COUNCIL ON HIGHER EDUCATION

Higher Education Qualifications Sub-Framework

Qualification Standard

for

Bachelor of Agriculture in Agricultural Extension

The process of drafting this standard is described in the Introduction.

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The Council on Higher Education (CHE) is an independent statutory body established by the Higher Education Act, no. 101 of 1997 (amended). The CHE is the Quality Council for Higher Education, advises the Minister of Higher Education and Training on all higher education issues and is responsible for quality assurance and promotion through the Higher Education Quality Committee.

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HIGHER EDUCATION QUALIFICATIONS SUB-FRAMEWORK

STANDARDS DEVELOPMENT: POLICY AND PROCESS

Introduction

National policy and legislative context

In terms of the National Qualifications Framework (NQF) Act, 67 of 2008, the Council on Higher Education (CHE) is the Quality Council (QC) for Higher Education. The CHE is responsible for the quality assurance of higher education qualifications.

Part of the implementation of the Higher Education Qualifications Sub-Framework (HEQSF) is the development of qualification standards. Standards development is aligned with the *nested approach* incorporated in the HEQSF. In this approach, the outer layer providing the context for qualification standards are the NQF level descriptors developed by the South African Qualifications Authority (SAQA) in agreement with the relevant QC. One of the functions of the QC (in the case of higher education, the CHE) is to ensure that the NQF level descriptors 'remain current and appropriate'[1]. The development of qualification standards for higher education, therefore, needs to take the NQF level descriptors, as the outer layer in the *nested approach*, into account. An ancillary function is to ensure that they 'remain current and appropriate' in respect of qualifications awarded by higher education institutions. This means that they need to be responsive to the distinctive features of each field of study.

A secondary layer for the context in which qualification standards are developed is the HEQSF. This framework specifies the types of qualifications that may be awarded and, in some cases, the allowable variants of the qualification type. An example of variants is the provision for two variants of the Master's degree (including the 'professional' variant). Another example is the distinction in the Bachelor's degree type, between the 'general' and 'professionally-oriented' variants. The HEQSF also specifies the purpose and characteristics of each qualification type. However, as indicated in the *Framework for Qualification Standards in Higher Education* (CHE, 2013), neither NQF level descriptors nor the HEQSF is intended fully to address, or indeed capable of addressing, the relationship between generic qualification-type purpose and the specific characteristics of that qualification type in a particular field of study. One of the tasks of standards development is to reconcile the broad, generic description of a qualification type according to the HEQSF and the particular characteristics of qualifications awarded in diverse fields of study and disciplines, as defined by various descriptors and qualifiers.

Framework for standards development

Development of qualification standards is guided by the principles, protocols, and methodology outlined in the *Framework*, approved by the Council in March 2013. The focus of a standards statement is the relationship between the purpose of the qualification, the

[1] NQF Act 67 of 2008

attributes of a graduate that manifest the purpose, and the contexts and conditions for the assessment of those attributes. A standard establishes a threshold. However, on the grounds that a standard also plays a developmental role, the statement may include, as appropriate, elaboration of terms specific to the statement, guidelines for the achievement of the graduate attributes, and recommendations for above-threshold practice.

A qualification standard is a statement that indicates how the purpose of the qualification, and the level on the NQF at which it is awarded, are represented in the learning domains, assessment contexts, and graduate attributes that are typical for the award of the qualification. Qualification standards are not the same, in either scope or effect, like other modalities used for the establishment of standards in higher education, for example, resource allocation standards, teaching and learning standards, or standards used for the grading of individual students. Matters such as actual curriculum design, tuition standards, and standards for resource allocation for a programme are the responsibility of the institution awarding the qualification. Nor does the standard prescribe the duration of study for the qualification. It establishes the level on the NQF on which it is awarded and confirms the minimum number of credits as set by the HEQSF. The standard relates to all programmes leading to the qualification, irrespective of the mode of delivery, the curriculum structure, and whether or not a prior qualification at a lower or the same level on the NQF is a prerequisite.

The process of development

The aim of the standards development process is to explore the extent to which the principles, procedures, content, and methodology of standards development meet the requirements of all relevant parties: the institutions awarding the qualifications, the CHE as quality assurer of the qualifications, the graduates of those qualifications; their prospective employers; and any relevant professional council or association. The standard is, therefore, cognisant of academic as well as professional interests, insofar as the latter apply.

