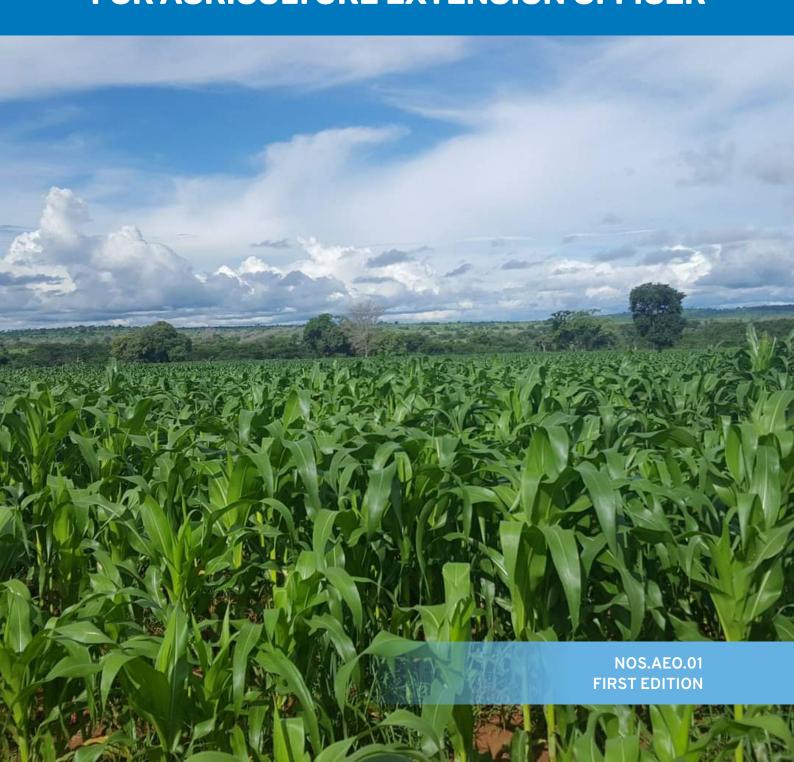


# NATIONAL OCCUPATIONAL STANDARD FOR AGRICULTURE EXTENSION OFFICER



#### **APPROVING AUTHORITY**

This National Occupational Standard has been prepared and published under the authority of the Zambia Qualifications Authority Board on 30<sup>th</sup> September, 2020.

#### ZAMBIA QUALIFICATIONS AUTHORITY

The Zambia Qualifications Authority Act No. 13 of 2011 was enacted by the Government of the Republic of Zambia to "provide for the development and implementation of a national qualifications framework; establish the Zambia Qualifications Authority; provide measures to ensure that standards and registered qualifications are internationally comparable; and provide for matters connected with, or incidental to the foregoing". Among other functions, ZAQA is responsible for determining national standards for any occupation, through various sector specific National Occupational Standards Development Teams (NOSDTs).

#### REVISION OF NATIONAL OCCUPATIONAL STANDARDS

National Occupational Standards shall be revised every after **5 years**, or whenever necessary, by the issue of either amendments or of revised editions. It is important that users of National Occupational Standards (NOS) should ascertain that they are in possession of the latest amendments or editions.

#### NOS DEVELOPMENT TEAM RESPONSIBLE

This National Occupational Standard was prepared by the Agriculture National Occupational Standards Development Team, upon which the following organisations were represented:

- 1. Ministry of Agriculture (MoA);
- 2. Zambia Agriculture Research Institute (ZARI);
- 3. Zambian Forum for Agricultural Extension and Advisory Services (ZAFAAS);
- 4. University of Zambia (UNZA);
- 5. Zambian Aquaculture Cooperative Society (ZACOSO);
- 6. Natural Resources Development College (NRDC);
- 7. Aquaculture Development Association of Zambia (ADAZ);
- 8. Zambia Qualifications Authority (ZAQA) Secretariat.

#### **ACKNOWLEDGEMENT**

The Zambia Qualifications Authority would like to acknowledge the invaluable support of the following stakeholders that participated in the development of this National Occupational Standard:

- 1. Mr. Katupa Chongo (Ministry of Agriculture);
- 2. Dr. Batiseba Tembo (Zambia Agriculture Research Institute);
- 3. Mr. Vincent M. Akamandisa (Zambian Forum for Agricultural Extension and Advisory Services);
- 4. Dr. Wilson Mwenya (University of Zambia);
- 5. Mr. Freznarnd Simfukwe (Zambian Aquaculture Cooperative Society);
- 6. Mr. Masautso E. Sakala (Natural Resources Development College);
- 7. Mr. Baldwin Chibuta (Aquaculture Development Association of Zambia).

