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Draft Sri Lanka Standard
Requirements for Good Agricultural Practices (GAP)
Part 7 : Cashew
(DSLS 1523 – 7 :.....)

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7 වන කොටස : කජු
(ශ්‍රීලංප්‍ර කෙටුම්පත 1523 – 7 :.....)

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இவ்வரைவு இலங்கைக் கட்டளையெனக் கருதப்படவோ அன்றிப் பிரயோகிக்கப்படவோ கூடாது
This draft should not be regarded or used as a Sri Lanka Standard.

අදහස් එවිය යුත්තේ : ශ්‍රී ලංකා ප්‍රමිති ආයතනය, 17, වික්ටෝරියා පෙදෙස, ඇල්විටිගල මාවත, කොළඹ 08.

Comments to be sent to: SRI LANKA STANDARDS INSTITUTION, 17, VICTORIA PLACE,
ELVITIGALA MAWATHA, COLOMBO 08.

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මෙම ශ්‍රී ලංකා ප්‍රමිති කෙටුම්පත , ශ්‍රී ලංකා ප්‍රමිති ආයතනය විසින් සකසන ලදුව, සියලුම උදෙසාගේ අංශ වලට තාක්ෂණික විවේචනය සඳහා යටත් ලැබේ.

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ඇල්විටිගල මාවත,
කොළඹ 08.

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Introduction

This Draft Sri Lanka Standard has been prepared by the Sri Lanka Standards Institution and is now being circulated for technical comments to all interested parties.

All comments received will be considered by the SLSI and the draft if necessary, before submission to the Council of the Institution through the relevant Divisional Committee for final approval.

The Institution would appreciate any views on this draft which should be sent before the specified date. It would also be helpful if those who find the draft generally acceptable could kindly notify us accordingly.

All Communications should be addressed to:

The Director General
Sri Lanka Standards Institution,
17, Victoria Place,
Elvitigala Mawatha,
Colombo 08.

Draft Sri Lanka Standard
REQUIREMENTS FOR GOOD AGRICULTURAL PRACTICES (GAP)
PART 7: CASHEW

DSLS:

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SRI LANKA STANDARDS INSTITUTION
17, Victoria Place,
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Colombo 8,
Sri Lanka.

Draft Sri Lanka Standard
REQUIREMENTS FOR GOOD AGRICULTURAL PRACTICES FOR CASHEW

FOREWORD

This Standard was approved by the Sectoral Committee on Agriculture and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on

Cashew is a valuable plantation crop with high export potential. Many importing countries and local buyers are now necessitating producers to implement Good Agricultural Practices (GAP) for which ensure quality and safety of the produce. To build trust and recognition of the produce to be accepted both in the domestic and international markets by considering the environment, health and food safety of consumers, quality of produce and welfare of the workers, it is appropriate to establish the GAP Standard for Cashew. The GAP stands on four pillars of economic feasibility, environmental sustainability, social acceptability, and food safety and quality. Therefore, GAP is a guideline for the management of crop produce, from planting material preparation, planting, agronomy, and harvesting to post harvest handling. The aim is to ensure safety in the crop produce for both domestic and international trade while minimizing environmental damage.

This Standard is subjected to the provisions under the Food Act No. 26 of 1980, the Plant Protection Act No. 35 of 1999, the Promotion of Export Agriculture Act No. 46 of 1992, the Consumer Affairs Authority Act No. 9 of 2003, the National Environmental Act No. 47 of 1980, the Soil Conservation Act No. 25 of 1951, the Fauna and Flora Protection Ordinance No. 02 of 1937, the Forest Ordinance No. 16 of 1907, the Control of Pesticides Act No. 33 of 1980, the Employment of Women, Young Person and Children Act No. 47 of 1956 and the regulations framed thereunder, and any other regulatory and statutory requirements wherever applicable.

In the preparation of this Standard, the valuable assistance derived from the related publications of the Food and Agriculture Organization (FAO) of the United Nations and Philippine National Standard, are gratefully acknowledged.

1 SCOPE

1.1 This Standard prescribes the GAP to be applied for the Raw Cashew Nuts (RCN) production and processing within the farm site for their sustainable production that is legally compliant, socially acceptable and economically viable to ensure safe and quality produce or product that is suitable for utilization and/or consumption.

1.2 This Standard does not absolve any product, person(s), corporate entities and organizations from fulfilling criteria laid down in the Standards for product(s) that use(s) the SLS mark.

