

**KENYA STANDARD**

**KNWA 2940:2021**

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06-05-2021

ICS 65,020.20

**First Edition**

# **Miraa (Khat) industry — Code of practice**

# KNWA 2940:2021

## TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Agriculture and Food Authority — Miraa, Pyrethrum and Other Industrial Crops Directorate  
Council of Governors  
Government Chemist's Department  
Igembe Forestry and Agribusiness Community Based Organization  
Kenya Agricultural and Livestock Research Organization  
Kenya Airports Authority  
Kenya Medical Research Institute  
Kenya Methodist University  
Kenya Plant Health Inspectorate Service  
Mega Fortune Distributors Ltd.  
Ministry of Agriculture, Livestock, Fisheries and Cooperatives  
Ministry of Industrialization, Trade and Enterprise Development  
Miraa and Food Crops Farmers Organization  
Mwenge SACCO  
Nyambene Miraa Traders Association  
Pharmacy and Poisons Board  
REK East Africa  
Sakijo International  
Kenya Bureau of Standards — Secretariat

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# **Miraa (Khat) industry — Code of practice**

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# KNWA 2940:2021

## Foreword

This National Workshop Agreement was prepared by the National Workshop on Miraa under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards

This code stipulates the hygienic and safety requirements during the production, handling and marketing of Miraa (Khat). The document also considers the safety provisions for consumers and workers in the industry.

The recommendations made in the code target quality production and marketing of Miraa (Khat) under appropriate environmental conditions.

During the preparation of this standard, reference was made to the following document:

KS 1758-2:2016, Horticulture Industry — Code of practice Part 2: Fruits and vegetables.

Acknowledgement is hereby made for the assistance derived from this source.

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# Contents

Page

<b>TECHNICAL COMMITTEE REPRESENTATION .....</b>	<b>ii</b>
<b>Foreword.....</b>	<b>iv</b>
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions .....</b>	<b>1</b>
<b>4 Farm management responsibilities and documentation .....</b>	<b>6</b>
<b>5 Traceability .....</b>	<b>7</b>
<b>5.1 Ability to track a product .....</b>	<b>7</b>
<b>5.2 Produce labelling .....</b>	<b>8</b>
<b>5.3 Produce receipt.....</b>	<b>8</b>
<b>6 Record keeping and internal audit.....</b>	<b>8</b>
<b>7 Varieties and rootstocks .....</b>	<b>9</b>
<b>7.1 Choice of variety and rootstock .....</b>	<b>9</b>
<b>7.2 Pests .....</b>	<b>9</b>
<b>7.3 Compliance of propagation materials .....</b>	<b>9</b>
<b>8 Site history, soil and substrate management .....</b>	<b>9</b>
<b>8.1 Site selection.....</b>	<b>9</b>
<b>8.2 Soil and substrate management .....</b>	<b>9</b>
<b>8.2.1 Cultivation .....</b>	<b>10</b>
<b>8.2.2 Soil erosion .....</b>	<b>10</b>
<b>8.2.3 Soil fumigation .....</b>	<b>10</b>
<b>8.3 Substrates .....</b>	<b>10</b>
<b>9 Plant nutrition and fertilizer use.....</b>	<b>11</b>
<b>9.1 Advice on quantity and type of fertilizer .....</b>	<b>11</b>
<b>9.2 Records of application .....</b>	<b>11</b>
<b>9.3 Application machinery .....</b>	<b>11</b>
<b>9.4 Nutrient requirements .....</b>	<b>11</b>
<b>9.5 Timing and frequency .....</b>	<b>11</b>
<b>9.6 Fertilizer storage.....</b>	<b>12</b>
<b>9.7 Organic fertilizers .....</b>	<b>12</b>
<b>10 Irrigation and fertigation .....</b>	<b>12</b>
<b>10.1 Water management.....</b>	<b>12</b>
<b>10.2 Quality of irrigation water .....</b>	<b>13</b>
<b>10.3 Supply of irrigation water/ fertigation water .....</b>	<b>13</b>
<b>11 Crop protection .....</b>	<b>13</b>
<b>11.1 Pest .....</b>	<b>13</b>
<b>11.1.4 The control of pests shall take into consideration of the following:.....</b>	<b>13</b>
<b>11.2 Pest management .....</b>	<b>14</b>
<b>11.3 Resistance management.....</b>	<b>14</b>
<b>11.4 Application conditions .....</b>	<b>14</b>
<b>11.5 Procurement of pesticides.....</b>	<b>14</b>
<b>11.6 Transport of pesticides and hazardous chemicals .....</b>	<b>14</b>
<b>11.7 Storage of pest control products .....</b>	<b>15</b>
<b>11.8 Selection of pest control products .....</b>	<b>15</b>
<b>11.9 Dispensing of pesticides and hazardous chemicals .....</b>	<b>15</b>
<b>11.10 Advice on quantity of pesticide application .....</b>	<b>16</b>
<b>11.11 Application of pesticides and protection of workers.....</b>	<b>16</b>
<b>11.12 Pre-harvest intervals .....</b>	<b>16</b>

# KNWA2940:2021

12	Harvesting and postharvest handling of produce .....	17
12.1	Produce integrity .....	17
12.2	Harvesting hygiene .....	17
12.3	Field holding facility .....	17
12.4	Pack house premises .....	18
12.5	Design and construction of pack house .....	18
12.6	Forklift.....	18
12.7	Incompatible goods.....	19
12.8	Pack house risk assessment .....	19
12.9	Pack house hygiene .....	19
12.10	Produce receipt .....	19
12.11	Produce inspection .....	19
12.12	Quality control .....	20
12.13	Produce handling .....	20
12.14	Personal hygiene.....	20
12.15	Exit Point inspections .....	21
12.16	Medical check-up.....	21
12.17	Sick workers .....	21
12.18	Visitors .....	21
12.19	Handling of rejected produce.....	21
12.20	Cold chain facilities.....	21
12.21	Packaging material.....	21
12.22	Cleaning materials.....	22
13	Waste and pollution management, recycling and re-use.....	22
14	Worker health, safety and welfare .....	22
14.1	Worker health.....	22
14.2	Worker welfare.....	23
14.2.1	Wages .....	23
14.2.2	Overtime .....	23
14.2.3	National Social Security Fund (NSSF).....	23
14.2.4	National Hospital Insurance Fund (NHIF) .....	23
14.2.4	Bonus and incentive schemes .....	23
14.3	Labour conditions .....	23
14.3.1	Work contracts .....	23
14.4	Working hours and leaves.....	24
14.5	Pregnancy .....	24
14.6	Summary dismissal.....	24
14.7	Redundancy .....	24
14.8	Termination of employment .....	24
14.9	Workman's compensation.....	24
14.10	Grievance procedures.....	24
14.10.1	Forced labour.....	24
14.10.2	Discrimination.....	24
14.10.3	Child labour/minors.....	25
14.11	Out-growers/leasors.....	25
14.12	Worker safety.....	25
14.13	Health and safety risk prevention.....	25
14.14	Emergency procedures.....	26
14.15	Training .....	26
14.16	Medical .....	26
14.17	Pregnancy .....	26
14.18.	Visitors .....	26
14.19	Fire precautions.....	26
15	Environmental management .....	26
15.1	Soil conservation.....	26
15.2	Water sources.....	27
16	Complaint handling procedures .....	27

<b>17</b>	<b>Legal and contractual obligations .....</b>	<b>27</b>
<b>17.1</b>	<b>Legal compliance.....</b>	<b>27</b>
<b>17.2</b>	<b>Intellectual Property (IP) rights and royalties .....</b>	<b>27</b>
<b>17.3</b>	<b>Registration and licensing.....</b>	<b>28</b>

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## Miraa (Khat) industry — Code of practice

### 1 Scope

This Kenya National Workshop Agreement provides requirements for legal compliance, the responsible and safe production of miraa (khat), species *Catha edulis*.

This code applies to the procurement of inputs, pre-export requirements and placing in the market of miraa (khat). It applies to all players in the industry including but not limited to growers, propagators, aggregators, transporters, shippers and cargo handlers.

