Additional Criteria and Indicators for Pineapple Production

Sustainable Agriculture Network

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Introduction

This document contains the criteria and indicators that complement Sustainable Agriculture Standard with Indicators – Sustainable Agriculture Network for the certification of pineapple production. A pineapple farm needs to comply with the indicated standards as well as the additional criteria and indicators in this module.

The criteria in this module substitute the corresponding criteria in Sustainable Agriculture Standard with Indicators – Sustainable Agriculture Network. For example, criterion 2.5 in this module substitutes criterion 2.5 in Sustainable Agriculture Standard with Indicators – Sustainable Agriculture Network.

The differences or changes in criteria with respect to Sustainable Agriculture Standard with Indicators – Sustainable Agriculture Network are underlined. In some instances the differences are minimal, such as a modified sentence or the addition of a few words. Nevertheless, the changes are important for guaranteeing the correct implementation of best social and environmental management practices on farms that cultivate pineapple.

In other cases, there are criteria in this module whose numbering does not correspond to any criteria in Sustainable Agriculture Standard with Indicators – Sustainable Agriculture Network. These are additional criteria for the production of pineapple and are not underlined. An example is criterion 8.7.

All indicators included in this module are additional indicators. These illustrate examples of how compliance with the standards is measured or evaluated on farms that cultivate pineapple. In other words, the indicators are examples of best management practices.

Additional criteria and indicators for pineapple

2.5 There must be a minimum separation of production areas from natural ecosystems where chemical products are not used. A vegetated protection zone must be established by planting or by natural regeneration between different permanent or semi-permanent crop production areas or systems. The separation between production areas and ecosystems is indicated in Annex 1 of this document.

2.6 Natural water channels must be protected by establishing protected zones on the banks of rivers, streams, creeks, lakes, wetlands and around the edges of other natural water bodies, as indicated in the matrix in Annex 1 of this document. Farms must not alter natural water channels to create new drainage or irrigation canals. Previously converted water channels must maintain their natural vegetative cover or, in its absence, this cover must be restored.

2.7 As part of the conservation program, the farm must establish and maintain vegetation zones between the crop and areas of human activity, as well as between production areas
and on the edges of public or frequently traveled roads passing through or around the farm. These zones must consist of permanent native vegetation with trees, bushes or other types of plants, in order to promote biodiversity, minimize any negative visual impacts and reduce the drift of agrochemicals, dust and other substances coming from agricultural or processing activities. The width of the vegetated protection zone is stipulated in Annex I of this document.

4. WATER CONSERVATION

4.4 The farm must have appropriate treatment systems for all of wastewaters it generates. The treatment systems must comply with applicable national and local laws and have the respective operating permits. There must be operating procedures for industrial wastewater treatment systems. All packing plants must have solids traps that prevent the discharge of solids from washing and packing into canals and water bodies.

Additional indicators

- There are no washing and packing process wastes, such as plastic or pieces of fruit or leaves, in the canals where packing plant waters are discharged.
- The solid traps are in good condition and well maintained. This is no evidence of excessive accumulations of wastes, holes in the screens, or other problems that would permit the discharge of solids to canals.

6. OCCUPATIONAL HEALTH AND SAFETY

6.6 The farm must provide workers in all work areas with the basic services, resources and working conditions necessary to comply with the occupational health and safety program objectives and with the safety, health, and cleanliness requirements of applicable laws and this standard. The farm must consult workers about the provided services, resources and working conditions, and demonstrate that they take into account the results of these consultations. The farm must provide the necessary protective equipment, and require its usage, for all machinery, tools and other implements considered dangerous. Farms must provide shelter for shade and protection from extreme weather conditions, such as heavy rain and lightning, as well as sanitary facilities, within 500 meters of any point in the plantations where field workers are working. Farms must have procedures for protecting workers in the event of an extreme weather event. When harvesting at night, farms must provide constant lighting in the entire radius of harvest worker activities.

