### NATIONAL EDUCATION AND TRAINING STRATEGY FOR AGRICULTURE AND RURAL DEVELOPMENT IN SOUTH AFRICA

### AET STRATEGY





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### ACRONYMS

AET:	Agricultural Education and Training
AKIS:	Agricultural Knowledge and Information Systems
APAC:	Association of Principals of Agricultural Colleges
CTP:	Committee for Technikon Principals
DoA:	Department of Agriculture
DoE:	Department of Education
DoL:	Department of Labour
Ed and Tr.	Education and Training Directorate of the Department of Agriculture
EMS:	Economics and Management Sciences
FAO:	Food and Agriculture Organisation
FET:	Further Education and Training, Grades
GET:	General Education and Training
HE:	Higher Education
HET:	Higher Education and Training
HG:	Higher Grade
HSRC:	Human Science Research Council
LO:	Life Orientation
MoU:	Memorandum of Understanding
NAET	National Agricultural Education and Training
NAFU:	National African Farmers Union
NARF	National Agricultural Research Forum
NARS:	National Agricultural Research System
NQF:	National Qualification Framework
OBE:	Outcomes Based Education
PDA:	Provincial Department of Agriculture
PDE:	Provincial Department of Education
SAQA:	South African Qualification Authority
SAUVCA:	South African University Vice-Chancellors Association
SETA:	Sectoral Education and Training Authority
SG:	Standards Grade
SGB:	Standards Generating Body
SPSAA:	Strategic Plan for South African Agriculture

### FOREWORD BY THE MINISTER

1 am pleased to present the Agricultural Education and Training (AET) Strategy 2005 which is aimed at addressing the needs of our economy and improving of agricultural production through quality agricultural education and training.

The strategy was informed by the Reconstruction and Development Programme, Human Resource Development and the Skills Development Strategies for South Africa. It emanates from the broadening of access to education and training in agriculture which is one of the important pillars of the Broadening Access to Agriculture Thrust (BATAT) concept.



It is a culmination of a consultative process and greater collaboration of the

Provincial Departments of Agriculture (PDAs) and all stakeholders, which started in 2001 as a sign of commitment by the Department of Agriculture (DoA) to implement these key policies of government and to address human resource challenges in the agricultural sector.

The AET Strategy signals our determination as government to give effect to improving the skills profile in the agriculture sector and support the objectives of the Agricultural Black Economic Empowerment (AgriBEE), African Agricultural Development Programme (AADP), Integrated Food Security and Nutrition Programme (IFSNP) and the Comprehensive Agricultural Support Programme (CASP) which are some of the key programmes to advance the objectives of the sector as articulated in the strategic Plan for South African Agriculture.

The strategy addresses, among other things, training and capacity building of the beneficiaries of land reform which is one of the six priority areas of CASP. The broader objectives of IFSNP are to fight hunger, reduce poverty through communal and home garden, which I believe they are not possible without AET being accessible to the rural populations.

It is my belief that the AET strategy will make a genuine contribution to the realisation of the AgriBEE framework. The success of AgriBEE requires a well coordinated and quality assured AET system that is integrated at all levels. Such an AET system will provide equitable access and participation and empower Black South Africans to participate significantly in the South African agriculture. The AET strategy is one of the initiatives that will contribute markedly to realising the enhancement of the deracialisation of land and enterprise ownership. It will also promote full entrepreneurial potential in the sector and ensure that new entrants in the agricultural sector acquire skills to cope with the rapidly changing landscape.

The AET strategy will contribute to the success of the AADP objectives of promoting agricultural growth, rural development and food security in the African continent.

However, there are a number of challenges that need to be dealt with in the quest to redress the imbalances of the past. I pose these challenges with a view to teasing out critical issues that need consideration in the implementation of the AET strategy. The challenges vary from inequities in the provision of AET to the provision of resources and access to curriculum offerings. There is a mismatch between supply and demand, poor articulation of agricultural programmes. These challenges limit the opportunities for the majority of South Africans to participate fully in agricultural development in the continent.

I have studied AET survey reports compiled by Provincial Research Officers and I was particularly amazed by one of the highlights; that agriculture has a negative career image among the youth and that it is regarded as non-profitable and as suitable only for the elderly. This finding is particularly worrying because it reflects the perspective of posterity without whom any sustainability measures are unthinkable.

Previously disadvantaged groups of the population, particularly women and the disabled, continue to have

limited access to AET as a result of factors such as affordability and admission requirements. Links between AET providers and relevant role players who can provide strategic information about employment demand in the agriculture sector are inadequate.

There has not been an appropriate response in formal AET curriculum content to address the required improvement in marketing, management, value adding and other practical skills. Little has been done in curriculum development to position agriculture as a market-driven and profit making business as opposed to being presented only as a production enterprise. Other than the need for highly specialised technical skills, there is also a crucial need for general economics skills, as well as those related to agricultural business, marketing, farm planning and management, enterprise management, agricultural law and policy, land care and environmental management.

The 2003 report on the State of Skills in South Africa by the Department of Labour indicates that there has been a significant increase in the demand for skilled and highly skilled agricultural scientists. However, there are two challenges facing agricultural postgraduate studies at Masters and PhD level. Firstly, there is a general reduction in number of students entering into these sciences and secondly, the scant numbers of Agricultural Scientists who come from historically disadvantaged populations. The former is in large measure the result of the generally negative career image of agriculture. The latter is ascribed to a small number of secondary school learners who take in Mathematics and Science subjects on Higher Grade. This yields a narrow agricultural research base, which in turn, contributes to the slow response to the changes, challenges and opportunities in agriculture presented provincially, nationally, regionally and globally.

It is our responsibility as government to address these challenges; and the AET strategy is our initiative to provide a sound framework to these challenges and to guide the development and provision of agricultural education and training, which responds to the needs of the agricultural sector.

To give effect to the strategy I will establish a National Agricultural Education and Training (NAET) Forum.

The NAET Forum amongst other programmes; will spearhead a programme of action for:

- Developing and maintaining an effective and well-coordinated AET that is integrated at all levels and responds appropriately to South African agriculture.
- Enhancing equitable access and meaningful participation in AET by all South Africans.
- Aligning the AET curricula with urgent challenges faced by the South African agriculture sector including sustainable development and land care, food security, water harvesting and rural wealth creation.

The structure of the NAET Forum will be built strongly on provincial input provided through a hierarchy of representation from provincial and national level to facilitate dialogue, exchange of information and shared learning to assist with implementation, review and adjustment of the AET strategy.

Our gim is to achieve a wide-ranging representation from many stakeholders, particularly at provincial and service delivery level, while retaining a high degree of efficiency and flexibility for implementation.

The Directorate Education and Training of the DoA will serve as a secretariat for the Forum. Each province will establish its own AET Forum that will nominate representatives to the NAET Forum. The role of the Provincial AET Forum is to maintain constructive dialogue among members of the Forum and other AET stakeholders with a view to:

- Facilitating the implementation of relevant AET programmes and projects in each province.
- Monitoring, reviewing and reflecting on AET programmes and projects in each province.
- Providing feedback and making recommendations to the NAET forum on adjustments to the AET strategy and about potential new initiatives.

I hope you will enjoy the articulation of this strategy so as to ensure and support its effective implementation towards a competitive and sustained agricultural sector.

4.J.

Ms Thoko A Didiza (MP) MINISTER FOR AGRICULTURE AND LAND AFFAIRS

### **OVERVIEW BY THE DIRECTOR-GENERAL**

The government of South Africa has identified human resource development as a strategic priority for the country. The response of the Department of Agriculture together with other stakeholders and partners to the call to prioritise human resource development in the sector has been the development of the Agricultural Education and Training (AET) Strategy to address human resources challenges in the agriculture sector.

The development of the AET strategy was a consultative process aimed at ensuring optimal participation by all stakeholders. A National Strategy Formulation Team was established consisting of senior officials from various Provincial Departments of Agriculture and Education, national Departments of Education and Labour,



Agricultural Public Entities, Higher Education structures, line function Sectoral Education and Training Authorities (SETAs), the National African Farmers Union (NAFU), AgriSA, the Food and Agriculture Organisation and some international consultants.

This document represents the first effort to address agricultural education and training holistically in a manner that engages all role players to develop and maintain an effective and well coordinated AET that is integrated at all levels and responding appropriately to South African Agriculture. The strategy advocates working jointly with other Departments and Public Entities, for example. the Departments of Labour and Education as well as with the SETAs and the South African Qualification Authority (SAQA) to realise a coordinated and relevant AET system that will address the skills needs of the agriculture sector.

