



# **GREEN LEAF QUALITY REQUIREMENTS FOR THE KENYA TEA INDUSTRY**

## **1.0 Handling pre-harvested and post-harvested green leaf from farm to factory**

### **1.1 Pre- harvesting practices**

- a) Pre - harvesting practices include: nursery management, bringing bushes to bearing, pruning, tipping, fertilizer application, soil management, weed control, pest & disease management, infilling and replanting.
- b) Pre-harvest practices shall be as per Tea Research Foundation of Kenya (TRFK) Good Agricultural Practice (GAP) guidelines provided for both Mechanical Tea Harvesting and Hand Plucking tea.
- c) A tea factory shall ensure that optimal ratio of tea extension officers to grower is maintained at 1:1500 to ensure that the growers receive adequate support and guidance from the extension staff.
- d) A grower intending to establish a new farm shall seek guidelines on the best practices from the factory where he/she intend to register.
- e) A factory shall develop standard operating procedures and maintain records of pre-harvesting practices.

#### **1.1.1 Fertilizer application**

- a) Fertilizer application shall be done in accordance with the recommended guidelines by tea cultivation manual for good agricultural practices-TRFK
- b) A documented policy on fertilizer application shall be maintained and implemented by the tea factories for optimizing growth, yields and quality of tea leaf.

#### **1.1.2 Weed Management**

- a) Cultural or biological methods of weed control shall be applied on tea farms to ensure healthy tea plants and higher yields.
- b) A grower shall put in place measures to prevent drifting, leaching or contamination of tea bushes with chemical used in adjacent farms.

#### **1.1.3 Pest & Disease management**

- a) A grower shall apply cultural and biological methods in control of tea pest and diseases.
- b) Pests and diseases shall be controlled in accordance with Tea Grower's Handbook-TRFK.

#### **1.1.4 Infilling and replanting**

- a) A tea grower or factory shall establish a tea infilling and replanting program for replacement of moribund tea bushes as stipulated in Tea Grower's Handbook-TRFK.

#### **1.1.5 Pruning cycles**

- a) A tea grower or factory shall develop and implement a pruning program in accordance with Tea Grower's Handbook-TRFK.
- b) Pruning records shall be maintained for reference purposes.
- c) A tea factory shall issue an advisory to its growers on the appropriate time to prune.
- d) A factory shall ensure that a training program for pruning is implemented and appropriate records are maintained.

### **1.2 Harvesting and post - harvesting practices**

- a) Harvesting and Post-harvesting practices includes: hand plucking, machine harvesting, leaf handling & preservation, weighing, transportation and receiving at factory.
- b) Harvesting or plucking of tea shall be done in accordance with the requirements under the Tea Growers Handbook and Production and Processing of tea – Code of practice KS EAS 1175.
- c) Post –harvest handling of leaf shall be done in a manner that ensures proper aeration and prevents scorching, leaf breakage, damage and temperature built up.
- d) A tea factory shall develop standard operating procedures and maintain appropriate records.

#### **1.2.1 Hand Plucking guidelines**

- a) Hand plucking shall be done in a manner that is hygienic and maintain the quality and integrity of the leaf.
- b) A factory shall train tea pluckers on proper plucking practices to avoid over-handling of green leaf by holding too much leaf in their hands;
- c) A tea plucker shall use a standard harvesting basket that is rigid and perforated;
- d) The harvesting baskets shall not be loaded with more than 10 kgs of leaf to prevent compression and allow free air circulation;
- e) A tea producer shall adhere to good green leaf handling practices by use of appropriate woven plucking baskets as recommended by the KS 2780 Standard.

### **1.2.2 Mechanical Tea harvesting**

- a) Mechanical tea harvesting involves use of machines, which include but are not limited to hand-held, motorized or self-propelled machine.
- b) Mechanical tea harvesting shall be done in a manner that is hygienic and maintain the quality and integrity of the leaf;
- c) Machine harvesting shall ensure proper aeration, prevent damage and contamination of the leaf;

### **1.2.3 Green leaf collection**

- a) A tea grower shall ensure harvested green leaf is preserved in a shaded area prior to transportation;
- b) A tea factory shall ensure that green leaf is collected from a leaf collection or buying center where tea growers supply their green leaf;
- c) Harvested leaf shall be transported to a tea collection or buying Centre within four (4) hours after plucking to maintain freshness and prevent fermentation;
- d) It is recommended that leaf collection centres should be situated at least 250 meters apart and no factories shall share a collection centre;
- e) Every tea buying centre shall be labelled with the name of centre and factory to which it is affiliated;
- f) A tea factory shall register its green leaf transportation vehicles with the Board and maintain the appropriate records.
- g) A tea factory shall not collect green leaf from the roadside or any other place where integrity and quality of the leaf is compromised.

