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Malapapaya Polyscias nodosa (Blume) Seem Physical Characteristics Malapapaya tree reaches a height of about 25 meters and a diameter of 50 centimeters, usually with a cylindrical bole. Its outer bark is whitish or creamish-white. The leaves are simply pinnate, crowded on twig-apices and each measures from one to two centimeters long, with 14 to 20 pairs of leaflets. The leaflet is ovate-oblong to lanceolate with short acuminate base, crenate-serrate margins, and measure 10-25 cm x 4-10 cm. Inflorescences are panicles about 1.5 centimeters long with sessile, yellow-green flowers about two centimeters long. The fruits are sub-globose ridges and yellowish, has red, persistent calyx, and five-ribbed when dry. Distribution Malapapaya can be found in Benguet, Pangasinan, Zambales, Rizal, Bulacan, Laguna, Quezon, Sorsogon, Mindoro, Palawan, Leyte, Surigao, and Basilan. It also grows in moist areas along gullies and creeks. Open thickets and secondary forests are ideal places for plantation establishment for this tree. Method of propagation The species is propagated mainly by seeds. Wildlings from mother trees are also collected for nursery rearing and planting purposes. Contemporary use The malapapaya wood is commercially used in the Philippines for making fancy woodwork, boxes, pencil slats, chopsticks, matchsticks, ice cream spoons, plywood, native wooden shoes, lollipop and popsicle sticks, toothpicks, and similar articles. Traditional use The leaves are powdered and applied as fish poison or used medicinally against purpuric fever and as a contraceptive. How to plant your malapapaya seedling Clear the area where you want to plant your seedling with unwanted weeds and debris. Make sure that a one-meter radius is kept free from other vegetation. Dig a plant hole with dimensions of at least 20 cm x 20 cm x 20 cm. Plant the seedling at proper depth. Root collar should be at level with or a little below the ground surface with the seedling oriented upward. Fill the hole with top or garden soil and press soil firmly around the base of the seedling. In plantation-making, seedlings should maintain a two-meter distance between seedlings if planted in a row of a three-meter distance from one strip to the next strip. How to take care of your malapapaya seedling Remove grass and other unwanted vegetation and cultivate the soil around the base of the seedling (50 cm radius) once in every quarter for two to three years. Place mulch around the base of the seedling (maintaining the 50 cm radius and using cut grass, leaves, and other suitable materials as mulch base). Prune the branches at most 50 percent of the crown depth, preferably during dry season, and ensure that when pruning, you do not injure the bark. Remove infected or infested vegetation nearby to stop plant diseases from spreading and contaminating your seedling. Monitor regularly the growth of the seedling for presence of pests and diseases. Data about native tree species are featured by the Ramon Aboitiz Foundation Inc. For comments and suggestions, e-mail . - THE FREEMAN Gen info - Polyscias is a genus of flowering plants in the family Araliaceae. In 2003, a published checklist and nomenclator for Araliaceae listed 116 species for Polyscias. (2) Botany Malapapaya is a tall tree reaching a height of about 25 m and a diameter of 50 cm. Bole is very long, cylindrical, with no buttresses or with very low, simple, rounded and inconspicuous buttresses. Outer bark is whitish or creamy white. Leaves are crowded on the twig apices, widely spreading downward, simple pinnate, 1-2 cm long, with 14-20 pairs of leaflets. Leaflet is ovate-oblong to lanceolate with short acuminate base, crenate-serrate margins, 10-25 cm long and 4-10 cm wide. Inflorescences are panicles about 1.5 cm long with sessile, yellow-green flowers about 2 cm long. Fruits are subglobose, ridged and yellowish, with a red persistent calyx, and five-ribbed when dry. (4) Distribution - Native to the Philippines. - Found in Benguet, Pangasinan, Zambales, Rizal, Bulacan, Laguna, Mindoro, Palawan, Leyte, Surigao, and Basilan. - In open thickets and secondary growth forests at low and medium altitudes. Also in moist areas along gullies and creeks. - Native to Java, Lesser Sunda Is., Maluku, New Guinea, Queensland, Solomon Is. (1) Constituents - Study of dichlormethane extract of Polyscias nodosa yielded squalene (1). phytyl fatty acid esters (2), lutein (3), ß-sitosteryl-3à-glucopyranoside-6'-0-palmitate (4) from the leaves; and 1,triacylglycerols (5), and a mixture of stigmasterol (6a) and ß-sitosterol (6b) in a 5:1 ratio from the twigs. (5) Properties - Considered febrifuge and contraceptive. Parts used Leaves Uses Folkloric - Leaves used for purpuric fever. - Reported use of leaves as