



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF AGRICULTURE

**INDIGENOUS KNOWLEDGE SYSTEMS RESEARCH AND
INNOVATION STRATEGY**

October 2008

Foreword

Studies in various parts of the African continent show that the majority of people including those living in South Africa, still depend largely on indigenous knowledge for survival. For centuries, local communities have relied on their indigenous knowledge and expertise to cope with the challenges posed by harsh environments such as droughts, epidemic pests and infertile soils to mention but few. Overtime, many communities and local people managed to develop their own coping strategies to get the most out of their natural environment by using indigenous knowledge systems (IKS).

The cabinet of the South African Government adopted the IKS policy in November 2004, thus laying in place the first important milestone in the efforts to recognize, affirm, develop, promote and protect indigenous knowledge. In September 2006, the Limpopo Department of Agriculture (LDA) established a division of Indigenous Knowledge Research and Innovation to primarily identify, prioritize and conduct indigenous knowledge research in line with the Departmental strategic plan. Together with other stakeholders, the division facilitated processes that led to the development of the indigenous knowledge systems research and innovation strategy. With the strategy now in place, it is extremely important that all relevant stakeholders move firmly towards the implementation of its provisions. It is hoped that the strategy will bring together key drivers to catalyze IKS activities in the areas of research and development, processing and marketing, capacity building and infrastructure development.

Finally, the strategy is seen as a framework meant to respond flexibly to the changing environment and through which local communities and individuals can share the economic and social opportunities in Limpopo Province.



Mme Dipuo Letsatsi-Duba
MEC: Limpopo Department of Agriculture

Preamble

The Indigenous Knowledge Systems Research and Innovation division of the Limpopo Department of Agriculture (LDA) developed this strategy to enhance indigenous knowledge systems (IKS) research and innovation in the Limpopo Province. The Division organized a workshop aimed at laying a foundation for the development of IKS research strategy with relevant stakeholders implementing this specialized field in the province. This workshop took place on the 18th – 19th October 2007 at Elephant Springs Hotel in Belabela and its goal was “Towards the development of a strategy for the successful implementation of indigenous knowledge research and innovations systems in Limpopo Province”. During the workshop, participants shared their experiences on the promotion of IKS at community level; identified critical components that would make IKS initiatives to be implemented successfully; identified suitable project areas for starting IKS initiatives in Limpopo and identified realistic next steps to kick start the joint collaboration for the implementation of IKS.

The stakeholder’s workshop was jointly coordinated and organised with the directorate of Biodiversity and Resource Use Management of Limpopo Economic Development Environment and Tourism (LEDET). Representatives from national and provincial government departments, farmer organisations, traditional health practitioners, non – governmental organisations (NGOs), THP’s representatives tertiary institutions and Agricultural Research Councils (ARCs) were invited to participate in the workshop. From the exchange of experiences during the workshop, participants acknowledged that indigenous knowledge is a primary factor in the survival and welfare of the majority of South Africans and that a network to enhance joint learning should be established.



Mr MBJ Maloa

Head of Department: Limpopo Department of Agriculture

TABLE OF CONTENTS

Page numbers

1	INTRODUCTION	4
2	OBJECTIVES	5
3	POLICY AND LEGISLATIVE FRAMEWORK	5
4	IKS SITUATION ANALYSIS.....	5
4.1	STRENGTH	5
4.2	WEAKNESSES	6
4.3	OPPORTUNITIES.....	6
4.4	THREATS	7
5	STRATEGIC INTERVENTIONS	8
5.1	IDENTIFICATION OF IKS PRACTITIONERS AND ESTABLISHMENT OF NETWORKS	8
5.2	DOCUMENTATION OF IKS	9
5.3	INTELLECTUAL PROPERTY RIGHTS	10
5.4	RESEARCH ON IKS	10
5.5	PARTNERSHIPS	11
5.6	CAPACITY BUILDING.....	12
5.7	TECHNOLOGY TRANSFER	13
5.8	MENTORING SYSTEMS	13
5.9	INSTITUTIONAL ARRANGEMENTS.....	14
6	FOCAL AREAS FOR IKS IMPLEMENTATION	15
6.1	ORGANIC FARMING	15
6.2	LIVESTOCK PRODUCTION SYSTEMS.....	15
6.3	CROP PRODUCTION SYSTEMS	16
6.4	MEDICINAL PLANTS	16
6.5	VALUE ADDITION	16
7	IMPLEMENTATION PLAN	16
8	MONITORING AND EVALUATION	16
9	ANNEXURE.....	17
9.1	ANNEX 1: IMPLEMENTATION PLAN FOR 2009/2010, 2010/2011 AND 2011/2012	17
9.2	ANNEX 2: POLICIES AND LEGISLATION.....	18
9.3	ANNEX 3: ACRONYMS	20
9.4	ANNEX 4: REFERENCES.....	21