### **1.2.4 Transportation of green leaf from collection Centre to factory**

- a) The harvested leaf shall be transported from the tea collection or buying Centre to the factory within (2) hours to prevent deterioration of quality;
- b) Leaf handling during transportation shall be done in a manner that prevents contamination, compression, breakage or damage and ensures that the leaf is well aerated;
- c) Where carriers or conveyor systems are used to transport leaf from the farm to the factory, the transporter shall ensure that the integrity and quality of the leaf is preserved;
- d) The design of green leaf bags shall be in accordance to Knitted bags (100% polyethylene) for green tea leaf – Specification KS 2780

Standard and the maximum leaf to be loaded in the bag should not exceed 12kilos.

#### **1.2.5 Green leaf transportation vehicles turnaround time**

- a) A tea factory shall document a schedule for collection of green leaf to ensure that turnaround time does not exceed three (3) hours;
- b) A tea factory shall ensure that the leaf collection schedule is aligned to specific routes and tea buying or leaf collection centres.

#### **1.2.6 Plucking and Harvesting cycles**

- a) A tea factory shall establish, communicate and implement a harvesting/plucking plan.
- b) Plucking cycles for hand plucked tea shall be 7-10 days, whilst for mechanical tea harvesting it is recommended that a harvesting cycle of between 10-21 days.
- c) A tea grower or factory shall ensure that a proper plucking or harvesting table is maintained.

### **2.0 Green leaf quality standard for Tea Producers in Kenya**

- a) A tea grower shall produce and supply good quality leaf to the factory for processing.
- b) A tea factory shall ensure good quality leaf is received for processing.
- c) For hand plucked leaf, good quality leaf shall constitute: **a bud, 1Leaf and a bud, 2Leaves and a bud**, and **soft bhanji** and shall constitute not less than 65% by weighment method.
- d) For mechanically harvested leaf, good quality leaf shall constitute: **a bud, 1Leaf and a bud, 2Leaves and a bud, soft bhanji and soft loose leaf** and shall constitute not less than 65% by weighment method.
- e) Leaf quality shall be determined by weight from a composite sample picked randomly from the leaf delivery carrier.
- f) A tea factory shall conduct growers' education on leaf quality standards on continuous basis.
- g) A tea factory shall maintain records on the quality of green leaf received at the factory.
- h) A tea factory shall submit monthly status reports on green leaf quality to TBK by the 10th day of the following month.

### **3.0 Outturn – Conversion of Green leaf to Made Tea**

The conversion of green leaf to made tea depends on the weather conditions. The outturn during the wet seasons due to rains to dry seasons shall range between 20% to 24% whereas weighing scales used to weigh the green leaf are accurately calibrated and have not been manipulated.

### **4.0. Implementation plan for green leaf quality Standard**

- a) Sensitization forums of stakeholders.
- b) Adoption of the guidelines by the tea factory shall be done immediately the tea regulations have been published & gazetted.
- c) Factories will come up with an implementation plan.
- d) factories to submit returns on implementation on the guidelines using a prescribed format.
- e) A multi-stakeholder technical committee shall be constituted by TBK to oversee implementation and monitor the green leaf quality guidelines.

### **5.0. Green leaf sourcing practices**

- a) A tea factory shall be sourcing green leaf as per the terms and condition of the tea manufacturing license issued by Tea Board of Kenya;
- b) A tea factory shall source green leaf within a radius of 50km from the location of the factory;
- c) A tea factory shall establish a grower recruitment policy and exercise diligence when recruiting new growers;
- d) A tea grower shall be registered with one factory to which they shall deliver green leaf for processing;
- e) A tea grower who wishes to transfer to another factory shall give a minimum of one-month notice to the factory to which they are registered;
- f) A tea factory shall ensure that a tea grower who transfer from another factory to which they are registered to deliver leaf provides proof that he/she has been officially released from the previous factory;
- g) A tea grower shall not exceed the productivity limit stipulated in the Greenleaf supply agreement unless where supply of excess leaf is justified, e.g. from lease of bushes.
- h) A tea factory shall collect green leaf from only designated tea collection or buying centres that meet factory's set guidelines;
- i) A factory shall not collect leaf from the roadside or other non-designated points or areas.