



**African Union – German Development Co-operation  
CAADP/TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET) IN  
AGRICULTURAL SECTOR IN AFRICA**

**Process Report**

**Mission Title**

Credit Accumulation and Transfer System for  
Agricultural qualifications  
(Mainstreaming Agriculture Training in Kenya National Qualifications Framework)

**Country: Kenya**

**Mission Approval Number**

**Consultant's**

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We are grateful to have been part of this crucial assignment that will transform Education and training in agriculture in Kenya.



## List of Acronyms and abbreviations

<b>AHITI</b>	<b>Animal Health and Industry Training Institutes</b>
<b>ASTAS</b>	Agriculture Sector Transformation Strategy
<b>A-TVET</b>	Agriculture Technical Vocational and Education Training
<b>ATCs</b>	Agricultural Training Centres
<b>AU</b>	African Union
<b>AUC-DREA</b>	Africa Union Commission- Department of Rural Economy and Agriculture
<b>AUDA</b>	African Union Development Agency
<b>CAADP</b>	Comprehensive Africa Agriculture Development Program
<b>CATS</b>	Credit Accumulation and Transfer System
<b>CBET</b>	Curriculum Based Education Training
<b>CDACC</b>	Curriculum Development Assessment and Certification Council
<b>CUE</b>	Commission for University Education
<b>EALA</b>	East African Legislative Assembly
<b>GDP</b>	Gross Domestic Product
<b>GIZ</b>	Deutsche Gesellschaft für Internationale Zusammenarbeit
<b>ISCED</b>	International Standard Classification of Education
<b>IUCEA</b>	Inter University of East Africa
<b>KICD</b>	Kenya Institute of Curriculum Development
<b>KNEC</b>	Kenya National Examinations Council
<b>KNQA</b>	Kenya National Qualifications Authority
<b>KNQCS</b>	Kenya National Qualifications Classification Standard
<b>KNQF</b>	Kenya National Qualifications Framework
<b>KUCCPS</b>	Kenya Universities and Colleges Central Placement Service
<b>KVB</b>	Kenya Veterinary Board
<b>KYCAT</b>	Kenya YMCA College of Agriculture and Technology
<b>MOALF&amp;C</b>	Ministry of Agriculture, Livestock, Fisheries & Cooperatives
<b>MOE</b>	Ministry of Education
<b>NITA</b>	National Industrial and Training Authority
<b>MPTUs</b>	Mobile Pastoral Training Units
<b>NEPAD</b>	New Partnership for African Development
<b>NGO</b>	Non-governmental Organisation
<b>TVET</b>	Technical Vocational Education and Training
<b>TVETA</b>	Technical Vocational Education and Training Authority
<b>TVET-CDAAC</b>	Technical Vocational Education and Training-Curriculum Development, Assessment and Certification Authority
<b>TWG</b>	Technical Working Group
<b>PPP</b>	Public Private Partnership
<b>ToR</b>	Terms of Reference
<b>TWG</b>	Technical Working Group
<b>TVET</b>	Technical Vocational Education and Training
<b>AVC</b>	Agriculture Value Chain



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## EXECUTIVE SUMMARY

Kenya's agricultural sector remains the backbone of the economy and has great potential for growth and transformation. In order to enhance productivity and ensure a productive and innovative sector as well as food security, meaningful capacity building of all the players involved in Agricultural Value Chains (AVCs) is of utmost importance. Agriculture Sector Transformation Strategy (ASTGS 2019-2029) identifies skills development as a key enabler to agricultural transformation. Kenya's global competitiveness will depend on the ability to create a human resource base that will constantly be subjected to learning and re-training and have access to new technological skills and knowledge in order to cope with dynamic changes in the sector. There is consensus that credits and credit accumulation are the best devices to help create a converged, yet flexible training system required within the Kenyan education sector.

The origin of the Credit Accumulation and Transfer System is traced to the elective system initiated in 1872 at Harvard University in USA while the European Credit Transfer and Accumulation System (ECTS) was instituted in 1989. Regionally, the National Higher Education Regulatory Agencies for the East Africa countries published Credit the Accumulation and Transfer System (CATS) covering Human Medicine,



Agriculture, Engineering, and Basic Sciences in 2007 to 2009. The Commission for University Education continued the effort by entrenching guidelines for credit accumulation and transfer in the Universities Standards and Guidelines, 2014, and developing CATS in Education and Law among other programmes. Despite all these efforts, the implementation of the CATS in Kenya encountered challenges because the components of the systems were not in place, notably, the National Qualifications Framework and the requisite parameters for credit accumulation and transfer. To address this reality, the Kenya National Qualifications Authority (KNQA) was established by the KNQF Act No 22 of 2014 and operationalized in 2015, with the mandate of developing and implementing a harmonized and coordinated qualifications framework for the country. In line with this requirement, the Authority has developed and is implementing the Kenya National Qualifications Framework (KNQF), and several policies and standards to operationalize the framework. In regard to the CATS, section 8 of the KNQF Act No 22 of 2014 mandates KNQA to facilitate linkages, credit transfers, exemptions, vertical and horizontal mobility at all levels to enable entry, re-entry and exit.

KNQF stipulates that each qualification level for the parallel pathways (namely: academic, Vocational and skills development shall be the minimum requirement for direct entry to the next level immediately above it. However, the problem which a national CATS in general and for agriculture qualifications, in particular would be to address the inadequate clarity or lack of a national consensus on equivalence between qualifications. The lack of consensus is especially from the Technical, Vocational, Education and Training (TVET) and the Industrial training where much emphasis is put on assessment of practicum or practical exposure in the work place.

To support KNQA achieve this mandate CAADP/GIZ initiated and supported this project in order develop the CATS in agriculture education and training for application in Kenya. The purpose of this project is to develop a harmonized CAT system in agricultural education and training as a standard for seamless progression of students between and within different levels of qualifications, institutions and courses. This will foster common understanding and ownership of CATS by providers of agricultural education and training at various qualification levels, while assuring education quality and lifelong learning. To achieve the objectives of this project, primary and secondary data was collected using desk reviews, in-depth interviews with TVET institutions and key informant discussions were held with experts who had experience in implementing CATS in agriculture education and training. Some of the key recommendations that have been made in this report are as follows:

1. In regard to the implementation of the CATS, it is recommended that a national policy on Credit Accumulation and Transfer should be developed.
2. Once the Competency Based Curriculum (CBC) and Competency based Education and Training (CBET) are up and running properly, it is recommended that Competence-friendly University Education (CfUE) be escalated, especially, in universities of technology/technical universities and their constituent colleges. The KNQF anticipates this eventuality.



3. Mainstreaming the qualifications in the agriculture education and training be extended to assigning each level with a generic competency; i.e. level 1 – unskilled farm hand/worker; level 2 – semi-skilled farm hand/worker; level 3 - semi-skilled crop/animal raiser; level 4 skilled crop/animal raiser/minder; *level 5 associate farmer/assistant farmer*; level 6 – farmer; level 7 – farm manager; level 8- advanced farm manager/ farm produce value addition processor; level 9 - associate agricultural researcher/ agricultural research assistant; and level 10 – agricultural researcher/innovator.

## 1. Chapter 1

### 1.1 Introduction

A robust framework for credit-based learning is central to an inclusive education system that fosters access, equity and lifelong learning, especially in post-compulsory education provided in training institutions. For nearly fifteen years, since the coming onto operation of the Sessional Paper No. 1 of 2005 on a Policy Framework for Education and Training and Research, there have been efforts to develop, implement, and institutionalize a credit accumulation and transfer system (CATS) in training institutions in the Ministry of Education (MOE) and other line Ministries in Kenya for various qualification levels. These efforts aimed at facilitating progression in education and training through various alternative pathways, especially in Technical and Vocational Education and Training (TVET), where the bulk of qualifications occur, in terms of levels and discipline areas. The Kenya National Qualifications Authority (KNQA) provides a unique opportunity for building and implementing a robust and sustainable Credit Accumulation and Transfer System (CATS) for education and training at artisan, craft certificate, diploma and degree levels. With the support of Deutsche Gesellschaft für Internationale Zusammenarbeit-Comprehensive Africa Agriculture Development Program (GIZ-CAADP), the KNQA held a workshop at Egerton University on 30th September to 2nd October 2019 bringing together more than eighty stakeholders drawn from Agricultural Education and Training Institutions,





curriculum developers, regulatory agencies, examining bodies, the Kenya Universities and Colleges Central Placement Service (KUCCPS), the MOE, and Ministry of Agriculture, Livestock, Fisheries and Cooperatives (MOALF&C). The workshop succeeded in mapping out agriculture qualifications and developing a mechanism for mainstreaming agriculture qualifications in the Kenya National Qualifications Framework (KNQF). For the first time in Kenyan history Universities, National Polytechnics, Technical and Vocational Colleges are working together to create better progression of learners in the Agricultural sector through improved and harmonized CATS. This is the kind of innovation that needs to be capitalized on and leveraged to mitigate the downward trend in agriculture training.

## 1.2 Current Situation

Development and implementation of the CATS in Agricultural Education and Training in Kenya was a major recommendation of the Stakeholders during the Egerton Workshop. The CATS will enable harmonization of accumulation of credits as evidence of learning, and seamless transfer of credits between and within different levels of education and training, different institutions and courses to enable student progression and recognition of qualifications.

Kenya currently has thirty-three (33) Agricultural Training Centres (ATCs), four (4) Animal Health and Industry Training Institutes (AHITIs), three (3) Pastoral Training Institutes (PTIs) and Mobile Pastoral Training Units (MPTUs) across the 47 Counties for farmers and live-stock keepers. In addition, other Agricultural Colleges, Faith-Based Private Organizations, Dairy and Meat Training Institutions including the Manor House Agricultural Centre in Kitale, Baraka in Molo, and Latia in Kajiado produce graduates with hands-on experience. However, these institutions have been experiencing challenges in awarding agricultural qualifications in the absence of clear-cut frameworks to facilitate the mounting of experiential-learning programmes for award of formal qualifications to graduates.

