Mango production in the philippines pdf

Philippine mangoes (national fruits) are known around the world as the best tasting of various Carabao mangoes in the world. The Philippines produces about 1 million metric tons of mangoes per year (3.5% of global production) – 95% of domestic consumption and 5% of exports – this generates about $35 million a year in the country. In Asia, the Philippines is the largest exporter of mangoes. Hong Kong and Japan are the largest importers of mangoes in Asia. Next to bananas and pineapples, mangoes are the Philippines' most important agricultural products in terms of export revenue. Prospects and strengths * Mango cultivation is in line with initiatives in both the public and private sectors in terms of production, processing and marketing support * When a productive, 10-15 year old tree will make about 500 kilograms * There is a niche market for both fresh and processed mangoes on the site and abroad. Export market expanding * Technologies from propagation to post-harvest processing have been tested, tested and adopted nationally * Sustained efforts are also available to develop new products * There is a group of experts in the country that can be used, to provide technical assistance to mango growers and processors * Research and development activities for new pests and diseases are a priority for the relevant agency's government * Expansion of large production areas in Mindanao, which are free from typhoonsFavorable growing conditions * Altitude plant: 600 meters above sea level (400 m considered ideal) * Temperature: 21°C-2 27°C * Weather due to vegetative parts and flowering: different wet and dry (3 to 5 months dry) * Fruit development time : plenty of sunlight * Ideal soil: sandmable, relatively high organic matter * Soil pH: 6.0 to 7.0 * Soil texture: good water holding capacity * Top : flat rolling, not exceeding 45 degrees gradient * Drainage: well drained soil; less moisture level required during maturation leaves and buds, flowering, fruit set and maturation * Distance planting: depending on the varietyPopular varieties 1. CARABAO * originated from India, Burma and Malaya (Indo-Burmese region) * the tree is coarse, large and conical trunk with shallow and small cracks on the bark, foliar dome shaped * fruits are elongated and kidney-shaped, weigh about 240 grams, with thin, yellow pulp, very delicate flavor and slight aroma 2. there are deeper cracks on the bark * kidney-shaped fruit weighing about 230 grams; different beak on the vertex, pulp is fibrous and thick, light orange yellow and sweeter than Carabao variety 3. sexual and aborn spread 1. Sexual Reproduction – Growing Rootstock 1. Get seeds from ripe fruit 2. Selects seeds to enhance germination 3. Sow seeds in seed boxes or elevated parcels. The ideal feed is a mixture of one part compost and one part of the garden soil. Composting materials such as sawdust, coconut coconut dust, rice housing and other similar organic materials may also be used. 4. Water seed boxes or seed plots to maintain enough moisture. Drain excess water. 5. Transfer seedlings with 2 to 3 sheets of black plastic bags (7x11) filled with garden soil mixed with broken organic materials. Note 6: Seeds germinate 10-15 days after planting. Apply fertilizer (16-20-0 mixed with urea) for 30 days after potting at a rate of 3/4 teaspoon per bag. 7. After that, spray the greens every week. 8. Apply the fertilizer again (as in step 6) every 30 days. 9. Spray with pesticides when the need arises. The most common problems are scale insects, cecid fly, corn silk beetle and antracnose. 10. Rootstocks are ready for grafting, reaching the diameter of the pencil-sized stem (germination of 10-12 months). 2. Aborn multiplication (grafting, budding, inarching, etc.) Through Grafting 1. Grow rootstock seedlings up to pencil size diameter (8 to 12 months) 2. Get a mature scion (pencil size with plump end) from healthy stem trees that have higher characteristics 3. Remove the leaves and clean the scion. Immediately put in a plastic bag to prevent transpiration and drying 4. Cut the trunk rootstock preferably at the tender joint at the active growing shoot one leg from the base. Make the cut, 1/ 4 inches deep from the cut, in the center of the trunk 5. Make a clean V cut at the base of scion 6. Insert the scion's V to cut the base of the incision rootstock, seeing that the cambium layer or skin of both scion and rootstock corresponds to 7. Tied them together gently, but firmly with a plastic tape. Wrap the entire scion from the joint to the tip to prevent drying 8. Place freshly grafted seedlings in semi-shaded environments 9. It is usually observed for 15 to 20 days 10. When this happens, remove the plastic strips that cover the tip to stimulate growth. Leave the strip that binds the joint. 