contraceptive. Others - Fish poison: Powdered leaves used as fish poison. - Wood: A good source for the manufacture of plywood and veneer, wooden shoes, handicrafts and a variety of common-use products (matchsticks, popsicle sticks, toothpicks, chopsticks, ice cream spoons).It is a good replacement for non-biodegradable food containers. - Agroforestry: Useful for the reforestation of denuded forest areas. Studies • Phytochemical Study / Leaves and Twigs: See study above. Availability Wild-crafted. Common name: Malapapaya Local name: Malapapaya (Visayas, Pangasinan, Tagalog); bongliw (Camarines Sur) Scientific name: Polyscias nodosa (Blume) Seemann Family: Araliaceae Description Malapapaya is a tall tree reaching a height of about 25 m and a diameter of about 50 cm. Leaves are crowded on twig-apices, widely spreading-downward, simple pinnate, 1-2 mm long; petiole is one third of the length of pinnate leaf; leaflets ovate-oblong, lanceolate from a rounded base, narrowed or shortly acuminate, rounded scallop to saw-tooted edge, 10-25 cm long, and 4-10 cm wide; petiole is very short, more or less 1 cm long. Leaf-blade on the upper surface has distinct fine soft spine in the seedling stage. Inflorescences in panicles (sometimes with additional flowering branches in the axils of the upper leaves); primary axils stout, about 1.5 m; bearing secondary axils along its length, bract triangular, about 5 mm long; secondary axils about 20 to 40 cm; capitula borne racemosely along the secondary branches on peduncles about 6-15 cm long. Flowers are attached directly to a branch, capitate, 8-12 in capitulum. Petals are broadly oblong, valvate, acute, yellowish green, usually 2 mm. Fruits are subglobose, ridged and yellowish red when dry. Uses The wood is primarily used for fancy woodwork, native wooden shoes, matchsticks, pencil slats, lollipops and Popsicle sticks, toothpicks, chopsticks, ice cream spoons, boxes and crates. It is also a good material for plywood making. Distribution Malapapaya can be found in Benguet, Pangasinan, Zambales, Rizal, Bulacan, Laguna, Quezon, Sorsogon, Mindoro, Palawan, Leyte, Surigao, and Basilan. It also occurs in Solomon Island, in Malesia; Sunda Straits, Java, Lesser Sunda Island, Celebes, Moluccas and Papua New Guinea. Site requirements Malapapaya grows in open thickets and second growth forests at low and medium altitudes. It also grows in moist areas along gullys and creeks. Propagation Malapapaya is propagated by seeds. Seed technology Seed collection Fruits of malapapaya are gathered from superior mother trees by using a pruner with long handle, a ladder or by climbing up the tree. Seed processing and storage Fruits with pulpy covering are placed in a can filled with water for 24 hrs in order to soften the covering. As soon as the pulpy covering is soft, the fruits are macerated. Then, the seeds are taken and spread on a dry surface under a shade and allowed to dry for 2 to 3 days. A moisture content of 4 to 6% is most favorable for long storage. Nursery practices 1. Prepare seedboxes measuring 60 cm long, 45 cm wide and 14 cm deep. 2. Fill the first bottom inch of the seedboxes with gravel and the second and third inches with sifted sand. The rest should be filled with clay-loam soil which should be one inch lower than the rim of the box. Before sowing, the surface soil is lightly pressed to make the soil firm. 3. Broadcast the seeds thinly and then cover with a thin layer of sifted sand. 4. Cover the surface of the seedboxes with burlap or gunny sacks. Then, gently sprinkle with water and allow it to penetrate slowly into the soil When the gunny sacks are partially dry, remove them. Water the seedboxes everyday. 5. Germination usually occurs from 25 to 30 days after sowing. 6. Pot the seedlings in 3 x 6 or 4 x 8 inches polyethylene bags with soil media mixed with sand and top soil. 7. Rear the seedlings in the nursery until they become robust and vigorous enough for field planting, usually when they reach the height of 10 to 20 cm or 8 to 10 months from sowing. Plantation establishment Open thickets and secondary forests are ideal places for plantation establishment of Malapapaya. The following are the steps in establishing Malapapaya plantation: 1. Prepare the planting site by complete removal of vegetation. 2. Plant the potted seedlings before they reach the height of about 20 cm in holes with 3 x 3 m spacing. 3. They should be planted at the onset of the rainy season. 