Many TVET institutions under the MOE and MOLF&C offer agricultural related training for award of diplomas, craft certificates and artisan certificates. Furthermore, at least 26 (21 public and 5 private) - offer more than 35 academic programmes in Agricultural, Horticultural, Soil, and Animal Science and Production and related courses leading to degree, diploma and, in some cases, certificate qualifications. Consequently, the qualification's awarding system for agricultural qualifications is fragmented calling for a common framework to harmonize the system and clearly articulate progression pathways for these qualifications. The KNQA has made great strides in rallying stakeholders towards the development of a Credit Accumulation and Transfer System (CATS) for the Agricultural qualifications and laying a framework for mainstreaming pathways for progression and transition from one Agricultural qualification level to the next. This will foster understanding and ownership of CATS by the providers of Agricultural Education and Training at all levels and for all qualifications.

## 1.3 Overall Objective



The objective of this assignment is to support the Kenya National Qualification Authority to develop CATS in agriculture education and training for application in Kenya.

#### 1.4 Problem Statement

Agriculture and training in Kenya have lacked a harmonized national CAT system to facilitate credit transfers between and within various level, courses and institutions. Previous attempts to mainstream CATS in education and training have not been successful due to inadequate understanding and ownership of the CAT system. This has been attributable to the fact that curriculum developers such as Kenya Institute of Curriculum Development (KICD), Technical Vocational Education Training-Curriculum Development, Assessment and Certification Authority (TVET-CDACC) and other curriculum developers at diploma and certificate levels, and developers of academic programmes at degree level hardly have any interaction with one another. As a result:

- i. Trainers/Academic staff at consecutive levels of training and qualification have very limited understanding of the training at the lower level in terms of volumes of learning, and expected learning outcomes;
- ii. The understanding of a Credit, measured in terms of hours and competencies, may not necessarily be understood the same way at different qualifications; and
- iii. Grading systems at the levels between which credit transfer is contemplated differ, thus complicating the credit transfer.

#### 1.5 Purpose of Study

To develop a harmonized CAT system in agricultural education and training that will be a standard for seamless progression of students between and within different levels of qualifications and training. This will foster common understanding and ownership of CATS by providers of agricultural education and training at various qualification levels, while assuring education quality.

#### 1.6 Specific Objective

The specific objectives of this assignment are:

- i. Capture Stakeholders' input from the workshop held at Egerton university into further designing of the CAT System;
- ii. Analyse and link the development of CATS with the outcome of the workshop held at Egerton university to mainstream agriculture training into KNQF;
- iii. Further develop the CATS to meet the expectation of KNQA;
- iv. Present and discuss the developed and almost final version of CAT system with KNQA and relevant Ministries and strategize on its presentation to the second stakeholders' workshop ready for implementation and dissemination;
- v. Prepare implementation Guidelines for CATS in Agricultural Education and Training.



## 1.7 Scope of Assignment

The scope of the study was defined by the terms of reference as follows:

- i. A credits accumulation and transfer system (CATS) be designed and developed in tandem with the qualifications standards set out in the KNQF;
- ii. The outcome of the workshop held at Egerton university in 2019 to mainstream Agriculture Education and Training pathways in the KNQF be analysed for input to the CATS;
- iii. A proposed Guideline for implementation of the agricultural sector CATS be developed.

Thus, this project ends when the KNQA receives the process report, CATS and implementation guidelines, being the expected deliverables that will be undertaken by the consultants as per the terms of reference. Further necessary action, such as validation by a second stakeholder's workshop and a breakfast meeting for chief executive officers from the stakeholders' institutions may follow later, at any convenient date.

## 1.8 Deliverables

The expected deliverables are as follows:

- i. Inception report elaborating on the implementation plan and methodology adopted for the execution of the project.
- ii. Draft CAT System for Agriculture qualifications, mainstreamed in the KNQF, with specific reference to the CBET curricula generally and those developed by CAADP-ATVET in particular;
- iii. Guideline for a harmonized CATS system spanning artisan, certificate, diploma and degree qualification levels;
- iv. Consolidated report that includes the review report capturing the proposals of the Egerton workshop and the assignment process report.



## 2. Chapter Two

### 2.1 Methodology and tasks

#### 2.1.1. Methodology

Based on understanding of the TOR and the subsequent development and discussion of the inception report, the project adopted both qualitative and quantitative methods with a combination of primary and secondary data sources. The data was collected using various data collection methodologies as stipulated in the inception report. Primary and secondary data was collected during the months of February and March 2020 as follows:

##### i. Primary Data

Primary data was both qualitative and quantitative. This data provided an insight of the previous and current practice in agriculture education and training. Data was collected using key informant discussions and in-depth interviews guides:

###### a) Key informant discussion

A questionnaire guide was developed and validated to facilitate the discussions with the identified Key informants. Key informant participants were purposively selection based on their expertise and experience in implementing CATS at the university level in agriculture education and training.

###### b) In-depth interviews

An in-depth interview guide was developed and validated to facilitate interviews with TVET institutions that offer agriculture education and training programmes. The selected institutions were diverse in the sense that some were domiciled in the MOE, MOALF&C while others were faith based/private owned. The diversity was also in terms of the curricula offered and the assessment/examination.

##### ii. Secondary Data

Secondary data was collected using desk review as follows:

a) Reviewing and analysis of documents related to the Stakeholders workshop held at Egerton University on 30th September to 2nd October 2019. The documents included the pre-conference report on mapping of agricultural qualifications into the KNQF, participants' presentations, group discussion output and the consolidated workshop report.

b) Review of laws, policies and reports relating to CATS at the national, regional and international level. This was done to bring an understanding of the legal framework in relation to the development and implementation of CATS. The CATS from different countries were reviewed for understanding on the common practice and the challenges. Review of CATS developed by Commission of University Education (CUE), Inter University of East Africa (IUCEA) and other related agencies was also done with a view to benchmarking.



- c) Review of various curricula offered in the TVET institutions was done which included those that have been developed by TVET-CDACC, Kenya Institute of Curriculum Development (KICD) and individual institutions.
- d) Review of the placement and regulatory guidelines for various organizations including the Kenya Universities and Colleges Central Placement Services (KUCCPS), National Industrial Training Authority (NITA) and Kenya Veterinary Board (KVB).
- e) Review of coded agriculture and training programmes mapped onto the KNQF.

### 2.1.2. Data Analysis

An integrated approach whereby quantitative and qualitative data were captured, grouped into themes and then analysed was employed in data analysis and presentation. Quantitative data was analysed using IBM SPSS version 22. Qualitative data was categorized into themes and reports generated. Charts and tables were generated using MS Excel for windows.

### 2.1.3 Project Team Tasks

The tasks for each of the project team members are stipulated in table 1.

**Table 1: Project team Tasks**

Consultant	Tasks
<b>1. Lynette G. Kisaka –STE Team Leader</b>	<ul style="list-style-type: none"> <li>i. Inception Report- preparation, presentation</li> <li>ii. Desk Review of relevant Framework and sample CATS</li> <li>iii. Design and development of CATS</li> <li>iv. Design and development of CATs guidelines</li> <li>v. Writing and submission of Harmonized CATS</li> <li>vi. Report Writing</li> </ul>
<b>2. Florence Kaibi – STE</b>	<ul style="list-style-type: none"> <li>i. Inception Report - preparation, presentation</li> <li>ii. Desk Review of relevant ATVET, TVET-CDACC &amp; Curriculum Based Education Training (CBET) Documents</li> <li>iii. Design and development of CATS</li> <li>i. Report writing</li> <li>iv. Writing and submission of Harmonized CATS</li> </ul>
<b>3. Samuel W. Wanyonyi – STE</b>	<ul style="list-style-type: none"> <li>i. Inception Report- presentation</li> <li>ii. Desk Review of Egerton stakeholders’ workshop and relevant documents</li> <li>iii. Design and development of CATS</li> <li>iv. Data collection, analysis and Stakeholders’ input</li> <li>v. Writing and submission of Harmonized CATS</li> </ul>



### 3. CHAPTER THREE

#### 3.1 Literature Review

##### 3.1.1 Agriculture Education and Training in Kenya

Kenya's agricultural sector remains the backbone of the economy and has great potential for growth and transformation. In 2018, the sector directly contributed 34.2% to the Gross Domestic Product (GDP) with a value of KES 3 trillion and approximately 27% through linkages to other sectors such as manufacturing and construction (Economic Survey, 2019). The sector employs more than 40% of the total population and about 70% of the rural population. In order to enhance productivity and ensure a productive and innovative sector as well as food security, meaningful capacity building of all the players involved in Agricultural Value Chains (AVCs) is of utmost importance. Agriculture Sector Transformation Strategy (ASTGS 2019-2029) identifies skills development as a key enabler to agricultural transformation.

In order to achieve skills development, there are a number of institutions offering Agriculture Education and Training at Degree, diploma, craft certificate and artisan levels in Kenya. The MOE and the MOALF&C manage most of the A-TVET institutions. In addition, there are a few institutions that are faith-based or/and privately sponsored and managed. The curricula offered in these institutions are also diverse. The economic survey (2019) has identified the various institutions offering agriculture education and training programmes in Kenya at diploma and vocational levels (Table 2).