1.3 All materials containing or produced from Genetically Modified Organisms (GMOs) are not compatible with this Standard.

2 REFERENCES

SLS	143	Code of practice for general principles of food hygiene
SLS	245	Specification for cashew nuts
SLS	405	Specification for cashew kernels
SLS	614	Specification for potable water
SLS	726	Compression knapsack sprayers Part 1: Non-pressure retaining type
SLS	1003	Code of practice for processing of cashew nuts
SLS	1465	Code of Practice for Application of Pesticides
SLS ISO	27065	Protective clothing – Performance requirements for protective clothing worn by operators applying pesticides and re-entry workers

3 DEFINITIONS

For the purpose of this Standard, the following definitions shall apply:

3.1 environmentally sound: Farm practices with minimal effect on the environment

3.2 good agricultural practices (GAP): Collection of scientific principles to apply for on farm production and post-production processes, resulting in safe and quality food, spices, beverages and non-food agricultural products, while taking into account economic, social and environmental sustainability

3.3 inter-cropping: Cropping system in which two or more crops are grown in combination on a single land area

3.4 quality produce: Produce that is safe for consumption and/or suitable for utilization

3.5 raw cashew nuts (RCN): Enclosed in a hard, kidney-shaped shell at the bottom of the cashew apple. The nut is typically kidney-shaped itself, with a smooth surface and a slight curve.

3.6 pre-harvest interval (PHI): The amount of time that must pass between the application of pesticides to a crop and the harvesting of that crop.

3.7 produce: Cashew produced according to this Standard.

3.8 product: Product that has been produced, processed and/or handled in compliance with this Standard.

3.9 socially acceptable: Meeting concerns on the welfare and safety of persons working or living within the farmer surrounding the farms

3.10 sustainable crop production: A holistic, systems-oriented approach to farming that is efficient in resource management and focuses on the interrelationship of social, economic and environmental processes.

3.11 traceability: The ability to trace the history, application, use and location of an item or its characteristics through recorded identification data

4 REQUIREMENTS

4.1 Document requirements

4.1.1 Traceability

The produce shall be traceable to the farm where it has been originally produced.

4.1.2 Site map

The producer shall maintain an up-to date site map including the location, access to the site, farm layout, land extent of the farm and adjacent activities.

4.1.3 At the farm site

Documents require assuring the traceability shall be maintained at the farm site.

4.1.4 During transportation

A traceability system shall be maintained during the transportation that shall be able to trace the product back to the farm, date of harvest, class and type of the produce.

4.1.5 At the retail market

The final product shall contain identification number, QR, Bar, batch code or any reliable method to be able to trace back to the farm.

4.2 Record keeping

4.2.1 Farms shall keep up-to-date records.

4.2.2 All records shall be maintained and retained for at least 2 years unless stipulated by any specific legislation, otherwise.

4.2.3 The farm records shall be accessible and audited.

4.2.4 Record keeping system shall be established in which all the essential elements are captured including following details:

- a) Name of the farmer;
- b) Address of the farm site;
- c) Year and season;
- d) The variety, the origin of the planting materials and the date of planting;
- e) The type, amount, the mode-of-application and the date of application of fertilizer;
- f) The common name, commercial or brand name, amount or dosage, the name of the operator, the mode-of-application, and the date of application of pesticides; and
- g) The date of harvested, quantity and type of produce.

4.3 Internal audit

4.3.1 Internal audit shall be carried out at least once a year based on the requirements of this Standard. It shall be completed and documented.

4.3.2 Corrective actions shall be implemented and documented.

4.4 Record of complaints

Records of complaints on all produce not in compliance with requirements in this Standard and their remedial actions shall be made available on-site.

5 PRIMARY PRODUCTION REQUIREMENTS

5.1 Environmental hygiene

5.1.1 Cashew plants shall be protected from contamination by human, animal, domestic, industrial and agricultural wastes which may be present at levels likely to be a risk to environmental health.

5.1.2 Adequate precautions shall be taken to ensure that these wastes are disposed of in a manner that will not contaminate plants, animals and humans, and not constitute a health hazard to consumers of the final product.

5.1.3 If a particular site categorized as unacceptable to be used, production shall not be carried out until the necessary control measures taken.

5.1.4 The corrective actions shall be implemented and monitored and results shall be properly recorded to ensure the produce is obtained within the acceptable levels.

