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Avocado > Year-Round IPM Program > Monitor for Diseases > Identifying Disease Signs and Symptoms Identifying Disease Signs and Symptoms Click on photos to enlarge Conditions that favor pathogen infection and disease development Near the top of slopes, trees can be stressed due to less efficient irrigation, shallower (eroded) soils, and more exposure to drying winds. Avocado black streak and other drought stress-related maladies often occur here. On the bottom of slopes, trees are subject to water-logged soil and pathogen-contaminated runoff from above. Armillaria root rot, Phytophthora root rot, and disorders such as root asphyxiation can be problems here. Poor drainage and water puddling beneath trees increases root and crown diseases and disorders such as root asphyxiation due to insufficient oxygen in soil. Directly wetting trunks promotes Phytophthora trunk canker and crown rot. Watering too often or with excess amounts increases avocado root rot. Mite outbreaks, nutritional disorders, salt toxicity, sunburn, and reduced fruit quality and yield are more prevalent where irrigation is inappropriate. Root and crown diseases Armillaria root rot Identification tip: Commonly causes unhealthy looking, wilted, downward-hanging foliage, leaf drop, and dieback of upper limbs. Armillaria root rot Identification tip: White, cottony fungal mycelia growing in cambial tissue, revealed by cutting under bark. Armillaria root rot Identification tip: Short-lived mushrooms growing around the base of trees during the rainy fall and winter. Phytophthora root rot Identification tip: Symptoms include unusually abundant small fruit, a sparse canopy of drooping leaves with brown tips, and new shoots of small pale leaves. Phytophthora root rot Identification tip: Shoot dieback and a paucity of chlorotic or pale older leaves. Phytophthora root rot Identification tip: Unhealthy small rootlets turn black, are brittle and readily break when bent. Healthy rootlets flex without breaking and are pale beneath their outer layer. Cankers on limbs and trunks caused by pathogens Avocado black streak Identification tip: Dark staining, cankers on bark, and powdery white exudate, typically occurring on trees stressed by insufficient irrigation and excess salts in water. Avocado black streak Identification tip: Infected cambium exposed by cutting under discolored bark Bacterial canker Identification tip: Liquid or pale, dry ooze, often occurring in small patches in a row on bark. Branch canker and dieback Identification tip: Exudate and dark discoloring on infected green bark of young trunk. Branch canker and dieback Identification tip: Cankered graft union from young tree killed in the field by fungal infection caused by contaminated nursery stock. Branch canker and dieback Identification tip: Exudate and dark discolored or oozing bark on older trees (typically occurs on bark at least several feet aboveground), unhealthy foliage, and declining or dead limbs. Phytophthora trunk canker and crown rot Identification tip: black, brownish, orange, or reddish discolored cambium and wood beneath unhealthy bark. Phytophthora trunk canker and crown rot Identification tip: Reddish brown resin and white powder on bark. Symptoms usually appear relatively low on the trunk. Phytophthora trunk canker and crown rot Identification tip: Rough, cracked, dark stained flaking bark from fungal infection in cambium near the root crown. Sunblotch Identification tip: Symptoms include discolored indentations on fruit, rectangular bark cracking or checking on limb or trunk, called alligator bark, and stunted tree growth. Verticillium wiltIdentification tip: Discolored, brown, grayish, or reddish streaks in wood or other tissue beneath bark indicate an unhealthy vascular system. Ganoderma sp.Identification tip: Conks (fungal fruiting bodies) on crowns, trunks, or limbs indicate wood decay. Cankers on limbs and trunks, caused by abiotic disorders Mechanical injury Identification tip: Old wound from chemical injection into trunk. Mechanical injury Identification tip: Hatchet cuts made before spraying chemical onto trunk bark. Mechanical injury Identification tip: Old wound closing as cambial tissue grows. Mechanical injury from too tightly staking and tying a trunk. Cracked, discolored bark on trunk killed by wildland fire. Sunburn Identification tip: Cracked and roughened bark from heat damage to formerly shaded limb exposed to direct light after extensive pruning. Cankers on limbs and trunks, caused by vertebrates Rabbits Identification tip: Bark gnawed by rabbits, similar to chewing by ground squirrels and voles. Ground squirrels Identification tip: Girdled bark and soil burrowing from ground squirrels. Top of page Did you know that Kenya is one of the top producers of avocados in the world? In fact, according to the Kenya National Bureau of Statistics, avocado exports brought in over