REPUBLIC OF HONDURAS
MINISTRY OF AGRICULTURE AND LIVESTOCK (SAG)
ANIMAL AND PLANT HEALTH NATIONAL SERVICE (SENASA)

Technical Dossier for the Recognition of Melon Production Farms of Montelibano and Santa Rosa as a Place of Production Pest free (*Ceratitis capitata(Wiedemann))*

ANIMAL AND PLANT HEALTH NATIONAL SERVICE
TECHNICAL SUB DIRECTORATE OF PLANT HEALTH
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I.- INTRODUCTION

AGROPECUARIA MONTELIBANO is a family own business located in the south region of Honduras with more than 30 years of dedicated to grow, pack and export melons (*Cucumis melo* sp.), seeded and seedless watermelons (*Citrulus sp*.) to a wide range of demanding markets around the globe including; North America (USA & Canada), Continental Europe, United Kingdom, Middle East and South Asian Market.

Types of Melons:

Cantaloupe: Caribbean Gold, Caribbean Diamond, Zelda, Florida and Florentino.

Galia: Amaregal.

Honey Dew: White and Yellow.

Watermelons: Seeded and Seedless.

PRODUCTION PROCESS DESCRIPTION:

A. GREENHOUSE:

AGROPECUARIA MONTELIBANO has 6,330 square meters of greenhouse with capacity to produce 3,630,000 each eleven days, with humidity and temperature control and cover with an antivirus mesh to avoid decease at early stage of the plant. After 11 days sprouts are sent to the final fields.

B. FIELD PRODUCTION PROCESS:

We use drip irrigation system in all farms. We do a deep soil preparation and prepare a soil bed with dimensions of 8” high and 24” wide. This soil bed is covered with plastic mulch that restricts the growth of weeds and avoids the contact of melons with the soil. Once transplanting is done the sprouts are covered with a special antivirus mesh for a period of 18 days to avoid insect damage and to reduce the usage of chemical for crop protection products (Pesticide).

22 days after transplanting, the antivirus mesh is removed and the spraying plant protection program begin using EES (Electric Spraying System) and forced air equipment to ensure a good coverage of the applied products. When the flowering period begins, beehives are introduced at a rate of 6-8 per hectare to ensure a proper pollination process and a good quality fruit. Beehives are removed from the field on day 32 after transplanting.

At day 40 after transplanting, an small plastic dishes is placed under each melon to avoid the contact with plastic surface, allow the melon to have an uniform netting around the fruit, ensure good sanitation and food safety of each melon.

At day 45 after transplanting, a labor call flipping is performed on each melon, whose primary purpose is to turn and clean the melon.

A pesticide program is implemented to each crop, using only products that are allowed by the local and markets laws (Europe, U.S.A. and Honduran Law). Pesticides are applied only if level of pest in the crop is above critical line. An IPM program has been established to meet the international market standards of the melon.

At day 60 after transplanting the harvest process take place, once melons are removed from the plant vine, they are placed in a 1 m3 plastic bin and then transported in a flatbed pulled by a tractor from the field to the packing house. All bins are cover with a plastic sheet to avoid dust or eliminate contamination risk during transportation.

C. PACKING OPERATIONS

Agrolibano Packing House are constructed of solid materials, they all have a chain link fence around and security control on each entrance. Each employee must show their ID to enter into AGROLIBANO facilities. Each employee must perform a sanitation procedure before entering into the packing house and dress the uniform given to work.

As a result of the different markets we serve, the packing process is adjusted according to the market standards and the customer specification.

After harvest and transportation to the packing house, the fruit is unloaded into a water tank with 200 ppm of chlorine concentration, then each fruit goes through a set of brushes to remove dirt from skin, then the fruit goes to a hot water treatment at 70 °F that pasteurizes the surface of the melons and eliminates risk of bacterial contamination, then the fruit is classified by customer standard (size and grade quality) and then goes through a post-harvest treatment done as per market regulations. Finally the melon goes to the packing area where they are place inside cartons.

As soon as the fruit has been packed inside a carton then is send into the palletize area and then to the cooling chamber to low temperature as quick as possible. Once fruit reach the proper internal temperature, then is loaded inside a container and send to the final destination.

AGROLIBANO comply with the safety and quality requirement for all the customers and meet the annual Certification of: US GAP, US GMP, Global Gap, HACCP, TESCO Nurture, Field to

Fork, Wal-Mart, ETI Code Initiative, Chiquita and IP, and SENASA (Branch of the Ministry of Agriculture) that have a permanent official inspector in the packing house and field operations.

II.- OBJECTIVES

In the best interests of the producer Agropecuaria Montelibano, Honduran company that produces melon (*Cucumis melo*) to export to your country, melon that is produced in its Farms Montelibano and Santa Rosa. Both farms have been official declared PLACE OF PRODUCTION AND PRODUCTION SITE FREE OF MEDITERRANEAN FLY (*Ceratitis capitata*), by the Secretary of Agriculture and Livestock of Honduras(SAG) and the National Agricultural Health Service of Honduras (SENASA), on November 1, 2012 Decision No. 1415-1412 taken on October 26, 2012 and published in the Official Journal La Gazette No. 32979 in November 20, 2012 and on January 16, 2014 Agreement No. 758-13 taken on November 4, 2013 published in the Official Journal La Gazette No. 33305 on December 16, 2013.

The National Agricultural Health Service (SENASA) and Competent National Authority in the present case takes the willingness to adapt the concept of a place of production free of pests that can be applied to any premises or collection of fields operated as a single unit of production. Where the producer applies the necessary measures over the entire production site, with the case of FARMS SANTA ROSA AND MONTELIBANO, farms that operate as a single unit of agricultural production, located at a sufficient distance from potential sources of pest infestation, with proper insulation, clear boundaries, with officially recognized boundaries and appropriate access to the buffer zone.

Also taken into account the characteristics of the Medfly in Montelibano and Santa Rosa farms, where the Medfly has low relative probability of survival from previous seasons due to temperatures which are greater than 35 ° C., the factors in the biology of Medfly in managing the production site, do not interfere with the detection, having the methods available which are sufficiently sensitive for the detection of the Medfly, for tests applied in the field during the appropriate season.

According to the procedure employed by the Department of Diagnostic and Phytosanitary Surveillance sub technical direction of Plant Health it was preceded as following:

Preparation and implementation of the Trapping Manuel was used under the following features:

• GENERAL OBJECTIVES: To officially establish the procedures to be followed in the implementation of the detection system for medfly trapping in Farm Santa Rosa in Nacaome, Valle and on Farm Montelibano in Namasigüe, Choluteca.

• SPECIFIC OBJECTIVES:

• Provide personnel responsible for this activity, a standard procedural tool for conducting screening activities.

• Ensure proper implementation of the detection system in the medfly production location and free production sites.

• Facilitate the collection and flow of information generated from the establishment of the trapping network.

LEGAL BASE MANUAL

The Ministry of Agriculture and Livestock (SAG), through the National Agricultural Health Service (SENASA), is responsible for ensuring plant health control and the planning and execution of phytosanitary surveillance actions and eradication of pests and diseases within the national territory, also taking care of the phytosanitary control aspects of the production, manufacturing, marketing, and mobilization of plants and products, vehicles, materials, machinery and agricultural and forestry equipment when involving a phytosanitary risk, which has been assigned by the Animal and Plant Health Act, contained in Decree No. 157-94 as amended by Decree No. 344-2005 and Regulations on Agricultural Quarantine and phytosanitary Surveillance and Diagnosis stipulated in the agreements No.1618-002-98 and No. 97 respectively.

The manual contains procedures that provide the above legal provisions, which shall be applied by plant protection officers monitoring Mediterranean fly populations in the Production Location and Free Production Sites of Farm SANTA ROSA and MONTELIBANO of Grupo Agrolibano in compliance with those provisions.

DETECTION BY TRAPPING

Activity detection using traps consisted in the installation of a properly planned trapping network using the suitable attracting agents, enabling the capture of the adult Mediterranean fruit fly.

TYPES OF TRAPS USED

The traps used on the project PLACE AND PRODUCTION SITE SANTA ROSA and MONTELIBANO from GRUPO AGROLIBANO, are the following:

- Jackson Trap
- Multilure Trap

THE ATTRACTANTS USED

The attractant used in adult trapping Medfly are trimedlure; Cuelure Methyl Eugenol, which is also used to detect exotic flies. Jackson traps and hydrolyzed protein in Multilure traps, which will also be used with 3 attractants (putrescine, ammonium acetate and trimethylamine) in the packing area to tighten control on the critical zone.

TRAP DENSITY USED

The trap density of the project will be beating the guidelines of the International Atomic Energy Agency (IAEA) to have a more rigorous monitoring, the following densities and composition of trapping stations were determined:

Monitored Area	Project Density	Recommended Density	Station Composition
Production Zone	1 trap station/20 Ha's ≈ 5 stations/Km^2	0.5 to 1.0 stations/Km^2	1 MLT with torula 1 JT+CUE 1 JT+MLT 1 JT+ME
Packing Zone	1 trap station/10 Ha's ≈ 10 stations/Km^2	0.25 to 0.5 stations/Km^2	1 MLT + AA/TMA/Pt
Buffer Zone	0.5 trapping zone/Km^2	0.25 a 0.5 stations/Km^2	2 MLT with torula 1JT+CUE 1 JT+MLT 1 JT+ME

1. Production area: Any area located within the perimeter of the farm which is destined for the plantation of Melon (Cucumis melo).

2. Packaging Zone: The area of 0.30 Ha's around the premises where the melon is packed for export.

3. Buffer Zone: The 1 km area after the perimeter boundaries of the farm production.

Monitoring Area	Project Density	Farm Santa Rosa	Farm Montelibano	Station Composition
Production Zone	1 Trap Station/ 20 Ha's ≈ ≈ 5 stations/ Km^2	164 Trap: 41 stations	80 traps: 20 stations	1 MLT with torula 1 JT+CUE 1 JT+MLT 1 JT+ME
Buffer Zone	0.5 trap stations/ Km^2	100 Traps: 20 stations	60 traps: 12 stations	2 MLT with torula 1 JT+CUE 1 JT+MLT 1 JT+ME
Total Traps		**264**	**140**	

DISTRIBUTION OF TRAPS IN THE FIELD

The distribution of trapping network in the field was done according to the particular characteristics of the area, in the case of the areas where continuous compact blocks and commercial blocks and in urban areas where hosts are in the backyards, traps were placed with a uniform distribution.

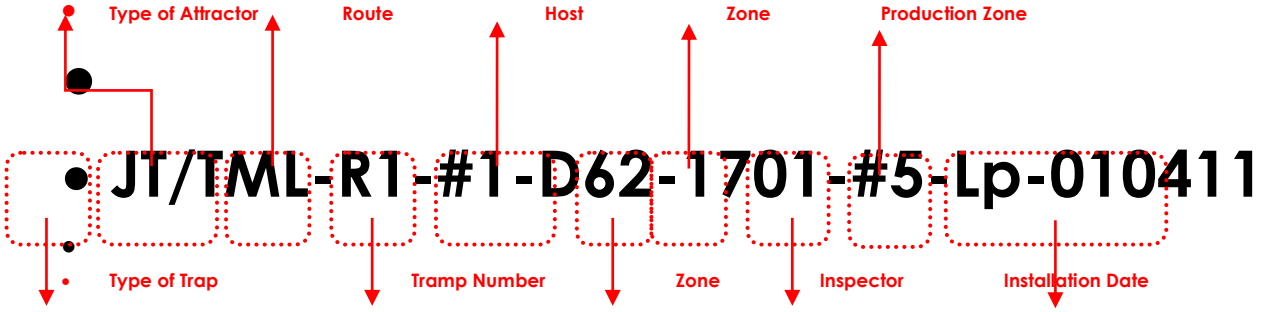
• **TRAPS PLACEMENT** : Traps are placed in host fruiting and the phenology of the same should be the pattern to be followed in the rotation of the trapping network .

• **TRAPPING MAP NETWORK**: You need to have a map , as accurate as possible containing the location of each of the traps that have been placed in the field. To this end , each field technicians prepares the maps for each of the routes under its responsibility, the references included on these maps should be as descriptive as possible, so as to facilitate the inspectors , supervisors and anyone interested finding traps where traps were placed in the urban area. It must have the exact address of the property where the trap was laid and the name and owner of the property .