**Table 2: Institutions awarding Agriculture Qualifications in Kenya**

Name of institution/ Universities	KNQF level of Qualification	Curriculum developer	Examination and Assessment	Parent Ministry
<b>Universities</b>	Level 7,6,5	Individual University	Individual University	MOE
<b>Bukura Agricultural College (BAC)</b>	Level 6,5,4	BAC/TVET- CDACC KICD	BAC/TVET- CDACC KNEC	MOALF&C
<b>Animal Health and Industry Training Institutes (AHITIs)</b>	Level 6,5	AHITI	AHITI	MOALF&C
<b>Dairy Training Institute (DTI)</b>	Level 6,5	DTI	DTI	MOALF&C
<b>TVET institutions</b>	Level 6,5,4	KICD/TVET- CDACC KICD	KNEC/TVET- CDACC KICD	MOE/ MOALF&C
<b>Meat Training institute (MIT) Athi River</b>	Level 3	MIT/NITA	MIT/NITA	MOALF&C
<b>Livestock Training Institute (LTI)</b>	Level 5,4	LTI	LTI	MOALF&C
<b>Private/Faith based colleges</b>	Levels 6,5,4,3	KICD/ TVET- CDACC KICD/ Self/NITA	KNEC/TVET- CDACC KICD/ Self/ NITA	N/A

Source; Adapted from the Economic survey, 2019

Key: 07-Bachelor's Degree; 06-National Diploma; 05-National Craft certificate; 04-National Artisan; 03-National Skills Certificate I

The many institutions that offer Qualifications in Agricultural Education and Training in Kenya fall in various Ministries and private/Faith based entities. They include but are not limited to the following:

## I. Agriculture Education and Training Institutions under the MOE

### 1. Universities

Public and Private universities are established under the Universities Act, No. 42 of 2012 (Amendments) and regulated by Commission for University Education (CUE) established under the same Act as a regulatory agency under the Ministry of Education. The Economic survey 2019, indicates that universities in Kenya offer degree, diploma and certificate qualifications in agriculture related programmes. Universities are legally mandated to develop and offer academic programmes, examine and award qualifications at certificate, diploma, and degree (graduate and post-graduate) qualifications. Currently, at least 26 universities offer more





than 35 academic programmes including;

- a) **Agriculture:** Agriculture (General), Agronomy, Soil Science, Dryland Agriculture, Agricultural biotechnology, Crop improvement and protection, Agroforestry and rural development
- b) **Agricultural Education and Extension/Economics/:** Agribusiness management, Entrepreneurial agriculture, Agricultural Resource Management
- c) **Agricultural Engineering**
- d) **Animal health Sciences:** Animal Health, Animal production and health management, Dairy Technology and management, Applied animal laboratory science
- e) **Food Science and Technology:** Food processing technology, Food science and technology etc.
- f) **Horticulture**

## 2. TVET Institutions

The TVET act No.29, of 2013, makes provisions for the registration and accreditation of technical and vocational training institutions to offer education and training programmes that are below the degree programmes. A number of TVET institutions under the MOE offer various diploma, craft certificates and artisan programmes in agriculture. The curriculum offered in these institutions is developed by KICD and examined by Kenya National Examinations Council (KNEC) with exception of the National Polytechnics who have a legal provision to train and award qualifications.

The institutions under this Ministry are categorized as;

- a) **National Polytechnics** -These are established under legal orders under the TVET Act, 2013; and are therefore qualification awarding institutions. However, these institutions still offer KICD curriculum and examined by KNEC.
- b) **Technical and Vocational Colleges** -These institutions are registered and licensed to train by TVETA. They are not legally mandated to award qualification therefore KNEC awards the qualifications in all these institutions. Some of the modular or Technical Education Program (TEP) programmes offered in the Technical and Vocational colleges include the following:
  - i. Diploma programmes (3 years)
    - a) General agriculture
    - b) Entrepreneurial Agriculture
    - c) Sustainable Agriculture for rural development
    - d) Food Science and Processing Technology
    - e) Agricultural Engineering
  - ii. Craft Certificate (2years)
    - a) General agriculture
    - b) Sustainable Agriculture for rural development
    - c) Food Science and Processing Technology
    - d) Food Science and Preservation Technology
  - iii. Artisan in Agriculture (1 year)





## II. Agriculture Education and Training Institutions under the MOALF&C

This Ministry has several training institutions that train exclusively in agriculture related programmes.

### a) Bukura Agricultural college

Established by Bukura Agricultural College Act of 1999 is therefore a qualification awarding institution. Bukura offers the following programmes:

- i. Diploma programmes - (2 years)
  - a) Agriculture and Biotechnology
  - b) Horticulture
  - c) Animal Production and health Management
  - d) Agriculture extension and community development
  - e) Agriculture irrigation and drainage engineering
  - f) Agribusiness Management and Marketing
  - g) Agriculture, Human ecology and Consumer Science
- ii. Diploma programmes - (2 ½ years)
  - a) Agriculture Education and Extension
  - b) Animal health and Production
- iii. Certificate in agriculture and community development. (1 year)

b) **Kenya School of Agriculture** is registered and licensed by TVETA as a Technical and Vocational training College. The college is currently offering modular programmes in diploma and craft certificate based on the KICD curriculum, which is examined by KNEC.

### c) Animal Health and Industry Training Institutes (AHITIs)

These training institutions are under the state department of livestock. The curricula that are offered in these institutions are developed and examined by the institutions. Kenya Veterinary Board regulates the training offered by the four AHITI colleges. The following programmes:

- i. Diploma programmes
  - a) Animal health and Production-2 ½ years
  - b) Animal Health and range management-2 ½ years
  - c) Leather Technology-2 ½ years
  - d) Upgrading course to Animal health and Production-1year
- ii. Certificate Programmes
  - a) Animal Health and Production-2years
  - b) Upgrading certificate in Animal Health and Production-1year

d) **Dairy Training Institute (DTI)** - This training institution is under the state department of livestock. The curricula that are offered in this institution is developed and examined by the institutions. DTI offers the following programmes:

- i. Diploma programme
  - a) Dairy Production and processing-2years
- ii. Certificate Programmes
  - a) Dairy Production and management-1year
  - b) Dairy Technology and management-1year



- e) **Livestock Training Institute (LTI)**- This training institution is under the state department of livestock. The curricula that are offered in this institution is developed and examined by the institutions. LTI offers a Certificate craft Course in animal health and range management.

### III. Faith based and/or Private Agricultural Education and training Institutions

There are many Faith based and private colleges in Kenya offering Agriculture related training programmes, including but not limited to the following;

- a) **Baraka Agricultural College (BAC)** is registered and licensed by TVETA as a Technical and Vocational college. The college is currently offering programmes in diploma and craft certificates based on the KICD curriculum, which is examined by KNEC as follows:
- i. Diploma programmes (modular)
    - b) Sustainable agriculture for rural development
    - c) Entrepreneurship agriculture
    - d) Social work and community development
  - ii. Craft Certificate Programme in sustainable agriculture (modular)
  - iii. Level 5-Sustainable agriculture for rural development-TVET/CDAAC
- b) **Latia Agri-preneurship Institute (LAI)** is registered college under TVET Act as a Technical Vocational College. LAI uses an industry led, market driven and competency-based approach to deliver a broad training program referred to as Apprenticeship.
- c) **Kenya YMCA College of Agriculture and Technology (KYCAT)** is a private faith-based college recognized and registered TVETA. KYCAT offers programmes leading to local and internationally recognized qualifications. KYCAT training model is founded on knowledge, skills and a positive mindset.
- i. Diploma Programmes: 3years
    - a) General Agriculture
    - b) Animal Health & Production
    - c) Animal Production & Health Management
    - d) Food Processing
  - ii. Craft Certificate Programmes: 2 years
    - a) General Agriculture
    - b) Animal Health & Production
    - c) Animal Production & Health Management
    - d) Food Processing
  - iii. Artisan Programmes-1.3 years
    - a) General Agriculture
    - b) Agricultural Mechanics
    - c) Food Processing Technology
    - d) Modern Methods Agriculture

The Distribution of Qualifications in the awarding institutions is summarised in Table 2; and the comprehensive list appended (Appendix 1).



**Table 3. KNQF Qualifications by level (minimum hours in brackets)**

Name/Category of Institution	KNQF Qualifications Level and Minimum duration in Hours					
	Level 3 (300)	Level 4 (600)	Level 5 (1200)	Level 6 (2400)	Level 7 (4800)	Total Number of Qualifications
<b>Universities</b>			10	6	180	<b>196</b>
<b>Bukura Agricultural College (BAC)</b>			2	10		<b>12</b>
<b>Animal Health and Industry Training Institutes (AHITIs)</b>			11	11		<b>22</b>
<b>Dairy Training Institute (DTI)</b>			6	2		<b>08</b>
<b>TVET institutions</b>	12	10	13	9		<b>44</b>
<b>Meat Training institute (MIT) Athi River</b>	4					<b>04</b>
<b>Livestock Training Institute (LTI)</b>			1			<b>01</b>
<b>Private/Faith based colleges</b>			1			<b>01</b>
<b>Total Qualifications by Level</b>	<b>16</b>	<b>10</b>	<b>44</b>	<b>38</b>	<b>180</b>	<b>288</b>

### 3.1.2 Placement and regulatory guidelines for related programmes in Kenya

#### i. Kenya Universities and College Central Placement Services (KUCCPS)

Kenya Universities and Colleges Central Placement Services is a State corporation under the Ministry of Education established under the universities act, 2012 with a mandate to coordinate the placement of the government-sponsored students. KUCCPS collects and retains data relating to university and college placement while advising the government on matters relating to student placement. In consultation with qualification awarding institutions, regulatory authorities and other relevant stakeholders, KUCCPS develops student placement guidelines and establishes the minimum entry requirements for courses in Kenya. Table 3, shows the minimum entry



requirements for agriculture related courses in Kenya. These minimum requirements were agreed on during the Egerton university stakeholders’ workshop.

**ii. Kenya Veterinary Board (KVB)**

Kenya Veterinary Board is established by the Veterinary Surgeons’ and Veterinary Para-professionals (VSVP) Act No. 29 of 2011. The mandate is to regulate the animal health and veterinary medicine sector in order to protect the welfare of farmers, the professionals, other stakeholders and the animals. Additionally, KVB exercises general supervision and control over the training, business, practice and employment of veterinary surgeons and veterinary paraprofessionals in Kenya. In this regard, the board quality assures training by being involved in the setting of minimum entry requirements, curriculum development and examination of animal health and veterinary medicine training programmes. The VSVP Act, provides for registration of both Veterinary surgeons and Veterinary Para-professionals.

