KENYA STANDARD

KS 2366: 2021

APPROVED
10-08-2021

ICS 67.140.20

Third Edition

Coffee industry — Code of practice

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Agriculture and Food authority — Coffee Directorate
Consumer Information Network
Dedan Kimathi University of Technology
Dorman Coffee Ltd.
Government Chemist's Department
Green Flag Consultants
Institute of Packaging of Kenya
Kenya Agricultural and Livestock Research Organization (KALRO) — Coffee Research Institute
Kenya Industrial Research and Development Institute (KIRDI)
Kenya Institute of Food Science and Technology
Kenya Plant Health Inspectorate Service
Nestle Kenya Ltd.
University of Nairobi
Kenya Bureau of Standards — Secretariat

REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

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Foreword

This Kenya Standard has been developed by the Technical Committee on Coffee under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

This Code of Practice is aimed at providing guidance to all stakeholders in the value chain to conduct all activities in a manner that ensures food safety and quality; personnel safety; environmental protection and sustainability. It also intends to enhance compliance with statutory and regulatory requirements in Kenya.

Kenyan Coffee has its uniqueness in the world market and the desire to maintain the positive attribute of the product is one of the drivers towards development of this standard.

This Second Edition provides more focus on areas of control to ensure food quality and safety and updates on existing national legislations.

This third edition cancels and replaces the second edition (KS 2366:2018) which has been technically revised.

During the development of this standard, reference was made to the following documents:

CAC/RCP 1: 1969, General principles of food hygiene.

KS CAC/RCP 69:2009: Code of practice for prevention and reduction of ochratoxin in coffee.

Coffee Production Recommendations handbook by Coffee Research Institute.

CODEX Online Commodity details for coffee http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/.

Acknowledgement is hereby made for the assistance derived from these sources.

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1 Scope

This Kenya Standard provides guidelines for ensuring food safety and quality; worker health, safety and welfare; environmental protection and sustainability by stakeholders along the coffee value chain in Kenya.

2 Normative references

The following referenced documents referred to in the text in such a way that some or all of their 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 EAS 39**,** *Hygiene in the food and drink manufacturing industry — Code of practice*

KS ISO 22000, *Food safety management systems — Requirements for any organization in the food chain*

KS ISO 22005, *Traceability in the feed and food chain — General principles and basic requirements for system design and implementation*

KS 22006, *Quality management systems — Guidelines for the application of ISO 9001:2015 to crop production*

KS CAC RCP 69, *Code of practice for prevention and reduction of Ochratoxin A in coffee*

KS EAS 38 *Labelling of pre-packaged foods — General requirements*

KS 2221, *Coffee packaging — Specification*

KS ISO 4072, *Green coffee in bags — Sampling*

KS ISO 8455, *Green coffee guidelines for storage and transport*

KS ISO 4149, *Green coffee — Olfactory and visual examination and determination of foreign matter and defects*

KS EAS 12, *Portable water — Specification*

3 Terms and definitions

For the purposes of this document, the definitions given in KS 173 and the following shall apply:

3.1
processor
an entity engaged in the business of coffee as a pulper (primary), miller (secondary), roaster, blender or packer (tertiary)

3.2
coffee auction
a system under which coffee is offered for sale at the Nairobi Coffee Exchange

3.3
direct sales
a marketing and selling of coffee products directly to consumer in non-retail environment

3.4
hazard analysis critical control point (**HACCP**)
food safety and quality management system which emphasizes raw material and process control in the manufacturing environment

3.5
critical control point (CCP)
a step or operation at which control can be applied and is essential to prevent, eliminate or reduce a food safety hazard to acceptable levels

3.6
hazard
a potential to cause harm

3.7
risk
the probability of the hazard occurring

3.8
calibration
a process of measuring and adjusting the performance of an equipment so as to achieve predetermined accuracy

3.9
contamination
the presence of undesirable substance in a known product

3.10
rate of application
the amount of chemical recommended to be used on a given unit area

3.11
pre-harvest intervals
period of time that shall elapse between pesticide application and the harvesting of a crop

3.12
Personal Protective Equipment (PPE)
equipment selected or designed to protect the user against exposure to hazards for job related occupational safety and health purposes

3.13
worker
a person aged 18 years and above who is engaged to provide services in the coffee industry

3.14
traceability
the ability to track a coffee product in the supply chain from any given point

3.15
transporter
entity engaged in the conveyance of coffee products within Kenya

3.16
miller
an entity who performs the functions of mechanical hulling or de-husking of parchment/*Mbuni*, and grading and packaging of green coffee

3.17
warehouse

building or premises designated for storage of coffee products

3.18
liquorer
competent person engaged in organoleptic assessment of processed coffee quality

4 General requirements

4.1 Coffee value chain

Stakeholders within the coffee value chain shall undertake production, processing, storage, distribution and trading of coffee in a manner that ensures food safety and quality; worker health, safety and welfare; environmental protection and sustainability.

Adequate measures should be taken, as appropriate throughout the value chain in accordance with relevant Kenya Standards but not limited to KS EAS 39, KS ISO 22006 and KS ISO 22000, KS ISO 22005 to achieve the following:

a) Food safety by identifying practices, control measures and monitoring hazards associated with the product at each step.

b) Food quality by identifying factors that compromise coffee quality and implement measures to ensure conformity to product specifications.

c) Environmental protection and sustainability by adopting sustainable environmental practices; and

d) Worker health, safety and welfare by adhering to relevant legislations.