11. Grafts are ready for disposal after 8 to 10 months. Hardening, however, is recommended before the field is planted 12. Grafts that are not sold after 1 year must be transferred using larger plastic containersSEarth preparation 1. Prepare a lay-out from the farm There are four lay-outs to choose from: 1st Square System (as them) 2. Triangle system (as them) 3. Quincunx system (as them) 4. Contour system (as in them) 2. Place the stakes (markers) in place of planting 3. Dig one cubic meter hole and fill with fertile soil (usually soil mixed with broken organic materials and fertilizer). 4. Pour water into the hole and allow to absorb soil. 5. 5. plastic bag. 6. Plant graft in the center and cover the hole with the remaining soil. 7. Protect the freshly planted graft from intense heat by providing a shed using coconut leaves. 8. Apply the mulch to maintain soil moisture. Crop EstablishmentDisting plantingFatori consider: * topography of land * development program farms * varieties * soil fertility * planting intercrops – types of intercrops * (to include a table containing the recommended distance of planting and the total number of trees per hectare using different systems of planting) Pruning and thinningAs a general rule that the farmer should start pruning and thinning when the crown or tree leaves begin to meet. Pruning is the removal of unwanted vegetative parts of a tree, usually overcrowded branches. Insect-infested and sick branches, leaves, flowers or other parts of plants must also be removed. An integral part of the pruning is the training of the canopy for a manageable size, shape and height. Type crown Training: * open center * formative * modified stairs * conventional * DwarfingPruning is done to allow sunlight to penetrate the crown and free air circulation, thereby reducing the incidence of insect pests and diseases. In general, branched trees produce larger and high-quality fruit compared to unstifiable trees. The best time to prune is after harvesting. When done in the summer, the injured parts dry and heal faster. Other considerations in pruning paragraph 1. Select only the parts to be pruted (minimal pruning) 2. Cut small branches first followed by large branches (minimal pruning only) 3. Always make a clean cut at the base of the branch and avoid leaving the stumps where unwanted water cabbage can grow 4. Paint or spray an open incision with fungicide, tar or disinfectant when pruning is done during the wet season 5. Remove all debris and maintain cleanness in the surrounding areas. Nutrient management In the first five years, trees need high levels of nitrogen fertilisers. To promote faster vegetative growth, the use of organic fertilisers is also recommended. The age of the tree bearings puts more emphasis on phosphorus and potassium. Phosphorus fertilizer contributes to the development of roots and flowers, while potassium is fruit and maturation. Apply fertilizer containing 4-5% phosphoric acid and 8-15% potash. Important Considerations Fertilizer Application: 1. When applying fertilizer, dig a few holes (6-8 holes) around the tree or canal area on which the foliage. For large trees, follow the canopy drop line. 2. Zone for maximum and effective use of fertilizers is 30 deep and 100 cm from the trunk of 5-10 year old trees. It goes a little further, as the tree crown becomes wider 3. The desired time of worship of fertilisers for non-bedred trees or juveniles is at the beginning of the rainy season and before the end of the rainy season, when the soil is still moist. Fertilizer can also be applied during the dry season if there is irrigation. 4. fertiliser is similar to both bearings and new trees. 5. During flowering, it is recommended to spray foliage fertilizer as an addition. Flower InductionIn inducing mango trees to carry the flower, take into account: 1. Different mango varieties have different flowering and fruit habits. The carabao variety normally bears fruit every two to three years. 