This code shall apply to the procurement of inputs, production and placing of fresh miraa in the market. It may be used for registration and certification of growers and traders.

### 2 Normative references [ ]

The following document is referred to in the text in such a way that some or all of its content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

KS ISO/IEC 17065, *Conformity assessment — Requirements for bodies certifying products, processes and services*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1 accreditation

third-party attestation related to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment tasks

#### 3.2 accreditation body

organization responsible for assessing and accrediting certification bodies against ISO/IEC 17065 and that is a member of the International Accreditation Forum (IAF) and is a signatory of the Multi-Lateral Agreement (MLA) for product certification

#### 3.3 active ingredient

substance that kills, or otherwise controls, target pests. Plant protection products are regulated primarily on the basis of active ingredients

#### 3.4 agricultural production unit

geographic area composed of fields, yards, plots, orchards, greenhouses, livestock building, hatcheries, group of geographic areas of restricted fresh water and/or restricted sea water activities and/or any other area/location/transport used for production of registered products

# KNWA 2940:2021

## 3.5

### **aggregator**

entity/person collecting or receiving, consolidating and documenting produce, cold chain handling, repackaging where applicable and conveying of the produce to shippers/cargo handlers

## 3.6

### **applicant**

candidate for certification that has applied or is in the process of applying for registration by approved Certification Body

## 3.7

### **audit**

systematic and functionally independent examination to determine whether quality and food safety activities and results comply with planned procedures and whether these procedures are implemented effectively and are suitable to achieve objectives

## 3.8

### **benchmark**

measurable set of variables used as a baseline or reference in evaluating the performance of schemes

## 3.9

### **Benchmarked Certification System**

certification system which has achieved its accreditation to ISO/IEC 17065 through an accredited Certification Body

## 3.10

### **biodiversity**

variability among living organisms from all sources, including, 'inter alia', terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems. Biodiversity is of main relevance during Environmental impact assessment and Environmental management plans

## 3.11

### **breeder**

person or entity which commercially develops new varieties of plants from existing varieties or wild relatives

## 3.12

### **bund**

barrier on the surface of the soil/ground/floor to prevent runoff, spillage and soil erosion

## 3.13

### **calibration**

determination of the accuracy of an instrument, usually by measurement of its variation from a standard, to ascertain necessary correction factors

## 3.14

### **certification**

all those actions leading to the issuing of a certificate in terms of ISO/IEC 17065 product certification or any other internally accredited certification scheme

## 3.15

### **certification bodies**

also known as conformity assessment bodies, are organizations which provide conformity assessment services such as inspections and certifications to operators or producer groups for standards in context with the requirements established under the above Certification guides

## KNWA 2940:2021

### 3.16

#### **cold chain**

movement of fresh produce from the field to the end destination at the lowest achievable temperatures without damaging the produce

### 3.17

#### **concentrate**

forms in which pesticides are usually sold, mostly requiring dilution before use

### 3.18

#### **concern**

expert judgment on the level of threat to the consumer or the product of a particular hazard

### 3.19

#### **consumer**

individual who buys products or services for personal use

### 3.20

#### **contaminant**

any substance not intentionally added to food, which is present in such food as a result of the production (including operations carried out in crop husbandry, animal husbandry and veterinary medicine), manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food or as a result of environmental contamination. The term does not include insect fragments, rodent hairs and other extraneous matter

### 3.21

#### **contamination**

pollution by the undesirable presence of pesticides, pests, off farm and on farm inputs such as irrigation water etc.

### 3.22

#### **cooling**

process of reducing temperature to well below ambient atmosphere

### 3.23

#### **cultivation**

any agricultural action or practice used by growers to allow and improve the growing conditions of miraa (khat) grown in the field

### 3.24

#### **customer**

anyone who purchases products or services from a supplier

### 3.25

#### **dilution**

addition of water to reduce the concentration of a pesticide before use

### 3.26

#### **documentation**

the accumulation, classification and dissemination of information relating to a process or procedure usually in written or electronic form

### 3.27

#### **dose rate**

amount of pesticide recommended to be used on a given area of crop, expressed, e.g. in litres or kilograms per hectare

# KNWA 2940:2021

## 3.28

### **Environmental Impact Assessment (EIA)**

detailed study based on environmental impact assessment to determine the type and level of effects an existing facility is having, or a proposed project would have, on its natural environment

## 3.29

### **erosion**

erosion is the mechanical movement of the land surface by wind, rain, running water or moving ice resulting in the wearing away of land or soil

## 3.30

### **exporter**

the person/entity who has the ownership of the produce being shipped/exported to the determined destination

## 3.31

### **food safety**

assurance that food will not cause harm to the consumer when it is prepared and consumed according to its intended use

## 3.32

### **hazard**

biological, chemical, physical agent or any other property that may cause a product to be unsafe for consumption

## 3.33

### **hazardous material**

any material which, at specific levels, has the potential to cause adverse health effects

## 3.34

### **Integrated Pest Management (IPM)**

consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep plant protection products and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment

## 3.35

### **lease**

person who gives payment for miraa plants for a stipulated period of time

## 3.36

### **leaser**

person who receives payment for miraa plants for a stipulated period of time

## 3.37

### **manure**

decomposed or otherwise treated materials used to maintain or improve plant nutrition and soil properties

## 3.38

### **medicines**

substances intended for use in the diagnosis, prevention, mitigation, cure or treatment of a condition or disease

## 3.39

### **non-compliance**

control point in the checklist is not fulfilled according to the compliance criteria

## 3.40

### **operators**

individual producers of primary agricultural products including propagators and breeders; farmer groups, associations and cooperatives; processors and packers; trading companies (including exporters), shippers, consolidators and cargo handlers

## KNWA 2940:2021

### 3.41

#### **organic fertilizer**

organic fertilizers mean materials of animal or plant origin used to maintain or improve plant nutrition and soil properties. They may include manure, compost and digestion residues

### 3.42

#### **outgrower**

one who grows miraa under contract to a third party

### 3.43

#### **packaging**

procedures for protecting the products by a wrapper, a container, box or other suitable device

### 3.44

#### **pack house**

any facility for handling harvested produce without changing its form

### 3.45

#### **pest**

any injurious, noxious or troublesome insect, fungus, bacterial organism, virus, weed, rodent or other plant or animal pest; and includes any injurious, noxious or troublesome organic function of a plant or animal

### 3.46

#### **pest control products**

product, device, organism, substance or thing that is manufactured, represented, sold or used as a means for directly or indirectly controlling, preventing, destroying, attracting or repelling any pest

### 3.47

#### **pre-harvesting intervals**

the period of time which shall elapse between the application of a pesticide and the harvesting of a crop

### 3.48

#### **produce**

part of miraa (khat) plant that is harvested. These include but not limited to the twigs, leaves, suckers, buds and shoots

### 3.49

#### **producer group**

set of growers who have come together for purposes of marketing their produce under a common quality management system

### 3.50

#### **personal protective equipment**

clothing and equipment selected or designed to protect the wearer against contamination and injury

### 3.51

#### **potable water**

water which meets the quality standards of drinking water in accordance with relevant Kenya Standard

### 3.52

#### **propagator**

person or entity which commercially multiplies plants while preserving their essential genetic characteristics

### 3.53

#### **propagation**

process of multiplying plants for commercial or own use

# KNWA 2940:2021

## 3.54

### **propagation facility**

place where the plants are multiplied for commercial or own use

## 3.55

### **risk**

is the probability of a hazard occurring

## 3.56

### **Shipper/cargo handler/freight forwarder**

one who receives, handles and loads produce into a freight vessel for destination delivery in desired conditions as per this standard

## 3.57

### **spray mixture**

pesticide concentrate diluted with water or sometimes oil

## 3.58

### **substrate**

medium, other than soil used for growing crops

## 3.59

### **traceability**

is the ability to trace a product from any given point back through all stages to its origin

## 3.60

### **visitors**

person or persons visiting a firm who is or are not employees or otherwise connected with the said firm

## 3.61

### **volatility**

property of chemicals to evaporate readily even at low temperatures

## 3.60

### **waste**

already discarded

## **4 Farm management responsibilities and documentation**

This code of practice promotes the use of skill and experience to produce miraa (khat) of the highest quality under conditions that ensure a balance between farm operations and the safety of people, flora and fauna and of the natural environment. This code shall not be taken as providing justification for failure to comply with other legal requirements.