• Geo-reference TRAPS : The use of Global Positioning System (GPS) , are very useful in these pest monitoring systems . Each of the traps installed in the field, shall be geo - referenced using portable GPS 's, this activity should be done at the time that each trap is placed and each time it is rotated .

- IDENTIFICATION OF TRAPS :

- Example: Unique Identification Code Trap (CUIT)



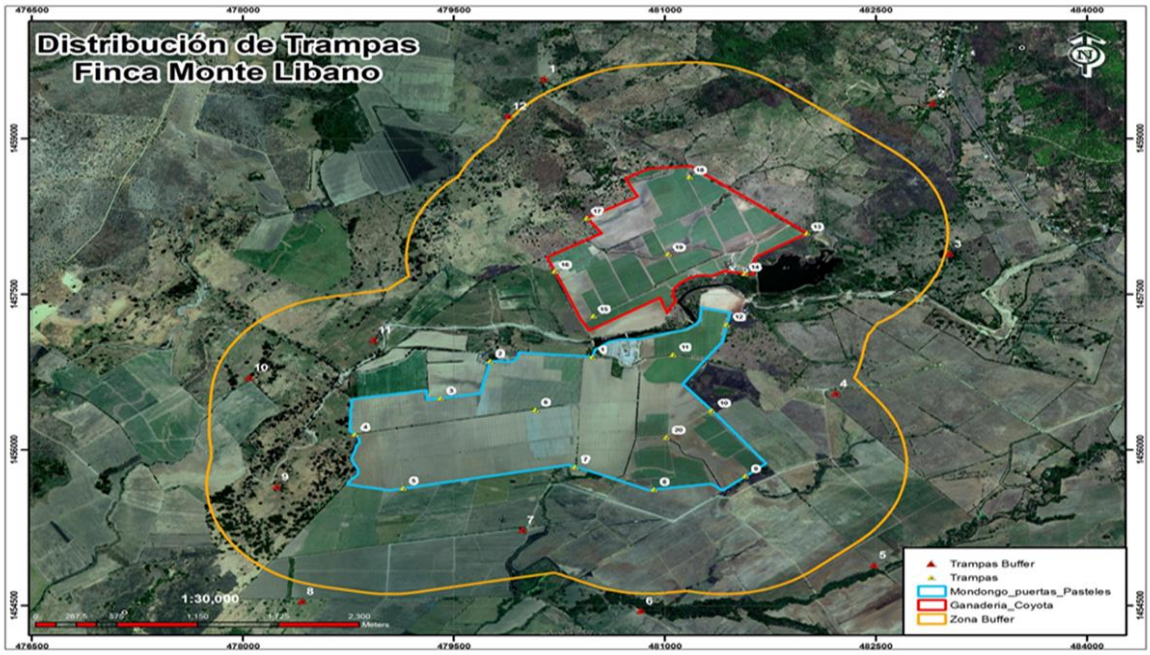
- **FREQUENCY AND METHODOLOGY OF THE TRAP INSPECTION AND SERVICE:** Traps installed in free production sites must be inspected every week (every 7 days), or the exposure time of the trap under normal conditions should be 7 days. The traps in the buffer zone must be inspected every two weeks (every 14 days).

BUFFER ZONE REQUIREMENTS MONTELIBANO AND SANTA ROSA FARM.

In case a Medfly is detected in the buffer zone, the contingency measures taken include:

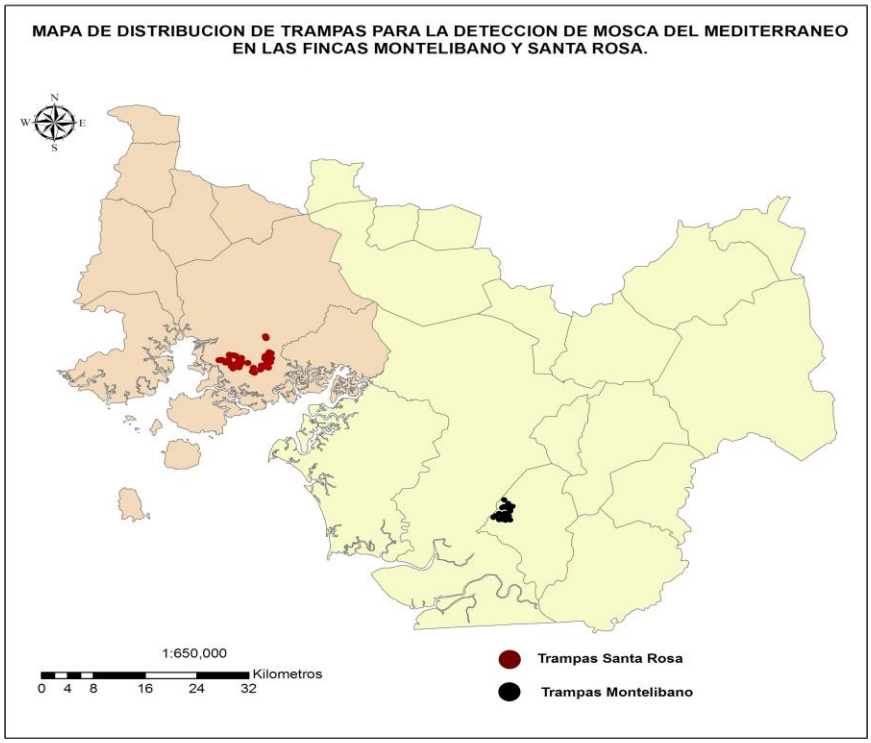
a) 1 application of eradication treatment (25 and 48 hours)
b) Trap and sampling of the fruit continuously (3 to 4 months)
c) Application of eradication treatments (3 to 4 months)
d) **Quarantine Measures**
e) **Reduction intensities**. At the end of the equivalent of 3 generations of the pest period, delimitation trapping and fruit sampling is reduced.
f) **Declaration and Notification**

MAP N° 1 TRAPS DISTRIBUTION FOR MEDFLY DETECTION IN MONTELIBANO FARM



MAP N° 2 TRAPS DISTRIBUTION FOR MEDFLY DETECTION IN SANTA ROSA FARM

MAP N° 3 TRAPS DISTRIBUTION FOR MEDFLY DETECTION IN MONTELIBANO AND SANTA ROSA FARMS



TECHNICAL BASIS :

ISPM 26

ESTABLISHMENT OF PEST FREE AREAS FOR FRUIT FLIES (TEPHRITIDAE)

BACKGROUND

Fruit flies are a very important group of pests for many countries due to their potential to cause damage in fruits and to their potential to restrict access to international markets for plant products that can host fruit flies. The high probability of introduction of fruit flies associated with a wide range of hosts results in restrictions imposed by many importing countries to accept fruits from areas in which these pests are established. For these reasons, there is a need for an ISPM that provides specific guidance for the establishment and maintenance of pest free areas for fruit flies.

A pest free area is “an area in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained” (ISPM 5). Areas initially free from fruit flies may remain naturally free from fruit flies due to the presence of barriers or climate conditions, and/or maintained free through movement restrictions and related measures (though fruit flies have the potential

to establish there) or may be made free by an eradication programme (ISPM 9:1998). ISPM 4:1995 describes different types of pest free areas and provides general guidance on the establishment of pest free areas. However, a need for additional guidance on establishment and maintenance of pest free areas specifically for fruit flies (fruit fly-pest free areas, FF-PFA) was recognized. This standard describes additional requirements for establishment and maintenance of FF-PFAs. The target pests for which this standard was developed include insects of the order Diptera, family Tephritidae, of the genera *Anastrepha*, *Bactrocera*, *Ceratitis*, *Dacus*, *Rhagoletis* and *Toxotrypana*.

The establishment and maintenance of an FF-PFA implies that no other phytosanitary measures specific for the target species are required for host commodities within the PFA.

1. General Requirements

The concepts and provisions of ISPM 4:1995 apply to the establishment and maintenance of pest free areas for all pests including fruit flies and therefore ISPM 4 should be referred to in conjunction with this standard.

Phytosanitary measures and specific procedures as further described in this standard may be required for the establishment and maintenance of FF-PFA. The decision to establish a formal FF-PFA may be made based on the technical factors provided in this standard. They include components such as pest biology, size of the area, pest population levels and dispersal pathway, ecological conditions, geographical isolation and availability of methods for pest eradication.

FF-PFAs may be established in accordance with this ISPM under a variety of different situations. Some of them require the application of the full range of elements provided by this standard; others require only the application of some of these elements.

In areas where the fruit flies concerned are not capable of establishment because of climatic, geographical or other reasons, absence should be recognized according to the first paragraph of section 3.1.2 of ISPM 8:1998. If, however, the fruit flies are detected and can cause economic damage during a season (Article VII.3 of the IPPC), corrective actions should be applied in order to allow the maintenance of a FF-PFA.

In areas where the fruit flies are capable of establishment and known to be absent, general surveillance in accordance with section 3.1.2 of ISPM 8:1998 is normally sufficient for the purpose of delimiting and establishing a pest free area. Where appropriate, import requirements and/or domestic movement restrictions against the introduction of the relevant fruit fly species into the area may be required to maintain the area free from the pest.

- **Documentation and record-keeping**

The phytosanitary measures used for the establishment and maintenance of FF-PFA should be adequately documented as part of phytosanitary procedures. They should be

reviewed and updated regularly, including corrective actions, if required (see also ISPM 4:1995).

The records of surveys, detections, occurrences or outbreaks and results of other operational procedures should be retained for at least 24 months. Such records should be made available to the NPPO of the importing country on request.

ISPM 8
DETERMINATION OF PEST STATUS IN AN AREA
GENERAL REQUIREMENTS FOR DETERMINATION OF PEST STATUS

1. Purposes of Pest Status Determination

A pest record is documented evidence [1] that indicates the presence or absence of a specific pest at a particular location and certain time, within an area, usually a country, under described circumstances. Pest records are used in conjunction with other information for the determination of the status of the given pest in the area.

In general, the provision of reliable pest records and the determination of pest status are vital components of a number of activities covered under the International Plant Protection Convention (IPPC) and by the principles noted in ISPM 1:1993 and the international standards for phytosanitary measures that have been developed from them.

3.1.2 Absence

If there are no records of the presence of the pest in the general surveillance data of an area, it may be reasonable to conclude that a pest is or has always been absent. This may be supported by specific records of absence.

It is also possible to conclude that a pest is absent even if there are pest records suggesting the contrary. These different situations are described below. Absence may also be confirmed by specific surveys (see ISPM 6:1997) and, in that case, the phrase “confirmed by survey” should then be added. Similarly, when a pest free area is established according to the appropriate ISPM (see ISPM 4:1995) the phrase “Pest free area declared” should be added.

Absent: pest no longer present

Pest records indicate that the pest was transient or established in the past, but general surveillance indicates the pest is no longer present. The reason(s) may include:

- **climate or other natural limitation to pest perpetuation**
- **changes in hosts cultivated**
- changes in cultivars
- changes in agricultural practices.

ISPM 10
REQUIREMENTS FOR THE ESTABLISHMENT OF PEST FREE PLACES OF PRODUCTION AND PEST FREE PRODUCTION SITES

1. Concept of a pest free place of production or pest free production site

1.1 Application of a Pest Free Place of Production and Pest Free Production Site

A “pest free place of production” is a: “place of production in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained for a defined period”. It provides a means for an exporting country, if so required by an importing country, to ensure that consignments of plants, plant products or other regulated articles produced on, and/or moved from, the place of production are free from the pest concerned, because it has been shown to be absent from that place over a relevant period of time. Pest freedom is established by surveys and/or growing-season inspections and maintained as necessary by other systems to prevent the entry of the pest into the place of production. The operations are supported by appropriate documentation.

Depending on the pest concerned, local circumstances and the acceptable level of risk for the importing country, an adequate level of security may be achieved by different intensities of measures, ranging from a simple growing-season inspection in the year of export to a complex system of surveys and supporting procedures maintained over several years.

The concept of a pest free place of production can be applied to any premises or collection of fields operated as a single production unit. The producer applies the required measures to the entire place of production.

Where a defined portion of a place of production can be managed as a separate unit within a place of production, it may be possible to maintain that site pest free. In such circumstances, the place of production is considered to contain a pest free production site.

Where the biology of the pest is such that it is likely to enter the place of production or production site from adjacent areas, it is necessary to define a buffer zone around the place of production or production site within which appropriate phytosanitary measures are applied. The extent of the buffer zone and the nature of the phytosanitary measures will depend on the biology of the pest and the intrinsic characteristics of the place of production or production site.