1 Introduction

Indigenous knowledge (IK) manifests itself in areas ranging from cultural, religious, health and agricultural practices. The IK is generally used synonymously with traditional and local knowledge to differentiate the knowledge developed from western knowledge systems generated through universities, government research centres and private sector. It also embraces the traditional way of knowing, solving problems and utilizing resources for local needs in a sustainable manner.

There are several definitions of IKS but few have a specific relation to agriculture. One of them is given by *Onwu and Mosimege (2004)* who defines Indigenous knowledge systems (IKS) as:

An all inclusive knowledge that covers technologies and practices that have been and are still used by indigenous and local people for existence, survival and adaptation in a variety of environments. Such knowledge covers contents and contexts such as agriculture, engineering, health, governance and other social systems and activities.

In Africa, South Africa and Uganda are few of the countries which have tried to mainstream the utilization of IK in agriculture, environment and health sectors. In the past, IKS practitioners in South Africa were marginalised, suppressed and subjected to ridicule under the previous government dispensation. Nevertheless, much of their IK persisted and people used it to address various issues of development including agriculture.

The Department of Science and Technology (DST) in South African managed to develop a national policy on IKS that promotes the interfacing of IK with other knowledge systems and therefore provides an opportunity for new products and services. In addition to this, the Limpopo Department of Agriculture (LDA) established a division of Indigenous Knowledge Research and Innovation in September 2006. These moves will go a great length in supporting a disproportionate share of the total food insecure people living in the rural areas of Limpopo Province and enhancing their economic development.

The proposed strategy will provide a conceptual framework for future operationalisation of IKS research activities in Limpopo Province. This engagement requires that IKS be integrated into the on-going programmes undertaken by LDA and various stakeholders. Most importantly, it will have to be implemented in line with the philosophy supported by four key service delivery approaches, namely:

- Municipality focus;
- Commodity based;
- Value chain analysis and;
- Project based.

2 Objectives

By establishing a division responsible for implementing IKS research activities, LDA recognises IK as a strategic resource for food security and economic development through innovative initiatives and programs. The department therefore undertakes to promote the utilisation of IK by creating an enabling environment as provided for in this strategy.

The objectives of the strategy would therefore be to:

- Guide LDA in the formation and operation of IKS research and innovation programmes.
- Guide the generation of indigenous knowledge and information in the agricultural sector.
- Provide a framework for developing IKS research capacity and expertise, focusing efforts to LDA strategic priorities and areas of competitive advantage; and ensuring effective technology transfer and communication with the entire farming community.
- Provide an institutional framework to enhance participation of all stakeholders in IKS research and innovation.
- Mobilise resources and enhance their effective use for sustainable agricultural research, innovation and development.

3 Policy and legislative framework

In the implementation of IKS research and innovation strategy in Limpopo Province, LDA will be mandated and guided by selected policies, strategies, and legislation at international and national level (refer to the annex 2) which cover areas in,

- Agriculture,
- Environment,
- Health

4 IKS situation analysis

4.1 Strength

Various programs¹ have been implemented by LDA for the purpose of broadening the provision of services to the majority of rural farmers. In addition to this, other specialised programs² are currently being implemented within LDA to further enhance access to services by the local people. Integration of IKS research activities with experiences and lessons developed from the implementation of these programs and other LDA divisions will therefore be very important.

¹ Broadening agricultural services and extension delivery (BASED); Japanese international cooperation agency (JICA) and LDA supported food security program.

² Compressive agricultural support program (CASP), Limpopo agricultural development program (LADEP), and Limpopo agricultural development academy (LADA).

