.M.	Pass
Rooi K.M.	1 <sup>st</sup> class	Lambrechts N.E.	Pass
Botha M.J.	1 <sup>st</sup> class	Lombard M.J.	Pass
Claassen J.S.	1 <sup>st</sup> class	Lotter B.J.C.	Pass
De Ru J.	1 <sup>st</sup> class	Madubela Z.	Pass
Fulemeni T.	1 <sup>st</sup> class	Marais B.J.F.	Pass
Gomo Z.	1 <sup>st</sup> class	Matthysen C.S.	Pass
Le Roux J.N.	1 <sup>st</sup> class	Mbenya S.	Pass
Ntengo N.	1 <sup>st</sup> class	Mhlana N.	Pass
Ntshuntshe S.A.	1 <sup>st</sup> class	Miles M.C.	Pass
Sambokwe V.	1 <sup>st</sup> class	Moyeni Z.	Pass
Van Staden I.	1 <sup>st</sup> class	Mpangele E.	Pass
Appies A.A.	Pass	Nel J.P.	Pass
Aucamp J.A.	Pass	Prinsloo J.T.	Pass
Bezuidenhout W.C.C.	Pass	Reitz J.	Pass
Bosch J.C.	Pass	Saal B.B.	Pass
Bosch R.P.	Pass	Sawula P.	Pass
Botha M.	Pass	Schmidt L.	Pass
Copeman R.B.	Pass	Schoonwinkel P.J.	Pass
Davel J.	Pass	Serfontein F.S.	Pass
Dayimani L.	Pass	Skoti L.L.	Pass
De Beer W.S.	Pass	Smith R.	Pass
De Kock H.J.	Pass	Strauss R.	Pass
De Wet H.L.	Pass	Tlhokwe T.P.	Pass
Fouche J.A.	Pass	Uys F.P.	Pass
Gae I.	Pass	Van der Mescht S.	Pass
Hills R.	Pass	Visser J.S.	Pass
Jacobs S.	Pass		



## CHAPTER 3

### FARMER TRAINING PROGRAM

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#### 3.1 Aim

To improve the knowledge and skills of emerging farmers, Land Reform beneficiaries, farm workers and the unemployed to capacitate them to contribute to a prosperous agricultural sector and to improve their quality of life.

#### 3.2 Objective

- (a) To provide targeted skills training in:
  - Animal production
  - Pastures and crop production
  - Agricultural economics
  - Agricultural technical services
- (b) To provide beneficiaries with functional knowledge and skills in the agricultural production process.
- (c) To teach practical skills to carry out farming production operations

#### 3.3 Teaching methodology

All skills training are based on Unit Standards and learners must meet the outcomes of the Unit Standard to be declared competent. The emphasis of this training program is the mastering of specific skills and competencies. Due to the low levels of literacy of beneficiaries in many communities, training was offered at lower than FET levels in an effort to reach out to illiterate people who want to master a specific skill that would help them to generate or increase their income.

The Farmer Training Program is presented on site at the community or farm where the training is needed. Mobile training units are equipped with all the equipment and apparatus needed to present the training. Where livestock is required for the training, farmers or projects have to provide the necessary animals. A number of short courses were offered on campus during the winter holiday (June - July).

#### 3.4 Training presented during 2013

The Farmer Training Program was implemented on a very limited scale due to various restrictive factors. Two of the short courses were presented elsewhere in the province and the rest at Grootfontein. A large percentage of the training

presented during 2013 was done for beneficiaries of projects in local municipalities.

The program approval from AgriSETA for the FET that Grootfontein offers will expire in 2014 and the College will have to apply for extension of program approval. AgriSETA and the Association of Principals of Agricultural Colleges (APAC) have agreed on a closer and formal relationship that includes the provision of bursaries to college students, the placement of interns and the provision of workplace learning opportunities to students from FET colleges.

Grootfontein is committed to play a bigger role in the local municipality to uplift and support communal farmers. A wide range of activities, including training, has been done in the community.

### **3.5 People trained**

The details of the courses and the number of attendees for 2013 are listed in Table 10. In Figure 5 the number of beneficiaries trained in the GADI Farmer Training Program since 2009 can be seen.