As the agriculture sector, we are faced with a challenge of bringing on board those sectors of the community, which were excluded from participating in the sector. We can only do so, by ensuring that we have in place an AET system that is accessible to all sections of the South African population and that assists us in achieving the broad goals of poverty alleviation, wealth creation and accelerated growth in our country.

The strategy embraces agriculture as one of the major economic drivers in which the vast number of rural dwellers, who in most cases cannot contribute to the economy in any way, can participate. It further recognises the potential contribution of AET to agricultural economic competitiveness and overall societal well being.

This AET strategy represents the first effort in the identification of implementation approaches that will yield certain performance outcomes. It maintains that reflection, evaluation and adjustment will be required on a regular and systematic basis. Such a review would be aimed at refining focus and strategies as more understanding of the impact of interventions proposed in this strategy is gained.

The implementation of the strategy remains the responsibility of the Department of Agriculture. However; the success in meeting the goals outlined above requires a joint effort with all the other stakeholders who have an interest in agricultural growth and development.

I would like to thank all the stakeholders who participated in the broad consultation process, which has provided us with a solid foundation for sustained dialogue with the aim of continuing to benefit from stakeholders' inputs during reviews and further refinement of the strategy. The dynamism and enthusiasm of Provincial Research Officers has been a continual source of rich inputs throughout the process. The work of the Provincial Agriculture and Education Task Teams is appreciated not only for supporting the work of the Provincial Research officers but also for providing a platform for further participation by grassroots at provincial level.

I would also like to acknowledge the invaluable contribution of the Food and Agriculture Organisation (FAO) national and international advisors, and all the other stakeholders in the development of the AET strategy.

I hope you enjoy reading the document.

Masiphula Mbongwa **DIRECTOR - GENERAL: AGRICULTURE** 

### INTRODUCTION

AET is concerned with the provision and maintenance of sound education and training to support an environmentally and economically sustainable agriculture. At present, AET is provided by a variety of statutory, non-statutory and private institutions.

The national AET strategy is based on a consultative process that involves AET stakeholders in all provinces and at national level. This process includes building capacity at national and provincial levels, and the creation of NAET Forum that includes national and provincial Agricultural Education and Training Task Teams, and the National Strategy Formulation Team.

These structures engaged in a process of research, analysis and consultation, which resulted in the production of ten (10) individual reports outlining the status, issues and recommendations for each of the nine (9) provinces of South Africa and national stakeholders. These documents form the foundation upon which the AET strategy was formulated.

In addition to creating the foundation for formulating the strategy, the consultative process resulted in two tangible outcomes, and these are:

- Greater collaboration between and among the provincial and national agencies concerned with agriculture in general, and with agricultural education and training in particular. This forms a framework for the structures needed to implement this strategy, and for its continued monitoring, evaluation and revision
- A wealth of information about the status of AET in all the provinces of South Africa (in terms of needs, providers and outcomes), which could be used as a benchmark for the implementation of the AET strategy, and which further creates a foundation for action at provincial level, particularly with regard to agricultural extension and farmer training is currently in existence

While it is understood that the terms "formal" and "non formal" education are being replaced, they are however, for the purposes of this document, used in the next two sections as this corresponds with the terms of reference under which the research informing this strategy was conducted.

### 1.1 Formal education in agriculture

Some eleven (11) Colleges of Agriculture, six (6) Universities of Technology and nine (9) universities offer various tertiary AET programmes that are nationally accredited. Secondary AET is provided by approximately 1500 secondary schools.

Many non-governmental bodies, including enterprising organisations also offer AET. Information about the activities of these organisations is not readily available. The bulk of the training offered by these bodies is presently not accredited by SAQA.

Agriculture as a subject has been removed from the curriculum at primary school level. It could be included indirectly through the OBE system. However, awareness about the importance of agriculture is at a low level, with few primary school teachers specifically trained to teach agriculture. Also, supporting teaching materials and equipment are not readily available.

AET at secondary school level (NQF levels 2-4) delivers poorly. High schools that offer agriculture as a subject are mostly ill equipped both in terms of qualified teachers and relevant equipment for practical training. Failure rates are high, and there is often a punitive association with studying agriculture - this is particularly true in the previously disadvantaged areas of the country.

At tertiary level, delivery is far better resourced. In most cases, Colleges of Agriculture offer AET in practical agricultural production within broad categories of crops and livestock - with some colleges specialising in

crops, which are unique or more prevalent in their respective geographic areas. Elements of agricultural extension are also frequently included in the curricula. Learners leave institutions with recognised diplomas after several years. It has been noted that, due to low student numbers and other factors, some Colleges of Agriculture are shifting their focus from educating Extension Practitioners to training farmers.

Similarly, at Universities of Technology, AET follows a practical curriculum, though not as extensive as Colleges of Agriculture. With the introduction of the BTech degree, Universities of Technologies are increasing their theoretical components and moving towards agricultural science - with the primary focus still on crop and livestock production.

Universities offer a very broad and diversified range of agricultural sciences, touching on pre-production, production, and post-harvest technologies related to crops and livestock. They also offer curricula on a variety of associated disciplines including Agricultural Engineering, Agricultural Management, Agricultural Economics, Soil Science, Food Security, Agricultural Extension, Community Resource Management, Bio-Resources, as well as some specialities including Viticulture, Hydroponics, Forestry, Range and Wildlife Management. Learning is driven more towards Agricultural Science than Agricultural Practice. A number of universities also offer a 'bridging year' in Sciences and Maths to enable learners' entry into faculties of agricultural sciences. These are learners whose background in Science and Maths precludes their entry into these faculties right after matric.

Internationally, interdisciplinary agricultural education has been found to be an important component of AET. While there is some movement towards this in South Africa - particularly in extension education and food security - it remains an area that requires further attention. Further, globalisation and international competition are driving significant changes in agricultural curricula worldwide. Given South Africa's unique agriculture sector, where a huge backlog exists on the home-front in terms of such fundamentals as food security and widespread rural poverty, AET will need to steer a careful course between meeting the demands of home and the opportunities abroad.

### 1.2 Non-formal education in agriculture

Non-formal AET is offered by a range of providers including:

- Public agricultural extension and training services
- Providers in the NGO and private sectors
- Universities, colleges and some high schools that offer agriculture as a subject.

These providers are an intrinsic part of the AET network. One of the potentially most powerful vehicles for AET delivery at farmer level is the contingency of Extension Practitioners, Agricultural Scientists, Agricultural Technicians, and similar functionaries. Such functionaries are both providers and recipients of AET.

Preliminary results from research conducted indicate significant gaps in the training of extension personnel particularly with regard to a change in focus of the agricultural policy to redress the historically inequitous, as well as provision of support to farmers, agriculturalists and land users.

Extension worker-to-farmer ratios vary from province to province in South Africa. There are approximately 55 000-60 000 commercial farmers, and 2,4 million homesteads with home food production, who can be termed 'subsistence' farmers. The national corps of public extension staff is approximately 2800. For the purpose of this exercise, extension is taken to include Scientists, Extension Officers, Agricultural Technicians and Trainees, but exclude extension management personnel. This gives extension/client ratios as follow:

Commercial farmers:	1: 21
Subsistence farmers:	1: 857
Combined:	1: 878

Internationally, these ratios vary significantly. In countries such as India, Zambia and Zimbabwe (the latter two and South Africa have similarities as far as agricultural issues are concerned), the ratios are 1:1000, 1:800 and 1:700 respectively). However, studies have indicated that the training and education of extension workers (among other managerial issues such as deployment and resourcing), rather than extension worker/farmer ratios, has a greater impact on the efficiency and effectiveness of agricultural extension. The size of South Africa's extension service is therefore not the primary issue - but capacity to deliver is.

In addition, other factors, which are important considerations in the provision of non-formal AET by public extension services, include:

- Distance between farmers
- Geographic areas covered by extension workers
- Client literacy
- Level of practical functioning of local farmer groups and associations

As implied above, South Africa has a dual agricultural economy, which was created by a long history of separate development and inequitable access to the factors of production that include land, capital and markets. The one face of South African agriculture is a horizontally and vertically integrated commercial sector, which draws on land and input resources, and sells to markets, which remain mainly in the hands of the minority of the population. The other face of South African agriculture is a disenfranchised, poorly resourced and poorly trained cadre of farmers and producers with little or no access to the benefits of the commercial sector. An effective AET system should therefore, recognise this. AET should, therefore, be responsive to the needs of, and be structured to increase access by those sectors of the population that were excluded in the past by political, legislative and economic factors.