Additional indicators

- Shelters exist that are accessible for all field workers. These shelters are designed to protect workers from the rays of the sun, lightning, intense rain, and other extreme weather. They can be permanent or portable, but must be found within 500 meters or five minutes of walking time from where field workers are laboring.
- Sanitary facilities are within 500 meters or five minutes walking time from workers.
- The farm can demonstrate that it takes measures or actions to guarantee that the workers do not suffer the negative effects of dehydration or exposure to the sun due to working long
periods in the field. For example, field activities are programmed early in the morning or at the end of the day to avoid high temperatures and direct sun.

- Lighting used for night harvesting is constant and distributed uniformly for all field workers. For example, the worker positioned the furthest from the harvester has the same intensity of light as the worker closest to the harvester.
- The workers that harvest at night confirm that they have enough light to carry out their activities without additional risk of accidents. The farm can demonstrate that the accident rate is not higher for night harvesting compared with other harvest times.

6.8 Workshops and storage facilities of substances that are agrochemicals or flammable must be designed, constructed and equipped to reduce the risk of accidents and negative impacts on human health and the environment. The farm must have packing material (cardboard boxes, plastic and other materials) storage and assembly areas constructed from impermeable and non-flammable materials. All of these areas must be used exclusively for designated purposes and must have signs inside and outside that indicate the types of substances stored, the dangers they present, and precautionary measures to be taken in the area. The design, construction and equipping of these facilities must comply with applicable laws or with the following parameters, whichever are stricter:

a. The corridors and storage areas on the floor of the storage facilities must be well marked. There must be a free space of at least 30 centimeters between the wall and the stored materials.

b. The storage facilities must have shelving and platforms for storing equipment made from non-absorbent materials for storing liquid products.

c. There must be enough natural light to allow visibility during the day in the absence of electricity.

d. There must be enough natural ventilation to prevent the accumulation of odors and vapors.

e. The emergency exits must be clearly marked and unobstructed.

f. In the box and packaging assembly areas, the continuous noise level must not exceed 85 decibels.

g. The box and packaging assembly areas must have at least two square meters of free space for each assigned worker’s position.

Additional indicators

- The walls and roof of packing material assembly and storage areas are made of cement, zinc sheets, metal screening or other non-flammable materials.

- For this standard, a continuous maximum noise period is considered as the time of exposition to the maximum permitted noise level during the course of a workday. In the cardboard storage area, for example, the noise level must not exceed 85 decibels during eight consecutive hours without workers using noise protection. As a point of comparison, 80
decibels is the equivalent to being one meter from an alarm clock with the alarm sounding; it is difficult to hold a conversation under these conditions.

- The working position where workers are assigned must be free of debris and packing materials not immediately needed for their tasks. This area must be at least two square meters. If a worker is positioned at a table or bench, then the free space must take into account each side and the rear of the worker.

6.15 The farm must take permanent actions to protect workers, neighbors and other persons from the effects of the application of agrochemicals and biological or organic inputs. The farm must identify the groups that are most exposed to applications and have mechanisms for alerting them well in advance regarding application dates and areas and the time periods during which entry to these areas is restricted. Access to these areas must be prevented by warning signs with symbols or by other safety indications. The farm must implement an application schedule in order to prevent undue entrance of unauthorized persons into the application area. The presence of workers in production areas during aerial fumigation must not be permitted. The workers know and respect the restricted entry intervals, and quarantine and pre-harvest periods stipulated in the Material Safety Data Sheet for applying agrochemicals. For products that do not have restricted entry periods in the Material Safety Data Sheet, the following restricted entry intervals must be applied:

a. WHO categories III and IV – between 4 and 12 hours.

b. WHO category II products – between 24 and 48 hours.

c. WHO category I products – between 48 and 72 hours.

When two products with different restricted entry or pre-harvest application intervals are used at the same time, the longest interval and the strictest quarantine procedures must be applied. Spray booms must have a colored sign, visible from 30 meters, that corresponds to the toxicity of the product being applied or to that of the most toxic product in the application mix.