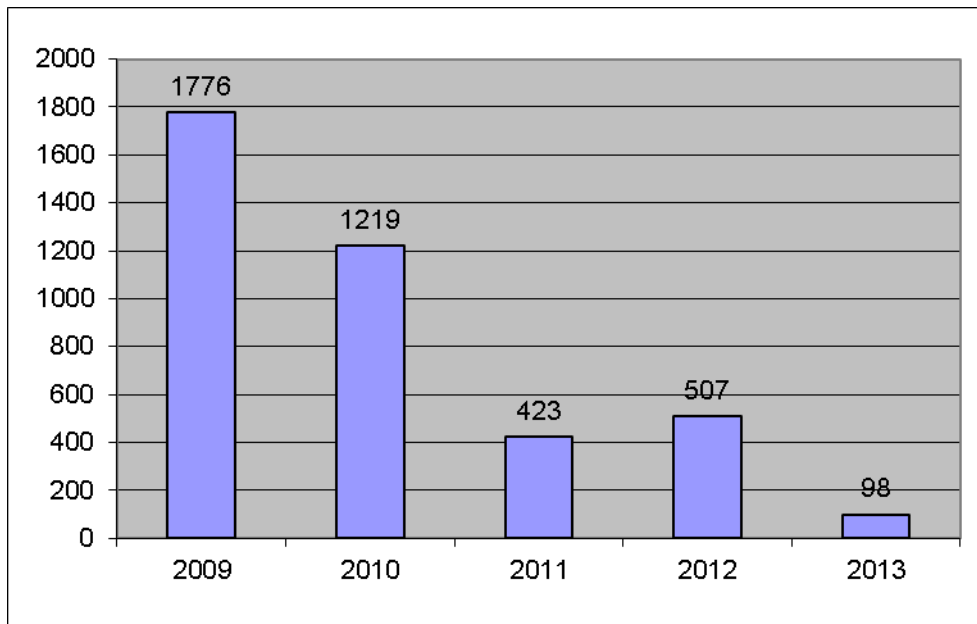
In total 98 people were trained in the Farmer Training Program during the 2013 academic year of which 63% were from previously disadvantaged groups. It must be noted that not all the attendees could be declared competent. The same person may be counted more than once and therefore the number is not of different individuals declared competent, but rather of the total number of attendees.

There is a big decline in the number of people trained in the Farmer Training Program. A submission was made to DAFF with proposals of corrective measures to enable the College to train 4 000 beneficiaries with this program.

### **3.6 Customer satisfaction**

Feedback from the attendees of the courses was very positive. Beneficiaries of the training also indicated that they benefited from the training. Some farmers whose farm workers were trained also informed the presenters that they could see the impact of the training on the performance of their workers.





**Figure 5:** Number of beneficiaries trained in the GADI Farmer Training Program

**Table 10:** Short courses presented from January 2013 to December 2013

No	Course	NQF level	Where presented		Attendance						
			Town	District Municipality	PDI		Other		Total (gender)		Total
					♂	♀	♂	♀	♂	♀	
1	Basic Arc Welding	2	Uitenhage	Cacadu	8	4	0	0	8	4	12
2	Wool Classing	5	Middelburg	Chris Hani	3	0	10	4	13	4	17
3	Basic Arc Welding	2	Middelburg	Chris Hani	10	0	0	0	10	0	10
4	Dismantle Automotive Components	2	Middelburg	Chris Hani	7	0	0	0	7	0	7
5	Operate a Tractor	2	Middelburg	Chris Hani	13	0	0	0	13	0	13
6	Computer Course	3	Middelburg	Chris Hani	5	12	0	1	5	13	18
7	Basic Arc Welding	2	Cradock	Chris Hani	0	0	21	0	21	0	21
					<b>46</b>	<b>16</b>	<b>31</b>	<b>5</b>	<b>77</b>	<b>21</b>	<b>98</b>

## CHAPTER 4

### INFORMATION DAYS

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#### 4.1 Objective of Information days

Grootfontein organises information days and utilises events of organised agriculture and industry organisations as a platform to disseminate information to producers. The objective of the information days is to communicate farming technology and the latest research findings to commercial and emerging producers. Although the presentation of lectures during information days cannot be regarded as training, it plays a major role in raising awareness of farmers about different aspects of farming and new technology. Through interaction at information days, scientists and technicians are sensitised to the needs and challenges of producers.