### 2. Challenges faced by AET in South Africa

The background above clearly identifies the main challenge as the development of a co-ordinated, quality controlled, effective and responsive AET that is accessible to all South Africans. Such a system of agricultural education and training would meet the needs of the sector and creates opportunities as identified in the national and provincial agricultural strategies, as well as those resulting from the research conducted to formulate this strategy. Based on the research, analysis and consultation conducted, limitations in the current South African AET pose the following challenges:

### 2.1 Fragmentation and lack of co-ordination

The broad consultation process that took place during the development of the strategy has illustrated that AET lacks coherence and is not coordinated. Poor articulation characterises the programmes offered both between the formal and informal subsection, but also vertically within the formal education and training sector. The AET system has no strategic direction that focuses its development or determines priorities.

The funding of programmes is skewed and uneven across different sites of provision, with former white institutions still better resourced than their historically black counterparts.

Programmes differ markedly in quality, standards, outcomes and curriculum, and therefore, limit the opportunities for students to change from institution to institution, and create further barriers to higher levels. There is a wide range of role players who require a co-ordinating body that would regularly review the performance of AET and give a co-ordinated direction aimed at optimal impact on the performance of the sector.

### 2.2 Poor and inconsistent quality control

Formal agricultural training and education is very poorly controlled, both in terms of curriculum content and qualifications of educators, while the informal is to a large extent untested in terms of quality. Former white institutions are still relatively better resourced in terms of infrastructure that supports training and education and human resources, while historically black institutions are poorly resourced and provide poorer quality agricultural training with no attention given to the qualifications of educators who teach agriculture in schools.

It could therefore be argued from the above that formal education on the other hand, has some quality control in place while non-formal AET is almost completely lacking in quality control, while the formal education and training has some quality control in place. The application of quality control varies and so does its efficacy in providing a reliable quality product.

### 2.3 Ineffective and non-responsive education and training system

<u>Curriculum</u>: While some of the constraints to attaining the full potential of agricultural performance are known (and have been for a while), there has not been an appropriate response in formal education and training curriculum content to address the required improvement in areas such as marketing, management, value-adding and other practical skills. Positioning agriculture as a market-directed business could be profitable as opposed to being taught only as a production enterprise.

<u>Preparation and training of teachers:</u> Teachers who provide training in agriculture at secondary school level are often inadequately trained in both theoretical and practical agriculture. The access of learners to higher education in agriculture is thus limited due to a lack of adequate knowledge and stimulation of interest in agriculture.

Teachers at tertiary levels are well trained in theoretical agriculture, but often inadequately trained in practical agriculture. Therefore, few graduates have practical skills to offer the agricultural sector.

Only few teachers at both secondary and tertiary levels have been trained to teach agriculture as a profitmaking business.

<u>Poor linkages between AET providers and the agricultural industry:</u> Research indicates that there are inadequate links between AET institutions and relevant role-players who provide strategic information about employment and entrepreneurial opportunities in the agriculture sector.

<u>Research base:</u> Low enrolments in post-graduate studies (Masters and PhD levels) yield a narrow research base that also contributes to the slow response of AET to provincial, national, regional and global changes, challenges and opportunities in agriculture

### 2.4 Poor access to AET by emerging farmers and new entrants into the agriculture sector

Previously disadvantaged communities, and in particular women and the disabled continue to have poor access to quality AET. This is a result of various barriers, including affordability, admission requirements, physical distance from training centres, literacy and numeracy, language of instruction and scant resources available to those charged with the responsibility of providing AET to these communities.

### 2.5 Agriculture's negative career image

Research indicates that agriculture has a negative image as a career choice in the eyes of the youth. It is seen as the "work" of the poor and the elderly and not as something that could be profitable. Furthermore, agriculture is seen in a very narrow context, and is equated solely with primary production as opposed to a profitable business incorporating value-adding elements.

In addition, a large number of learners who have diplomas and degrees in agriculture are, for a variety of reasons, unable to find jobs.

### 2.6 Shortage of critical skills

Agriculture draws on a wide range of scientific and practical skills and knowledge. These can be categorised into five broad areas:

- Agricultural production
- Agricultural engineering
- Agricultural economics
- Agricultural development
- Veterinarians

### 2.6.1 Agricultural production

Training in agricultural production has focused on a narrow band of commodities and only a small section of the population had been exposed to it. As a result few black South Africans have highlevel production skills and the range of agricultural research had been limited to a narrow band of commodities and geared toward large-scale commercial farming, thereby not addressing the needs of small-scale and subsistence producers, and in the process ignoring opportunities presented by niche products. This also resulted in a limited capacity to support mixed farming needed to address issues of household food security and rural livelihood sustainability

Higher qualifications in Agricultural Sciences are confronted by two challenges: firstly, is the general reduction in number of students entering into this field; secondly historically disadvantaged populations produce only a scant number of Agricultural Scientists. The former is in large measure due to the generally negative image agriculture has as a livelihood or career. The latter is ascribed to the fact that few secondary school learners specialise in Mathematics and Science.

### 2.6.2 Agricultural engineering

Training in agricultural engineering has focused primarily on supporting large-scale commercial farming, and this has resulted in a shortage of technologies suitable for small-scale farmers, for example, appropriate and sustainable production and post-harvest technologies (e.g. processing and food storage).

A combination of the scarcity of engineering courses at Historically Black Institutions (HBI) and the lack of adequate training in Mathematics and Physical Science have prevented historically disadvantaged communities from accessing training in Agricultural Engineering.

### 2.6.3 Agricultural economics

The provincial enquiries supporting the AET strategy highlighted the crucial need for general agricultural economic skills, as well as those related to agricultural business, farm planning, farm management, enterprise management, marketing, finance, credit and risk management, and human resources management.

### 2.6.4 Agricultural development

There is an increasing number of new entrants into agriculture. This is however not addressing the needs of the rapidly changing landscape. The skills required cover areas such as agricultural extension, sustainable livelihoods, food security, resource management, agricultural law and policy, land care, and environmental management.

Agricultural extension presents a special case in that it is particularly urgent that all agriculturalistseconomists, engineers, and scientists-at all levels be skilled in taking their speciality into the field, to the farmer. The skill of engaging farmers, producers and small-scale value-adders in technology development is a singular challenge to the AET system.

Furthermore, research has highlighted the need for the concept of agricultural extension to be expanded to issues that were not traditionally associated with agricultural extension. Specifically, it has highlighted the need to provide agricultural extension workers with capacity and the skills to assist communities to deal with the effects of rural change, the impact of HIV/AIDS on the rural economic base, and the growing vulnerability of household livelihood systems, which presently are not generally part of the formal and non-formal training of extension workers.

### 2.6.5 Veterinarians

The South African Public Service is faced with the challenge of ensuring that there is an adequate supply of veterinarians. There is no existing or recommended ratio of the number of veterinarians per number of households/livestock farmers. Policymakers should agree on this ratio, as this will identify the possible needs for veterinarians in the sector, as well as their knowledge and qualification gaps.

### 2.7 Foundations for an AET strategy

This strategic plan is the result of a lengthy consultative process that includes a broad spectrum of AET role players under the auspices of the Department of Agriculture, with the support and participation of the FAO and the PDAs.