4. Weeding should be done around the base of the plant as may be necessary but not during the dry months to avoid the drying up of the surface soil within the plant environs. Diseases Damping-off Symptoms: Damping-off occurs either before or after seedling emergence. In postemergence damping-off, infected seedlings develop water-soaked lesions at the base which dehydrate later, turn brown, wilt and cause the seedlings to topple over. In very crowded seedbeds, the cotyledons and the upper part of the stem may turn brown and die. Causal pathogen: Phytopthora, Pythium, Diplodia, Rhizoctonia and Fusarium spp. Control measures: Since the disease is caused by a variety of soilborne fungi, exact control measure cannot be given. However, the following measures may significantly control if not minimize the disease: 1. Avoid using heavy soil – a good growing medium is a 50:50 mixture of fine sand and clay-loam soil. 2. Avoid overcrowding. Thin immediately if seedling population is dense. Thinning enhances circulation of air and prevents accumulation of moisture at the base of the seedlings. 3. Remove diseased seedlings and burn them once infection becomes evident. 4. Gradually expose the seedlings to full sunlight. No observation has been made regarding major pests that attack Malapapaya. Source: Research Information Series on Ecosystems. Volume 3 No. 4. April 30, 1991. DENR-ERDB. College, Laguna Common name: Malapapaya Local name: Malapapaya (Visayas, Pangasinan, Tagalog); bongliw (Camarines Sur) Scientific name: Polyscias nodosa (Blume) Seemann Family: Araliaceae Description Malapapaya is a tall tree reaching a height of about 25 m and a diameter of about 50 cm. 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Thinning enhances circulation of air and prevents accumulation of moisture at the base of the seedlings. 3. Remove diseased seedlings and burn them once infection becomes evident. 4. Gradually expose the seedlings to full sunlight. No observation has been made regarding major pests that attack Malapapaya. Source: Research Information Series on Ecosystems. Volume 3 No. 4. April 30, 1991. DENR-ERDB. College, Laguna The Philippine Malapapaya Tree, scientifically known as Polyscias nodosa, is a versatile and ecologically valuable tree native to the Philippines and other parts of Southeast Asia. Known for its resilience and unique appearance, the Philippine Malapapaya contributes significantly to the biodiversity of tropical forests. This tree plays an essential role in its ecosystem by providing habitat, stabilizing soil, and enhancing soil quality, supporting the diverse life forms found in these regions. As part of the Araliaceae family, which includes various plants adapted to tropical and subtropical environments, the Philippine Malapapaya has a particular significance in biodiversity conservation, particularly in regions where deforestation and habitat loss are prominent concerns. The Philippine Malapapaya Tree, or Polyscias nodosa, is a small- to medium-sized tree species that thrives in tropical climates. Belonging to the Araliaceae family, this tree shares its family roots with other important tropical plants, making it well-adapted to warm, humid environments. It is recognizable by its compound leaves, which grow in an alternate arrangement along the stem, and its umbrella-shaped canopy that provides shade and shelter. Characteristics: Leaves: Compound and glossy, arranged alternately on the branches. Flowers: Small and typically greenish, they grow in clusters. Bark: Smooth and grayish-brown, adding to the tree’s aesthetic appeal. One interesting aspect of the Philippine Malapapaya is its adaptability to varying soil types and environments. It plays an essential role in soil conservation and improvement, as it helps stabilize soil and prevents erosion, particularly in disturbed or deforested areas. Philippine Malapapaya Tree Species While Polyscias nodosa is the primary species referred to as the Philippine Malapapaya, the broader genus Polyscias includes several species that differ in size, foliage shape, and environmental adaptations. Some other species in the Polyscias genus commonly found in similar habitats include: Polyscias Fruticosa Known as Ming Aralia, smaller and often used as a decorative plant. Polyscias Guilfoylei With variegated leaves, this species is often cultivated for ornamental purposes. These species, while varying in size and appearance, each offer unique ecological benefits such as shelter for wildlife, pollinator support, and soil stabilization. The Philippine Malapapaya stands out within its genus for its ability to adapt to various ecological niches and support local biodiversity. The Philippine Malapapaya Tree naturally thrives in tropical rainforests, often found in Southeast Asia, including the Philippines. It grows well in humid, tropical climates with ample rainfall, although it can also survive in moderately dry conditions due to its adaptive nature. The Philippine Malapapaya Tree plays a vital role in tropical ecosystems by helping stabilize soils, which is particularly important in areas susceptible to erosion. Its wide canopy provides shelter and habitat for numerous