The Authority wishes to also acknowledge the efforts of all stakeholders that took time to review and submit comments on this NOS and those that participated in the national validation process.

### **TABLE OF CONTENTS**

FO	REWORD	iv
AC	RONYMS AND ABBREVIATIONS	v
GL	OSSARY OF TERMS	vi
1.	OVERVIEW	1
2.	SCOPE	2
3.	PERSONAL ATTRIBUTES (VALUES, ETHICS AND ATTITUDES)	2
4.	UNITS AND ELEMENTS	2
5.	EQUIPMENT, TOOLS AND CONSUMABLE MATERIALS	13
6.	DILEMMAS/CHALLENGES AND COMPLEXITIES FOR A JOB HOLDER	14
7.	WORKING CONDITIONS/ENVIRONMENT	14
8.	PARTIES INVOLVED/INTERACTING WITH THE JOB HOLDER OR TRAINEE	14
9.	PHYSICAL DEMANDS ON THE BODY	14
AN	NEX A	15
Cri	teria for Assessments based on this NOS	15
ΑN	NEX B	16
NO	S Version Control	16

#### **FOREWORD**

The Zambia Qualifications Authority (ZAQA) is a statutory body under the Ministry of Higher Education established by ZAQA Act No. 13 of 2011 to "provide for the development and implementation of a national qualifications framework; provide measures to ensure that standards and registered qualifications are internationally comparable; and provide for matters connected with, or incidental to the foregoing".

Among other functions, ZAQA is responsible for "determining national standards for any occupation", through various sector specific National Occupational Standards Development Teams (NOSDTs) of experts composed of representation from appropriate authorities, government departments, industry, academia, regulators, consumer associations and non-governmental organisations, etc.

This National Occupational Standard (NOS) has been developed by the Agriculture National Occupational Standards Development Team in accordance with the procedures and guidelines of ZAQA. All users should ensure that they have the latest edition of this publication as National Occupational Standards are revised from time to time.

This NOS shall be used by, among others, industry, employers, quality assurance bodies, awarding and professional bodies and education and training institutions, as a benchmark to identify training needs, develop job profiles/descriptions, develop curricula and learning programmes, in various sectors where the occupation exists. In the Agriculture sector, demonstration of competence against this NOS may be required in order to run a business or practice a craft or profession.

Agricultural extension is the application of scientific research and knowledge to agricultural practices through farmer education. The role of Agriculture Extension Officers is invaluable in teaching farmers how to improve their productivity. They are also critical in moving research from the lab to the field and to ensure a return on investment in research by translating new knowledge into innovative practices.

In addition, Agriculture Extension Officers play a crucial role in boosting agricultural productivity, increasing food security, improving rural livelihoods, and promoting agriculture as an engine of pro-poor economic growth.

This National Occupational Standard highlights core knowledge, skills, competences and personal attributes that Agriculture Extension Officers must possess to be successful in their work roles.

Mirriam M. A Chiyaba (Mrs)
Director and Chief Executive Officer

#### **ACRONYMS AND ABBREVIATIONS**

AEO Agriculture Extension Officer

CS Core Skill

NOS National Occupational Standard

NOSDT National Occupational Standards Development Team

OK Organisational Knowledge

PC Performance Criteria

PS Professional Skill

RPL Recognition of Prior Learning

TK Technical Knowledge

ZAQA Zambia Qualifications Authority

ZQF Zambia Qualifications Framework

#### **GLOSSARY OF TERMS**

For the purposes of this NOS, the following terms and definitions shall apply:

**Core Skills/Generic Skills:** are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles.

**Function:** is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of NOS.

**Job Role:** defines a unique set of functions that together form a unique employment opportunity in an organisation.

**Knowledge and Understanding:** are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.

**National Occupational Standards (NOS):** are statements of the standards of performance individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding. They are precise descriptions of what an individual is expected to be able to do in his/her work role.

**National Occupational Standards (NOS) Code:** is a unique reference code that identifies a NOS.

**National Occupational Standards Development Team (NOSDT):** means an established group of national stakeholders/experts responsible for the development of National Occupational Standards within a specific economic sector or occupation.

**Occupation:** is a set of job roles, which perform similar/related set of functions in an industry.

**Organisational Context:** includes the way the organisation is structured and how it operates, including the extent of operative knowledge that managers have in their relevant areas of responsibility.