This national strategy for AET stipulates that:

- A sound, nationally coordinated AET is necessary for effective agricultural and economic development
- The content and approach of AET must be guided by a coherent implementation strategy, the formulation of which has been guided by the relevant post-apartheid democratic imperatives, national policies, legal and strategic framework that include:
  - An all-inclusive and transparent AET strategy formulation initiative of 2002
  - The Education White Paper 4 a programme for the transformation of higher education
  - The White Paper on Higher Education, 1997
  - Strategies for South African Agriculture and Integrated Rural Development
  - The Skills Development Act (Act No. 97 of 1998) and its associated implementation strategy
  - South African Qualifications Authority Act, 1995 (Act No. 58 of 1995)

The strategy is designed to:

- Guide the development and provision of a nationally coordinated, effective, responsive and quality-assured AET that is accessible to all South Africans
- Foster a unified vision by all AET service providers
- Instil public accountability, guide policy formulation, and create a framework for the maintenance, coordination, implementation and review of AET
- Instil public confidence in the AET system as a crucial element of its success
- Address the many challenges facing AET identified through the competitive analysis of the present system

- Provide sound national strategic guidelines for harmonising the accreditation of the current "formal" and "non-formal" education and training in agriculture in a manner that is consistent with democratic imperatives, the achieved policy framework and legislation, as well as overall national development goals
- Address the historical emphasis on primary production and widen the spectrum of disciplines included in AET to incorporate current and future trends and opportunities (for example, agrotourism and game farming)
- Facilitate the adoption of appropriate legislative and regulatory framework needed to protect the education and training rights and interests of agricultural and rural role-players
- In brief, the strategy provides a sound framework to guide the development and provision of a nationally coordinated, effective, responsive and quality-assured AET that is accessible to all South Africans

It is further envisaged that the system will continually assess the impact of changes in the agricultural environment, as well as the needs of the sector in its endeavours to overcome the challenges as they occur. This will be done consistently in order to contribute continuously to the enhancement of the economic competitiveness of agriculture in South Africa. In this way, the role players will grow in their confidence that they too are contributing meaningfully to the nation's economic growth and sustainability.

### 2.8 Guiding principles for the AET strategy

The strategy is underpinned by commitment and adherence to the following principles:

- 2.8.1. While the context for AET is improvement and increased sustainability of the South African Agriculture, it is primarily a programme of Human Resources Development, which recognises the inherent nobility and dignity of every individual touched by AET, whether as a service provider or as its user.
- 2.8.2. AET is committed to operating in a paradigm of continual partnership-based learning through a conscious linkage to research, education and extension (outreach), each informing and enhancing the other through a partnership between service provider and client, thereby promoting an active process of planning, action, reflection and learning.
- 2.8.3. Planning and implementation of AET will take cognisance that an independent farmer requires/expects less State intervention and perhaps might enjoy more private-sector support, and vice versa.
- 2.8.4. AET is committed to the principles of integrity and trustworthiness, but these are only measured by deeds rather than by words.
- 2.8.5. AET should result in a wide range of developed human resources engaged at all levels of agriculture.
- 2.8.6. AET should be harnessed to deal with short, medium and long-term issues facing agriculture in South Africa, ranging from micro issues of household food security to international issues of global competitiveness of South African agricultural products.
- 2.8.7. AET should make a genuine contribution to the realisation of the strategic outcomes of the current agricultural strategy.

### 2.9 Outline of the AET strategy

### Vision:

Accessible, responsive, quality education and training for agriculture and rural development.

Strategic goals and objectives:

The AET strategy has the following three strategic goals, each of which has a number of strategic objectives.

- Goal 1: Develop and maintain an effective and well-coordinated AET that is integrated at all levels and responds appropriately to South African agriculture
  - 1.1 Ensure policy and curriculum development is coordinated and harmonised.
  - 1.2 Ensure that AET delivery at provincial level is well coordinated.
  - **1.3** Ensure that AET learning is mobile and transferable from one AET institution to another and articulates with hierarchies of AET qualifications.
  - **1.4** Ensure the alignment of AET curricula with urgent challenges facing South African agriculture starting with:
    - Sustainable development and land care
    - Food Security and water harvesting
    - Rural wealth creation
  - **1.5** Develop and recommend a systematic and coordinated programme to introduce sustainable agriculture, sustainable development and land care in the formal AET system.
  - **1.6** Develop and recommend a systematic programme to train learners of all levels and educators in household food security and water harvesting.
  - 1.7 Develop and recommend a systematic programme to train all levels of learners and educators in the fundamental elements of rural wealth creation.
- Goal 2: Enhance equitable access and meaningful participation in AET for all South Africans.
  - 2.1 Develop and recommend a systematic plan to identify, prioritise and remove access barriers to AET.
  - 2.2 Improve the image of agriculture as a career and livelihood choice: develop and implement a highimpact public education programme that promotes the image of agriculture, particularly among children and the youth.
  - 2.3 Encourage further studies (Masters and PhD) in the Agricultural Sciences (especially those soughtafter skills that the majority does not possess) to produce highly qualified scientists who add value to the agricultural science knowledge base.
- Goal 3: Ensure the application of an effective quality assurance of AET at all levels.

Ensure that AET at all levels is accredited and resourced, with the appropriate number of teachers and trainers with relevant skills.

### 3. Implementing the strategy

### 3.1 The Creation of a National Agricultural Education and Training (NAET) Forum

The AET strategy envisages the creation of a NAET Forum which will operate along the lines of the NARF. The function of this Forum would be to direct the many programmes, actions and tasks designed to fulfil the vision of an accessible, responsive, quality agricultural education and training in South Africa. The primary function of such an entity would be to look at the interest of the agriculture sector, provide public accountability, policy formulation and maintenance, coordination and strategic guidance with regard to AET.

The forum will facilitate delivery on three strategic goals:

- Contribute to the development and maintenance of an effective and a well-coordinated AET that is integrated at all levels and responds appropriately to South African Agriculture
- Enhance equitable access and meaningful participation in AET for all South Africans
- Ensure the application of an effective quality assurance of AET at all levels

In pursuit of these goals, the NAET Forum will strive to ensure that:

- AET policy and curriculum development are coordinated and harmonised
- AET delivery at provincial level is well coordinated
- AET learning is mobile and transferable from one AET institution to another and articulates with hierarchies of AET qualifications; and
- AET curricula are aligned with urgent challenges facing South African agriculture that include sustainable development and land care, food security and water harvesting, as well as rural wealth creation

Further, the Forum will encourage higher-level studies of the agricultural sciences (in particular, skills in short supply) to produce highly qualified scientists who add value to the Agricultural Science knowledge base.

The Forum will also undertake a systematic programme to remove all barriers that prevent or limit citizens to have access to AET, and to improve the image of agriculture as a career and livelihood choice.

It will also be responsible for ensuring that AET at all levels is accredited and resourced, and has the appropriate number of teachers and trainers with relevant skills.

### 3.2 Structures for implementation

The structure of the NAET forum will be built on the networks and collaboration achieved through the strategy formulation methodology and process. It will be built strongly on provincial input provided through a hierarchy of representation from provincial to national level to facilitate a dialogue, exchange of information and shared learning to assist with the implementation, review and adjustment of the AET strategy.

The aim is to achieve a wide-ranging representation from the many stakeholders, particularly at provincial and service delivery level, while retaining a high degree of efficiency and flexibility for implementation.

The overall structure of the Forum will consist of:

- A NAET Forum
- A National Executive Committee

- A National AET Secretariat
- Nine Provincial AET forums
  - 3.2.1 National structures

### 3.2.1.1. NAET forum

The NAET forum will comprise of representatives from all the relevant stakeholders. The function of the Forum will be to provide a platform for sharing and consulting on various aspects of the status of the AET strategy for the benefit of provincial and national initiatives, and to advise and make recommendations to the Executive Committee.

### 3.2.1.2. Executive Committee of the Forum

It is envisaged that the national structure will be headed by the Executive Committee, which would report to the Minister of Agriculture. The Committee will have thirteen members who will be able to provide technical and practical expertise, these would consist of the following:

- Two representatives from the DoA, appointed by the Minister of Agriculture
- A representative from the DoE, appointed by the Minister of Education in consultation with the Minister of Agriculture
- A representative from the SETAs, appointed by the Minister of Labour in consultation with the Minister of Agriculture
- A representative from the South African University Vice-Chancellors Association (SAUVCA), appointed by the Minister of Agriculture in consultation with SAUVCA
- A representative from Principals of Universities of Technology appointed by the Minister of Agriculture in consultation with Association of Technikon Principals
- A representative from the Association of Principals of Agricultural Colleges (APAC), appointed by the Minister of Agriculture in consultation with APAC
- Two representatives from the Agricultural Public Entities appointed by the Minister of Agriculture.
- Two representatives from PDAs appointed on a two year rotational basis by the Minister of Agriculture in consultation with MINMEC.
- Two representatives from the Farmers Union

From these members, the Minister will also appoint a chairperson.

The function of the Executive Committee is to manage the implementation, review and continued development of the AET strategy. The committee will therefore be responsible for:

- All expenditures from the AET budget
- Approval of project proposals and the commissioning of contract work
- Ensuring the consolidation and the sharing of information along the AET network

 Submitting regular reports to the Minister of Agriculture on the status and progress of the AET strategy

### 3.2.1.3. National Secretariat

It is envisaged that the Directorate Education and Training will serve as the Secretariat for the Executive Committee and the Forum as a whole. Its primary function will be to provide administrative coordination and support for the activities and programmes of the various national AET structures. This may require the creation of additional posts at managerial and administrative levels.