5.2 Location of the production site

5.2.1 The proximity of production sites that pose a high risk for contamination of source plants, such as animal production facilities, hazardous waste sites and waste treatment facilities, shall be identified and evaluated for the potential to contaminate production fields with microbial or other environmental hazards.

5.2.3 The crop producer shall implement measures to prevent or minimize contamination of source plants at the production site.

5.2.4 All procedures associated with primary production shall be carried out under hygienic conditions to minimize contamination and potential sources of contamination of produce or products.

5.3 Site history

5.3.1 A recording system shall be established on the history of the site, the layout of fields and cultivation history.

5.3.2 For all new planting sites, a risk assessment shall be carried out, taking the following into account:

- a) Prior use of the land;
- b) Potential impacts for the production by adjacent crops and areas; and
- c) Potential impact of activities carried out at adjacent areas.

5.3.3 The information of the risk assessment shall be recorded.

5.4 Minimum grace period for GAP certification

5.4.1 Minimum grace period from conventional farming to GAP production shall be 06 months or elapse of one annual harvest.

5.4.2 The grace period shall not be applicable when the crop is established in a land which has not been used for agriculture or industrial purpose for a long time (more than 1 year).

5.5 Site management

5.5.1 The farm management shall demonstrate that it has legal rights to the cultivation of the land and all necessary regulatory approvals.

5.5.2 Where farms are located on sloping lands (within the permissible level), appropriate soil conservation measures shall be undertaken to prevent soil erosion and silt deposition into drains and other waterways.

5.5.3 The farm shall not be established adjacent to natural forest reserves. The minimum distance from the natural water streams shall be maintained according to the national Laws.

5.5.4 The required catchment area shall be protected when the farm is located near to the reservoir or natural water body.

5.5.5 A visual identification or reference system for each field shall be established.

5.6 Planting materials

5.6.1 Choice of planting materials shall meet requirements recommended and / or certified by the regulatory authority.

5.6.2 Propagative materials shall be obtained from reliable sources and be able to trace to their sources of origin.

5.6.3 Where propagation material produced within the farm, records of mother plants, date of establishment, method of propagation, material used for preparation of bed mix with, method of bed sterilization and date, materials used as mulch, agro-chemicals used and date of application, type of fertilizer used, date of application and agronomic practices shall be recorded.

5.6.4 Planting material shall be free from pests.

5.6.5 Where protected varieties are used, the farm shall respect intellectual property right legislation on plant variety protection.

5.6.6 Varieties used for planting in the farm shall preferably possess resistance or tolerance to major pests, so as to minimize utilization of pesticides.

5.6.7 If chemical treatments are carried out on planting materials, such treatments shall be justified and recorded.

5.6.8 Adequate hardening processes shall be followed for the planting materials whether obtained from outside or produced within the farm before field planting.

5.7 Nursery practices

5.7.1 *Seed propagation*

5.7.1.1 Seed progenies (RCN) used for propagation should be selected from superior mother plants; the selected seeds should be well-developed, medium sized nuts with the typical kidney-shape, which are free from pests and diseases.

5.7.1.2 Seeds should be collected from selected mother plants in plantations or from seed gardens which are established from such selected plants. Mother plants should be selected from plants with desirable characters such as high yield potential, regular bearing, low height with compact canopy, high number of flowers and fruit set, and pest and disease tolerance.

5.7.1.3 Ripened cashew apples shall be collected and the RCN should be separated by twisting.

5.7.1.4 It is recommended to clean the seeds thoroughly and dry them well in the sun for a minimum period of around 16 hours to several days.

5.7.1.5 The seeds should be stored under 8 per cent moisture in air-tight containers, until direct seedling.

5.7.2 *Nursey site selection*

5.7.2.1 A flat land with well-drained soil shall be selected and located in an open place closer to a reliable water source and transport facilities.

5.7.2.3 The nursery should be established as close as possible to the plantation.

5.7.3 *Nursery bed preparation*

Well-drained sand beds should be prepared for sowing of cashew seeds. Alternatively, sand-or coir dust- filled pots may be used for smaller seed numbers.

5.7.4 *Seed sowing*

Seed sowing should be done by placing the seeds vertically keeping the stalk end upwards in the sand or coir dust media in beds or in pots; When using pots, one seed may be used per pot at a depth of 3-4 cm.