**Performance Criteria:** are statements that together specify the standard of performance required when carrying out a task.

**Scope:** is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.

**Sector:** is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.

**Sub-Sector:** is derived from a further breakdown based on the characteristics and interests of its components.

**Technical Knowledge:** is the specific knowledge needed to accomplish specific designated responsibilities.

**Unit Title:** gives a clear overall statement about what the incumbent should be able to do.

#### 1. OVERVIEW

This is an introductory section providing a brief summary and specific information or commentary about the content of the NOS and the targeted sector and occupation to help the user judge whether it is relevant to them.

NOS Code	NOS.AEO.01
Occupation	Agriculture Production Information Management
Job Title	Agricultural Extension Officer
Job Description	An agriculture extension officer gives talks, guidance and actual demonstrations on latest technologies related to agriculture. He/she also works with other experts in agriculture to learn more or develop new methods that advance production and productivity
Job Purpose	To undertake the provision of extension services in order to facilitate dissemination of information and technologies for improved agriculture at Camp level
ZQF Level	4
Sector	Agriculture
Sub sector	Agriculture Extension and Advisory Services
Other Economic Sector(s) in which the Occupation is Practiced	Production, Processing and Marketing
Other Similar Jobs Performed in the Occupation	Block Extension Officer, District Subject Matter Specialists, Senior Agricultural Officer and District Agriculture Coordinator
Minimum Educational Job Entry Qualification(s)	General Certificate in Agriculture (Level 4 Certificate) or equivalent
Practicing License Requirements (if any)	N/A
Training/RPL	Mandatory 2 years training in General Agriculture
Minimum Job Entry Age	18
Prior Experience (Optional)	N/A
Performance Criteria	As described in the Units under Section 4

#### 2. SCOPE

This National Occupational Standard specifies the fundamental knowledge and understanding, skills and competences that Agriculture Extension Officers must possess to be successful in their job roles. It is applicable to Agriculture Extension Officers working in governmental or non-governmental organisations, in agriculture.

#### 3. PERSONAL ATTRIBUTES (VALUES, ETHICS AND ATTITUDES)

The job of Agriculture Extension Officer requires individuals to be armed with the latest techniques and information related to agriculture. They should have sound knowledge of the subject, should be able to create motivation and self confidence among farmers, to be trustworthy, honesty and integrity, time conscious, etc.

#### 4. UNITS AND ELEMENTS

This National Occupational Standard is divided into 5 Units representing the tasks that a job holder should undertake in his/her day to day work. Each Unit is further broken down into elements depicting the number of activities to be carried out for the successful execution of a particular task.

**UNIT 1** [This Unit is about the Agriculture Extension Officer planning for the extension services to be delivered at farmers' fields].

Unit No.	01	
Unit Title	Plan for the extension services	
Description	This Unit is about the Agriculture Extension Officer planning for the	
	extension services to be delivered to farmers' groups	
Scope	This Unit covers the following:	
•	Prepare for providing extension and advisory services	
	Prepare the action plan	
Performance Crit	eria (PC) w.r.t. the Scope	
Element	Performance Criteria (PC)	
Prepare for	To be competent, the Agriculture Extension Officer must be able to:	
providing	PC1. take internal trainings from subject matter specialists to	
extension and	prepare for providing extension services to farmer groups.	
advisory	PC2. conduct timely demonstrations and training of farmers in order to	
services	ensure effective delivery of appropriate information on technology	
	PC3. understand the usage of tools and equipment to be used for extension services	
	PC4. prepare to interact with farmer groups in the area chosen PC5. understand the socio-economic aspects of the area chosen	
	PC6. understand the agro-climatic condition of the area chosen	
Prepare the	To be competent, the Agriculture Extension Officer must be able to:	
action plan by	PC7. ensure timely development of individual work plans in order	
the Agriculture	to monitor and evaluate performance	
Extension	PC8. outline the action plan consisting of shortlisted technologies,	
Officer	tools and equipment, training methodologies according to	
	seasonal activities, etc.	
	PC9. decide the date and time when the farmer groups need to be	
	met in their respective agricultural zones	
Knowledge and l	Jnderstanding (K)	
A. Organisation-	The individual on the job must demonstrate knowledge and	
al Context	understanding of:	
(Knowledge	OK1. legislation, standards, policies and procedures relevant to	
of the	work	
company/	OK2. relevant health and safety requirements applicable in the	
organisation	work environment	
and its	OK3. own job role and responsibilities and sources for information	
processes)	pertaining to work	
	OK4. who to approach for support in order to obtain work related	
	information, clarifications and support	
	OK5. importance of following health, hygiene, safety and quality standards and the impact of not following the standards on	
	consumers and the business	
	OK6. documentation and related procedures applicable in the	
	context of work	
	Some of work	