4.2 Documentation requirements

Stakeholders within the coffee value chain should establish, approve, implement and maintain necessary documents to demonstrate effective control of processes within the value chain, that have potential to negatively affect food safety; environmental protection and workers welfare and health.

Documentation may include but not limited to the following:

a) Policies and manuals for coffee quality and food safety, environmental protection, and worker welfare and health.

b) Risk assessment records.

c) Records of personnel training.

d) Records of working hours.

e) Records of coffee farms.

f) Records of analysis — soil, water, products.

g) Records of prequalification of suppliers of materials, services and transport.

h) Records of stocked and applied fertilizer and crop protection products.

i) Programs and records for pests and disease incidences and control.

j) Records of pesticide residue monitoring.

k) Personnel hygiene policy.

l) Food handlers health certificates.

m) Procedures for handling harvested coffee.

n) Records for coffee quality.

o) Records of production, processing and distribution.

p) Procedures and programs for cleaning and disinfection.

q) Records of heavy metals monitoring.

r) Procedure for management of nonconforming products, and

s) Procedure for traceability, withdrawal and recall.

t) Records of contracts, services providers and suppliers.

4.3 Transport

All modes of transport used for transfer of coffee throughout the value chain should be maintained in a manner that ensure product quality and safety; and package integrity of the coffee in transit.

4.4 Competence

A system should be established and maintained to ensure that personnel at each stage of the value chain are equipped with appropriate training, knowledge and skills that ensure safe handling of coffee, protection of environment and workers' health.

4.5 Food defense

Measures shall be established and implemented to prevent intentional tampering, contamination and adulteration of coffee along the value chain.

5 Coffee production

Measures should be taken to ensure agronomic practices are in compliance with statutory requirements for environmental protection, Crop varieties, and to minimize introduction of contamination from agricultural activities.

5.1 Nursery establishment and management

a) The nursery site should have adequate water supply, sheltered from wind, exposed to the sun and well drained media;

b) Where plant materials used for construction of nursery shades, should conform to legislations on protection of plant species;

c) Fertilizer use should be in accordance with coffee production recommendation handbooks or grower manuals;

d) Non-biodegradable materials and other waste generated in the nursery should be disposed off in accordance with Environmental Management and Coordination Act (EMCA);

e) Planting material used should be approved in accordance with the Seed and Plant Varieties Act, Biosafety Act and other relevant legislations;

f) Use of agrochemicals for pest and disease control should be limited to those approved for use in the coffee industry and in accordance with applicable legislations on chemical use; and

g) Sites excavated for nursery soils should be rehabilitated.

5.2 Farm establishment

a) Coffee should be grown in recommended agro-ecological zones.

b) In case of forested land, and land use change, an environmental impact assessment (EIA) license from National Environment Management Authority should be obtained.

c) Land preparation techniques (time, methods and technology) that minimize soil erosion and compaction, and safeguard the environment should be applied.

d) Field planting should be in accordance with coffee production recommendation handbooks or grower manuals.

e) Where necessary, soil PH correction should be based on soil analysis reports.

f) Use of agrochemicals for soil treatment and weed control should be limited to those approved for use in the coffee industry and in accordance with applicable legislations on chemical use.

5.3 Crop husbandry

5.3.1 Pruning should be done in accordance with approved coffee production handbooks or grower manuals and the pruned material left in the field for sustainable soil fertility.

5.3.2 Fertilizers should be used in a manner that promotes plant health while ensuring food safety and environmental protection;

a) Fertilizer used should not contain potentially harmful substances and should comply with relevant Kenya Standards;

b) Application of fertilisers should be as recommended by a competent authority;

c) Machines used for application of fertilisers should be regularly maintained, calibrated and records maintained;

d) Records of fertilizer application indicating location, date of application, type and quantity of fertilizer applied should be established and maintained;

e) The fertilizer should be stored in a designated location and records maintained

5.3.3 Quality and abstraction of water used for irrigation should be in accordance with the Water Act, EMCA, and analysis reports maintained.

5.3.4 Well decomposed manure should be used in production of coffee and managed in a manner that ensures food and environmental safety in accordance with coffee production recommendation handbooks or grower manuals.

5.3.5 Use of agrochemicals for soil treatment, weed control and use of pesticides should be limited to those approved for use in the coffee industry and in accordance with applicable legislations on chemical use and material safety data sheet.