The drafting of this standards statement is the work of a group of academic experts in the field of study, convened by the CHE. Members of the Standards Development Working Group participate in their individual capacity, not as representatives of any institutions or organisations.

The Agricultural Extension Reference Group met on several occasions during the period 2022-2024 and the standard statement has been through several iterations and revisions. A draft version was disseminated to the higher education institutions and other interested parties for public consultation.

QUALIFICATION TITLE

Bachelor of Agriculture in Agricultural Extension

QUALIFICATION TYPE AND VARIANT

Bachelor's degree *(professional)*

BACHELOR'S DEGREE: GENERAL CHARACTERISTICS

There are two types of Bachelor's Degrees, namely general and professionally-oriented Bachelor's Degrees. Both types of degree may be structured as a 360-credit qualification with an exit at level 7 or as a 480-credit qualification with an exit at level 8 on the National Qualifications Framework[2].

The 480-credit Bachelor's Degree at NQF level 8 has both a higher volume of learning and greater cognitive demand than the 360-credit degree at level 7 and should prepare students to be able to undertake Master's level study by providing them with research capacity in the methodology and research techniques of the discipline.

The primary purpose of both the general and the professional Bachelor's Degree is to provide a well-rounded, broad education that equips graduates with the knowledge base, theory, and methodology of disciplines and fields of study, and to enable them to demonstrate initiative and responsibility in an academic or professional context. Both the 360- and 480-credit Bachelor's Degrees may require students to undertake research in a manner that is appropriate to the discipline or field of study in order to prepare them for postgraduate study.

The general Bachelor's Degree emphasises general principles and theories as preparation for entry into general employment or for a postgraduate programme. The professional Bachelor's Degree prepares students for professional training, post-graduate studies, or professional practice in a wide range of careers. Therefore, it emphasises general principles and theory in conjunction with procedural knowledge in order to provide students with a thorough grounding in the knowledge, theory, principles, and skills of the profession or career concerned and the ability to apply these to professional or career contexts. The degree programme may contain a component of work-integrated learning.

(*Higher Education Qualifications Sub-Framework*, CHE, 2013)

[2] See below, NQF level and credits

STANDARD FOR BACHELOR OF AGRICULTURE IN AGRICULTURAL EXTENSION

PREAMBLE

Agricultural extension is an established body of scientific knowledge. Graduates in this field must have competence not only in agricultural extension science as a professional field of practice, but they also must have a sound, scientific and practical understanding of the various aspects of efficient, profitable, and sustainable farm operations within varying operational contexts and within varying social, environmental and policy contexts.

Historically, anyone with a qualification (e.g. Diploma in Agriculture, BSc Agriculture) was deemed qualified to serve as an extension practitioner. Over the last several decades, this notion has evolved to the understanding that agricultural extension is an area of specialisation – not unlike that of a teacher – within the broad field of agriculture. The notion of agriculture itself has evolved from the narrow definition of primary production (e.g. farming) to embrace the whole of the agri-food system and value chains and their supporting professions (e.g. agricultural economics, agricultural engineering, agri-business management).

Historically, there have been three avenues aimed at acquiring the knowledge and skills relevant to an agricultural extension practitioner:

- acquire a qualification in agriculture with limited content in agricultural extension;
- acquire a qualification in an aspect of agriculture followed by a separate professional qualification in agricultural extension (e.g. Advanced Diploma in Agricultural Extension) – similar to a Post-Graduate Certificate in Education; or
- acquire a qualification specifically in agricultural extension.

The Bachelor of Agriculture in Agriculture Extension falls into the third avenue and is herein proposed as the premier avenue to service in agricultural extension. As such it is based on the understanding that while agricultural extension is within the descriptor of agriculture, it nevertheless represents its own body of knowledge with its own science, theories, and practices. While all extension practitioners must have a sound working knowledge of the science and practice of agriculture, this knowledge is insufficient to be effective an agricultural extension practitioner. As will be articulated in the core knowledge of this qualification standard, a graduate must be competent in the science and practice of agricultural extension, the science and practice of agriculture, and the theories and practices of various environmental, social, and economic policies. This qualification brings these elements together in a coherent and integrated manner.

Agricultural extension practitioners are innovative thinkers who embrace collaborative problem-solving approaches working together with farmers and other stakeholders to

create, assess, and share knowledge, information, and sustainable technologies to build the capacity and resilience of farmers and other relevant parties along the agro-food system value chain. They actively work in partnership with multiple parties in coordinated efforts towards the attainment of meaningful change/transformation in society.