B. Technical	The individual on the job must demonstrate knowledge and	
	understanding of:	
	TK1. various scientific methods and technologies for increasing	
	crop production, farmer productivity and income	
Skills (S)	one production, talling productions, since most income	
A. Core Skills/	Reading Skills	
	The individual on the job must be able to:	
Skills	CS1. update oneself about latest technologies by reading research	
- Citino	articles, attending seminars, conferences, etc.	
	CS2. keep abreast with the latest knowledge by reading brochures,	
	pamphlets, product information sheets, etc.	
	CS3. read relevant newspapers/booklets, etc.	
	Writing Skills	
-	The individual on the job must be able to:	
	CS4. fill work related forms and documents clearly	
	CS5. write down the plan for field visits	
	CS6. prepare reports for review by supervisors	
	Oral Communication (Listening and Speaking skills)	
=	The individual on the job must be able to:	
	CS7. maintain effective relationships with senior officers and	
	specialists	
	CS8. communicate clearly and effectively with seniors	
	CS9. understand information and grasp its meaning	
	CS10. communicate precisely	
	CS11. discuss issues, clarify doubts and seek solutions	
B. Professional	Decision Making Skills	
	The individual on the job must be able to:	
	PS1. make decisions pertaining to the concerned area of work	
	PS2. identify problems that may arise in carrying out tasks and	
	take preventive action following workplace procedures	
	Plan and Organise	
	The individual on the job must be able to:	
	PS3. plan and organise improved technologies to be demonstrated	
	PS4. organise meetings of stakeholders	
	PS5. organise meetings of farmer groups	
	Customer Centricity	
5	The individual on the job must be able to:	
	PS6. develop a rapport with senior officers and specialists	
	PS7. listen carefully and interpret the information given by the	
	seniors	
	PS8. discuss possible solutions	
	PS9. make use of exposure visits to model farms	
	PS10. participate in exhibitions/seminars/workshops which provide	
	information on new technologies in agriculture and allied sectors	
	Problem Solving Skills	
	The individual on the job must be able to:	
	PS11. think through problems, evaluate possible solutions and	
	suggest an optimum/best possible solution	
	seniors PS8. discuss possible solutions PS9. make use of exposure visits to model farms PS10. participate in exhibitions/seminars/workshops which provide information on new technologies in agriculture and allied sectors  Problem Solving Skills The individual on the job must be able to: PS11. think through problems, evaluate possible solutions and	

PS12. identify economically viable and operationally feasible solutions which meet farmer needs in collaboration with supervisors

#### **Analytical Thinking**

The individual on the job must be able to:

PS13. analyse the information received from officers and specialists

PS14. think analytically to come up with solutions

PS15. apply, analyse and evaluate the information gathered from trainings

PS16. improving/adapting the technologies based on results as guided by supervising officers

#### **Critical Thinking**

The individual on the job must be able to:

PS17. take up his/her own working and learning

PS18. apply, analyse, and evaluate the information gathered from observation, experience, reasoning, or communication, as a guide to thought and action

**UNIT 2** [This Unit is about the Agriculture Extension Officer identifying the location and specificity of different agricultural technologies under various farming systems].