**iii. National Industrial Training Authority (NITA)**

The National Industrial Training Authority is a state corporation established under the Industrial Training Act of 2011. The mandate is to promote the highest standards in the quality and efficiency of Industrial Training in Kenya by ensuring that there is adequate supply of properly trained manpower at all levels in the industry. The Authority is thus responsible for Industrial training, developing industrial training curricula and assessment of industrial training, testing occupational skills and awarding certificates including Government Trade Test certificates. The authority also accredits institutions engaged in skills training for industry and registers industrial trainers. Based on the KNQA framework, the Industrial track links with the TVET track at Artisan level (Level 4) (see Figure 1).

**Table 4: Minimum Entry Requirements for Agriculture related Courses in Kenya**

COURSE	QUALIFICATION	MINIMUM ENTRY REQUIREMENT
<b>Animal Science &amp; Production</b>	BSC-Degree (7)	KCSE: C+, C+ in Biology/Biological Science, C+ in either Mathematics/Chemistry//Physics/Physical Science/Agriculture  Two Principal & Subsidiary Pass in Biology and any other Science subject  OR  Diploma in animal health/agriculture/medical lab technology from an accredited institution registered by KNQA
	Diploma (6)	KCSE: C (plain), C in Biology/Biological Science, C- in either Mathematics/ Chemistry/Physics/Physical Science/Agriculture  OR  Certificate in animal health/ agriculture/ranch management/wildlife health/dairy technology (from an institution registered by KNQA)



	Certificate (5)	KCSE: C-; C- in Biology/Biological Sciences Artisan certificate in the same discipline (from an institution registered by KNQA)
	Artisan (4) Meat inspection (6months) AI (3months)	Certificate in animal health production (from an institution registered by KNQA)
<b>Agricultural Sciences</b>	BSC-degree (7)	KCSE C+, C in Biology/Biological Science, C in either Mathematics/Chemistry/Physics/Physical Science/Agriculture OR Diploma in the same discipline (from an institution registered by KNQA)
	Diploma (6)	KCSE: C-, D+ in Biology/Biological Sciences OR Craft certificate in the same discipline (from an institution registered by KNQA)
	Certificate (5)	KCSE: D+ Artisan certificate in the same discipline (from an institution registered by KNQA)
	Artisan (4)	KCSE: D plain
<b>Agriculture related programmes e.g. Dairy, Aquaculture</b>	Diploma	KCSE mean C- C- in Biology, Chemistry and Agriculture OR Craft certificate in the same discipline from an institution registered by KNQA
	Craft Certificate	KCSE Mean grade D (plain) D plain in Biology, Chemistry and Agriculture Artisan certificate from an institution registered by KNQA
<b>Agriculture Teacher Education</b>	Degree and Diploma	KCSE Mean grade C+ with a C+ in the two teaching subjects (Biology/agriculture)

### 3.1.3 Kenya National Qualifications Framework

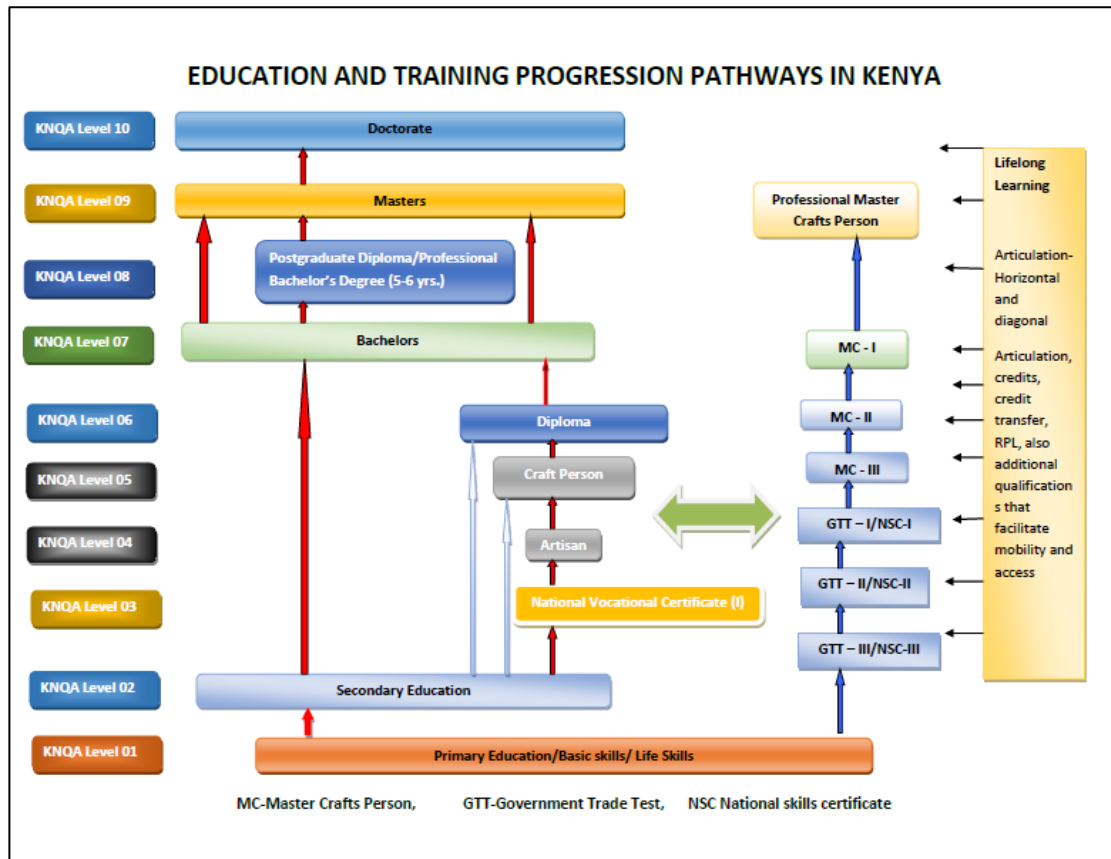
Qualifications Framework is an instrument for the development and classification of qualifications according to set criteria for levels of learning and, the knowledge, skills and competences achieved. Core elements of a national qualifications framework include levels of learning complexity, minimum entry requirement, level descriptors of qualification types, and/or learning outcomes, the volume of learning that contributes towards qualifications, and guidelines for linking qualifications within or



between levels. The key functions of the Qualifications Framework include encouraging use of learning outcomes, and ensuring that all qualifications levels are accessible to everyone from all kinds of learning including non-formal and formal learning. The Authority shall ensure that curriculum developers translate level descriptors per a qualification into credit level descriptors against which specific learning outcomes and assessment criteria can be derived and credit for achievement of learning assigned.

The Kenya National Qualifications Framework Act No. 22 of 2014 establishes the Kenya National Qualifications Authority (KNQA) and provides for the development of the Kenya Qualifications Framework. The KNQF shows, in a single view all the vertical qualification levels together with their respective lateral equivalences in basic education, higher education, TVET and industrial training (Figure 1). The KNQF is thus a broad-enough mechanism through which Kenya can bring diverse education and training qualifications together in a unified system, providing for:

- i. Quality-assured, nationally-recognized and consistent educational standards;
- ii. Recognition of due credit for any and all assessable skills and knowledge;
- iii. Alternative tracks of progression through education:
  - a. an academic track running from a common basic education (level 1) through secondary education (level 2) up to doctorate degree (level 10);
  - b. A TVET track running, alongside the academic track, from a graded artisan (level 2 through level 3 and level 4) to the craft certificate (level 5), diploma (level 6) and higher diploma (level 7); and there will be a talent and sports track to end up within the TVET Sector; and
- iv. The anticipated competence-based curriculum (CBC) in basic education and the competency-based education and training (CBET) in TVET with industrial training, including experiential and on-the-job training, as a separate progression pathway running up to Masters (level 8) in parallel to the academic and the TVET tracks.



**Figure 1: Education and training progression pathways in Kenya (Source: KNQA)**

### 3.1.3 Credit Accumulation and Transfer System

The origin of the Credit Accumulation and Transfer System is traced to the elective system initiated in 1872 at Harvard University in USA, and quickly taken up by other universities and colleges in USA. This led to a shift in measuring progress towards a degree from the traditional completion of a course of study to the accumulation of individual courses. By the early 20<sup>th</sup> century, it was common for colleges and universities to list in their catalogues the number of credits offered for each course; and to state graduation requirements in terms of number of credits required. The European Credit Transfer and Accumulation System (ECTS) was instituted in 1989. Regionally, the National Higher Education Regulatory Agencies for Kenya, Tanzania and Uganda published Credit the Accumulation and Transfer System (CATS) for the East African Region covering Human Medicine, Agriculture, Engineering, and Basic Sciences. This was done through a project of The Rockefeller Foundation over the period 2007-2009. The Commission for University Education continued the effort by entrenching guidelines for credit accumulation and transfer in the Universities Standards and Guidelines, 2014, and developing CATS in Education, Law, Sociology and Social Work, Development Studies, among other programmes. However, implementation of the CATS encountered challenges because the components of the systems were not in place, notably, the National Qualifications Framework and the requisite parameters for credit accumulation and transfer.





Credits express the volume of learning based on learning outcomes, and the workload. Learning outcomes are statements of what a learner knows, understands and is able to do on completion of a learning process. They are stated in terms of knowledge, skills and competence, reflecting the level at which the learning has occurred, in association with their related assessment criteria. Competence is the proven ability to apply knowledge, skills and abilities to work, study, professional, and personal development. Workload is a quantitative measure, in hours, of learning activities required for achievement of learning outcomes associated with the programme and subsequently, award of credits. Workload should include total student experience in the classroom, fieldwork, workplace experience, and time on reading assignment; not just formal classroom or contact hours.