2. Chemical flower inducers should not be used under the following conditions: * If the tree is too small or new * When the leaves and buds are young * If the tree is weak and fminous * On rainy days * Just after the harvest or when the tree is fruit or is in the rinsing stage 3. A large dose of flower inducers (2.0 to 3.0% KNO3) should be used if: * Trees are just starting to mature * Leaves and buds are maturing * The tree is healthy with vigorous buds and leaves * During cloudy weather * Sprayed six to seven months after harvesting 4. Use a low dose flower inducer (1.0 to 2.0% KNO3) when: * Trees are large, old or fully mature * Leaves and buds are fully mature * The tree is healthy with dormant buds * Sprayed in sunny weather * Sprayed seven to nine months after harvesting 5. Cause flowering only once a year 6. From flowering to harvest, it takes 7-8 months to restore and accumulate enough nutrients for the next fruit season 7. Trees that swept the fruit last season, but have not washed up should not cause flower 8. Spraying should be carried out if the tree and leaves are dry and without expected rain over the next 6 hoursS potassium nitrate is the generic name of the chemical flower inducer mango. The chemical symbol of this compound is KNO3. It contains 13% nitrogen and 46% potash, thus, 13-0-46. When sprayed, it provides potassium deficiency in the tree and in the process, causes blooms. When spraying potassium nitrate, follow these simple steps: 1. Prepare 1-3% solution depending on the condition of the tree. 2. Spray leaves and branches completely moisturizing, but not dripping. 3. Spray early in the morning (from sunrise to 9:00 a.m.) or late afternoon (14:00 to 5:00). This prevents the burning of leaves due to sunlight. Water managementMukos mango trees, weekly manual watering should be carried out in dry months, saturating the soil with enough water, followed by mulching. If drip irrigation is available, the use of fertilizer may be included in the irrigation water. Apply water to flowery trees weekly during flower initiation and fruit development and stop for one month before harvesting. Irrimises developing flowers and fruits to improve rapid development, reduce fruit droplets and increase fruit size. The volume of water varies from 60 to 100 liters per tree depending on size. Pest controlHigh protection Packing or packing fruit is practiced in many areas, as follows: * Reduces the incidence of fruit fly and other fruit insects * reduces disease (fungal) infection * Reduces the incidence of mechanical * Paper used to serve as an absorbent latex flow during harvest * Results for cleaner fruit skin and more attractive light green color * Provides an estimate of harvestable fruits on a treePract, conscripted recommended to protect the fruit from pests and reduce spraying insecticide. This practice is done when the fruit is about the size of chicken eggs (55 to 60 days after flower induction)Insect pests 1. Mango Leaf Funnel Damage: Sucking plant juices causes drying and drying tender shoots, flowers and very young fruits. In the process, the insect secretes sticky fluids (honeydew), which contribute to the development of soot mold, fungal diseases. Control: Spray recommended chemicals ranging from flower/bud formation to fruit setting. Confidor is effective against funnels. 2. Mango tip boreris Damage: Shoots wilt and terminal parts die. If infested, panicles break and flowers shed off. Control: * Plum dead branches to prevent the spread of insects. Burn parts that are affected. * As adults begin to destroy flowers from buds until the extension, it is necessary to spray insecticides to protect these stages, especially in hit months. Tip borer is also recommended to use insecticides used for the control of mango funnels. 3. Twig Cutters Damage: This is a very destructive dry season. If present, the number of flowers that will be formed is reduced. The most prominent indication of the problem is the presence of dead branches and leaf foliage. Control: Pruning and burning e dead branches to prevent the spread of insects. Protect the waves from adults by spraying insecticide. 4. Pulp weevil Damage: It has been a unique pest since insect feed larvae inside the fruit and destroy the pulp, however the peel does not show any damage even up to harvest. The insect is present only in some parts of Palawan. Control: 1. Pruning of crowded mango trees that allow light to penetrate foliage is unfavorable to the weevil. Dead or overcrowded branches must be removed. 2. Store each tree without salty, fallen leaves, fruit manure and other debris. Soil cultivation is beneficial because it exposes and kills the weevil hidden in the soil after harvesting. Burn infested fruit to prevent the source of the infestation during the next fruit season. 3. For chemical control, Cypermethrin at 50 ml/100 li water provides good protection against weevil. Fenwalrate and carbaryl are also effective against the pest. The insecticide should be administered at 14-day intervals from fruits set to complete fruit development. Note: Insecticides are not effective when the pest is inside the fruit. 