Ksh 14 billion (USD 140 million) in revenue in 2019 alone. However, diseases of avocado hamper the industry's growth as local farmers need to meet stringent export requirements. The main export Avocado is Hass. You can know more about Hass Avocado farming in Kenya by reading the prepared guide. The guide will help you enter the export market and increase yields by at least 30%. In Kenya, various factors, such as climate and soil type, contribute to the prevalence of avocado diseases. According to a study published in the African Journal of Horticultural Science, up to 80% of avocado trees in Kenya are affected by diseases, with fungal and bacterial diseases being the most prevalent. This article will explore ten of the most common avocado diseases in Kenya and their management strategies to help farmers protect their crops and livelihoods. 10 Diseases of Avocados Trees in Kenya The first disease of avocado trees that we will discuss is Anthracnose. Anthracnose is a fungal disease affecting avocado tree leaves, stems, and fruits. The symptoms of anthracnose vary depending on the affected plant part. In avocado leaves, anthracnose appears as small, dark, water-soaked spots that eventually enlarge and turn brown or black. The spots can coalesce, causing the leaves to yellow and drop prematurely. In avocado fruit, anthracnose causes small, circular, sunken lesions that are dark brown or black in color. The lesions can expand, covering large areas of the fruit, and can also cause the fruit to rot. In severe cases, anthracnose can cause defoliation, stunted growth, and reduced fruit yield. It is important to note that anthracnose symptoms can be mistaken for those of other diseases, such as scab and bacterial canker. Therefore, it is essential to seek the advice of a plant pathologist or agronomist for proper diagnosis and management. In avocado leaves, anthracnose appears as small, dark, water-soaked spots that eventually enlarge and turn brown or black. The spots can coalesce, causing the leaves to yellow and drop prematurely. In avocado fruits, anthracnose causes small, circular, sunken lesions that are dark brown or black in color. The lesions can expand, covering large areas of the fruit, and can also cause the fruit to rot. In severe cases, anthracnose can cause defoliation, stunted growth, and reduced fruit yield. It is important to note that anthracnose symptoms can be mistaken for those of other diseases, such as scab and bacterial canker. Therefore, it is essential to seek the advice of a plant pathologist or agronomist for proper diagnosis and management. Other diseases of avocado trees are: 2. Phytophthora Root Rot In young avocado trees, the first symptom of Phytophthora root rot is wilting of the leaves, which is often followed by a rapid decline in plant growth. The roots of affected trees appear brown or black and are soft and spongy to the touch. In mature avocado trees, the symptoms of Phytophthora root rot may be less noticeable. However, affected trees may exhibit a reduced growth rate, thinning canopy, and declining fruit yield and quality. The bark of the trunk may also show signs of sunken cankers. In avocado fruit, Phytophthora root rot causes the fruit to rot from the peduncle (stem) end, developing a brown, slimy mass. The fruit may also develop a sour smell and become soft to the touch. It is essential to note that the symptoms of Phytophthora root rot can be similar to those of other root diseases, such as Armillaria root rot. Therefore, proper diagnosis is crucial for effective management. The disease can be controlled in three main ways: Preventing waterlogging Using disease-resistant varieties Using a suitable fungicide with a combination of cultural practices 3. Scab Disease Scab disease in avocado trees and fruits is caused by a fungus called Sphaceloma perseae. The symptoms of this disease can vary depending on the severity of the infection, but some common symptoms are: Lesions on leaves: The first symptoms of scab disease usually appear on the leaves. Small, circular, or irregularly shaped lesions appear on the upper surface of the leaves. These lesions are brown or black and may have a raised edge. Lesions on fruits: As the disease progresses, lesions may also appear on the fruit. These lesions are similar to those on the leaves and can cause the fruit to become disfigured. Cracking of the fruit: In severe cases, the lesions on the fruit can cause the fruit to crack or split open. Premature fruit drop: Infected fruits may drop prematurely from the tree. Defoliation: Severe infections can cause the leaves to turn yellow and fall off the tree. Reduced yield: Scab disease can reduce the yield of the avocado tree, as infected fruits may be unsuitable for sale or consumption. To control scab disease, follow the following guidelines: Use disease-free planting materials: Ensure the planting materials are free from gumming disease infection to avoid