#### 4.2 Information days presented

During 2013 Grootfontein scientists and technicians participated in a total number of 13 information days. The topics addressed included breeding, nutrition, production, fodder flow, veld management and various other aspects of small stock production. Most information days were held in the Northern and Eastern Cape, while some were also presented in the other provinces. These information days were attended by 597 farmers (196 small scale and subsistence farmers and 391 commercial farmers) (Table 11). Grootfontein and the Middelburg District Farmers' Union presented a prestige information day.

Grootfontein has contributed to the well-being of the small-scale farmers of Middelburg by assisting farmers with advice, diagnosis, treatments and other livestock practices through the Extension and Outreach program. An information day was held for small scale farmers and this was co-presented by the final year students. During this day learners from the local communities had the opportunity to participate in a mini youth show. This is a contribution of GADI to improve the image of agriculture amongst the youth and to make agriculture a career of choice.

**Table 11:** Presentations during 2013

No	Theme/Event	Where presented		Attendance		
		Town	District Municipality	PDI	Other	Total
1	Prestige Farmers' Day	Grootfontein	Chris Hani	1	72	73
2	Small-scale Farmers' Day	Grootfontein	Chris Hani	180	0	180
3	Spreadsheets	Pretoria	Tswane	0	75	75
4	Plant identification	Cradock	Chris Hani	0	25	25
5	Inoculation of legumes seeds	Middelburg	Chris Hani	0	8	8
6	Plant identification	Strydenburg	Pixley ka Seme	0	20	20
7	Diversification	Middelburg	Chris Hani	0	15	15
8	Economic Study groups: Dohne Merinos	Bloemfontein	Motheo	0	45	45
9	Supplementary feeding	Middelburg	Chris Hani	0	20	20
10	Nutrition small stock	Hopetown	Pixley ka Seme	0	25	25
11	Sheep feedlots	Grootfontein	Chris Hani	5	45	50
12	Overseas student	Grootfontein	Chris Hani	0	6	6
13	Ruminant nutrition	Kamieskroon	Namaqua	10	40	50
<b>Total</b>				<b>196</b>	<b>396</b>	<b>602</b>



The Youth Show during the small-scale farmer's day

## CHAPTER 5

### SPORT

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#### 5.1 Rugby

Two teams participated in the Karoo league. Both teams ended high on the log but due to the scheduling of the play-off rounds during the winter holiday, they could not participate further. The College team secured the fourth spot during the 2013 PANNAR SA Agric Rugby Week for Agricultural Colleges that was hosted by Elsenburg College of Agriculture. Three players were selected for the SA Agric team.

#### 5.2 Soccer

The soccer club played in a number of games and two tournaments of note, the most important being the SA Agric Soccer week hosted by Potchefstroom College of Agriculture.

#### 5.3 Golf

A number of players are active and the Grootfontein golf team participated in the annual SA Agric Colleges golf tournament hosted by Glen College of Agriculture where they were runners-up.

#### 5.4 Netball

The highlight of the year was the reaching of the finals of the SA Agric Netball Tournament, hosted by Taung College of Agriculture. Two players were selected for the SA Agric netball team.

#### 5.5 Other sport

Gerard van Bosch represented the SA Tug-of-War (600kg under 23) team that participated in the world championships in Netherlands and won the silver medal.

Archery delivered some good achievements with four students participating in the South African Championship in Pretoria.

The squash club participated in tournaments in Port Elizabeth and Graaff-Reinet where they gave good accounts of themselves.

A number of students participated in horse riding at local and regional competitions and won some individual classes. Social horse riding is very popular and a number of students keep horses at Grootfontein for recreational use.

Alexis Boltman coached the Eastern Province Youth Show small stock team to 4 gold, 3 silver and 4 bronze medals while Christian Cronje coached the large stock team.

Charl Rogers and Luane Stapelberg won the first and second position respectively in the Free State Wool Handling Competition.

The angling and cricket clubs undertook a tour to the Southern Cape coast to conclude the year's activities.



Gerard van Bosch, member of the u/23 SA Tug-of-War team that won a Silver medal at the World Championship of 2013

## **5.6 Grootfontein College Cup**

A new event that was hosted for the first time in 2013 was the Grootfontein College Cup, an in-house sport competition based on the Varsity Cup concept. The three year-groups competed against one another in ten sport and cultural events.