1.2 Distinction between a Pest Free Place of Production or a Pest Free Production Site and a Pest Free Area

The concept of the pest free place of production is distinct from that of the pest free area (see ISPM 4:1995). The pest free area has the same objective as the pest free place of production but is implemented in a different way. Every distinction between a pest free

place of production and a pest free area applies equally to a pest free production site.

A pest free area is much larger than a place of production, includes many places of production and may extend to a whole country or parts of several countries. A pest free area may be isolated by a natural barrier or an appropriate usually large buffer zone. A pest free place of production may be situated in an area where the pest concerned is prevalent and is isolated, if at all, by creating a buffer zone in its immediate vicinity. A pest free area is generally maintained over many years without interruption, whereas the status of a pest free place of production may be maintained for only one or a few growing seasons. A pest free area is managed as a whole, by the NPPO of the exporting country. A pest free place of production is managed individually by the producer, under the supervision and responsibility of the NPPO. If the pest is found in a pest free area, the status of the whole area is called into question. If it is found in a pest free place of production, that place loses its status but other places of production in the area operating the same system are not directly affected. These distinctions may not always apply in particular cases. A place of production lying in a pest free area may satisfy, by that fact, the requirements for a pest free place of production, although the importing country may require verification.

The choice of a pest free place of production or pest free area as a management option will depend on the actual distribution of the pest concerned in the exporting country, on the characteristics of the pest and on administrative considerations. Both systems can offer the required assurance of pest freedom: the pest free area mainly assures this by the common application of measures to an area covering many places of production; the pest free place of production mainly assures this by the fact that management procedures, surveys and inspections are applied specifically and intensively to it.

2. General requirements

2.1 Critical Factors for Pest Free Places of Production or Pest Free Production Sites

The possibility of ensuring that a place of production or a production site is pest free depends on:

- characteristics of the pest
- characteristics of the place of production and production site
- operational capabilities of the producer
- requirements and responsibilities of the NPPO.

2.1.1 Characteristics of the pest

A place of production or a production site can be declared free from a given pest with the required assurance of pest freedom if the characteristics of the pest are suitable for this. Suitable characteristics may include the following:

- the natural spread of the pest (or its vectors, if appropriate) is slow and over short distances

- the possibilities for artificial spread of the pest are limited
- the pest has a limited host range
- the pest has a relatively low probability of survival from previous seasons
- the pest has a moderate or low rate of reproduction
- sufficiently sensitive methods for detection of the pest are available, either by visual inspection or by tests applied in the field or in the laboratory, at the appropriate season
- as far as possible, factors in the biology of the pest (e.g. latency) and in the management of the place of production do not interfere with detection.

The availability of effective and practical measures for control and management of the pest is also an advantage in establishing and maintaining a pest free place of production or pest free production site.

2.1.2 Characteristics of the place of production or production site

The basic definition of a "place of production" should be satisfied (i.e. operated as a single production or farming unit). Depending on the pest concerned and local circumstances, a place of production and production site as well as the buffer zone, as appropriate, may also require some of the following additional characteristics:

- location at a sufficient distance from possible sources of pest infestation, with appropriate isolation (advantage being taken of physical features that can act as barriers to pest movement)
- clear delimitation, with officially recognized boundaries
- access to the buffer zone (if appropriate)
- absence, in the place of production or production site of hosts of the pest other than those meeting the conditions for export
- absence in the buffer zone (if appropriate) of hosts of the pest or adequate control of the pest on these hosts.

2.1.3 Operational capabilities of the producer

The producer should have defined management, technical and operational capabilities which are considered by the NPPO to be adequate to prevent the pest from entering the place of production or production site, and to maintain pest freedom by the application of appropriate phytosanitary measures. The producer or NPPO should also have the ability to apply appropriate phytosanitary measures in the buffer zone if necessary.

2.1.4 Requirements and responsibilities of the NPPO

The NPPO should define the particular requirements which a producer must meet in order that its declaration of a pest free place of production or pest free production site gives the required assurance of pest freedom. The NPPO is responsible for the surveys, inspections and other systems that verify pest freedom. For any given pest and host, the management systems required are generally widely known and can be used in any country. Where appropriate, the NPPO may provide training in these management systems. The NPPO should check the phytosanitary import requirements and/or bilaterally establish conditions to ensure that compliance can be achieved.

2.2 Establishment and Maintenance of Pest Free Places of Production or Pest Free Production Sites

There are four main components the NPPO should consider in establishing and maintaining pest free places of production or pest free production sites. These are:

- systems to establish pest freedom
- systems to maintain pest freedom
- verification that pest freedom has been attained or maintained
- product identity and phytosanitary security of the consignment.

2.2.1 Systems to establish pest freedom

The NPPO should normally specify a set of conditions to be met by the producer, enabling the place of production or production site to be subsequently declared pest free. These requirements will concern the characteristics of the place of production or production site (and the buffer zone, if appropriate) and the operational capabilities of the producer. **Formal agreements may be required between the producers (or their organizations) and the NPPO to ensure that specific measures are taken.**

In some cases, the NPPO may require that pest freedom should be verified by official surveys for one or more years before the year in which consignments are certified for export. The methods used to verify freedom in this way may be the same as, or different from, those used for verifying freedom in the year of export (see section 2.2.3). In other cases, the NPPO may only require that pest freedom be verified in the year of production. In any case, the objective of the NPPO and the producers will generally be to maintain the pest free status of a place of production or production site continuously over a period of years. Specific provisions should be made for the withdrawal of pest free status if the pest is detected in the pest free place of production or pest free production site or a buffer zone meant to be pest free, and for the eventual re-establishment and verification of pest free status, including investigation into the cause and consideration of the measures to prevent future failure.

In the case where pest free production sites are established, delimiting surveys may be used to determine their extent.

2.2.2 Systems to maintain pest freedom

The NPPO should generally require that specific measures be applied to the place of production or production site (and buffer zone, if appropriate) before and/or during the growing season, and is responsible for general supervision of the place of production or production site to ensure that these requirements are met. Their aim is to prevent the entry of the pest into the place of production or production site, or to destroy previously undetected occurrences. These measures may include:

- preventive measures (e.g. pest free propagating material, elimination of other hosts)

- exclusion measures (e.g. physical barriers, screens, controls on equipment, machinery, plants, soil and growing media)
- pest control measures (e.g. cultural methods, treatments, and resistant cultivars).

The producer should be required to:

- notify the NPPO of any suspected or actual occurrences of the pest
- maintain relevant records of cultural and pest control procedures for the time period designated by the NPPO.

2.2.3 Verification of establishment and maintenance of pest freedom

The verification of pest free status is done by NPPO personnel or by persons duly authorized by the NPPO, who undertake the specific surveys to assess the pest free status of the place of production or production site (and the buffer zone, if required). These most often take the form of growing-season inspections, but may also include other detection methods (sampling followed by laboratory testing, trapping, soil tests, etc.).

Pest free status may be verified by a stated number or frequency of inspections or tests (e.g. three inspections at monthly intervals). The inspections or other procedures may concern a single growing season, or may be required over several seasons. Inspection or testing of the harvested commodity may be required at the place of production or production site. Pest freedom over a number of years may also be required and the growing of host plants on the site in previous years may be prohibited.

Verification procedures should be based on a design, which should relate to the division of the place of production into individual plots, and may, according to the pest and its symptoms, be conducted by overall estimation or by taking samples. The incidence of the pest in the area surrounding the pest free place of production or pest free production site may influence the intensity of the survey required.

2.2.4 Product identity and phytosanitary security of the consignment

Verification measures may be needed to maintain the identity of the product (labelling to ensure traceability to the pest free place of production) and the integrity of the consignment. The pest freedom of the product should be maintained after harvest.

2.3 Buffer Zone Requirements

In appropriate cases, the establishment and maintenance of a pest free place of production or pest free production site include procedures related to the buffer zone associated with the place of production or production site.

The extent of the buffer zone should be determined by the NPPO, on the basis of the distance over which the pest is likely to spread naturally during the course of the growing season. Monitoring surveys should be conducted at adequate frequency over one or more growing seasons. The action to be taken, if the pest is detected in the buffer zone,

will depend on the requirements of the NPPO. The pest free status of the place of production or production site may be withdrawn or appropriate control measures may be required in the buffer zone. In any case, access for surveys or control measures should be verified in advance. If appropriate, adequate procedures may be established to support the assurance that pest freedom is maintained (local reporting/notification and publicity, local regulation, control/elimination of detected pests).

3. Doducmentation and review

The measures taken in establishing and maintaining a pest free place of production or pest free production site, including those taken in the buffer zone, if appropriate, should be adequately documented and periodically reviewed. The NPPO should institute procedures for on-site audit, review and systems' appraisal.

3.1 General Records

Documentation should be available, as appropriate, on the administrative system applied by the NPPO for the establishment of pest free places of production or pest free production sites in general, and in relation to the particular pest(s) concerned. This includes details of the surveillance systems used (including inspection, survey and monitoring), of the procedures for reaction to pest presence (corrective action plans), and of the procedures to ensure product identity and phytosanitary security of the consignment.

Documentation should also be available, as appropriate, on the specific actions taken at a place of production or a production site and any associated buffer zone in relation to the approval of pest free status for a particular growing season, including the results of surveys and the pest management records (e.g. types and dates of treatments, use of resistant cultivars).

The procedures for withdrawal and reinstatement of pest free status should be documented.

When complex measures are needed to establish and maintain a pest free place of production or pest free production site, because a high assurance of pest freedom is required, an operational plan may be needed. Where appropriate, such a plan would be based on bilateral agreements or arrangements listing specific details required in the operation of the system including the role and responsibilities of the producer and trader(s) involved.

3.2 Additional Declaration on Phytosanitary Certificates

The issuance of a phytosanitary certificate for a consignment by the NPPO confirms that the requirements for a pest free place of production or a pest free production site have been fulfilled. The importing country may require an appropriate additional declaration on the phytosanitary certificate to this effect.

3.3 Provision of Information

The NPPO of the exporting country should, on request, make available to the NPPO of the importing country the rationale for establishment and maintenance of pest free places of production or pest free production sites. Where bilateral arrangements or agreements so provide, the NPPO of the exporting country should expeditiously provide information concerning establishment or withdrawal of pest free places of production or pest free production sites to the NPPO of the importing country.

ISPM 29
RECOGNITION OF PEST FREE AREAS AND AREAS OF LOW PEST PREVALENCE.

5. Considerations on Pest Free Places of Production and Pest Free Production Sites

Usually pest free places of production and pest free production sites **should not require recognition using the procedures described above (section 4**). In this regard ISPM 10:1999 states, for such places and sites, “The issuance of a phytosanitary certificate for a consignment by the NPPO confirms that the requirements for a pest free place of production or a pest free production site have been fulfilled. The importing country may require an appropriate additional declaration on the phytosanitary certificate to this effect.” (section 3.2 of ISPM 10)

However, ISPM 10 (in section 3.3) also indicates:

The NPPO of the exporting country should, on request, make available to the NPPO of the importing country the rationale for establishment and maintenance of pest free places of production or pest free production sites. Where bilateral arrangements or agreements so provide, the NPPO of the exporting country should expeditiously provide information concerning establishment or withdrawal of pest free places of production or pest free production sites to the NPPO of the importing country.

As described in ISPM 10 (section 3.1):

When complex measures are needed to establish and maintain a pest free place of production or pest free production site, because the pest concerned requires a high degree of phytosanitary security, an operational plan may be needed. Where appropriate, such a plan would be based on bilateral agreements or arrangements listing specific details required in the operation of the system including the role and responsibilities of the producer and trader(s) involved.

In such cases recognition may be based on the procedure recommended in section 4 of this standard or another bilaterally agreed procedure.

REQUIREMENTS AND RESPONSIBILITIES SENASA

SENASA defines particular customs that Agropecuaria Montelibano in their **FARM Santa Rosa and Montelibano must comply for 52 weeks without interruption and zero catches of Medfly,** for this statement to be established as a free place of production or pest free production site that has the necessary level of phytosanitary security.

SENASA is responsible for surveys, inspections and other systems used to verify pest freedom and control (Control of host fruit for Medfly to SANTA ROSA Farms and Montelibano farm), and verification that has been achieved or sustained absence Medfly through weekly reports of trapping. In addition to overseeing the farms Santa Rosa and Montelibano maintain the identity of the product by labeling to ensure the location of the site and site pest free production (***Ceratitis capitata)*** and consignment integrity and maintenance of plant product safety after harvesting.