introducing the disease into the field. Sanitation practices: Remove and destroy all infected plant debris from the field, as it can be a source of inoculum for the disease. Use of resistant varieties: Plant-resistant varieties are less susceptible to gumming disease. These varieties have genetic traits that can help reduce the severity of the disease. Insect control measures: Control the insect vectors that spread the bacteria that cause gumming disease, such as leafhoppers and mealybugs. This can be achieved through the use of insecticides or biological control agents. Cultural practices: Adopt good agricultural practices, such as proper drainage, irrigation, and fertilizer management, which can help reduce the severity of the gumming disease. 4. Avocado sunblotch viroid This disease is transmitted through infected plant materials such as cuttings, seedlings, or contaminated pruning tools. The disease affects the avocado tree's leaves, roots, and fruits. It causes yellowing and blistering of the leaves, which can lead to defoliation, stunted growth, and reduced yields. The infected tree's fruits are also affected, leading to poor quality and reduced market value. In addition to affecting the tree's aerial parts, ASBVd can also infect the avocado tree's roots. The disease can cause reduced root growth and development, leading to poor nutrient and water uptake by the tree. This can lead to further stunting and decline of the tree. In severe cases, ASBVd can cause the death of the avocado tree. The disease has no cure, and infected trees should be removed and destroyed to prevent the further spread of the disease. Effective management of ASBVd involves using disease-free planting materials, regular crop scouting and monitoring, and strict sanitation practices. The use of disease-resistant avocado varieties can also help reduce the impact of the disease on avocado production. 5. Bacterial Canker Bacterial canker is a common disease that affects avocado trees and is caused by the bacterium Pseudomonas syringae. The bacterium infects the tree through wounds on the bark, usually caused by pruning, hail damage, or insect feeding. Once inside the tree, the bacterium multiplies and causes cankers, or swollen areas on the bark. The cankers ooze bacterial exudates, which may dry up and form a crust around the canker. The exudate can also spread the bacterium to other parts of the tree or to other trees in the orchard. As the disease progresses, the cankers enlarge and cause dieback of the affected branches, leading to reduced fruit yield and tree decline. Bacterial canker also affects the avocado fruit, causing small, water-soaked lesions that eventually turn brown and dry up. The lesions can coalesce and form larger areas of rot on the fruit, making it unmarketable. The disease can also cause premature fruit drop, leading to reduced fruit yield. Management of bacterial canker involves cultural practices such as proper irrigation, fertilization, and pruning to minimize the risk of tree damage and entry points for the bacterium. Infected plant material should be removed and destroyed to prevent further spread of the disease. Chemical control using bactericides can also be effective in managing the disease, but it is important to use bactericides that are effective against the specific strain of the bacterium causing the disease. 6. Stem End Rot Disease Stem-end rot is a common disease that affects avocado fruit and is caused by the fungus Colletotrichum gloeosporioides. The disease causes brown, dry rot on the stem end of the fruit, which can spread to the surrounding tissue and cause the fruit to become soft and unmarketable. Stem-end rot can also cause premature fruit drop, leading to reduced fruit yield. Stem-end rot typically occurs during the fruit maturation and ripening stages, but can also occur in fruit that has been stored for a long time. The disease enters the fruit through wounds or cracks on the skin, usually caused by insect feeding or sunburn. Stem-end rot can also affect the tree, causing cankers on the branches and trunk, and leading to dieback and reduced fruit yield. However, the impact of the disease on the tree is generally less severe than on the fruit. Management of stem-end rot in avocado trees involves a combination of cultural practices and chemical control methods. Cultural practices include: Proper irrigation: Maintaining proper soil moisture levels can prevent water stress, which can make the tree more susceptible to stem-end rot. Proper fertilization: Providing the tree with adequate nutrients can help it grow strong and healthy, and better resist disease. Regular pruning: Pruning can help improve air circulation within the canopy, reducing humidity levels and the risk of fruit infection. Harvesting: Careful harvesting practices can minimize the risk of fruit damage and infection. Chemical control methods include Fungicides: Fungicides can be used to control the disease, but it is important to use fungicides that are effective against the specific strain of the fungus causing the disease. Fungicides should be applied according to label instructions, and timing is critical to ensure that the disease is effectively managed Sanitation: Removing and destroying infected plant material can help prevent the spread of the disease. Post-harvest treatment: Treating the fruit with fungicides after harvest can prevent the disease from spreading during storage and transportation. 