Employers shall ensure that employees are given information, instruction, training and guidance to carry out their work and to be aware of the risks to health and precautions to be taken.

Farm audits will be conducted to confirm compliance to the requirements of this code.

**4.1** Ultimate responsibility for compliance with this code of practice rests with the owners or board of directors of each growing or exporting company.

**4.2** Each growing or exporting company shall appoint a manager holding a senior position in the company as a safety officer who will liaise with the worker's representative. The person shall be responsible for the day to day management and implementation of the code of practice and the health and safety of all personnel, keep a check on the observance of the labour and safety regulations and evaluate suggestions for improvements and complaints.

## KNWA 2940:2021

**4.3** The operator shall demonstrate a commitment to continual improvement of standards in social responsibility towards all categories of workers.

**4.4** The operator shall periodically review its policies and practices in social responsibility towards all categories of workers and out-growers.

**4.5** The operator shall demonstrate a commitment to investigating non-compliance and to taking corrective action where necessary. Resources shall be allocated to this purpose as necessary and shall take measures to ensure that workers and out-growers who raise concerns about non-compliances are not discriminated against.

**4.6** The operator shall provide access to third parties carrying out external verification of compliance to the requirements of this code of practice.

**4.7** The operator shall make a commitment to employee and out-grower training to ensure that all persons are able to work in safety and in accordance with this code of practice.

**4.8** The operator shall liaise with its customers to ensure compliance with specific customer policies regarding workers' welfare, out-grower relationships, environmental protection and food safety.

**4.9** The operator shall develop an environmental management plan to cover all aspects of both positive and negative aspects of agricultural and social activities.

**4.10** Procurement of inputs used in production and packaging shall comply with legislative requirements and customer specifications. Procurement policy for propagation material, pesticides, cleaning and disinfecting agents shall be understood and implemented by all staff involved in the procurement process. Procurement shall be done from reputable suppliers only.

**NOTE** Operators shall implement good agricultural practices to safeguard produce from contamination.

## 5 Traceability

### 5.1 Ability to track a product

**5.1.1** The operator shall put in place a traceability system by way of designing, implementing and monitoring a detailed process flow that addresses raw material procurement, product process and conditions; byproducts generated; waste treatment; risk assessments; human resources; equipment employed; governing standards and regulations.

**5.1.2** Traceability shall ensure that the consumer is informed correctly on produce specifications, origin and usage, while stimulating all stakeholders to act with respect to each other i.e. good corporate practice.

**5.1.3** An Aggregator shall source produce as per the miraa regulations and ensure the following:

- a) The operator shall be responsible for the safety of the produce.
- b) Miraa shall be labeled at source based on guidelines provided in this code.
- c) Miraa produce shall have a code indicating the Country code, County code, farm name and location.
- d) Miraa produce aggregators shall be able to identify the sources from whom they obtained and the clients they have supplied.
- e) Miraa which is considered unsafe for human health shall be disposed as per the relevant requirements of relevant national food laws.
- f) Unsafe miraa shall be withdrawn from sale or distribution chain.
- g) Aggregators, importers and exporters shall keep records from whom miraa is sourced and to whom is sold for a period not less than three months and in consideration of its shelf life

# KNWA 2940:2021

- h) The operator is responsible for withdrawing or recalling miraa from the market. They shall also notify the relevant competent authority and collaborate with the authority (ies) on any action they should take to avoid or reduce the risk posed by the produce.
- i) Where the operator has reason to believe the produce has reached the consumer, the producer shall explain, timely, effectively and accurately of the reason for withdrawal of the produce.
- j) The exporter shall obtain a traceability certificate from the relevant competent authority.

## 5.2 Produce labelling

Every unit of produce shall be clearly and indelibly marked from source (farm) to the point of sale such that the identification marks are not altered, adulterated or obliterated.

## 5.3 Produce receipt

The operator shall have in place a detailed and precise process flow that ensures that every unit or batch of the produce received is clearly marked to enable the produce to be clearly traced from receipt through the handling process to dispatch point.

## 6 Record keeping and internal audit

**6.1** The essence of the documentation is to prove that the code has been carefully followed, actions identified, implemented and the management system with regard to the code, is proactive and self-improving, thus demonstrating that all reasonable precautions and due diligence has been taken in carrying out the business by the operators. The records shall be maintained for a period of no less than two years.

Records and documentation to be kept in addition to those required by the laws of the land shall include:

- a) crop diary showing propagation/planting material quality, take up rate, variety name, planting dates, date of harvest and other records related to the plant life cycle;
- b) agrochemical stock record;
- c) a list of all the chemicals used in the farm;
- d) Notices shall be posted giving emergency procedures in case of fire, spillages, contamination of humans or animals etc;
- e) a list of first aiders and training given;
- f) a record of work contracts for workers; and
- g) a record of all the daily rolls for all casual workers;

**6.2** The operator shall ensure that employees charged with record keeping are trained to do so accurately and that they are adequately supervised.

**6.3** Records shall be clearly written, dated and signed by a responsible person.

**6.4** Recording of data showing non-compliance with standards shall be followed up with a written account of interventions.

**6.5** All records shall be available for inspection by authorized persons.

**6.6** The operator shall undertake a minimum of one audit per year which shall be documented.

**6.7** A checklist shall be used to conduct a self-audit for this code of practice, which shall be documented.



## **KNWA 2940:2021**

**6.8** All the corrective actions generated from the self-audit shall be documented and acted upon.

## **7 Varieties and rootstocks**

### **7.1 Choice of variety and rootstock**

**7.1.1** The operator shall procure approved varieties from licensed sources.

**7.1.2** The propagules shall be certified by the competent authority and if imported shall be accompanied with a phytosanitary certificate from the country of origin, a plant import permit and any other relevant document issued by a competent authority at source.

**7.1.3** Where sourced from own farm, the grower shall observe the good agricultural practices for miraa. The grower shall have a quality control system that monitors any visible signs of pests to guarantee the quality of the nursery stock produced.

### **7.2 Pests**

**7.2.1** Where alternatives exist the grower is encouraged to select varieties which are tolerant or resistant to commercially important pests.

**7.2.2** Planting materials harbouring pest beyond the standard specifications shall not be accepted.

**7.2.3** When pesticides are used, this shall be recorded indicating the product name, application dates, pre-harvest intervals (PHI), doses and the justification for use.

### **7.3 Compliance of propagation materials**

**7.3.1** The farm management should ensure that the propagation material complies with sanitary and phytosanitary requirements.

**7.3.2** Inspections of plant materials shall be done at all entry and exit points by relevant authority which shall release the material only if ascertained to comply with sanitary and phytosanitary requirements.

**7.3.3** The plants and all propagules shall be free of any visible signs of soil and pests.

## **8 Site history, soil and substrate management**

### **8.1 Site selection**

**8.1.1** Farm plans and activities shall be, drawn and done in accordance with Environmental Impact Assessments (EIA). Crop production areas shall be indicated in relation to staff housing, toilets, drinking water points, waste disposal sites, waste water treatment points, utility stores and social facilities.

The EIA or risk assessments shall take into account potential contaminants, type of soil, erosion, quality and level of ground water, availability of sustainable water sources, prior use of land, pests, impact on and of the adjacent areas among other factors as stipulated in the Environmental Management and Co-ordination Act, 1999.

**8.1.2** The records and justifications showing the suitability of the site for agricultural activity shall be available.