Considering the spirit of the **International Standard for Phytosanitary Measures ISPM 29 Recognition of pest free areas and areas of low pest prevalence in your Section 5:** ¨ Considerations places pest free production sites and pest free production ¨ determines ¨ **usually should not be necessary to use the procedure described above (section 4) for the recognition of free places of production and pest free production sites.**

In this regard, ISPM No. 10 (Requirements for the establishment of free places of production and pest free production sites) provides that for such places and sites : ¨ issuing a phytosanitary certificate for a shipment by NPPO confirms that they have met the requirements for places of pest free production sites or pest free production. ¨ to this end, the importing country may require an appropriate phytosanitary certificate to be include as an additional statement ¨ (section 3.2 of ISPM No. 10).

TRAPPING RESUMED DATA:

MONTELIBANO FARM 80 TRAPS 140 WEEKS FROM 08/20/2011 TO MAY 09,2014

0 CATCHED MEDFLY

SANTA ROSA FARM 164 TRAPS TOTAL 71 WEEKS FROM 06/07/2011*TO* 07/18/2012 58 WEEKS WITH 6 CATCHED MEDFLY MALE (WEEKS 51, 54,55,56(2),58).

SANTA ROSA FARM 164 TRAPS TOTAL 80 WEEKS FROM 10/24/2012 *TO* 05/01/2014 WITH 0 CATCHED MEDFLY.

See www.senasa-sag.gob.hn

DECLARATION DECREE MONTELIBANO AND SANTA ROSA FARM

La Gaceta

DIARIO OFICIAL DE LA REPUBLICA DE HONDURAS

La primera imprenta llegó a Honduras en 1829, siendo instalada en Tegucigalpa, en el cuartel San Francisco, lo primero que se imprimió fue una proclama del General Morazán, con fecha 4 de diciembre de 1829.

EMPRESA NACIONAL DE ARTES GRÁFICAS
E.N.A.G.

Después se imprimió el primer periódico oficial del Gobierno con fecha 25 de mayo de 1830, conocido hoy, como Diario Oficial "La Gaceta".

CXXXV TEGUCIGALPA, M. D. C., HONDURAS, C. A. MARTES 20 DE NOVIEMBRE DEL 2012. NUM. 32,979

Sección A

Presidencia de la República

ECRETO EJECUTIVO NÚMERO PCM-042-2012

PRESIDENTE DE LA REPÚBLICA EN CONSEJO MINISTROS,

CONSIDERANDO: La Constitución de la República blece que: "El Estado de Honduras reconoce, fomenta y ntiza la existencia de la propiedad privada en su más amplio cepto de función social"; así mismo que: "Nadie puede ser vado de su propiedad sino por causa de necesidad o interés blico calificado por la Ley o por resolución fundada en Ley, y que medie previa indemnización justipreciada".

CONSIDERANDO: Que la Administración Pública tiene r objeto promover las condiciones que sean más favorables a el desarrollo nacional, sobre una base de justicia social, curando el equilibrio entre su actuación y los derechos e reses legítimos de los particulares; y que le corresponde a la **cretaría de Estado en los Despachos de Obras Públicas,**

SUMARIO

CONSIDERANDO: Que de conformidad a lo establecido en el Artículo 1 de la **Ley Especial para la Simplificación de los Procedimientos de Inversión en Infraestructura Pública**, contenida en el Decreto Legislativo Número 58-2011, publicado el 13 de julio de 2011 en "La Gaceta", Diario Oficial de la República, sus normas y procedimientos serán aplicables a las Unidades Ejecutoras de la Administración Pública Centralizada y Descentralizada a cargo de proyectos de infraestructura pública de cualquier naturaléza como la Secretaría de Estado en los Despachos de Obras Públicas, Transporte y Vivienda (SOPTRAVI).

La Gaceta REPÚBLICA DE HONDURAS - TEGUCIGALPA, M. D. C., 20 DE NOVIEMBRE DEL 2012 No. 32,979

Sección A Acuerdos y Leyes

Secretaría de Estado en los Despachos de Agricultura y Ganadería

ACUERDO No. 1415-12

Tegucigalpa, M.D.C., 26 Octubre, 2012.

EL SECRETARIO DE ESTADO EN LOS DESPACHOS DE AGRICULTURA Y GANADERIA

CONSIDERANDO: Que para la correspondiente aplicación de la Ley, Fitozoosanitaria, emitida mediante Decreto Legislativo. N°. 157-94 del 04 de noviembre de 1994, publicada en el Diario Oficial "LA GACETA" N°. 27,552 del 13 de enero de 1995 y del Decreto 344-05 del 29 de diciembre del 2005, publicado en el Diario Oficial "LA GACETA N°. 30922 del 07 de Febrero del 2006 y en cumplimiento del artículo 12, reformado de la Ley citada inciso h) "la Secretaria de Agricultura y Ganadería (SAG) a través del SENASA, será responsable por la declaración y el reconocimiento de áreas libres de plagas, lugares de producción libres de plagas, lugares de producción libres de plagas y sitios de producción libres de plagas, incluyendo la agricultura bajo techo, así como de la elaboración y publicación del listado oficial de plagas reportadas en Honduras y de plagas de importancia cuarentenaria".

CONSIDERANDO: Que la Agricultura representa un alto grado de eficiencia productiva en beneficio de las necesidades de alimentación del país, por lo que es necesario el desarrollo de Proyectos de Declaratoria de Áreas Libres de Plagas, lugares de producción libres de plagas y sitios de producción libres de plagas al interior del país, de manera que no pueda afectarse la exportación de productos de origen vegetal por restricciones impuestas por los países importadores, en cumplimiento de las normas Internacionales para medidas fitosanitarias.

CONSIDERANDO: Que Honduras cuenta con una zona que reúne las condiciones naturales necesarias para la producción de frutas y vegetales libres de Moscas del Mediterráneo (Ceratitis capitata (Wied.) ubicada en la Finca Montelíbano, municipio de Namasigüe en el departamento de Choluteca, la cual califica según la Norma Internacional de Medidas Fitosanitarias N°. 10, como LUGAR DE PRODUCCION LIBRE DE PLAGAS Y SITIO DE PRODUCCION LIBRE DE PLAGAS.

La obligación posterior de hacer las comunicaciones correspondientes de acuerdo con los lineamientos técnicos y administrativos establecidos por la Convención Internacional de Protección Fitosanitarias (CIPF), a través de medios electrónicos y del Portal Internacional Fitosanitario, así mismo al Comité de Medidas Sanitarias y Fitosanitarias de la Organización Mundial de Comercio.

CONSIDERANDO: Que es potestad del Estado a través de la Secretaría de Agricultura y Ganadería (SAG), hacer la declaratoria de Lugares y Sitios de Producción Libres de Plagas, y sometería a la consideración de Organismos Internacionales cuando por razones fitosanitarias basadas en hechos científicos y técnicos, así lo amerite.

POR TANTO:

El Secretario de Estado en los Despachos de Agricultura y Ganadería en uso de sus facultades y en aplicación de los artículos 36 numeral 8, 116, 118 y 122 de la Ley General de la Administración Pública; artículo 9 incisos a), b), e), f) de la Ley Fitozoosanitaria Decreto 157- 94; Artículos 12,16,17, y 22 del Decreto 344-05, artículos 93, 94 y 95 del Reglamento de Cuarentena Agropecuaria Acuerdo 1618-97; artículos 17,18,19, 24,31,32 y 33 del Reglamento de Diagnóstico Vigilancia y Campañas Fitosanitarias Acuerdo No. 002-98.

A C U E R D A:

PRIMERO: Declarar la **FINCA MONTELIBANO EN EL MUNICIPIO DE NAMASIGÜE, DEPARTAMENTO DE CHOLUTECA, COMO LUGAR DE PRODUCCION Y SITIO DE PRODUCCION LIBRE DE PLAGAS** (Ceratitis capitata (Wied.).

SEGUNDO: Notificar a la oficina de la Convención Internacional de Protección Fitosanitaria (CIPF) y al Organismo Regional de Protección Fitosanitaria (ORPF) y sus países miembros el estatus fitosanitario adquirido basado en el artículo 6 del Acuerdo sobre la Aplicación de Medidas Fitosanitarias y Sanitarias de la O.M.C., y a los principales socio comerciales comunicar las razones para el establecimiento y mantenimiento de la FINCA MONTELIBANO, como **Lugar y Sitio de Producción Libres de Plagas,** fundamentados en la Sección 3.3 de la Norma Internacional de Medidas Sanitarias NIMF N°. 10 (Requisitos para el establecimiento de lugares de producción libres de plagas y sitios de producción libres de plagas).

TERCERO: La Secretaría de Agricultura y Ganadería, a través del Servicio Nacional de Sanidad Agropecuaria, adoptará y aplicará medidas fitosanitarias tendientes a la protección y sostenimiento del ESTATUS FITOSANITARIO adquirido, estableciendo un nivel adecuado, oportuno y eficiente de Protección.

CUARTO: El presente Acuerdo entrará en vigencia en forma inmediata y deberá publicarse en el Diario Oficial "LA GACETA".

QUINTO: Hacer las transcripciones de Ley.

COMUNÍQUESE:

JACOBO REGALADO WEIZEMBLUT
Secretario de Estado en los Despachos de Agricultura y Ganadería

SALVADOR POLANCO ROSA
Secretario General SAG

TERCERO: Se exceptúan de la presente disposición los funcionarios y empleados que laboran en las siguientes áreas: Dirección General de Asuntos Consulares, Auténticas, Traducciones, Correspondencia, Salón Diplomático y Mantenimiento; asimismo, el personal que presta sus servicios en las distintas Representaciones Diplomáticas y Consulares de Honduras en el Exterior, el personal nombrado y acreditado ante Organismos Internacionales de los que Honduras forma parte y aquellos funcionarios que sean designados por la autoridad superior en alguna asignación especial o de las labores de transición y transmisión de mando presidencial.

CUARTO: El presente Acuerdo deberá publicarse en el Diario Oficial La Gaceta.

Dado en la ciudad de Tegucigalpa, municipio del Distrito Central, a los cinco días del mes de diciembre del año dos mil trece.

COMUNÍQUESE:

MIREYA AGÜERO DE CORRALES
SECRETARIA DE ESTADO

MARÍA DOLORES SUAZO SUAZO
ASISTENTE DE LA SECRETARÍA GENERAL

Secretaría de Estado en los Despachos de Agricultura y Ganadería

ACUERDO No. 758-13

Tegucigalpa, M.D.C., 04 de noviembre, 2013.

EL SECRETARIO DE ESTADO EN LOS DESPACHOS DE AGRICULTURA Y GANADERIA

CONSIDERANDO: Que para la correspondiente aplicación de la Ley Fitozoosanitaria, emitida mediante Decreto Legislativo N°. 157-94 del 04 de noviembre de 1994, publicada en el Diario Oficial "LA GACETA" N°. 27,552 del 13 de enero de 1995 y reformada mediante Decreto N°. 344-05 del 29 de diciembre del 2005, publicado en el Diario Oficial LA GACETA N°. 30922 del 07 de febrero del 2006 y en cumplimiento del artículo 12, reformado de la Ley citada inciso h) "La Secretaría de Agricultura y Ganadería (SAG) a través del Servicio Nacional de Sanidad Agropecuaria (SENASA) será responsable por la declaración y el reconocimiento de áreas libres de plagas, lugares de producción libres de plagas y sitios de producción libres de plagas incluyendo la agricultura bajo techo, así como de la elaboración y publicación del listado oficial de plagas reportadas en Honduras y de plagas de importancia cuarentenaria".

CONSIDERANDO: Que la Agricultura representa un alto grado de eficiencia productiva en beneficio de las necesidades de alimentación del país, por lo que es necesario el desarrollo de Proyectos de Declaratoria de Áreas Libres de Plagas, lugares de producción libres de plagas y sitios de producción libres de plagas al interior del país, de manera que no pueda afectarse la exportación de productos de origen vegetal por restricciones impuestas por los países importadores, en cumplimiento de las normas Internacionales para medidas fitosanitarias.