7. Powdery Mildew Powdery mildew is a fungal disease that can affect avocado trees and fruits. The fungus that causes powdery mildew, Podosphaera xanthii, infects avocado tree leaves, stems, and fruit. When avocado trees are infected with powdery mildew, the disease can cause a range of symptoms, including white or greyish powdery patches on the tree's leaves, stems, and fruit. The powdery mildew can also cause the leaves to curl, twist, and turn yellow or brown. In severe cases, the leaves can fall off the tree, reducing the tree's ability to photosynthesize and produce fruit. In addition to affecting the leaves and stems of avocado trees, powdery mildew can also affect the fruit of the tree. Infected fruit may develop a powdery white or greyish coating, which can cause the fruit to become discoloured and deformed. The fruit may become cracked or distorted in severe cases, making it unmarketable. Powdery mildew can also affect the overall health of the avocado tree, reducing its growth rate, yield, and fruit quality. Severe infections can lead to defoliation and weaken the tree, making it more susceptible to other diseases and pests. To control powdery mildew in avocado trees, it is important to maintain good orchard hygiene by removing infected plant debris and pruning affected branches. Fungicides may also be used to control powdery mildew, but following the manufacturer's instructions and using them responsibly to avoid resistance development is important. 8. Black Streak Avocado Disease Black streak disease in avocado trees is caused by a virus called Avocado sunblotch viroid (ASBVd), and it can affect both the tree and its fruit. Here are some ways black streak disease can affect avocado trees and fruits: Reduced yield: Black streak disease can lead to a reduction in fruit yield as infected trees produce fewer fruits. Stunted growth: The disease can cause the tree to become stunted and grow slower than healthy trees. Leaf discoloration: The leaves of infected trees may become yellow, pale, or bronze. Fruit discoloration: Infected fruits may have black streaks, necrotic areas, or ring spots that reduce the marketability of the fruit. Poor quality fruit: The fruit may have a dry, mealy texture and a bitter taste, making it unsuitable for sale or consumption. Tree death: In severe cases, black streak disease can cause the death of the avocado tree. It is important to note that black streak disease can be transmitted through grafting, contaminated pruning tools, and seed propagation, so it is essential to practice proper sanitation measures to prevent the spread of the disease Want to give your brand videos a cinematic edge? Join our visual experts and special guests for an info-packed hour of insights to elevate your next video project. Tune in on June 24 at 11am ET.Register NowHow can financial brands set themselves apart through visual storytelling? Our experts explain how.Learn MoreThe Motorsport Images Collections captures events from 1895 to today's most recent coverage.Discover The CollectionWant to give your brand videos a cinematic edge? Join our visual experts and special guests for an info-packed hour of insights to elevate your next video project. Tune in on June 24 at 11am ET.Register NowHow can financial brands set themselves apart through visual storytelling? Our experts explain how.Learn MoreThe Motorsport Images Collections captures events from 1895 to today's most recent coverage.Discover The CollectionWant to give your brand videos a cinematic edge? Join our visual experts and special guests for an info-packed hour of insights to elevate your next video project. Tune in on June 24 at 11am ET.Register NowHow can financial brands set themselves apart through visual storytelling? Our experts explain how.Learn MoreThe Motorsport Images Collections captures events from 1895 to today's most recent coverage.Discover The Collection Avocado trees (Persea americana) are a great plant to grow if you live in the southern tip of the United States or father south. These plants are best grown outdoors as they can reach up to 60 feet in height. These evergreen fruit trees are best known for their delicious fruit, the avocado. Though the fruit may be the main draw for many growers, avocado trees are also quite beautiful because of their thick, bright green foliage and add ornamental value to any outdoor space. However, if it's the fruit you're after, these