Credits in higher education systems may be based on different parameters, such as student workload, learning outcomes and contact hours. Qualification awarding institutions describe learning outcomes and competencies for each course unit. Competences are a combination of attributes, abilities and attitudes which are generic at the Qualification Level; and subject specific at the level of academic programmes or modules. An academic credit is a value allocated to a module or academic programme to describe the student workload required to complete the module/programme in relation to the total workload required to complete a full year of academic study. A credit is awarded to a learner in recognition of the verified achievement of designated learning outcomes at a specified level. It is a personal achievement awarded for an assessed unit as proof of achievement of expected learning outcomes.

Whereas formal learning occurs in education and training institutions and leads to recognized, documented level qualifications, non-formal learning occurs outside mainstream education and training and does not aim at formal certificates. Additionally, informal learning, which is a natural consequence of every day learning, is often unintentional and may go unrecognized. Many skills and competences are acquired through self-study, work study or life experience which may or may not be linked to formal qualifications. Such learning can also be expressed in credits (non-academic) since every type of learning can be expressed in learning outcomes and student workload. The key requirement is validation and certification.

Credit transfer is the recognition of credits earned at a prior institution by a second (or subsequent) institution of attendance; or taking learning outcomes achieved in one context into another context. Credit transfer entails assessment of the achievement of learning outcomes and recording the outcome of assessment, which constitutes a credit, in a learner's personal transcript. Based on assessed outcomes, the credit can be validated and recognized by another competent institution. Credit transfer is therefore dependent on the use of credit, which is calculated on the basis of defined learning outcomes, which in turn are based on the amount and depth of learning undertaken.





Credit accumulation is the process through which a learner can acquire qualification progressively by successive assessments and validation of learning outcomes. A unit that is assessed, validated, and for which a credit is awarded and recognized contributes to accumulation of credits that can form a full qualification. A credit system facilitates the transfer, recognition and accumulation of assessed learning outcomes of individuals who are aiming to achieve a qualification. The basic parameters of a credit system are student workload expressed in credits, levels of learning, learning outcomes and an assessment system. The KNQF provided some of the basic parameters of credit system including qualification level descriptors, qualification level volume of learning in terms of notional hours, credit and duration.

## 4. CHAPTER FOUR

### 4.1 Results and Discussions

This chapter presents the findings based on review of relevant documents including policy documents, curriculum documents, the KNQF with emphasis of post-secondary school/higher education qualifications; national, regional and global Credit Systems, Workshop Reports, among other documents; interviews with key informants; and visits to selected A-TVET institutions. These are discussed, and also form the basis for the CATS.

#### 4.1.1 KNQF and the CATS in Agricultural Education and Training

In exercising the functions of the KNQA under section 8 (1) of the KNQF Act No.22 of 2014 the Authority (KNQA) has developed the qualifications framework (KNQF) with 10 Qualification levels and types. Each KNQF Qualification level has level descriptors stated in terms of knowledge, skills and competences; entry requirements, and volume of learning. Learning is measured either in hours where 10 notional hours of study constitute one credit; Five of the KNQF qualification levels and types fall within the category of post-secondary/higher education qualifications where the A-TVET credit system is applicable. These include KNQF Levels 3, 4, 5, 6 and 7, where levels 3-6 are TVET qualifications generally, although some universities offer qualifications at levels 5 and 6. In agricultural education and training, KNQA level 7 is the highest level for the Credit System.

The functions of KNQA include 8(1) (i); *to facilitate linkages, credit transfers and exemptions and a vertical and horizontal mobility at all levels to enable entry, re-entry and exit.* Towards this end the KNQF provides alternative progression pathways to education and training, including minimum entry requirements based on the academic secondary education, TVET, and Industrial Training. The KNQA has developed Kenya Credit Accumulation and Transfer System (KCATs) Guidelines, 2018 which describe important parameters of CATS including a credit system, CATS, Key features of a credit system, requirements for credit transfer. The credit system is based on workload, credits based on learning outcomes, allocation of credits based on quantity of work in a full year of study, and an appropriate assessment system, system. The requirements for credit transfer are based on duration of a programme and allocated credits rather than credits based on student achievement.



Two basic parameters for CATS are student workload expressed in credits, and learning outcomes which are statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning. Curriculum developers or designers of academic programmes define the two parameters.

#### 4.1.2 Case Study: Egerton University Model of CATS

A harmonized CATS in Agriculture Education and Training is key in facilitating progression through various alternative pathways, especially in ATVET where the bulk of qualifications occur. This will foster common understanding and ownership of the CATS by training providers at various qualification levels. Based on this understanding, progression of students between and within different levels of qualifications/training in the same or different institutions will be possible while assuring the quality of education.

Egerton University, a pioneer in agriculture education and training in Kenya has been involved in agricultural training since 1939 at all levels i.e. Certificate, Diploma, Degree and Post-graduate studies. Their experience in undertaking CATs is important in understanding the success factors and challenges in developing CATs for the agricultural sector in Kenya. It is therefore based on this understanding that discussions were held with experts who were involved in CATs in agriculture education and training from Egerton University in order to share their experiences.

Egerton University, undertook to transition diploma holders to Degree level based on guidelines that had been developed and approved by the institution. The diploma holders were admitted as in-service students. Individual transcripts were assessed with a view of deciding which courses/subjects/units would be exempted and/or what credits could be transferred. The first assessment was done at the departmental level; as this is where the subject experts are domiciled. Other assessments were done at other levels and finally the university senate did the approval.

The in-service students were allowed to pick whatever subjects/units were available in the university timetable, provided the workload allowed. The pre-requisite courses had however to be undertaken at the appropriate time. Credit transfer was specific to a learner and was up to 49%. The transition was delinked from the academic years and dependent on the individual learner performance. Due to the flexibility, the in-service students were able to complete their programme based on their efforts.

It was noted that due to difference in the academic orientation in the former institutions of learning, some of the in-service students were found to have a challenge in philosophies and principles of particular courses, research methods and academic writing. This could be a challenge even in the future and it can be resolved by the following:

- i. Ground the Learners in the basic courses. This can be done by auditing the basic courses (*Students attend the class without necessarily sitting the examination*).



- ii. Learners to retake these courses at the universities.

Based on the discussions with the key informants, the following was noted:

- i. The challenge of CATS is from KNQF level six (National Diploma) to KNQF Level 7 (Degree).
- ii. The transition of trainees in the KNQF levels 3,4,5,6 is clear and therefore not a challenge.
- iii. There was no credit transfer from KNQF level 7, which is the post-graduate level.
- iv. Training institutions are offering different curricula which is assessed and examined by different bodies e.g. Some are developed and examined by KICD/TVET-CDACC, and KNEC while others are developed and assessed/examined by the individual institutions (Table 2).

Focus on the CATS need therefore to be the transition from KNQF levels six to level seven. Based on the KNQF, Level six is the National diploma, which is, equated to Master crafts II or professional Diploma such as CPA II. This level requires between 2400 to 4799 learning hours, which is equivalent to 240 to 279 credits. One credit is equated to 10 notional hours.

Recommendations based on the discussions with the key informants are as follows:

- i. Institutionalized support for the KNQF level six learners as they transition to level seven.
- ii. Provision of academic advisors to support the doers to be thinkers
- iii. Domicile the CATs in the Directorate of quality assurance; a unit could be created in this directorate to make recommendations on the CATs.
- iv. Suitability assessments could be done to individual learners, as credit transfer is specific to a learner.
- v. Credit transfers to be institutionalized with the appropriate policies to support the system.
- vi. Suggestion of a placement examination or an assessment to determine the level in the case of level-to-level transfers. This was suggested to be up to 49%.
- vii. CATs require transparency, so that learners are aware of the requirements as they commence training.
- viii. Need for communication between the TVET institutions and the Universities so that they understand what is offered in each of the levels.
- ix. A notional hour needs to be re-defined so that the meaning is the same across the different levels of training.
- x. Part or partial qualifications to be defined to avoid any misunderstanding.

#### 4.1.3 Conclusion

In principle, the KNQF stipulates that each qualification level in each of the parallel tracks (namely: academic, TVET and industrial training) shall be the minimum requirement for direct entry to the next level immediately above it. However, the problem with national CATS in general and the agriculture education and training CATS



in particular is to address the inadequate clarity or lack of a national consensus on equivalence between qualifications. The lack of consensus is especially noted in the industrial training track where much emphasis is put on assessment of practicum or practical exposure in the work place with minimal emphasis for theory. The challenge is somewhat similar for the qualifications acquired within the TVET track, which are based on striking a balance between trade practice and trade theory. Another challenge liable to occur is where some courses forming part of a training course programme are also offered in higher education as mono-disciplines. A case in point is a core agricultural science such as microbiology, being a common support subject in at a certain level yet the discipline may stand in its own right as a fully-fledged programme at other levels.

Curricular standards and entry qualifications for learners advancing along each individual track in the KNQF are clear and workable as per the Egerton workshop report. However, the crux of the matter is how the agriculture education and training CATS ought to open up a mechanism for instituting the equivalence of qualifications across the alternative tracks of progression as already outlined in the KNQF. A mechanism with clear remunerable competencies such as a generic worker designation in the agriculture sector, is crucial for regulating the diagonal progression pathway. This will make it possible for learners to migrate from one qualification type to another type at the next level; progress from a skills set or qualification type to a broader skill set within the same qualification level and type (e.g. from artisan grade II to artisan grade I certificate).