**8.1.3** Selected site shall not be close to an area contaminated with industrial, domestic, faecal or organic wastes.

### **8.2 Soil and substrate management**

# KNWA 2940:2021

## 8.2.1 Cultivation

8.2.1.1 A Good Agricultural Practice (GAP) policy covering all aspects shall be maintained.

8.2.1.2 The method of tillage of choice shall be one that preserves soil structure and minimizes soil compaction.

8.2.1.3 Use of machinery that minimize the formation of hard pans is particularly encouraged on the farm.

## 8.2.2 Soil erosion

8.2.2.1 The operator shall put in place measures and practices that minimize the risk of soil loss from the farm e.g. terracing, cultivation along the contours, use of cover crops etc. i.e. good agricultural practices.

8.2.2.2 There shall be no cultivation on slopes greater than 35 %, along riverbanks, lake shores, or in designated water catchment areas.

8.2.2.3 Soil drainage systems shall be developed, well-maintained and adequate enough to deal with exceptional rainfall and run offs.

## 8.2.3 Soil fumigation

8.2.3.1 Alternatives to the use of fumigants shall be explored before resorting to their use.

8.2.3.2 Use of fumigants shall be minimized and when used there shall be evidence for use including location, date, active ingredients, doses, method of application, operator name. and written justification for their use.

8.2.3.3 Only fumigants registered by a recognized authority shall be used. They shall be used in accordance with the prescription for purpose fit for use. They shall be within the updated list of acceptable chemicals locally and internationally.

## 8.3 Substrates

8.3.1 Substrates used shall be certified by a competent authority as fit for purpose and comply with substrate supplier specification. All delivered substrate shall be accompanied with a certificate of analysis from a recognized institution. The substrate shall be traceable to an acceptable source and shall not be obtained from conservation areas unless with express permission from relevant authority.

8.3.2 Operators who use substrates are advised to recycle them and there shall be documentation to show the suitability of such substrates.

8.3.3 Where substrates are used and recycled, there shall be documentation on quantities used, and dates of recycling. If substrates are used but not recycled, justification shall be given.

8.3.4 Recycled substrates should be treated/sterilized before re-use. Substrates sterilization shall be done in an environmental friendly way.

8.3.5 Where substrates are used, steaming shall be preferred option for sterilization.

8.3.6 Where chemicals are used to sterilize substrate for reuse, the following shall be recorded: location of sterilization, date, type of chemical used, method of sterilization and operator performing sterilization.

8.3.7 There shall be documentation to show the location of the treatment, the method of treatment, dates of sterilization, the active ingredients if any, the machinery, the operator etc. particularly where chemicals are used to sterilize.

# KNWA 2940:2021

## 9 Plant nutrition and fertilizer use

### 9.1 Advice on quantity and type of fertilizer

**9.1.1** A fertilizer plan shall be developed based on soil, water and/or plant analysis which shall be regularly conducted to evaluate the fertilization plan. Chemical fertilizers shall be applied selectively and only on the basis of careful observation of the crop together with soil. Organic fertilizers and composted waste shall be used for the improvement of the soil.

**9.1.2** No fertilizer, organic or inorganic shall be applied within six meters of any water channel or source.

**9.1.3** There shall be no direct drainage to any water source of runoff water from land where fertilizer has been applied.

**9.1.4** Trained and competent employees shall be responsible for fertilization programme.

**9.1.5** There shall be proof of that competence and where it is lacking, training shall be given by qualified personnel.

**9.1.6** Inorganic fertilizers used on the farm shall have a fertilizer profile detailing chemical content.

### 9.2 Records of application

**9.2.1** Records of fertilizer application shall detail the geographical areas, name and reference of the field where the crop is located.

**9.2.2** A recording system shall be established for each application of fertilizers: date, type (trade name), quantity, method, type of machinery used for the application, method of application and the name of the operator of each application shall be recorded.

**9.2.3** The date of any application of soil/foliar/nutrient solution fertilizers shall be documented (recorded).

**9.2.4** Work instruction for the fertilizer application shall be clearly written and signed by a competent person able to interpret the crop soil analysis. The instruction shall indicate who, when, where and how to apply.

**9.2.5** Documents of the exact amounts applied shall be signed by a supervising authority.

### 9.3 Application machinery

**9.3.1** The fertilizer application machinery shall be well maintained and calibrated regularly to ensure accurate delivery.

**9.3.2** All machinery, including spraying machines, shall have a log book, showing maintenance, regular calibration checks, dates of service.

### 9.4 Nutrient requirements

**9.4.1** A cropping care plan shall be developed to ensure optimum crop productivity.

**9.4.2** The grower shall, based on regular soil analysis, make a fertilization program that aims at minimizing nutrient loss.

**9.4.3** The application of fertilizer shall be based on a calculated nutrient requirements of the crop and on the appropriate routine analysis of nutrient levels in the soil, the crop or nutrient media.

### 9.5 Timing and frequency

## **KNWA 2940:2021**

**9.5.1** The grower shall take into consideration the stage of growth of the crop as well as the weather conditions prevailing at the time of the intended application.

**9.5.2** The quantities of the applied nitrogen shall fall within the national limits where they exist and or international limits and such quantities shall be worked out on a regular basis.

**9.5.3** The frequency of application shall be based on the quantity and form of fertilizer, crop age, nutrient requirement, soil type, farming system and weather condition.

### **9.6 Fertilizer storage**

**9.6.1** Fertilizer store shall be covered and bunded. The fertilizer shall be placed on a raised surface. The store shall be located away from water source. The store shall be rodent-proof.

**9.6.2** There shall be a well-managed fertilizer stock inventory indicating the contents of the store, types and amounts. The inventory shall be regularly updated.

**9.6.3** Fertilizers shall be stored separately from pesticides, produce, food and feedstuffs, nursery stocks and any living quarters. They shall be adequately protected from weather elements in a clean and dry area.

**9.6.4** Where stored together with pesticides, they shall be in separate compartments. and be well labelled.

**9.6.5** Fertilizers shall be stored away from concentrated acids, such acids should be stored separately in lockable rooms.

**9.6.6** All hazard and risk areas shall be clearly indicated and correct hazard warnings posted in clear and understandable forms in English and Kiswahili and the local language where applicable. The warnings signs shall be prominently displayed both inside and outside at the entrance to the store.

### **9.7 Organic fertilizers**

**9.7.1** The use of organic manure is encouraged for maintenance and improvement of soil fertility. It shall be well composted and stored in an appropriate manner to contain the risk of contamination of the environment. This shall be in a designated area away from water sources.

**9.7.2** Where organic fertilizer is used a documented risk assessment shall be carried out before use. and shall consider the source and characteristics of the fertilizer, risks of disease transmission, weed seed, and method of composting.

**9.7.3** There shall also be records on site, crop and date of application as well as the analysis results and the nutrient calculations of the organic matter.

**9.7.4** The analysis shall be carried out by a nationally recognized laboratory to determine the content of the nitrogen, phosphorous and potassium in the organic manure/fertilizer.

## **10 Irrigation and fertigation**

### **10.1 Water management**

**10.1.1** Operators should be conversant with concepts of soil-water relations, which enable water requirements to be accurately estimated.

**10.1.2** There shall be an irrigation plan to optimize water usage and minimize wastage.

**10.1.3** All operators shall maintain valid water abstraction permits where applicable and in accordance with the Water Act, Cap. 372 of the Laws of Kenya.

## **KNWA 2940:2021**

**10.1.4** Field personnel shall be trained to recognize and rectify irrigation deficiencies such as pipe bursts to ensure remedial action is taken promptly to avoid water wastage.

**10.1.5** Operators will endeavour to harvest rainwater to be used within their farms to reduce reliance on natural sources.

### **10.2 Quality of irrigation water**

**10.2.1** There shall be a complete and regular risk assessment of irrigation/fertigation water preferably annually and shall encompass potential microbiological, chemical or physical pollution of the water sources.

**10.2.2** The analysis shall be performed by a laboratory of known and recognized competence and with the capacity to analyze for nitrogen, phosphorous and potassium Electrical conductivity, microbial, mineral and chemical contaminants, pH, biological activity and heavy metals contaminants.

**10.2.3** The results of such analysis shall be well documented and where corrective actions are recommended, the nature of the corrective actions shall be stated, documented and acted upon.

