PESTS AND FREQUENT DISEASES IN THE MAIN FRUITS OF HUAMBO PROVINCE – ANGOLA

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The characteristics and climatic conditions of Huambo favor, among many fruit crops, the production of Mango (***Mangifera indica*** **L.**) and Lemon (***Citrus limonum*** **(L.) Osbeck**).

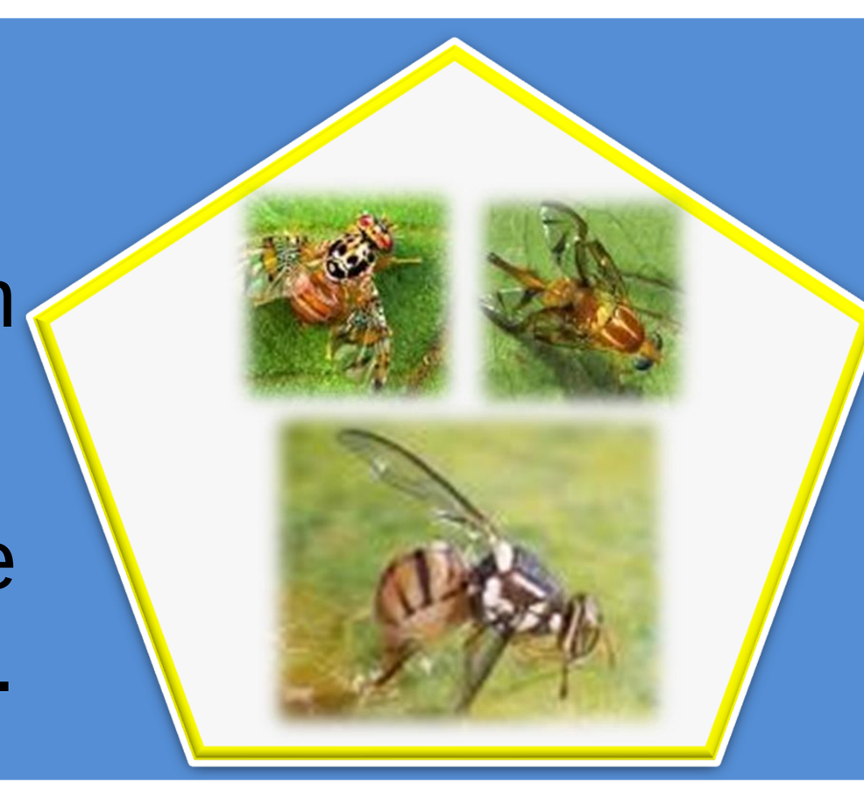
Its main pests and diseases, as well as the appropriate practices for its cultivation, have already been identified through scientific research, with indicators of increased production in a sustainable manner, good management and soil conservation and adaptation to climate change conditions.

Mangifera indica

Citrus limonum

CONTROL MEASURES

1. Chemical control: sprinkle toxic bait [protein hydrolyzate (1L), malathion (200ml); water (100 L)].
2. Biological control: parasitoids of the Braconidae family, for example *Diachasmimorpha longicaudata*.



Anastrepha spp. e Ceratitis capitata **Wied**
Fruit fly

CONTROL MEASURES

1. Chemical control: Preventive sprays with Parathion Methyl for the eradication of insects.
2. Eliminate and burn all branches dry or affected by the drill bit.
3. Avoid prolonged water and nutritional stress.

Hypocryphalus mangiferae
Mango berry borer

CONTROL MEASURES

1. Preventive spraying based on wettable sulfur and quinomethionate, during periods of population increase (dry seasons).
2. In the nursery use healthy branches (for grafting).
3. Pruning and burning of branches and inflorescences with symptoms of overgrazing and malformation.

Eriophyes mangiferae
Mite

Anthracnose
Colletotrichum gloeosporioides

CONTROL MEASURES

1. Proper fertilization and proper management of invasive plants.
2. Raise the canopy of the plant and perform aeration or cleaning pruning in densified orchards.
3. Fungicides (Benomyl: 70g / 100L H_2O; Methyl thiophanate: 250g / 100L H20) + adhesive spreader.

Dry matter of branches
Lasiodiplodia theobromae

CONTROL MEASURES

1. Remove diseased branches and branches 40 cm or more below the infected site. Burn the branches.
2. Place a copper paste + carbaryl (0.2%) in the pruned area; disinfect pruning tools with 2% sodium hypochlorite (bleach) solution.
3. Use of resistant rootstocks (example: Jasmine).

Powdery mildew
Oidium mangiferae

CONTROL MEASURES

1. Intermediate application of sulfur (0.2% concentration) and systemic products (tebuconazole: 0.05%, triadimenol: 0.1%).
2. Use of systemic oidicides (fenarimol and pyrazophos).
3. Cultivation of new products besides the hose.

Orthezia praelonga
Cochineal ortezia

CONTROL MEASURES

1. Application of contact insecticide and systemic to eliminate nymphs and adults.
2. Implantation of live fences as an environmental management measure.
3. The application of entomopathogenic fungi *Beauveria bassiana*, *Verticillium lecanii* and *Fusarium sp*.

Anastrepha fraterculus e Ceratitis capitata
Fruit fly

CONTROL MEASURES

1. Collection and burial of fallen fruits at 30 cm depth.
1. Application of insecticide associated with hydrolyzed protein (5%) or molasses (10%) in areas of high concentration of flies.

Phyllocoptruta oleivora e Brevipalpus phoenicis
Mite

CONTROL MEASURES

1. Application of sulfur-based acaricides when the pest reaches 20-30%.
2. It is recommended: the use of green cover with the intermediate planting of billygoat-weed (*Ageratum conyzoides*); use of windbreaks; total restriction on agrochemicals and non-selective inputs.

CONTROL MEASURES

1. Planting of healthy seedlings free of mites and viruses.
2. Elimination of invasive and invasive plants.
3. Chemical control with acaricides. It is recommended to apply drops with a volume diameter of 150-200 microns and a volume of syrup of 100-200 ml / m^3 of a canopy.

Leprosis
Citrus leprosis vírus

CONTROL MEASURES

1. Control of the citrus miner (*Phyllocnistis citrella*) with insecticides based on abamectin, or neonicotinoid insecticides (*Diaphorina citri*).
2. Use of healthy seedlings and resistant plants.
3. Copper application to reduce the amount of plant symptoms and fruit drop.

Citrus canker
Xanthomonas citri subsp. citri

CONTROL MEASURES

1. Fertilization and balanced irrigation helps prevent unequiform flowering.
2. Elimination of weak plants and maintenance of the sanity of the orchard.
3. Applications of fungicides to that of the triazole + strobirulin mixture (500 to 1000 liters / ha).

Floral rot
Colletotrichum spp.

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