5.7.5 *Nursery care*

5.7.5.1 It is recommended to provide full shade by covering with a black nylon netting or other suitable shading material (70-90 per cent shade) after the sowing and sufficient amount of water shall be applied twice a day until 7 days of planting followed by watering once a day.

5.7.6 *Transplanting of seedlings to polythene bags*

Seedlings can be transplanted into black polythene bags just after the germination before the radical develops to 2 cm in length at four leaf stage.

5.7.7 *Nursery care after transplanting*

5.7.7.1 The seedlings should be maintained under shielded humid conditions.

5.7.7.2 Irrigation should be carried out after observing the moisture status of the growing media.

5.7.7.3 Weeds should be controlled within the nursery and surrounding area.

5.7.7.4 Turning of polythene bags can be done regularly to check the penetration of taproot into the ground.

5.8 **Post planting care operations**

5.8.1 When vegetative propagated planting materials used, the shoot growth below graft union shall be removed periodically.

5.8.2 The lower branches shall be removed.

5.8.3 De-blossoming shall be carried out during the first two years after planting.

5.8.4 First fruiting shall be allowed in the third year after planting.

5.9 Inter-cropping

Where inter-cropping is practiced, the recommendations or regulations applicable on other crops shall be followed.

5.10 Soil and substrate management

5.10.1 *Soil type mapping*

A soil map shall be developed and recorded for the farm, which can then be used during land preparations, inter-cropping and replanting programmes, where necessary.

5.10.2 *Soil structure*

Cultivation practices that improve or maintain soil structure and those avoid soil compaction shall be selected.

5.10.3 *Soil conservation*

Recommended cultivation and soil conservation techniques that minimizes soil erosion shall be adopted.

5.10.4 *Soil fumigation*

Where chemical fumigation of soils, substrates or potting media is carried out, it shall be justified and recorded.

5.10.5 *Growing media, mulch and shading materials*

5.10.5.1 Preference shall be given to the use of natural substrates.

5.10.5.2 No shelter, mulch, soil or any substrate shall be obtained from natural forest reserves.

5.10.5.3 Usage of sand, top soil, coir dust, cow dung or compost shall be encouraged for preparation of potting media as recommended.

5.10.5.4 Recommended sterilization methods shall be followed prior to the use as a potting media.

5.10.5.5 Where chemicals are used to sterilize the potting media, records shall be kept and maintained.

5.10.5.6 The location of sterilization shall be kept confined. Solarization shall be the preferred option of sterilization.

5.10.6 *Production management*

5.10.6.1 Soil used for planting shall be well drained.

5.10.6.2 Preventive measures for attack of soil borne pests shall be in place without posing any threat to worker safety, produce quality, consumer safety and environment.

5.11 Fertilizer management

5.11.1 *Nutrient requirement*

5.11.1.2 A soil care plan shall be developed to ensure that nutrient losses are minimized.

5.11.1.3 The application of fertilizers shall be based on nutrient levels of the soil or substrates wherever possible and requirements of the crop.

5.11.1.4 Soil testing and treatment shall be followed as per the recommendations of the relevant regulatory authority.

5.11.2 *Fertilizer utilization*

5.11.2.1 Application of fertilizers shall be in accordance with the recommendations of the relevant regulatory authority and fertilizers shall conform to the relevant Sri Lanka Standard Specifications.

5.11.2.2 The type, quantity, method, timing and frequency of fertilizer application shall be carefully observed so as to maximize benefits and to minimize losses.

5.11.2.3 Crop producers shall not use untreated solid or liquid manure.

5.11.2.4 In cases where the farm produces its own organic inputs, proper treatment procedures shall be adopted to reduce or eliminate pathogens present in the raw material and to minimize the probability of contaminating the product. Records of treatment procedures, including the raw materials used shall be kept. The location of the composting site shall also consider the slope and its proximity to crop production sites in order to prevent cross contamination from run-off or leaching. Composting area shall be located at the lowest catena of the crop production site.

5.11.2.5 Organic and inorganic fertilizers shall be used appropriately, optimizing yield and minimizing negative impacts on human health, the environment and the quality of the produce.

5.11.3 *Records of application*

All applications of soil and liquid fertilizers shall be recorded. Records shall include location of application, origin and composition of fertilizers, date of application, type and quantity of fertilizer applied, method and frequency of application and name of the operator.

5.11.4 *Application machinery*

Fertilizer application machinery shall be kept in good working condition and calibrated to ensure the correct quantity is applied.