animals, insects, and smaller plants that thrive beneath its shade, thus promoting biodiversity within its natural habitat. For those interested in cultivating the Philippine Malapapaya Tree, it can thrive in home gardens with a tropical or subtropical climate. Here are some essential tips: Soil: Well-drained soil with a slightly acidic to neutral pH. Watering: Regular watering is necessary, especially during dry seasons. Sunlight: Prefers partial to full sunlight, though it can tolerate some shade. Propagation: This tree is usually propagated through seeds or cuttings, with seeds sown in well-drained soil. Maintenance Tips: To keep a Philippine Malapapaya Tree healthy, regular pruning of dead branches and leaves is recommended. This not only keeps the tree aesthetically pleasing but also promotes new growth. Routine checks for pests or diseases, along with appropriate organic treatments, can also help the tree thrive. The Philippine Malapapaya Tree offers numerous ecological benefits, making it invaluable in conservation efforts: Soil Stabilization: Its root system helps prevent soil erosion, especially in areas with disturbed soil. Soil Fertility: The tree contributes organic matter to the soil as leaves fall and decompose, enriching soil nutrients. Habitat Support: By providing shelter and nesting areas, the tree supports various bird and insect species, enhancing biodiversity. The Philippine Malapapaya Tree typically flowers in the warm season, with small, greenish blooms that grow in clusters. These flowers play a key role in local pollination processes, attracting insects such as bees, which are vital pollinators in tropical ecosystems. The Philippine Malapapaya Tree exhibits moderate drought tolerance, an adaptation that allows it to survive short periods of dry conditions. However, for optimal growth, regular watering is recommended, as it flourishes in environments with ample moisture. This quality makes it a viable option for reforestation projects, where soil restoration and conservation are goals. The Philippine Malapapaya Tree maintains symbiotic relationships with various local wildlife. Its broad canopy provides shade, and the tree serves as a nesting site for birds and shelter for small mammals. In return, animals like birds aid in seed dispersal, which supports the tree’s propagation across its natural habitat. In conclusion, the Philippine Malapapaya Tree (Polyscias nodosa) stands as an ecological keystone within tropical forests, contributing significantly to soil health, biodiversity, and forest stability. Its adaptability, resilience, and ecological contributions underscore its importance in conservation efforts, especially in regions facing environmental challenges. By understanding and protecting trees like the Philippine Malapapaya, we take a step toward safeguarding the diverse and valuable ecosystems of tropical regions. What is the Philippine Malapapaya Tree?The Philippine Malapapaya Tree, or Polyscias nodosa, is a tropical tree native to the Philippines and Southeast Asia. It belongs to the Araliaceae family and contributes to biodiversity through its ecological roles in soil stabilization and wildlife habitat. Where does the Philippine Malapapaya Tree grow naturally?This tree thrives in tropical rainforests and humid climates across Southeast Asia, particularly in the Philippines. It adapts well to various soils and is commonly found in areas where soil conservation is necessary. What are the unique characteristics of the Philippine Malapapaya Tree?It has glossy, compound leaves arranged alternately, small greenish flowers in clusters, and smooth, grayish-brown bark. Its umbrella-like canopy provides essential shade and shelter in its environment. How does the Philippine Malapapaya Tree benefit the ecosystem?The tree improves soil health by preventing erosion, enriching the soil with organic matter, and offering shelter and nesting sites for birds and insects, supporting biodiversity. Is the Philippine Malapapaya Tree drought-tolerant?Yes, it shows moderate drought tolerance, which allows it to survive in short dry spells, though it thrives best with regular watering. How can I grow a Philippine Malapapaya Tree in my garden?Plant it in well-drained soil with partial to full sunlight, water it regularly, and propagate through seeds or cuttings. Occasional pruning helps keep the tree healthy. What wildlife depends on the Philippine Malapapaya Tree?Birds, small mammals, and insects rely on this tree for food, nesting, and shelter, making it essential to local biodiversity. When does the Philippine Malapapaya Tree flower, and what attracts pollinators?It flowers during warm seasons with small, greenish blooms that attract pollinators like bees, playing a crucial role in supporting pollination within tropical ecosystems.