In addition to the above, others factors create a conducive environment for the implementation of IKS research in Limpopo. They are:

- Existence of the division of Indigenous Knowledge Research and Innovation in the department.
- Existing networks on IKS that have been created and availability of other stakeholders in Limpopo.
- Availability of researchers³ / scientist at the agricultural development centres(ADCs)⁴ and the extension officers in municipalities.
- The existence of knowledgeable farmers and their organisations on diverse IKS practices and innovations.
- Availability of indigenous livestock breeds in the province and indigenous vegetables (sometimes regarded as weeds). What about availability of indigenous fruits
- Limpopo Province as a rural province with 89% of population which is mostly dependent on the use of indigenous resources.

4.2 Weaknesses

Though IK contributes significantly to the welfare of rural people of Limpopo Province in terms of farming systems, its contribution to agriculture still remains informal. For instance, apart from the health sector⁵ in which its contribution can easily be acknowledged, in agriculture and other sectors it has scarcely been appreciated. Some important weaknesses related to the implementation of IKS research in Limpopo Province are:

- IKS has not been part of the education system for the existing staff and hence the limited capacity to create its awareness, document it and do research.
- Limited tools and skills to encourage the local people to open up and provide IKS related information
- Less recognition of IKS as science by the scientist and researchers
- Limited knowledge and clarity on the legislative framework for intellectual property (IP)
- Limited attention given to its contribution to economic development

4.3 Opportunities

Despite the challenges faced by farmers in the rural areas, IK holders in local communities have for many years developed innovative ways of using and sustaining IKS for their livelihood. The national IKS policy in South Africa has also opened avenues for the establishment of much needed platforms for the

³ In addition to the scientist at the ADCs and municipalities, LDA has appointed specialist researchers whose main functions will be to do research in various disciplines of livestock and crops production

⁴ These are the two research stations of LDA, namely Towoomba and Mara

⁵ The Department of Health and Social Development has established an office to promote IKS program in the provinces. The program covers traditional health practitioners, traditional health medicines and research.

local people to conserve IK and use it sustainably for economic benefits. Some more opportunities related to IKS are:

- Building innovations on IK can be particularly effective in enhancing research initiatives with the rural communities where this knowledge is often the only asset they control, and certainly one with which they are very familiar.
- Validation of IK would be important to address the current challenges (e.g. food insecurity and high food prices) in agriculture that could not be dealt with through the use of conventional methods alone.
- Provide an opportunity for the scientist and researchers within LDA to initiate and engaged in research projects that address LDA focal areas in line with IKS
- The availability of IK would increase the sustainability of innovation efforts of research programs for mutual learning and adaptation, which would in turn lead to the empowerment of local communities.
- Local institutions, indigenous appropriate technology, and low-cost systems can increase the efficiency of local economic development programs because IK is a locally owned and managed resource.
- Harnessing IK in line with business principles would provide marketing opportunities and international branding of local products.

4.4 Threats

Local people in rural areas of Limpopo Province have been inventing effective agricultural techniques in order to survive in marginalised conditions brought about by factors such as drought and weak infrastructure. Despite these attempts, the following threats are identified:

- IK is available but not well documented. As result of this, many IK bearers are dying with vital knowledge that could be useful for provincial and national development efforts.
- There is less involvement of the youth in IKS related activities. This is also encouraged by the fact that many of them migrate to urban areas and pursue economic activities that engage modernised systems.
- The local people and stakeholders do not cooperate in providing/ sharing knowledge for fear of losing their IK information or losing their patent rights to the outsiders.
- There is little confidence built between IK holders and researchers because many of the legal instruments that facilitate benefit sharing between concerned parties are still too complicated to be understood by the innovators and their communities.
- The sceptical attitude towards labelling IK as backward (e.g. use traditional medicines) are still not encouraging, more especially when in competition with conventional methods.
- More indigenous breeds and crops are going extinct

5 Strategic Interventions

5.1 Identification of IKS practitioners and establishment of networks

Identification of networks of IK practitioners in Limpopo and establishment of new ones where they don't exist provide a foundation for sustaining the operationalisation on IKS in the province.

Identification of individual and groups

This process, which will largely be facilitated by the municipal officers, will enable the identification of local interest groups such as:

- Individual innovators
- Entrepreneurs
- Group of farmers
- Traditional health practitioners
- Local schools

During this exercise, information related to IKS activities/ innovations being practiced, their scale of operation, stakeholders involved and location of implementation will be documented.

Strengthening of IKS groups

Not all interest groups/ projects that will be identified will be functional and strong. Instead of starting new groups, existing projects would be strengthened where there is a need through a process that involves self reflection and repeated planning. The responsibility of strengthening the existing IKS groups will rest with the municipal officers, most of which have acquired facilitation skills from their involvement in previous LDA programs.