Because of the strong connections that exist between AET and education and labour issues, the AET structure will conduct its business in close collaboration with the relevant agencies of the Ministries of Education and Labour.

3.2.1.4. Task forces

It is envisaged that various task forces and working groups be established to facilitate detailed work on strategic goals and specific objectives and interventions. Initially, three task teams are envisioned - one for each of the following strategic goals:

- Coordination of curricula and delivery
- Coordination of access
- Quality control and the coordination of accreditation and registration of service providers as well as programmes

These task teams will comprise of seven members. Based on the recommendations of the national board, six of these members will be invited by the national Executive Board. These six appointees should be people who can add technical value to the process. The seventh member will be a member of the national Executive Board chosen by the board, and will serve as convenor and team leader. Members of these task forces will be paid for their services, except in instances where they are already in the employ of the government.



### 3.2.1 Provincial Forum

It is envisaged that each province will establish a Provincial AET forum. The Forum is intended to have the widest possible representation from all AET stakeholders and role-players. Its establishment should be informed by the networks and processes established during the strategy formulation process.

The purpose of the Forum is to establish and maintain healthy dialogue among its members and other AET stakeholders with a view to:

- Facilitating the implementation of relevant AET programmes and projects in its province
- Monitoring, reviewing and reflecting on AET programmes and projects in its province
- Providing feedback and making recommendations to the NAET Forum about adjustments to the AET strategy and potential new initiatives

Provincial forums as a collective will have representation at the NAET Forum. Provincial members of the NAET forum will rotate after every two years.

### 3.2.1.1. Provincial Steering Committee

The work of the Forum will be managed by a provincial AET Steering Committee, which should comprise seven members. The chairperson of the Steering Committee should be a representative of the PDA. The other six members of the Steering Committee should be selected by the Forum through a process of consensus. Administrative support will be provided through the PDA.

### 3.2.1.2. Working groups

It is envisaged that the provincial Forums will establish a range of working groups to address various issues affecting AET. These working groups will be formed on an interest basis and led by a 'champion'. Administrative support for the working groups will be decided on a case-by-case basis.

### 3.3 Strategy for implementation

### **3.3.1** Approach to implementation

As indicated earlier, the National Executive Committee will be responsible for the implementation of the AET strategy.

The appended Table provides the essential details of the implementation plan for the AET strategy. The plan is intended to serve as a framework upon which the Task forces can build more detailed plans of action for each of the strategic goals and their respective strategic objectives. It provides priorities for action, indicators for achievement, broad activities, assignments of overall responsibilities and preliminary budgets.

Each of the three strategic goals is allocated to one of the three task forces. The role of the task forces is to champion the relevant objectives and interventions identified through the AET formulation process. Objectives, interventions and activities are generally intended to be achieved through a collective and participatory action. While the national and provincial Departments of Agriculture are expected to provide leadership and support for the implementation plan, the success of the AET strategy rests, to a large extent, in the collaborative partnerships created among, and between the state, private and NGO AET providers at all levels.

Only in a number of cases will task forces be expected to develop more detailed action plans, and may also need to engage the services of consultants.

Where possible, building capacity to deliver on the AET strategy would be part of the implementation plan. The aim is to build on the outcomes of the formulation process, increase the number of owners of the overall strategy, and give greater sustainability to the AET delivery and support network.

### 3.3.2 Preliminary budgets

Budgeting for the AET strategy is divided into three basic categories: running costs, staff remuneration, and programme costs.

Running costs: Both the DoA and PDAs will carry the running costs for the Forum. Provincial structures are expected to provide staff to carry out the functions of the Forum, Executive Committee and administrative staff. The anticipated running cost to support the work at provincial level is R170 000 per province.

Staff remuneration: As noted earlier, additional posts will be needed to staff the secretariat that will provide administrative support and coordination. The budget to staff the secretariat will depend on the outcome of work-study by the Department of Agriculture's Business Analysis Unit. The allowances of members of the Forum, Executive Committee and the task forces will also be drawn from staff remuneration funds.

Programme costs: These costs are for investigating, planning, designing, implementing, and reviewing specific interventions and lines of action. Some preliminary costs and estimates for some of the work to be done are included in the framework that is presented at the end of this document. In a number of cases, information is either outstanding, or programmes are too complex to address within the parameters of this submission. In the latter cases, funds are either needed to appoint an external agent to develop the more detailed plans, including comprehensive budgets. In other cases, 'seed' money is proposed to start selected initiatives.

The overall initial budget for proposed interventions was R11 1050 000.

### Initial budget for AET programmes

Strat	tegic goals and corresponding objectives		Provisional Budget (R)
Goa	1: Develop and maintain an effective and well-coordine all levels and responds appropriately to South Africe		-
1.1	Ensure that policy and curriculum development are coordinated and ho	armonised	500 000
1.2	Ensure that AET delivery at provincial level is well-coordinated		60 000
1.3	Ensure that AET learning is mobile and transferable from one AET inst another, and articulates with hierarchies of AET qualifications	itution to	150 000
1.4	Ensure the alignment of AET curricula with urgent challenges facing th South African agriculture	e	75 000
1.5	Develop a systematic and coordinated programme to introduce sustain agriculture, sustainable development and land care in the formal AET		1 360 000
1.6	Develop and recommend a systematic training programme for learner levels and educators in household food security and water harvesting	s at all	800 000
1.7	Develop and recommend a systematic training programme for learner levels and educators in the fundamental elements of rural wealth creat		50 000
		SUB-TOTA	L 2 995 000
Goa	2: Enhance equitable access and meaningful particine Africans	pation in	AET for all South
2.1	Develop and implement a systematic plan to identify, prioritise and re access barriers to AET	move	60 000
2.2	Improve the image of agriculture as a career and livelihood choice: d and implement a high impact public education programme that promo image of agriculture, particularly among children and the youth	•	3 000 000
2.3	Encourage further studies (Masters and PhD) in the Agricultural Science (especially of critical skills in short supply) to produce highly qualified that would add to the agricultural science knowledge base		5 000 000
		SUB-TOTA	L 8 060 000
Goa	3: Ensure the application of effective quality assurance of	AET at a	ll levels
3.1	Recommend and ensure that AET at all levels is accredited and resour the appropriate number of teachers and trainers with relevant skills	ced with	50 000

4. AET STRATEGY IMPLEMENTATION PLAN

1. STRATEGIC VISION: Accessible, responsive, quality agricultural education and training

# ESTABLISHMENT OF THE NATIONAL AGRICULTURAL EDUCATION AND TRAINING FORUM

Strategic Objective	Intervention	Outputs and Indicators	Implementation activities Responsibility	s Responsibility
1.1. Creation of a NAET Forum.	Establishment of a NAET Forum to direct all the	Terms of Reference (ToR) for the NAET Forum should	Public Notice of the NAET DoA Forum	L DoA
	activities of the AET Strategy	be established by Dec 2005	<ul> <li>Stakeholder Workshop to discuss ToR for NAET</li> </ul>	DoA
		Nominations of the NAET Forum should be completed	<ul><li>Forum</li><li>Advertise for nominations</li></ul>	DoA
		by March 2006A	<ul> <li>Publication of nominations</li> </ul>	of NAET Forum Publication of nominations DoA and AET Stakeholders
		NAET Forum should be established by July 2006	<ul> <li>in the government gazette</li> <li>Finalize Nominations for</li> </ul>	
			the NAET Forum	Ed and T. Disserver
			nominees to the Minister	
			for approval and	
			<ul> <li>Appointment of members of NAET Forum</li> </ul>	Minister of Agriculture
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Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture. ä

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Responsibility	NAET Forum and DoA	NAET Forum and DoA	NAET Forum and DoA	NAET Forum and DoA	NAET Forum and DoA
Implementation activities	<ul> <li>Design and implement a system of stakeholders' consultation and feedback.</li> </ul>	<ul> <li>Recommend training programmes in curriculum development for AET educators NAET Forum and DoA</li> </ul>	<ul> <li>Audit the current level of the availability and use of training resources in AET. NAET Forum and DoA</li> </ul>	<ul> <li>Publish guidelines for curriculum review to relevant stakeholders'. NAET Forum and DoA</li> </ul>	<ul> <li>Develop a framework on the frequency of the curriculum review and its flexibility and make recommendations to DoE.</li> </ul>
Outputs and Indicators	<ul> <li>By Sept 2006, the system of stakeholders' consultation and feedback should have been designed and implemented.</li> </ul>	<ul> <li>By Dec 2006</li> <li>recommendations for training and research should have been completed.</li> </ul>	<ul> <li>By March 2007 audits on the availability and use of training aids with target recommendations and recommendations</li> </ul>	tor implementation should have been completed.	<ul> <li>By June 2007 the guidelines for curriculum review should have been developed and published to relevant stakeholder</li> </ul>
Intervention	Review the alignment of AET Curricula at all levels to support the development of an effective agricultural science, agricultural practice and agricultural extension skills and expertise.	Review the alignment of AET Curricula at all levels to support the development of effective agricultural science, agricultural practice and agricultural extension skills and expertise.			
Strategic Objective	2.1 Ensure Policy and Curriculum development are co-ordinated and harmonized				

Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture.