5.11.5 *Fertilizer source and storage*

5.11.5.1 Fertilizer stock records shall be kept up-to-date and made available for inspection.

5.11.5.2 Fertilizers shall be clearly labeled and stored in a way not contaminating the environment.

5.11.5.3 Fertilizers shall not be stored in close contact with pesticides. If this is not possible, fertilizers and pesticides shall be physically separated and labeled accordingly.

5.11.5.4 Fertilizers shall be stored in a covered, clean, dry location where there is no risk of contamination of water sources. Fertilizers shall not be stored in direct contact with the ground.

5.11.5.5 Fertilizers shall not be stored with nursery stocks.

5.11.5.6 Fertilizers shall not be stored with farm produce or products.

5.11.5.7 Records of sources and nutrient content of fertilizers used shall be kept and made available for inspection.

5.11.6 *Organic fertilizer*

5.11.6.1 Organic fertilizer shall be stored and handled in an appropriate manner to reduce the risk of contamination of farm produce or products and the environment.

5.11.6.2 Sewage sludge shall not be used.

5.11.6.3 Take precautions to avoid pollution by heavy metals or by nitrate leaching, the levels of nutrients, heavy metals and other potential pollutants in the organic fertilizer shall be confirmed before application. A proper account shall also be taken of the nutrient contents in organic fertilizers.

5.11.6.4 The use of organic fertilizers in cultivation shall be based on Integrated Plant Nutrient System (IPNS).

5.11.6.5 The source of organic fertilizer shall be recorded.

5.11.6.6 Operators shall maintain purchase, handling, treatment and processing records.

5.12 **Irrigation and fertigation**

5.12.1 *Planning*

Crop producers shall have acquired plans in their irrigation or fertigation systems based on historical and scientific data.

5.12.2 *Method*

5.12.2.1 The most efficient and commercially viable water delivery system shall be used to ensure the best utilization of nutrient and water resources as well as to protect water sources and avoidance of pollution.

5.12.2.2 Due consideration shall be given to a water management plan to optimize water and nutrient usage and reduce wastage.

5.12.2.3 All crop producers shall maintain water usage records of irrigation and fertigation.

5.12.3 *Quality of water*

Water sources shall be analyzed at least once a year for microbial, chemical and inorganic pollutants. The analysis results shall comply with the microbiological requirements and chemical residual limits of the **SLS 614**.

5.12.4 *Supply of water*

5.12.4.1 On-farm water requirements shall be derived from sustainable sources.

5.12.4.2 Crop producers shall seek advice from relevant authorities on water sourcing.

5.12.4.3 On-farm water sources shall be managed to ensure water-use efficiency and sustainability.

5.13 **Crop protection**

5.13.1 The use of pesticides in crop production shall be minimized.

5.13.2 Non-chemical control measures are preferred over chemical treatments.

5.13.3 Wherever possible, crop producer shall apply recognized Integrated Pest Management (IPM) techniques.

5.13.4 Proper pruning shall be practiced regularly and through the use of appropriate tools in order to reduce pest and disease infestation.

5.13.5 Diseased or infested pods, branches and other plant material shall be regularly removed from the trees, and properly disposed of in a way that prevents contamination. Tools used shall be dedicated for this purpose only and disinfected before and after each use.

5.13.6 In situations where trees are already old and/or less productive, rehabilitation shall be done by removal of unproductive branches.

5.13.7 Measures to reduce risk of diseases shall be in place.

5.13.8 *Choice of pesticides*

Application of pesticides shall be in accordance with the recommendations of relevant regulatory authority.

5.13.8.1 The records of plant protection products shall be kept and maintained for inspection.

5.13.8.2 Crop producers shall only use the pesticides that are registered under the Control of Pesticides Act No. 33 of 1980, as amended for use on the crop that is to be protected.

5.13.8.3 Crop producers shall select the least hazardous pesticides out of the recommended list and shall not use the dosage exceeding the recommendation.

5.13.8.4 Instructions on the pesticide label shall be followed to ensure effective application and to avoid risks to operators, consumers and the environment.

5.13.8.5 A pesticide-rotation strategy (mode-of-action) shall be adopted to avoid reliance on any one pesticide.

5.13.8.6 For crops to be exported, crop producers shall not use pesticides that are banned or disallowed in importing countries.