To enable a wider coverage within a short period of time, the process would be backstopped by the facilitators from the agricultural training centres (ATCs)⁶.

Database of IKS practitioners and links with relevant stakeholders

A comprehensive list of IKS holders and projects related to agriculture in Limpopo Province should lead to the development of a database in each municipality. This fit very well with some of the priorities of the National Office on IKS.

On the one hand, such a process would enable further links with the Indigenous Knowledge System of South Africa (IKSSA) Trust that has been established by a range of stakeholders as an umbrella body representing IKS practitioners.

⁶ The two agricultural colleges (Madzivhandila and Tompi Seleka) are now referred to by LDA as agricultural training centers (ATCs).

5.2 Documentation of IKS

Documentation is one of the ways of protecting the disappearance of IK and preserving it for current and future generations. Nevertheless, this can only be effective if local communities support the transmission of such knowledge and its maintenance.

Databases of IK practices

Databases on IK would be created for the purposed of:

- Providing a system where IK is captured and stored.
- Promoting the sharing and dissemination of IK information, experience and practices.

The existence of a database would also encourage researchers and development workers to incorporate IK into their:

- Project proposals,
- Feasibility studies,
- Implementation plans and
- Project assessments

The standard used in the creation of the IK database should be in harmony with national and international systems so that cross – referencing is possible.

Documentation centers

In addition to documenting IK in a written form, it may also be presented through other formats such as:

- Audio and video tapes of events and processes
- Photographs (e.g. of preparations or plants involved in a process)
- Physical artefacts and specimens
- Drawings
- Maps

The documentation centres⁷ residing at libraries of the two ATCs would provide information management function where published and unpublished documents on IK would be systematically housed for public use. The documentation centres would therefore be promoting the understanding of IKS by:

- Providing an opportunity for the local communities to actively record and share their agricultural related information
- Facilitating IK information access to local people through the Municipalities

⁷The documentation centers are part of the libraries at the ATCs (Madzihandila and Tompi Seleka). The idea for their establishment was to collect information, especially old documents in the form of journals and books related to agriculture and keep them save for future reference.

5.3 Intellectual Property Rights

Intellectual property rights (IPRs) are legal protections given to persons over their creative endeavours. South Africa is a signatory to Trade-related intellectual properties (TRIPS) and the protection of aspects of IKS within the context of trademarks is possible within this framework. Other international instruments for addressing intellectual property are:

- Convention on biological diversity (CBD), Article 8(j)
- Declaration on indigenous rights, Draft, Article 29

Added to the above, various tools exist for protecting IK in South Africa. The following gives their brief description,

- *Patents*: Is a set of exclusive rights granted by the government to a person (s), usually with regard to an invention, for a fixed period of time. In South Africa, a patent lifespan may range from 10 to 15 years.
- *Trademarks*: Is a brand name, a slogan or a logo used to distinguish goods and services of one trader from another. The lifespan of a trademark is 10 years and can be renewed indefinitely.
- *Geographical indicators*: Is a sign used on goods that have a specific geographical origin and possess qualities or reputations that are due to their place. Two examples for this tool are Rooibos and honey - bush tea.
- *Contractual arrangements*: This tool can be used to protect IK of a local community through benefit sharing⁸.
- *Trade secret*: This tool protects undisclosed knowledge through secrecy and access agreements, which may also involve paying royalties to knowledge holders for access to and the use of their knowledge. For example, the traditional health practitioners are mainly using trade secret to protect their methods of healing.

The intellectual property of IKS as it relates to innovation and interface with other knowledge systems, including research and development is the responsibility of DST . The Department of Trade and Industry (DTI) deals with matters on intellectual property and IK for small medium and micro enterprises (SMME) development.

5.4 Research on IKS

Like any other knowledge, IK needs to be constantly challenged and further adapted to the evolving local contexts. Similarly, in research, IKS will gain more recognition if the findings would lead to the commercialisation of the local products and benefit for the communities. The potential of major research institutions to promote value addition to IK is immense.

⁸ In South Africa, an example of benefit sharing is an agreement between the Khoi and San communities and the Council for Scientific and Industrial Research (CSIR) concerning the patents derived from Hoodia plant which has been used by these indigenous people.