5.3.6 Approved Crop Protection Products should be applied in a manner that assure food safety, protects the worker and the environment in accordance with Pest Control Products Act, EMCA Regulations, Water Act, and Crops Act

a) Instructions on the label such as application rate, timing of application, pre-harvest interval, maximum number of sprays, restricted re-entry interval shall be observed to minimise pesticide residues and ensure compliance with requirements for maximum pesticides residue limits for coffee;

b) Where technically feasible, recognized Integrated Pest Management (IPM) techniques should be applied; and

c) An up to date and complete list of all the crop protection products used and/or stored on the farm should be maintained;

d) d)The choice of Personal Protective Equipment (PPE) and handling of the product should be as per manufacturer's recommendations in the material safety data sheet;

e) Records of crop protection products applied should be maintained including: field identification (number or code, location), application date, rate, product trade name (brand), name of the operator/supervisor, application machinery (e.g. knapsack) and name of pest or diseases controlled;

f)) Application and measuring equipment should be well maintained and calibrated regularly to ensure accuracy of application rates and proper records maintained;

g) All crop protection products should be transported in a safe manner with attention to minimizing possible danger to people, food products and the environment;

h) When an original package is broken or damaged, and the product is transferred to another package, the new package should contain key information of the original label;

i) Storage facilities should be appropriately designed with safety features, product inventory and manufacturer's safety information maintained;

j) The disposal of the surplus application mixes and wash downs should be carried out in a manner that ensures safety of the worker and the environment;

k) Empty containers of crop protection products should be safely stored and later disposed in accordance with EMCA (waste management) Regulations;

l) Obsolete crop protection products should be labelled, stored and handled in a manner that prevents contamination of coffee and environmental pollution awaiting disposal; and

m) Personnel involved in application of crop protection products should be trained in safe handling, maintenance and storage of application equipment and records maintained.

5.4 Harvesting

5.4.1 Measures should be taken to ensure that harvesting and sorting of coffee cherries is undertaken in a hygienic manner to prevent contamination and quality deterioration of the coffee.

a) Farmers should be sensitized on handling of berries, equipment, containers and use of personal protection equipment.

b) Where used, harvesting machines should be maintained in good hygienic condition and the lubricants used should be of food grade quality.

c) Contact of coffee berries with the soil should be avoided.

d) Containers used during harvesting and sorting should be of food grade materials, clean and free from odours.

e) Coffee cherries should be stored under shade and delivered to the pulping station on the same day of harvesting.

f) Transport equipment and containers should be clean and free from odour and contaminants.

g) Records for harvested coffee cherries and transportation should be maintained.

5.4.2 Measures should be put in place to minimise pesticide residues through periodical residue analysis prior to processing to ensure:

a) Compliance of final coffee products with legislations and standards for pesticide residues.

b) Taking of appropriate corrective actions and records maintained.

6 Processing

To ensure that coffee products are wholesome, safe for human consumption and the worker is protected from occupational hazards, coffee processing location, premises and steps should comply with Good

Manufacturing Practices (GMP) in accordance with KS EAS 39, and other relevant legislations, but not limited to Public Health; and Occupational Health and Safety.

6.1 Location, design and layout

Premises for coffee processing should be located, designed, and constructed to facilitate necessary hygienic practices and effectively control food hazards and protect the environment. The location, design and layout should ensure that:

6.1.1 Sources of contamination, pollution, and threats to food safety are identified and appropriately controlled.

6.1.2 Adequate maintenance, cleaning, disinfection and monitoring of transport vehicles, equipment, surfaces, ceilings and overhead structures is achieved

6.1.3 Materials in contact with coffee are of food grade quality, appropriately designed, and easy to maintain and clean

6.1.4 Wet and dry operations are adequately separated to reduce microbiological contamination.

6.1.5 Workers safety is assured and maintained by use of appropriate controls.

6.1.6 Waste is managed effectively to prevent recontamination of food, pest access and infestation.

6.2 Hygiene facilities

Coffee processing premises should have appropriate internal design, equipment layout and location that ensure maintenance of good hygiene throughout the plant and to prevention of cross contamination and the following should be provided:

a) Washrooms, changing rooms, and hand-washing facilities supplied with water, disinfectants, liquid soap, sanitizer, disposable towels and/or hot air hand driers, as appropriate.

b) Potable water complying with KS EAS 12.

c) Adequate lighting and Glass policy.

d) Clean compressed air for dry cleaning.

e) Food grade quality lubricants.

f) Appropriate storage facilities for packaging materials, finished products (unpackaged and packaged), lubricants, fumigants, among others.

g) Stairs in close proximity to production lines should be appropriately designed and maintained.

h) Facilities for appropriate waste disposal.

6.3 Maintenance and sanitation

Maintenance and sanitation procedures and programmes should be established to cover all areas of the manufacturing premises to prevent cross contamination. Procedures may include but not limited to:

a) Efficient operation programmes are in place for all plant machinery and equipment.

b) Effective cleaning and disinfection programs for all facilities and equipment are undertaken.

c) Use of approved solvents, oils, lubricants, detergents and disinfectants.

d) Monitoring to establish effectiveness of maintenance, cleaning and sanitation done.

6.4 Personal hygiene

A personal hygiene policy should be established and implemented to ensure that coffee is not contaminated by food handlers:

a) Written instructions for acceptable personal hygiene should be visibly displayed at appropriate areas and enforced.

b) Visitors to manufacturing and storage areas should be sensitised on hygiene practices and wear protective clothing as appropriate.

c) A documented and effective training program should be in place to ensure that employees, contractors and sub-contractors are competent in assigned duties, and are conversant with hygiene, accidents, and emergency procedures and any other issue critical to food safety.