Additional indicators

- The spray boom has a sign, flag or other type of warning in a color that corresponds to the most toxic product in the application mix; for example, a red flag for a highly toxic or dangerous product.

- Workers can explain the significance of the colored warning sign on the spray boom and what the respective safety measures they must take are.

7. COMMUNITY RELATIONS

7.2 The farm must implement and carry out policies and procedures for identifying, consulting and considering the interests of local populations and community interest groups regarding farm activities or changes that could have a negative impact on their quality of life or on local natural resources.

Additional Indicators
• The farm has identified local community groups and the farm-related issues that concern them.

• The farm has consulted local populations and interest groups and it can demonstrate how it considered or incorporated the results into its decision-making process and how it sought to resolve potential conflicts.

7.4 The farm must contribute to the protection and conservation of community natural resources, collaborate with the development of the local economy, and contribute fairly towards the costs of the community infrastructure and local shared resources consumed – schools, pathways, aqueducts and other infrastructure as well as water and other resources – according to the amount of used by the farm. **Farms must negotiate a fair compensation with local communities and local and national authorities for resources and infrastructure used.**

Additional Indicators

• Where farms consume local resources that are also used by others, such as water supplies, it has quantified this use and has sought to justly compensate it. Compensation is negotiated with local communities and government authorities. When a negotiated settlement cannot be decided, farms can seek settlement through legal or other means of mediation.

8. INTEGRATED CROP MANAGEMENT

8.7 Farms must only use fumigation methods for post-harvest treatment that minimize and control applications. Records must be maintained of any post-harvest treatment of fruit. These records must at least include the following information: treatment application date, fruit lot or batch number, the name of the applied product(s), dose, and the names of the persons who applied and mixed the product(s) and approved the application.

Indicators

• In the packing plant, post-harvest treatments are applied using methods that do not pose a threat to workers’ health.

• The fumigation chambers and other application methods are in good condition. They do not leak or permit the escape of chemical products towards workers.

• The farm can demonstrate that the following post-harvest treatment information is recorded for any fruit processed or packed: treatment substance name, doses used, the names of the persons who applied and mixed the treatment, and the treatment dates.

9. SOIL MANAGEMENT AND CONSERVATION

9.1 **Critical Criterion.** The farm must execute a soil erosion prevention and control program that minimizes the risk of erosion and reduces existing erosion. The program activities must be based on the identification of soils affected by or susceptible to erosion, as well as soil properties and characteristics, climatic conditions, topography and agricultural practices for the crop. **Special emphasis must be placed on controlling runoff and wind**
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erosion from newly tilled or planted areas, as well as preventing sedimentation of water bodies. Structures that capture sediments must be well maintained and periodically dredged or cleaned. The farm must use and expand vegetative ground covers on the banks and bottoms of drainage canals to reduce erosion and agrochemical drift and runoff towards water bodies. Priority should be given to native species unless it has been proven that the use of native species strongly limits crop development, when propagation materials are not locally available, or when it is proven that the exotic species has a special value for the environment or wildlife.

Additional Indicators

- The farm implements activities to reduce runoff from pineapple production areas, particularly newly planted areas. These may include diversion ditches, vegetated waterways, contour planting, sediment traps, sedimentation ponds, and structures within tertiary and secondary canals that trap sediments.
- Sediments are removed periodically from sedimentation ponds and sediment traps. There is no evidence of excess sediments in reaching water bodies directly (by runoff) or indirectly (through drainage canals).
- The farm takes measures to minimize the loss of soil due to blowing on newly tilled areas. Tilling is managed so as to minimize soil erosion.
- Drainage canals have vegetative cover on the banks and bottoms. There is no evidence that the farm applies herbicides on the banks or bottoms of the canals to control vegetation.
- The farm carries out activities to establish ground cover in those canals where it is absent.
- Exotic species adapted to local conditions are used only in cases when it has been proven that the use of native species strongly limits crop development, when propagation materials are not locally available, or when it is proven that the exotic species has a special value for the environment or wildlife.