The following are aspects that could incorporate IKS into agricultural research:

- Documenting relevant IK from the holders
- Forming task teams for inter-disciplinary technology development and innovation processes
- Identifying problems and developing research agendas
- Conducting on-station and on-farm farmer-oriented research
- Evaluating technological options with the involvement of the beneficiaries

On–station research

There is a need for LDA to promote on-station research that links with the need of the clients. Such research will be supporting agricultural development by,

- Promoting and encouraging research that contribute to the sustainable use of local resources
- Enhancing profitability in agriculture; and
- Addressing food security and poverty alleviation

The on-station research in IKS presents a unique opportunity for trans-disciplinary and multi-collaborative research and can be done in the following institutions:

- Within LDA – ADCs and ATCs
- Other stakeholders - universalities and research institutes

Farmers participatory research

On-station research forms a base-line for conducting on-farm farmer oriented research. This type of research is relevant for IKS for the following reasons,

- It is grounded on a genuine partnership and make the local people drivers and owners of the initiatives
- It facilitates a rigorous farmer participation and generate a basket of technological options
- It can be taken to wider areas and spectrum of farmers with minimum cost
- It encourage the initiative to result in improved livelihood of the local people, sustained income, and/or ecologically sound management of the environment
- It enable researchers to get direct and firsthand feedback that helps research to improve or modify technologies.

The farmer participatory research will be done in the communities to support existing initiatives or projects.

5.5 Partnerships

The successful implementation of this strategy would require involvement of a number of stakeholders without whose cooperation, no visible impact will be realised. Already IKS research at national level operates under the auspices of the National Research Foundation (NRF). In addition, a significant number of programs exists that embrace IK research in the established science councils, in particular the,

- Agricultural Research Council (ARC)
- Council for Scientific and Industrial Research (CSIR)
- Human Sciences Research Council (HSRC)
- Medical Research Council (MRC).

Furthermore, there is a potential for major research institutions to promote the value additions to IK and make legal arrangements⁹ that meet community objectives. The interests of the local people in these instances are represented by institutions that are comprised of the traditional authorities, health practitioners and farmer organisations.

Where appropriate, collaboration research on IKS with other stakeholders would be formalised in the form of memorandum of understandings or service level agreements.

5.6 Capacity building

In line with the HRD strategy of LDA, the implementation of IKS will be made sustainable through the development of competencies related to research and technical skills.

Competency development of staff

The competency development process for the officers supporting IKS projects at municipal level will be aimed at helping them to acquire expertise in the area of:

- The documentation of IK innovations and processes
- Technical methodologies
- Research methodologies

Competency development of farmers

The acquired skills from trained officials will be shared with the farmers through various methods such as farmers' days and farmer field schools. In addition, farmers will be trained on programmes in line with HRD policies on skills related to:

- Technical
- Organisational
- Marketing and
- Financial / budget planning

These training programs will be provided by the ATCs and other service providers. They will enable local people and their organisations to manage local resources in a sustainable manner for purpose of increasing their associated benefits.

⁹ As has happened in the case of the CSIR and the San Hoodia Sharing Trust

Personal development

The field of IKS is new to many of the research and institutions of higher learning. This provides LDA officers with an opportunity to do their studies alongside identified problems on IKS. This is favoured by the fact that memoranda of understanding (MOU) exists between LDA and some universities in South Africa, namely

- University of Limpopo
- University of Venda
- University of Free State

These collaborations were established because these universities have a high number of LDA officials furthering their studies at honours, masters and PhD levels. The research programs by LDA official in these universities will address pertinent issues on IKS through problem solving and action learning/ research processes.

5.7 Technology Transfer

A variety of means exist through which awareness creation to the local communities on agricultural IKS could be made, and they include:

- Farmers' days for exposure to on – farm and on - station experiments
- Participation in innovation clubs/ organisations
- Participation in traditional and organic food festivals
- Participation in extensive radio and television coverage

After these awareness creation sessions that may include exposure visits or farmer's days, the local people should be helped to reflect and plan in order to identify lessons that could be implemented from such events.

5.8 Mentoring systems

The agricultural sector has experienced an increasing demand for support in agricultural development initiatives that lead to commercialisation. However, the majority of the staff supporting the beneficiaries lacks experiences and skills in certain specialised fields. In such fields, that include IKS, the use of different forms of mentorship would provide hands–on experience and adaptation of information into practical application. Where service providers are contracted for mentoring purposes, service level agreements would be developed in line with the IKS research interventions and strategic focus of LDA.