6.5 Process control

6.5.1 General

a) All process steps should be designed, implemented, monitored, measured, documented and reviewed for effectiveness of controls and compliance with critical limits for contaminants in accordance with Kenya Standards and Coffee Production Recommendations for various coffee products.

b) All equipment but not limited to weighing machines shall be calibrated, standardized and verified regularly by a competent authority.

c) Calibration records shall be maintained.

d) The weighing equipment shall be in compliance with the Weights and Measures Act, Cap. 513 of the Laws of Kenya.

6.5.2 Primary processing

6.5.2.1 Sorting

a) There should be a documented procedure detailing handling of produce from harvesting to receipt at the factory.

b) Sorting area surfaces should be easy to clean, not slippery, and have adequate drainage and lighting.

c) Sorting should be done to effectively remove foreign, extraneous matter, and coffee cherries that are under-ripe, overripe, and diseased.

d) Sorted coffee cherries should be processed separately.

6.5.2.2 Weighing

The aim of this process is to document the quantities of cherry delivered for traceability.

a) During weighing measures should be put in place to ensure that the coffee cherry is protected from contamination and quality deterioration.

b) The accepted coffee cherries should be weighed and records maintained.

6.5.2.3 Pulping

a) Only clean water complying with water KS EAS 12 should be used for pulping.

b) Proper adjustment to suit cherry sizes and servicing of the pulping machine should be ensured to prevent physical damage.

c) Coffee should be pulped the same day it is harvested and received.

d) Re-circulated water should be disposed of after the day's pulping.

e) Pulping machines to be eco-friendly in terms of water and power.

f) Measures should be put in place to ensure that different grades of parchment are clearly separated.

6.5.2.4 Mucilage removal

a) Fermentation

i) Fermentation should be as per Coffee Production Recommendations (CPR) handbooks or grower manuals.

ii) Measures should be taken to avoid over-fermentation.

iii) Fermentation tanks should be roofed.

iv) Fermentation tanks should be made of food grade material.

v) The fermentation tank walls and floors shall not be cracked and shall be waterproof.

b) Mechanical removal

i) Measures should be taken to ensure that the mucilage removing machine is in serviceable condition to prevent mechanical damage of the parchment.

ii) Procedures on cleaning the machine should be established and records maintained.

6.5.2.5 Washing and grading

Washing and grading should be done in a manner that maintains acceptable quality and safety of parchment

a) Water used for washing and grading should be clear, clean and free from taints, odours.

b) Water used should be analysed for compliance to (KS EAS 12) and records maintained.

c) Washing and grading channels should be smooth and clean.

d) Grading should be done in a manner that ensures separation of parchment according to density.

e) Washing tools should be made of appropriate material, clean and maintained in serviceable condition.

f) Where soaking is undertaken it should be done in a manner that does not compromise quality.

g) Conveyance of parchment should be done in a manner that prevents physical damage of the parchment.

6.5.2.6 Drying

a) Parchment should be dried in a manner that promotes efficient aeration, uniformity in drying and prevent development of Ochratoxin A in accordance with, but not limited to KS CAC RCP 69and Coffee Production Recommendation (CPR) handbook or grower manual.

b) The drying tables should be at least 1m from the ground in accordance with Coffee Production Recommendation (CPR) handbook or grower manual.

c) Moisture content of dried coffee should be monitored using a calibrated moisture meter to achieve a moisture content:

i) 10 -11 % for parchment.

ii) Not more than 12% for dried cherry (*mbuni*).

d) During drying, measures should be taken to prevent rewetting of the coffee.

e) Conditioning bins should be covered and well aerated.

f) Drying tables and conditioning bins should be labelled to facilitate traceability and records maintained.

g) Measures should be taken to ensure hygienic handling and storage of dried coffee.

6.5.2.7 Bagging

Dried coffee should be bagged in food grade materials that assure the product safety and integrity in accordance to KS 2221. Dried coffee bags should be labelled to show the following information:

a) Code.

b) Type of coffee.

c) Farm/factory name.

6.5.2.8 Storage of dried coffee

Dried coffee should be stored in facilities that preserve the product safety and quality.

6.5.2.9 Transportation to mill

a) Vehicles for transporting dried coffee should be clean, dry, and free from odours.

b) Measures should be taken to prevent rewetting and contamination.

c) Inspection procedures should be established to assess suitability of the vessel for transportation and a checklist maintained.

d) Dry coffee consignment should be accompanied by the relevant documents to facilitate identification and traceability including but not limited to:

i) Booking slip.

ii) Growers' delivery note.

iii) Movement permit.

NOTE The above documents should be serialized.

6.5.3 Secondary processing

6.5.3.1 Receipt of coffee at the dry mill

Measures should be put in place to assess the suitability and traceability of dry coffee delivered for milling:

a) Coffee received should be weighed to determine quantity and facilitate issuance of identification document for the consignment.

b) Coffee should be sampled in accordance with KS ISO 6666 for determine moisture content, milling loss and quality.

c) An outturn number should be generated for every consignment, showing the production week, mill identity, consignment among others as per the Crops Act.

d) On delivery, the farmer should receive a pre-milling quality report showing the moisture content, expected milling loss, quality and a weight ticket.

e) Measuring equipment shall be calibrated and records maintained.

6.5.3.2 Parchment bulking

Bulking should be done in a manner that ensures uniformity of grades and quality to attain a millable lot.