The practitioner is a professional who is sufficiently grounded in the key areas relevant to managing crop, livestock, and mixed farming enterprises, managing environmental, economic, and social contexts within which farming enterprises operate, and fostering farmer learning and innovation. This grounding enables the practitioner to build the capacity of farmers operating in various contexts and scales to manage their farming enterprises, to manage the sustainability contexts in which their farming enterprises operate, and to manage their own life-long learning.

Extension and advisory[3] services (public, private, and non-governmental) are keys to sustainable agriculture, resilient livelihoods, and inclusive growth. Extension services, in collaboration with other role-players, play a critical role in the agro-food value chain. There will be an increasing need for extension practitioners well into the future and an urgent need to improve the extension practitioner-to-farmer ratios to ensure that development objectives can be met.

Recent trends in agriculture affecting agricultural extension include the effects of globalisation and food security, the fourth industrial revolution (with rapid advances in artificial intelligence and big data sets), demographic changes, increased urbanisation, climate change, private sector expansion, structural adjustments, and rapid technological development. There is also mounting pressure to achieve the United Nations Sustainable Development Goals (SDGs). In an era of digitisation, enterprise development by young people is an integral part of the transformation of the agricultural sector.

This calls for a global view of extension and advisory Services (EAS) that reinvents and clearly articulates the role of EAS in a rapidly changing rural context. It argues for an expanded role for EAS within agricultural innovation systems (AIS) and the development of new capacities at diverse levels.

The AIS approach focuses on interactions among a wide range of actors critical for innovation, and on the institutions and policies that influence these interactions. EAS includes parties from public, private, and civil society sectors who support rural communities in many ways. EAS is an important aspect of AIS and plays a major role in enabling innovation.

AIS embodies not only the competencies needed by individuals, but the expanded role of EAS envisaged here and the focus on organizational and system-level capacities. The new extensionist vision implies changes in EAS organisations, systems, and enabling environments, plus reskilling all types of individuals to better contribute to increasing the productivity and effectiveness of agricultural systems to improve the livelihoods of farmers.

[3] Refer to Guideline below.

Extension practitioners have a set of competencies that are special and separate from other disciplines. However, most of their training has traditionally been focused on the technical rather than the functional aspects. Practical level field experience is also often missing in their training.

Extension practitioners influence food and nutrition security through each of the Food and Nutrition Security (FNS) pillars of availability, access, utilisation, and stability. Extension practitioners contribute to consultation between and within public and private sectors and immerse themselves in recent relevant technical and social science research output, creating links between research and farming practice.

The primary role for graduates with a Bachelor of Agriculture in Agricultural Extension degree is to build the capacity of farmers to manage their farming enterprises, to manage the sustainability contexts in which their farming enterprises operate, and to manage their own lifelong learning. Agricultural extension practitioners provide an effective linkage between farmers, agricultural research, and other sources of information, making it possible to stimulate collective learning amongst all role-players to improve the quality of knowledge and decision-making skills. Extension practitioners learn and put into practice principles that are applicable to other fields such as food security, health, nutrition education, land reform, and climate change. They facilitate technology development (including farmer-initiated innovation) and transfer, and linkage with cognate disciplinary specialists. They are drivers of entrepreneurship in the agro-food system.

Training in agricultural extension should enable the graduate to qualify for registration with statutory professional bodies such as the South African Council for Natural Scientific Professions (SACNASP). The Natural Scientific Professions Act (Act No. 27 of 2003) as amended requires that all natural scientists (including agricultural extension scientists) register as practitioners and undertake continuing professional development activities that accrue credit points.

Training in agricultural extension should enable the graduate to qualify for employment in the public, private, and/or NGO sectors as well as provide a foundation for self-employment in a range of contexts including public service extension, commodity organisations, cooperatives, as well as institutions such as banks and private organisations with interests in agricultural and/or rural development.

PURPOSE

The purpose of the professionally-oriented Bachelor of Agriculture in Agricultural Extension degree is to produce graduates possessing the necessary knowledge, skills, and applied competence to design, develop, assess, and execute or manage scientifically sound situation-specific and community-adapted extension or development programmes, conforming to the principles of participatory development with maximum involvement and impact with respect

to those directly affected by extension engagements. The graduate is proficient in extension science as a discipline that provides pathways toward multiple programmes of applied research, sustainable development, capacity building, and impactful empowerment initiatives that are essential for all aspects of society.