9.5 Critical Criterion. New production areas must only be located on land with the climatic, soil and topographic conditions suitable for intensity level of the agricultural production planned. The establishment of new production areas must be based on land use capacity studies that demonstrate long-term production capacity. The cutting of natural forest cover or burning to prepare production areas is not permitted. Pineapple must not be cultivated on slopes greater than 15 percent.

Additional Indicators

- Pineapple is not found on slopes greater than 15 percent. Slopes up to 20 percent can be permitted if the slope is less than 30 meters in length, and these areas make up less than 10% of the total pineapple production area on the farm.
- Farms do not burn brush, forest, or crop residues to prepare land for cultivation.
Annex 1. Separation between production areas and water bodies, roads and buildings.

Separations in meters between areas of pineapple production and water bodies, roads and buildings, based on crop-management intensity, are shown in the following table. The farm must comply with the distances indicated in the table or applicable laws, whatever is greater.

The separation from water bodies is also indicated according to the average percentage of slope of the surrounding terrain. For example, farms that apply agrochemicals less than once per month, and do not use WHO category I or II products, must maintain a separation of five meters between streams (less than three meters wide) and crop production areas on flat land.

For roads, the separation indicates the width of the buffer strip between the crop and the edge of the road in which the use of agrochemicals or the production of crops is prohibited. These areas must have vegetative barriers.

This table applies to pineapple not cultivated in association with other crops. In the case of mixed crops in the same production area, the greatest distance must apply.

The following definitions apply:

**High use of inputs** – WHO category Ia, Ib and II agrochemicals are applied, or the frequency of agrochemical application is two or more times per month.

**Housing or similar areas** – Houses, schools, dining areas, health clinics, recreation areas or similar infrastructure where human activity takes place on a daily basis in general.

**Infrequent use** – Storage areas, packing sheds, warehouses, workshops, processing plants and other similar infrastructure where workers carry out activities for short periods of time (less than 30 minutes per day) no more than twice per week.

**Low use of inputs** – Only WHO category III and IV chemicals are used and the frequency of application is less than two times per month. Aerial fumigation or applications using “spray booms” are not employed.

**Organic** – Farms in which the audit team proves that chemical pesticides or fertilizers are not used; farms that are certified organic by accredited certification bodies.

**Permanent use** – Storage areas, packing sheds, warehouses, workshops, processing plants and other similar infrastructure where workers carry out activities on a daily basis.

**Public roads** – Roads, streets or highways that connect or lead to population centers (towns, settlements, cities) and are used for transportation or by pedestrians on a daily basis on average. This category does not refer to internal roads within the farm boundaries that are used on a daily basis on average only for farm activities.
### Table of separations

<table>
<thead>
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<th>Slope: Type of crop management for pineapple</th>
<th>High input use</th>
<th>Low input use</th>
<th>Organic</th>
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<td>Greater than 8%</td>
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1. **From water bodies (in meters):**

   a. Perennial and seasonal streams and creeks (width less than or equal to three meters); primary drainage canals and natural waterways that were previously converted to primary drainage canals

      |                | 10 | 20 | 5 | 10 | 5 | 5 |

   b. Rivers (width greater than three meters), lakes, ponds, swamps and marshes, reservoirs, estuaries.

      |                | 10 | 30 | 10 | 20 | 5 | 10 |

   c. Springs

      | 30 | 50 | 10 | 20 | 10 | 10 |

2. **From roads (in meters):**

   a. Public

      | 10 | 5 | 5 |

3. **From buildings (in meters):**

   a. Housing or similar use

      | 30 | 30 | 10 |

   b. Permanent use

      | 30 | 10 | 5 |

   c. Infrequent use

      | 10 | 5 | 0 |