6.5.3.3 Hulling and polishing

Measures should be put in place to ensure the following:

a) Hulling is completely done.
b) When polishing, not more than 50 % of the silver skin should be retained.
c) The milling loss should be ± 2 % of the pre-milling for the heavy coffee.
d) The milling loss for lights, *mbuni* and estate-cured coffee should be ± 5 % of the expected.

6.5.3.4 Green bean grading and sorting

Coffee grading and sorting shall be done as prescribed in KS EAS 130.

6.5.3.5 Green coffee bulking

Bulking should be done in a manner that ensures uniformity of grades and quality to attain a sellable lot.

6.5.3.6 Sampling for trade

Sampling should be done as per Nairobi Coffee Exchange (NCE) trading rules or contractual agreements.

6.5.3.7 Bagging

To ensure that product quality and safety is maintained and traceability achieved during storage and dispatch, the following should be observed:

a) Bags used shall be in accordance to per KS 2221.
b) Bags shall be labelled and similar information on a label shall be put inside the bag. Details of the label shall indicate:
    i) Growers code.
    ii) Grade.
    iii) Season.
    iv) Outturn number.
    v) Storage instructions.

6.5.3.8 Transport to warehouse

Measures should be established, implemented, monitored and documented to ensure that transportation maintains quality and integrity of the coffee in compliance with KS ISO 8455

a) Transporters should be prequalified based on their ability to provide services in a manner that does not compromise product safety, quality and package integrity.

b) Vehicles should be checked prior to loading, and during unloading to verify that the quality and safety of the material or product is assured.

6.5.3.9 Warehouses for green coffee

Green coffee should be stored in facilities that maintain the safety, quality of the product in compliance with KS ISO 8455 and ensure traceability.

The following documents should be maintained but not limited to:

a) Movement permit.

b) Delivery note.

c) Outturn Reconciliation/weight-note.

d) Goods Received Note (GRN) from warehouse.

e) Weighbridge tickets.

f) Internal storage records.

g) Coffee warrants.

6.5.3.10 Blending

Measures should be put in place to ensure that blending is done in a manner that prevents contamination and maintains product safety and integrity.

a) Blending areas should be clean, free from dust, have appropriate lighting and prevent absorption of moisture.

b) Procedures should be established to identify and control potential sources of contamination.

c) Personnel should have appropriate protective equipment and avoid direct contact with the coffee.

d) All materials in contact with the coffee should be clean, dry and food grade

6.5.3.11 Roasting and grinding

a) All roasting factories shall be operated as per the Crop Act, Coffee General Rules, Occupational Safety and Health Act, Fire Protection Act, Public Health Act, Food Drug and Chemical Substances Act, KS EAS 39 and EMCA.

b) The raw material used shall conform to KS EAS 130, while the end product shall comply with KSEAS 105.

c) Coffee spilling onto the floor should be avoided, and any spillages should be rejected, disposed of appropriately and records maintained.

6.5.3.12 Packaging and dispatch

Measures should be established to ensure that coffee products packaging and dispatch operations maintains quality, integrity and traceability. Hence

a) Procedures should be established to ensure that only food grade packaging materials are used and appropriately labelled.

b) Coffee packages should be kept on pallets away from the walls.

c) Pallets used should be constructed and treated in a manner that preserves coffee quality and integrity of packages.

d) Dispatch vehicles should be in good hygienic and repair conditions and records maintained.

6.6 Product control

The finished product should be stored, packaged, dispatched and transported in a manner that maintains its quality, safety and complies with relevant Kenya Standards and customer contractual agreements; and should be traceable to the market.

a) Contractual agreements for supplies should be honoured by both parties.

b) Consumer packages should be designed in compliance with KS 2221.

c) Containers and packages should be designed in a manner that minimise damage, prevent contamination.

d) Where recycled materials are used, they should not be in direct contact with the product.

e) Where required, pallets for product packaging should not compromise product safety and quality.

f) A dispatch procedure and criteria should be established to ensure that only clean vehicles capable of preserving safety and quality of the product are used

g) Coffee transportation containers should be dry, clean, and free from holes, odours, leak proof and designated only for coffee transport at a time.

h) Transport personnel and drivers should be sensitized and aware of food safety requirements, and appropriate vehicle and security conditions for transporting finished products.

i) The producer/exporter should establish a documented system to ensure that every unit or batch of the products is traceable.

j) A procedure should be established to ensure that coffee samples are representative of the offered lot and that non-conforming products are disposed of appropriately.

k) Monitoring should be undertaken to identify processing points and products that are out of specification; identify non-conforming products as appropriate for isolation, rework, release and /or disposal, and records of actions taken maintained.

l) Cleaning and disinfection should be done in a manner that will safeguard the package integrity and product quality.

7 Coffee trade practices

7.1 Buying and selling

Coffee buying and selling should be carried out in accordance with relevant coffee industry rules, national legislations and Kenya Standards. Ensure that:

a) Coffee samples should be prepared, labelled and handled in a manner that is representative of the lot, preserves traceability, product integrity and in accordance with but not limited to KS ISO 4072 , KS ISO 22005, and the Kenya coffee trading rules;

b) Organoleptic tasting should done in accordance with KS ISO 4149 to ascertain quality and value of Coffee by relevant parties;

c) Coffee intended for auction should be catalogued and offered for sale in accordance with relevant legislations, and coffee trading and auction rules;

d) Auction coffees, direct sales, and exports should be executed in accordance with contractual agreements, Crops Act, and Coffee trade rules; and

e) Imported and transit Coffees should be registered and monitored for compliance with coffee regulations and Kenya Standards for green coffee beans, roasted and ground coffee.