## 5 Chapter 5

### 5.1 Recommendations

This chapter presents the recommendations based on the triangulation of the information from preceding chapters. While it is expected that the recommendations will be implemented, it is anticipated that they will form the basis for actual implementation of CATS in Agriculture education and training:

1. In regard to the implementation of the CATS, it is recommended that a National Policy on Transfer of Credits in Agricultural education and training to guide progression between and within TVET and universities be developed for implementation. This should be a multi-sectoral process
2. Once the CBC and CBET are up and running properly, it is recommended that Competence-friendly University Education (CfUE) be escalated, especially, in universities of technology/technical universities and their constituent colleges. The KNQF anticipates this eventuality.
3. Mainstreaming the qualifications in the agriculture education and training be extended to assigning each level with a generic competency; i.e. level 1 – unskilled farm hand/worker; level 2 – semi-skilled farm hand/worker; level 3 - semi-skilled crop/animal raiser; level 4 skilled crop/animal raiser/minder; *level 5 associate farmer/assistant farmer; level 6 – farmer; level 7 – farm manager; level 8- advanced farm manager/ farm produce value addition processor; level 9 - associate agricultural researcher/ agricultural research assistant; and level 10 – agricultural researcher/innovator.*

### 5.2 Suggested Knowledge Management (K&M) Products

The literature reviewed, interactions with key informants and visits to ATVET Qualifications-awarding institutions point to a stakeholder base with a very wide information gap on the major reforms that the falling into place of KNQF sets in motion. Almost all relevant stakeholders in Agricultural Education and Training know something about the KNQF and CATS, but not many seem to appreciate how it affects what they do. At the same time, a lot is going on in relation to the KNQF, with different entities across ministries, directorates and agencies implementing one aspect or another of the KNQF as they deem it appropriate. This is likely to slow down progress in all aspects. In our view, a web-based Communication Strategy in clear, targeted nuggets that can address the interests of major players in the CATS including students, instructors, assessors, curriculum developers, employers, regulators in real time anywhere, would be great value addition.

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## 7 APPENDICES

### APPENDIX 1: AGRICULTURE EDUCATION AND TRAINING PROGRAMMES

#### ACCREDITED BY KNQA

	NAME OF THE DETAILED FIELD OF STUDY ACCORDING TO THE NATIONAL NOMENCLATURE	KNQA DETAILED FIELD OF STUDY	KNQF _LEVEL
<b>BUKURA AGRICULTURAL COLLEGE</b>			
1.	Diploma in Agriculture and Biotechnology	0512 Biochemistry	06 -National Diploma/Master Craft Person II/Professional Diploma
2.	Diploma in Horticulture	0812 Horticulture	06 -National Diploma/Master Craft Person II/Professional Diploma
3.	Diploma in Animal Production and Health Management	0811 Crop and livestock production	06 -National Diploma/Master Craft Person II/Professional Diploma
4.	Diploma in Agricultural Irrigation and Drainage Engineering	0811 Crop and livestock production	06 -National Diploma/Master Craft Person II/Professional Diploma
5.	Diploma in Agribusiness Management and Marketing	0811 Crop and livestock production	06 -National Diploma/Master Craft Person II/Professional Diploma
6.	Diploma in Food Science and Nutrition	0721 Food processing	06 -National Diploma/Master Craft Person II/Professional Diploma
7.	Diploma in Agricultural Education and Extension	114 Teacher training with subject specialization	06 -National Diploma/Master Craft Person II/Professional Diploma
8.	Diploma in Agricultural Extension and Community Development	0800 Agriculture, forestry, fisheries and veterinary not further defined	06 -National Diploma/Master Craft Person II/Professional Diploma
9.	Craft in Agriculture and Community Development	0899 Agriculture, forestry, fisheries and veterinary not elsewhere classified	06 -National Diploma/Master Craft Person II/Professional Diploma
10.	Craft in Horticulture	0812 Horticulture	06 -National Diploma/Master Craft Person II/Professional Diploma
11.	Diploma in Agriculture, Human Ecology and Consumer Science	0800 Agriculture, forestry, fisheries and veterinary not further defined	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III





12.	Diploma in Farm Business Management	0812 Horticulture	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
<b>KENYA NATIONAL EXAMINATIONS COUNCIL (KNEC)</b>			
13.	Diploma in Agricultural Engineering	0799 Engineering, manufacturing and construction not elsewhere classified	06 -National Diploma/Master Craft Person II/Professional Diploma
14.	Diploma in Agricultural Engineering	0810 Agriculture not further defined	06 -National Diploma/Master Craft Person II/Professional Diploma
15.	Diploma in Food Science and Processing Technology	0721 Food processing	06 -National Diploma/Master Craft Person II/Professional Diploma
16.	Craft Certificate in Food Processing and Preservation	0721 Food processing	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
17.	Craft Certificate in Fisheries, Science and Technology	0831 Fisheries	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
18.	Artisan Certificate in Food Processing Technology	0721 Food processing	04 - Artisan Certificate/National Vocational Certificate III (NVC-II)/National Skills Certificate I (NSC-I)/Government Trade Test I (GTT-I)
19.	National Vocational Certificate in Food Processing Technology	0721 Food processing	04 - Artisan Certificate/National Vocational Certificate III (NVC-II)/National Skills Certificate I (NSC-I)/Government Trade Test I (GTT-I)
20.	Craft Certificate in Agricultural Engineering (Farm Power and Machinery)	0810 Agriculture not further defined	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
21.	Craft Certificate in Fisheries, Science and Technology	0831 Fisheries	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III

**UNIVERSITIES AND UNIVERSITY COLLEGES**





	<b>NAME OF THE DETAILED FIELD OF STUDY ACCORDING TO THE NATIONAL NOMENCLATURE</b>	<b>KNQA DETAILED FIELD OF STUDY</b>	<b>KNQF_LEVEL</b>
<b>KENYATTA UNIVERSITY</b>			
22.	Bachelor of Science in Agricultural Resource Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
23.	Bachelor of Science in Animal Production and Health Management (Animal Production Option)	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
24.	Bachelor of Science in Dryland Agriculture and Enterprise Development	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
25.	Bachelor of Science (Agribusiness Management and Trade)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
26.	Bachelor of Science (Agricultural Education & Extension)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
27.	Bachelor of Science (Animal Science)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
28.	Bachelor of Science (Crop Science Option)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
29.	Bachelor of Science Agriculture	0810 Agriculture not further defined	07-Bachelor's Degree/Management Professional/Master Craft Person I
30.	Bachelor of Science in Crop Improvement and Protection	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
31.	Bachelor of Science in Animal Health	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>EGERTON UNIVERSITY</b>			
32.	Bachelor of Science in Horticulture	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
33.	Bachelor of Science in Soil Environment and Land Use Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
34.	Bachelor of Veterinary Medicine and Surgery	0912 Medicine	07-Bachelor's Degree/Management Professional/Master Craft Person I
35.	Bachelor of Science (Agricultural Education and Extension);	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
36.	Bachelor of Science (Agriculture and Human Ecology Extension);	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
37.	Bachelor of Science in Agricultural Economics	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
38.	Bachelor of Science in Agricultural Engineering	0716 Motor vehicles, ships and aircraft	07-Bachelor's Degree/Management Professional/Master Craft Person I



39.	Bachelor of Science in Agriculture	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
40.	Bachelor of Science in Animal Health Management	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
41.	Bachelor of Science in Animal Sciences	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
42.	Bachelor of Science in Dairy Technology and Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
43.	Bachelor of Science in Dryland Resources Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
44.	Bachelor of Science in Food Science and Technology	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
45.	Bachelor of Agribusiness Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>LAIKIPIA UNIVERSITY</b>			
46.	Bachelor of Science (AGEC)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>EMBU UNIVERSITY</b>			
47.	Bachelor of Agribusiness Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
48.	Bachelor of Agricultural Education and Extension	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
49.	Bachelor of Horticulture	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>TAITA TAVETA UNIVERSITY</b>			
50.	Master of Science in Applied Crop Science	0811 Crop and livestock production	09 -Master's Degree
51.	Bachelor of Science in Horticulture	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
52.	Bachelor of Science in Agribusiness Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
53.	Bachelor of Science in Agriculture	0810 Agriculture not further defined	07-Bachelor's Degree/Management Professional/Master Craft Person I
54.	Bachelor of Science in Agriculture Education and Extension	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>RONGO UNIVERSITY</b>			
55.	Bachelor of Science in Agriculture	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
56.	Bachelor of Science in Agricultural Extension and Education	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I



57.	Bachelor of Science in Agricultural Economics or Resource Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
58.	Bachelor of Science in Agribusiness management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
59.	Bachelor of Science in Horticulture	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>SOUTH-EASTERN KENYA UNIVERSITY</b>			
60.	Bachelor of Science (Agriculture)	0810 Agriculture not further defined	07-Bachelor's Degree/Management Professional/Master Craft Person I
61.	Bachelor of Science (Forestry)	0821 Forestry	07-Bachelor's Degree/Management Professional/Master Craft Person I
62.	Bachelor of Science (Geology)	0532 Earth sciences	07-Bachelor's Degree/Management Professional/Master Craft Person I
63.	Bachelor of Science (Actuarial Science)	0542 Statistics	07-Bachelor's Degree/Management Professional/Master Craft Person I
64.	Bachelor of Science (Biochemistry and Molecular Biology)	0512 Biochemistry	07-Bachelor's Degree/Management Professional/Master Craft Person I
65.	Bachelor of Science (Dryland Agriculture)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
66.	Bachelor of Science (Dryland Animal Science)	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
67.	Bachelor of Science (Fisheries & Aquaculture)	0831 Fisheries	07-Bachelor's Degree/Management Professional/Master Craft Person I
68.	Bachelor of Science (Horticulture)	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
69.	Bachelor of Science in Agribusiness Management and Entrepreneurship	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
70.	Bachelor of Science in Agricultural Education and Extension	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
71.	Bachelor of Science in Management of Agri. Ecosystems	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>UNIVERSITY OF NAIROBI</b>			
72.	Bachelor of Science (Agricultural Engineering)	0888 Inter-disciplinary programmes and qualifications involving agriculture, forestry, fisheries and veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
73.	Bachelor of Science (Bio systems Engineering)	0511 Biology	07-Bachelor's Degree/Management Professional/Master Craft Person I