5. Mango fruit fly Damage: Adults lay eggs on mature fruits and larvae feed on pulp. The affected fruit falls on the grown and is easily contaminated with micro-organisms. Control: Call in, collect and properly disposing of fallen fruit and harvest at the correct stage of maturity. If chemicals are to be used, spray it 90 or 110 days after induction. 6. Bugs Damage: Attack the newly rinsed leaves, flowers and fruits and suck vital herbal juices. The affected parts become yellow, dry out and eventually fall. Control: Removal of infested fruit, flowers and leaves. Spray insecticides to kill the kaistas associated with the mealy bug. 7. Capsid bug damage: attacks on new leaves, branches and fruits. Insect saliva is very toxic, and the puncture site is marked with sunken blisters. Lesions become brown after 24 hourssater black and scabs for 2-3 days. Infected young fruits are falling prematurely. Locally the damage is called a kurikong or armalite or buti. Control: Plum trees before induction, underbrushing areas around the tree, spray insecticide in the late afternoon and remove substitute hosts such as Indian, Guava and Cocoa. 8. Mango cecid fly Damage:Adults, which are mosquito-like in appearance, lay eggs on new waves. Larval mine leaves produce bile or swelling of tissues. The results of severe infestation deform leaves; leaves remain yellow. Close examination of the leaves shows dark green, circular bile accidentally distributed on the leaf blade. Control: 1. Prune or cut infested leaves and burn. 2. Practice orchard sanitation. Underbrush sedy areas as adults stay in these areas. 3. Spray either Sevin, Decis, Karate or Stingray (3-4 tablespoons per 16 liters of water) to reduce damage. 9. Scale insect Damage: In nurseries, leaves of grafted mangoes are easily infected with scale insects, causing them to dry and fall. Bearing trees, high populations of insects cause blackening foliage due to the growth of fungus in soy mold. The affected leaves become covered with a thin, black, paper-thin film that creates an unsightly look. In addition, affected branches are deformed in the production of bile, such as protruberances. Control: 1. Youth-scale insects are transported and distributed with red cocktails for different parts of the tree. To prevent infestation, destroy the frames by spraying Malathion at 1 1/2 tablespoons per 16 liters of water, Decis at 1-5 tablespoons per 16 liters of water or Karate at 3/4 – 1 1/2 tablespoons per 16 liters of water. 2. Plum and burn heavily infested parts of plants such as branches and leaves. Then spray the recommended insecticides and use of high doses of nitrogen recommended for this pest. Important diseases 1. Antracnose Damage: This is the most common and destructive disease of mango both in the field and after harvesting. Symptoms are exhibited not only on the fruit bust also on flowers and leaves. Prevention and control: 1. Rural sanitation 2. Prune infected branches, burn them and bury trash 3. Schedule flower induction after rainy season or dry months 4. When spraying the flower inducer 5, include insecticide and fungicide. Wrap the fruits 50-60 days after flowering to protect them from pests and diseases. 6. After harvesting, practice 2 for hot water treatment. Stem end Rot Injury: This is another post-harvest disease mango and appears in storage and During. The disease, which only ripening fruit. Control measures: 1. During the harvest, leave one centimeter of pedicel attached to the fruit to avoid too much latex staining. The occasional organism germinates and grows in the presence of latex. 2. Pack mango boxes for two layers to avoid injury due to compaction 3. Do not use organic materials during packaging. Scabies Damage: The disease occurs in kindergartens and wet weather. Damage occurs while the fruit is still green Control measures: the control methods are similar to the antracnose methods. However, scabs are effectively controlled using copper fungicide. 4. Gummosis Lesion: This fungal disease causes stem bleeding, crown and root rot. Infection can begin seedlings and can appear in both dry and wet season. Control measures: 1. Plant in well-dryed soil. 2. Disinfect the nurseries with methyl bromide, chlorpyolin or other fungicides before disinfection (3). Avoid planting too tight to allow aeration and ventilation. 