Unit No.	02	
Unit Title	Identify location and specificity of agricultural technology and	
	production constraints	
Description	This Unit is about the Agriculture Extension Officer identifying	
-	production constraints under various farming systems.	
Scope	This Unit covers the following:	
	Interact with farmer groups and others	
	Conduct on-farm research	
	Complete the documentation of research findings	
Performance Crit	eria (PC) w.r.t. the Scope	
Element	Performance Criteria (PC)	
Interact with	To be competent, the Officer must be able to:	
farmer groups	PC1. identify the representative group of farmers	
and others to	PC2. hold detailed discussions to assess their needs	
identify	PC3. involve the representative group in investigations to find the	
production	suitability of the new technology	
constraints		
	To be competent, the Officer must be able to:	
Research	PC4. list down the problems to be solved	
	PC5. rank the problems by priority	
	PC6. identify causes of problems	
	PC7. list possible solutions	
	PC8. screen possible solutions for feasibility	
	PC9. identify experimental factors to be included in on-farm	
	experiments	
	PC10. conduct on-farm experiments in the fields of representative farmers	
	PC11. involve the representative farmers in the experiments	
	PC12. establish cause-effect relationships	
	PC13. evaluate the performance and potential application of the	
	new technology/farm practice	
	PC14. evaluate if the new technology can be applied 'as-is' or if it	
	needs to be refined and modified to be adapted in the local context	
Complete the	To be competent, the Officer must be able to:	
documentation	PC15. document properly the results of on-farm research in a	
	precise, clear and concise manner	
	PC16. discuss test results and ideas with the representative group	
	of farmers as well as the other stakeholders	
Knowledge and U	Jnderstanding (K)	
A. Organisation-	The Officer must demonstrate knowledge and understanding of:	
al Context	OK1. legislation, standards, policies and procedures relevant to	
(Knowledge	work	
of the	OK2. relevant health and safety requirements applicable in the	
company/	work environment	
organisation	OK3. documentation and related procedures applicable in the	
	context of work	

and its	
processes)	
B. Technical	The Officer must demonstrate knowledge and understanding of:
Knowledge	TK1. General agriculture knowledge in the agro ecological zone
Skills (S)	
A. Core Skills/	Reading Skills
Generic	Refer to Unit 1
Skills	Writing Skills
	Refer to Unit 1
	Oral Communication (Listening and Speaking skills)
	Refer to Unit 1
B. Professional	Decision Making Skills
Skills	The Officer must be able to:
	PS1. make decisions pertaining to the concerned area of work
	PS2. identify problems that may arise in carrying out tasks and
	take preventive action following workplace procedures
	Plan and Organise
	The Officer must be able to:
	PS3. organise meetings of stakeholders if necessary
	PS4. organise farmers' groups and lead them towards solutions to
	their problems
	Customer Centricity
	Refer to Unit 1
	Problem Solving Skills
	The Officer must be able to:
	PS5. think through problems, evaluate possible solutions and
	suggest an optimum/best possible solution
	PS6. identify economically viable and operationally feasible
	solutions which meet farmers' needs
	Analytical Thinking
	The Officer must be able to:
	PS7. analyse the data and information collected from on farm
	testing to come up with results and solutions thereof
	PS8. apply, analyse and evaluate the information gathered from
	observation, on-farm testing, experience, reasoning, discussions
	with farmers and stakeholders
	PS9. improving/adapting the technologies based on results found
	from analytical thinking

**UNIT 3** [This Unit is about the Agriculture Extension Officer planning for demonstrations to showcase the potential of improved agricultural technology in the farmer's field].

Unit No.	03
Unit Title	Demonstrations
Description	This Unit is about the agriculture extension Officer planning for demonstrations to showcase the potential of improved agricultural
	technology in the farmer's field.
Scope	This Unit covers the following:
	Preparing for field demonstrations
	Conducting field demonstrations
	Record keeping
Performance Crit	eria (PC) w.r.t. the Scope
Element	Performance Criteria (PC)
Preparing for	To be competent, the individual on the job must be able to:
frontline field	PC1. select suitable site for field demonstrations
demonstrations	PC2. conduct timely demonstrations of agronomic practices for the farmers in order to ensure effective delivery of appropriate
	technologies PC3. select a group of farmers who are willing to host the
	demonstration plots
	PC4. prepare for demonstrations by arranging for critical inputs to
	be used for the demonstrations
Conducting	To be competent, the individual on the job must be able to:
frontline field	PC5. guide and assist farmers in laying out the field
demonstrations	demonstrations.
	PC6. hold training for the farmers in managing demonstrations
	plots PC7. be present at the time of crucial farm operations like seeding,
	fertiliser application, weeding, plant protection measures,
	harvesting, threshing, and weighing of produce and use each of
	these operations as an input for training of farmers.
	PC8. encourage questions from farmers at each stage of the
	operations
	PC9. arrange a field day for a large manageable group of
Decemb	interested farmers and other stake holders
Record	To be competent, the Officer must be able to: PC10. maintain records for each demonstration
keeping	PC10. maintain records for each demonstration PC11. maintain an information card with basic information of the
	demonstration site and detailed information of the demonstration
	PC12. maintain technical report containing information on cost-
	benefit ratio of the demonstration to help work out the economic
	returns
	Jnderstanding (K)
	The Officer must demonstrate knowledge and understanding of:
al Context	OK1. legislation, standards, policies and procedures relevant to
(Knowledge	Work
of the	OK2. relevant health and safety requirements applicable in the work environment
company/	MOLY GUALIOULIEUR