5.13.8.7 Crop sanitation and quarantine activities shall be adopted at all times.

5.13.8.8 Pesticides applied for other crops in the integrated cropping systems shall be carried out avoiding any direct contamination with the cashew crop.

5.13.9 *Records of application*

All applications of pesticides shall be recorded to include the name of crop, location and date of application, reason for application, name of pesticide (common name and the trade name) used, dosage, method of application and name of the operator.

5.13.10 *Safety, training and instructions*

5.13.10.1 Operators shall be trained on safety measures and proper application of pesticides complying with the **SLS 1465**.

5.13.10.2 Each area of application shall be field-marked with appropriate warning signs of the re-entry period.

5.13.11 *Personal protective equipment*

5.13.11.1 Operators shall be equipped with suitable personal protective equipment (PPE) in accordance with the **SLS ISO 27065** as appropriate to the danger posed to the applicator.

5.13.11.2 Personal protective gear shall be cleaned after use, minimizing the environmental contamination and stored separately from pesticides.

5.13.12 *Pre-harvest interval*

Crop producers shall be strictly adhered to pre-harvest intervals prescribed in pesticide product labels.

5.13.13 *Spray equipment*

5.13.13.1 Spray equipment shall conform to the **SLS 726 PART 1** and be kept in good working condition.

5.13.13.2 Calibration shall be carried out as and when necessary to ensure accurate delivery of the required quantity of pesticide.

5.13.13.3 Equipment used for chemical application shall be properly cleaned and securely stored.

5.13.14 *Disposal of surplus spray mix*

Surplus spray mix and tank washings shall be disposed of with utmost care (This can be sprayed on the treated part of the crop as long as the recommended dosage has not been exceeded or on designated fallow land away from water sources). Records shall be kept of such spraying.

5.13.15 *Pesticide storage*

5.13.15.1 Pesticides shall be stored in accordance with the national regulations.

5.13.15.2 Pesticides shall be stored in a secured, water-resistant, well-ventilated and well-lit location away from other materials.

5.13.15.3 All shelves shall be made of non-absorbent materials.

5.13.15.4 The pesticide store shall be able to retain spillage.

5.13.15.5 There shall be adequate facilities for measuring and mixing of pesticides.

5.13.15.6 There shall be emergency facilities to deal with contamination and accidental spillage.

5.13.15.7 Keys and access to the store shall be limited to workers with adequate knowledge on the handling of pesticides.

5.13.15.8 A procedure to handle accidents, a list of emergency telephone numbers and the location of the nearest telephone shall be available within the immediate vicinity of the store. Similar information shall also be available next to the designated telephone.

5.13.15.9 An inventory of the pesticides in store shall be kept and readily available for inspection.

5.13.15.10 All pesticides shall be stored in their original packaging.

5.13.15.11 Only the pesticides that are recommended and registered for use on crops on the farm shall be stored.

5.13.15.12 Solid pesticides shall be stored on shelves above liquids or stored separately.

5.13.15.13 Hazard and warning signs of potential dangers shall be placed on access doors.

5.13.16 *Empty pesticide containers*

5.13.16.1 Empty pesticide containers shall not be re-used. The disposal of empty pesticide containers shall be in a manner that prevents exposure to humans and contamination of the environment.

5.13.16.2 Official collection and disposal systems shall be used, if available.

5.13.16.3 Empty containers shall be rinsed at least three times with water and the washings are returned to the spray tank before disposing.

5.13.16.4 Unless participating in established recycling programmes or with expressed permission from the authorities, rinsed containers shall be pierced and dented to prevent reuse.

5.13.16.5 Empty containers shall be kept secure until they are disposed.

5.13.16.6 Disposal or destruction of containers shall be in accordance with the national Laws.

5.14 Harvesting

5.14.1 Only fallen nuts shall be collected and cashew apples shall be detached from these. RCN shall be collected within 72 hours of falling.

5.14.2 It is also recommended that a net should be spread underneath the trees to facilitate collection of the nuts and to prevent contamination.

5.14.3 The surface under the tree shall be kept clean and weed growth kept under control by a suitable method such as slashing.

5.14.4 The interval between the fall and collection of the cashew apples and nuts shall be minimized. RCNs shall be frequently collected specially under conditions of high relative humidity or occasional rainfall.