**10.2.4** The results of such analysis shall be compared with the relevant national or international standards.

**10.2.5** Any adverse results obtained shall be acted upon and the corrective actions well documented.

**10.2.6** The quality of the water both at the intake and exit points shall be done on a regular basis (at least every six months) and the quality records kept. Determination of the contaminants, types and amounts present in the water supply and, where applicable, in the runoff water shall be considered as a basic step in developing a management plan.

### **10.3 Supply of irrigation water/ fertigation water**

**10.3.1** All operators shall obtain water abstraction permits where applicable and in accordance with the Water Act, Cap. 372:2002 of the Laws of Kenya. Irrigation/fertigation water shall be abstracted only from sustainable sources.

**10.3.2** Growers shall endeavor to collect rainwater and recycle water used within their farms to reduce reliance on natural sources.

## **11 Crop protection**

### **11.1 Pest**

**11.1.2** Where alternatives exist, the operator shall select varieties which have some level of tolerance or resistance to pests of economic importance.

**11.1.3** The operator shall monitor the pest in the facility to ensure that the plants receive all necessary treatments which are appropriate according to the pest.

**11.1.4** The control of pests shall take into consideration of the following:

- a) Diagnostic tools for various pests of economic importance should be available to screen plant materials and prevent pest spread.
- b) Soils and propagation facility should be disinfected (fumigated/steamed) or using other applicable technologies before setting up propagation facility.
- c) Clean planting materials should be used.

## KNWA 2940:2021

- d) Rigorous and periodic scouting should be carried out and where infection is detected early, infected plants should be removed followed by destruction of rouged plants and treatment of infected areas with disinfectants.
- e) All persons entering propagation facilities should wear clean and appropriate protective clothing as per Personal Protective Equipment (PPE) policy to minimize introduction and spread of pests.

11.1.5 Disinfection of benches, working knives and hands should be carried out using disinfectants.

11.1.6 Plants that are suspected of, or diagnosed as having disease shall be isolated.

11.1.7 Cultivation systems should be in a clean medium.

11.1.8 Plants shall be grown in a system that does not allow cross contamination with surrounding soils.

### 11.2 Pest management

11.2.1 Operators shall demonstrate up to date knowledge of the properties of the range of recommended crop protection products available, chemical, biological and other forms of control.

11.2.2 Management strategies to keep pest levels below economically damaging thresholds shall be devised using the most appropriate combination of biological (use of natural enemies), cultural, mechanical/physical, monitoring (scouting) and chemical (plant protection products) methods. They shall be based on a thorough evaluation of the situation, taking into account integrated pest management systems.

11.2.3 The presence of pest is predictable and control shall be achieved by an integrated strategy. An integrated pest control strategy shall be drawn based on past history of infestation and indication of main threats. Its implementation shall be supervised by a technically competent person.

### 11.3 Resistance management

Products shall be chosen to avoid over reliance or continued use of any single chemical grouping, thus reducing the emergence of pesticide resistance.

### 11.4 Application conditions

Pesticides shall not be applied in adverse weather conditions such as wind, rain or during overhead irrigation. Spraying during high midday temperatures should be avoided.

### 11.5 Procurement of pesticides

11.5.1 Purchasing shall only be done for pesticides that are:

- a) registered by the Pest Control and Products Board (PCPB). Current list of approved pesticides registered by the PCPB can be obtained on request. It is also available from the PCPB website;
- b) from licensed distributors;
- c) labelled by the manufacture as per the Pest Control Products Act, Cap. 346 of the Laws of Kenya;
- d) accompanied with material safety data sheet; and
- e) purchase receipts of all pest control products shall be maintained for at least 12 months.

11.5.2 A register of the types and characteristics of all pesticides used on the farm shall be maintained.

### 11.6 Transport of pesticides and hazardous chemicals

## **KNWA 2940:2021**

Pesticides shall not be transported together with food, animal feed or general consumer goods. They shall be transported in a suitable, self-contained box or container.

### **11.7 Storage of pest control products**

**11.7.1** Chemicals shall be stored in suitably constructed stores of sound structure, enclosed/secured/locked and well ventilated which meet minimum technical requirements and conditions.

**11.7.2** Only approved pesticides in original labelled containers shall be held in the store. No other commodities shall be stored with pesticides.

**11.7.3** Pesticides shall be kept in a separate room and shall be kept secure from children and animals, foodstuffs, fires, stoves or lamps. In the case of the cupboards, the shelf shall have a front lip to prevent containers from falling out on opening the doors. Access shall be limited to suitably trained and authorized personnel.

**11.7.4** Shelves in stores shall be made of non-absorbent and non-flammable material. Materials to deal with leakage and spillage shall be available in the store. These may include sand, shovel, broom and empty disposal bin.

**11.7.5** There shall be adequate washing facilities near the store.

**11.7.6** All personnel working in pesticide stores shall have access to suitable Personal Protective Equipment.

**11.7.7** Pesticides and fertilizers shall be stored separately, and away from detergents or disinfectants.

**11.7.8** Pesticide store shall be located away from water sources.

### **11.8 Selection of pest control products**

**11.8.1** The technical person responsible for pesticide choice and application shall be competent by training.

**11.8.2** There shall be written justification to show that the choice of pesticide is appropriate for the intended purpose.

**11.8.3** The application rate of pesticides per given area (dosage) and the dilution rates shall comply with recommendations on the product label. Where a choice exists, a product that is safer to handle and has less environmental impact shall be chosen.

**11.8.4** Selection and the use of a pesticide shall be such that non target organisms such as bees are not harmed.

### **11.9 Dispensing of pesticides and hazardous chemicals**

**11.9.1** There shall be a separate area for dispensing of pesticides and hazardous chemicals fitted with:

- a) workbench;
- b) running water supply shall be within at least 5 meters from the dispensing areas;
- c) wash basin plus eyebath;
- d) accurate measuring equipment;
- e) suitable containers for pre-mixing of pesticides/chemicals; and
- f) clear marking on all equipment to indicate they are for use with pesticides/chemicals only.

## KNWA 2940:2021

**11.9.2** Adequate and appropriate personal protective clothing and equipment shall be worn by those persons doing the dispensing.

### 11.10 Advice on quantity of pesticide application

Recommendations on application of the pest control products shall be given by persons of demonstrable competence attained through training and the relevant documentation availed.

### 11.11 Application of pesticides and protection of workers

The following requirements are to be implemented by growers/exporters:

**11.11.1** Employers shall ensure that employees are given information, instruction, training and guidance to carry out their work and to be aware of the risks to health from exposure to pesticides and the precautions to be taken.

**11.11.2** Signs to restrict personnel access to area under pesticide application or treated with pesticides shall be displayed.

**11.11.3** After applying pesticides, spray operators shall remove all protective clothing and take a shower. Facilities for this including soap, towel and water shall be made available.

**11.11.4** All waterproof personnel protective clothing and equipment shall be rinsed immediately after use in an area where the rinsing water can be channelled to chemical waste water treatment facility. Protective overalls if continuously used shall be laundered after use and stored in a hygienic well-ventilated location on the farm.

**11.11.5** All equipment used for spraying shall be regularly inspected, well maintained, calibrated and serviced. Any defective equipment shall be repaired and/or replaced immediately and be verified by a competent person.

**11.11.6** Each application shall be accompanied by clear instructions on the specific crop location, where the crop protection application is to be done, the requisite dosage and the application technique signed by the authorizing officer.

**11.11.7** All workers within the vicinity to be sprayed and not wearing protective clothing shall leave the area. Warning signs shall be displayed at field gates stating time and date of application, pesticide being used and indicating when entry will be safe without the use of protective clothing.

**11.11.8** Material safety data sheets of all pesticides used shall be kept on file.

**11.11.9** Spray mixing and application shall only be carried out by trained personnel. No expectant and nursing mothers or persons under the age of 18 years shall handle, mix or apply pesticides. Female workers are discouraged from handling pesticides.

**11.11.10** Partly used containers shall be returned to the store with caps and lids properly replaced. All returns shall be documented.

**11.11.11** Pesticides with a high leaching potential or high aquatic toxicity shall not be used within 200 m of open water sources, dams, lakes, rivers.