74.	Bachelor of Science in Agri-Business Management	0888 Inter-disciplinary programmes and qualifications involving agriculture, forestry, fisheries and veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
75.	Bachelor of Science in Agricultural Education & Extension	0114 Teacher training with subject specialization	07-Bachelor's Degree/Management Professional/Master Craft Person I
76.	Bachelor of Science in Food Science and Technology	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
77.	Bachelor of Science in Horticulture	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
78.	Bachelor of Veterinary Medicine	0912 Medicine	07-Bachelor's Degree/Management Professional/Master Craft Person I
79.	Bachelor of Agriculture	0810 Agriculture not further defined	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>UNIVERSITY OF ELDORET</b>			
80.	Bachelor of Education in Agricultural Education Science	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
81.	Bachelor of Engineering Agricultural and Bio-Systems Engineering	0712 Environmental protection technology	07-Bachelor's Degree/Management Professional/Master Craft Person I
82.	Bachelor of Science in Agricultural Biotechnology	0888 Inter-disciplinary programmes and qualifications involving agriculture, forestry, fisheries and veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
83.	Bachelor of Science in Agricultural Economic	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
84.	Bachelor of Science in Agricultural Extension Education	0810 Agriculture not further defined	07-Bachelor's Degree/Management Professional/Master Craft Person I
85.	Bachelor of Science in Agriculture	0819 Agriculture not elsewhere classified	07-Bachelor's Degree/Management Professional/Master Craft Person I
86.	Bachelor of Science in Animal Science and Management	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
87.	Bachelor of Science in Applied Animal Laboratory Science	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
88.	Bachelor of Science in Fisheries and Aquatic Science	0800 Agriculture, forestry, fisheries and veterinary not further defined	07-Bachelor's Degree/Management Professional/Master Craft Person I



89.	Bachelor of Science in Food Science & Nutrition	0721 Food processing	Food	07-Bachelor's Degree/Management Professional/Master Craft Person I
90.	Bachelor of Science in Horticulture	0812 Horticulture		07-Bachelor's Degree/Management Professional/Master Craft Person I
91.	Bachelor of Science in Seed Science & Technology	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
92.	Bachelor of Science in Soil Science & Land Use Management	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>LUKENYA UNIVERSITY</b>				
93.	Bachelor of Science in Dryland Agriculture	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>KENYA METHODIST UNIVERSITY</b>				
94.	Bachelor of Science in Agriculture	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>MASINDE MULIRO</b>				
95.	Bachelor of Science in Agricultural Economics and Resource Management	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
96.	Bachelor of Science in Agriculture Education and Extension	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
97.	Bachelor of Science (Fisheries and Aquaculture Technology)	0831 Fisheries		07-Bachelor's Degree/Management Professional/Master Craft Person I
98.	Bachelor of Science (Agribusiness Management and Marketing)	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
99.	Bachelor of Science (Agriculture and Biotechnology)	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
100.	Bachelor of Science (Animal Health and Management)	0841 Veterinary		07-Bachelor's Degree/Management Professional/Master Craft Person I
101.	Bachelor of Science (Animal Production and Processing)	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
102.	Bachelor of Science (Food Science and Technology)	0721 Food processing	Food	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>MOI UNIVERSITY</b>				
103.	Bachelor of Science (Animal Science)	0841 Veterinary		07-Bachelor's Degree/Management Professional/Master Craft Person
104.	Bachelor of Science (Agricultural Extension Education)	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person



105.	Bachelor of Science (Agricultural Economics & Resource Management)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person
106.	Bachelor of Science (Agri-Business Management)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person
<b>MT KENYA UNIVERSITY</b>			
107.	Bachelor of Science in Agriculture and Rural Development	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
108.	Bachelor of Science in Animal Health and Production	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
109.	Bachelor of Science in Animal Science	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
110.	Bachelor of Science in Food Processing and Technology	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>PWANI UNIVERSITY</b>			
111.	Bachelor of Science (Agribusiness Management & Trade)	0811 Crop and livestock production	07-Bachelor's Degree
112.	Bachelor of Science (Agriculture & Enterprise Development)	0811 Crop and livestock production	07-Bachelor's Degree
113.	Bachelor of Science (Animal Production & Health Management)	0811 Crop and livestock production	07-Bachelor's Degree
114.	Bachelor of Science in Agricultural Education and Extension	0811 Crop and livestock production	07-Bachelor's Degree
115.	Bachelor of Science in Industrial Chemistry	0531 Chemistry	07-Bachelor's Degree
116.	Bachelor of Science in Marine Biology and Fisheries	0831 Fisheries	07-Bachelor's Degree
117.	Bachelor of Science on Agricultural Resource Management	0811 Crop and livestock production	07-Bachelor's Degree
<b>TOM MBOYA UNIVERSITY COLLEGE</b>			
118.	Bachelor of Science (Horticulture)	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>TECHNICAL UNIVERSITY OF MOMBASA</b>			
119.	Bachelor of Science in Food Technology and Quality Assurance	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>MURANG'A UNIVERSITY OF TECHNOLOGY</b>			





120.	Diploma in Food Science and Technology	0721 Food processing	Food	06 -National Diploma/Master Craft Person II/Professional Diploma
<b>MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY</b>				
121.	Bachelor of Science in Animal Health Production	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
122.	Bachelor of Science in Crop Protection	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
123.	Bachelor of Science in Food Science and Nutrition	0721 Food processing	Food	07-Bachelor's Degree/Management Professional/Master Craft Person I
124.	Bachelor of Science in Food Science and Technology	0721 Food processing	Food	07-Bachelor's Degree/Management Professional/Master Craft Person I
125.	Bachelor of Science in Horticulture	0812 Horticulture		07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>MASENO UNIVERSITY</b>				
126.	Bachelor of Science in Horticulture	0812 Horticulture		07-Bachelor's Degree/Management Professional/Master Craft Person I
127.	Bachelor of Science in Animal Science	0841 Veterinary		07-Bachelor's Degree/Management Professional/Master Craft Person I
128.	Bachelor of Science in Agronomy	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
129.	Bachelor of Science in Soil Science	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
130.	Bachelor of Science in Aquatic Resources Conservation & Development	0831 Fisheries		07-Bachelor's Degree/Management Professional/Master Craft Person I
131.	Bachelor of Science in Fisheries & Aquaculture	0831 Fisheries		07-Bachelor's Degree/Management Professional/Master Craft Person I
132.	Bachelor of Science in Agricultural Education & Extension	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
133.	Bachelor of Science in Agribusiness Management	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
134.	Bachelor of Science in Agricultural Economics	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>MACHAKOS UNIVERSITY</b>				
135.	BSc in Agribusiness Management	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
136.	BSc in Agricultural Education and Extension	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>MAASAI MARA UNIVERSITY</b>				



137.	Bachelor of Science (Agricultural Economics & Resource Management)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
138.	Bachelor of Science in Agricultural Economics & Resource Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
139.	Bachelor of Science in Animal Health and Production	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
	<b>KISII UNIVERSITY</b>		
140.	Bachelor of Agribusiness Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
141.	Bachelor of Science in agricultural Economics	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
142.	Bachelor of Science in Applied Aquatic Science	0831 Fisheries	07-Bachelor's Degree/Management Professional/Master Craft Person I
143.	Bachelor of Science in Agricultural Education and Extension	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
144.	Diploma in Agricultural Education and Extension	0811 Crop and livestock production	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
145.	Diploma in Animal Health	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
146.	Diploma in Animal Science and Technology	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
147.	Diploma in Farm Resource Management	0811 Crop and livestock production	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
	<b>KIRINYAGA UNIVERSITY</b>		
148.	Bachelor of Water Irrigation and Environmental Engineering	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>KIBABII UNIVERSITY</b>			
149.	Bachelor of Science (Agricultural Economics and Resource Management)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
150.	Bachelor of Science (Agriculture & Biotechnology)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>KARATINA UNIVERSITY</b>			
151.	Bachelor of Science in Horticultural Science and Management	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I





152.	Bachelor of Science in Food Science and Nutrition	0721 Food processing	Food	07-Bachelor's Degree/Management Professional/Master Craft Person I
153.	Bachelor of Science in Agricultural Extension Education	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
154.	Bachelor of Science in Agricultural Resource Economics and Management	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>KAIMOSI FRIENDS UNIVERSITY COLLEGE</b>				
155.	Bachelor of Science (Agricultural Economics and Resource Management)	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>UNIVERSITY OF KABIANGA</b>				
156.	Bachelor of Science Agriculture Economics	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
157.	Bachelor of Science Horticultural Science	0812 Horticulture		07-Bachelor's Degree/Management Professional/Master Craft Person I
158.	Bachelor of Science in Agriculture	813 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
159.	Bachelor of Science in Agricultural Education Extension	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY</b>				
160.	Bachelor of Science in Agribusiness Economics and Food Industry Management	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
161.	Bachelor of Science in Agribusiness Extension Development	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
162.	Bachelor of Science in Agribusiness Management and Enterprise Development	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
163.	Bachelor of science in Agricultural and Bio systems Engineering	0719 Engineering and engineering trades not elsewhere classified		07-Bachelor's Degree/Management Professional/Master Craft Person I
164.	Bachelor of Science in Agricultural Economics and Rural Development	0811 Crop and livestock production		07-Bachelor's Degree/Management Professional/Master Craft Person I
165.	Bachelor of Science in Agricultural Engineering	0719 Engineering and engineering trades not elsewhere classified		07-Bachelor's Degree/Management Professional/Master Craft Person I
166.	Bachelor of Science in Agricultural Engineering and Rural Entrepreneurship	0719 Engineering and engineering		07-Bachelor's Degree/Management Professional/Master Craft Person I



		trades not elsewhere classified	
167.	Bachelor of Science in Agriculture	0810 Agriculture not further defined	07-Bachelor's Degree/Management Professional/Master Craft Person I
168.	Bachelor of Science in Animal Health, Production and Processing	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
169.	Bachelor of Science in Crop Protection	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
170.	Bachelor of Science in Environmental Horticulture and Landscaping Technology	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
171.	Bachelor of science in Food Process Engineering	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
172.	Bachelor of Science in Food Science and Nutrition	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
173.	Bachelor of Science in Food Science and Technology	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
174.	Bachelor of Science in Food Service and Postharvest Technology	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
175.	Bachelor of Science in Horticulture	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
176.	Bachelor of Science in Crop Protection	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
177.	Bachelor of Science in Environmental Horticulture and Landscaping Technology	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
178.	Bachelor of science in Food Process Engineering	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
179.	Bachelor of Science in Food Science and Nutrition	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
180.	Bachelor of Science in Food Science and Technology	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
181.	Bachelor of Science in Food Service and Postharvest Technology	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
182.	Bachelor of Science in Horticulture	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY</b>			
183.	Bachelor of Science in Agribusiness Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
184.	Bachelor of Science in Agricultural Education and Extensions	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
185.	Bachelor of Science in Animal Science	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I