5.14.5 Newly harvested RCN shall not be mixed with any of the previously harvested nuts.

5.14.6 Used fertilizer bags shall not be used for collecting harvest and for covering of nuts.

5.14.7 Unfit RCN shall be segregated during harvesting and processing to the fullest extent practicable and shall be disposed of in an appropriate manner.

5.15 Post-harvest handling

5.15.1 The post-harvest handling shall be done in accordance with good hygienic practices as described in the **SLS 143**.

5.15.2 All product packing and storage sites shall have adequate pest control measures, particularly in the working and storage areas for packaging materials, pesticides and fertilizers.

5.15.3 Precautions shall be taken to minimize rapid weight loss after harvesting with appropriate storage practices.

5.15.4 *Drying*

5.15.4.1 The moisture content of collected RCN can be as high as 25 per cent. High moisture level may cause deterioration of the kernel due to mould or bacterial attack or enzyme action.

5.15.4.2 Storing the collected RCN in a heap before drying shall be avoided as the nuts in the inner part of the heap are adversely affected.

5.15.4.3 RCN shall be dried in the sun immediately after collecting. Artificial drying of RCN at this stage is not recommended.

5.15.4.4 Drying floors shall be flat, gently sloping and shall have a waterproof, easily cleanable smooth surface.

5.15.4.5 The drying floor shall be allowed to warm up in the sun before spreading RCN.

5.15.4.6 Where the drying floors are not available, mats made of bamboo or palm leaves or other similar material may be used.

5.15.4.7 The layer of RCN shall be no more than 100 mm thick.

5.15.4.8 The layer of RCN shall be constantly raked for even drying

5.15.4.9 Wooden tools are recommended for manipulating RCN during drying, sweeping, the nuts into rows, or filling into bags.

5.15.4.10 Dried RCN shall be heaped and covered at the end of the day.

5.15.4.11 Well dried RCN shall be greyish brown to black in colour and when shaken together will make a sharp rattle. No impression can be made with the thumb nail.

5.15.4.12 Dried RCN shall be graded as given in **SLS 245** and stored.

5.15.5 *Storage*

5.15.5.1 RCN shall be safely stored at a moisture level of 8 per cent or less either in bulk or in bags.

5.15.5.2 The store room shall have a clean dry floor and roof with sufficient head room allowing manipulation of bags in a stack. The store room shall have adequate ventilation.

5.15.5.3 The bags shall be stacked on dunnage to prevent uptake of moisture through the floor and shall be well away from the walls. Pests can be discouraged by using a pesticide from time to time when the stack is being made.

5.15.5.4 Bags can be stacked in such a way that they taper inwards from the base to form a tank leaving an inner space that can be filled with nuts. The mouths of bags shall be open and facing

inwards to the tank. Stacking shall be done carefully to withstand the pressure of loose nuts inside.

5.16 Packaging on farm

5.16.1 Packaging materials shall be stored in clean storage areas to avoid contamination by physical and chemical hazards as well as pests. It shall be protected from rodents, birds and other animals.

5.16.2 Where produce is field packed, packaging shall not be left in the field overnight where risk of contamination and moistening exists.

5.16.3 Packing material shall be made out of virgin material. The farmer shall obtain food-grade certificate from the supplier with Material Safety Data Sheet (MSDS).

5.16.4 Bags or containers used to store chemicals and feeds shall not be re-used.

5.16.5 Re-usable crates, boxes, containers and also vehicles used to transport harvested produce shall be cleaned to ensure that they are free from foreign materials, soil, dirt, manure, crop residue, decaying produce, lubricant, and any other contaminant which may be detrimental to the quality of the produce and/or consumers' health.

5.17 Waste and pollution management, recycling and re-use

5.17.1 All possible waste products and sources of pollution shall be identified in all areas of the production.

5.17.2 Having identified wastes and pollutants, a plan shall be developed and implemented, to prevent or reduce wastage and pollution. Whenever possible, crop debris and waste shall be composted and re-used for soil conditioning, and shall not be burnt or used for land filling as a mean of recycling.

5.17.3 Sufficient area of garbage disposal or clearly specified disposal area shall be provided.

6 WORKER'S HEALTH, SAFETY AND WELFARE

6.1 Action plan

There shall be an action plan to promote safe and good working conditions. Workers who are handling fresh produce shall be medically screened as per the legal requirement.