CONSIDERANDO: Que Honduras, cuenta con una zona que reúne las condiciones naturales necesarias para la producción de frutas y vegetales libres de Moscas del Mediterráneo (Ceratitis capitata (Wied.), ubicada en la Finca Santa Rosa, municipio de Nacaome, en el departamento de Valle, la cual califica según la Norma Internacional de Medidas Fitosanitarias N°. 10, como LUGAR DE PRODUCCION LIBRE DE PLAGAS Y SITIO DE PRODUCCION LIBRES PLAGAS. La obligación

La Gaceta
DIARIO OFICIAL DE LA REPÚBLICA DE HONDURAS
DECANO DE LA PRENSA HONDUREÑA
PARA MEJOR SEGURIDAD DE SUS PUBLICACIONES
LIC. MARTHA ALICIA GARCÍA
Gerente General
JORGE ALBERTO RICO SALINAS
Coordinador y Supervisor
EMPRESA NACIONAL DE ARTES GRÁFICAS
E.N.A.G.
Colonia Miraflores
Teléfono/Fax: Gerencia 2230-4956
Administración: 2230-3026
Planta: 2230-6767
CENTRO CÍVICO GUBERNAMENTAL

posterior de hacer las comunicaciones correspondientes de acuerdo con los lineamientos técnicos y administrativos establecidos por la Convención Internacional de Protección Fitosanitarias (CIPF), a través de medios electrónicos y del Portal Internacional Fitosanitario, así mismo al Comité de Medidas Sanitarias y Fitosanitarias de la Organización Mundial de Comercio.

CONSIDERANDO: Que es potestad del Estado a través de la Secretaría de Agricultura y Ganadería (SAG), hacer la declaratoria de Lugares y Sitios de Producción Libres de Plagas, y someterla a la consideración de Organismos Internacionales cuando por razones fitosanitarias basadas en hechos científicos y técnicos, así lo amerite.

POR TANTO:

El Secretario de Estado en los Despachos de Agricultura y Ganadería, en uso de sus facultades y en aplicación de los artículos siguientes; 36 numeral 8), 116, 118 y 122 de la Ley General de Administración Pública; 9 incisos a), b), e), f), 12, 16, 17, y 22 de la Ley Fitozoosanitaria, Decreto N°. 344.-05; 93, 94 y 95 del Reglamento de Cuarentena Agropecuaria, Acuerdo N°. 1618- 97; 17,18,19, 24, 31, 32 y 33 del Reglamento de Diagnóstico, Vigilancia y Campañas Fitosanitarias, Acuerdo N°. 002-98.

A C U E R D A:

PRIMERO: Declarar la **FINCA SANTA ROSA, EN EL MUNICIPIO DE NACAOME, DEPARTAMENTO DE VALLE, como LUGAR DE PRODUCCIÓN LIBRES DE PLAGA Y SITIO DE PRODUCCIÓN LIBRES DE PLAGAS** (Ceratitis capitata (Wied.)).

SEGUNDO: Notificar a la oficina de la Convención Internacional de Protección Fitosanitaria (CIPF) y al Organismo Regional de Protección Fitosanitaria (ORPF) y sus países miembros el estatus fitosanitario adquirido basado en el artículo 6 del Acuerdo sobre la Aplicación de Medidas Fitosanitarias y Sanitarias de la O.M.C., y a los principales socios comerciales comunicar las razones para el establecimiento y mantenimiento de la FINCA SANTA ROSA, como Lugar y Sitio de Producción Libres de Plagas fundamentados en la Sección 3.3 de la Norma Internacional de Medidas Sanitarias NIMF No. 10 (Requisitos para el establecimiento de lugares de producción libres de plagas y sitios de producción libres de plagas).

TERCERO: La Secretaría de Agricultura y Ganadería (SAG), a través del Servicio Nacional de Sanidad Agropecuaria (SENASA), adoptará y aplicará medidas fitosanitarias pendientes a la protección y sostenimiento del ESTATUS FITOSANITARIO adquirido, estableciendo un nivel adecuado, oportuno y eficiente de Protección.

CUARTO: El presente Acuerdo entrará en vigencia en forma inmediata y deberá publicarse en el Diario Oficial "LA GACETA".

QUINTO: Hacer las transcripciones de Ley.

COMUNÍQUESE:

JACOBO REGALADO WEIZEMBLUT
SECRETARIO DE ESTADO EN LOS DESPACHOS
DE AGRICULTURA Y GANADERÍA

SALVADOR POLANCO ROSA
SECRETARIO GENERAL SAG

Tribunal Supremo Electoral

ACUERDO No. 13-2013

DECLARATORIA DE CIUDADANOS(AS) ELECTOS(AS) AL CARGO DE DIPUTADOS AL PARLAMENTO CENTROAMERICANO, DIPUTADOS AL CONGRESO NACIONAL Y CORPORACIONES MUNICIPALES, ELECCIONES GENERALES 2013.

EL TRIBUNAL SUPREMO ELECTORAL,

CONSIDERANDO (1): Que de conformidad al Artículo 51 de la Constitución de la República, para todo lo relacionado con los actos y procedimientos electorales habrá un Tribunal Supremo Electoral, autónomo e independiente, con personería jurídica, con jurisdicción y competencia en toda la República, cuya organización y funcionamiento serán establecidos por la Constitución y la Ley, la que fijará igualmente lo relativo a los demás organismos electorales.

CONSIDERANDO (2): Que el Tribunal Supremo Electoral, mediante Acuerdo Número 005-2013 de fecha 23 de mayo del año dos mil trece y publicado en el Diario

JUSTIFICATION

GEOGRAPHIC LOCATION AND DESCRIPTION OF PRODUCTION AREAS DESIGNATED FOR EXPORT

Departament of Choluteca

Latitude North 12 degrees 58 minutes and 13 degrees 46 minutes

Longitude West 86 degrees 42 minutes and 87 degrees 31 minutes

It covers an area of 602.500 hectares. Its altitude ranges from 0 to 600 meters above sea level. The soils are low in organic matter, of alluvial origin and clay loam texture. Conformed by the basins of Goascorán river, Nacaome River, Rio Negro river and Choluteca river. Borders on the west with the Republic of El Salvador, to the east with the Republic of Nicaragua, on the north with the department of Francisco Morazán and the south with the Gulf of Fonseca.

1. Choluteca 2. Apacilagua 3. Concepción de María 4. Duyure 5. El Corpus 6. El Triunfo 7. Marcovia • 8. Morolica 9. Namasigue 10. Orocuina 11. Pespire 12. San Antonio de Flores 13. San Isidro • 14. San José 15. San Marcos de Colón 16. Santa Ana Yusguare

Departament of Valle:

Map of the Country with the productive areas

Country Map marking the production areas designated for exports and other production areas.

All production areas mentioned are areas designated for export production.

PHENOLOGICAL DEVELOPMENT OF MELON (*Cucumis melo* L.)

Phenological Stages of Melon				
No of phase	Name of phase	Covered Age		Plant physiological characteristics
		From (day)	until (day)	
Phase 0	Greenhouse	0	10	It starts with sowing at the greenhouse and finishes when plants are sent to field to be sowed or transplanted
Phase I	Vegetative	Transplantati	21	It starts with sowing at field and finishes when four inches-long tendrils intersect from one soil bed to another one
Phase II	Flowering	21	30	Begings with polinization of fruits and it finishes when fruits have reached a diameter of 3 inches
Phase III	Fruit	31	48	Begins with the nutritional fattening of fruits and ends when the pulp of the fruit changes color
Phase IV	Fruit ripening	48	58	Begings when flesh color becomes salmon and ends when fruit reaches the desired brix degrees (10°)
Phase V	fruit takeoff	59	65	It starts when fruit have reached the desired fragrance and brix degrees, and simultaneously ethylene and abscisic acid releasing occurs

No of phase	Name of phase	Covered Age		Plant physiological characteristics
		From (day)	until (day)	
Phase 0	Greenhouse	0	10	It starts with sowing at the greenhouse and finishes when plants are sent to field to be sowed or transplanted

No of phase	Name of phase	Covered Age		Plant physiological characteristics
		From (day)	until (day)	
Phase I	Vegetative	Transplantation	21	It starts with sowing at field and finishes when four inches-long tendrils intersect from one soil bed to another one

No of phase	Name of phase	Covered Age		Plant physiological characteristics
		From (day)	until (day)	
Phase II	Flowering	21	30	Begings with polinization of fruits and it finishes when fruits have reached a diameter of 3 inches

No of phase	Name of phase	Covered Age		Plant physiological characteristics
		From (day)	until (day)	
Phase III	Fruit fattening	31	48	Begins with the nutritional fattening of fruits and ends when the pulp of the fruit changes color

No of phase	Name of phase	Covered Age		Plant physiological characteristics
		From (day)	until (day)	
Phase IV	Fruit ripening	48	58	Begings when flesh color becomes salmon and ends when fruit reaches the desired brix degrees (10°)

No of phase	Name of phase	Covered Age		Plant physiological characteristics
		From (day)	until (day)	
Phase V	fruit takeoff	59	65	It starts when fruit have reached the desired fragrance and brix degrees, and simultaneously ethylene and abscisic acid releasing occurs

PHYTOSANITARY PROBLEMS OF IMPORTANCE OF THE CROP.

The southern part of Honduras has a sunny climate with relative humidity between 50-60%, daytime temperatures of 30-37 degrees C and night 18 to 25 Celsius, fertile soils of alluvial and volcanic origin.

This is the ideal climate for growth and development of cucurbits without much influence of pests and diseases.

The main pests we have in Melon in order of importance are:

FOLIAGE

1. Aphids (*Aphis sp*)
2. Whitefly (*Bemisia sp*)
3. Armyworm (*Spodoptera sp*)
4. Helotero worm (*Heliothis sp*)
5. Cucurbitas Worm (*Diaphania sp*)

SOIL

1. Nematodes (*Meloidogyne sp*)
2. Flat black millipede (*Polydesmus sp, sp Blastinus*)

The main diseases on melon are:

FOLIAGE

1. Downy Mildew (*Pseudoperonospora sp*)
2. powdery Mildew (*Erysiphe sp, Sphaerotheca sp*)
3. *Alternaria sp*
4. *Cladosporium sp*
5. Bacteriosis (*Erwinia sp, Pseudomonas sp*)

SOIL

1. *Fusarium oxysporum*
2. *Monosporascus sp*
3. *Dydimella sp*

Pest Behavior May-2012-May-2014

Pest **Adult White Fly (*Bemissia tabac*i)**

MONTH	Average/Plant	Criti/level
may-12	5.00	0.50
jun-12	2.00	0.50
jul-12	0.80	0.50
aug-12	0.50	0.50
sep-12	0.12	0.50
oct-12	0.09	0.50
nov-12	0.07	0.50
dic-12	0.90	0.50
jan-13	1.10	0.50
feb-13	2.30	0.50
mar-13	3.10	0.50
apr-13	6.00	0.50
may-13	6.50	0.50
jun-13	0.10	0.50
jul-13	0.23	0.50
ago-13	0.70	0.50
sep-13	0.85	0.50
oct-13	0.93	0.50
nov-13	1.18	0.50
dic-13	1.23	0.50
jan-14	1.56	0.50
feb-14	1.89	0.50
mar-14	2.50	0.50
apr-14	3.50	0.50
may-14	5.10	0.50

Pest **White Fly Nymph (*Bemissia tabac*i)**

MONTH	Average/Plant	Criti/level
may-12	2.1	0.00
jun-12	1.5	0.00
jul-12	0.9	0.00
aug-12	0.07	0.00
sep-12	0.05	0.00
oct-12	0.02	0.00
nov-12	0.09	0.00
dic-12	0.08	0.00
jan-13	1.00	0.00
feb-13	1.80	0.00
mar-13	3.50	0.00
apr-13	4.50	0.00
may-13	5.20	0.00
jun-13	0.10	0.00
jul-13	0.05	0.00
ago-13	0.10	0.00
sep-13	0.03	0.00
oct-13	0.01	0.00
nov-13	0.01	0.00
dic-13	0.04	0.00
jan-14	0.07	0.00
feb-14	0.50	0.00
mar-14	0.62	0.00
apr-14	0.80	0.00
may-14	0.92	0.00