**11.11.12** Documented re-entry policy and procedure shall be put in place as preventive measure to avoid employees' health risks.

**11.11.13** Pesticide application method shall ensure that non target organisms such as bees are not harmed.

**11.11.14** The pre harvest interval shall be stated for all the crop protection products applied and the first harvestable date indicated/recorded.

### 11.12 Pre-harvest intervals



## **KNWA 2940:2021**

**11.12.1** The crop protection policy shall provide safeguards to ensure that only pesticides approved for use on the crop are applied in accordance with the label rates and pre-harvest intervals. Procedures shall guarantee that harvesting cannot commence before the pre-harvest intervals have expired.

**11.12.2** Regular audits and training shall be conducted to check consistency in the process and underpin the practice.

## **12 Harvesting and postharvest handling of produce**

Workers shall be trained and supervised closely to ensure that the produce is harvested at the right maturity and as prescribed by the harvesting procedure. Training and supervision procedures shall be documented. Smoking, eating, chewing and drinking shall only be permitted in designated areas away from immediate vicinity of harvesting, grading, packing, or storage operations. Signs shall be displayed to this effect.

Animals and children shall be excluded from all produce handling areas.

### **12.1 Produce integrity**

Operators shall ensure the integrity of produce consignment throughout the handling phases including storage, transportation, repackaging where necessary, and loading into a transport vessel.

Machinery that comes into contact with produce shall be of a design that prevent contamination of the produce, be readily cleaned and well maintained.

### **12.2 Harvesting hygiene**

**12.2.1** The operator shall have a documented hygiene procedure for handling of produce premised on the basis of a risk assessment.

**12.2.2** There shall be a regular risk assessment of the hygiene aspect of the harvesting procedures/operations.

**12.2.3** The containers, harvesting tools and other harvesting equipment that are continuously used shall be appropriately cleaned, disinfected and maintained in tandem with the risk assessments. Produce handling containers shall be strictly for the produce and not any other use e.g. chemicals, plant debris, etc. Colour codes, symbols or any other means may be used to distinguish containers for various uses.

**12.2.4** A planned washing program shall ensure that harvesting containers that can be easily cleaned are used and are free from contamination.

**12.2.5** Cleaning water shall be free from microbial and, chemical contaminants, and other foreign matter.

**12.2.6** Supervision procedures and training programs shall ensure that all workers involved in handling of produce observe personal hygiene. Personal hygiene facilities including field toilets with hand washing facilities shall be provided and kept clean.

**12.2.7** To avoid contamination of produce, the operator shall ensure that field workers involved in handling of miraa are in good health and that field workers with communicable diseases are not knowingly assigned duties in fields operations. Employees shall be instructed to report to the operator if they are suffering from any illness either on arrival for work or during working hours.

### **12.3 Field holding facility**

**12.3.1.** Temporary or mobile holding or grading facilities shall ensure that the produce is handled hygienically. Thorough inspection shall ensure that such areas are well maintained, kept clean and only used for miraa. Records of inspection shall be maintained.

## **KNWA 2940:2021**

**12.3.2** Procedures of handling, storage and stock control of produce and packaging materials shall be done in a manner that will sustain a high status of hygiene and cleanliness. Produce and packaging materials shall be held in areas protected from rodent, insect and other pest ingress.

The facility shall be designed to protect the produce and the packaging material from any adverse weather.

**12.3.3** Packaging material shall be of food grade and of such a design as to protect the produce from any contamination or compromise integrity of the produce.

### **12.4 Pack house premises**

**12.4.1** Pack houses shall comply with all relevant national laws relating to working conditions including environmental, fire, electrical, mechanical and structural safety. Pack houses shall be in good structural condition. The area around the pack house shall be free from rubbish, unserviceable equipment, weeds etc. The pack house shall not be used for activities not related to packing of produce.

**12.4.2** The operator shall pack produce in premises registered by the relevant competent authority. Growers packing their own produce may do so as part of the licensed production process, where such processes are limited to their own produce.

**12.4.3** Access to the pack house shall be restricted to authorized personnel only and signs shall be displayed to that effect.

### **12.5 Design and construction of pack house**

**12.5.1** Construction of the pack house shall be such as to prevent the entry of domestic animals, insects, birds, rodents, among others. Effective control measures shall be in operation and fully documented.

**12.5.2** Floors, doors and wall surfaces shall be made of impervious, non-absorbent, non-toxic, washable materials, which are easy to clean and disinfect. Floors shall be durable and allow easy drainage without leaving wet areas. Windows and doors shall open and close easily.

**12.5.3** Ceiling and overhead fixtures shall be designed, constructed and finished to prevent the accumulation of dirt, growth of undesirable moulds, shedding of paint flakes or particles and also reduce condensation.

**12.5.4** Windows and other openings shall be constructed and finished to prevent the accumulation of dirt. Those that can be opened to the outside environment shall be fitted with insect proof screens of appropriate mesh size.

**12.5.5** There shall be a glass and hard plastics handling policy to govern their use within the premises whenever they are used.

**12.5.6** Where glass is used, there shall be a form of screening to prevent any broken glass contaminating the produce. All use of glass (windows, lights etc.) shall be recorded and a system of inspection implemented to ensure that any breakages are rectified.

**12.5.7** Inspection, grading and cold store areas shall be adequately illuminated to allow effective inspection of produce. All fixtures shall be protected to prevent the risk of broken glass contaminating the produce.

**12.5.8** The pack house shall have adequate ventilation in order to provide adequate air circulation and temperature control.

**12.5.9** The height of grading tables and other facilities for work shall be appropriate for the comfort of the workers.

**12.5.10** Loading and dispatch areas shall be roofed and proofed so as to prevent the nesting of birds.

### **12.6 Forklift**

## **KNWA 2940:2021**

Forklifts with internal combustion engines shall not be used in restricted spaces holding produce as they can result in taint of produce. Electric forklifts shall be preferred. Only fully trained operators shall use forklifts.

### **12.7 Incompatible goods**

All non-food items e.g. cleaning agents, lubricants etc. shall be stored in designated areas away from the fresh produce and outside the packhouse. Incompatible products shall not be stored together to prevent taint or cross contamination of produce.

### **12.8 Pack house risk assessment**

A risk assessment or audit shall be made when determining the process flow and its associated systems. This assessment shall consider not only areas where health hazards to the produce may occur but also areas where quality aspects of the produce are likely to be affected. This shall include preventing contamination from foreign bodies such as pieces of string, glass, metal, hair, nails, knives and other produce. These assessments shall be documented and periodically reviewed. The operator shall have in place a detailed and precise process flow that ensures that every unit or batch of the produce received is clearly marked in a manner that enables the produce to be easily traced from receipt through handling process to dispatch point. Such a system shall be monitored and reviewed periodically for effectiveness.

### **12.9 Pack house hygiene**

**12.9.1** Packhouse operations shall be geared towards implementing quality management systems and Good Hygiene Practices (GHP).

**12.9.2** Routine and general cleaning procedures for the facilities and equipment shall be documented, monitored and evaluated for effectiveness.

**12.9.3** Workers shall have access to clean toilets, appropriate waste disposal bins and hand washing facilities in the vicinity of their place of work.

**12.9.4** Work table tops, knives and cutting boards shall be of stainless metal and plastic construction only. These shall be maintained in sound condition and kept clean at all times.

**12.9.5** Workers shall be given basic instructions on hygiene before handling produce and shall comply with the hygiene instructions.

### **12.10 Produce receipt**

**12.10.1** Operators shall periodically collect samples for analysis to verify the produce pesticide residue status at receipt stage.

**12.10.2** The produce shall be received by trained and competent personnel capable of carrying out independent inspection of it and deciding on whether to accept or reject (with a reason), or, accept with a provision for further sorting. The condition of produce at the time of receipt and delivery shall be documented to indicate unconditional acceptance, further sorting or rejection.

### **12.11 Produce inspection**

**12.11.1** Although inspection of produce for quality is a continuous process in certain designated areas, inspection shall be mandatory at:

- a) reception;
- b) quality-control operations;
- c) final quality check when ready for dispatch; and

# KNWA 2940:2021

d) loading area.