organisation and its processes)	OK3. documentation and related procedures applicable in the context of work	
B. Technical Knowledge	The Officer must demonstrate knowledge and understanding of: TK1. uses and harmful effects of various pesticides TK2. safe methods of handling the pesticides TK3. first aid for the exposure of humans to harmful effects of pesticides TK4. use of tools for making demonstrations TK5. appropriate handling of tools TK6. safety measures to be adopted for using tools	
Skills (S)	The carety measures to be adopted for deling tools	
A. Core Skills/	Writing Skills	
Generic	The Officer must be able to:	
Skills	CS1. maintain records	
	CS2. report and document the results collected from field	
	demonstrations	
	Reading Skills	
	Refer to Unit 1	
	Oral Communication (Listening and Speaking skills)	
D. Doorfood's and	Refer to Unit 1	
B. Professional	Decision Making Skills	
Skills	The Officer must be able to: PS1. make decisions pertaining to the concerned area of work PS2. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures	
	Plan and Organise	
	The Officer must be able to: PS3. plan and organise field demonstrations PS4. organise meetings of representative group of farmers for field demonstrations	
	Customer Centricity	
	Refer to Unit 1	

**UNIT 4** [This Unit is about providing training to farmers to update their knowledge and skills].

Unit No.	04	
Unit Title	Provide training to farmers	
Description	This Unit is about providing training to farmers to update their	
_	knowledge and skills.	
Scope	This Unit covers the following:	
-	Plan the training program	
	Deliver training	
	Ensure feedback mechanism	
	Documentation	
<b>Performance Crite</b>	eria (PC) w.r.t. the Scope	
Element	Performance Criteria (PC)	
Plan the training	To be competent, the individual on the job must be able to:	
program	PC1. select technologies/topics on which training has to be	
	provided (could be agriculture as well as allied topics)	
	PC2. select a place where training has to be provided, i.e. farmer's	
	field, training school, famers training centre, etc.	
	PC3. select a group of farmers to whom training has to be provided	
	PC4. arrange necessary inputs required for the training, such as	
	machinery and equipment, black board, leaflets, etc.	
Deliver training	To be competent, the individual must be able to:	
	PC5. gather the farmers on a specific date and time for the training	
	PC6. deliver training modules in a clear and concise manner	
	PC7. make the training session interactive and encourage	
	questions from the farmers	
Encure feedback	PC8. provide both theoretical as well as practical training	
and follow-up	To be competent, the individual must be able to:  PC9. seek feedback after the training session is over	
mechanism	PC10. follow up with the farmers to ensure whether they are	
Illechamsin	following the new practices taught	
Documentation	To be competent, the individual must be able to:	
Documentation	PC11. maintain records of all training programs delivered	
	PC12. maintain details of feedback received and action taken	
	PC13. document the benefits received by farmers from the	
	trainings	
	PC14. document challenges faced during the training programmes	
Knowledge and U	Jnderstanding (K)	
A. Organisation-	The Officer must demonstrate knowledge and understanding of:	
al Context	OK1. legislation, standards, policies and procedures relevant to	
(Knowledge	work	
of the	OK2. relevant health and safety requirements applicable in the	
company/	work environment	
organisation	OK3. documentation and related procedures applicable in the	
and its	context of work	
processes)		