7.2 Warehouse operations

In addition to the requirements in Clause 6, warehouses, blending, packaging, and dispatch should be done in a manner that facilitates identification, and implementation of control measures that ensure acceptable food

quality, safety and traceability; health conditions of personnel; and integrity of packaging materials, machines and premises.

7.2.1 Warehouses in trade

Warehouses in which coffee is stored and handled should have adequate space to ease movement of equipment and goods without damaging packages and prevent product contamination. Ensure the following:

a) A prequalification and traceability system should be established and monitored to ensure all materials and equipment received or operating within and around the warehouse are of approved quality and are traceable to the supplier;

b) Specific covered areas should be designated for loading and offloading vehicles to prevent packages from wetness and potential contamination;

c) Clean and hygienic environmental conditions should be maintained to preserve Coffee quality during receiving, loading, storage and inter-warehouse transportation;

d) Criteria should be established to verify product quality for acceptance in the warehouse;

e) Effective measures should be established to control temperatures, humidity and other environmental conditions in the warehouse to prevent damages to packages, absorption of taints, moisture, and accumulation of dust and in accordance to KS ISO 8455;

f) Vehicles, conveyances and containers should be in good state of repair and cleanliness;

g) Gasoline or diesel-powered fork-lift trucks should not be used within storage areas for coffee ingredients or products;

h) Fumes from vehicles should be prevented from entering the warehouses;

i) Where wooden pallets are used, they should be treated to destroy pests using approved methods and chemicals; and

j) Access to warehouses should be controlled to allow only authorised staff and visitors.

7.2.2 Blending of coffee products

Blending should be done in a manner that prevents contamination and maintains product safety and integrity by ensuring that:

a) Blending areas have appropriate lighting, clean, free from dust and prevent absorption moisture;

b) Procedures should be established to identify and control potential sources of contamination;

c) Where necessary, measures should be implemented to eliminate and prevent foreign matter contamination;

d) Measures should be established to prevent personnel having direct contact with coffee;

e) Personnel should have appropriate protective clothing;

f) All materials in contact with food should be clean, dry and food grade; and

g) Measures should be taken to control coffee spilling onto the floor, and any spillages should be rejected, disposed of appropriately and records maintained.

7.2.3 Packaging and dispatch of pre-packaged coffee

Measures should be established to ensure coffee product packaging and dispatch operations maintains quality, integrity and traceability by ensuring that:

a) Procedures should be established to ensure only food grade packaging materials are used and appropriately labelled to ensure traceability;

b) Coffee packages should be kept away from the floor on pallets;

c) Pallets used should be constructed and treated in a manner that preserves coffee quality and integrity of packages; and

d) Hygienic and mechanical conditions of dispatch vehicles and integrity of packages should be confirmed before dispatch and records maintained.

7.3 Transport in trade

Measures should be established, implemented, monitored and documented to ensure transportation to the market maintains the coffee quality and safety.

a) Transporters should be prequalified based on their ability to provide services in a manner that does not compromise product quality and package integrity;

b) Prequalified transporters shall have systems in place to ensure accidental damages to the product on transit are appropriately addressed;

c) Vehicles should be checked prior to loading, and during unloading to verify that the quality and safety of the material or product is maintained;

d) Vehicles transporting finished products should be equipped with fire safety equipment;

e) Containers should be dry, clean, and free from holes, odours, leak proof and designated only for Coffee transport at a time;

f) Procedures should be established and implemented to ensure transport personnel have adequate knowledge on preservation of coffee quality and safety. This may include but not limited to:

   i) Potential impact of environmental conditions and weather on coffee;

   ii) Hygienic handling of coffee;

   iii) Criteria for acceptance of coffee;

   iv) Mechanical soundness of coffee transport vehicles; and

   v) Security protocols.

8 Shipping

Coffee exports and imports shall be done in accordance with coffee regulations and in food grade containers. Ensure that:

a) Designated containers are dry, odourless, and dust-free;

b) Records of coffee export shipments are maintained but not limited to the following:

   i) Certificate of origin

   ii) Export approval certificate

   iii) Certificate of inspection

   iv) Contracts

   v) Bill of lading

   vi) Phytosanitary certificate

c) Records of coffee import shipments are maintained but not limited to the following:

   i) Certificate of origin

ii) Certificate of inspection

iii) Customs declaration

iv) Invoice

v) Plant import permit

9 Product tracking information

Information on tracking of the product should be documented at the factory and should include, but not limited to the following:

a) Truck/trailer registration number;
b) Date and time of dispatch;
c) Type of coffee;
d) Farm name;
e) Name of manufacturing factory;
f) Product invoice numbers;
g) Growers delivery note;
h) Booking slip; and
i) Movement permit.