Pest **Winged Aphids (Aphis gossypii)**

MONTH	Average/Plant	Criti/level
may-12	2.00	0.05
jun-12	1.50	0.05
jul-12	0.50	0.05
aug-12	0.35	0.05
sep-12	0.20	0.05
oct-12	0.16	0.05
nov-12	0.37	0.05
dic-12	0.55	0.05
jan-13	0.80	0.05
feb-13	1.10	0.05
mar-13	1.67	0.05
apr-13	2.10	0.05
may-13	2.30	0.05
jun-13	1.73	0.05
jul-13	0.83	0.05
ago-13	0.64	0.05
sep-13	0.43	0.05
oct-13	0.27	0.05
nov-13	0.48	0.05
dic-13	0.69	0.05
jan-14	0.88	0.05
feb-14	1.33	0.05
mar-14	1.45	0.05
apr-14	1.72	0.05
may-14	1.92	0.05

PEST **Wingless Aphids colonies (Aphis gossypii)**

MONTH	Average/Plant	Criti/level
may-12	1.10	0.00
jun-12	0.56	0.00
jul-12	0.47	0.00
aug-12	0.25	0.00
sep-12	0.16	0.00
oct-12	0.13	0.00
nov-12	0.45	0.00
dic-12	0.53	0.00
jan-13	0.75	0.00
feb-13	1.23	0.00
mar-13	1.58	0.00
apr-13	1.92	0.00
may-13	2.01	0.00
jun-13	0.62	0.00
jul-13	0.73	0.00
ago-13	0.35	0.00
sep-13	0.22	0.00
oct-13	0.18	0.00
nov-13	0.35	0.00
dic-13	0.56	0.00
jan-14	0.61	0.00
feb-14	0.90	0.00
mar-14	1.30	0.00
apr-14	1.11	0.00
may-14	0.90	0.00

Pest ***Spodoptera sp.*** Larvae and Mass

MONTH	Average/Plant	Criti/level	Nivel Critico
may-12	0.20	0.13	0.01
jun-12	0.12	0.09	0.01
jul-12	0.10	0.086	0.01
ago-12	0.09	0.055	0.01
sep-12	0.07	0.01	0.01
oct-12	0.06	0.012	0.01
nov-12	0.08	0.015	0.01
dic-12	0.10	0.07	0.01
ene-13	0.12	0.09	0.01
feb-13	0.18	0.10	0.01
mar-13	0.20	0.19	0.01
abr-13	0.27	0.20	0.01
may-13	0.29	0.22	0.01
jun-13	0.20	0.01	0.01
jul-13	0.18	0.065	0.01
ago-13	0.14	0.05	0.01
sep-13	0.09	0.02	0.01
oct-13	0.09	0.018	0.01
nov-13	0.18	0.14	0.01
dic-13	0.13	0.1	0.01
ene-14	0.15	0.11	0.01
feb-14	1.60	0.17	0.01
mar-14	0.27	0.12	0.01
abr-14	0.33	0.14	0.01
may-14	0.39	0.167	0.01

Pest *Diaphania hyalinata eggs white, yellow and red*

MONTH	Average/Plant White eggs	Average/Plant Yellow eggs	Average/Plant Red eggs	Critical level
may-12	0.00	0.00	0.00	0.01
jun-12	0.00	0.00	0.00	0.01
jul-12	0.00	0.00	0.00	0.01
ago-12	0.05	0.08	0.00	0.01
sep-12	0.08	0.08	0.07	0.01
oct-12	0.10	0.15	0.20	0.01
nov-12	0.18	0.20	0.27	0.01
dic-12	0.20	0.25	0.30	0.01
ene-13	0.25	0.28	0.20	0.01
feb-13	0.15	0.20	0.15	0.01
mar-13	0.10	0.15	0.12	0.01
abr-13	0.01	0.09	0.10	0.01
may-13	0.00	0.01	0.05	0.01
jun-13	0.00	0.00	0.00	0.01
jul-13	0.00	0.00	0.00	0.01
ago-13	0.00	0.00	0.00	0.01
sep-13	0.01	0.01	0.00	0.01
oct-13	0.09	0.12	0.05	0.01
nov-13	0.10	0.18	0.08	0.01
dic-13	0.19	0.22	0.10	0.01
ene-14	0.20	0.15	0.08	0.01
feb-14	0.18	0.12	0.06	0.01
mar-14	0.05	0.10	0.04	0.01
abr-14	0.07	0.08	0.03	0.01
may-14	0.01	0.05	0.01	0.01

Pest **Diaphania hyalinata Larva L1 foliage**

MONTH	Average/Plant	Criti/level
may-12	0.01	0.01
jun-12	0.00	0.01
jul-12	0.00	0.01
aug-12	0.00	0.01
sep-12	0.00	0.01
oct-12	0.05	0.01
nov-12	0.09	0.01
dic-12	0.10	0.01
jan-13	0.11	0.01
feb-13	0.09	0.01
mar-13	0.04	0.01
apr-13	0.06	0.01
may-13	0.01	0.01
jun-13	0.00	0.01
jul-13	0.00	0.01
ago-13	0.00	0.01
sep-13	0.00	0.01
oct-13	0.01	0.01
nov-13	0.02	0.01
dic-13	0.12	0.01
jan-14	0.14	0.01
feb-14	0.06	0.01
mar-14	0.03	0.01
apr-14	0.03	0.01
may-14	0.01	0.01

Pest **Diaphania hyalinata Larva L2 in foliage**

MONTH	Average/Plant	Criti/level
may-12	0.02	0.00
jun-12	0.00	0.00
jul-12	0.00	0.00
aug-12	0.00	0.00
sep-12	0.00	0.00
oct-12	0.10	0.00
nov-12	0.14	0.00
dic-12	0.18	0.00
jan-13	0.12	0.00
feb-13	0.09	0.00
mar-13	0.07	0.00
apr-13	0.05	0.00
may-13	0.03	0.00
jun-13	0.00	0.00
jul-13	0.00	0.00
ago-13	0.00	0.00
sep-13	0.00	0.00
oct-13	0.14	0.00
nov-13	0.18	0.00
dic-13	0.22	0.00
jan-14	0.15	0.00
feb-14	0.12	0.00
mar-14	0.10	0.00
apr-14	0.08	0.00
may-14	0.01	0.00

Pest **Diaphania hyalinata Larva L3 in foliage**

MONTH	Average/Plant	Criti/level
may-12	0.00	0.00
jun-12	0.00	0.00
jul-12	0.00	0.00
aug-12	0.00	0.00
sep-12	0.00	0.00
oct-12	0.01	0.00
nov-12	0.05	0.00
dic-12	0.01	0.00
jan-13	0.00	0.00
feb-13	0.00	0.00
mar-13	0.00	0.00
apr-13	0.00	0.00
may-13	0.00	0.00
jun-13	0.00	0.00
jul-13	0.00	0.00
ago-13	0.00	0.00
sep-13	0.00	0.00
oct-13	0.05	0.00
nov-13	0.07	0.00
dic-13	0.08	0.00
jan-14	0.00	0.00
feb-14	0.00	0.00
mar-14	0.00	0.00
apr-14	0.08	0.00
may-14	0.00	0.00

Pest **Diaphania nitidalis Larvae L1 in flowers**

MONTH	Average/Plant	Criti/level
may-12	0.00	0.00
jun-12	0.00	0.00
jul-12	0.00	0.00
aug-12	0.00	0.00
sep-12	0.00	0.00
oct-12	0.09	0.00
nov-12	0.08	0.00
dic-12	0.03	0.00
jan-13	0.00	0.00
feb-13	0.00	0.00
mar-13	0.00	0.00
apr-13	0.00	0.00
may-13	0.00	0.00
jun-13	0.00	0.00
jul-13	0.00	0.00
ago-13	0.00	0.00
sep-13	0.00	0.00
oct-13	0.00	0.00
nov-13	0.00	0.00
dic-13	0.01	0.00
jan-14	0.02	0.00
feb-14	0.00	0.00
mar-14	0.00	0.00
apr-14	0.00	0.00
may-14	0.00	0.00

Pest **Diaphania nitidalis Larvae L2 in flowers**

MONTH	Average/Plant	Criti/level
may-12	0.00	0.00
jun-12	0.00	0.00
jul-12	0.00	0.00
aug-12	0.00	0.00
sep-12	0.00	0.00
oct-12	0.05	0.00
nov-12	0.08	0.00
dic-12	0.03	0.00
jan-13	0.00	0.00
feb-13	0.00	0.00
mar-13	0.00	0.00
apr-13	0.00	0.00
may-13	0.00	0.00
jun-13	0.00	0.00
jul-13	0.00	0.00
ago-13	0.00	0.00
sep-13	0.00	0.00
oct-13	0.00	0.00
nov-13	0.05	0.00
dic-13	0.02	0.00
jan-14	0.00	0.00
feb-14	0.00	0.00
mar-14	0.00	0.00
apr-14	0.00	0.00
may-14	0.00	0.00

Pest **Diaphania nitidalis Larvae L3 in flowers**

MONTH	Average/Plant	Criti/level
may-12	0.00	0.00
jun-12	0.00	0.00
jul-12	0.00	0.00
aug-12	0.00	0.00
sep-12	0.00	0.00
oct-12	0.05	0.00
nov-12	0.07	0.00
dic-12	0.00	0.00
jan-13	0.00	0.00
feb-13	0.00	0.00
mar-13	0.00	0.00
apr-13	0.00	0.00
may-13	0.00	0.00
jun-13	0.00	0.00
jul-13	0.00	0.00
ago-13	0.00	0.00
sep-13	0.00	0.00
oct-13	0.00	0.00
nov-13	0.01	0.00
dic-13	0.00	0.00
jan-14	0.00	0.00
feb-14	0.00	0.00
mar-14	0.00	0.00
apr-14	0.00	0.00
may-14	0.00	0.00

Pest **Diaphania nitidalis Larvae L1 in fruits**

MONTH	Average/Plant	Criti/level
may-12	0.00	0.00
jun-12	0.00	0.00
jul-12	0.00	0.00
aug-12	0.00	0.00
sep-12	0.00	0.00
oct-12	0.10	0.00
nov-12	0.09	0.00
dic-12	0.04	0.00
jan-13	0.00	0.00
feb-13	0.00	0.00
mar-13	0.00	0.00
apr-13	0.00	0.00
may-13	0.00	0.00
jun-13	0.00	0.00
jul-13	0.00	0.00
ago-13	0.00	0.00
sep-13	0.00	0.00
oct-13	0.00	0.00
nov-13	0.00	0.00
dic-13	0.01	0.00
jan-14	0.00	0.00
feb-14	0.00	0.00
mar-14	0.00	0.00
apr-14	0.00	0.00
may-14	0.00	0.00

Pest **Diaphania nitidalis Larvae L2 in fruits**

MONTH	Average/Plant	Criti/level
may-12	0.00	0.00
jun-12	0.00	0.00
jul-12	0.00	0.00
aug-12	0.00	0.00
sep-12	0.00	0.00
oct-12	0.05	0.00
nov-12	0.02	0.00
dic-12	0.01	0.00
jan-13	0.00	0.00
feb-13	0.00	0.00
mar-13	0.00	0.00
apr-13	0.00	0.00
may-13	0.00	0.00
jun-13	0.00	0.00
jul-13	0.00	0.00
ago-13	0.00	0.00
sep-13	0.00	0.00
oct-13	0.00	0.00
nov-13	0.00	0.00
dic-13	0.05	0.00
jan-14	0.00	0.00
feb-14	0.00	0.00
mar-14	0.00	0.00
apr-14	0.00	0.00
may-14	0.00	0.00

Pest **Diaphania nitidalis Larvae L3 in fruits**

MONTH	Average/Plant	Criti/level
may-12	0.00	0.00
jun-12	0.00	0.00
jul-12	0.00	0.00
aug-12	0.00	0.00
sep-12	0.00	0.00
oct-12	0.01	0.00
nov-12	0.05	0.00
dic-12	0.00	0.00
jan-13	0.00	0.00
feb-13	0.00	0.00
mar-13	0.00	0.00
apr-13	0.00	0.00
may-13	0.00	0.00
jun-13		
jul-13		
ago-13		
sep-13		
oct-13		
nov-13		
dic-13		
jan-14		
feb-14		
mar-14		
apr-14		
may-14		

Pest **Heliothis eggs**

MONTH	Average/Plant	Criti/level
may-12	0.00	0.01
jun-12	0.00	0.01
jul-12	0.00	0.01
aug-12	0.00	0.01
sep-12	0.00	0.01
oct-12	0.10	0.01
nov-12	0.15	0.01
dic-12	0.20	0.01
jan-13	0.22	0.01
feb-13	0.12	0.01
mar-13	0.09	0.01
apr-13	0.00	0.01
may-13	0.00	0.01
jun-13	0.00	0.01
jul-13	0.00	0.01
ago-13	0.00	0.01
sep-13	0.00	0.01
oct-13	0.00	0.01
nov-13	0.00	0.01
dic-13	0.10	0.01
jan-14	0.12	0.01
feb-14	0.14	0.01
mar-14	0.05	0.01
apr-14	0.08	0.01
may-14	0.10	0.01