6.2 Training

6.2.1 Training shall be given to workers operating dangerous or sophisticated equipment.

6.2.2 Workers shall undergo training in basic hygiene and food safety before handling produce. The aspects of hygiene shall include personal cleanliness, clothing cleanliness and personal behavior. Workers shall be made aware of the requirement to notify management

when they are in contact with anyone with a communicable disease which may render them unfit to work in the vicinity of produce destined for human consumption.

6.2.3 Records of training for each employee shall be kept.

6.2.4 Accident and emergency procedures shall be available with clear instructions to all workers. These procedures shall be displayed in the appropriate language of the workforce. Instructions shall be supported by symbols where possible.

6.3 Facilities and equipment

6.3.1 First aid boxes shall be available at permanent sites on the farm. All workers shall be informed of these locations and the personnel-in-charge of safety.

6.3.2 All hazards shall be clearly identified by warning signs and symbols where appropriate.

6.4 Pesticide handling

Workers undertaking pesticide applications on the farm shall receive regular health checks in line with guidelines based on regulatory requirements.

6.5 Workers' hygiene

6.5.1 Hygiene protocol for workers shall be put in place in order to prevent physical, microbiological and chemical contamination of the produce.

6.5.2 Workers shall be encouraged to wear Personal Protective Equipment (PPE) to prevent possible contaminations.

6.5.3 Workers shall have access to clean toilets and washing facilities in the vicinity of their work.

6.5.4 Workers shall receive basic training in hygiene requirements for the handling of produce. The training program shall outline the need for hand cleaning, the covering of skin cuts, and the confinement of smoking, eating and drinking in permitted areas.

6.6 Welfare

6.6.1 All employment conditions shall comply with National Employment Regulations.

6.6.2 If on-site living quarters are provided, they shall be habitable and have basic amenities and facilities.

7 SOCIAL JUSTICE

7.1 The certification body shall not certify the GAP production in the case of clear social injustice or any violation of basic human rights.

7.2 Farm shall not engage in or support the use of child labour. Farm shall comply with Sri Lankan child labour laws regarding minimum working age.

7.3 Employees shall have equal opportunities, treatment and equal wages when performing the same level of work, regardless of colour, sex, religion, race, political opinion, nationality, extraction or origin.

7.4 The operator shall provide adequate health and safety measures for employees, casual workers and contractors to prevent accidents and injuries to health arising out of, linked with or occurring in the course of work, by minimizing, so far as is reasonably practical, the causes of hazards inherent in the working environment.

8 ENVIRONMENTAL ISSUES

8.1 Impact of farming on the environment

Crop producers shall conform to existing environmental legislation. This covers the concern for air, water, soil, biodiversity and other environmental issues.

8.2 Wildlife and biodiversity conservation

8.2.1 Crop producers shall always be conscious of the need to conserve wildlife, biodiversity, high conservation value areas and the enhancement of agricultural biodiversity.

8.2.2 Where Environmental Impact Assessment (EIA) is required, consideration for the conservation of wildlife and biodiversity shall include the following areas:

- a) Conduct a baseline audit to understand existing animal and plant diversity on the farm. Conservation organizations may be requested to conduct surveys to measure biodiversity and identify areas of concern.
- b) Take action to avoid damage and deterioration of habitats on the farm; and
- c) Create an action plan to enhance habitats and increase biodiversity on the farm complying with the national legislation.

8.3 Unproductive sites

Crop producers are encouraged to convert unproductive sites in their farms into conservation areas for natural flora and fauna.

9 PACKAGING REQUIREMENTS

9.1 Crop producers shall not use packaging material that may contaminate GAP produce or products.

9.2 The use of packing material containing Polyvinyl chloride (PVC) shall be prohibited.

9.3 Packaging materials, storage containers or bins that contain a synthetic pesticide, preservative, fumigant or their residues shall be prohibited.

9.4 Recycled materials shall not be used for packaging of GAP produce or products.

9.5 Agricultural produce from conventional agriculture shall not be packed together with GAP-certified and GAP-labeled products.

10 MARKING AND / OR LABELLING REQUIREMENTS

10.1 The following shall be marked or labeled legibly and indelibly on each package/ container to cover GAP and general labeling requirements:

- a) Name of the produce;
- b) Grade
- c) Name and address of the producer;
- d) QR code, bar code, batch code or any decipherable code marking;
- e) Net mass in g or kg;
- f) Date of manufacture/ harvest;
- g) Date of expiry / best before;
- h) Instructions for usage;
- j) Registration number; and
- k) Storage condition.

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