**12.11.2** Final product check shall involve the following:

- a) identity of product, grower and/or packhouse identity and date;
- b) essential information such as variety, grade; and
- c) presence of pests.

## **12.12 Quality control**

**12.12.1** Quality of produce shall be checked regularly and records kept.

**12.12.2** Records of data showing non-compliance with the quality requirements specified in relevant standards shall be followed up with a written account of corrective measures taken.

## **12.13 Produce handling**

**12.13.1** Produce at different stages of preparation shall be kept separate. The floor layout shall allow for a smooth flow of produce from reception to finishing area. Waste materials shall be removed regularly.

**12.13.2** Produce shall normally be processed on a "First In, First Out" (FIFO) basis unless there are quality, or hygiene attributes identified.

## **12.14 Personal hygiene**

**12.14.1** All sores and cuts shall be adequately covered with an identifiable-food type waterproof dressing:

- a) hand washing with liquid bactericidal soap shall be encouraged. Drying facilities like hot air shall be provided.
- b) no powder shall be used on hands as this may contaminate produce.
- c) finger nails shall be clipped short.
- d) protective clothing including overalls, head covering which shall contain all hair shall be worn at all times in packing areas.
- e) clothing shall be regularly laundered and kept in a clean and well-maintained condition.
- f) smoking, eating and drinking shall be prohibited in all areas of the packhouse.
- g) personnel shall be advised to keep personal belongings away from production lines and that:
  - i) no false nails, eye lashes or hair pieces;
  - ii) no strong perfumes or aftershave;
  - iii) no nail varnish;
  - iv) no watches or jewellery except single plain band wedding ring;
  - v) no chewing gum; and
  - vi) no open shoes shall be allowed in the pack house.

**12.14.2** Signs shall be displayed to this effect.

# KNWA 2940:2021

## 12.15 Exit Point inspections

KEPHIS shall carry out inspection of all produce before release. Only produce conforming to phytosanitary requirements will be released.

## 12.16 Medical check-up

Members of staff working in a packhouse for miraa shall have full medical check-ups once every six months and the records of the examination shall be well documented.

## 12.17 Sick workers

Staff suffering from any communicable diseases shall report to their immediate supervisor. They shall not be allowed to work on miraa until a medical officer clears their condition and certifies them as fit to resume duty.

## 12.18 Visitors

Access to post-harvest handling areas shall be restricted. No unauthorized person shall be allowed access to the packhouse. Authorized visitors entering the packhouse shall only be allowed in after a briefing on the importance of hygiene and shall be provided with appropriate protective clothing. A visitor's book shall be maintained to record all visits to the packhouse.

## 12.19 Handling of rejected produce

Operators shall establish a written procedure to minimize wastage and for dealing with miraa that is rejected. The produce shall be disposed of safely by composting or burying to avoid environmental pollution.

## 12.20 Cold chain facilities

**12.20.1** Recommended produce temperature, humidity and air composition shall be documented and be maintained at all times.

**12.20.2** Harvesting is recommended to be carried out when it is cool and dry and at no time shall produce be left exposed to direct sunlight. Shade netting or similar provisions shall cover field collection areas.

**12.20.3** Harvested miraa shall be moved from the field into cool conditions as quickly as possible. Produce temperature shall be reduced uniformly as fast as possible.

**12.20.4** Transportation system shall include facilities for maintaining produce temperature at the recommended level. Records shall be kept at every phase of dispatch.

**12.20.5** The transport vessel shall be cleaned and disinfected on a regular basis.

**12.20.6** Transportation of produce shall be done in such a manner so as to avoid mechanical damage due to bruising or stacking

## 12.21 Packaging material

**12.21.1** Operators shall ensure packaging and other materials in contact with the produce do not cause contamination. Packaging materials shall reduce produce damage and waste while protecting the produce from contamination.



## **KNWA 2940:2021**

**14.1.3** Every Firm shall be provided with sufficiently well stocked first aid kits and have personnel trained in first aid on hand to deal with emergencies.

**14.1.4** Written procedures on how to deal with serious injuries requiring medical attention shall be displayed prominently.

**14.1.5** Changing rooms and workers eating areas together with sufficient clean toilets, washing hand basins, unscented bactericidal soap and hand drying facilities shall be provided.

### **14.2 Worker welfare**

#### **14.2.1 Wages**

**14.2.1.1** Wages and benefits paid shall meet the legal minimum or industry minimum standards.

**14.2.1.2** All employees shall be paid at the agreed time and in full or by some mutually acceptable monetary means. Information regarding wages shall be made available to employees in a detailed and understandable form.

**14.2.1.3** No deductions of any sort shall be made from employee's wages without mutual agreement.

**14.2.1.4** Workers will be selected for a particular job and paid in accordance with their ability to carry out specific tasks. All workers shall receive equal pay for equal work. Hiring, compensation and access to benefits shall be on the basis of ability and job responsibilities alone.

#### **14.2.2 Overtime**

Where overtime is required due to seasonal demands, payment shall be made at mutually agreed rates.

#### **14.2.3 National Social Security Fund (NSSF)**

Employers shall make the necessary deductions and remit monthly contributions in accordance with NSSF Act, Cap. 258 of the Laws of Kenya.

#### **14.2.4 National Hospital Insurance Fund (NHIF)**

Employers shall make the necessary deductions and remit monthly contributions in accordance with NHIF Act, Cap. 255 of the Laws of Kenya.

#### **14.2.4 Bonus and incentive schemes**

There shall be clear and fair guidelines on payments of bonuses and incentives and these shall be administered fairly and communicated transparently to all staff concerned. Bonuses and incentives shall not be used to raise the basic wage of the worker to the required national minimum.

### **14.3 Labour conditions**

#### **14.3.1 Work contracts**

**14.3.1.1** All employees, including those sub-contracted, shall be given a written, legally binding employment contract signed by both parties detailing their obligations, rights and entitlements. Subsequent changes in terms and conditions shall be negotiated and communicated to employees.

**14.3.1.2** Work contracts may be executed for a fixed term, for a period of time to complete a task or for an

## **KNWA 2940:2021**

indefinite period to accomplish an occasional task. Tasks allocated per day shall be based on what can be reasonably completed by an averagely experienced worker on a standard working day.

**14.3.1.3** Use of fixed-term contracts or "casual labour" to circumvent labour or NSSF laws is illegal.

### **14.4 Working hours and leaves**

Agreed working hours and leaves shall be observed in accordance with the provisions of the labour laws.

### **14.5 Pregnancy**

Women shall not be discriminated against during ante or post-natal periods in regard to recruitment, selection or termination of a particular job.

### **14.6 Summary dismissal**

Gross misconduct as set out in the Employment Act, Cap. 226 of the Laws of Kenya shall be grounds for summary dismissal.

### **14.7 Redundancy**

An employee whose services are terminated on account of redundancy shall be compensated in accordance with applicable laws.

### **14.8 Termination of employment**

An employee whose services are terminated for reasons other than for gross misconduct shall be terminated in accordance with relevant laws.

### **14.9 Workman's compensation**

**14.9.1** Any member of the workforce who is injured in the course of their work shall be entitled to compensation in accordance with the Workman's Compensation Act, Cap. 236 of the Laws of Kenya.

**14.9.2** Compensation claimed shall be disallowed if it is proved that the injury was attributable to the serious and wilful misconduct of the employee.

### **14.10 Grievance procedures**

Workers shall have the right to be heard on matters relating to contractual terms, dismissals and general welfare. The management in co-operation with the workers' representatives shall be required to establish and implement a coherent policy with regard to labour and social issues. Clear written procedures shall be developed and communicated to the workers and be accepted by all parties involved. Complaints regarding labour and working conditions shall be forwarded to the worker's representatives or to an external independent body on a confidential basis. Employers shall provide a formal procedure for solving disputes in the workplace within a specified time frame.

#### **14.10.1 Forced labour**

No firm shall make use of forced labour nor coerce anyone to work against their will. Workers shall not be required to deposit their original identification papers with their employer.