Strategic Objective	Intervention	Outputs and Indicators	Implementation activities	Responsibility
		<ul> <li>By June 2007 a framework and guidelines for curriculum review should have been agreed upon with DoE</li> </ul>	<ul> <li>Prioritise training needs for GET and FET AET providers and recommend appropriate training courses linked to the Sector Skills Plan.</li> </ul>	NAET Forum and DoA
		<ul> <li>By December 2007 AET educator training needs should have been prioritised with action plans and recommended training programmes.</li> </ul>	<ul> <li>Prioritise AET educator training needs and recommend action plans to DoE</li> </ul>	NAET Forum and DoA
		<ul> <li>By April 2008 recommended training action plans should have been budgeted for by the relevant SETA.</li> </ul>	<ul> <li>Budgeting for recommended training action plans.</li> </ul>	Relevant SETAs.
2.2. Ensure that AET learning is mobile and portable from one AET institution to another and articulates with hierarchies of AET	In partnerships with DoL, SAQA and DoE, establish a unit/whole qualification standard for AET.	<ul> <li>Draft recommended guidelines for articulation of AET qualifications from one institution to another should have been established by Dec 2006</li> </ul>	<ul> <li>Agree on a feedback mechanism with relevant SETAs.</li> <li>Design AET Qualifications with SETAs, SGBs and Follocition institutions</li> </ul>	NAET Forum and DoA NAET Forum and DoA
qualifications.				

Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture.

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Responsibility	NAET Forum and DoA	DoA	NAET Forum and DoA	NAET Forum and DoA
Implementation activities	<ul> <li>Develop a rational and practical programme for establishing standards, including priorities, target dates and required resources.</li> </ul>	<ul> <li>Commission work according to agreed programme.</li> </ul>	<ul> <li>Co-ordinate with FET and HE structures offering AET to develop a programme for establishing mapping articulation</li> </ul>	<ul> <li>Engage with FET and HE structures (SAUVCA &amp; APAC) to facilitate adoption of articulation by FET and HE structures offering AET.</li> </ul>
<b>Outputs and Indicators</b>	<ul> <li>A programme for AET standards development should have been commissioned by March 2007.</li> </ul>	<ul> <li>Unit standards or whole qualifications standards should have been established for a full range of AET offerings (formal and non-formal) by December 2007.</li> </ul>	<ul> <li>Progress should have been achieved according to agreed programme.</li> </ul>	<ul> <li>Documentation and adoption by AET offering agencies of the articulation of qualification within the AET system should have been completed by December 2007.</li> </ul>
Intervention	In partnership with DoL and DoE, establish a unit/whole qualification standard for AET.			
Strategic Objective				

Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture.

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Responsibility	NAET Forum, DoA NAET Forum and DoA	DoA	NAET Forum and DoA
Implementation activities Responsibility	<ul> <li>Engage AET providers to incorporate the cited elements into their respective qualification curricula.</li> <li>Pursue formal agreements with AET providers to incorporate the cited elements into their respective qualification curricula.</li> </ul>	<ul> <li>Establish "youth in agriculture" type of programme in primary schools.</li> </ul>	<ul> <li>Awareness campaigns on sustainable agriculture, sustainable development and Land Care at all levels</li> </ul>
<b>Outputs and Indicators</b>	<ul> <li>MOUs with identified providers should have been negotiated and signed by April 2007</li> <li>Reviews should indicate curricula incorporate relevant aspects in Agricultural Science qualifications. (Ongoing commencing April2007).</li> </ul>	<ul> <li>At least 25% of all primary schools should be having a "youth in agriculture" type of a programme by the end of 2010</li> </ul>	<ul> <li>At least 25% of all GET schools should have practical showing of sustainable agriculture, sustainable development and Land Care in their schools by the end of 2010</li> </ul>
Intervention	Broadened curriculum beyond primary production to include pre-production requisites (including genetic material, technology, economists, business management, finance etc.) post harvest (this includes consumption storage, processing, value adding and marketing) as a part of Agricultural Sciences qualifications.	Recommend a systematic and co-ordinated programme to introduce sustainable agriculture, sustainable development and Land Care in the formal AET system at all levels	
Strategic Objective	<ul> <li>2.1. Ensure alignment of AET curricula with urgent challenges facing South African Agriculture to include:</li> <li>Sustainable development and Land Care.</li> <li>Food Security and Water Harvesting.</li> <li>Rural wealth creation.</li> </ul>	2.1.1. Ensure alignment of curricula to include Sustainable development and Land Care.	

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Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture.

<b>Outputs and Indicators</b>
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<ul> <li>Funds for facilities of practical training in high schools should be</li> </ul>
available annually commencing April 2007
<ul> <li>Practical Training Programmes should be designed and implemented in partnerships with relevant agencies by April 2007.</li> </ul>
<ul> <li>Funds should be available annually in each province commencing April 2007.</li> </ul>

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Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture.

Sti	Strategic Objective	Intervention	Outputs and Indicators	Implementation activities	Responsibility
6	2.3.1 Ensure alignment of curricula to include Sustainable development and Land Care.	Recommend a systematic and co-ordinated programme to introduce sustainable agriculture, sustainable development and Land Care in formal AET system at the HE Level	By January 2008, all universities, universities of technology and colleges offering AET should have included sustainable development and Land Care as part of their core, capstone or required courses.	<ul> <li>Lobby HE structures representing institutions offering AET (SAUVCA and APAC) for inclusion of sustainable development and Land Care in curricula and review the status regularly.</li> </ul>	NAET Forum and DoA
		Develop a systematic and co-ordinated programme to evaluate and upgrade skills with the extension services	<ul> <li>Assessment and design should have been completed and budgeted for by April 2007.</li> <li>All extension staff should be demonstrating understanding of the</li> </ul>	<ul> <li>Commission research to assess current knowledge and skill base in agricultural production, sustainable development, including Land Care within extension service.</li> </ul>	DoA and NAET Forum.
			theory and practices of agricultural production, sustainable farming, including land care to at least a minimum level by December 2010.	<ul> <li>Design and implement tailored training course for all technicians, extension officers and scientist/specialists in agricultural production, sustainable farming including Land Care.</li> </ul>	NAET Forum and DoA

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DoA, NAET, PDAs and PDEs	NAET Forum and DoA	NAET Forum, DoA, PDAs and PDEs DoA	
<ul> <li>Introduce an awareness programme on food security and water harvesting.</li> </ul>	<ul> <li>Liaise with district Senior Managers in PDEs to provide special training for educators</li> </ul>	<ul> <li>Facilitate poster and essay competitions.</li> <li>Facilitate special programmes on educational television.</li> </ul>	
<ul> <li>50% of all GET schools should have at least 2 educators trained in household food security and water harvesting by 2010.</li> </ul>	<ul> <li>50% of all GET schools should have participated in competitions on Household Food Security with at least Grades 5, 6, 7, 8 and 9 included by 2010.</li> </ul>	• At least one appropriate programme on food security and water harvesting should have been developed by Dec 2006 and broadcast on educational television at least twice a year from January 2007 for not less than 5 years.	
Recommend a systematic training programme in household food security and water harvesting for educators at GET and FET Level.	Recommend a systematic training programme in household food security and water harvesting for educators at GET and FET Level.		
2.1.2. Ensure alignment of curricula to include household food security and water harvesting.			
	Ensure alignment of Recommend a systematic curricula to include training programme in household food security and water water harvesting for water harvesting for the ducators trained in household food security and water harvesting. Level. 2010.	Ensure dignment of training programme in household food security and water harvesting.E S0% of all GET schools should have at least 2 should have at least 2 should have at least 2 educators trained in household food security and water household food security and water harvesting for water harvesting for household food security and water household food security and water harvesting for household food security and water household food security and water harvesting for household food security and household food secu	<ul> <li>Fisure dignment of Recommend a systematic activing programme in household food security and water horvesting programme in household food security and water horvesting for advater horvesting in household food security and water horvesting for advater horvesting for advater horvesting for household food security and water horvesting for advater horvesting for advater horvesting for household food security and water horvesting should hove been developed by bec.</li> <li>At least on a dow housed to hood security and water horve hord household hove been developed by bec.</li> <li>At least hore a year from household hove bear form for household hove bear form ho</li></ul>

Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture.