Mentoring process will also be available through collaborative work with other like – minded organisations. In this way, LDA officers would learn as they implement initiatives with organisations such as centres for innovation (e.g. Universities of Limpopo and North West) and research institutions (e.g. ARCs).

5.9 Institutional arrangements

Different levels of institutional arrangements are necessary to support local IK holders and their organisations.

Coordination of IKS within LDA

The “*nothing about us without us*” approach is working for the department and its partners in improving the integration and management of agriculture at the local municipality level. Where research initiatives are implemented with the involvement of the local communities, the municipal scientist and extension officers have important roles to play in fulfilling the expectation of IKS groups/organisations. These municipal officers can then be part of the task teams that will include officials from the divisions of Agricultural Research Services Sub - branch and other components of LDA.

Provincial Steering Committee on IKS

The processes leading to the development of the IKS strategy has from the start involved a range of stakeholders at national and provincial level. While it is difficult to come up with a strategy that encompasses many sectors, there is, however, a need for a forum through which different stakeholders would share a wide range of IKS experiences. Such a forum could be in the form of a provincial steering committee¹⁰ which could also include sectoral departments implementing IKS and other important stakeholders.

Because of the diverse focus of government departments on IKS in Limpopo, the driver and champion of this provincial forum could be a relevant component in the Office of the Premier.

Linkages with the National Office of IKS

There is a need to link with the national office of IKS to access resources and funding for the implementation of IKS programs for research and development. This support system would have to be in line with the databases developed from the identification of IKS projects and their activities.

Linkages with IKS centers

The IKS centres, also called centre of excellence for indigenous African knowledge studies are in the process of being established jointly by the University of Limpopo, University of Venda and University of North West in partnership with DST. Collaboration with these centres will be important in the areas documentation of innovations, interdisciplinary research and technical training.

¹⁰ This coordination mechanism was proposed by the participants during the Bela-Bela stakeholder workshop on IKS held in October 2007.

Involvement of the private sector

The synergy between the formal private sector and IKS is still largely unexplored. Therefore, the role of the private sector in IKS will be of particular importance in the following areas:

- The creation of businesses based on IK services resulting in long - term gainful employment opportunities for local communities, thus assisting in poverty reduction.
- Forming partnership with communities based on IK based products that are a result of processing of local products.

Involvement of the traditional leaders

Traditional leaders are the formal custodians of the customary values of the communities, which are historically and constitutionally entrusted to them. The existence of traditional leadership in the development process of IK is therefore significant. In fact, no IKS strategy will work if indigenous and local communities and their leaders are not directly and actively involved.

Access to the community in respect of IK will have to involve discussions with traditional leadership structures. In relation to research, the involvement of the traditional leaders will ensure that researchers work with local communities on a sound and sustainable basis.

6 Focal areas for IKS implementation

The core thematic areas that have been identified for the implementation of IKS research in Limpopo Province are organic farming, livestock production systems, crop production systems, medicinal plants and value addition.

6.1 Organic farming

Organic farming¹¹ projects are being implemented in different municipalities of Limpopo Province by various stakeholders. The farmers involved in most of the projects are mainly producing vegetable crops with some already selling to the national and international markets. In addition to this, the research topics on organic farming would cover other broad areas in crop production and enterprises on livestock.

6.2 Livestock production systems

Many indigenous livestock breeds in South Africa are brands that have attracted international attention. More research work is therefore important for the promotion of sustainable utilization of these breeds and enhancement of the local economic development initiatives. Other areas of research may include systems of keeping the livestock such as grazing systems and veld management.

¹¹For example, the Limpopo Department of Agriculture (LDA) in partnership with NECOFA (Network for Eco-Farming in Africa) initiated a market – driven organic production and farmer controlled enterprise with the purpose of enhancing the development of organized groups of smallholder farmers and farmer organizations

6.3 Crop production systems

Traditional agriculture is an economically tolerant and resilient crop production system that has demonstrated sustainability over long periods and optimizes its production security through adaptation to the local environment. This recognizes the importance of indigenous crops, especially some vegetables that provide healthy diets and have abilities to fight common diseases. Agronomic research will be done to optimise production on local vegetable, cereals, pulses, tubers, and fruit crops. It will also be important to do some studies on the management practices of these indigenous crops.