B. Technical Knowledge	The Officer must demonstrate knowledge and understanding of: TK1. tools to be used for providing effective training TK2. machinery, equipment and other inputs to be used for providing training
	TK3. effective methods of delivery of training TK4. availability and use of infrastructure to be used for training
Skills (S)	1114. availability and use of infrastructure to be used for training
A. Core Skills/	Writing Skills
Generic	Refer to Unit 1
Skills	Reading Skills
	Refer to Unit 1
	Oral Communication (Listening and Speaking skills)
	Refer to Unit 1
B. Professional	Decision Making Skills
B. Professional Skills	The individual on the job must be able to:
	The individual on the job must be able to: PS1. make decisions pertaining to the concerned area of work
	The individual on the job must be able to: PS1. make decisions pertaining to the concerned area of work PS2. identify problems that may arise in carrying out tasks and
	The individual on the job must be able to: PS1. make decisions pertaining to the concerned area of work PS2. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures
	The individual on the job must be able to: PS1. make decisions pertaining to the concerned area of work PS2. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures  Plan and Organise
	The individual on the job must be able to: PS1. make decisions pertaining to the concerned area of work PS2. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures  Plan and Organise The individual on the job must be able to:
	The individual on the job must be able to: PS1. make decisions pertaining to the concerned area of work PS2. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures  Plan and Organise The individual on the job must be able to: PS3. plan and organise training programmes
	The individual on the job must be able to: PS1. make decisions pertaining to the concerned area of work PS2. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures  Plan and Organise The individual on the job must be able to: PS3. plan and organise training programmes  Critical Thinking
	The individual on the job must be able to:     PS1. make decisions pertaining to the concerned area of work     PS2. identify problems that may arise in carrying out tasks and     take preventive action following workplace procedures     Plan and Organise The individual on the job must be able to:     PS3. plan and organise training programmes     Critical Thinking     Refer to Unit 1
	The individual on the job must be able to: PS1. make decisions pertaining to the concerned area of work PS2. identify problems that may arise in carrying out tasks and take preventive action following workplace procedures  Plan and Organise The individual on the job must be able to: PS3. plan and organise training programmes  Critical Thinking

**UNIT 5** [This Unit is about the Agriculture Extension Officer assisting the farmers in establishing backward linkages with input suppliers and forward linkages with the food industry, warehouse, etc.].

Unit No.	05	
Unit Title	Assistance with backward and forward linkages	
	This Unit is about the extension Officer assisting the farmers in	
<u>-</u>	establishing linkages with input and output markets.	
Scope	This Unit covers the following:	
	<ul> <li>Assist in establishing backward linkages with input suppliers</li> </ul>	
	<ul> <li>Assist in establishing forward linkages with processors and</li> </ul>	
	off-takers	
Performance Crite	eria (PC) w.r.t. the Scope	
Element	Performance Criteria (PC)	
Assist in	To be competent, the individual on the job must be able to:	
establishing	PC1. provide information about input markets and insurance.	
backward	PC2. link the farmers to input providers	
linkages with		
input suppliers		
	To be competent, the individual on the job must be able to:	
establishing	PC3. develop entrepreneurial skills in farmers for selling their	
forward linkages with processors	produce PC4. Assist farmers on effective practice in forward linkage such	
and off-takers	as warehouse, marketing, etc.	
and on-takers	PC5. link the farmers with supply chain industry	
Knowledge and U	Inderstanding (K)	
_	The individual on the job must demonstrate knowledge and	
	understanding of:	
(Knowledge of the	OK1. legislation, standards, policies and procedures relevant to work	
company/	OK2. relevant health and safety requirements applicable in the	
organisation	work environment	
and its	OK3. own job role and responsibilities and sources for information	
processes)	pertaining to work	
<b>,</b>	OK4. who to approach for support in order to obtain work related	
	information, clarifications and support	
	OK5. importance of following health, hygiene, safety and quality	
	standards and the impact of not following the standards on	
	consumers and the business	
	OK6. documentation and related procedures applicable in the	
5	context of work	
	The individual on the job must demonstrate knowledge and	
Knowledge	understanding of:	
	TK1. different sources of supplies of inputs TK2. best and most cost-effective sources of supply	
	TK2. best and most cost-effective sources of supply TK3. ability to negotiate	
	TK3. ability to negotiate TK4. marketing and sales channels	
	TK5. sale network	
	TK6. prospective buyers	

	TK7. how to get in touch with suppliers of inputs					
	TK8. best ways of getting in touch with the prospective buyers					
Skills (S)						
A. Core Skills/	Writing Skills					
Generic	The individual on the job must be able to:					
Skills	CS1. fill work related forms and documents clearly and prepare					
	reports for review by supervisors					
	Reading Skills					
	The individual on the job must be able to:					
	CS2. update oneself about existing and upcoming suppliers of					
	inputs					
	CS3. update oneself about prospective buyers in the market					
	CS4. keep abreast of latest modes of communication with the					
	buyers and sellers					
	Oral Communication (Listening and Speaking skills)					
	The individual on the job must be able to:					
	CS5. maintaining effective relationships with farmers, buyers and					
	sellers					
	CS6. communicate clearly and effectively with various stakeholders					
	CS7. understand information					
	CS8. seek advice from senior people and experts					
B. Professional	Decision Making Skills					
Skills	The individual on the job must be able to:					
	PS1. make decisions pertaining to the concerned area of work					
	PS2. identify problems that may arise in carrying out tasks and					
	take preventive action following workplace procedures					
	Plan and Organise					
	The individual on the job must be able to:					
	PS3. plan and organise the sale and purchase of commodities					
	PS4. organise meetings of stakeholders if necessary					
	Customer Centricity					
	Refer to Unit 1					
	Analytical Thinking					
	Refer to Unit 1					
	Critical Thinking					
	Refer to Unit 1					