#### **14.10.2 Discrimination**



## **KNWA 2940:2021**

The operator shall not engage in or support discrimination, intimidation or coercion in any form based on ethnic origin, religion, gender, union membership or political affiliation. Employees shall be protected from strain due to excessive and permanent work stress. Harassment at the workplace and mental and physical repression shall be strictly prevented.

### **14.10.3 Child labour/minors**

**14.10.3.1** No children (persons under 18 years of age) shall be employed for any duty or task whether gainfully or otherwise in the workplace. Exceptions may be made in smallholder operations where young family members may help out on the farm.

**14.10.3.2** Work that is likely to jeopardize the health, physical or mental development shall not be carried out by persons under 18 years of age. Work shall not restrict educational opportunities.

### **14.11 Out-growers/leasors**

**14.11.1** Exporters and Aggregators shall formulate and implement a fair purchasing policy with their out growers.

**14.11.2** There shall be a written, legally binding agreements between the exporters and aggregators and all out-growers/leasors covering produce, volumes, frequencies of collection, pricing, grades and obligations.

**14.11.3** The buyer shall be able to justify the pricing policy regarding the out-growers.

**14.11.4** All out-growers shall be paid in cash or by a mutually agreed monetary arrangement and be supported with proper and adequate documentation.

**NOTE:** To ensure the welfare of workers and out-growers all companies, growers and exporters shall abide by the Employment Act, Cap. 226 of the Laws of Kenya and any other laws which affect the welfare of workers.

### **14.12 Worker safety**

**14.12.1** Machinery used shall be suitable for its purpose. It shall be designed to prevent contamination of the produce, be readily cleaned, well maintained and equipped with operational safety devices. Regular inspection and maintenance records shall be documented.

**14.12.2** Employees shall be trained on safety of equipment. Training records shall be kept and available for audit.

**14.12.3** Readily available fire extinguishers and other appropriate fire-fighting equipment shall be easily accessible and regularly maintained. Fire alarms shall be fitted to each floor above the exit.

**14.12.4** There shall be clearly marked emergency exits, which shall be fitted with fire safety break locks or remain unlocked during working hours.

**14.12.5** Relevant safety rules and precautionary safety measures shall be clearly displayed.

### **14.13 Health and safety risk prevention**

**14.13.1** The employer shall register his workplace with the Directorate of Occupational Health and Safety Services (DOHSS), Ministry of Labour and Social Protection.

**14.13.2** There shall be a health and safety committee made up of a senior manager, medical officer or safety advisor, production manager, supervisor and workers/union representative committee shall meet regularly and ensure prompt action on its recommendations by designated person. Proceedings shall be recorded in written form.

# KNWA 2940:2021

## 14.14 Emergency procedures

Employers shall establish clear understandable written procedures for getting the injured or sick workers to medical facilities as efficiently and safely as possible. The procedures shall be prominently displayed.

## 14.15 Training

On induction into the workforce, all personnel shall receive health and safety training and also on reassignment. Thereafter, the training will be done on a regular two yearly basis. Training shall be from recognized certified trainers able to issue certificates of satisfactory completion to attendees. Training shall include aspects of first aid in cases of chemical poisoning, handling of chemicals, waste management and fire precautions. Training shall include awareness of environmental issues. (Employers shall register with National Industrial Training Authority in accordance with the Industrial Training Act, Cap. 237 in order to benefit from refunds of amounts expended on training workers.)

## 14.16 Medical

**14.16.1** Medical treatment for the workforce shall be provided at the expense of the employer except where such injury/illness was contracted during any period when the employee was absent from his place of work or the injury/illness was self-inflicted or as a result of substance abuse.

**14.16.2** Medical facilities including first aid kits and simple medicines shall be provided on site or nearby staff with trained first aid/health workers.

## 14.17 Pregnancy

**14.7.1** Expectant mothers shall be given due consideration and be assigned duties appropriate to their physical condition. Where risk is identified, action shall be taken to minimize or eliminate the danger. In particular, pregnant women shall not come into contact with pesticides or dangerous chemicals.

**14.7.2.** There shall be, where possible, provision for the safe care of young children when their mothers are required to work in areas hazardous to children and facilities for nursing mothers to feed infants.

## 14.18. Visitors

All visits by non-company personnel shall be recorded in a visitor's book or similar register. Visitors shall be accompanied at all times by a company representative. Visitors shall be provided with suitable protective clothing or equipment when entering areas where they might be exposed to hazardous or injurious conditions.

## 14.19 Fire precautions

Precautions shall include safe installation and use of electricity and gas, special instructions on smoking and the disposal of cigarette butts, provision and regular servicing of firefighting equipment and regular fire drills for employees.

## 15 Environmental management

### 15.1 Soil conservation

**15.1.1** A Good Agricultural Practice (GAP) policy shall be maintained covering all aspects.

**15.1.2** Riparian land boundaries shall be established and riparian rights respected.

**15.1.3** The use of organic manure and composted waste shall be encouraged for maintenance of soil fertility.

## **KNWA 2940:2021**

**15.1.4** There shall be designated areas for burning or burial of non-hazardous waste which cannot be recycled or composted.

**15.1.5** Old sump oil shall not be allowed to contaminate the environment. It shall be disposed of in a safe manner. It may be used as fuel but only in a suitable combustion system.

**15.1.6** Waste material such as plastic sheet, cardboard, wood etc. shall be recycled.

**15.1.7** Only packaging material which is acceptable in the importing country shall be used.

**15.1.8** Every effort shall be made to reduce the use of natural materials that have not been grown specifically for commercial use

### **15.2 Water sources**

**15.2.1** There shall be no disposal of hazardous chemicals, empty containers or other waste material within the vicinity of water sources.

**15.2.2** Riparian land shall be conserved according to the relevant National Environmental Regulations.

**15.2.3** Rivers shall not be dammed or diverted without permission from the ministry responsible for water resources. Lakes shall not be restricted by bunds or dykes.

**NOTE** All operators shall control and reduce the negative impact on the environment due to agricultural activities.

## **16 Complaint handling procedures**

**16.1** The operator shall show commitment to adequately address complaints that may arise with regard to the activities of the firm.

**16.2** There shall be an established and documented complaint handling procedure addressing all issues relating to the firm's activities.

**16.3** The procedure shall state all the steps taken to address arising complaints and all the recommended corrective actions shall be stated and acted upon.

**16.4** The complaint handling procedure shall be regularly reviewed to enhance effectiveness. The evaluation system shall be used to determine the reason for clients' complaints and the corrective and preventive action undertaken.

**16.5** The procedure shall be available to customers as required.

## **17 Legal and contractual obligations**

### **17.1 Legal compliance**

The operator shall comply with applicable laws and regulations and with applicable international treaties and agreements including judicial decisions.

### **17.2 Intellectual Property (IP) rights and royalties**

**17.2.1** Operators shall respect all IP rights in accordance with prevailing national and international laws. These include but not limited to plant breeders' rights, patents, traditional knowledge and trademarks.

**17.2.2** Royalties will be set within internationally acceptable ranges as negotiated by the parties.

## KNWA 2940:2021

**17.2.3** In case of any unresolved disagreements between parties arbitration will be through applicable laid down regulations and procedures.

### 17.3 Registration and licensing

Operators shall be registered and licensed by the competent authority. Documentation that the operator is regularly audited by the relevant regulatory agency should be provided.

### 17.4 Ownership and transfer

**17.4.1** If the holder of the permit advertises a variety for sale the advertisement shall specify the permit number allocated to the permit by the regulatory agency.

**17.4.2** Plants offered for sale shall be healthy and certified to be healthy by relevant authority.

**17.4.3** If the holder of the permit sells plants to a person (the receiver), the holder of the permit shall give written notice to the receiver of:

- a) the number allocated to the permit by the relevant government agency;
- b) the common characteristics of the variety;
- c) the standard of care appropriate for the variety; and
- d) information on any known condition of the variety that might affect its future development should be disclosed to a prospective purchaser prior to sale.

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