plants need warmth and space for the best results. It is important to keep in mind that all parts of this tree, including the fruit, are toxic to a wide range of animals. Common Name Avocado tree Botanical Name Persea americana Family Lauraceae Plant Type Tree Mature Size 60 ft. tall, 30 ft. wide Sun Exposure Full, partial Soil Type Loamy, sandy, well-drained Soil pH Acidic, neutral Bloom Time Winter, spring, summer Flower Color Yellow, green Hardiness Zones 9-11 (USDA) Native Area North America, Central America, Asia Toxicity Toxic to pets It is best to plant avocado trees outdoors in the spring, allowing ample time to become established before winter temperatures arrive. Plant your avocado tree in a location with plenty of sunlight and well-draining soil. If soil conditions are less than ideal, amend the soil with sand or another well-draining substrate before planting. The trees are vulnerable to high winds, so immature trees may benefit from support. Try choosing a planting location that offers wind protection to help keep your tree upright and healthy. All avocado trees should be planted at least 10 feet away from structures. The avocado tree's root system is sensitive, so try not to disturb the roots during planting. Dig a hole that is wider than the root structure and the same height as the root ball. Avocado trees grown from seed (avocado pits) will not produce the same fruit as the mother. Purchasing a young tree and growing it will yield fruit easier and faster. Credit: The Spruce / Gyscha Rendy Credit: The Spruce / Gyscha Rendy Credit: The Spruce / Gyscha Rendy Credit: The Spruce / Gyscha Rendy Like most tropical plants, the avocado tree thrives on a lot of sunshine. Plant this tree in a location where it can receive at least eight hours of sunlight every day. These trees can tolerate partial shade, but grow best and produce more fruits when kept in full sun. Avocado trees prefer rich, loamy, and well-draining soil. A soil pH that is acidic to neutral, between 5 and 7, is ideal. These trees are sensitive to alkaline soil. Adding a layer of mulch around the tree can help the soil retain the right amount of moisture and will offer protection to the avocado tree's shallow root system. Don't mulch any closer than six inches from the trunk. Avocado trees benefit from infrequent, deep watering. This encourages deeper, stronger root growth. Wait until the soil begins to dry out, then water deeply. During the summer months, the avocado tree will require more frequent watering. Young trees also require more frequent watering as they become established. Mature trees should receive around two inches of water per week. These famous fruit trees can only be grown outdoors in USDA hardiness zones 9 through 11, limiting an avocado tree to climates that are tropical and subtropical, unless grown indoors. They are frost-sensitive and grow best in temperatures between 50-85ºF. Though prolonged temperatures 30ºF or below will be too cold for avocado trees, they should be able to withstand an occasional, very brief freeze. You should fertilize an avocado tree starting in the late winter to early spring and feed until the fall, depending on the specific instructions included with your chosen fertilizer. Fertilizers specifically designed for avocado or citrus trees work best. For the best pollination, it is ideal to have two avocado trees, as flowers have male and female parts but they open at separate times, making self-pollination is unlikely. Avocado trees are considered either type A or type B, and each type opens its flowers parts at different times of day. These different times make cross-pollination between the two types possible. When choosing which trees to plant, be sure you have both type A and type B for best results. Starting an avocado tree from seed is a fun, simple project. However, it is important to keep in mind that seeds will not produce trees identical to the parent tree. To do this, you will need an avocado seed, a jar of water, toothpicks, a sharp knife, a small pot, and well-draining potting soil. Using a sharp knife, poke three or four holes around the circumference of the avocado seed.Poke the toothpicks into the holes, which will create the support needed to suspend the seed in water. Submerge the thick, or bottom end, of the seed into the water. Around one-third of the seed should be in the water. Place the seed in a sunny location and change the water daily. After a few weeks, roots should form and leaves should appear at the top of the seed. Once this occurs, gently plant the seed in well-draining soil. All avocado trees stem from three main varieties: Mexican, West Indian, and Guatemalan. Within these categories, there are several avocado varieties available. Hass: One of the most popular avocado varieties, the Hass avocado is often found in grocery stores. This is a type A tree that produces thick, bumpy-skinned, rich, and creamy fruits. It is more