10 Traceability, withdrawal and recall

A traceability, withdrawal and recall system should be established and maintained across the value chain to ensure the customer is informed correctly of the product origin and identity. Ensure that:

a) A procedure should be established, implemented and maintained to facilitate traceability of products and recall of non-conforming products at any stage of the value chain;
b) The procedures should ensure identification of the product one step forward and one step backward; and
c) Products failing to meet required food safety standards should be identified, segregated, withdrawn from the value chain, recalled from the market, evaluated and disposed of as appropriate and records maintained.

11 Labour and workers welfare

All stakeholders within the value chain should comply with relevant legislations on labour and employment.

12 Environmental management

a) Sustainable environmental management should be maintained to conserve energy, soils, water resources, wild life and forests in accordance with the relevant environmental related legislations;
b) Emissions from factories should be managed in a manner that minimizes environmental degradation; and
c) Proper waste management systems should be established, monitored and maintained.

Annex A
(informative)

Maximum pesticide residue limits for coffee

A.1 Pesticide residues are a food safety concern in food and feed commodities.

A.2 Maximum Residue Limit (MRL) "MRL" is the maximum concentration of a pesticide residue (expressed as mg/kg), recommended by the Codex Alimentarius Commission to be legally permitted in or in food commodities and animal feeds.

A.3 The Codex Alimentarius Commission maintains an online pesticide residues in food database that provide recommended maximum pesticide residue limits.

A.4 The pesticide residue database is regularly reviewed and updated.

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Annex B
(informative)

Relevant legislations

The following is a list of legislations that apply to the coffee industry:

a) Agriculture and Food Authority (AFA) Act 2013.

b) Crops Act 2013.

c) Kenya Agricultural and Livestock Research Act 2013.

d) The Employment Act, Cap. 226.

e) The Environmental Management and Coordination Act (EMCA), 1999.

f) Occupational Safety and Health Act, 2007.

g) The Food, Drugs and Chemical Substances Act, Cap. 254.

h) The Irrigation Act, Cap. 347.

i) The Lakes and Rivers Act, Cap. 409.

j) The National Hospital Insurance Fund Act, Cap. 255.

k) The National Social Security Fund Act, Cap. 258.

l) The Pest Control Products Act, Cap. 346.

m) The Physical Planning Act, 1996.

n) The Regulation of Wages and Conditions of Employment Act, Cap. 229 (ROWA).

o) The Standards Act, Cap. 496.

p) The Trade Disputes Act, Cap. 234.

q) The Children's Act, 2001.

r) The Trade Union Act, Cap. 233.

s) The Water Act, Cap. 372.

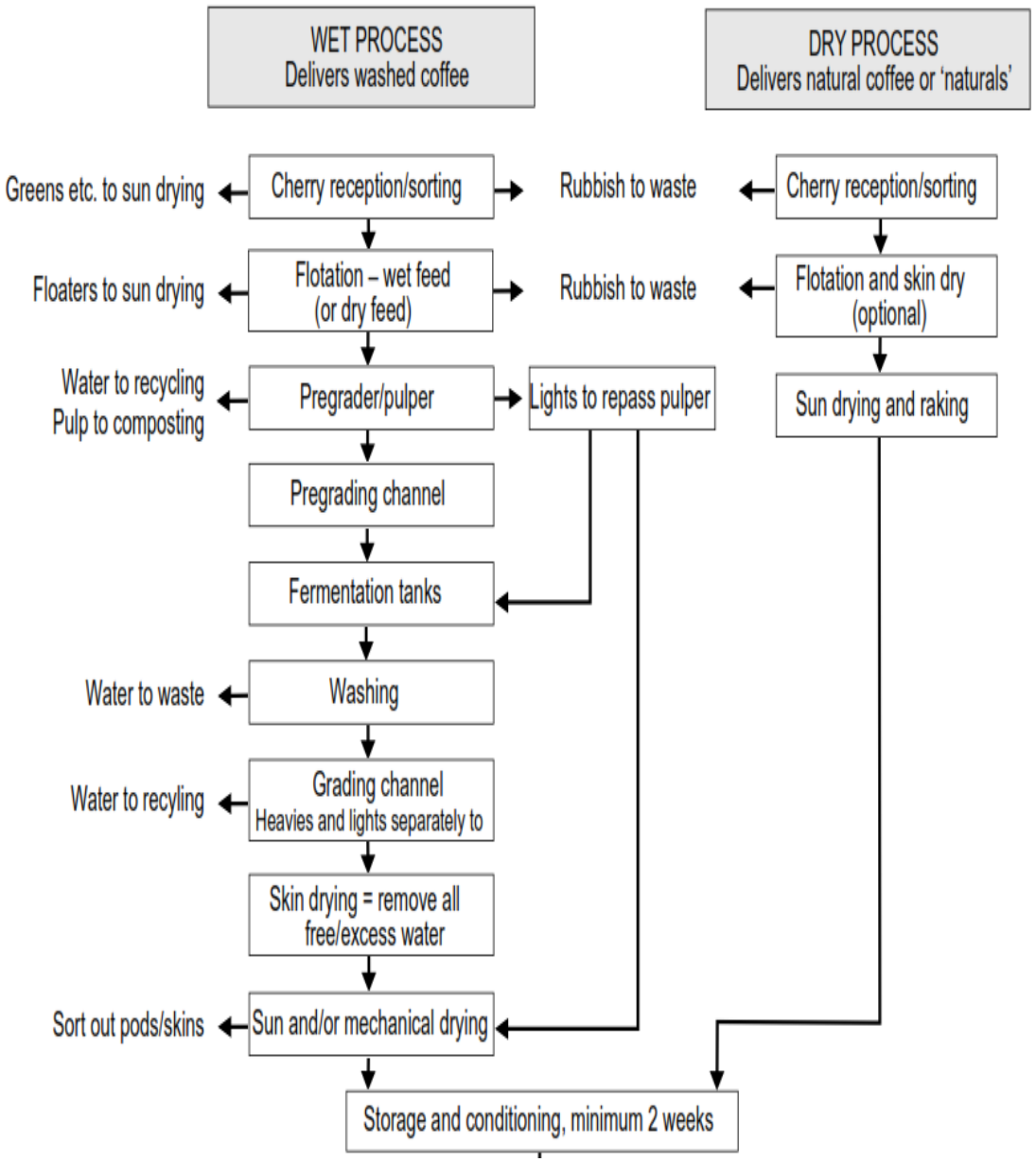
t) The Seed Act, Cap. 326.