6.4 Medicinal plants

In South Africa, approximately 3000 plant species are used as medicines, of which about 700 are traded in large quantities in informal markets. Due to the marginalization of the African traditional medicines, there is little research on this subject, with only 25 of the South African plants biomedically characterized in terms of their medical properties. Added to this, there is also a problem of accessibility and availability of the traditional medicines. Possible research activities would therefore be in the area of cultivation practices of medicinal plants and their uses on crops and livestock. Establishment of the nurseries in the communities and within the ATCs will be encouraged for the conservation and preservation of the medicinal plants.

6.5 Value addition

Links of indigenous crops and livestock products with value addition is important to integrate agricultural production in a system relationship with business enterprise. This implies incorporation of innovative practices and processes for post- harvesting, storage and preservation. The nutritional content of indigenous foods and their processed forms will also be an important area of research activities.

7 Implementation Plan

Implementation plan is an evolving tool that will be developed overtime. But, based on the current activities, a plan that will cost R 3, 500000 has been developed for the period 2009/2010, 2010/2011 and 2011/2012 (see Annex 1).

8 Monitoring and evaluation

Monitoring and evaluations of implemented research activities of the strategy will be based on the key result areas and targets formulated in line with the strategic focus of the Research and Training Branch and its Research Services Sub – Branch. Using the different tools, monitoring¹² will form a basis for evaluation,¹³ which will further look at the impacts based on the agreed targets.

¹² For examples, quarterly reports, workshop reports on meetings with stakeholders and onsite visits

¹³ For example impact assessments and clients feedback

9 Annexure

9.1 Annex 1: Implementation plan for 2009/2010, 2010/2011 and 2011/2012

Intervention Strategy	Project / Activities	Targets and financial years			Estimated Budget			Total
		Year 1 2009/2010	Year 2 2010/2011	Year 3 2011/2012	Year 1 2009/ 2010	Year 2 2010/ 2011	Year 3 2011/ 2012	
Identification of IKS practitioners/networks	Identification & strengthening of IKS group	Seven IKS groups	Seven IKS groups	Seven IKS groups	70000	75000	80000	225000
Documentation of IKS researchable Innovations	Hang-up posters	4 x hang up posters	4 x hang up posters	4 x hang up posters	10000	12000	15000	37000
	Documented innovations	1x Booklet & 50 copies	1x Booklet & 50 copies	1x Booklet & 50 copies	30000	33000	35000	98000
	Video documentation development	Video for Diphagane		Video for Mbahela	Video for Phalaborwa	45000	50000	55000
60 copies of DVD			60 copies of DVD	60 copies of DVD	1500	1700	2000	5200
Research on IKS	Identification & isolations of active ingredients	5x samples for Diphagane	5x samples for Mbahela	5x samples - Phalaborwa	150000	170000	200000	520000
	Shelf life of the Biopesticide	36 x samples for Diphagane	37 x samples for Mbahela	38 x samples - Phalaborwa	180000	200000	220000	600000
	Consumable materials for agriculture	Diphagane	Mbahela	Phalaborwa	10000	12000	15000	37000
IKS Nursery establishment	Materials for nursery		Nursery at Tompi Seleka		100000		100000	
Capacity building	Capacity building of officers	Research methodology (50 x officers)	Documentation of innovations (50 officers)	Research methodology (50 x officers)	20000	25000	30000	75000
	Capacity building of farmers	Diphagane - propagation & conservation	Mbahela - propagation & conservation	Phalaborwa - propagation & conservation	10000	12000	15000	37000
Technology transfer	Farmers information days	2x at Diphagane	3x (2x Mbahela & 1x Diphagane)	3x (1x Mbahela, 1x Diphagane, 1x Phalaborwa)	40000	60000	65000	165000
	Farmers conference on innovations	1x Madzivhandila / Tompi (50 farmers & officers)	1x Madzivhandila/ Tompi (50 farmers & officers)	1x Madzivhandila/ Tompi (50 farmers & officers)	20000	25000	30000	75000
Exposure visit to India (Honey Bee Network)	Visit by management, officers and farmers	Study tour by management (x5)	Study tour by officers and innovators (x 10)		100000	200000		300000
Value addition	Processing of indigenous products	Processing machine for Makonde	Processing machine for Tshikundama	Processing machine for Musina	170000	200000	250000	620000
Human resource	Deputy manager for value chain	1x Deputy manager			175000	175000	175000	525000

						Grand Total	3, 569200
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9.2 Annex 2: Policies and legislation

International and national policies and legislations relevant for the IKS research and innovation strategy are briefly described below:

International policies and legislation

The Convention on Biological Diversity (Signed: June 1993 Ratified: 2 November 1995)

The aim of the convention is to effect international cooperation in the conservation of biological diversity and to promote the sustainable use of living natural resources worldwide.