As extension practitioners the graduates need two sets of competencies: competencies related to agricultural production (pre-production, production, and post-production); and function extension competencies related to engaging with and building the capacity of farmers and others along the agro-food system value chain.

From the global perspective, the expanded role of the "New Extensionist", including "risk mitigation and adaptation in extension" means that they must be capable of "understanding factors such as declining water availability, soil degradation, uncertain climates, market distortions, infrastructure problems and social considerations such as gender, age and ethnic differences that affect farmers' adoption of technologies" (Global Forum for Rural Advisory Services, 2017)[4].

Graduates must be adequately versed with knowledge about, and drivers of positive adaptation to, matters relating to agriculture, including climate change and conservation, so that they are well-positioned to assist farmers to adapt. Key to this is the capacity to foster farmer resilience, adaptability, and innovation, with a full understanding of prevailing realities. Extension practitioners must understand climate change and other relevant agricultural influences from the scientific, economic, and social perspectives as well as their direct impact on agricultural production, agricultural decision-making, and natural resources and natural resource management. Extension science therefore must equip the extension practitioner with professional and systemic technology transfer[4] knowledge and skills on various aspects aimed at effecting change in the behaviour of the agriculturalists (manifest in the adoption of new technologies, improved productivity, and profitability).

Graduates are prepared to offer services to a wide range of sectors comprising, but not limited to, government, non-government, and industry entities in the agricultural and rural development sectors (agri-business), regional and international organisations, research institutes, and youth entrepreneurship ventures. Clients will include household producers (including vulnerable subsistence producers), smallholder, medium-scale, large-scale, and mega-/corporate commercial producers. The scope includes farming in rural communities, informal settlements, and urban settings.

On qualification, the graduate is eligible, subject to prevailing internship requirements, for registration with SACNASP as an agricultural extension practitioner, is prepared for higher-level postgraduate studies if so desired, and is capable of ongoing professional development.

[4] https://www.g-fras.org/en/activities/the-new-extensionist.html.

NQF LEVEL AND CREDITS

The exit level of the qualification is **NQF level 8**. The minimum number of credits allocated to the qualification is 480 credits. The qualification includes work-integrated learning (WIL) bearing a number of credits appropriate for the demonstration of all WIL-related graduate attributes. A minimum of 120 credits must be awarded at the exit level (NQF level 8)[5], including an appropriate number of NQF 8 credits allocated to WIL.

STANDARD FOR THE AWARD OF THE QUALIFICATION

The qualification may be awarded when the qualification standard has been met or exceeded. The *purpose* and *level* of the qualification will have been achieved when the following attributes are evident.

A Bachelor of Agriculture in Agricultural Extension graduate displays the NQF level 8 holistic knowledge of core areas, as well as generic attributes including critical and analytical thinking, problem-solving, transfer of knowledge and skills from familiar to unfamiliar contexts, ability to work in disciplinary and cross-disciplinary groups, interpersonal skills, and awareness of the need for lifelong learning, time management, self-management and, in particular, ethical considerations and practice.

Core Knowledge

Extension graduates must be competent in two interrelated areas of expertise: agricultural extension science as a professional field of practice; and the science and practice of the various aspects of operating an efficient, profitable, and sustainable farming enterprise or related business. Graduates must be able to understand and apply both these areas of competence within varying operational contexts and within varying social, environmental, and policy contexts.

Agricultural extension science is the field of operation and the context for all related core knowledge. The related core knowledge must be at least functional in the sense that, while the graduate will not emerge as a farmer, he/she will have sufficient knowledge of the science and practice of agricultural production to be able to provide guidance, assistance, and advice.

Upon completion of a Bachelor of Agriculture in Agricultural Extension degree, the graduate demonstrates knowledge of the following:

[5] Note that the Standard does not prescribe the duration of a programme leading to the qualification. That is determined by the institution offering the programme.

1) Advanced understanding and application of theories, research methodologies, methods, and techniques relevant to the practice of agricultural extension including theory and practice of:
    a) Social and economic development;
    b) Learning[6];
    c) Systems thinking;
    d) Project design and management;
    e) Pluralistic and participatory methods, facilitation[7], group dynamics;
    f) Indigenous knowledge systems and livelihood assessment;
    g) Innovation;
    h) Research, including ethical considerations;
    i) Communication, stakeholder analysis, and partnerships.