4. Remove dirt, no smedes or trash 5. Avoid scaly soils for a long time at the base of the tree. 6. Cultivation to aerate the soil is necessary to reduce fungal infection 7. Plum-crowded branches 8. Ethyl phosphate metaxyl licked foliage spray at 2 g of water every 80 days 9. Press the infected parts, expose the lesion and cover with slurry fungicide 5. Sooty Mold Damage: The causal organism (fungus) develops in the presence of honey dew excreted by insects such as funnels, scales and mealy bugs. As such, it stains the fruit and makes them look dirty and unattractive. Control measures: Spray insecticide to kill funnel, scales and mealy bugs. Bag fruit 60 DAFI. Integrated plant protectionIt includes the following practice: 1. Planting whole plants. 2. Proper land preparation and cultivation. This includes cleaning and removing residues of infected plants in the field and exposing the soil to direct sunlight. This will help eliminate soil pathogens. 3. Proper irrigation and drainage to avoid water logging and reduce water borne diseases. 4. Correct distance for planting and row orientation. This will allow maximum soaking in sunlight, aeration and facilitating farm activities such as pest and disease control, breeding, plowing, smudging, fertiliser use, harvesting, etc. 5. Introduction and maintenance of natural enemies and other biological control techniques such as entomophagous mushrooms against mango funnels. Intercropping with trees that can ward off harmful insects and serve as wind breaks. 6. Using the recommended fertiliser and soil conditioner, keep the correct pH 6-7.7. Practice of clean and sanitary culture. This includes pruning, alkalination, thinning, cultivation and infested debris burning. 8. Using insecticides and fungicides derived from plant extracts such as neem, porcelain berry and custard apple. 9. Use of bait and light traps in fruit (fruit flies and drills). 10. Monitoring of pest populations and use of pesticides only if necessary. 11. 11. cultures, biological and chemical products for pest s. Harvest ManagementThe are indications that mango fruits are ready for harvesting: 1. After 110 days (very warm and dry, 120 days (warm climate) and 130 days (cool and high elevation) after flowering; 2. When the flesh turns yellow; 3. When a powder deposit or bloom on the surface of the skin is found; 4. If the fruit at the end of the stem is flattened shoulders; or 5. When the fruit pedicels become dark green to brown in color; 6. 75% mature fruit samples sink when immersed in 1% saline solutionMade by hand is the most effective way to avoid bruises or damage to the fruit. The best time for harvesting is from 9:00 to 15:00, because the tree and fruit are dry and the flow of latex is minimal. Harvest with intact pedicel (1.5-2.0cm). Before packing, cut the pedicels and let the latex dry. After harvest Processing The following post-harvest treatment is practiced to sell quality fruit: 1. Washing fruit in water – To remove dirt on the surface. 2. Hot water purification – This involves heating by dipping the fruit for 5 to 10 minutes in heated water (52-55 ° C). This is followed by hydrocoalting (washing in cool water) and drying of air. 3. Steam heat treatment (VHT) – This involves heating the fruit with water vapor saturated air until the fruit pulp reaches 46 ° C in 10 minutes. Maturing FruitsFully mature fruits can cause ripening faster and with a uniform color. There are two ways to do this: 1. Use of calcium carbide (calburo) at a rate of 5 to 6 grams per kilogram of fruit. This is done by wrapping calcium carbide in paper or leaves and placing it at the bottom of the container. The container should be enclave for 2 to 3 days. For best results, let the fruit produce a yellow color and place the kalburo. 2. Use of ethylene gas or ethyl water solution. The use of ethylene gas includes a chamber, while the ethyl-bound fruit is simply soaked in the solution. Mango Processing TechnologiesBeing is a decaying product, mango is processed in different ways, to: * Protect it from chemical deterioration and microbiological contamination * Provide additional income * Ensure adequate and continuous supply of mango products throughout the yearTreacing forms of mangoes * Mango chat * Mango ing * Mango cubes * Burong mangga * Mango atsara * Mango puree * Mango pickles (sweet and sour blend) * Mango candySources: bar.gov.ph/agfishtech/crops/mango.asp. September 2009. HVCC. 2001. Mango, Techno-Guide For Mango In The Philippines. philippineherbalmedicine.org/mango.htm. I do not. Photo: merinews.com Do you like this Money Making Business and Ideas? then please consider subscribing to our RSS feed and have new articles sent directly to your inbox. Inbox.