Responsibility	NAET Forum and DoA	NAET Forum and DoA	DoA and PDEs	NAET Forum and DoA
Implementation activities	<ul> <li>Lobby for food security and water harvesting as a formal part of the curriculum.</li> </ul>	<ul> <li>Lobby for the development of special training materials for LO educator.</li> </ul>	<ul> <li>Poster and essay website competitions.</li> </ul>	<ul> <li>Lobby for food security and water harvesting included in HE curriculum as a core or presented module in all the undergraduate Agricultural Science, Agricultural Science, and social science qualifications and or programmes.</li> </ul>
Outputs and Indicators	<ul> <li>At least one module on food security and water harvesting should have been included in the FET curriculum by January 2007.</li> </ul>	<ul> <li>Every FET school should have at least two teachers trained in food security and water harvesting by December 2010.</li> </ul>	<ul> <li>50% of FET schools should have participated in competitions by December 2010.</li> </ul>	<ul> <li>At least one module in food security and water harvesting should have been included in relevant curricula in all HE Institutions offering undergraduate qualifications in Agricultural Science, Agricultural extension and social science qualifications, by the Jan of 2009</li> </ul>
Intervention	Recommend a systematic training programme in household food security and water harvesting for HE level studies.			
Strategic Objective	2.3.2 Ensure alignment of curricula to include household food security and water harvesting.			
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Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture.

a'	Interventio	E	Outputs and Indicators	Implementation activities	
2.3.2 Ensure alignment of curricula to include household food			<ul> <li>Each HE institutions offering Agricultural Science, Agricultural</li> </ul>	<ul> <li>Assess current knowledge/skill base in food security and water</li> </ul>	NAET Forum and DoA
security and water harvesting.			extension and social science qualifications should be having at least one bursary holder studying towards food	harvesting within the extension service and align with the Extension Strategy	*
			security and water harvesting by 2007.		
			<ul> <li>Assessment of knowledge and skill base in food security and water harvesting within the extension services should have been completed by April 2007.</li> </ul>		
		-	<ul> <li>Training Programme for extension services should have been designed and budgeted for implementation in April 2008.</li> </ul>		

Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture. ų

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Responsibility	NAET Forum and DoA	NAET Forum and DoA	NAET Forum and DoA
Implementation activities	<ul> <li>Design and implement tailored training programmes for all technicians, Extension Officers and scientists/specialists in food security and water harvesting.</li> </ul>	<ul> <li>Lobby for the inclusion of concepts of "self employment" and sustainable livelihoods as part of LO or EMS in the GET curriculum.</li> </ul>	Lobby for the inclusion concepts of "self empowerment" and sustainable livelihoods as part of the LO or Agricultural Science Curriculum.
Outputs and Indicators	<ul> <li>All extension staff should be demonstrating an understanding of the theory and practices of household food security and water harvesting at least to a minimum level by Dec 2010.</li> </ul>	• By 2010 50% of all GET schools should be having at least two educators trained in sustainable livelihoods and entrepreneurship, and will be conducting modules in these concepts as part of the LO programme.	<ul> <li>By 2010 50% of all FET schools should be having at least 2 teachers who have been trained in sustainable livelihoods and entrepreneurship, and will be conducting modules in these concepts as part of LO or Agricultural Science Curriculum.</li> </ul>
Intervention	Develop and implement a systematic programme to train all extension officers in household food security and water harvesting in Extension Service.	Recommend (develop and implement) a systematic training programme for educators at GET and FET levels in the fundamentals elements of rural wealth creation	
Strategic Objective	2.3.2 Ensure alignment of curricula to include household food security and water harvesting.	2.3.3. Ensure alignment of curricula to include Rural Wealth Creation	

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Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture.

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Responsibility	NAET Forum and DoA		DoA
Implementation activities	<ul> <li>Lobby for Agricultural Science and in particular, agricultural extension curricula to be contextualized in a rural wealth creation paradigm.</li> <li>Encourage the adoption</li> </ul>	of a learning paradigm that supports AKIS concept of teaching and extension as well as research, and inform each other in a continuous learning cycle.	Commission research to assess current knowledge/skill base in rural wealth creation within the extension service
<b>Outputs and Indicators</b>	<ul> <li>At least one module in rural wealth creation should have been included in the relevant curricula in all HE Institutions offering undergraduate qualifications, Agricultural extension</li> </ul>	<ul> <li>and Social Science qualifications by 2010.</li> <li>Each HE Institution offering Agricultural Science, Agricultural Extension and social science qualifications should be having at least one bursary holder studying rural wealth creation by 2007.</li> </ul>	<ul> <li>Assessment and design should have been completed and budgeted for by April 2008</li> </ul>
Intervention	Recommend (develop and implement) a systematic programme for HE Level Studies.		Develop and implement systematic programme to train all Extension Officers in the fundamental elements of Rural Wealth Creation
Strategic Objective	2.3.3. Ensure alignment of curricula to include Rural Wealth Creation		

Develop and maintain an effective and well co-ordinated AET that is integrated at all levels and responds appropriately to South African Agriculture. ä

<ul> <li>All Extension Officers should be demonstrating an understanding of the theory and practices of rural wealth creation to at least a minimum level set by Dec 2010</li> </ul>	<ul> <li>Design and implement tailored training courses for all technicians, Extension Officers and scientists/ specialists in the fundamentals of rural wealth creation</li> </ul>	DoA	

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To enhance equitable access and meaningful participation in AET for all South Africans

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Responsibility	NAET Forum and DoA	NAET Forum and DoA	NAET Forum and DoA
Implementation activities	<ul> <li>Establish a task team to draft an intervention strategy for access to AET</li> </ul>	<ul> <li>Recommend the incorporation of Recognition of Prior Learning in the accreditation processes as a way of compelling providers to build on existing knowledge and further the skills development in the agriculture sector.</li> </ul>	<ul> <li>Target Special groups such as farm workers, youth and women for access by providers.</li> </ul>
Outputs and Indicators	<ul> <li>There should be a significant movement towards demographic representation in the registration of learners in AET programmes in accordance with the prevailing policies of the Ministry of Education by the end of 2010.</li> </ul>	<ul> <li>Any limitations in the advancement of qualifications are solely on the basis of performance not as a result of artificial barriers by December 2010.</li> </ul>	<ul> <li>Proposed uniform fee structure for similar programmes should be completed by Sept 2007</li> </ul>
Intervention	Develop and implement a systematic plan to identify, prioritize and remove access barriers to AET.	Develop and implement a systematic plan to identify, prioritize and remove access barriers to AET	
Strategic Objective	3.1 Remove all barriers that prevent or limit access to AET.		