2) In the context of building farmer capacity and otherwise providing advice and other support to farmers, the graduate demonstrates a foundational understanding of the science and practice of:
    a) Agricultural livestock production systems including large and small stock ruminants and non-ruminants;
    b) Agricultural plant production systems including, *inter alia*, field crops, vegetables, and fruit crops;
    c) Natural resource management in the context of agriculture including land use planning;
    d) Farm business management including managing a farm enterprise and managing the social and environmental contexts within which the farm enterprise operates, and risk management;
    e) Market identification, analysis, and access;
    f) Managing farm equipment, structures, and infrastructure including basic skills related to design, maintenance, and operation; and
    g) Agro-food value chain systems and development.
3) Advanced knowledge of theories and practices related to policy analysis, development, and implementation relevant to agricultural development and food and nutrition security, including:
    a) Agricultural policy, including rural and urban agricultural policy;
    b) Food and nutrition security policy;
    c) Land reform policy;

[6] Refer to Guideline below.
[7] Refer to Guideline below.

d) Rural development policy;

e) Climate change and conservation policy.

Application of knowledge and skills

The graduate demonstrates an ability to apply the knowledge and skills acquired in an integrated manner. This includes demonstrating an ability to assist farmers to achieve their vision, make better use of resources/technology, and create opportunities for farmers to develop competence.

In demonstrating these abilities, the graduate is able to:

1) Perform all duties accurately and precisely within the scope of practice of an agricultural extension practitioner in keeping with professional standards as implied in the purpose and core knowledge for this qualification;

2) Facilitate learning in a variety of development settings;

3) Contribute to leadership in an extension unit to promote excellence and effectiveness in service delivery including applying the principles of group dynamics and ethical leadership amongst interacting groups to improve the effectiveness of the groups;

4) Demonstrate an understanding of his/her role as a contributor and eventual leader in building farmer capacity on local, national, and international levels;

5) Think critically and develop creative responses to problems and issues informed by acquired knowledge and applied values to assess and address social, environmental, economic, safety, regulatory, and cultural issues relevant to agricultural extension and building farmer capacity;

6) Conduct scientific research in an area relevant to agricultural extension and communicate and apply the results of research in the field and among colleagues;

7) Understand and apply the use of information technology both to his/her own work in extension and the work related to the farm and the rest of the agro-food value chain;

8) Foster innovation among farmers and others in the agro-food value chain;

9) Introduce existing and new technologies in relevant contexts;

10) Communicate concepts, arguments, information, and solutions to problems in a manner appropriate to the agricultural extension context and to the recipients of the

communication, taking into account professional, technical, social, and cultural factors with particular emphasis on promoting learning in a range of contexts, including resort to position papers, policy critiques, scientific articles, and professional reports;

11) Demonstrate an understanding of how to work productively, whether independently or within cross-disciplinary teams[8], based on an understanding of the roles and relationships between the members of a professional team in diverse environments.

CONTEXTS AND CONDITIONS FOR ASSESSMENT

Appropriate assessment of graduate attributes is about finding the right balance between theoretical, technical, and functional knowledge, skills, and applied competence, and ensuring that agricultural extension professionals receive practical field training as well as learning provided in the classroom.

i. The Bachelor of Agriculture in Agricultural Extension degree is delivered and assessed in an environment that places the study in both a professional and an academic context.

ii. Adequate resources are available to implement effective teaching, learning, and assessment activities, which, in order to achieve the particular purpose of the qualification, include:

    a. an adequate context-relevant student: staff (academic and support) ratio;
    b. adequately equipped infrastructural resources;
    c. adequate access to resources such as in a library (hard copy and/or e-resources) in order to meet the problem-solving and research attributes of the qualification;
    d. IT resources sufficient to enable graduates to achieve the purpose of the qualification.

iii. Assessment is conducted by a diverse range of appropriately qualified staff from relevant disciplines adequate for the nature and level of the qualification, to ensure validity, reliability, and consistency in both campus-based and field-placement assessment. The institution provides opportunities for academic staff to enhance their competencies and to support their professional growth and development. The number of staff, and the ratio of full-time to part-time staff, are appropriate for adequate design, delivery, development, assessment, and quality assurance.