International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

The objectives of this treaty are the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with conservation of biological diversity, for sustainable agriculture and food security.

National policies and legislations

A White Paper on Agriculture, 1995

The aim of the policy is to ensure equitable access to agriculture and promote the contribution of agriculture to the development of all communities, societies at large and the national economy, in order to enhance income, food security, employment and quality of life in a sustainable manner.

The Indigenous Knowledge Systems (IKS) policy

The policy aims to stimulate and strengthen the contribution of indigenous knowledge to social and economic development in South Africa.

Policy on Indigenous Crops

This policy aims to support research and technology development of indigenous crops, develop and promote sustainable production practices and create demand on both local and export markets by promoting its consumption.

Plant Improvement Act, 1976 (Act no. 53 of 1976)

This Act is aimed at ensuring the availability of high quality propagation material to all users.

Livestock Improvement Act, 1977 (Act no. 25 of 1977)

Aimed at the development and importation of animal breeds of high quality and therefore with an economic impact.

National Environmental Management: Biodiversity Act (Act 10 of 2004)

The objective of the Act is for the protection of species and ecosystem that warrant national protection, the sustainable use of indigenous biological resources as well as the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources.

Policy on Sustainable Agriculture

The purpose of this policy is to facilitate a coordinated approach towards achieving an ecologically, socially and economically sustainable agricultural sector in South Africa that support the government's commitment towards poverty alleviation, food security and economic development.

Sustainable Utilization of Agricultural Resources (SAUR), Draft Bill (2003)

This Bill is aimed at the sustainable utilization of natural agricultural resources, including control over the subdivision and change of use of agricultural land in support of biodiversity.

Conservation of Agricultural Resources Act, 1983 (Act no. 43 of 1983)

This Act provides for control over the utilisation of natural agricultural resources in South Africa in order to promote the conservation of soil, water sources and vegetation, and the combating of weeds and invader plants.

Co-operatives Act, 1981 (Act no. 91 of 1981)

This Act regulates the formation, registration, management and functioning of various types of co - operatives and the winding-up and dissolution of their formation.

Integrated Food Security Strategy for South Africa

The strategy aims to attain physical, social and economic access to sufficient, safe and nutritious food by all South Africans at all times, which will meet their dietary and food preferences for an active and healthy life.

Broad-based Black Economic Empowerment Act (2003) and the Broad-based Black Economic Empowerment Framework for Agriculture (AgriBEE) (2004)

The Acts aim to pursue Broad-based Black Economic Empowerment in support of a united and prosperous agricultural sector. The Acts apply to the entire value chain including provision of inputs, services, farming, processing, distribution, logistics and allied activities that add value to agricultural products.

9.3 Annex 3: Acronyms

ADCs	Agricultural Development Centres
AgriBEE	Agricultural Black Economic Empowerment
ARCs	Agriculture Research Councils
ATCs	Agricultural Training Centers
BASED	Broadening Agricultural Services and Extension Delivery
CASP	Compressive Agricultural Support Program
CBD	Convention on Biological Diversity
CSIR	Council for Scientific and Industrial Research
DST	Department of Science and Technology
DTI	Department of Trade and Industry
HRD	Human Resource Development
HSRC	Human Sciences Research Council
IK	Indigenous Knowledge
IKS	Indigenous Knowledge System
IKSSA	Indigenous Knowledge System of South Africa
IP	Intellectual Property
IPRs	Intellectual Property Rights
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
JICA	Japanese International Cooperation Agency
LADA	Limpopo Agricultural Development Academy
LADEP	Limpopo Agricultural Development Program
LDA	Limpopo Department of Agriculture
LEDET	Limpopo Economic Development Environment and Tourism
MOU	Memoranda of Understanding
MRC	Medical Research Council
NECOFA	Network for Eco-Farming in Africa
NGOs	Non-Governing Organizations
NRF	National Research Foundation
SAUR	Sustainable Utilization of Agricultural Resources

SMME	Small Medium and Micro Enterprises
TRIPS	Trade-Related Intellectual Properties

9.4 Annex 4: References

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