186.	Bachelor of Science in Biological Sciences	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
187.	Bachelor of Science in Food Security	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
188.	Bachelor of Science in Horticulture	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
189.	Bachelor of Science in Soil Science	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>GREAT LAKES UNIVERSITY OF KISUMU</b>			
190.	Bachelor of Science in Agri-business	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY</b>			
191.	Bachelor of Science in Food Science and Technology	0721 Food processing	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>CHUKA UNIVERSITY</b>			
192.	Bachelor of Science (Agriculture)	0810 Agriculture not further defined	07-Bachelor's Degree/Management Professional/Master Craft Person I
193.	Bachelor of Science (Animal Science)	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
194.	Bachelor of Science (Horticulture)	0812 Horticulture	07-Bachelor's Degree/Management Professional/Master Craft Person I
195.	Bachelor of Science in Agricultural Economics	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
196.	Bachelor of Science in Agricultural Education & Extension	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
197.	Bachelor of Science in Fisheries and Aquaculture	0831 Fisheries	07-Bachelor's Degree/Management Professional/Master Craft Person I
198.	Bachelor of Agribusiness Management	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
199.	Bachelor of Science (Agricultural Economics)	0811 Crop and livestock production	07-Bachelor's Degree/Management Professional/Master Craft Person I
<b>UNIVERSITY OF EASTERN AFRICA (BARATON)</b>			
200.	Bachelor of Science in Agriculture	0810 Agriculture not further defined	07-Bachelor's Degree/Management Professional/Master Craft Person I
201.	Bachelor of Science in Agriculture (Agricultural Business)	0810 Agriculture not further defined	07-Bachelor's Degree/Management Professional/Master Craft Person I

**TVET-CDACC CBET PROGRAMMES**



<b>Agriculture Qualification</b>	<b>KNQA Level</b>
1. Agricultural Extension	06
2. Agriculture Extension	03
3. Agriculture machinery and equipment	04
4. Agripreneurship	06
5. Agripreneurship	04
6. Aquaculture	03
7. Aquaculture	04
8. Aquaculture	05
9. Aquaculture	06
10. Butchery Operations	04
11. Butchery Operations	03
12. Dairy Farm Management	03
13. Dairy Plant Management	05
14. Dairy Plant Management	06
15. Dairy Processing	04
16. Food Technology	05
17. Food Technology	06
18. Horticultural Produce Processing Management	06
19. Horticultural Produce Processing Management	04
20. Horticultural Produce Processing Management	03
21. Horticultural Produce Processing Management	05
22. Horticultural Production	06
23. Horticulture Nursery Management	04
24. Horticulture Nursery Management	05
25. Horticulture Nursery Management	03
26. Horticulture Nursery Management	06
27. Horticulture Production	04
28. Horticulture Production	03
29. Horticulture Production	05
30. Integrated Pest Management	05
31. Meat Processing	05
32. Meat Slaughter House Attendant	03
33. Meat Slaughter House Operations	03
34. Poultry Breeding and Hatchery Operations	05
35. Poultry Breeding and Hatchery Operations	05



36. Poultry Broiler Production	03
37. Poultry Broiler Production Operations	04
38. Poultry Kienyeji Production.	03
39. Poultry Layer Production.	03
40. Poultry Management	06
41. Poultry Processing Operator	05
42. Poultry Products Processing Operator	04
43. Soil Management.	05
44. Sustainable Agriculture for Rural Development	05

### INSTITUTIONS OFFERING ANIMAL HEALTH SCIENCES PROGRAMMES

	<b>Training Institutions/ QAIs</b>	<b>Name of the detailed field of study according to the national nomenclature or your university</b>	<b>KNQA Detailed field of study</b>	<b>KNQF Level</b>
202.	University of Nairobi	Bachelor of Veterinary Medicine	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
203.	Egerton University	Bachelor of Veterinary Medicine and Surgery	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
204.	Egerton University	BSc. Animal Health and Production	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
205.	Egerton University	Diploma in Animal Health and Production	0841 Veterinary	06 -National Diploma/Master Craft Person II/Professional Diploma
206.	Kenyatta University	BSc. Animal Health and Production	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
207.	Jomo Kenyatta University of Agriculture and Technology	BSc. Animal Health, Production and Processing	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
208.	Meru University of Science and Technology	BSc. Animal Health and Production	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
209.	Pwani University	BSc. Animal Health and Production	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I



210.	Pwani University	Diploma in Animal Health and Production	0841 Veterinary	06 -National Diploma/Master Craft Person II/Professional Diploma
211.	Mount Kenya University	BSc. Animal Health and Production	0841 Veterinary	07-Bachelor's Degree/Management Professional/Master Craft Person I
212.	Mount Kenya University	Diploma in Animal Health and Production	0841 Veterinary	06 -National Diploma/Master Craft Person II/Professional Diploma
213.	Mount Kenya University	Certificate in Animal Health and Production	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
214.	Kisii University	Diploma in Animal Health and Production	0841 Veterinary	06 -National Diploma/Master Craft Person II/Professional Diploma
215.	Kisii University	Certificate in Animal Health and Production	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
216.	Chuka University	Diploma in Animal Health and Production	0841 Veterinary	06 -National Diploma/Master Craft Person II/Professional Diploma
217.	Chuka University	Certificate in Animal Health and Production	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
218.	Bradegate International College	Certificate in Animal Health and Production	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
219.	JKUAT- School of Livestock Breeding, Artificial Insemination and Dairy Management (SLIBRAID)	Certificate in Animal Health and Production	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
220.	Baraton College	Certificate in Animal Health and Production	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III

**INSTITUTIONS OFFERING ANIMAL HEALTH SCIENCES PROGRAMMES-MOALF&C**





	Name of the detailed field of study according to the national nomenclature or your university	KNQA Detailed field of study	KNQF_Level
<b>AHITI-NYAHURURU</b>			
221.	Animal Health and Production Course	0841 Veterinary	06 -National Diploma/Master Craft Person II/Professional Diploma
222.	Upgrading Course to Diploma in Animal Health and Production	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
223.	Diploma in Clinical Child Neuropsychology	0912 Medicine	06 -National Diploma/Master Craft Person II/Professional Diploma
<b>AHITI-NDOMBA</b>			
224.	Diploma in Animal Health Production	0841 Veterinary	06 -National Diploma/Master Craft Person II/Professional Diploma
225.	Diploma in Occupational Health and Safety	1022 Occupational health and safety	06 -National Diploma/Master Craft Person II/Professional Diploma
226.	Upgrading to Certificate in Animal Health and Production	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
227.	Certificate in Animal Health and Production	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
<b>AHITI-KABETE</b>			
228.	Diploma in Animal Health Production	0841 Veterinary	06 -National Diploma/Master Craft Person II/Professional Diploma
229.	Diploma in Leather Technology	0723 Textiles (clothes, footwear and leather)	06 -National Diploma/Master Craft Person II/Professional Diploma
230.	Diploma in Animal Health and Range Management	0841 Veterinary	06 -National Diploma/Master Craft Person II/Professional Diploma
231.	Certificate in Animal Health and Production	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
232.	Certificate in Artificial Insemination	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
233.	Diploma in Animal Health Production	0841 Veterinary	06 -National Diploma/Master Craft Person II/Professional Diploma



234.	Diploma in Leather Technology	0723 Textiles (clothes, footwear and leather)	06 -National Diploma/Master Craft Person II/Professional Diploma
<b>DAIRY TRAINING INSTITUTE</b>			
235.	Diploma in Agriculture (KNEC)	0811 Crop and livestock production	06 -National Diploma/Master Craft Person II/Professional Diploma
236.	Diploma in Dairy Production and Processing	0721 Food processing	06 -National Diploma/Master Craft Person II/Professional Diploma
237.	Certificate in Dairy production and management	0811 Crop and livestock production	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
238.	Certificate in Dairy Technology and Management	0721 Food processing	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
239.	Certificate in Dairy farm (or Dairy plant technician)	0716 Motor vehicles, ships and aircraft	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
240.	Craft in Dairy Management (MoALF)	0811 Crop and livestock production	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
241.	Craft in Dairy Science and Technology (MoALF)	0721 Food processing	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
242.	Craft in Entrepreneurial Agriculture (KNEC)	0413 Management and administration	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III
<b>MEAT TRAINING INSTITUTE</b>			
243.	Meat Inspection course	0721 Food processing	03 - National Skills Certificate II (NSC-II)/Government Trade Test II (GTT-II)/National Vocational Certificate II (NVC- II)
244.	Certificate in Slaughter House Attendants	0721 Food processing	03 - National Skills Certificate II (NSC-II)/Government Trade Test II (GTT-II)/National Vocational Certificate II (NVC- II)
245.	Abattoir Instructors course	0721 Food processing	03 - National Skills Certificate II (NSC-II)/Government Trade Test II (GTT-II)/National Vocational Certificate II (NVC- II)
246.	Certificate in Meat Grading	0721 Food processing	03 - National Skills Certificate II (NSC-II)/Government Trade Test II (GTT-





			II)/National Vocational Certificate II (NVC- II)
<b>LIVESTOCK TRAINING INSTITUTE</b>			
247.	Certificate in Animal Health and Range Management	0841 Veterinary	05 -National Craft certificate /National Vocational Certificate IV (NVTC IV)/Master Craft Person III