[8] 'Cross-disciplinary teams' includes multi-, inter- and transdisciplinary teams.

iv. Throughout the qualification, formative and summative assessment strategies are used to ensure that all graduate attributes are identified, understood, and achieved. There is a variety of assessment tasks, so as to give students opportunities to demonstrate developing levels of competence.

v. Externally-moderated examinations are conducted in both taught modules and work-integrated learning, at least at the exit level (NQF level 8), in a manner that promotes evaluation, development, and improvement where appropriate.

vi. Work-integrated learning (WIL) is a fundamental aspect of the whole qualification and the achievement of graduate attributes. Therefore, the assessment of practice includes a variety of WIL approaches. WIL is conducted at appropriate intervals during the programme, and the institution ensures that periods of WIL include relevant and adequately demanding activities on the part of the student. The institution is responsible for the coordination, supervision, and assessment of WIL activities. Where a contribution to supervision and/or assessment is made by an external agency or individual, the institution ensures that adequate and timely induction/orientation of such agents is in place. An appropriate number of credits is allocated to WIL, including credits allocated at the exit level.

PROGRESSION

A Bachelor's Degree is the minimum entry requirement for admission to a Bachelor Honours Degree or Postgraduate Diploma. A level 8 Bachelor's Degree with 480 credits may also meet the minimum requirement for admission to a cognate Master's Degree.

(Higher Education Qualifications Sub-Framework)

GUIDELINES

It is useful to view agricultural extension from four broad perspectives: technology transfer; advisory; learning and facilitation.

Technology transfer

As implied, the approach focuses on transferring knowledge and technologies to farmers. The technology originates externally to the farmer – usually through research conducted in the absence of the farmer and in response to generalised concerns most often related to productivity. It has been the dominant approach to agricultural extension for many decades – particularly in post-colonial Africa. Also, as implied, the approach is technology-focused in that the aim is for the farmer to adopt the proposed technology. Thus, this approach often engages persuasive methods to convey information and ultimately to encourage adoption. The approach has been criticised because it often does not take account of farmers' needs and demands, and because of its tendency to treat farmers as end-users as opposed to partners. The effectiveness of this approach depends on the context of each situation. Simple transfer of technology is not always appropriate, but it is well suited when the problem is immediate and urgent and on-farm options are limited.

Advisory

This approach is like the technology transfer approach in that it still focuses on technological solutions originating from external sources. It differs in that it is the farmer who initiates the transfer process. In this approach, the farmer has a problem and reaches out to find a solution to adopt. It differs also because farmers' problems are not always directly related to production and often involve other farm management decisions. While technology is central, the farmer is in the driver's seat, deciding what problems to solve and from whom to obtain solutions. This approach works both with short- and longer-term issues but does not actively seek farmer input into the solution. It is similar to a patient-doctor relationship.

Facilitation

This is closely linked to participatory research and action methods. Most often it operates through clustering farmers with a common interest to work together to achieve individual and common goals – not only to solve a specific technological/production problem. This approach is different from the technology transfer and advisory approaches in that its fundamental purpose is to assist farmers to learn, and thus become experts within their farming enterprises. The focus is not on any particular technology and specifically not on transferring technology developed externally to the farm. The aim is to reduce dependence on external inputs and even tradition, increase reliance on their own observations, knowledge, and ability to make decisions. This form of agricultural extension requires knowledge and skill in the theory and practice of various social sciences including participatory learning, group dynamics and decision-making. The most common form of this approach has been the Farmer Field Schools and more recently the Farm Business Schools. The main caveat with this approach is that it is time-consuming and assumes there is time to resolve issues. It is best suited for long-range issues, rather than one-off immediate problems.

Learning

This is the newest of the four approaches and was developed in South Africa. It focuses almost exclusively on farmer learning. Arguably, it is an outgrowth of the facilitation approach which also focuses on farmer learning. It was developed to address specifically the learning capacity of farmers and power relations between farmers and extension and research – essentially between farmers and all other external agents with whom the farmer interacts. The farmer, rather than the technology, is the centre of this approach. A key purpose of the learning approach is to develop and build the learning capacity of farmers to give greater equity and synergy to the relationship between farmers, on the one hand, and policymakers, researchers, and extension workers (and other players like sales representatives), on the other. It is a supply-driven approach in that an external agent – concerned about power balances – initiates the engagement. But it is also a response context for farmer-initiated extension engagements. Rather than immediately providing an answer to a question, the response is to focus on finding a way to help the farmer learn to understand and solve the problem him- or herself with minimal external inputs. The focus is on learning and on building learning capacity, particularly of the farmer. The aim is to build the capacity of farmers to manage their farm enterprises, the social, environmental, and economic contexts in which their enterprises operate, and their own capacity to learn and engage with scientific enquiry and with all external agents with whom they are obliged to engage. This approach requires knowledge and skill in agricultural production sciences and practices, knowledge in the contextual spaces of the natural, social, economic and policy environment, and knowledge and skill in various social sciences with a particular emphasis on the theory and practice of learning.