sensitive to heat than other varieties. Hass avocado trees are known to produce a reasonably sized yield when grown on their own. Fuerte: Also a widely known avocado type, the Fuerte avocado is a type B tree often grown with Hass avocados. These trees produce large, oval-shaped fruits with relatively smooth, thin skin. These trees are also more sensitive to heat, making them a good fit for the northern borders of the avocado's growing zones. Pinkerton: This type A, Guatemalan tree is popular for its smaller size and large fruit yield. It produces oblong fruits with flesh similar to the Hass avocado—rich and creamy. These trees require a type B avocado tree to produce a significant fruit yield. On a healthy outdoor avocado tree, you could harvest upwards of 200 avocados per season. For nursery-bought trees, you can expect to see fruit in three to four years. For avocados started from seed, it may take five to 13 years before fruits appear. When fruits appear, wait until the avocado grows to its mature size. The fruits do not ripen on the tree, so avocados are picked as soon as they are full size. Bring the avocados indoors and let them rest on a counter until ripe. Don't pick all of your avocados at once. If you pick a few at a time, you will be able to extend your harvest and enjoy the fruits of your labor for longer. Avocados can be grown in pots outdoors, though it will stifle their growth. (They can also be grown indoors in pots.) This is ideal for small yards or gardens near the northern edge of the avocado's growing zones, as potted trees can be moved to a protected area when cold weather arrives. Young trees or dwarf varieties are ideal for growing in pots as these will stay small for some time. If avocado trees are grown from seed, start pruning when the seedling is only six inches tall, snipping off the top pair of the leaves. When it reaches a foot in height, trim it back six inches. After this, prune the tree yearly. Mature trees require occasional pruning. Light pruning can be done any time of year, though heavy pruning should be done in the early spring. Prune thick areas to ensure adequate light and airflow. Cut back any dead wood and trim away V-shaped branches. Don't take off more than one-third of the length of each branch. Looking for the best pruners for your avocado trees? We tested 8 top-rated pruners in our Lab to make sure your trees stay happy and healthy. Propagation is often done through grafting, layering, or cuttings. Grafting is often done to combine the desirable qualities of two different varieties of avocados while layering and starting cuttings are done to produce duplicate trees. Here's how to perform each method of propagation: You will need sharp snips, moist and well-draining potting soil, a small pot, and IBA rooting hormone. In the spring, select new growth that is five to six inches long and has several leaves that have not opened. Using sharp snips, cut the new growth branch at a 45-degree angle. Wound the cut end by scraping at the bark on either side of the cutting. This will encourage root production. Dip the cutting into IBA rooting hormone. Bury the cut end into moist, well-draining soil. Keep the soil moist and place the cutting in a sunny area. After a couple of weeks, gently tug the cutting to check for resistance, which indicates root growth. Repot the cutting into a larger pot or outdoors. You will need sharp snips, a sharp knife, and something to cover the grafted area, such as grafting tape. Follow steps one and two as if you are taking a cutting. Remove the tip of the cutting, along with any leaves that are present. Then, wound the tree you would like to graft onto by removing a section of bark. Make sure the cambium of the cutting and the cambium of the tree are touching. Secure the cutting onto the tree with grafting tape, making sure to cover the exposed areas. In a few weeks, the grafted branch and the main tree should be fused together. You will need a sharp knife, a rooting medium that can be wrapped around a branch, and rope or tape to secure the rooting medium around the tree. Select the branch you would like to take as a new tree.Using a clean knife, cut two circles around the branch to create a section of bark that can be peeled away. Once the bark is removed, scrape the inner branch to clean the cambium away. Wrap the exposed inner branch with rooting material, such as compost in a small bag (make sure the compost is wrapping the branch, not the bag) or another rooting medium. Secure around the branch with rope or tape. In several weeks, roots should develop. When this occurs, remove the bag, cut the branch off below the formed roots, and plant the new tree. When grown in the appropriate zones, avocado trees do not require extra care during the winter unless the area experiences a frost. Protect the tree from a cold front by wrapping it loosely in burlap and adding extra soil at the base of its trunk until the