Pest **Heliothis larvae**

MONTH	Average/Plant	Criti/level
may-12	0.00	0.01
jun-12	0.00	0.01
jul-12	0.00	0.01
aug-12	0.00	0.01
sep-12	0.00	0.01
oct-12	0.17	0.01
nov-12	0.20	0.01
dic-12	0.23	0.01
jan-13	0.28	0.01
feb-13	0.23	0.01
mar-13	0.10	0.01
apr-13	0.05	0.01
may-13	0.00	0.01
jun-13	0.00	0.01
jul-13	0.00	0.01
ago-13	0.00	0.01
sep-13	0.00	0.01
oct-13	0.00	0.01
nov-13	0.00	0.01
dic-13	0.05	0.01
jan-14	0.10	0.01
feb-14	0.08	0.01
mar-14	0.12	0.01
apr-14	0.10	0.01
may-14	0.03	0.01

Pest **Heliothis damage in fruits scale 0-1-2-3**

MONTH	Average/Plant	Criti/level
may-12	0.00	0.00
jun-12	0.00	0.00
jul-12	0.00	0.00
aug-12	0.00	0.00
sep-12	0.00	0.00
oct-12	1.00	0.00
nov-12	1.00	0.00
dic-12	0.00	0.00
jan-13	0.00	0.00
feb-13	0.00	0.00
mar-13	0.00	0.00
apr-13	0.00	0.00
may-13	0.00	0.00
jun-13	0.00	0.00
jul-13	0.00	0.00
ago-13	0.00	0.00
sep-13	0.00	0.00
oct-13	0.00	0.00
nov-13	0.00	0.00
dic-13	0.00	0.00
jan-14	0.00	0.00
feb-14	0.00	0.00
mar-14	0.00	0.00
apr-14	0.00	0.00
may-14	0.00	0.00

Disease Behavior May-2012-May-2014

A level Foliage

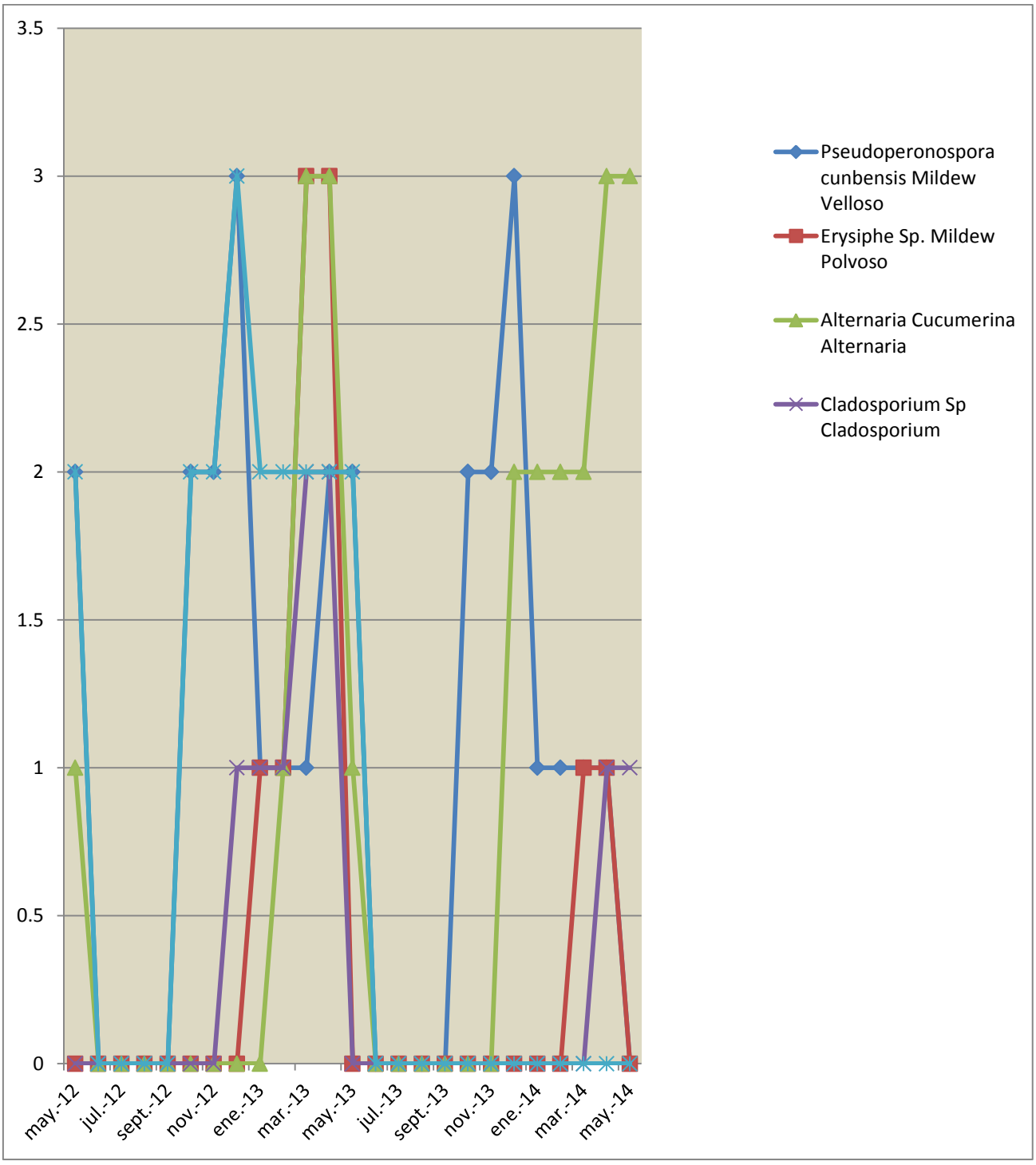
Fungus	Disease
Pseudoperonospora cunbensis	Mildew Velloso
Erysiphe Sp.	Mildew Polvoso
Alternaria cucumerina	Alternaria
Cladosporium Sp	Cladosporium
Bacteriosis	(Erwinia sp Pseudomonas)

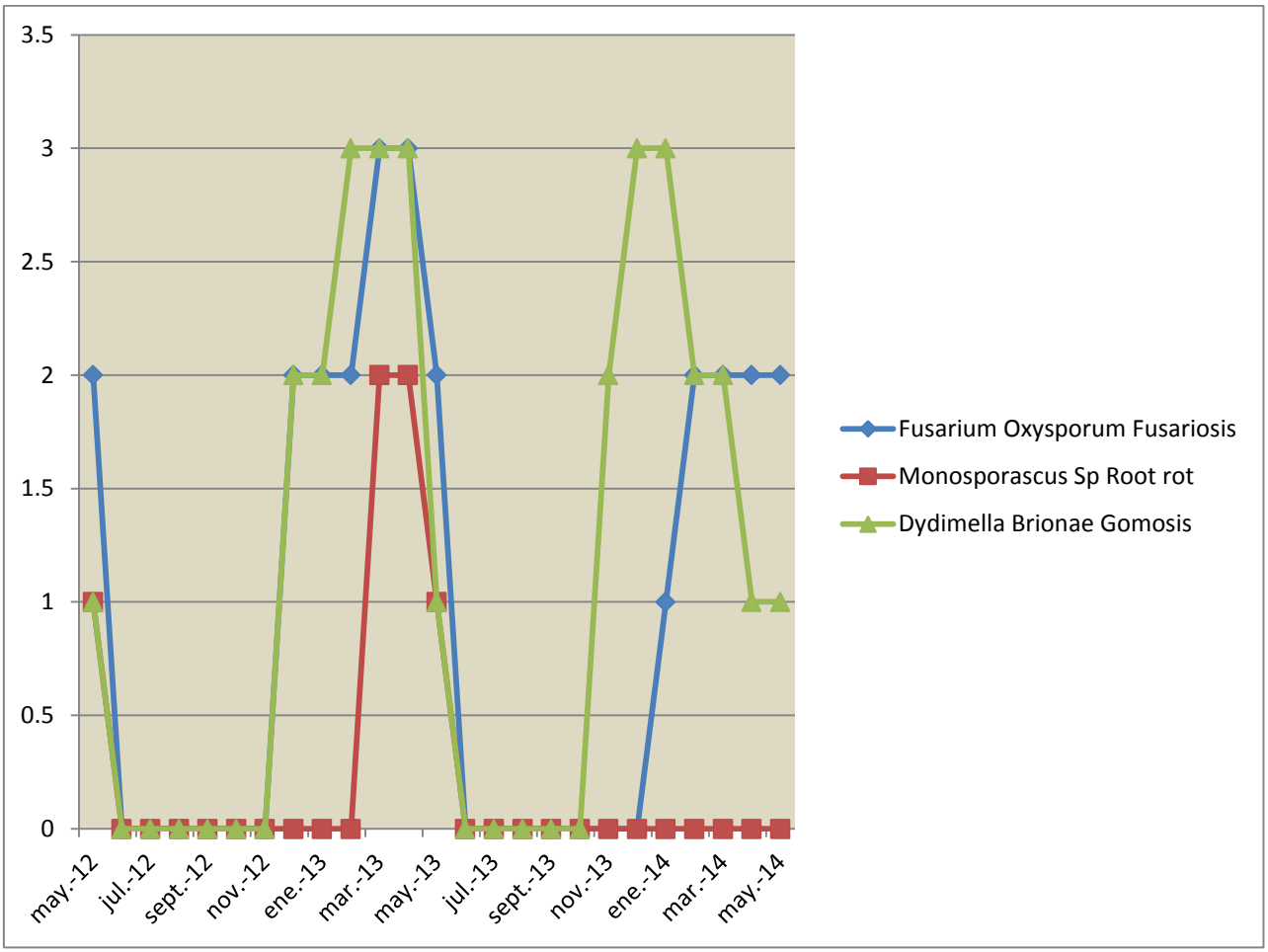
A ground level

Fungus	Disease
Fusarium Oxysporum	Fusariosis
Monosporascus Sp	Pudricioon de Raices
Dydimella brionae	Gomosis