Smallholder Empowerment Promotion

Equally adopted lately in public sector agricultural extension in South Africa is the Smallholder Empowerment Promotion (SHEP) approach, launched through the Technical Cooperation Project by the Japan International Cooperation Agency (JICA) in 2006 and introduced in South Africa in 2014. The approach is based on two pillars that seek to promote the idea of ''farming as a business'', and to ''empower and motivate farmers". It succeeded in improving farmers' income in various countries in Africa such as Kenya and South Africa through the promotion of "market-oriented agriculture''.

In this approach, farmers and extension practitioners are taken through a participative training workshop comprising of four steps and activities. It is a participatory approach where farmers visit and become part of the identification of the market, develop understanding of market requirements, of pricing, and of securing the market (through contracts) for specific commodities. It ensures demand-driven production by promoting the concept of "growing strategically to sell" not "growing and then sell". The steps are as follows:

FOUR ESSENTIAL STEPS	SHEP ACTIVITIES
1. Selection of targets and sharing vision/goal	• Explaining the guidelines and extension material to farmers • Demand-driven in-field training
2. Farmers' awareness of the current situation and new information	• Participatory baseline survey • Participatory market survey
3. Decision-making by farmers	• Crop selection • Crop calendar
4. Provision of technical solutions	• Providing understandable guidelines and extension material to farmers

ANNEXURE A

NQF LEVEL DESCRIPTORS

The qualification is awarded at level 8 on the National Qualifications Framework (NQF) and therefore meets the following level descriptors:

a. Scope of knowledge, in respect of which a learner is able to demonstrate knowledge of and engagement in an area at the forefront of a field, discipline, or practice; an understanding of the theories, research methodologies, methods, and techniques relevant to the field, discipline or practice; and an understanding of how to apply such knowledge in a particular context.

b. Knowledge literacy, in respect of which a learner is able to demonstrate the ability to interrogate multiple sources of knowledge in an area of specialisation and to evaluate knowledge and processes of knowledge production.

c. Method and procedure, in respect of which a learner is able to demonstrate an understanding of the complexities and uncertainties of selecting, applying, or transferring appropriate standard procedures, processes or techniques to unfamiliar problems in a specialised field, discipline, or practice.

d. Problem-solving, in respect of which a learner is able to demonstrate the ability to use a range of specialised skills to identify, analyse and address complex or abstract problems drawing systematically on the body of knowledge and methods appropriate to a field, discipline or practice.

e. Ethics and professional practice, in respect of which a learner is able to demonstrate the ability to identify and address ethical issues based on critical reflection on the suitability of different ethical value systems to specific contexts.

f. Accessing, processing and managing information, in respect of which a learner is able to demonstrate the ability to critically review information gathering, synthesis of data, evaluation and management processes in specialised contexts in order to develop creative responses to problems and issues.

g. Producing and communicating information, in respect of which a learner is able to demonstrate the ability to present and communicate academic, professional or occupational ideas and texts effectively to a range of audiences, offering creative insights, rigorous interpretations, and solutions to problems and issues appropriate to the context.

h. Context and systems, in respect of which a learner is able to demonstrate the ability to operate effectively within a system, or manage a system based on an understanding of the roles and relationships between elements within the system.

i. Management of learning, in respect of which a learner is able to demonstrate the ability to apply, in a self-critical manner, learning strategies which effectively address his or her professional and ongoing learning needs and professional and ongoing learning needs of others.

j. Accountability, in respect of which a learner is able to demonstrate the ability to take full responsibility for his or her work, decision-making and use of resources, and full accountability for the decisions and actions of others where appropriate.

ANNEXURE B

Members of the Bachelor of Agriculture in Agricultural Extension Working Group

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