**3. STRATEGIC GOAL TWO:** 

# To enhance equitable access and meaningful participation in AET for all South Africans

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Responsibility	DoA, NAET Forum and DoE	DoA and NAET Forum	NAET Forum and DoA	NAET Forum and DoA
Implementation activities	<ul> <li>Commission research into how fees are determined for AET Programmes in institutions at levels.</li> </ul>	<ul> <li>Present the proposed fee structure for similar programmes to all offering agricultural programmes</li> </ul>	<ul> <li>Develop guidelines for the assessment of mobile units' requirements for adequately reaching rural emerging farmers and farm workers on the basis of the minimum norm, budgeted and rolled out over a period of five years.</li> </ul>	<ul> <li>Recommend that language, training centre locations and training materials as well as approach should form part of the curriculum evaluation process for rural communities and</li> </ul>
Outputs and Indicators	<ul> <li>A systematic plan to remove access barriers should have been completed, budgeted for and implemented by Dec 2010</li> </ul>	<ul> <li>Training materials written in the languages of the rural communities,</li> </ul>	emerging rarmers and farm workers for training purposes by December 2010	
Intervention	Develop and implement a systematic plan to identify, prioritize and remove access barriers to AET.			
Strategic Objective	3.1. Remove all barriers that prevent access to AET			

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Strategic Objective	Intervention	Outputs and Indicators	Implementation activities	Responsibility
3.1 Remove all barriers that prevent or limit access to AET	Develop and implement a systematic plan to identify, prioritize and remove access barriers		<ul> <li>Expose non-formal providers working in rural communities (e.g. Agricultural Extension Officers) to participatory extension methods in order to ensure that recipients of their training can also contribute their indigenous knowledge base. Other areas where non-formal providers must be trained include needs analysis.</li> </ul>	NAET Forum and DoA
			<ul> <li>Encourage</li> <li>entrepreneurship in agriculture</li> </ul>	NAET Forum and DoA
			<ul> <li>Implement, evaluate and revise the programme on an ongoing basis.</li> </ul>	NAET Forum and DoA

**3. STRATEGIC GOAL TWO:** 

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3.2 Improve the image of				
agriculture as career livelihood choice.	Developed and implement a high impact public education programme that	<ul> <li>Number of students registering Agricultural Science, combined with Mathematics and at least</li> </ul>	<ul> <li>Poster, essay and website competitions DoA</li> </ul>	DoA
	agriculture, particularly among the youthDevelop	one other Science subject in FET schools should increase at 2%	<ul> <li>Organize Career awareness campaigns</li> </ul>	NAET Forum and DoA, DoE
	impact public education programme promoting the impact of action/hure among	annually until at least a 10% of all registered	<ul> <li>Recommend Career guidance in schools</li> </ul>	NAET Forum and DoA
	the youth	Grade 12 have the above combination,	<ul> <li>Establish "Youth in Agriculture" programmes</li> </ul>	NAET Forum and DoA
			<ul> <li>Liaise with District Senior Managers in PDEs and recommend special training and materials for LO educators</li> </ul>	NAET Forum and PDAs
			<ul> <li>Organize Inter High School competitions on agriculture</li> </ul>	PDAs and DoA
		<ul> <li>Programme should have been developed by Dec 2006</li> </ul>	<ul> <li>Encourage the study of Agricultural Science, Agricultural Economics and Rural Resource</li> </ul>	NAET Forum and DoA
		<ul> <li>Programme should have been launched by April 2007</li> </ul>	Management as formal qualifications or specialisation through special bursaries and awards.	

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3. To enhance equitable access and meaningful participation in AET for all South Africans

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NAET Forum and DoA	NAET Forum and DoA	NAET Forum and DoA	DoA	
<ul> <li>Encourage the incorporation of Agricultural Economics and Rural Resource Management into Agricultural Science qualifications</li> </ul>	<ul> <li>Identify and codify crucial skills in demand.</li> </ul>	<ul> <li>Commission research to identify crucial skills in demand.</li> </ul>	<ul> <li>Award bursaries for postgraduate studies in critical skills in demand.</li> </ul>	
<ul> <li>Number of students registering for agricultural related qualifications should increase annually, commencing 2007 until at least 15% of all registrations at HE institutions offering agricultural qualifications is reached by 2010.</li> </ul>	<ul> <li>Prioritized List of crucial and scarce skills should have been completed and published by Dec 2006</li> </ul>	<ul> <li>Research proposals on identifying crucial skills in demand should have been finalized by June 2007.</li> </ul>	<ul> <li>Bursaries awarded according to the prioritized list from Jan 2007.</li> </ul>	
	Engage in partnerships with HE institutions to conduct research into agricultural sciences in those areas were crucial skills are in demand to encouraae hiaher level	studies.		
<ul> <li>3.2 Improve the image of agriculture as career livelihood choice.</li> </ul>	<ol> <li>3.3 Encourage further studies (Masters and PhD) of the agricultural sciences (especially of critical skills in short supply) to produce</li> </ol>	highly qualified scientists and add to the agricultural science knowledge base.		
	<ul> <li>Number of students registering for agricultural related qualifications should increase annually, commencing 2007 until incorporation of Agricultural Economics and Rural Resource Management into Agricultural Science qualifications is reached by 2010.</li> </ul>	Image in partnerships with       • Number of students       • Encourage the incorporation of agricultural related audifications should increase annually, and Rural Resource increase annually, and Rural Resource institutions offering and Rural Resource institutions offering agricultural gualifications is reached by 2010.         Image in partnerships with       • Prioritized List of crucial skills are in demand by Dec	<ul> <li>Number of students registering for cgricultural related qualifications should increase annually, and Rural Resource increase annually, and Rural Resource and Rural Resource increase annually, and Rural Resource in Resource in Rural Resource and Rural Resource in Rural Resource and Rural Resource in Rural Resource and Rural Resource in Rural Resource and Rural Resource and Rural Resource in Resource in Resource in Rural Resource and Rural Resource in Rural Resource is reached by 2010.</li> <li>HE institutions to conduct is reached by 2010.</li> <li>HE institutions to conduct is reached by 2010.</li> <li>Identify and codify crucial skills in demand.</li> <li>Research proposals on identifying crucial skills in in demand.</li> <li>Research proposals on studies.</li> </ul>	<ul> <li>Number of students registering for agricultural Economics registering for agricultural reconomics avertications should with a spricultural Economics and Rural Resource increase amualy, commencing 2007 until agricultural Science are least 15% of all agricultural Science are avert into agricultural qualifications is reached by 2010.</li> <li>Fingage in partnerships with HE institutions of end start and a sciences in those areas were cucial skills are in demand. Tesearch into agricultural skills in demand. Tesearch into agricultural should have been completed by Dec cucial skills are in demand should have been finalized by June studies.</li> <li>Bursaries avarded is the of cucial skills in demand. Tesearch into agricultural should have been finalized by June 2007.</li> </ul>

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4. STRATEGIC GOAL THREE:

### Ensure the application of effective quality assurance of AET at all levels.

	Strategic Objective	Intervention	Outputs and Indicators	Implementation activities	Responsibility
	<ol> <li>Ensure that, AET at all levels is accredited and resourced, with</li> </ol>	Recommend to DoE the educator and trainer reauirements that can	<ul> <li>Quality Assurance Programme for educator training and practical</li> </ul>	<ul> <li>Establish research commission.</li> </ul>	NAET Forum and DoA
	appropriate number of teachers and trainers with relevant skills.	adequately support an effective AET system from GET level to HE level and	training in all the institutions should have been designed and	<ul> <li>Create a database of all AET Providers</li> </ul>	DoA
		for non-formal AET, and set goals to meet this requirement.	budgeted for by Dec 2006 for implementation from April 2007	<ul> <li>Consolidate research into client training needs/requirements.</li> </ul>	NAET Forum and DoA
			<ul> <li>Number of accredited</li> <li>AFT providers should</li> </ul>	<ul> <li>Measure the gaps and develop standards.</li> </ul>	NAET Forum and DoA
			increase annually by 15% until at least all AET	<ul> <li>Plan to fill the gaps</li> </ul>	NAET Forum and DoA
			providers, are accredited to relevant standards.	<ul> <li>Regular review</li> </ul>	NAET Forum and DoA
		Support the National Policy of accreditation of AET providers and the registration of AET programmes.	<ul> <li>80% of AET providers should have been accredited and offering registered programmes by 2010.</li> </ul>	<ul> <li>Engages private sector, SAQA and NGO AET providers to facilitate accreditation and registration.</li> </ul>	DoA
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### 5. Conclusion

Agricultural Education and Training is a human resource intensive endeavour; therefore, an innovative and effective marketing of the strategy will be important in securing additional resources that are an integral part of some of the critical interventions.

The national Department of Agriculture has developed this strategy and action plan to commence in the financial year 2006/7. It is expected that the implementation of the plan will change some of the current conditions on a continuous basis, even if the change might not be so significant. The Department of Agriculture considers this plan as a significant and an important step in creating the preferred future for agricultural education. Most notable, is the extensive consultation with AET end-users, providers and other role-players, which distinguish this strategy as representing a future that is preferred by many partners in the sector. However, it will be important to ensure that visioning, strategic planning and implementation are continually refined with additional development as the understanding of the effects of interventions increases and as the environment changes.

Finally, the department would like to acknowledge and thank all the participants that contributed to the development of this strategic and action agenda.