u) The Public Health Act, Cap. 242.

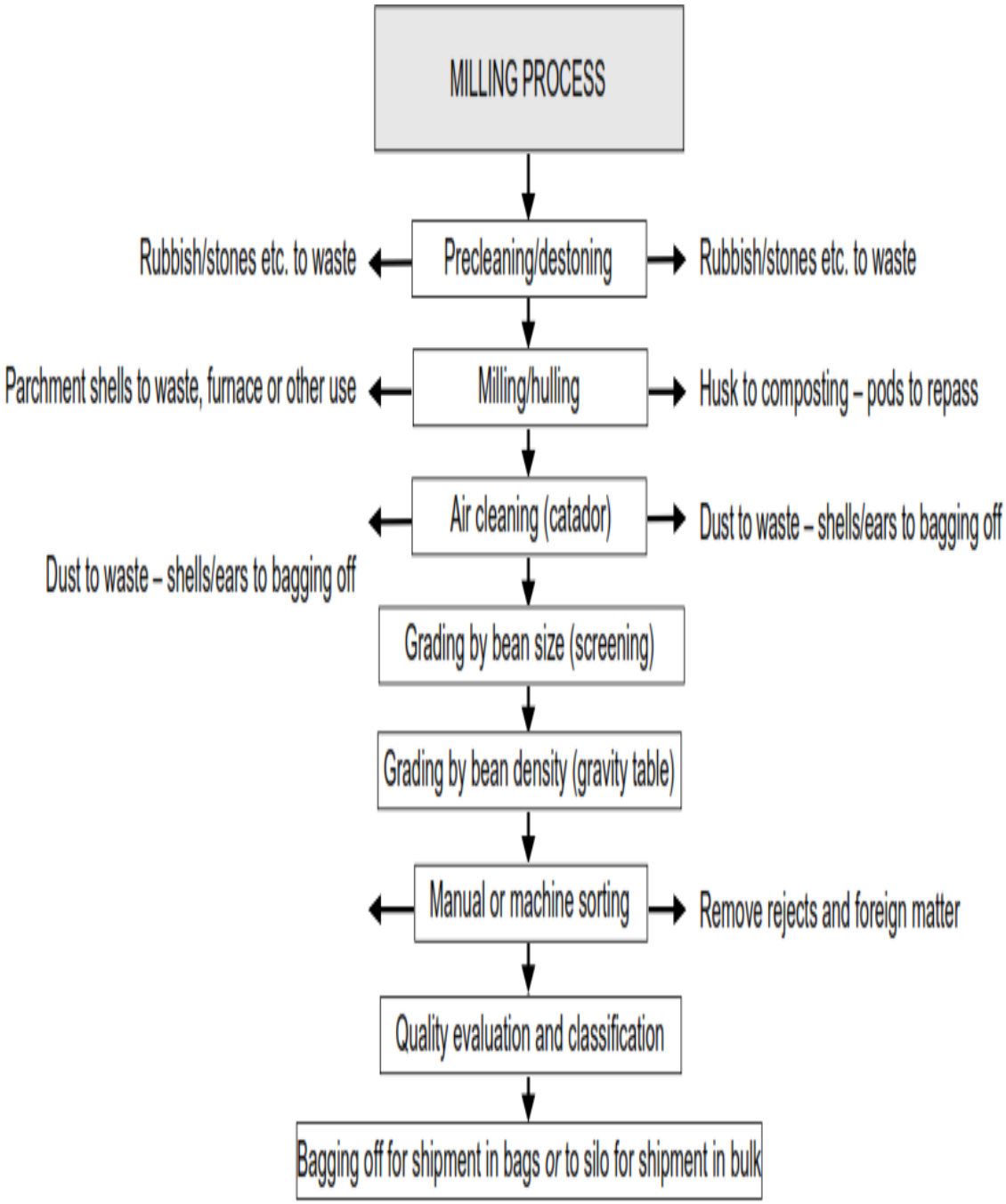
v) The Forest Act, 2005.

Annex C
(informative)

Wet and dry processing



(Adapted from: ITC Coffee guide, 3rd ed. 2012)



Bibliography

The Environmental Management and Coordination (noise and excessive vibration pollution) (control) regulations, 2009.