frost has passed. For trees grown on the northern edges of their growing zones, it is best to keep them in pots so they can be moved to an area protected from cold weather. Common pests that may bother an avocado tree include mites, caterpillars, borers, lace bugs, and thrips. Diseases include root rot, fruit rot, sun blotch, and cankers. Be alert to the presence of these pests or early signs of disease. Prompt action is the best way to remedy any developing problems before they threaten the health of your avocado tree. FAQ Though avocado trees are not quick to produce fruits, growing the tree for ornamental value is easy—assuming you're growing the tree within its growing zones. While some avocado trees are self-fruiting, such as the Hass avocado, these trees will always produce a larger yield of fruit if two are grown near each other. Be sure you plant a type A and a type B avocado tree for the best results. The lifespan of an avocado tree will depend on its environment. However, healthy avocado trees have been known to live for hundreds of years. Some have even been reported to live up to 400 years old. Fruiting a potted avocado tree can be tricky, especially if it's indoors. If you carefully choose a grafted dwarf hybrid variety, you might expect a small amount of fruit in time. One of the best grafted dwarf varieties of avocado, the Wurtz (or 'Little Cado'), is known to fruit when grown in a container. If you live in the United States and want to grow an avocado tree outdoors, try growing one in the tropical and subtropical zones of Florida, California, southern Texas, and Hawaii. It can also grow well in Puerto Rico, an American territory. Avocados growing on a tree. Mexico is the world's largest exporter of avocados. The country exports nearly US$2 billion worth of avocados representing 47% of the global exports. The Netherlands is Europe's largest exporter accounting for 11.2% while Peru and Chile export 9.3% and 8.4% respectively. The United States exports $128.7 million or 6.3% of the global exports while Kenya is Africa's largest exporter with a market share of 2.3%. Avocado Types There are three main types of avocadoes named for where they originated from. They vary in size and amount of oil. The Mexican avocados have the highest oil content but are the smallest while the West Indian avocados have the least oil content but are the largest. The Guatemalan avocados have an average amount of oil and size. Suitable Climate For Growing Avocadoes Avocadoes are tropical plants that grow in tropical climates. The most limiting climatic condition to the growth of avocados is cold weather. The optimum temperature is between 68 to 75 degrees. The Mexican avocados are the most resilient to cold climate but can only sustain temperatures of up to 24 degrees Fahrenheit. The West Indian varieties cannot tolerate temperatures above 34 degrees Fahrenheit while the Guatemalan varieties tolerate temperatures up to 34 degrees. Temperatures of above 100 degrees F with low humidity damage avocado plants. Fertilizer, Soil, And Water The avocado tree can grow in a variety of soil types with varying alkaline levels. However, the soil must have good drainage. The West Indian varieties are the most tolerant to salt and are more likely to grow in the coastal regions. The best avocado tree planted by large-scale farmers is the Mexican variety grafted to the West Indian rootstock. The avocado tree does not tolerate wet soil but needs about an inch of water weekly. It is recommended not to fertilize the tree until it is a year old. After the tree begins to produce fruits it is recommended to use a high-nitrogen fertilizer during late winter and early summer. Pollination An avocado tree needs to cross-pollinated to successfully produce fruits. Although the avocado plant has both the male and female flower parts, they open up at different times of the day thus preventing pollination. Farmers need to plant type A and B varieties for successful pollination. A single plant grows as a specimen but cannot yield fruits. The best place to grow the plant is in an open field that allows cross-pollination by wind or insects. Victor Kiprop October 25 2018 in World Facts Home World Facts How Do Avocados Grow? How to Make Hydrangeas Bloom Again (and Again) Before Summer Ends What to Watch Now Bar-Joseph, M. and Ben-Shalom, J. 1982. Limited systemic spread of impietratura and psorosis-A in graft-inoculated grapefruit trees. Plant Dis., 66:820–821. Google Scholar Bar-Joseph, M., Marcus, R. and Lee, R.F. 1989. The continuous challenge of citrus tristeza virus control. Annu. Rev. Phytopath., 27: 291–316. Google Scholar Bender, G.S. 1999. Phytophthora canker or collar rot. AV-521. UC Cooperative Extension, Univ. California Davis, Davis. USA. Google Scholar Bijzet, Z. and Sippel, A.D. 2001. Rootstocks. In: "The Cultivation of Avocado" (ed.. de Villiers, E.A.). 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