A level of fruit

Fungus	Disease
Fusarium rosseun	Fusariosis de fruto


3.5
3
2.5
2
1.5
1
0.5
0
may.-12
jul.-12
sept.-12
nov.-12
ene.-13
mar.-13
may.-13
jul.-13
sept.-13
nov.-13
ene.-14
mar.-14
may.-14
Pseudoperonospora cunbensis Mildew Velloso
Erysiphe Sp. Mildew Polvoso
Alternaria Cucumerina Alternaria
Cladosporium Sp Cladosporium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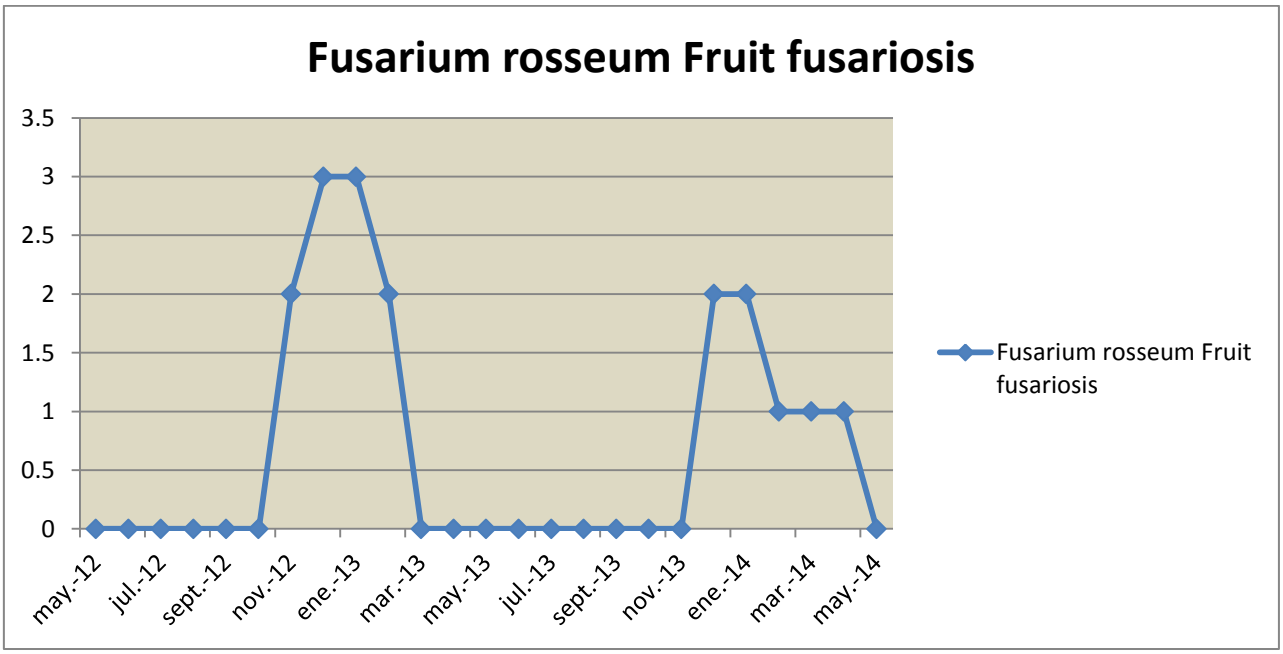
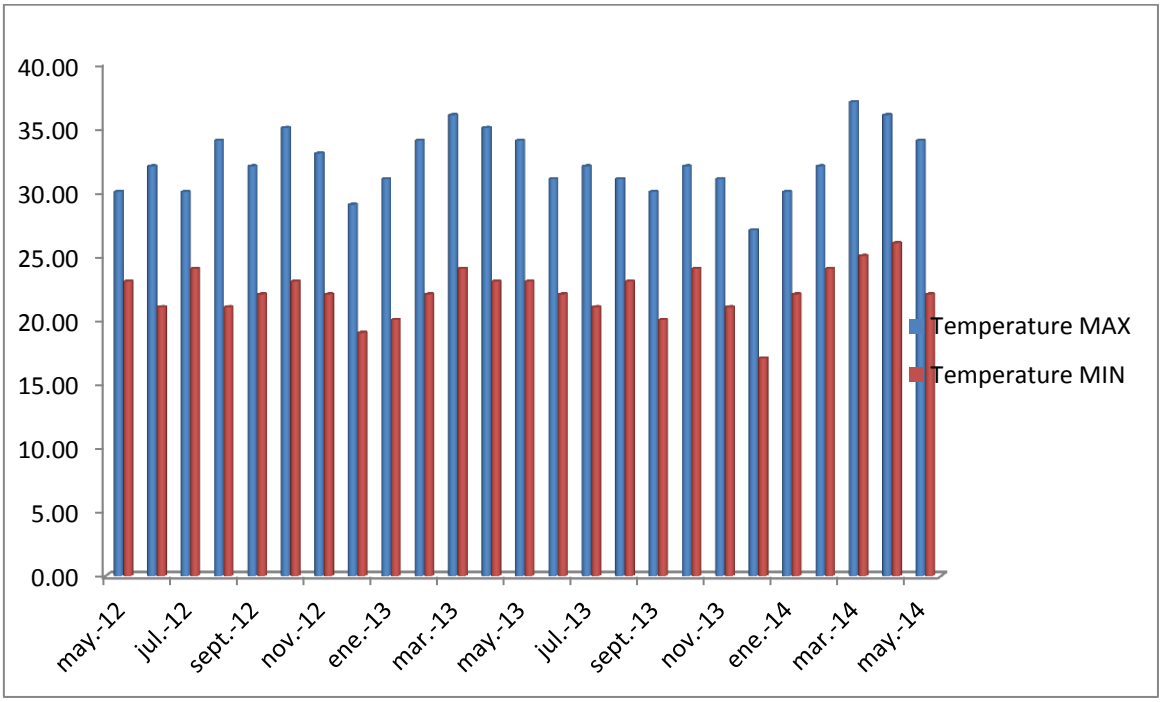
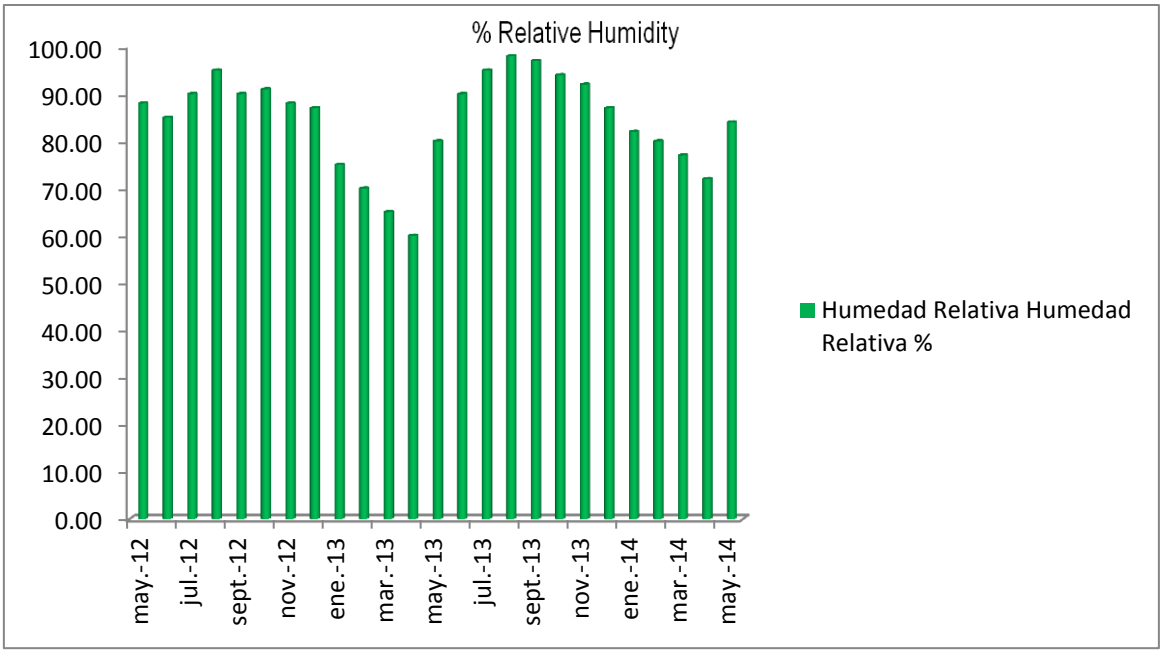
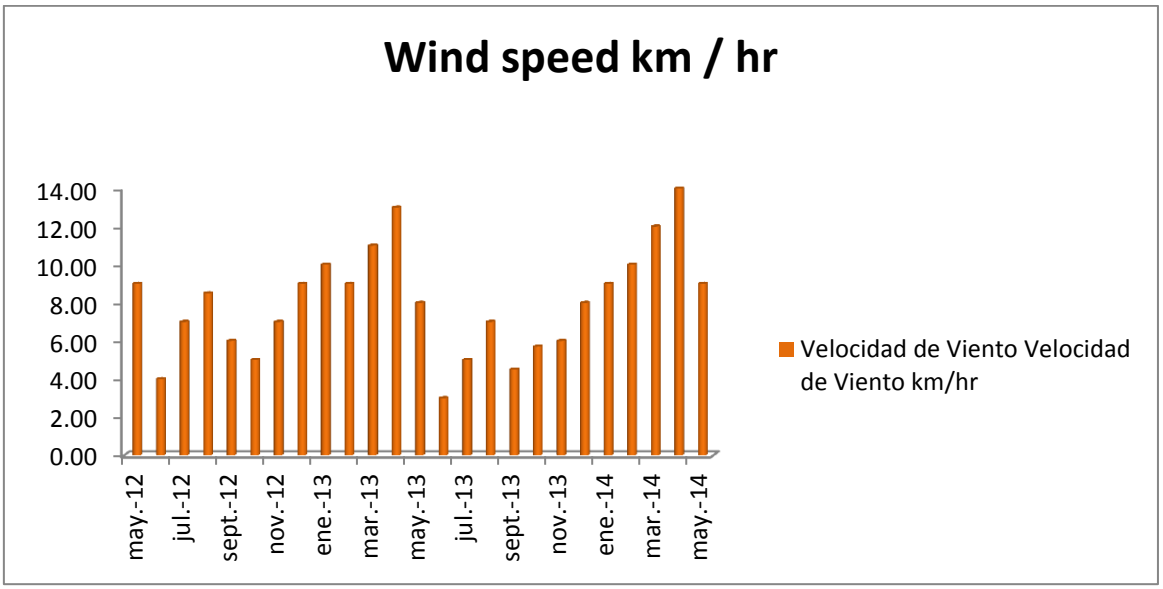
3
2.5
2
1.5
1
0.5
0
may.-12
jul.-12
sept.-12
nov.-12
ene.-13
mar.-13
may.-13
jul.-13
sept.-13
nov.-13
ene.-14
mar.-14
may.-14
Fusarium Oxysporum Fusariosis
Monosporascus Sp Root rot
Dydimella Brionae Gomosis


Fusarium rosseum Fruit fusariosis
3.5
3
2.5
2
1.5
1
0.5
0
may.-12
jul.-12
sept.-12
nov.-12
ene.-13
mar.-13
may.-13
jul.-13
sept.-13
nov.-13
ene.-14
mar.-14
may.-14
Fusarium rosseum Fruit fusariosis

TEMPERATURE






Wind speed km / hr
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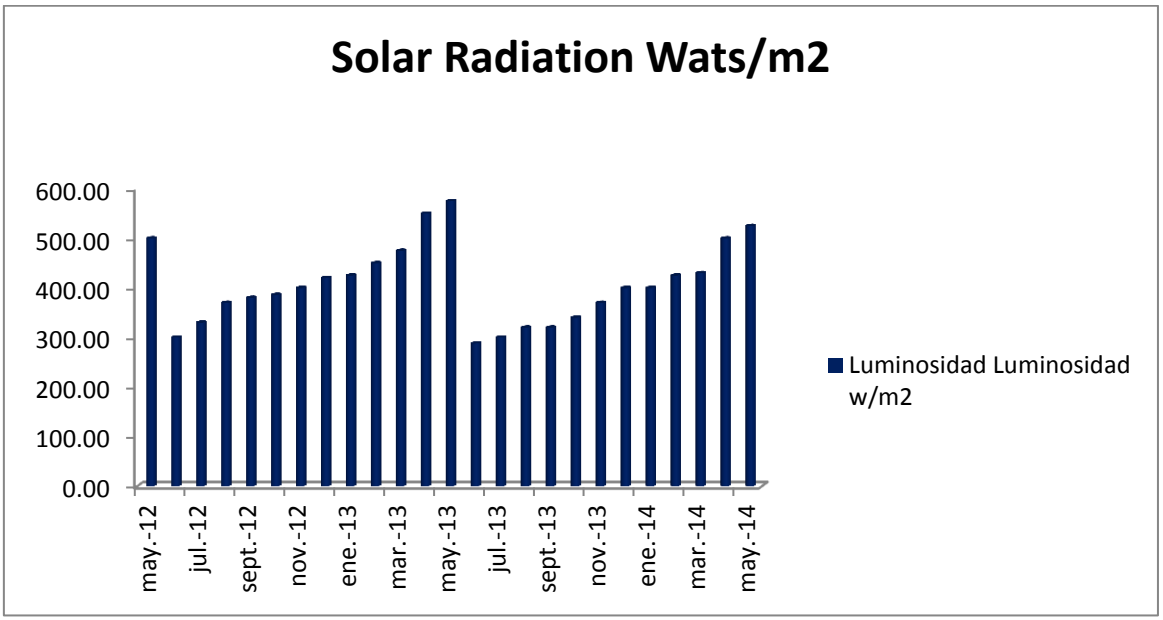
12.00
10.00
8.00
6.00
4.00
2.00
0.00
may.-12
jul.-12
sept.-12
nov.-12
ene.-13
mar.-13
may.-13
jul.-13
sept.-13
nov.-13
ene.-14
mar.-14
may.-14
Velocidad de Viento Velocidad de Viento km/hr


Solar Radiation Wats/m2
600.00
500.00
400.00
300.00
200.00
100.00
0.00
may.-12
jul.-12
sept.-12
nov.-12
ene.-13
mar.-13
may.-13
jul.-13
sept.-13
nov.-13
ene.-14
mar.-14
may.-14
Luminosidad Luminosidad w/m2