#### 5. EQUIPMENT, TOOLS AND CONSUMABLE MATERIALS

These include, but not limited to the following: motor vehicle/motorcycle/bicycle, computer with internet connection, note pads and pens, projector, markers, cardboards, flipchart/board, protective equipment, cultivating/digging tools/equipment, water source, watering equipment, seeds/stems/runners, fertilisers and applicators, growth/protective chemicals, planting/spraying/harvesting equipment, storage facilities, company's standard operating procedures, reporting templates, etc.

## 6. DILEMMAS/CHALLENGES AND COMPLEXITIES FOR A JOB HOLDER

Dilemmas associated with the job of Agriculture Extension Officer include handling dangerous chemicals, long working hours, pressure from farmers and supervisors, language barriers, working in extreme weather such as rainy conditions, having to overstate points, resistance by farmers to adopt new farming technics, unrealistic demands or expectations from farmers and other stakeholders, insufficient funding, etc.

#### 6.1 Alternative Choices (Solutions) to Dilemmas and Complexities

Solutions to dilemmas include exercising regularly to maintain physical fitness, learning local languages, undertaking training in customer service and team management, undertaking training in teaching/material delivery, wearing protective clothing such as rain coat, safety boots, gloves, goggles, etc.

#### 7. WORKING CONDITIONS/ENVIRONMENT

Working conditions include remote/forested areas, slippery areas and heights, cold, hot and rainy conditions, stand/walk for long hours for field visits, working in flexible hours, dealing with large groups of people with differing information assimilation abilities, etc.

## 8. PARTIES INVOLVED/INTERACTING WITH THE JOB HOLDER OR TRAINEE

#### 8.1 Internal/Within the Organisation

Trainers, supervisors, colleagues, etc.

#### 8.2 External/Outside the Organisation

Farmers, trainers, government regulators, suppliers of equipment/tools/consumables, Extension Officers from other organisations, donor agencies/non-governmental organisations, etc.

#### 9. PHYSICAL DEMANDS ON THE BODY

- Be able to walk and stand for long periods of time;
- Be able to climb to and from high altitudes;
- · Bend, stretch, twist, or reach out;
- Be able to lift relatively heavy materials, tools and equipment;
- Coordinate movement of several parts of the body, such as arms and legs, while the body is moving;
- Be able to withstand feelings of wetness, itching, burning or coldness on the body, etc.

# ANNEX A Criteria for Assessments based on this NOS

#### A.1 Guidelines for Assessment

A.1.1 Criteria for assessment for curricula and learning programmes based on this NOS will be created by curricula and programmes developers. Each Performance Criteria (PC) will be assigned marks proportional to its importance in the NOS. Curricula and programmes developers will also lay down proportion of marks for theory and practical skills for each performance criteria, giving more weight to practical skills.

There shall be allocated the 'Total Mark', which will be the sum of all marks in each Unit, distributed across the number of PCs in that particular Unit. The 'Out Of' mark will be the mark allocated to each PC, which will be shared between theory and practical skills assessments.

**A.1.2** Awarding/assessment bodies or institutions and other users of the NOS will create unique question papers for the theory part and evaluations for skill practical part for their respective candidates.

#### ANNEX B NOS Version Control

This Annex gives details necessary for the tracking of the NOS versions based on the number of revisions.

NOS Code	NOS.AEO.01		
ZQF Level	4	Version Number	01
Sector	Agriculture	Date of Approval	September, 2020
Sub-sector	Agriculture Extension and Advisory Services	Date of Last Review	N/A
Occupation	Agriculture Production Information Management	Date of Next Review	October, 2025

### **REGISTERED OFFICE**

Zambia Qualifications Authority Ground Floor, Finsbury Park P.O Box 51103 Lusaka,Zambia

**Tel:** +260 211 843050/ 843053

**Mobile:** + 260 963 922 730/ 0956 037 185 / 0972 559 301

**Email:** info@zaqa.gov.zm **Website:** www. zaqa.gov.zm