The objective of the Grootfontein College Cup is to:

- Provide structured extramural activities to keep the students busy with constructive activities
- Promote team spirit and coherence in and between the year groups
- Promote a healthier student lifestyle.

Students agreed that it is something to build up further in the years to come. The 2013 College Cup was awarded during the glamorous Mr & Miss

Grootfontein Gala Evening. The third years were the overall winners of the College Cup.

### **5.7 Choir**

Another first for the College was the establishment of a formal College Choir. The choir participated in three festivals of which the inter-college festival was the highlight. The choir returned home with two trophies. Thozama Fulemeni won the trophy for best mezzo soprano.

### **5.8 GRACE**

Grace is an inter-denominational student Christian society that arranges weekly praise, worship and preaching events.



The third-years were the first winners of the College Cup



College choir

## CHAPTER 6

### STUDENT MATTERS

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#### 6.1 Accommodation

Owing to the high student numbers, Bergsig Hostel, Huis Karoo Annex and student houses were fully occupied. A number of students had to stay in town.

The matron and hostel staff succeeded in keeping the hostel fully functional during the year. The new hostel warden, Mr Rolf Herrmann, slotted well into this role and succeeded to apply the hostel rules effectively.

#### 6.2 Student Representative Council

The Student Representative Council (SRC) and House Committee (HC) received leadership and ethics training and were equipped with skills to manage diversity and group dynamics. At the same event a year planner was developed to organise the student calendar. The SRC was responsible for a very active social program for the year.

A number of disciplinary cases were referred to the Principal. One student was excluded from the College due to a breach of disciplinary code. A few incidents of vandalism by students were reported and dealt with during the year.

A new SRC for 2014 was elected during November 2013 and they assumed their duty promptly, and more responsibilities have been allocated to them. The House Committee for 2014, as sub-committee of the SRC, was elected at the same time. For the first time in the history of the College a female student, Marlie Gouws, was elected as Chairperson of the House Committee. The House Committee is responsible for the management of student discipline and activities in the hostel.

The first-year students attended a team building day where they had to overcome different challenges as individuals, but also in groups consisting of different cultures. Students from different backgrounds and cultures worked together to overcome many challenges. During the same event training on ethics and group dynamics was presented to them. This contributed to a better understanding of all the different cultures of our student body.



### 6.3 Alumni

Mr Déan Kleynhans received the Honorary Award from the Grootfontein Alumni during the Diploma Ceremony in December 2013. The award is to acknowledge his contribution to agriculture as alumni of the College.



Mr Déan Kleynhans (right) received the honorary award from the Grootfontein Alumni chairperson Mr Abrie Aucamp



The SRC of 2013

## CHAPTER 7

### SUMMARY

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The major achievement of 2013 was the successful development of the Competency Based Learning curriculum for the Diploma in Agriculture to be implemented in 2014.

The College conducted all its activities in line with the vision of the Department of Agriculture, Forestry and Fisheries benefiting a large client base in the public and private agricultural sectors. Training by the Grootfontein College in 2013 focused mostly on formal vocational training in the Higher Education band of the National Qualifications Framework (NQF), and to a limited degree on informal training in the Further Education and Training band of the NQF. The flagship program remains the Higher Education program and all efforts were made to ensure the successful completion of the 2013 academic program.

As the College is also involved in small stock research, various information days have been organised to disseminate information and research results to commercial, small-holder and subsistence farming sectors. GADI succeeded to host a very successful Prestige Farmers' Day in cooperation with the local farmers.

The students excelled in a number of sporting codes and made the most of the opportunities on the sport field and other extramural activities.

Based on the following, Grootfontein is in a stronger position than a year ago:

- Additional funding from DAFF through the ECSP
- Funding from the Netherlands based donors
- Development of the CBL curriculum
- Progress with quality assurance
- Various student sports achievements
- First female Chairperson of the House Committee
- The successful 2013 College Cup
- The completion of maintenance projects
- Dynamic leadership at different levels
- Linkage created with UFS for co-presentation of a B.Agric. degree at Grootfontein and
- Participation in the transformation process of colleges into ATI's.